Niagara BIRDS

A compendium of articles and species accounts of the birds of the Niagara Region in Ontario

John E. Black and Kayo J. Roy

Foreword by James D. Rising
Dedications

To Jean, Steven and Carolyn who encouraged my birding, and to the birders of Niagara, past and present, who enriched the experience.

John E. Black

To Diane, Carolyn, John and Barbara for their ever-present and immeasurable support and encouragement, to Edmund D. Johns for introducing me to the exciting world of birding, and to the many contributors that made this book possible.

Kayo J. Roy

Harold H. Axtell
1904 – 1992

Clarke S. Beardslee
1898 – 1957

Harold D. Mitchell
1890 – 1982

Roy W. Sheppard
1891 – 1985
THE AUTHORS OF *NIAGARA BIRDS* EXTEND THEIR DEEP APPRECIATION to the following donors for their generous financial support in the publication of this regional bird book. All proceeds from its sale will be awarded to deserving students in the biology program at Brock University in St. Catharines.

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In memory of Bert Braun
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When word first went out about our proposed book, we immediately received encouraging communications from numerous individuals. Robert Curry was the first to call to commend us for this undertaking and to offer help in whatever way possible. He directed Glenn Barrett, the committee chair of his _Birds of Hamilton and Surrounding Areas_, to provide us with any information we requested. A note from Ross James was also heartwarming: “Great to see this happening. An interesting part of the province that needs summary information.” A telephone call from Robert Andre assured us that we were tackling something worthwhile: “How appropriate nearly 50 years after Beardslee and Mitchell. You have my best wishes for the successful completion of an important addition to Niagara birdlife.” An e-mail from Harold Lancaster offered assistance and good wishes: “The very best to you both on your project and if there is anything I can do to help — just holler.” At a pool party in Niagara Falls, Ron Pittaway warned us that “the road would not be easy, but we should forge ahead.” A letter from Fred Bodsworth wished us well and asked that we be sure to send him the first signed copy. We are most grateful to these friends and others such as Jon Dunn and Paul Baicich, whose encouragement and advice influenced our approach to this work.

Twenty-five authors wrote articles on bird-related activities that occurred in Niagara during the 1966-2006 time frame of this book. An additional twelve wrote species accounts. To all these authors we express our deep appreciation for their substantial contribution to the content of this book.
An important step in the production of any book of this kind is the peer review process. We are indebted to the following shrewd critics for reviewing the articles: Ned Brinkley, Willie D’Anna, Rob Dobos, Marcel Gahbauer, Colin Horsted, Bruce Hunter, Ross James, Ron Larkin, Jon McCracken, George Meyers, David Moore, Ralph Morris, Cynthia Pekarik, Jim Quinn, Gerry Rising, Tony Shaw, Christopher Somers, John Stevens, Elvin Wightman and Doug Woods. We were also fortunate to have the assistance of a number of highly qualified individuals with the expertise to review the species accounts. The valuable comments and useful references of the following reviewers were very much appreciated: Robert Andrle, Margaret Bain, Gregor Beck, Ned Brinkley, Glenn Coady, Robert Curry, Rob Dobos, Jim Duncan, Chris Escott, Bruce Falls, Colin Horsted, Pud Hunter, Ross James, Doug McRae, Ralph Morris, Guy Morrison, Eugene Morton, Robert Nero, Mark Peck, Scott Petrie, Ron Pittaway, John Rappole, Bill Read, James Rising, John Stevens, Bridget Stutchbury, Don Sutherland, Ron Tozer, Chip Weseloh and Alan Wormington.

We attempted to include in the species accounts all the published information on birds found in Regional Niagara from 1966 through 2006. In gathering the status and abundance data and other pertinent material, we have not relied solely on our own observations of more than 35 years; we have also taken advantage of a wealth of data from many other sources. Harold Lancaster, Daniel Salisbury and Alan J. Smith gave us the right to use their entire collection of field notes and accumulated records, which collectively covered the entire 41-year period of our book. In addition we had access to the unpublished field notes and correspondence of Harold Axtell.

We were extremely fortunate as well to have received, from a large number of both local and more distant birders, records and detailed field notes that augmented our ever-increasing collection of data. We extend our gratitude to the following for providing and freely sharing this data: Brian Ahara, Gordon Bellerby, Paul Benham, Fred Bodsworth, Peter Burke, Drew Campbell, Barb Charlton, Arthur Clark, Brad Clements, Robert Curry, Marcya Foster Dalmer, Rob Dobos, Blayne Farnan, Jean Farnan, Robert Farnan, Denys Gardiner, Michael Hamilton, Jean Iron, Marcie Jacklin, Edmund Johns, Barry Jones, John Lamey, Bruce Mackenzie, Kay McKeever, Kevin McLaughlin, Doug McRae, John Miles, David Milsom, Michael Morgante, Ralph Morris, James Pawlicki, Mark Peck, Ron Pittaway, Maggie Smiley, Katherine Stoltz, Ron Tozer, Scott Watson, William Watson, Chip Weseloh, Alan Wormington, Gustave Yaki and Peter Yoerg. Additional data were discovered in the Niagara area nature club bulletins; we thank the various editors of The Peninsula Naturalist, Nature Niagara News, The Rambler and The Prothonotary. We also thank each club for permission to use its logo in the section on Natural History Clubs of Niagara in Part One of this book.

We made full use of the issues of Ontario Birds, a publication of the Ontario Field Ornithologists (OFO) that contained detailed reports of the Ontario Bird Records Committee (OBRC). We are grateful to the editors of Ontario Birds and the secretaries of the OBRC. We thank the OFO Board of Directors and James Heslop, Seabrooke Leckie, Dave Moore and Christine Vance, editors, for promoting Niagara Birds in OFO News. We are indebted to Mark Cranford, coordinator of the OFO-sponsored Ontbirds, for promoting our book on this OFO listserv. Help and encouragement also came from John Stevens and Mike Street of the Niagara Peninsula Hawkwatch. We thank them and Keith Dieroff, editor, for promoting Niagara Birds in their newsletter.

Our work would not have been possible without the noteworthy bird records of the Buffalo Ornithological Society (BOS) and the Hamilton Naturalists’ Club (HNC).
We are grateful to the Board of Directors of these two established clubs for allowing us unlimited access to the relevant portions of their databases. We are particularly grateful to David Suggs of the BOS and Robert Curry of the HNC for their extraordinary help in making these arrangements. We are also deeply indebted to the countless birders (too many to mention) in these two clubs who, over the years since 1966, have submitted reports of their bird observations to their club statisticians. To these statisticians, Harold Axtell, Robert Andrle, Fran Rew, Michael Morgante and Tim Baird, all of the BOS, and Mark Jennings and Rob Dobos, both of the HNC, we extend our thanks.

Another important source of information was the Cornell Lab of Ornithology and the American Ornithologists’ Union Birds of North America series. For verification purposes, we made full use of Birders Journal and North American Birds and its predecessors, Audubon Field Notes and American Birds. Some historical (pre-1966) bird records have been included where appropriate. A good portion of this pre-1966 information was extracted from Beardslee and Mitchell (1965) and Sheppard (1960, 1968, 1970). The two atlases of the Breeding Birds of Ontario proved to be an invaluable source of data on birds breeding in Niagara. Robert Curry’s comprehensive book, Birds of Hamilton and Surrounding Areas, published in 2006, provided us with a substantial amount of Niagara data.

For further help in obtaining various kinds of records and data, we acknowledge the following individuals: Robert Curry, Ross James, Alvaro Jaramillo, Steven Mlodinow and Ron Pittaway for clarification of abundance and occurrence; Alvaro Jaramillo, Klaus Malling Olsen and Norman D. van Swelm for information regarding the origin of Slaty-backed Gulls found in Niagara; Steven Mlodinow and Joseph Morlan for their help in confirming the identity of several flycatchers in photographs; Brad Clements and Mark Peck for data from the Royal Ontario Museum Ontario Nest Records Scheme database; Don Sutherland and Tanya Taylor for Niagara records from the Natural Heritage Centre; Guy Morrison for the Ontario Shorebird database of records submitted by Alan J. Smith; Blayne Farnan and Paul Philp for owl prowl data; Louise Laurin for data from the Canadian Bird Banding Office of the Canadian Wildlife Service; Richard Byron, Robert De Leon, Michael Hamilton, Jim Landau, Lynne Landon, Thomas O’Donnell, Dominic Sherony and Terry Yonker for additional BOS data; Peter Carson, Mary Gartshore, Stu Mackenzie, Jon McCracken, Andrew Reynolds and Tim Seburn for additional information about birds in Niagara.

In producing Niagara Birds, we have been aided by the years of extensive fieldwork carried out by earlier generations of birders. The formidable efforts of Clark S. Beardslee, Harold D. Mitchell, Robert F. Andrle, Roy W. Sheppard and others in the publication of the details of these early records should not be forgotten. Given the volume of statistical information, it is inevitable that some records may have been overlooked. Full responsibility for any errors or omissions in the articles and the species accounts remains ours.

We are grateful to Katherine Stoltz and Drew Campbell, not only for writing their articles on hotspot locations, but for checking their instructions in the real world. They painstakingly covered the entire area, recording all the detail on how to reach these many places of interest. Jean Hampson and Bob Highcock also drove a large section of the hotspot routes to ensure that the identified locations were findable. In addition, Heather and John Mitterer checked the accuracy of certain selected locations. We thank them for their assistance.

Birders often want to visit places not open to the general public. For arranging access to the St. Lawrence Seaway properties along the Welland Canal at Port Weller, we sincerely thank Michel Drolet, Bruce Tkachuk, Karen Morgenweg and Brigitte Wiley of the
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We extend our thanks to Mark Peck for access to resources at the Royal Ontario Museum; to Nicola Woods, Rights and Reproductions, Royal Ontario Museum, for arrangements to reproduce the painting of Old Fort Erie; to Glenda Slessor for a wide range of helpful suggestions, including advice on the proofreading stages of the book; to Glenn Barrett for his many meetings with us regarding administrative matters; to Michel Gosselin, Collection Manager (Birds), Canadian Museum of Nature, Mark Peck and Ron Pittaway for their help with specimen numbers and other data.

For their help in a variety of ways, we are grateful to the following: Robert Andrle and Richard Rosche for making arrangements for us to photograph the specimen of the Slender-billed Curlew at the Buffalo Museum of Science; John Grehan, Head of Science and Research at the museum, for allowing us to include these photographs in our book; Audrey Horbett for helping us research old BOS records at the Buffalo Museum of Science; Scott Gillihan, Executive Officer, American Ornithologists’ Union, for his help concerning the AOU acceptance of the Slender-billed Curlew record; Robert Andrle, Fran Rew, Mike Morgante, Tim Baird, and Karen and Jim Landau for their help in finding full names for many individuals, and Connie Adams, New York State Department of Environmental Conservation, for her helpful comments on environmental matters.

Revenue Canada requires that appropriate accounting procedures be followed for this book venture. We are indebted to Diane Ro for her role as our bookkeeper and for maintaining the Niagara Birds accounting ledger. Further, we wish to express our appreciation to Don Minchin, C.A. for auditing the Niagara Birds accounting books. We also gratefully acknowledge the initial editing assistance of Merle Richards. Finally, we are indebted to Carolyn Black, who quietly, behind-the-scenes offered advice and suggestions that made a difference to the outcome of this book.

The outstanding visual impact of this book is the result of the contributions of some extremely talented bird artists and some of the best bird photographers in North America. The following photographers invited us to search their websites and select
more than 500 bird images: Raymond Barlow, Sam Barone, Barry Cherriere, Peter Ferguson, Brandon Holden, Jean Iron, Jukka Jantunen, Kenneth Newcombe, Mark Peckand Harold Stiver. We thank other photographers, who submitted one or more photographs: Ann Brokelman, Allen Chartier, Anton Fercher, Vince Goldsworthy, Ron Goodridge, Eric Holden, Frank and Sandra Horvath, Kara Kristjanson, Janice Haines, Michael Harvey, Steve N.G. Howell, David Laliberte, Jerry Lazarczyk, Virginia Lucas, Kay McKeever, John Millman, Don Mills, James Pawlicki, Dawn Pierrynowski, Diane Roy, Dominic Sherony, Scott Watson, Scott Whittle and Alan Wormington. We are also indebted to professional aerial photographer David Walker, who at his own expense hired an airplane in order to capture the aerial images used in the book.

Artwork adds an important dimension to any book of this kind. We are delighted to have on our cover page, in full colour, the stunning painting of a Ross’s Gull in flight over the Niagara River. Created by David Beadle exclusively for Niagara Birds, it represents perhaps the rarest bird ever found in the Niagara Region. We are very grateful to David for this valuable contribution. To Barry Cherriere, Ross James, Seabrooke Leckie, Rick Manners and Don Peuramaki, we extend our gratitude for permission to include their excellent artwork.

These photographic images and the accompanying artwork are central to the book. All the contributors named above generously donated their photographs and artwork for credit only. Anyone wishing to contact one of these photographers or artists can find their websites and addresses on page 698, Photographer and Illustrator Information.

We owe a debt of gratitude to the Peninsula Field Naturalists Club (PFN) for partnering with Niagara Birds. In order to apply for funding from foundations, corporations and other sources, and in order to issue income tax receipts for contributions in excess of the cost of the book, we would be required to have charitable status. Since we did not have this status, it was mandatory that we team up with an organization that would be able to assist us in these two areas. The PFN came to our rescue. We are very grateful to the PFN Board of Directors for agreeing to this partnership. Under the leadership of John Potter, PFN President, numerous requests for funding were sent out. Don Minchin, PFN Treasurer, took care of all grants and donations and issued the appropriate income tax receipts. The first application submitted by the PFN resulted in a generous grant from the Ontario Trillium Fund. We particularly thank John Potter and Don Minchin for the generous amount of time they spent with us and for their support and interest.

Deserving special mention are three women who played an important role in the production of this book. Jean Black of St. Catharines undertook substantive editing of a large portion of the book. Her dedication to accuracy and lucidity is exemplary. Arleane Ralph of Whitby copy-edited the entire book with a cool, professional eye. How she was able to find so many errors and omissions will remain a mystery of her art. Judie Shore of Aurora is one of the most creative people we have ever met. Her layout and design skills are instantly apparent by just a glance at our cover. Her interweaving of text, photographs and artwork is sheer magic.

We conclude by thanking our wives, Diane and Jean, for their unfailing support and forbearance during the lengthy gestation of this project and for their confidence in us and our work. May the book prove worthy of their trust.

Kayo J. Roy
John E. Black
Fonthill/St. Catharines, Ontario
March, 2010
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Foreword

James D. Rising

The Niagara Region is an area rich not only in history but in natural history. Sitting largely on an isthmus between Lake Ontario and Lake Erie — two of the largest bodies of fresh water in the world — it is an area of temperate climate, with long cool springs and long cool autumns, conditions that make it one of the prime fruit-growing regions in Canada. It is also an ideal corridor for migrating birds, which prefer to fly over land rather than over large bodies of water. In Niagara Birds, we are told that 368 species of birds have been recorded in the region and that one could expect to see, with a reasonable dedication to search, 220 species in a year. In spring, birders come from afar to witness the northward movement of raptors over the Niagara Escarpment at Grimsby, where often the migrating raptors pass quite close to observers. In the winter months (especially December) birders gather along the Niagara gorge, where they have a good chance of seeing 8-10 species of gulls in a single day. During spring migration, Lake Erie, Lake Ontario, the Niagara River and the various wetlands together constitute a mecca for a variety of waterfowl. Fall and winter bring more — many Long-tailed Ducks and scaup, all three scoters and perhaps a King Eider, Harlequin Duck or Barrow’s Goldeneye.

Niagara Birds is brought to us by John Black and Kayo Roy, two long-time students of the ornithology of the area. John came to the Niagara Region in 1966, when he accepted a position as Professor of Physics at Brock University, and since 1993 he has been a serious student of bird migration. His work has included studies, by means of acoustic microphones and weather radar, of birds that migrate at night. The results of these studies have been published in scholarly journals. John has travelled widely, one of his ambitions being to see representative species of all of the families of the birds of the world. He has served as the Niagara Regional Coordinator for the Atlas of the Breeding Birds of Ontario 2001–2005 (2007) and as director and president of the Ontario Field Ornithologists. Kayo moved to Niagara in 1976 and has been active in the field studies there ever since. His primary goal has been the study of North American birds. He has travelled throughout all of the Canadian provinces and most of the lower 48 states. He has made numerous trips to Alaska: twice to Attu, three times to Gambell and once to the Pribilofs. Kayo has served as secretary of the Ontario Bird Records Committee, executive member of the Federation of Ontario Naturalists, and for the past 25 years, compiler of the Niagara Falls ON/NY Christmas Bird Count. Kayo is also a past president of the Niagara Falls Nature Club.
I first visited the Niagara Region in the late 1960s. It was a marvellous pastoral place — wonderful for birds. I have since then continued my trips to the region and have taken various students and classes there on the last Friday in November to feast our many eyes on the gulls (ten species in one day is my record). Today, in retirement, my wife and I still visit Niagara, now much changed but not yet entirely spoiled by agricultural and especially urban development. I cannot wait to take this volume with me on our next visit.

The natural history of the Niagara Region has been a subject well studied since the late nineteenth century. For Black and Roy, a significant and more recent reference point is Beardslee and Mitchell’s *Birds of the Niagara Frontier Region* published in 1965 and Roy Sheppard’s *Bird Life of Canada’s Niagara Frontier* published in 1970. The primary objective of *Niagara Birds* is to update these earlier works by covering the 41-year period 1966 – 2006. In this interim, several other significant works have been published on the birds of southern Ontario, though not exclusively of the Niagara Region, including the following: *Birds of Elgin County: a century of change*, compiled and written by naturalists of Elgin County and published in 2004; Robert Curry’s *Birds of Hamilton and Surrounding Areas*, published in 2006; the two Ontario breeding bird atlases, most recently the atlas based on 2001-2005 data and published in 2007. Added to these sources are the voluminous, unpublished field notes of the authors and their colleagues. In the production of *Niagara Birds*, Black and Roy have synthesized vast amounts of information in one complete volume, and in so doing have created a valuable work of varied content and great interest that is, at the same time, readable and accessible.

*Niagara Birds* is organized into four sections. Part 1 provides a broad historical, geographical and ornithological orientation to the Niagara Region, starting with the first commentaries of Jesuit priests who visited the area in the 1640s and continuing with the many who have subsequently written about the natural history of the region. Although the book focuses on the years 1966 – 2006, the period is placed in historical perspective in an essay by Marcie Jacklin, Brock University librarian and a student of Niagara’s cultural and natural history. Part 1 includes, as well, an overview of the climate, geology and ecology of the region and concludes with a review of the various natural history clubs in the area. Part 2, “Niagara Birds by Season,” is divided into five parts, one for each of the four seasons and one for issues and species that are present year round. Each section contains essays by a number of writers on a variety of interesting subjects. For example, the well-known author and “owl lady” Kay McKeever writes on the Owl Foundation and West Nile Disease, and Anne Yagi, wildlife manager with the Ministry of Natural Resources, presents a thesis on the management of resident upland game birds. Two essays of particular relevance in Niagara are “Birds and Vineyards” and “Starlings and Icewine,” which describe the interaction between birds and the local wine industry — an interaction that is, in fact, very costly to this industry. Each season and each essay is tastefully illustrated with both artwork and digital photographs of exceptional quality. Part 3, provides a detailed account of each bird species that has been recorded in the Niagara Region. Again, the focus is on data post-1966,
but in the case of a rare bird, or in cases selected for historical purposes, older information is given. Thus, for Ross’s Gull, a species not recorded in the region until 1994, each of the few sightings is cited; for the Prothonotary Warbler, a southern species marginal in this area, older records are noted, as well as an account of its current status. The last section, Part 4, contains a description of birding hotspots, specific areas where bird species of interest are most likely to be found in Niagara.

This book is a must for naturalists and birding enthusiasts living in southern Ontario, as well as those in the surrounding areas of New York, Pennsylvania, Ohio and Michigan — for anyone, in fact, interested in learning more about the birds of the Niagara Region. It is a fine compilation of information that is both up-to-date and visually pleasing. It is not a field guide, but a companion volume to other resources. The editors are to be commended on the evenness and clarity of the essays, which have been contributed by many individuals — each with local experience and each with a unique style and perspective. The layout and design by Judie Shore is not only attractive, but easy to negotiate. John and Kayo have produced for us a volume that is clear, useful and enjoyable. It should serve as a model to those who follow in producing studies of their own areas.

James D. Rising
Professor Emeritus
University of Toronto
Department of Ecology and Evolutionary Biology
August 2009
Preface

This book represents, as they say, “A tale that grew in the telling.” From 2001 to 2005 I acted as the regional coordinator for the Niagara Region component of the second Ontario Breeding Bird Atlas. While working with the atlas data in 2005, I decided that, in order to assist future atlassers, I should write up some of the small but interesting details not sent to the atlas. This material, along with a considerable body of other data, would best be stored in the Brock University Library for use by present and future students of ornithology. During the setting up of this arrangement, it became obvious just how rich and deep this body of bird lore was: in fact, there was enough material for several books. I decided to start with one. I approached Kayo Roy, whom I knew had been working for some years on a list of rare birds of the region, to see if he would like to be involved. Over the next few months of planning, we decided to draw upon the expertise and interest of other birders in the community by inviting them to contribute some of the articles and species accounts to the project. Gradually, the book grew to its present size as we added new components. Early in the process we determined that the book should be written, not only as a useful resource for students of ornithology, but also as an interesting and helpful reference for people who live in the region and for the many birders who come to Niagara expressly to see birds.

Since my arrival in St. Catharines in 1966, I have enjoyed the birds on an almost daily basis. I hope this book will convey some of the pleasure and involvement that those interested in nature can experience in Niagara and will encourage them to go outdoors, eyes opened.

John E. Black
St. Catharines
21 March, 2010
THE IDEA OF WRITING A BOOK ON THE BIRDS OF NIAGARA was initially triggered for me in April of 1987, when Howard Martin, the then President of the Niagara Falls Nature Club, asked if I would consider preparing a checklist of Niagara birds for the nature club. A book came to mind, but the idea lay dormant until early March 2005, when John Black asked if I would be interested in collaborating with him on a book that would update information on the ever-changing birdlife of Niagara. John was adamant that this endeavour be a joint venture with equal involvement. In April of 2005, I enthusiastically accepted the offer because I knew that if I didn’t get involved then, I never would.

After several meetings, we determined what we wanted to accomplish in writing such a book and what each of our responsibilities would be. Furthermore, we discussed the inclusion of bird-related subject matter of a kind that would not commonly appear in the same volume as species accounts and standard bird knowledge. Before long, our plans for the content of the book had expanded substantially; we were far beyond checklists.

One of our most important decisions was to agree to broaden the scope of the book by soliciting articles, in addition to those we ourselves would write, from birders in the area who had been involved in projects related to the birds, the natural history or even the social history (as reflected, for example, in the formation of nature clubs and societies) of Niagara. They would be asked to submit chapters on a variety of topics, all of which were relevant to the Niagara Region during the 1966-2006 time frame of the book. Detailed species accounts of all the birds found in Niagara would constitute a significant element in the book and would provide for a comparison of the status and abundance of present bird populations with those of earlier times. Since those early meetings, frequent changes in our thinking have taken place; however, updating the recorded information on the birdlife of Niagara for the specified 41-year period has remained our primary objective.

This book is intended for anyone interested in Niagara’s avifauna, but non-birders will also find the content absorbing. Here, then, for your enjoyment is a compilation of the changes in the avian diversity of Niagara over the 41 years from 1966-2006. Included as well are more than 500 exceptional photographic images of Niagara birds, all in colour, together with a number of outstanding black-and-white bird drawings.

Kayo J. Roy
Fonthill, Ontario
March, 2010
Spotted Sandpiper
Barry Cherriere
MONTAGUE CHAMBERLAIN, AUTHOR OF A Catalogue of Canadian Birds, with Notes on the Distribution of the Species (1887), laments in his Preface the very narrow limits to the knowledge of birds in Canada in the late 1800s. The reason for ornithology not making the advances in Canada that it had made in other countries he attributes to “the leading scientific men of the Dominion, who consider that all that can be learned about our fauna is now known to science.”

Chamberlain also refers to the correspondence he had on this subject with several eminent American ornithologists. One of these was Professor J.A. Allen of the American Museum of Natural History in New York, who writes to him as follows:

I have long watched with interest the reports of the Canadian Survey, and have been disappointed to find the Natural History portion of the work receiving so small a share of attention, where the field is so inviting and as yet so little worked…. No portion of this continent north of Mexico offers so inviting a region for natural history exploration as the great northern interior, where only the most superficial harvest has been reaped.

Another of Chamberlain’s correspondents, Dr. Elliott Coues of Washington, similarly disappointed by the limitations of ornithological research in Canada, writes to him of the “great amount of work that needs to be done before your country can stand side by side with the United States in this branch of science.” Coues does, however, acknowledge the work of Canadian Thomas McIlwraith. He also credits recent advances to the Geological Survey of Canada but inquires “whether it would be possible for the Survey to include some professed Ornithologist in its corps”.

Such comments by distinguished American ornithologists indicate how far Canada was behind at the end of the nineteenth century on matters ornithological. Much has been done since then to correct this situation, and Chamberlain, Allen and Coues would no doubt be enormously respectful today of the achievements of so many professional Canadian scientists of all kinds, of their students, and even of the increasing numbers of amateur birders who make their own impressive contributions. The depth and scope of the ornithological literature now available in Canada demonstrate the
advances made over the past 100 years. However, since much of this material languishes unpublished in the "special collections" of libraries and museums or in the hands of volunteers of natural history societies, problems of storage and retrieval abound. The desirability of having available a compiled and published version of all the pertinent ornithological data of a given area becomes obvious. Two substantial works, *Birds of Hamilton and Surrounding Areas* (Curry 2006) and the second *Atlas of the Breeding Birds of Ontario* (Cadman et al. 2007), are current examples of the published accumulation of data related to specific areas.

As for our book, we have focused on the Regional Municipality of Niagara as our area of study, not only because we have lived and birded here for more than 35 years, but also because the birding experiences it offers are among the richest in Ontario. We want this to continue to be the case. We believe that it is through learning as much as possible about our birds, and by being aware of their numbers and needs, that we shall help preserve them for our grandchildren and many future generations to enjoy.

This is hardly a new idea. For a 1926 publication, *Birds a National Asset*, the provincial Ministers and Secretaries of Agriculture were invited by the Canadian National Parks Branch of the Department of the Interior to express their views on the value of birds. In his response, Melville Cumming, Secretary of Agriculture for Nova Scotia, makes the point that each species represents a unique, irreplaceable outcome of evolution, invoking as an example the Passenger Pigeon and its fate:

*It is clearly in the interests of the entire human family to prevent in future the work of extermination that has taken from us forever the Passenger Pigeon and other once numerous species and is threatening still others with complete destruction.*

We had another reason for producing this book — simply that it was time. The most recently published documentation of the birds in Niagara was Roy W. Sheppard's *Bird Life of Canada's Niagara Frontier*, a three-part work that appeared in 1960, 1968 and 1970. Clark S. Beardslee and Harold D. Mitchell compiled the comprehensive *Birds of the Niagara Frontier Region* in 1965, which was updated in 1970 by Harold D. Mitchell and Robert F. Andrle.
It has been more than 36 years since the most recent of these publications was launched, and during those years a considerable amount of change has occurred in the habitat and in the numbers and kinds of avian species seen here. Our objective was to present in a single volume a coherent, updated picture of these changes.

To be more precise, our book covers the period 1966 to 2006. It is divided into four parts, each of which has a unique focus and function. Part 1 consists of articles that set the stage for an understanding of the history (particularly the birding history) and geography of the Niagara Region. The articles in Part 2 are organized according to season, from spring through winter, beginning with an all-seasons section. They concentrate closely on the birds themselves at different times of the year, and they vary widely in style and approach, from the traditionally academic and/or experimental to the anecdotal. We feel that one of the greatest strengths of our book is the range of backgrounds and life experiences our contributors bring to the activity of birding and to the challenging task of writing about it. A glance at the biographies in Part 4 will reveal the variety of careers and interests represented by the contributors. Part 4 also contains a description of locations in the region that have yielded unusual and diverse species of birds over the years.

Long-time birders in the area, Katherine Stoltz and Drew Campbell, have painstakingly researched these birding hotspots and have provided directions to them that are as accurate and helpful as possible. Universal Transverse Mercator (GPS) coordinates are included. These could prove very useful to birders in the future if names of streets change or hotspot sites are built over.
Part 3 contains accounts, contributed by a number of authors, of each of the 368 species recorded in Regional Niagara. These are arranged according to the American Ornithologists’ Union Check-list, 7th edition and all its supplements through 2008 (AOU 1998). The main focus of each account is to identify where, when and how frequently each species was seen in Niagara during the period 1966 to 2006. Data from bird records prior to 1966 are included where relevant.

Who is this book for and how might it be used? This book is not a field guide. Excellent books of that type exist already, and we do not intend to add to their numbers. Our purpose here is to describe the avian diversity in Regional Niagara over the 41-year period 1966 to 2006 and to provide a base from which to note future changes in this attractive, bird-rich corner of Ontario. The book will be of assistance to professional and amateur ornithologists, historians, researchers and students of related disciplines. Regional municipalities should also find this material helpful in their land use deliberations. Our readers, however, do not have to be birders to enjoy the book. Many of the articles deal with subjects that members of the general public would find intriguing. “Peregrine Falcon Hacking in Niagara” and “The Owl Foundation and West Nile Disease in Niagara” stand out as obvious examples. The Niagara Region is bounded on the north by Lake Ontario, on the south by Lake Erie, on the southwest and part of the west by Haldimand County, on part of the west and northwest by the City of Hamilton and on the east by the international border that runs along the middle of the Niagara River, separating Canada from the United States. Birds, of course, do not acknowledge political boundaries; many of those described in our book, especially those observed
on the Niagara River, could as easily have been seen from the American side of the river. The border between the Canadian and American sides of the river is similarly permeable to birders and the information they glean from their observations and each other.

Our book has benefitted significantly from the willingness of birders living across the Niagara River and in Hamilton to share their records with us. A great deal of information was also obtained from birders living in the Niagara Region. We are very grateful to all these individuals for making their recorded observations available for our study. Surely the publication of a new book incorporating this wealth of information is not only warranted but long overdue.

**LITERATURE CITED**


PART ONE: THE NIAGARA REGION

Red-necked Grebe
Raymond Barlow
PART ONE PREPARES READERS for their encounter with the birds of Niagara by providing a broad geographical, historical and ornithological orientation to what is now called the Regional Municipality of Niagara. Since the first commentaries of Jesuit priests visiting the area in 1640, many people have written about the birds of Niagara. Although our book focuses on the period from 1966 to 2006, we wanted to supply some historical context by including at least a summary of these earlier observations. Marcie Jacklin, a librarian at Brock University in St. Catharines and an avid birder, is uniquely qualified to document such records, as she does in the article “History of Ornithology in the Niagara Region from the 1600s to the 1960s.”

Authors David Brown, John Middleton and Katelyn Vaughan, all associated with the Department of Tourism and Environment at Brock University, follow with the article “The Land Between the Lakes: An Overview of the Niagara Region,” in which they describe the climate, geology and ecology of the area under study. Included is a discussion of the impact of the human population on the region, with an emphasis on the current thriving grape and wine industry. We are reminded indirectly here and in other articles in this book that a study of birds will inevitably be as much about human beings as about birds.

The final essay in Part One also illustrates the social nature of bird study. Four natural history clubs have been incorporated in the Niagara Region: the Buffalo Ornithological Society in 1929, the Peninsula Field Naturalists Club in 1954, the Niagara Falls Nature Club in 1966 and the Bert Miller Nature Club in Fort Erie in 1995. Interesting historical details about these clubs, unavailable from other sources, have been provided by various club members and included in the article “Natural History Clubs in Niagara” by Janet Damude, Michael Hamilton, Marcie Jacklin, Earl Plato, Kayo Roy, Timothy Seburn, Richard Stockton and Gustave Yaki.
History of Ornithology in Regional Niagara from the 1600s to the 1960s

Marcie L. Jacklin

Niagara has a rich natural history as a result of a favourable climate and an abundance of freshwater sources. Native people are believed to have lived and hunted in the Niagara Region since 9000 B.C.E. The habitat was mostly deciduous forest until the beginning of the Woodland Period in about 1000 B.C.E., when the native population changed their food economy from hunting and gathering to agriculture and deforestation began.
The Early Explorers

Although explorers visited the Niagara area, many did not document their travels, and of those who did, few mentioned the birds they saw. The earliest written records date from the early 1600s when Jesuit priests began travelling to the Niagara Region and living with the natives. One of the first reports from Niagara, by Father LeJeune in 1640, recorded “multitudes of Wild Turkeys” seen near Lake Erie. Early explorers also encountered geese, waterfowl, and millions of Passenger Pigeons, which darkened the sky during migration. Pigeons and turkeys, often the only birds mentioned, must have been of great importance to the pioneers as a food source. Early explorers frequently referred to the abundance of these species. In 1678, the priest often credited with being the first European to describe Niagara Falls, Father Louis Hennepin, observed “Wood-Pidgeons” (Passenger Pigeons) near the falls in such great numbers that they appeared like a cloud. He also saw great numbers of Wild Turkey-Cocks between Lakes Erie and Huron.

Another seventeenth-century explorer, Baron Louis Lahontan, also reported that along the north coast of Lake Erie there were great numbers of turkeys and that he often saw flocks of 50 or 60 birds.
The Eighteenth Century

In the mid-eighteenth century, Carolus Linnaeus, the Swedish biologist who developed the taxonomic system, encouraged botanist Pehr Kalm to collect information on economically useful plants in North America. Kalm was commissioned to do so by the Royal Swedish Academy of Sciences with specific instructions to study the botany of Canada, a land similar in climate to Sweden. Unfortunately, Kalm’s diary of his trip to the falls in August 1750 was lost, but an account of this trip is included in a later work by Bartram and Kalm. This work was published by Bartram (whom Linnaeus once called the “greatest natural botanist in the world”) and Benjamin Franklin, one of the founding fathers of the United States. Kalm was the first explorer to report the death of swans, geese, ducks, teal and water-hens (now moorhens) that would fly in the fog above the falls and then “fall down and perish in the water… very often great flocks of them… going to destruction in this manner.”(4) Apparently, the birds were caught in the current above the falls and could not rise from the rapids. According to Kalm, in September and October of each year so many birds perished this way that the garrison at Fort Niagara could live mainly on this resource.(22)

Elizabeth Simcoe, wife of John Graves Simcoe, the first Lieutenant-Governor of Upper Canada, is often overlooked as one of the earliest European naturalists in the Niagara Region. The Simcoes arrived in Niagara in the summer of 1792. She was an avid naturalist who spent much of her free time over the next five years outdoors, frequently camping along the Lake Ontario, Niagara River and Lake Erie shorelines. One of her first sightings was a Bald Eagle near Navy Hall in Niagara-on-the-Lake. During her stay, she visited a Captain Darling, who showed her stuffed meadowlarks, recollects (Cedar Waxwings), Red-winged Blackbirds, Scarlet Tanagers and Grand Duc (Great Horned) Owls. In March 1793, while travelling on the river near Fort Niagara, she saw thousands of ducks she called Cawines, possibly the local name “Cowhens” for Long-tailed Ducks. On 31 August 1795, she noted that Wild Pigeons (Passenger Pigeons) were in “such numbers that besides those they roast and eat at present, they salt the wings and breasts of them in barrels and at any time they are good to eat after being soaked.” She also recalled a pond by her house where hundreds of them drank at a time and a mill near the whirlpool where the trees would be covered with pigeons.(20)
Colonel Henry Hope of Niagara commented on the numerous Passenger Pigeons in a report sent to Lord Sydney in 1785. When referring to the residents of the fort, he remarked that “the quantities of wild pigeons and fish, which are taken in abundance during the same period (June 1st to September 1st) will contribute to their support.”

Another early explorer, Isaac Weld, confirmed the enormous size of Passenger Pigeon flights in the Niagara area. He recorded a report from a passenger on a ship from Niagara to York (now Toronto) who saw a flock of Passenger Pigeons flying in the opposite direction of the ship’s course for the entire length of the trip, the flight even continuing after he had landed in York. The mass of birds must have been at least 129 kilometres in length. Weld noted that such large flocks were seen only every seven or eight years; locals referred to these as Pidgeon Years.

The Early Nineteenth Century

Earnest study of bird life in Niagara by amateur naturalists did not begin until the early nineteenth century, when people began travelling to view Niagara Falls. Since roads were poor and transportation not generally available, Alexander Wilson, often referred to as the Father of American Ornithology, walked from Pennsylvania in October 1804 to visit the falls. The round trip of 2,023 kilometres took him 59 days. Conditions were so rough on the return trip that his companions abandoned him and he completed the walk alone. While at the falls, he saw a Bald Eagle perched on a snag overlooking the falls, and one of his best known drawings, entitled White-headed Eagle, depicts that scene. Wilson also mentioned the birds and animals that plunged over the precipice to their death. In 1824 another celebrated ornithologist, John James Audubon, travelled to Niagara. Before his visit, Audubon had spent many months in the bush and was almost refused a room and food at an inn because of his appearance.
He wrote of shooting a pair of Great-Footed Hawks (Peregrine Falcons) close to the falls. In 1827, one of the first entrepreneurs in the area, Thomas Barnett, opened the Niagara Falls Museum, which claims to be Canada’s oldest museum. For well over a century, this museum exhibited Barnett’s personal collection of over 5,000 objects, including many stuffed animals and birds from Canada and thought to be of local origin. These specimens were bought by a private collector and relocated to Toronto in 1999.

The Late Nineteenth Century and Early Twentieth Century: The Buffalo Connection

In 1861, the Buffalo Society of Natural Sciences was founded as a community education organization by members of the local Young Men’s Association. The Society’s first president was George W. Clinton, son of New York governor DeWitt Clinton. George Clinton had been Mayor of Buffalo and, at the time of his death, was known as the oldest of American botanists. The stated object of this society was “the promotion and study of the natural sciences.” The study area encompassed the Niagara frontier on both sides of the border.

While he was pastor of a Buffalo church from 1881 until 1884, the Rev. James Hibbert Langille wrote “Our birds in their haunts.” A chapter entitled “Tenting along the Niagara River” describes a camping trip he took in August 1882 at Fort Erie, where he saw Short-billed Dowitchers, Pectoral Sandpipers, many Sanderlings and a few Water Pipits. He also reports on the abundance of ducks during fall migration, including hundreds of Common Goldeneye, numerous Long-tailed Ducks, many Ruddy Ducks and hundreds of Red-headed Ducks (Redheads). He noted that the Gadwall was one of the rarest ducks on the Niagara River.

Buffalo birder and author, Clark Beardslee, noted that “before 1910 few people had cars and poor roads made trips into the country hazardous.” As access to rural areas increased in the late 1800s and early 1900s, collecting eggs, nests and bird skins became popular, especially for middle and upper class residents in the Niagara area who could afford the time and expense of indulging in this hobby. Some of the contributors to the records or reports in the literature were Ottomar Reinecke, George A. MacCallum, James Savage and James Fleming.

Ottomar Reinecke, co-owner of a Buffalo newspaper, The Free Press, was also vice-president of the Buffalo Society of Natural Sciences. His egg collection was considered one of the most comprehensive private collections in the United States. Reinecke was known for going out on his collecting trips with friends to the north shore of Lake Erie. One significant contribution was a nesting record for Red-headed Woodpeckers in Sherkston on 31 May 1895. In 1912, he wrote “Personal observations and notes on breeding, migrant or visiting birds on the Niagara Frontier,” which was a combination of his own sightings and those of Bergtold’s “A list of the birds of Buffalo and vicinity from 1889.” Sadly, Reinecke is also known as the person who shot the last Passenger Pigeon in Sherkston, Ontario, in mid-September 1891. Only 25 years earlier in 1866, William King, a soldier at Fort Mississauga in Niagara-on-the-Lake, reported seeing in May a “grand migration of the Passenger Pigeon.” He estimated there were millions of pigeons in a flock that was 1.5 kilometres or more wide, 480 kilometres long and that passed overhead for 14 hours.
George Alexander MacCallum practised medicine in Dunnville, Ontario, from 1868 to 1901. He reported many interesting sightings from this area, including two Eskimo Curlews he collected in 1894, likely from the Dunnville area.

James Savage, a civil engineer and businessman in Buffalo, was known from the age of twenty as a stalwart of Niagara Region ornithology. He contributed records to Bergtold's list, and he became the first vice-president of the Buffalo Society of Natural Sciences in 1921. One of his more interesting observations was of a Western Sandpiper in September 1897 at Fort Erie Beach. Like Kalm, who reported a large die-off of swans at Niagara Falls in 1751, Savage and Fleming reported that on 15 March 1908 approximately 128 swans were swept over the falls. Fleming speculated that the swans might have been tired and hungry and therefore unable to fly once they had floated into the rapids above the falls. Fleming also reported 22 swans going over the falls on 23 March 1911. The river claimed its largest toll on 4 March 1912, when between 126 and 200 swans were swept over, and at least 125 died. Many Canvasbacks and Common Goldeneyes were also killed this way that spring. Since then, in 1922, 1923 and 1951 there have been reports of numerous swans being swept over the falls. Fleming was a well-respected ornithologist and was elected president of the American Ornithologists' Union in 1932.

Early Twentieth Century: Early Birders in Niagara

During this period, the local bird life was changing: the first European Starling in Canada was seen at Niagara Falls in 1914, and the first Northern Mockingbird for Niagara was seen on 12 May 1928.

The birds were not the only thing that was changing. By 1920, the increasing availability of binoculars and field guides meant that many people could engage in birdwatching as a hobby. This also led to a shift from collecting birds, nests and eggs to documenting and listing sightings. For example, in 1918 Laing described the migration of more than 100 species of birds along the lakeshore at Beamsville.
Many local birders contributed sightings to James L. Baillie’s landmark 1936-1937 publication, *The Distribution of Breeding Birds in Ontario*. G. J. Clout reported the majority of nesting records for the Niagara Region in the period from 1932 to 1936. The majority of nests he found were in Lincoln County. Notable among them was a heronry of 37 nests, as well as nests of Yellow-billed Cuckoo, Marsh Wren, Vesper Sparrow and Brown Thrasher. W.P. Young contributed seven records from the Niagara Region between 1924 and 1926, including Loggerhead Shrike and a then rare Northern Cardinal. W.E. Hurlburt provided records for Cerulean Warbler in 1936 and Orchard Oriole in 1929. (3)

The best-known field ornithologist in North America, Roger Tory Peterson, visited the Niagara Region in December 1933 where, with Harold Mitchell, he identified three female or immature Harlequin Ducks and an Iceland “Kumlien’s” Gull. (29) On another trip, he reported a Laughing Gull at Niagara Falls on 21 October 1935. (38)

Roy W. Sheppard contributed significantly to ornithology in Niagara. He observed the first European Starling in Canada at Niagara Falls in 1914. (45) In October 1935, Sheppard reported that thousands of Blue and Lesser Snow Geese (these two are now the single species Snow Goose) were seen along the Niagara River. Unfortunately, on the night of 27 October, hundreds of these geese were swept over the falls; at least 200 were collected from the water the next day. (34) In 1936 Sheppard, Hurlburt and Dickson published *A Preliminary List of the Birds of Lincoln and Welland Counties, Ontario*. (44)
Between 1936 and 1954, Sheppard went on to write more than a dozen articles in The Auk, the official journal of the American Ornithologists’ Union and the Canadian Field-Naturalists. Several of these describe rare or unusual species on the Niagara Frontier: Willet, American [Common] Eider, Forster’s Tern, Sycamore (Yellow-throated) Warbler, phalaropes and waterbirds.

Formation of Nature Clubs in the Niagara Region

During the 1920s and 1930s two important organizations were formed in the Niagara Region. The Buffalo Ornithological Society was established in 1929 to promote the study of birds in the Niagara Frontier Region, including nearby Ontario as well as western New York State. Two years later the Federation of Ontario Naturalists was established to protect and restore natural habitats through research, education and conservation. Then in 1954, a number of regional birders formed the Peninsula Field Naturalists, the first nature-based club in the Niagara Region. In 1965, Beardslee and Mitchell wrote Birds of the Niagara Frontier Region: An Annotated Check-List, which was based largely on records accumulated by the Buffalo Ornithological Society in their study area. This was a time of change in field ornithology heralded by better transportation, better optics and improved field guides. The authors include many Niagara sightings and acknowledge the following Canadian contributors: James Baillie, Robert Curry, G.H. Dickson, Adrian Dorst, Donald R. Gunn, William W.H. Gunn, Norman Haultain, Grant Hawes, W.E. Hurlburt, George North, F. Salisbury and R.W. Sheppard.

In 1966, shortly after the publication of Beardslee and Mitchell’s book, the Niagara Falls Nature Club was founded. In 1960 Sheppard produced a key publication entitled Bird Life of Canada’s Niagara Frontier, followed by a supplement in 1968. A second edition was published in 1970 by the Niagara Falls Nature Club. In the later edition, Sheppard acknowledges some of the more active birders in the region at that time: W.L. Putman, W.E. Hurlburt, G.H. Dickson, Harold Lancaster, Dan Salisbury, Gustave Yaki and Connie Kintney.

There have been vast changes along the Niagara River since Father Louis Hennepin walked in sandals from Queenston to the falls in December 1678. One wonders what he would make of the falls and their surroundings today and of the many birders he would observe hauling state-of-the-art telescopes and binoculars from their comfortable vehicles.

LITERATURE CITED

Because of the large number of references in this article, we have used a numbered citation system in order to make the text less cluttered and more readable.


28. McIlwraith, T. 1894. The birds of Ontario: Being a concise account of every species of bird known to have been found in Ontario, with a description of their nests and eggs and instructions for collecting birds and preparing and preserving skins, also directions how to form a collection of eggs. 2nd edition. Unwin, London.


Carolus Linnaeus, 1707 – 1778

The Swedish naturalist, botanist, zoologist and physician Carolus Linnaeus wrote his 18th Century Systema Naturae over a period of many years. In it, he claimed that a classification for all animals was not just a convenience, but an acknowledgement that there are various levels of affinity that connect seemingly diverse animals (Wurtz and Repetto 2003).

Linnaeus who founded modern classification also introduced the World to binomial nomenclature (Wurtz and Repetto 2003).

Often called the Father of Taxonomy, Linnaeus’s tenth edition of Systema Naturae (1758) was the first edition to use the binomial system consistently throughout (Koerner 1999).


The Niagara Peninsula is a 40 x 70 kilometre spit of land separating the great inland waters of Lake Ontario and Lake Erie and bracketed at its eastern tip by the fast-flowing waters of the Niagara River. Originally settled by the aboriginal peoples of the Neutral nation and later colonized by European settlers, Niagara comprised some 26 cities, towns, townships and villages by 1966. In 1970, Niagara embraced the province-wide move towards municipal reform and regional governance, and on 1 January 1970 the Regional Municipality of Niagara was formed (RMON 2008). Except for its western boundary, the Niagara Region is congruent with the Niagara Peninsula.

The Niagara Region is a place of borders and interfaces, fragmented and subdivided by natural and anthropogenic features that shape its landscape and determine its ecological and economic importance. This area of 1870 km² is bisected by the prominent...
east-west ridge of the Niagara Escarpment, the north-south waterway of the Welland Canal and the international road and rail links of the Queen Elizabeth Way and the Grand Trunk Railway. The northern part of the peninsula is dissected by numerous creeks and rivers flowing northward into Lake Ontario. The Welland River and Lyon’s Creek wind their interconnected paths across the elevated plains south of the Niagara Escarpment and into the Niagara River. Utility corridors radiate across the peninsula,
conducting electricity from the massive Adam Beck complex on the Niagara River to consumers throughout the Northeast, and road and rail corridors move traffic and freight between Canada and its international trading partners. One international, one federal, two regional, and twelve municipal boundaries divide the area politically, adding jurisdictional fragmentation to the complex patchwork of land uses, engineered landforms, channelled waterways and remnant natural features.

Produced by the Niagara Peninsula Conservation Authority, 2009. See page 698 for details.
The north and south shorelines of the Niagara Region, each roughly 55 km long but never more than 50 km apart, are buffeted by the waters of two of the largest lakes in North America, and the interior of the peninsula forms a diverse patchwork of agricultural lands, urban settlements and natural areas. Habitats range from the Niagara Glen with its unique communities of plants and animals characteristic of more northerly latitudes, through the acidic ponds and ericaceous vegetation of the Wainfleet Bog, to the Carolinian forests of the south-central and eastern peninsula. In Pelham, the geographical heart of Niagara, the steeply dissected glacial re-entrant valleys of Short Hills Provincial Park, the Fonthill Sandhill Valleys, and the Fonthill Kame create a patchwork of ecologically diverse microhabitats.

Despite the many divisive influences on this narrow stretch of land, the Niagara Region remains a rich and diverse habitat for birds and a significant waypoint on the migratory pathways of many transient species. The promontories extending into Lakes Erie and Ontario are the first landfalls for many exhausted migrants, and the steep vegetated corridor of the Niagara Escarpment forms an east-west conduit for terrestrial transients. The fast-flowing, often ice-free Niagara River is a renowned winter gull and waterfowl hotspot, and the Welland Canal, the Adam Beck reservoir and various regional wastewater treatment plants create aquatic microhabitats that attract birds in all seasons. Increasing fragmentation of the already diverse natural landscapes through human influence, especially in the past half century, has had many impacts on bird populations in the area, but the Niagara Region still provides important avian habitats.

This article provides an overview of geology, climate, ecology, human activity and future development in the Niagara Region, the changing dynamics of which will profoundly influence the prospects for bird life in the area.

GEOLOGY

The Niagara Escarpment and the Great Lakes

The Niagara Escarpment has been acknowledged as one of the world’s most significant geological features and, as such, has been designated a World Biosphere Reserve by the United Nations Educational, Scientific and Cultural Organization (UNESCO). This designation recognizes the Niagara Escarpment as an internationally significant ecosystem for its special environment and its unique environmental plan (Ontario’s Niagara Escarpment 2007).

In Ontario the Niagara Escarpment extends 725 km from Queenston Heights on the Niagara River to Tobermory at the tip of the Bruce Peninsula in Georgian Bay, in places reaching heights of several hundred metres. It originated between 430 and 450 million years ago when this area lay under a shallow sea. Rivers flowing into this ancient sea carried sand, silt and clay, which eventually formed thick layers of sediment. Lime-rich organic material from the abundant sea life also accumulated during this time. Over millions of years these materials became compressed into massive layers of sedimentary rocks and ancient reef structures that can still be seen on the Niagara Escarpment today. Some of the layers now consist of soft shales and sandstones, while others are made up of the harder dolomitic limestone (Niagara Escarpment Commission 1990) coveted by the aggregate industry. Only after the ancient sea withdrew some 300 million years ago did the escarpment begin to form. The erosion of softer shales led to large blocks of the resistant dolostone caprock breaking off and creating the vertical face of the present day escarpment. The escarpment has also been dramatically altered by glaciations over the last one to two million years and is still affected by weathering and erosion (Tovell 1992).
During the Pleistocene era (the last 1.6 million years), huge glaciers advanced and retreated four times in rapid succession throughout North America. The last ice age, the Wisconsin ice age, began 23 thousand years ago and covered Canada and the northern United States with a layer of ice 2-3 km thick. Not only was the Niagara Escarpment exposed during this time, but the Great Lakes were also formed as meltwater began to drain into the hollows and ruts that had been scraped into the land by the glaciers (Moriyama & Teshima Planners Limited 1988). The deeply dissected glacial re-entrant valleys of central Niagara were formed by these processes.

Soils

The region also contains high-quality agricultural soils such as the Halton clay that overlies Queenston shale bedrock in most places and relatively deep sandy loams that originated in the ancient lakebeds and which overlie the clay soils in the region’s Lake Iroquois Plain north of the Niagara Escarpment. The soils that have developed in this region range from imperfectly drained silty clay to moderately well-drained sandy loam (Shaw 2005). The other two major physiographic areas of the region include the Niagara Escarpment and the Haldimand Clay Plain. The Niagara Escarpment separates the Iroquois Plain in the north from the Haldimand Clay Plain in the south. The Haldimand Clay Plain lies between the Niagara Escarpment and Lake Erie. Good air drainage attributed to the relatively steep slopes of the Fonthill area, together with well-drained, light-textured soils, make this area uniquely suited for specialty crops such as peaches, sour cherries, apples and cold-hardy grape varieties. The plain then dips southward toward Lake Erie, becoming flatter. Extensive field crops such as corn, soybeans and hay are cultivated on the mostly heavy, fine-textured and poorly drained soils (Shaw 2005).

Climate

As a result of the geological changes that created the Niagara Escarpment and the Great Lakes, the Niagara Peninsula now experiences mild winters and temperate summers—ideal conditions for certain specialized agricultural practices. Its location just north of the 43rd parallel would normally endow this region with a continental climate characterized by hot summers and cold winters. However, the two Great Lakes exert a buffering effect. Its position between the cool waters of Lake Ontario and the warmer waters of Lake Erie exposes the region to strong lake breezes that help to lower summer temperatures (Shaw 2005). In the winter, the lakes help to moderate cool temperatures. This effect allows cold-sensitive fruit trees and grapevines to flourish at latitudes further north than their normal range (Northwood 2000). The Niagara Escarpment also shelters the Iroquois Plain from prevailing southwest winds, decreasing winds on the leeward side and creating a protected zone that extends 0.3-2.5 km outward from the base of the escarpment (Shaw 2005).
However, as is characteristic of mid-latitude climates, the weather in the Niagara Region is highly variable, with occasional warm, moist, unstable subtropical air streams sweeping in from the northeast during the winter and spring, but with cold infusions of Arctic air in the spring and fall. The region has also been classified as having a humid continental climate. Precipitation in the region is abundant and almost evenly distributed throughout the year (Shaw 2005).

**Climate Change**

There is growing evidence that rising levels of carbon dioxide (CO2) will have drastic effects on ecosystems throughout the world. The predicted consequences of climate change in southern Ontario include increased summer temperatures, decreased precipitation rates, extreme weather events and major insect and disease outbreaks (Colombo et al. 1998). Changes in recent decades are apparent at all levels of ecological organization: declines in population, alterations in life histories, shifts in geographic range, differences in the composition of species in communities and the extinction of species both locally and globally (McCarty 2001).

A study on the impact of climate change on spring temperatures and the breeding of Tree Swallows in Southern Ontario revealed that the mean maximum daily temperatures in April and May increased from 1969 to 2000 by an average of 0.022 and 0.031°C per year. Mean minimum daily temperatures increased by 0.024 and 0.038°C per year, and mean daily temperatures increased by 0.027 and 0.040°C for each month respectively (Husnell 2003).

**ECOLOGY**

**Great Lakes**

Lake Ontario and Lake Erie have a history of contamination by industrial chemicals, agricultural fertilizers, untreated sewage and phosphates from laundry detergents. During the 1960s and 1970s, concern arose that the lakes were severely polluted and eutrophic, and that fish populations were dying. Since that time, legislative initiatives such as the 1972 Great Lakes Water Quality Agreement between Canada and the United States have sought to clean up the industrial and municipal waste. There have been some improvements in water quality since the 1960s, but the condition of the lakes remains a major environmental concern (Environment Canada 2004).

**Forest Habitat**

The forested landscapes of the Niagara Region are primarily deciduous. The Ontario Deciduous Forest Region lies along the northern shores of Lakes Erie and Ontario and extends across to the southeastern shore of Lake Huron. Only about 450,000 hectares
of mainly private forests remain in this area of 3 million hectares. Tree species found here include oak, maple, basswood, walnut and butternut. Within the region is the Carolinian forest, noted for distinctive plant species such as the Kentucky coffee tree, the tulip tree and sassafras, as well as animal species such as the southern flying squirrel. None of these species is found anywhere else in Canada (OMNR 2006).

**IBA Sites**

The Niagara Region is home to five sites that have been designated Important Bird Areas (IBA) by BirdLife International (www.birdlife.org). Point Abino, Beamer Memorial Conservation Area and Twelve Mile Creek have all met the criteria for Nationally Significant IBAs, while the Niagara River Corridor and the Port Colborne Breakwater and Mainland have met the criteria for Globally Significant IBAs. All the IBAs either extend over water or lie adjacent to water, a fact that demonstrates the importance of lakes, rivers and creeks for the breeding and migratory species of birds in the Niagara area.
Wetland Habitat

A high proportion of the fish and wildlife species in Ontario inhabit wetlands during part of their life cycle. Unfortunately, in order to accommodate urbanization and modern agricultural practices, more than 80% of the original wetlands of southern Ontario have been drained, dredged or otherwise altered since European settlement began. The negative impact of disruptions to wetlands is reflected in the fact that many of the species at risk of extinction in Southern Ontario are highly dependent on wetlands. A part of the long legacy of agriculture in Niagara has been the draining of such lands. In the Wainfleet Bog, for example, drainage and peat extraction have negatively impacted these once-extensive wetlands in the southwest of the region.

Protected Areas

A number of areas within Regional Niagara are protected by federal, provincial or regional jurisdiction, only one of which (Happy Rolph’s Bird Sanctuary in St. Catharines) has been nominally designated as a bird sanctuary. Table 1 lists these sites.

In recent years, the Ontario Ministry of Natural Resources has updated its wetland maps of Niagara, resulting in the identification and designation of considerably more protected habitat. This is beneficial for wetland bird species, but the reclassification of large tracts of industrial land as provincially significant wetland has also engendered considerable local controversy and political opposition. For example, local municipal officials in Fort Erie, fearing economic devastation in the southern part of the peninsula, have requested a provincial review of the new wetland boundaries.

The Niagara Peninsula Conservation Authority (NPCA) has received funding under the Ontario Trillium Foundation to construct an inventory and computerized database of natural areas that will provide an important ecological, scientifically defensible basis for protecting natural areas in the NPCA watershed. The project is slated for completion in 2010 (Niagara Peninsula Conservation Authority 2008).

Table 1. Protected areas in Niagara

- Ball’s Falls Conservation Area
- Beamer Memorial Conservation Area
- Cave Springs Conservation Area
- Chippawa Creek Conservation Area
- E.C. Brown Conservation Area
- Happy Rolph’s Bird Sanctuary
- Humberstone & Willoughby Wetlands
- Long Beach Conservation Area
- Louth Conservation Area
- Morgan’s Point Conservation Area
- Mountainview Conservation Area
- Mud Lake Conservation Area
- North Bismarck Slough Forest
- Port Davidson Weir Conservation Area
- Rockway Conservation Area
- Short Hills Provincial Park
- St. John’s Conservation Area
- Stevensville Conservation Area
- Sugar Bush Conservation Area
- United Empire Loyalist Conservation Area
- Virgil Dams Conservation Area
- Wainfleet Bog Provincial Wildlife Preserve
- Wainfleet Wetlands
- Woodend Conservation Area
- Woolverton Conservation Area

Black-crowned Night-Heron
Kenneth Newcombe
Species at Risk

At present there are 182 designated species at risk in Ontario. Of these 182 species, 25 are birds (OMNR 2006). Of the species that breed in Niagara, Hooded Warbler, Least Bittern and Peregrine Falcon are listed as threatened while Red-headed Woodpecker and Short-eared Owl are listed as species of special concern. Chimney Swift and Common Nighthawk are listed as endangered by the Committee on the Status of Endangered Species in Canada (Species at Risk Act 2008).

HUMAN FACTORS

Urban Expansion

After the Second World War, the area that was later to become the Niagara Region experienced a high demand for housing, which resulted in widespread, low-density urban expansion and helped support an increasingly automobile-dependent society. Highway development in the Niagara Peninsula increased significantly. The Queen Elizabeth Way evolved from a lightly travelled, low-speed recreational parkway to a high-speed utilitarian transportation corridor (van Nostrand 1983). Construction was initiated on Highways 405 and 406 in 1963 and 1965 respectively, and further development has occurred on both corridors in the intervening decades.

The Niagara economy was hit hard by the recessions of the early 1980s and 1990s, and, as a result, the population that had nearly doubled between 1941 and 1966 (Gayler 1994) actually began to decline (Vida 1987). This trend curbed the widespread development that had been encroaching on the region, and subsequent urban development has been relatively minor. Much of this later development, however, has been focused on filling in the space left behind by previous poorly planned, low-density development. Today the demand for urban land is as great as ever (Gayler 1994, 2003). Policy debates concerning future development versus the conservation of precious agricultural resources in the area rage on.

As a result of high housing prices in the Greater Toronto Area, people have increasingly begun looking for housing south of Toronto. The Oakville-Burlington area has received the bulk of this expansion; however, as these cities fill up and the prices for housing rise, more residents are moving south to the Niagara Region (Gayler 2003).

Heavy Industry

During the last century, the Niagara Peninsula became a magnet for heavy industry. Its proximity to both the American border and Toronto, convenient access to major transportation routes such as the Welland Canal, the Grand Trunk Railway and international highways, and the presence of cheap, abundant, and local hydroelectric power from the Niagara River all played key roles in attracting heavy industry. Heavy industrial activity, however, has been in decline for at least the past quarter century, primarily as a result of reduced production by the North American automotive industry, represented in Niagara by such giants as General Motors (Gayler 1994). As a result of these changes in the economy, the local municipalities have been forced to look at new and diversified economic opportunities. In recent years, the tourism industry and agricultural development have supplanted heavy industry in importance.

Despite cutbacks in industrial activity, continuing degradation of air and water quality remains a major concern. Proximity to industrial development in the United
States such as chemical and manufacturing industries on the New York side of the Niagara River and heavy industry in the Ohio River Valley has also contributed to poor environmental quality.

The Niagara River has been identified as an Area of Concern by the United States-Canadian International Joint Commission on the Great Lakes because human activities have impaired the ability of the area to support aquatic life (International Joint Commission 2002). Most of the environmental issues on the Canadian side of the river are associated with non-point sources of pollution, such as excessive nutrients (notably phosphorus) and sedimentation (erosion) from agricultural activities, as well as toxics from storm water runoff. Point and non-point sources from industry are also cited (Environment Canada 2003; United States Environmental Protection Agency 2006). Poor water quality also affects the habitats of the various bird species throughout the region.

The Niagara Region is also prone to high levels of smog, the noxious mixture of vapours, gases and particles that often appears as a yellowish-brown haze in the air. The main components of smog in eastern North America are elevated concentrations of ground-level ozone ($O_3$) and particulate matter (PM). These contaminants combine to give southern Ontario and the Windsor-Quebec City corridor the worst air quality problems in Canada (RMON 2006). The graph indicates the number of smog advisories that have been issued by the Ontario Ministry of the Environment since 1993. These records point to an overall increase in smog advisories and suggest that the problems with air quality are increasing.

### Tourism

The economy of Niagara is becoming increasingly dependent on tourism. Current statistics reveal that more than 12 million tourists visit the Niagara Region every year (Tourism Niagara 2007), although recent increasing fuel prices and less favourable exchange rates caused a decline of 14% in American tourist visits to Ontario between 2006 and 2007 (Ontario Ministry of Tourism 2007). Recreational activities such as exploring Niagara’s ecological and geological features along the many hiking and biking trails, cultural events such as the Shaw Festival and agritourist attractions such as wine tours, fresh fruit markets and festivals all bring tourists to the region.

These tourism-related developments and activities are having an impact on the natural areas. For example, along the Niagara River, an Important Bird Area, development of high rise hotels near Queen Victoria Park has severely reduced the number of trees and natural areas available for birds and other wildlife. The Niagara gorge provides another example: there, unenlightened visitors have been known to trample through the highly sensitive ecosystem, disrupting natural processes and endangering the flora and fauna.
The extensive trail and greenway network of the region continues to attract a wide range of users, including equestrians, mountain bikers, rollerbladers, birders, cross-country skiers, geocachers and off-road motorsports enthusiasts. The initial mapping of existing and potential trail and greenway infrastructure was undertaken by the Niagara Greenways Network in the early 1990s. Since then, the decommissioning of surplus railway rights-of-way and the provision of funding for trail and greenway development by agencies like the Waterfront Regeneration Trust, the Trillium Foundation and regional and municipal governments, have resulted in new trail links throughout the region, including the Niagara Great Circle Route in the eastern part of the peninsula, the Trans-Canada Trail through Fort Erie, Port Colborne, and Wainfleet, the Waterfront Trail along the Lake Ontario shoreline, the Steve Bauer Trail system in Pelham, and a variety of smaller trails and greenways elsewhere in Niagara (Niagara Greenways Network 1995; Niagara Greenbelt 2008). Though most non-mechanized human uses of trail systems tend to be low-impact, heavily used trail segments can become degraded over time, and a significant human disturbance factor may be introduced into otherwise inaccessible habitat like interior areas of forests. Trail construction and maintenance activities can affect the integrity of natural areas, creating new ecotones and disrupting natural successional processes. Trails can also become conduits for predators and corridors for invasive plant species, potentially affecting bird habitat.

Recent reports prepared for the Niagara Economic Development and Tourism Corporation suggest that Niagara tourism offers enormous economic and investment potential (Gayler 2003). However, without careful planning and management of natural areas, rampant tourism could further threaten bird habitats.

In response to some of these concerns, efforts are being made to reduce the negative impact of tourism and recreation in Niagara. For more than a decade, stewardship groups like the Friends of Short Hills Provincial Park have been publicizing guidelines for responsible use of natural areas and have distributed a Code of Ethics for park use (Stefanovic 1997). The Niagara Parks Commission has requisitioned reports encouraging holistic management of ecologically sensitive natural areas within its jurisdiction that are subject to heavy use from tourists. These reports include management strategies for species at risk in the Niagara Glen and Gorge (Brown et al. 2006) and for the Dufferin Islands region (Wang 2007). Other reports (Plummer et al. 2006; Vaughan et al. 2008) have advanced specific riparian corridor and comprehensive land management strategies for lands under the purview of the Niagara Parks Commission, explicitly acknowledging the tourism and recreation dimension of park land stewardship.

The Ontario Greenbelt Foundation has recently funded sustainable tourism initiatives in the Niagara Greenbelt. These include low-impact environmental interpretation tours aimed at children, families and ecologically sophisticated tourists and residents such as hikers, natural history aficionados and the birding community (Niagara Greenbelt 2008).

**Agriculture**

According to Statistics Canada, Niagara’s farmland is the most productive in the province, with average gross farm receipts (2001) of $5,400 per hectare (RMON 2003). Over the past two decades, agriculture in Niagara has changed considerably. In 1986 poultry, egg and fruit production dominated economically, while greenhouse operations ranked third with 18.6%. By 2001, greenhouse commodities were the most important economically, generating 42.6% of gross farm receipts, followed by fruit production (18.9%) and poultry and egg production (17.8%).
In addition to its traditional agricultural crops, Niagara produces specialized crops that cannot be grown elsewhere in the province. It is one of the few areas in Canada that is capable of supporting the production of cold-sensitive fruit such as juice and table grapes, wine grapes, peaches, cherries, plums, prunes and apricots. However, recent declines in market demand for Niagara-produced juice and table grapes and increasing imports of cheap fresh and processed tender fruits have seriously impacted these industries, resulting in vine pullout and orchard cutting programs. As an example, until recently, labrusca juice grapes were grown extensively throughout the region, but closure in late 2007 in Niagara-on-the-Lake of the last Canadian grape juice processing plant east of the Okanagan Valley signalled the end of a viable juice grape industry in eastern Canada and resulted in a twenty-three million dollar government-subsidized labrusca grapevine pullout program (Debbie Zimmerman pers. comm.). Consequently, vineyards above the escarpment have all but vanished, potentially affecting the distribution and abundance of frugivorous birds that foraged in these areas.

The wine grape industry, in particular, has made a substantial contribution to economic development over the years, and the majority of Ontario wine production occurs in the Niagara Region. According to a May 2006 KPMG study, every $10 million in wine sales translates to $13 million in economic activity in Ontario, and every bottle of Ontario wine sold in the province adds $4.29 in added value to the Ontario economy (Wine Council of Ontario 2008). In 2004-2005, the total retail sales value of Ontario wines was $500 million (Wine Council of Ontario 2008), up from $275 million in 1997 (Northwood 2000). Wine grape production has been largely confined to vineyards below the Niagara Escarpment, where the climate-moderating effects of Lake Ontario create microclimatic conditions favourable to cold-intolerant vinifera wine grape varieties.

In agricultural landscapes, three major factors influence the abundance and distribution patterns of bird species: (1) the type of crops grown on the land; (2) the configuration and physical structure of non-crop habitats such as hedgerows, woodlots and streams; and (3) agricultural practices such as tillage, pesticide applications and harvesting (O’Connor and Shrubbs 1986; Rodenhouse et al. 1995). Many scholars have raised concerns about the response of birds to changes in agricultural practices, especially the application of pesticides and fertilizers (e.g. Askins 1993; Boutin et al. 1999; Fuller et al. 1995; Gard and Hooper 1995; Grue et al. 1991; Jobin et al. 1996; Pimentel et al. 1991). The intensified farming practices taking place now will make these concerns more serious today than they were prior to 1965.

Because of the importance of agriculture to the region, land preservation has focused on agricultural land as opposed to natural areas. While agricultural lands are also threatened by urban development, the environmental impacts of farming practices can be as harmful as those of urban or industrial development. For example, the attraction of new greenhouse operators, who are classified as agricultural, would result in the conversion of land to an essentially urban warehouse use, as well as the increased consumption of fossil fuels for winter heating.

**FUTURE DEVELOPMENT**

Today, the expanding tourism and housing industries are threatening the tender fruit lands of the Niagara Region. So far, Niagara’s urban area boundaries can accommodate the present demands because the population increase has been modest. If the population continues to grow, however, these threats may become a reality (Gayler 2003).
In fact, in spite of Niagara Region’s policy plan directives to establish tighter urban boundaries which date back to the 1970s, urban boundary expansion continues. Approval has recently been given for an easterly expansion of Fonthill and for the development of East Fenwick in the Town of Pelham. Westerly expansion in St. Catharines has been dramatic in recent years. Single-lot and multiple-lot residential development also continues in rural areas in small but significant increments.

The establishment of the Ontario Greenbelt (www.ourgreenbelt.ca) in the Niagara region has meant that some of the environmentally sensitive land and farmland within the region will be protected from urban development. It remains to be seen for how long these boundaries will remain intact and whether or not economic development will come at the expense of biodiversity.

The expansion of highways within the area is also evidence of these development pressures. Expansion of the Queen Elizabeth Way is currently underway to widen the highway from four lanes to six lanes through St. Catharines and Niagara Falls, and from eight lanes to ten lanes through Halton Region. In an attempt to deal with increased traffic volumes and economic development pressures in the Niagara Region, plans are also under consideration to construct a mid-peninsula highway that would bypass the Queen Elizabeth Way and run from Fort Erie through Welland and end in Burlington. Sections of Highway 406 north of Regional Road 20 were also expanded from two lanes to four lanes in 2007 in order to make other less populated sections of the region more accessible (Ontario Ministry of Public Infrastructure Renewal 2006). These development initiatives have been outlined in Places to Grow, a 2006 report produced by the Ministry of Public Infrastructure Renewal.

CONCLUSION

The landscapes of the Niagara Region have changed considerably since 1966, and the nature of future development in the region is still unclear. Highway expansion and agricultural activities, as well as increasing tourism and manufacturing have all affected bird populations over the past four decades. Access to safe water, food, breeding habitat and shelter has been affected by urban expansion, agricultural spraying and runoff, contamination of soil, water and air by heavy industries, recreational activities and the destructive alteration of wetlands. Expansion of the wine industry, continuing changes in the distribution of vineyards as wine grapes replace juice grapes and continued development of large-scale greenhouse operations in Niagara will all influence land use patterns and therefore avian populations.

Although overall human population levels remain relatively stable, new residents and retirees from the Greater Toronto Area and elsewhere continue to filter into the Niagara Region in search of more affordable housing, retirement homes, and larger rural lots. There is continuing pressure to expand residential areas at the cost of highly diverse and vulnerable natural areas and specialty agricultural lands. Provincial regulations such as the 2005 Greenbelt legislation may slow development or redirect it to less vulnerable areas, but the pressures of economic development continue to erode the natural integrity of the Niagara Peninsula. Only economic development consistent with sustainable land use will allow Niagara’s birds to flourish in the future.
LITERATURE CITED


THE PENINSULA FIELD NATURALISTS CLUB
Marcie L. Jacklin

THE PENINSULA FIELD NATURALISTS CLUB began with a letter dated 15 April 1954, written by J.R. Ferguson and George H. Dickson. Both of these gentlemen were employees of the Agricultural Research Institute of Ontario in Vineland. In fact, Ferguson was president of the Niagara Branch of the Agricultural Institute of Canada, while Dickson had authored and co-authored numerous papers on the birds of this area. These included the first checklist for the area, “Preliminary list of the birds of Lincoln and Welland Counties, Ontario,” written in 1936 (Sheppard et al. 1936).

The letter, sent to anyone the authors thought might be interested in nature, invited the recipient to attend a meeting to discuss the formation of a naturalist club in Niagara.
The meeting was held on 26 April 1954; the minutes describe it as the inaugural meeting of the Peninsula Field Naturalists (PFN). Ferguson, acting as chairman, informed everyone present that the aim of the meeting was to form a nucleus for a potential naturalist club in the eastern end of the Niagara Peninsula. Dickson explained in brief the objectives of the Federation of Ontario Naturalists (FON) and introduced the special guest, Dr. William W. Gunn, president of the FON. Dr. Gunn outlined the four main aims of a successful naturalist club and, in addition, stressed that a club had to be enjoyable. A vote was taken and those in attendance voted to form the Club. It was the first nature club to be established exclusively within the Niagara Peninsula.

The following people were appointed to the board: G. Francis Goldring (temporary chairman), J.W. McInally (secretary-treasurer), Mrs. J.A. Selby, Alan J. Smith, George H. Dickson and Dr. W.E. Hurlburt. Other persons present at the meeting were R. Lipsit, H.C. Foster, William McCann, Bert W. Miller, Mr. and Mrs. William Holley, Frank W. Kingdon, W. Goldring, Roger Clarke, M.J. McComb, William L. Putman and Leila M. Biggar. Most of these people became long-term members of the club, serving every year on the executive and participating in field trips and the Christmas Bird Count. The next meeting was set for 16 May 1954 on the lawn of Mrs. J.A. Selby, Lookout Point Road, Fonthill, and included the first field trip to the farm of W.E. Hurlburt. During this meeting, the group decided on the name, Peninsula Field Naturalists, and set the annual membership fee at $1.50. In 1956 Bert Miller, a well-known local naturalist from Fort Erie, wrote an article about the club for the FON. He mentioned that members resided in both Lincoln and Welland Counties and that the area of interest included all of the Niagara Peninsula. He emphasized that the object of the club was to study the plants and birds of the Niagara Peninsula (Miller 1956).

Since the 1950s, the club has offered outings and held indoor meetings. Knowledgeable club members usually lead the outings to various natural areas in the Niagara Peninsula. The indoor meetings generally feature a guest speaker and include reports and sightings from club members. A newsletter, The Peninsula Naturalist, published since 1964, keeps members informed about the activities of the club and features articles about nature in the Niagara area.

Another important undertaking of the club is its current sponsorship of the St. Catharines Christmas Bird Count (CBC). The first St. Catharines Christmas bird outing occurred on 26 December 1954 and covered a large area extending from Niagara Falls to the west of St. Catharines. The first National Audubon Society Christmas Bird Count took place on 26 December 1982 inside a 24-km diameter circle centred 4 km west of Rockway Community Centre. (See also Clarke et al. 1945, 1946).
Aims and Objectives

The stated constitutional aims of the club are “to preserve wildlife and protect its habitat, to promote public interest in and a knowledge of the natural history of the area, and to promote, encourage and cooperate with organizations and individuals having similar interests and objectives.” These goals would appear to be even more relevant today than they were when the PFN was first organized in 1954.

Club Logo

This highly distinctive Peninsula Field Naturalists logo is the creation of Peter H. Stephani of St. Catharines. The scene centres on the Comfort Maple, a sugar maple believed to be 500 years old and located in the Comfort Maple Conservation Area on Metler Road in Pelham.

Activities

Over the years, the club has been involved in many local community activities involving nature and the environment. Following are a few examples.

In 1961, Gerry Wolfram, a local journalist for the St. Catharines Standard, proposed to the PFN that a committee be formed to develop a hiking trail (now part of the Bruce Trail) along the Niagara Escarpment. A committee was formed, and the club president at the time, Bert Lowe, contacted landowners along the route to ask for permission for the trail to cross their properties. He also helped to blaze the trail, and, as a result, the first section of the trail was officially opened in March 1962 in Beamsville. In honour of his contribution, part of the trail in St. Catharines was named the Bert Lowe Side Trail.

In the late 1980s, the Ontario Ministry of Natural Resources (OMNR) conducted a Peregrine Falcon release program in the Niagara area. The president of the PFN at that time, Mary Ellen Foley (now Hebb) approached the OMNR and proposed a hack of Peregrine Falcons in the Niagara Region in cooperation with the OMNR and the Canadian Wildlife Service. Hebb responded to the Ministry’s approval by mounting a round-the-clock team of volunteers from all the local nature clubs and the general public, who monitored the young birds as they matured enough to survive on their own. Her efforts, reported frequently in the local press, generated a great deal of interest in the community and captured the imagination of birders and non-birders alike.

THE NIAGARA FALLS NATURE CLUB

Gustave J. Yaki with Kayo J. Roy and Janet M. Damude

While living in the small community of Lindsay, I (Gustave Yaki) was president of the 70-member Victoria County Naturalists’ Club. When I moved to Niagara Falls in January 1964 and discovered that no organized naturalists group existed in the city, I attended the meetings of the Peninsula Field Naturalists in nearby St. Catharines. As I met others in Niagara Falls interested in nature, I took them with me. Soon, my guests began suggesting that we consider creating our own nature club in Niagara Falls.

During that time, Roy W. Sheppard, in a nature column he wrote for the Niagara Falls Evening Review, mentioned his privately published, 50-page Bird Life of Canada’s Niagara Frontier. I met him to obtain a copy, and on subsequent visits he supplied me with the names of many local people I could contact who shared my interest in nature.

An event in early 1966 helped motivate us further in the formation of a local naturalists club. The City of Niagara Falls was searching for a way to observe Canada’s one-hundredth birthday, which was to be celebrated the following year. Council took out an option for about $70,000 on the Von Mueller property atop the Niagara Escarpment, just west of the Queen Elizabeth Way (the property now known as the Woodend Conservation Area). Its intended use was as a Centennial Nature Park, and the Niagara Peninsula Conservation Authority eventually purchased it for about $365,000. I recall visiting it with Angelo Carrie in May of that spring. What a glorious site and sight! Covered with the blossoms of Spring Beauties and many other wildflowers, the ground was a wonderland of white, as if covered by snow. It would have made a magnificent nature park if left alone.

At that time, however, an aldermanic candidate mounted a strong campaign against this idea, and his criticism resulted in City Council backing off. The Council settled instead for a concrete and glass plaza near City Hall, filled with a multitude of light bulbs. I have heard since that the plaza has been frequently vandalized and is seldom used today by the public, who have apparently forgotten its initial purpose.

A local resident, the late Mary Moses, wrote the only letter published in the Niagara Falls Evening Review opposing the view of that would-be councillor. Only when City Council eventually reversed its decision, did I realize that a local naturalists club was sorely needed. Had we had such an organization, we could have mounted significant support for the nature park idea.

LITERATURE CITED
Having grown acquainted with a number of potential club members, I invited five to meet in the autumn of 1966 to discuss the formation of a club. Present were Angelo Carrie, Howard Martin, Norm Mitchinson, Wendell Palmer, Mike Scordino and I. We jointly compiled a list of potential members, augmented by those names supplied by Roy Sheppard, and notified them of the upcoming founding meeting to be held at Maple Street School, in Niagara Falls, on 15 November 1966. With the aid of some advertising in the Niagara Falls Evening Review, we managed to draw a total of 86 people. Forty-two single and family memberships were issued that evening. Ultimately, there were approximately 400 memberships, with 200 people regularly in attendance at indoor meetings. Once the local club was organized, Roy W. Sheppard willingly allowed his name to stand as the first Honorary President.

Aims and Objectives

The aims and objectives of the Niagara Falls Nature Club as stated under Article 111 of the Constitution shall be (1) to preserve and protect the natural habitat of Niagara, (2) to promote a better understanding and knowledge of the natural history of the Niagara area, for a better understanding of the value of our heritage in nature, (3) to promote, encourage and co-operate with organizations and individuals having similar interests and objectives, and (4) to consider matters of environmental concern.

Activities

THE R.W. SHEPPARD AWARD

In 1986, under the leadership of President Howard S. Martin, the Board of Directors established an annual award to recognize worthy achievement by an individual or a group whose contributions in the areas of conservation, research, education and preservation of nature merit special attention. In tribute to the memory of Roy Sheppard, the club named this award The R.W. Sheppard Award.

WEDNESDAY EVENING WALKS

El Wightman, a long-time club member, now deceased, comments: “In the early 1970s, a few individual members of the Niagara Falls Nature Club would invite people to join them on informal walks through local areas of interest to naturalists. These informal walks became popular and developed into more organized outings known as Wednesday Evening Walks.” They continue to this day.

THE HAROLD MITCHELL NATURE PRESERVE

Lot 29 in the Township of Wainfleet was a Crown Grant in 1796 to Johnson Butler. A 13.3-hectare portion of this parcel of land was to become in 1966 the property of Buffalo birder and author Harold Mitchell to ensure that the land would not fall into the hands of developers. In 1970 the Niagara Falls Nature Club was persuaded by the then 80-year-old Dr. Mitchell to buy the property from him for his cost price of $4,800.00. The club met this challenge, and the purchase was completed with the Federation of Ontario Naturalists (FON) agreeing to secure the property and issue tax receipts to donors. Known as The Harold Mitchell Nature Preserve, the property, located at Long Beach near the Lake Erie shoreline, is now owned by the FON (now known as Ontario Nature), whose Field Guide to
Nature Reserves clearly identifies the initial financial involvement of the Niagara Falls Nature Club. The Niagara Falls club remains the steward of the property, and members make frequent trips to this jewel of wetland woods.

**THE BERT MILLER NATURE CLUB**

*Earl N. Plato, Timothy A. Seburn and Richard A. Stockton*

A singular name and history distinguish the Bert Miller Nature Club in Fort Erie. Albert Weatherstone Miller, better known as Bert, was born in 1882 at Miller’s Creek in Fort Erie on his family’s old homestead. Bert was a naturalist whose enthusiasm influenced all those who participated in his many rambles across the counties of Welland, Lincoln and Haldimand. He became an excellent amateur botanist, well known for finding and propagating rare native plants. During his lifetime, he helped found several organizations in the Niagara Peninsula, including the Peninsula Field Naturalists. Unfortunately, he died before the nature club that would bear his name was created.

Bert would often arrange to take local groups of school children on hikes at Point Abino. On special occasions they would go into the isolated westernmost part of this peninsula, a pristine wildflower forest known as Marcy’s Woods after the Buffalo family that had acquired the property around 1921.

In 1968, the province announced plans to expropriate Marcy’s properties in order to create Abino Woods Provincial Park, a place where the public could camp and swim at the beach along Lake Erie. George Marcy and the regional nature clubs opposed this plan, fearing that public access would lead to the trampling of the sand dunes and the collapse of the biodiversity they supported. The plan was eventually abandoned by the province.

In 1994, when George was 87 years old and his health beginning to fail, he received a letter from a local amateur photographer and good friend, Dave Marr, calling on him to take prompt action to protect the woods. Dave knew of George’s concern that his children might not agree on a future for the property that would prevent its development. Rick Stockton, another close friend of the Marcys, urged George to call the Nature Conservancy of Canada (NCC) and make arrangements to have them acquire the property.

George arranged a meeting with the Conservancy. In addition to Dave Marr and Rick Stockton, he invited Earl Plato and Tim Seburn, two local naturalists who had opposed the development of another area of the Point Abino peninsula. Earl Plato, a recently retired principal of a local school, had become a nature columnist for a local newspaper. As a youth and later as a young teacher, Earl had accompanied Bert Miller on many personal and class outings to Point Abino. Tim Seburn, one of Earl’s former students, had also met Bert Miller and through him had acquired an interest in nature.

The meeting with NCC took place in May 1994. At this meeting it was recognized that a local advocacy base for the preservation of Marcy’s Woods had inadvertently been created by the years of kind hospitality offered by the Marcy family. To help NCC acquire Marcy’s Woods and to ensure its future conservation, NCC suggested this support could someday be organized into “The Friends of Marcy’s Woods.”

When George died on 27 July 1994, his friends united in their commitment to follow through with his aspirations and wishes for the future of Marcy’s Woods. Earl put a notice in the local Fort Erie paper inviting anyone interested in forming a nature club to come on 19 January 1995 to the Crystal Ridge Library in Ridgeway. He was surprised
when over 75 persons attended. A smaller group assembled shortly thereafter to begin work on writing a constitution and acquiring not-for-profit corporate charitable status. Earl became the founding president of the club and Dave Marr the founding treasurer.

Earl, a history buff, appreciated Bert Miller not only as a friend but also as an important figure who had raised public appreciation of nature across Niagara. An arboretum had been planted in his memory at the Balls Falls Conservation Area in Vineland. The Niagara Parks Commission was placing a marker in his memory along the Niagara Point Abino with Marcy's Woods indicated.

David Walker
River Parkway. Bert, who had lived by the motto, “Learn something new every day and smile at a child,” had died in 1973, but he would now be remembered through the name of a passionate new nature organization.

Preservation of natural areas of the Point Abino peninsula was the primary founding objective of the club, and conserving Marcy’s Woods was its initial focus. At one of the several rallies to “save Marcy’s Woods,” Elizabeth Marcy made Dave and Joy Marr honorary lifetime guards of Marcy’s Woods, and the club granted Elizabeth an honorary lifetime membership. Martha (Patty) Marcy, the youngest of the four children of George and Elizabeth Marcy, and the only sibling still residing in the area, became a member of the club. When Dave Marr died shortly after the club was created, the Marcys made a donation to the club for a speaker series in honour of his memory. During the remaining time Marcy’s Woods was owned by the Marcy family, several biological studies were conducted there (see Biological Inventories of Marcy’s Woods below), confirming the presence of many rare and endangered species and supporting the designation of the Point Abino Peninsula as an Important Bird Area (IBA).

Soon after Elizabeth Marcy died, the Marcy siblings sold the property. Patty opposed the sale and petitioned the New York State Court to prevent it. The court ruled it did not have jurisdiction to affect the status of the sale in Canada.

Fearing the destruction of Marcy’s Woods, on Friday, 29 August 2003, the club launched large war canoes from the beach on Lake Erie at Marcy’s Woods. The war canoes arrived in Toronto Harbour on Monday, 1 September and were portaged to the grounds at Queen’s Park. With a provincial election imminent, the government imposed a ministerial zoning order on the property to prevent its development. This zoning order remains in effect.
Aims and Objectives

The charitable objects of the club are (1) to preserve, protect, restore and improve the natural resources and environment of the Niagara Peninsula, (2) to protect and preserve the wildlife of the Niagara Peninsula and to protect the natural habitat therein, (3) to encourage, promote and foster an understanding and awareness of the natural resources and environment and their value in enhancing the quality of life, (4) to encourage cooperation with other organizations having similar interests, and (5) to recognize and honour individuals contributing to the preservation and restoration of our natural heritage and such other complementary purposes not inconsistent with these objects.

Club Logo

When the club held a competition in 1999 to create its logo, it was a surprise to no one that the winning selection, submitted by Bob Chambers, included a Pileated Woodpecker with the Point Abino lighthouse in the background, encircled with tulip tree leaves. The logo was updated for printing as a letterhead by Dawn Pierrynowski in 2003.

Activities

The conservation of Marcy’s Woods has not been the sole focus of the club. Some of the other projects the Bert Miller Club has engaged in over the years include:

- developing a Junior Naturalist program;
- monitoring populations of Fowler’s toad, a protected species in Canada, in partnership with the provincial Ministry of Natural Resources;
- conducting biological inventories of many remaining natural areas in Fort Erie;
- rehabilitating and managing a natural area in Ridgeway, known as the Shagbark Nature Area, in partnership with the Town of Fort Erie; and
- carrying out a study of old growth forests remaining in Niagara.

Biological Inventories of Marcy’s Woods

All of these references are available from the Bert Miller Nature Club or the Fort Erie Public Library.


THE BUFFALO ORNITHOLOGICAL SOCIETY

Michael Hamilton

In the mid-1920s, two men met while birding in Forest Lawn Cemetery in Buffalo. They had both recently moved to Buffalo from the New England area, and they struck up a long-lasting friendship. Their names were Clark S. Beardslee and Harold D. Mitchell. Forty years later, they would co-author *Birds of the Niagara Frontier Region*, still the most authoritative ornithological study of this region. They also conceived the idea of creating a bird-oriented society as an affiliate to the Buffalo Society of Natural Sciences (the corporation under which the Buffalo Museum of Science now operates), and in November of 1929, the Buffalo Ornithological Society (BOS) was incorporated. Charter members were Harold D. Mitchell, John W. Aldrich, Clark S. Beardslee, Gardner Bump, James Savage, John Schmahl, Ray M. Verrill and Alfred Wander. Membership was on an invitation basis only, and full or active membership was conferred only when it was evident that a member was seriously interested in and devoted to the principles of the society and willing to work to further its purposes.

Six years later, in 1935, all three of the present bird counts were organized and initiated. The April and October Counts focused on duck migration and the May Count on warbler migration. In these early years, the BOS territory was bounded on the east by the Genesee River, on the south by the Pennsylvania line, on the north by Lake Ontario and on the west by Lake Erie and the Niagara Peninsula west to Port Weller and Dunnville and north to the Welland River. This territory was not yet divided into sections, so individuals were called and assigned to cover known “hot spot” locations. They competed keenly to be assigned to special areas such as the Niagara River, Oak Orchard Swamp, Braddock Bay, Rock House Point (as Rock Point was then called) or Mitchell Woods near Long Beach. At the end of the count day, the participants would meet at some predetermined place and report their observations to each other and to the recorder.

Over time, observers recorded all bird species in their count reports. This meticulous record-keeping resulted in the documentation of not just ducks or warblers but of the total observed avian population of Western New York and the Niagara Peninsula of Ontario. To help all birders, the museum offered courses in bird identification and organized field trips to a wide variety of habitats in the territory. Some of the favorite destinations were, and still are, the Niagara River, the Ontario Plains, Rock Point Provincial Park and the north shore of Lake Erie, Tifft Nature Preserve in Buffalo and the Iroquois National Wildlife Refuge. Anyone who was interested could join these expeditions; beginners received help from birders with advanced skills.

### Presidents of the Buffalo Ornithological Society

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<th>Year</th>
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<tr>
<td>1934–1936</td>
<td>Clark S. Beardslee*</td>
<td>1975–1976</td>
<td>Harriette Klabunde*</td>
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<td>1938–1940</td>
<td>Tom M. Kelly*</td>
<td>1977–1979</td>
<td>Edward C. Fessler*</td>
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<td>2006–present</td>
<td>Thomas O’Donnell</td>
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* deceased.
In 1955, there was a change to the eastern and western boundaries to make room for the newly established Genesee Ornithological Society of Rochester. The eastern boundary was moved west to a line running from Point Breeze south through Batavia, Pembroke and Pike, New York, and east to include all of Allegany County. The western boundary in the Niagara Peninsula was moved west to a line from Grimsby Beach southwest through Smithsville, Canborough, thence along Route 3 and finally south to Rainham Center. The total area so included measures approximately 15,470 km² (5,973 sq. miles) in the United States and 2,109 km² (814 sq. miles) in Canada.

Aims and Objectives
The original purposes of the society, as specified in The Buffalo Ornithological Incorporation Papers, were (1) to undertake “the scientific study of birds of the Niagara Frontier Region, (2) to keep records of species observed in the study area, (3) to provide for the interchange of birding experiences for the mutual benefit of the members, and (4) to protect and promote the welfare of all birds in this area. The Society [would] also hold meetings, lectures and exhibitions, and develop and maintain a library, in the interest of bird study and of the conservation of natural resources.”

Club Logo
James Savage and Jack Schmahl, charter members of the Buffalo Ornithological Society, were walking across the Peace Bridge shortly after its opening in 1927, and one of them photographed a Common Tern flying over the bridge. They brought the photograph to the Buffalo Society of Natural Sciences (the corporation under which the Buffalo Museum of Science now operates), where Lewis Kalder was creating logos for youth clubs, and he made a drawing from the photograph. Subsequently, during a BOS field trip, a large colony of Common Terns was discovered on Gull Island (now Mohawk Island) near what is now called Rock Point Provincial Park, and it was decided that the drawing, with added graphics and text, should become the BOS logo. It was modified very slightly in 2000 to simplify and strengthen both image and text.

Activities
Harold Axtell, curator of biology at the Buffalo Museum of Science from 1947 to 1969, devised a system for the verification of rare bird sightings, the purpose of which was to make these sightings verifiable under scientific scrutiny and thereby dependable as scientific records.

In 1960, an article called “Noteworthy Records” first appeared in the monthly BOS publication The Prothonotary. This column, which has been included in each issue of The Prothonotary since, lists all species seen during the previous month that are, for various reasons, considered noteworthy. The birds may represent the first record for the year, the first or last record for the migration, unusually high numbers for a species and the like. Date of observation, location, number observed and name(s) of the observer(s) are included.

During these early years, the number of observers increased to approximately 150, but in 1966 an increased number of bird clubs in the United States portion of the BOS territory (Lake Erie Bird Club of Dunkirk, Cattaraugus Bird Club, Allegany Bird Club and the Jamestown Audubon Society) began participating in the counts, and the number of observers increased to approximately 250. This number has remained constant ever since.
In order to notify members of rare sightings in a timely manner, a telephone tree system was created whereby two subscribers, notified of a sighting, called two others, who in turn contacted two others, etc. If every one was at home or had an answering machine, all subscribers were notified very quickly. Of course, some were not at home, and some did not have answering machines, so the system was eventually abandoned. However, recent technology has now provided a system that allows an individual with a rare sighting to report it to a single number, after which all subscribers are very rapidly contacted automatically by phone and the message repeated. This system is working very well, and subscriptions now exceed 100.

To date, 22,197,801 individual birds have been observed during the three counts, April leads with over 10.1 million birds, October is next with over 7.7 million birds and May is last with over 4.3 million birds. The most species seen on a count is, interestingly, in reverse order with 216 species seen in May, 182 species in October and 142 species in April.

To further its goals, the BOS also runs an annual grant program that helps fund studies and the purchase of equipment such as mist nets for bird banders or optical equipment for educational projects.

Whereas BOS activities are focused on field observations and their recording, scattered scientific studies, such as the Bonaparte’s Gull survey supervised by Chip Weseloh in 1998, are also undertaken. Recently, a survey of bird populations along the Buffalo River and its tributaries has been initiated with the purpose of restoring riparian habitat in brown field areas. It is hoped that this project will lead to the delisting of the river as an “area of concern” by the International Joint Commission.
PART TWO

Niagara Birds by Season
IT IS MAINLY THE SEASONS that determine which bird species can be found in Niagara on any given day. Some species live here year-round, many more for only a part of the year.

In fact, four categories of bird species can be identified according to the length of time they spend in Niagara each year. The first category consists of permanent residents such as Blue Jay, European Starling, Northern Cardinal and House Sparrow. The second category includes winter residents such as many ducks, Northern Shrike, Dark-eyed Junco, American Tree Sparrow and northern finches, which arrive in Niagara in the fall, spend the winter here and move north in the spring to their breeding grounds. The third category contains summer residents such as flycatchers, sparrows and orioles, which arrive in Niagara in the spring, spend the summer here, and move south in the fall to their wintering grounds. The fourth and final category comprises transients such as vireos, most warblers and thrushes, which pass through Niagara in the spring and fall on the way to and from their breeding grounds.

All of this may seem confusing to the non-birder. To reduce the confusion, we have grouped the articles in Part 2 according to season, beginning with a section called “All Seasons.” Each of the subsequent sections tends to focus on one season and, therefore, on the species that may be found in Niagara at that time of year.
PART TWO: NIAGARA BIRDS BY SEASON
With a reasonable investment of time in all seasons of the year, a birder can expect to see about 220 species of birds in the Niagara Region.

Such an investment would include the following activities: searching for waterfowl and other overwintering birds during the winter months; monitoring migrants as they pass through the Niagara Region or arrive to breed in the spring; locating species in the summer months that are not always seen in migration, such as cuckoos, flycatchers and whip-poor-wills; searching sewage ponds and the shoreline of Lake Erie for shorebirds in late summer and fall; and, finally, identifying numerous gull species in the fall and early winter months, primarily on the Niagara River. One other component of this exercise would be following up on the sightings of rare birds reported by local or visiting birders. Where would one go to see all these species? Katherine Stoltz and Drew Campbell answer this question in their article “Hotspots and Day Trips in Niagara” in Part 4 of this book. They have personally researched these “must-see” destinations and provide precise driving and hiking directions.

As a result of the search for species, local birders eventually see almost all of the permanent residents in Niagara. This section of the book deals mainly with these residents, as viewed through the eyes (or binoculars) of the birders who share the territory with them and who have learned not to take them for granted.

In the fall of 2001, a dead Blue Jay found in the Niagara Region tested positive for the West Nile Virus, the first bird species in the region to do so. To date, no deaths among the human population in Niagara have resulted from this virus. (See the species accounts of the Blue Jay and American Crow for more information on West Nile Virus.) The Owl Foundation, a prominent and highly respected rehabilitation centre in Vineland, has been operated by Kay McKeever since its inception in 1965.
A disastrous loss of birds at the Owl Foundation occurred in 2002 as a result of the West Nile Virus. Over the summer months all the northern owls succumbed to the virus. In her article “The Owl Foundation and West Nile Disease in Niagara,” McKeever describes these numbing events and the combination of circumstances that led to the deaths of her beloved northern owls.

One of the more positive and surprising changes in the bird life of Niagara has been the considerable increase in the number of Wild Turkeys since their introduction in 1986. Anne Yagi explains this phenomenon and the status of other introduced game birds in her article “Resident Upland Game Birds in Niagara.” A wildlife manager for the Ministry of Natural Resources, she takes a stance on the management of game birds that some birders might find controversial.

A year-round characteristic of the Niagara landscape is the presence of large flocks of starlings. This All Seasons section of the book concludes with an examination of the relationship between starlings and vineyards — two inescapable and intertwined features of Niagara life. The havoc that starlings and other birds wreak in vineyards is discussed by Donald Ziraldo in “Starlings and Icewine” and by Christopher Somers in “Birds and Vineyards.” As a founding partner of Ontario’s famous Inniskillin Wines, Ziraldo has first-hand experience of the intense competition for the grapes — particularly for those frozen bunches of Vidal grapes that are transformed, starlings permitting, into icewine. Somers, a graduate of another notable Niagara feature — Brock University — takes a more measured, scientific approach to the starling “problem.”

All of the articles in this first section directly or indirectly reflect the extent to which the human inhabitants of Niagara, individually or communally, as birders or not, are interconnected with each other and with the birds that also reside here.

As with the other articles in the book, these four probably reveal as much about the authors as they do about the birds themselves.
The Owl Foundation, formerly known as The Owl Rehabilitation Research Foundation, began as a centre for the optimistic repair of injured native owls. It has existed since 1965 at its present site in the town of Vineland in the Niagara Region.

The physical presence covers 1.6 hectares along the west bank of the Twenty Mile Creek, inland about 1.5 km from the south shore of Lake Ontario. Half of the land is a treed slope of remnant northern Carolinian forest species, and half is level land formerly farmed as fruit orchards. An additional seven hectares of former orchard land has been converted to the development of a young forest of some 68 species of northern Carolinian trees, comprising over 2,000 individual plantings since 1976. The first of these plantings now averages 35 to 45 feet of height in the early formation of a canopy such as existed before European settlement some 200 years ago.

The four separate acres in use by The Owl Foundation since 1965 currently support a total of 53 enclosures of varied sizes and functions. Over the course of 42 years, the Foundation has housed all of Canada's 16 separate owl species, with occasional individuals from other national jurisdictions.

Before 1965, any organized rehabilitation of Canada's predatory avian species was largely unknown, and the veterinary profession was seldom involved in anything but
psittacine (parrot) pet species. Ontario government laws for any wildlife beyond fur-bearers or other harvestable species, where they existed at all, offered no protection for any raptorial birds, identifying them in the statutes of 1954 as “vermin”! Various recent provincial government prohibitions against interprovincial movement, for whatever purpose, have gradually discouraged once legal efforts by out-of-province centres to try to utilize permanently damaged owls for propagation of otherwise wasted genetic material. I know of no current attempts to do so in any other province.

The Importance of Captive Breeding

Since The Owl Foundation first attempted to rescue from oblivion, through captive breeding, the unique genes of damaged native owls, 14 of Canada’s 16 species have been propagated here. In all cases the progeny are raised by their own natural genetic parents and are isolated from human contact until learned species recognition is established and aversion to other large life forms follows. All progeny are able to vacate the parental territory at the natural time of separation (usually in August) when they are confronted by their familiar prey species, but now as living and elusive rodents. Over several weeks of practice, all must demonstrate the ability to forage successfully before they are banded and taken or shipped for release at the mother’s origin. In the case of the five most northern species, namely, Snowy Owl (*Bubo scandiacus*), Northern Hawk Owl (*Surnia ulula*), Great Gray Owl (*Strix nebulosa*), Boreal Owl (*Aegolius funereus*) and Northern Saw-whet Owl (*Aegolius acadicus*), the young, after initial training, are overwintered in generously flighted areas and resume serious hunting in early spring before being shipped by air to appropriate origins.

Such is the main and original purpose of this Foundation. A second and perhaps equally important undertaking, relying on the existence of the first, is the provision of a responsible and fully functioning foster-care capability for orphaned owls from the wild. These foundlings are placed within existing family groups of their own kind and are always accepted by their foster parents, who are apparently (and fortunately) unable to count. This indoctrination of juvenile owls has never failed to produce a releasable yearling, which is then returned to its own origins.

The only two Canadian owl species that have not bred here are the Spotted Owl (*Strix occidentalis*) of the west coast (of the five of this species sent here over the years, only once did we have two at the same time, and the male of this pair was very badly crippled) and, surprisingly, the Short-eared Owl (*Asio flammeus*) of the vanishing grassland habitats. Unfortunately, both males and females of this beautiful species have evolved very long and fragile wings and the habit of widely ranging over field, meadow and of course highways. We seldom receive a Short-eared that is not badly smashed, particularly the delicate males, although we retain those for whom some flight ability is recovered.
A peculiar habit of the male of this species is to make flamboyant aerial displays above the female’s ground scrape, and we have to assume that the physical inability to advertise in this way is discouraging to male and female alike! We sometimes find the forlorn female scrapes in the long ground cover or under low shrubs, even occasionally with eggs, but as yet no offspring.

For the record, in the first 25 years of our involvement with injured native owls, we also rehabilitated and/or bred the five western species, now no longer represented at the Foundation. They were the vanishing and migratory Burrowing Owl (*Athene cunicularia*) of the Great Plains (once found in Canada from western Manitoba to British Columbia), two races of the Western Screech-Owl (*Megascops kennicottii* and *M.k. macfarlanei*), the diminutive and insectivorous, migratory Flammulated Owl (*Otus flammeolus*) and the Northern Pygmy-Owl (*Glaucidium gnoma*) of British Columbia. The Pygmy-Owl is Canada’s smallest and probably most aggressive owl — an irresistible, vociferous and life-bonded little devil with the appetite and food preferences of a Sharp-shinned Hawk (*Accipiter striatus*), to which it is surely the owl family equivalent. It is also probably the only owl in Canada that is thriving because of the presence of people, since every backyard bird feeder in the city of Vancouver supplies it all winter with a regular smorgasbord of small birds. As mentioned earlier, the endangered Spotted Owl was the fifth species from western Canada with which we were acquainted.
Enclosures and Environment

Learning to accommodate the several stages of the seasonal needs of each species, even for the 14 species with which we have succeeded, is a daunting agenda to implement and follow. The early years of this endeavour were a time of great frustration as we designed and redesigned, built and rebuilt what we hoped were appropriate enclosures in which the inmates could make inherent choices as to mutual attraction or essential escape routes. Gradually, success followed increasing innovation from preconceived arrangements. Then, as the progeny arrived, so did the next conundrum: in preparation for their responsible release, how, and in what configuration of the larger enclosures, could we best expose the owls to the surprising availability of live prey?

Probably the single greatest difficulty in designing stimulating enclosures for the owls of even one province is the wide diversity of habitats from which they come. Snowy Owls, strongly nomadic in their Arctic range, need not only visual space around them but also the opportunity to get away from each other. They need low vegetation, diffused sunlight in hot southern summers and a very careful mechanical maintenance of an Arctic photo-period from May through September. At the other extreme, the migratory Northern Saw-whet Owl requires small shelters capable of being heated in the coldest months, as well as out-of-season photo-period regulation. Accommodating these extreme needs in the same latitude is not easy. Errors in manipulating light and temperature precipitate nest failures, unseasonable moults and even hostile relationships!

Our present accommodation, for breeding owls of the 11 most often encountered native species, consists of a great variety of cages of various sizes and shapes for the following species (in order of diminishing size): Snowy Owl, Great Horned Owl (Bubo virginianus), Great Gray Owl (Strix varia), Barn Owl (Tyto alba), Short-eared Owl, Long-eared Owl (Asio otus), Northern Hawk Owl, Eastern Screech-Owl (Megascops asio), Boreal Owl and Northern Saw-whet Owl. Of the existing 53 separate enclosures erected over the last 30 years, some are in the range of 372 m² and contain a number of divisible areas according to current needs. Many of the largest enclosures are for release training of different species and can also be reduced or enlarged as the need arises. The total number of areas that can be closed off from all others is about 108.

By the early 1980s it was abundantly clear that the only way to assess appropriate seasonal behaviour, without our own physical presence precipitating aberrant responses, was to install video cameras in the breeding and training units while keeping our monitoring out of the sight and awareness of the owls themselves. The installation and maintenance of such costly electronic surveillance equipment has been a sobering experience over the past 22 years. To date (2007) we have installed 40 video cameras in 38 of our 53 enclosures. Ultimately, as more cages are built or replaced, we hope to acquire another 8 to 10. Then, as now, they will feed into 42 monitors in the viewing room in order to record the species breeding and training here. Currently, we plan only three more enclosures to complete the project — two fairly large and one small. The first large one will offer better flight exercise for young Snowy Owls on their way to freedom, and the second will allow us to experiment with a more open concept in our quest to breed the now endangered Short-eared. The third will provide a relatively small alternative to our only secure environment for Boreal Owls.
West Nile at the Owl Foundation

Without question, in the four decades of The Owl Foundation history, the most devastating experience was the discovery that the virus of West Nile Disease, only very recently identified in North America, was in fact present at the Foundation. Its arrival precipitated almost immediate fatalities and widespread evidence of rapidly developing malaise among the other owls.

NORTHERN OWLS

When the first three deaths occurred (Snowy, Great Gray and Hawk Owl) in early July 2002, the chief avian pathologist at the Ontario Veterinary College, Dr. Bruce Hunter, came to The Owl Foundation. All three carcasses were opened and examination showed almost identical lesions in the meninges of each brain. These were fixed in formalin and taken back to Hunter’s laboratory for electron microscopy examination. He commented that all three lesions resembled those of Avian Herpes, with which he was familiar, but he called back to say that histopathology refuted this diagnosis. He prepared the three samples he had taken and sent them by courier to the Canadian Centre for Disease Control (CDC) in Winnipeg with an urgent request for identification. It is important to remember that, at the time, the positive recognition of the new West Nile Virus (WNV) was virtually unknown among the veterinary professionals in North America.

By the worst possible luck, the only biologist in Canada with actual experience of the footprint of this disease, the chief biologist at the CDC, was away on a three-week vacation. Thus, along with other incoming tissue samples from an increasing number of veterinarians, our sample sat in the lab in Winnipeg, awaiting scrutiny as the days and weeks went by.

Meanwhile at The Owl Foundation, the increasingly frantic staff dealt with the mounting numbers of sick and dying owls, two or three every day through the rest of July and half of August. Although identification of the virus was finally confirmed, it was another week before a source of the supposed antidote, suggested by European experience, was located in the United States. This was the so-called Equine vaccine, developed in Europe for the protection of rare and valuable horses in private collections. Dr. Hunter was able to secure several vials from the American source, and the vaccination of the remaining owls finally began in the last week of August, seven weeks too late. Because of this lamentable lapse of critical time, Dr. Hunter was pessimistic about recovery of the surviving few. Sadly, his worst fears were confirmed, despite his heroic efforts to combat the fatal contamination.
In light of current knowledge, prevention provides the only means of avoiding the disease. The Equine vaccine is now considered to be less than 7% effective in birds of prey. In three months, by the end of September 2002, out of 98 owls of the five Northern species, we had lost all but five individuals. All of our Great Grays had died (18 adults and 10 young). Of the 20 Snowy Owls, 12 adults and eight young had perished. Of 28 Hawk Owls (16 adults and 12 young) only four had survived, but they were indoors due to original collision damage. All of our 11 adult Boreal Owls had died, and out of 11 Saw-whets, only one middle-aged female survived (and is still with us). This was truly the most devastating experience of my life, an end to 35 years of carefully devising occupant encounters and avoidance through continual modification of cage design for these five northern species. By the fatal spring of 2002, against all discouraging predictions of assorted biologists, we had achieved, entirely from permanently damaged wild adults, four reliably breeding pairs of Great Grays, three of Snowy Owls, four of Hawk Owls, three of Saw-whets. Then all were gone, their elaborate and effective enclosures now “home” only to ghosts (Gancz et al. 2002, 2004).

SOUTHERN OWLS

Readers may, by now, be wondering why this narrative mentions only losses experienced by the five northern owl species when we have always maintained injured representatives of the other 11 Canadian owls. In order of diminishing size, eastern and western, they are the Great Horned, the Barred, the Spotted, the Barn Owl, the Short-eared and Long-eared, the Western and Eastern Screech-Owls, the Burrowing Owl and the western Flammulated and Pygmy-Owls. Interestingly, none of these species displayed the morbidity of the northern owls, and both Barn Owls and Screech-Owls emerged from this plague as evidently totally immune across North America. Our losses in these remaining species are typical of the overall pattern. Out of 22 Great Horned Owls on the premises, one very old female and one juvenile succumbed. We lost one nestling Barred Owl out of 13, including other juveniles, and our one Spotted Owl from British Columbia. We lost two older Short-eared out of 14 and two juvenile Long-eared out of 12, adult and young. There were no losses among either Burrowing Owls or Flammulated, but one older Northern Pygmy-Owl died. That amounts to only nine deaths among 141 owls of 11 species of Canadian temperate zones.

In 2002, prevailing speculation as to why vulnerability appeared so erratic among the different species suggested that both remoteness of range and reduced population density would render such owls more susceptible to a new virus. The high mortality of the five most isolated northern species was seen as an example of a lack of developed resistance to an opportunistic and evolving virus. However, that does not explain the surprising vulnerability of the Northern Saw-whet Owl. The only true migratory owl of eastern North America, it spends a third of each year at more southerly latitudes, and while in transit it is surely exposed to many opportunities for viral contamination along its route. Yet, it apparently fails to acquire immunity.
None of the anomalies revealed by the North American spread of this virulent strain of WNV has excited as much speculation as the outright immunity displayed by two genetically distant owl species — the Barn Owl of worldwide tropical and temperate distribution and the Screech-Owl of North America. The emerging evolutionary history of the Barn Owl may suggest one reason for its immunity. Apparently, it has evolved “up” the vulture family line in eastern Africa, in company with the emerging Falconidae, with whom the Tytonidae family is quite closely related. Old World vultures appear to be highly resistant to the African/European strain of WNV, which may have been an avian pathogen for several thousand years. In contrast, the other family of owls, the strigidae, native to the western hemisphere as well as Europe, Asia and Africa, share no common origin with Tytonidae or its immunity.
SCREECH-OWLS

It is interesting to note that in North America very few falcons of any species were victims of this virus, although it was a devastating disease among the hawk genera and, as with all the northern owl species, particularly lethal among Northern Goshawks (Accipiter gentilis). Even among the buteos, the northern Rough-legged Hawk (Buteo lagopus) was always more vulnerable than those of more temperate latitudes. Complicating the whole question of latitude versus intrinsic susceptibility to a new virus is the unknown range of its vector, the mosquito (primarily Culex pipiens and C. restuans in Ontario), supposedly not yet adapted to a more northern temperature. With global warming a current threat, how much longer will this intolerance of a colder climate be a barrier to its northward spread? However, none of this speculation as to why one species appears more vulnerable than another has generated such utter mystification among raptor veterinarians and biologists as the remarkable resistance to WNV of the Eastern and Western Screech-Owls (Nemeth et al. 2006; Dobbs 2006).

The experience of The Owl Foundation was no exception to the emerging picture. From the winter of 2002 through the whole following year, the Foundation maintained a total of 72 Eastern Screech-Owls of both sexes and all ages without a single fatality attributable to any disease process, and none had been injected with the existing vaccine. For all of 2003, every owl on these premises was subjected, on a weekly basis, to a blood test for titres of this virus. Of the 72 Eastern Screech-Owls, 44 showed the incriminating titres, and yet not one of the owls ever developed the fatal secondary stages of the disease. By spring of 2004, all those without earlier reasons for being retained (collision injuries, etc.) were trained and released either where they originated or, if hatched here, at their female parent’s origin. Some of the permanently damaged were retained as residents and subsequently bred here, demonstrating no reproductive problems as a result of their very brief but apparently harmless encounter with the virus.

The basic mystery remains: What accounts for the astonishing immunity of this genus in North America? One of the more plausible suggestions that I discovered goes as follows. There was an outbreak of an unknown disease along the Mississippi in the early settlement of St. Louis, Missouri, in the 18th century. Dogs, cats, horses and people succumbed, and “birds fell from the sky.” The common denominator of all examined deaths was a severe inflammation of the meninges of the brain. The disease became known as the “St. Louis Encephalitis,” thus entering medical history. Of all the owls endemic to North America, surely no genus is more widespread than the Eastern and Western Screech-Owl. They are on the Atlantic coast from Newfoundland to Florida, along the Caribbean to the Gulf of Mexico and up the Pacific coast from Baja, California to Prince Rupert, British Columbia. They prosper along the Mississippi and its

In the six years following the devastating losses from WNV, the slow, quiet process of new recruitment has been under way again. One by one, from here and there across the great grid of motorways, come the current victims of our hurried lives:

- a young female Snowy Owl delivered from Saskatchewan two years ago, now with recovering flight ability, but not yet able to carry her weight through the distances she needs to travel;
- a male Great Gray with destroyed right eye and ear, brought from Armstrong, Ont., in 2003, now quietly accepted by a female from Thunder Bay, a 2004 arrival with a smashed upper femur that is now able to bear weight again, allowing her to fly and land, if carefully;
- a female Hawk Owl from Long Lac, Quebec, received in 2004 as a fledgling with a twisted wing (which has defied resolution) but in the following spring, to our astonishment, the very young mother of her first six offspring! All were expertly raised by their own natural parents and became opportunistic hunters of live rodents in our 88 linear metres flight cage, where they overwintered before being shipped to Long Lac in spring, for release.

This success is now an annual event and a reward for that intrepid lady who rescued the crippled fledgling from the roadside and trusted us to give her a new chance at life;

- and four young Snowy Owls, hatched here in the spring of 2007 by our first permanently damaged adults since WNV, which were brought here from Manitoba in 2003 — the three young males and one heavily pigmented female, all flying strongly in preparation for their spring release in 2008 in the Canadian Arctic, where they will be taking their genes back home courtesy of Calm Air International Ltd. in Thompson, Manitoba.

All these stories provide current vistas of new hope for interrupted lives and an affirmation of the methods that have led us since 1970 through four decades of success with so many species.
feeder rivers, all around the Great Lakes and across the prairies. Is it not possible that in over 200 years, the virus has been disseminated across the continent, with each generation making inherited immunity more likely? I can think of no other owl species with such continuous opportunity over such a long period.

What has all this to do with immunity to WNV? Computer investigations have shown a very close match of the symptoms of infection between the two viruses, both forms of an encephalitic disease. The computer investigations also show that WNV and the St. Louis Encephalitis virus are very closely related and both belong to the virus family Flaviviridae. Corroboration in very recent medical reporting is the confirmed identification of WNV in the first four fatal human cases in North America. All four were diagnosed in life as having contracted St. Louis encephalitis and were treated as such medicinally. Only at autopsy was WNV revealed (Dobbs 2006).

The Future

A sober realization of the potential for such new disease processes is what we live with today as all life forms become less and less remote from one another. There appears to be no reason for once geographically isolated pathogens, viral or bacterial, to remain in isolation. They have been a part of the planet’s history since the first molecules of living matter, evolving and combining as opportunities have afforded, across all classes of animate life.

The reader may be surprised to learn the source of most injured owls. We receive 7% as orphaned foundlings; 93% of all the owls we have admitted over the years since 1965 have been picked up along both country roads and highways. These appalling statistics illustrate the human impact on wildlife across North America. People throw garbage out of vehicles. It collects in ditches. Rodents from surrounding fields and yards are drawn to the ditches for the garbage. Hawks and owls are drawn to roadways for the rodents. For the thousands that are still alive, and seen and retrieved, how many millions die unseen? In the sadness of holding the broken bodies, their brief beauty unseen, their perfection of form and function obliterated in a moment along our roadways, I ask myself the unanswerable question: How much longer can wildlife populations sustain this attrition?

Nothing obliterates the sadness of the remembered losses — the faces that I knew and loved, the unique personalities — but what is never defeated in every owl I’ve known is the enduring spirit of wildness and the will to try and try again despite appalling injuries and the loss of the world they knew.

LITERATURE CITED


Resident Upland Game Birds of Niagara

Anne R. Yagi

UPLAND GAME BIRD is a term commonly used to designate several species of the order Galliformes. They are grouped together because of their similarly stout bodies, short wings and legs, chicken-like beak structure, large toes for walking and scratching, and their historic and current desirability as birds for sport hunting. They are omnivorous, consuming predominantly seeds as adults and insects as young pouls. Five different species of game birds have been observed in the Niagara Region: Northern Bobwhite (Colinus virginianus), Ruffed Grouse (Bonasa umbellus), Wild Turkey (Meleagris gallopavo), Gray Partridge (Perdix perdix) and Ring-necked Pheasant (Phasianus colchicus). Northern Bobwhite, Ruffed Grouse and Wild Turkey are species native to Niagara while Grey Partridge and Ring-necked Pheasant were introduced.

The species listed above are non-migratory, year-long residents of the Niagara countryside, which consists of (1) fragmented forest, (2) grasslands/meadows and (3) shrubbed areas. The habitat has declined in quality and quantity in the northern portion of the region, but it remains in relative abundance in the southern townships of Fort Erie, Port Colborne and Wainfleet and in the western townships of West Lincoln and Pelham. Their status as game birds has involved these species in a unique relationship with the human population, which competes with them for habitat but values them as creatures of sport and sources of food. In this article, after a brief note on sustainability, I shall consider two opposing management styles that this relationship has engendered.
Sustainability: Annual Recruitment versus Annual Mortality

Self-sustaining populations, whether native or naturalized, exist where there are sufficient numbers of individuals naturally produced in the wild to replace all losses, without supplemental releases — in other words, where there is a balance between the number of individuals produced and the number lost on an annual basis. When annual recruitment exceeds annual mortality, populations grow and may exceed the carrying capacity of their habitat; hence the surplus population makes an effort to expand its range. Conversely, when annual recruitment is less than annual mortality, wildlife populations and their ranges decline. Small populations may persist for lengthy periods of time in managed, good quality habitat, but they are susceptible to crashes from natural events such as disjunct isolation, predation, severe storms and disease. This decline is a reflection of the inadequate quantity and quality of available habitat. Often in the case of resident game birds, winter habitat limits population size and range. Winter habitat is much smaller than summer habitat, which includes part of the adjacent farmlands where unharvested agricultural crops form part of the birds’ diet. Winter conditions may restrict the population to less than 20% of the total available habitat. Therefore, the animals annually produced in the summer range have to fit into a much smaller winter range. The healthiest birds get the best space, leaving the reduced and often unsuitable habitat to the weaker birds.
Management of Niagara Game Birds

An ongoing debate among interested parties centres on the management of native versus non-native, naturalized species. Some hold the view that only native species should be encouraged, and, where populations of native species have become extirpated or where their numbers have fallen below self-sustaining levels, these species should have management priority. The opposing view supports the encouragement of both non-native/naturalized species and native species. It allows for resource management, takes into consideration the habitat availability for a particular naturalized species, and permits activities of historic social interest such as recreational hunting. Before assessing the practical outcomes of each of these two views, let us consider the status (present and predicted) of each of the five species (three native and two non-native) and the likelihood of their achieving sustainability in the Niagara Region.

NATIVE BIRDS

The Northern Bobwhite is considered endangered in Ontario. Through the 1900s until the present, the population in southwestern Ontario has been considered small but stable. The second Atlas of the Breeding Birds of Ontario (2001-2005) includes only one sighting of a Northern Bobwhite in Niagara (Risely 2007). Nevertheless, through recovery action planning, it may be possible to re-establish the habitat necessary to support once again a self-sustaining population.

Another native species that is common elsewhere in Ontario but in low numbers in the Niagara Region is the Ruffed Grouse. The Niagara grouse population is considered self-sustaining within the limits of available habitat, offering both rare viewing and some hunting opportunities. An example of the successful recovery of a native game bird species is the Wild Turkey. The Niagara turkey population was extirpated by the late 1800s, but as a result of effective management, it is now considered “recovered” (Bowman 2007). A large, sustainable population exists today, one which since the early 1990s has supported a spring gobbler hunt.

![Figure 1. Niagara game bird observations during standard Christmas Bird Count surveys from 1954 to 2006.](image-url)
NON-NATIVE BIRDS

Not all non-native game species are ideally suited to the fragmented landscape of Niagara. Although self-sustaining, naturalized populations have been established in the midwestern United States, eastern Ontario and elsewhere in Canada, the Gray Partridge is an example of a failed attempt at establishing a non-native species population in the Niagara Region. The winter bird counts of 1954-2006 demonstrate that a small number of birds were observed in the late 1960s and early 1970s but that these observations were followed by periods of no sightings (Figure 1). The occasional sightings of individuals have been attributed to escapees from game farms and intentional releases for the purposes of training hunting dogs. No other releases were made following the initial failed attempts.

The Ring-necked Pheasant is an example of a non-native, naturalized species. Released into southern Ontario circa 1895, the population persists at low numbers in the Niagara Region despite large releases of captive reared birds (Figure 1). Although no studies have been conducted, the population is assumed to be small and self-sustaining within ecological limits such as habitat quality, winter severity and predation.
Two Different Management Approaches

The “native-only” approach would stop the release of Ring-necked Pheasant and Gray Partridge, and it would lead to the eventual curtailment of any societal benefits derived from those species. It would also focus management efforts on native species such as the endangered Northern Bobwhite.

An alternative to the “native-only” approach privileges neither native nor non-native species. This approach, which we shall call the “all-inclusive” approach, takes as the criterion for whether or not a species should be encouraged the likelihood of its attaining a state of sustainability. This viewpoint stems from an understanding that the landscape is not the same as it once was. The present fragmented forest landscape of the Niagara Region is well suited to the Wild Turkey, hence the increasing numbers of this native bird. The native Northern Bobwhite, however, fares poorly here in the absence of suitable prairie grasslands.

A managed grassland habitat would be feasible in some areas, but it would have to be established before recovery planning for the Northern Bobwhite could begin. The third type of habitat, the open successional agricultural shrubland, is a niche that remains unoccupied by native upland game birds. A small, non-native, self-sustaining pheasant population does occupy this niche.

It would be feasible to manage successfully the three types of upland wildlife habitats (fragmented forest, grassland/meadow and shrubland) because there is little overlap among the ecologies of native and non-native birds. Occupation of all these wild landscapes by a suited game bird population would also provide the human population with an environmental sentinel that would monitor healthy ecosystems.

The human factor is a major part of the feasibility equation: there are limits to the species that can persist at sustainable levels in what remains of the undeveloped landscape. According to Aldo Leopold (1949), “A thing is right only when it tends to preserve the integrity, stability and beauty of the community; and the community includes the soil, water, fauna and flora, as well as the people.” People are a part of the community of the Niagara Region as well, and it would not be realistic to attempt to restore only historic native game bird species if their ecology no longer fits into the fragmented landscape of southern Ontario. For example, the restoration here of large contiguous forest or prairie habitat is simply not feasible, and the habitat that remains cannot support viable, self-sustaining populations of some native species. However, the present fragmented landscape would support compatible non-native, naturalized species. The all-inclusive approach acknowledges a role for both native and naturalized self-sustaining populations, as it does for recreational hunting and viewing opportunities. Most important, it constitutes an economically sound use of renewable resources.

LITERATURE CITED


Human settlement of the Niagara Region of Ontario has resulted in much of its native forests and grasslands being cleared. The outcome of this process was the development of one of the most important fruit-growing areas in Canada, but also fragmentation and loss of habitat for birds and other animals. Recently, along with population increases and urban sprawl, the burgeoning grape and wine industry has contributed to more intensive human land use. The Niagara landscape is a mosaic of vineyards and orchards, farm fields, forest fragments and human habitations. These changes have caused the decline of habitat specialist bird species, such as the Ovenbird (Seiurus aurocapilla) of the forest and the Bobolink (Dolichonyx oryzivorus) of the grassland. However, cultivated areas can produce high-quality foods for birds, including the crops themselves, and generalists, such as the American Robin (Turdus migratorius) that can capitalize on this situation, have continued to thrive.

European Starling
Brandon Holden
In addition, the introduced European Starling (*Sturnus vulgaris*), which can eat fruit crops, has established large local populations. There is, therefore, significant potential for fruit-eating birds and grape growers to have a common interest in crop production, but for very different reasons. In this article, I discuss research on bird damage to grape crops with a focus on what has been learned about this issue in the Niagara Region.

**Is Bird Damage to Grapes a Concern for Niagara Region Growers?**

A suite of environmental factors can affect the quality and quantity of the grape crop produced each season. Given the economic value of grapes, it is critical to understand how important a factor birds are relative to other influences on grape production. In 1999, Ralph D. Morris, a biologist at Brock University, conducted a survey of growers to investigate this issue. A sufficient number of growers from several districts (Niagara-on-the-Lake, St. Catharines, Niagara South, and Lincoln) responded to enable the following generalizations. Growers perceived birds to be the most significant cause of damage to grapes, ranking them above fungal diseases, winter injury, insects, wind and spring frost. However, out of a possible score of 1 to 5 (1 = no damage, 5 = extreme damage), the average score for birds was 3.1. For comparison, fungal diseases had a mean damage score of 2.6, winter injury 2.5, insects 2.3, wind 2.3 and spring frost 2.2. So although growers viewed birds as being the most important of the damaging factors listed, birds were considered to cause only moderately high levels of damage to vineyards. Respondents identified the European Starling and American Robin as the species causing the most damage to grapes. Few growers could provide information on tonnage of grapes lost to birds, but the survey confirmed that there is a conflict between at least some bird species and the grape and wine industry.

**Which Birds Eat Grapes?**

Formal studies of bird damage to grapes have been conducted in California, Pennsylvania and Ontario. In California, 25 to 40 different bird species were routinely detected in vineyards, but only those species forming large flocks such as finches and sparrows were considered abundant enough to consume economically important quantities of grapes (Boudreau 1972; Tobin 1984). The American Robin was identified as the primary damage-causing species in many California vineyards (Skorupa and Hothem 1985). In Pennsylvania, 17 bird species were routinely observed in vineyards; however, only five were found with grapes in their gizzards: Swainson’s Thrush (*Catharus ustulatus*), Grey Catbird (*Dumetella carolinensis*), Cedar Waxwing (*Bombycilla cedrorum*), American Robin and European Starling. Of these, the robin, starling and waxwing, which formed large flocks around the time of the grape harvest, were considered to have an economic impact on grape production, although no dollar values were reported (Boudreau 1972). As in California, the America Robin was identified as the most significant grape consumer in Pennsylvania vineyards (Jubb and Cunningham 1976).

During early studies in the Niagara Region of Ontario, Stevenson and Virgo (1971) observed 12 bird species in vineyards, but only American Robins and European Starlings were deemed abundant enough to pose an economic threat to grape crops. Indeed, 100% of robins and 93% of starlings collected in Niagara vineyards had grapes in their gizzards. A subsequent study by Brown (1974) identified the American Robin as the major cause of grape damage in Niagara vineyards, with sporadic loss caused by flocks of European Starlings. Baltimore Orioles (*Icterus galbula*) were also identified as...
significant grape eaters during their southward migration in late summer, although the evidence provided for this was indirect. Smaller species, such as the American Goldfinch (*Carduelis tristis*), were also suspected of damaging grapes on a lesser scale by breaking open the skin and removing the pulp from inside the fruit. In general, all field studies in the 1970s and early 1980s, regardless of the study location, identified the American Robin as the major avian consumer of grapes in North America. Moreover, aviary studies revealed that robins and starlings preferentially supplemented their diets with high levels of grapes even when other food sources were available (Tobin 1984).

In my own more recent studies of bird damage to grapes in the St. Catharines area of the Niagara Peninsula (Somers 1999; Somers and Morris 2002), I identified 13 species commonly found in vineyards: Ring-billed Gull (*Larus delawarensis*), Mourning Dove (*Zenaida macroura*), American Crow (*Corvus brachyrhynchos*), Purple Martin (*Progne subis*), Eastern Bluebird (*Sialia sialis*), American Robin, Northern Mockingbird (*Mimus polyglottos*), European Starling, Cedar Waxwing, Baltimore Oriole, House Finch (*Cardopodacus mexicanus*), American Goldfinch, and House Sparrow (*Passer domesticus*).
However, only robins, starlings, waxwings and bluebirds were confirmed as grape eaters through behavioural observations, and only starlings were abundant enough to cause concern regarding loss of grapes. Indeed, when grape damage was detectable (see below) it was most often caused by flocks of starlings. The other bird species listed did not eat grapes during my studies and likely entered vineyards for other purposes, such as to feed on insects among vine rows (e.g., Purple Martin, mockingbird). Mourning Doves were one of the most frequently observed species in vineyards, but they did not appear to be foraging on grapes. Contrary to the findings of earlier studies conducted in Niagara, robins were infrequently observed in vineyards and never in large flocks.

Factors Affecting Bird Damage to Grapes within Vineyards

What causes some plots to be damaged by birds and others left untouched, and what influences where birds decide to forage in vineyards? These questions are fundamental to effective management of bird damage to grapes, yet factors that affect variance in bird damage remain poorly understood. While attempting to assess total loss of yield caused by birds, some authors noted that plots with adjacent trees, hedgerows, orchards or electrical lines appeared to have more bird damage than those that did not have these features (Stevenson and Virgo 1971; Brown 1974; DeHaven and Hothem 1979; Himelrick 1985). In addition, there appeared to be spatial patterns in damage within individual vineyard plots. For example, bird damage was heaviest near the edges of vineyards and lower in sections that were most distant from adjacent trees (Stevenson and Virgo 1971; DeHaven and Hothem 1981). It was proposed in several
Assessing Bird Damage to Grapes

Vineyards and fruit-eating birds coexist on five continents, some with a history extending back many hundreds of years (e.g., starlings in Europe), yet there have been few quantitative studies on bird damage to grapes anywhere in the world. Consequently, the few studies published in North America have focused on establishing damage assessment methods rather than on large-scale field studies (e.g., Stevenson and Virgo 1971; DeHaven and Hothem 1979, 1981; Martin and Crabb 1979). It is extremely time-consuming and difficult to directly quantify bird damage to grape bunches, so most studies have used visual estimates as a proxy for true damage measurements. This method involves choosing a sample of grape bunches in the vineyard of interest, briefly examining them for bird damage, and then assigning each bunch a rank indicative of the percentage of grapes that appear to be damaged. For example, working in the Niagara Region, Stevenson and Virgo (1971) developed a six-point scale where rank 1 = 0–5%, 2 = 5–20%, 3 = 20–50%, 4 = 50–80%, 5 = 80–95%, and 6 = 95–100% damaged grapes. Once a sample of bunches has been assessed, an average damage rank can be calculated and converted into an estimate of the percentage of grape crop lost. This method suffers from some problems with precision but is currently the only established means of generating damage estimates. To date, loss-of-yield estimates have varied by study site but have most often been in the range of one to 15% (e.g., Stevenson and Virgo 1971; DeHaven and Hothem 1981; Skorupa and Hothem 1985). In some cases, damage levels (loss of yield) have been much higher (e.g., 59% in Brown 1974), suggesting that susceptibility to bird damage can be influenced by factors that have not been well characterized.

of the above papers that adjacent habitat features provided perching areas for birds from which to make foraging forays into vineyards, but damage assessments were initially not designed to test this possibility.

More recent studies have attempted to determine how adjacent habitat features and bird foraging behaviour combine to produce patterns in bird damage within vineyards in the Niagara Region (Somers 1999; Somers and Morris 2002). Somers (1999) designed data collection and analysis to address the following hypothesis and predictions: birds should minimize their energy expenditure travelling to and from perching areas; therefore, bird damage to grapes should be (1) greatest at the edges of plots and decrease toward the centre, (2) localized near suitable adjacent perching habitats and (3) vertically stratified on vines depending on whether birds approached from the air or ground to forage. Field research was conducted on Baco Noir, Cabernet Sauvignon, Gamay Noir and Chardonnay summer harvest grape varieties, and Vidal and Riesling icewine grapes, all in vineyards belonging to the Henry of Pelham Family Estate Winery.

The predictions (1) through (3) above were accurate for two summer harvest red wine grape varieties, Baco Noir (August–September) and Cabernet Sauvignon (September–October). In the case of Baco Noir, visual estimates revealed that bird damage to marked grape bunches was greatest at the edge of the vineyard nearest several large trees and a set of electrical lines, and decreased significantly toward the centre of the plot. For example, in 1998, on average 22% of Baco Noir grapes on vines at the extreme edge of the vineyard adjacent to perching areas were lost to birds, but this decreased to 5% at 30 m into the plot, and down to only 2.5% at 70 m. In addition, in the first 30 m in from the edge of the vineyard, bird damage was approximately three times higher in grape bunches on the tallest portion of the vines compared to those on the lowest parts near the ground. Similarly, on average, 35% of Cabernet Sauvignon grapes on vines that were on the extreme edge of the vineyard near power lines were lost to birds, but damage decreased by tenfold just 10 m into the plot. In 1999, all of the above spatial patterns remained the same, but overall bird damage was markedly reduced.

I also found that Gamay Noir and Chardonnay grape varieties that shared a contiguous vineyard plot in August–October of 1998 and 1999 had little to no bird damage in either of the two study years (Somers 1999). This finding was surprising because of the close proximity of a large stand of mixed deciduous forest that presumably offered more natural habitat and perching sites for birds than the electrical lines or small tree stands that concentrated bird damage in Baco Noir and Cabernet Sauvignon plots. There was a slight trend for the minor damage sustained by both Gamay Noir and Chardonnay to be localized in vines near the trees (1.5% grapes lost) compared to the opposite end of the vineyards (0.7%), but this finding was not statistically significant. In addition, what little bird damage there was did not disproportionately affect the red (Gamay Noir) or white (Chardonnay) wine grapes, which ripened on the same schedule.
Thus, birds were either not choosy regarding the red versus green grapes in this context, or, for some reason, they did not find either grape variety desirable. Somers (1999) and Somers and Morris (2002) were the first to examine bird damage to icewine grapes (Vidal and Riesling varieties). More than 60% of marked grape bunches dropped off Riesling vines prior to harvest because of wind damage, so spatial trends in bird damage were not analysed. For Vidal, the predictions (1) through (3) above regarding spatial patterns in bird damage were accurate in 1998, and similar to those documented for Baco Noir. Bird damage to Vidal icewine grapes was on average 30% at the extreme edge of the vineyard, decreased to 20% at 30 m into the plot, and dropped to 0.5% by 70 m. For the first 30 m of the vineyard where bird damage was greatest, grape bunches near the top of the vines sustained 3 – to 4.5 – fold more bird damage than those on the lower portions of vines near the ground. Interestingly, these patterns in bird damage were apparent despite the use of protective netting (2.5 cm by 2.5 cm flexible mesh) to cover vine rows, and without an obvious perching area adjacent to the edge of the Vidal vineyard. Bird damage to Vidal icewine grapes was still prominent in 1999 when protective netting with a smaller mesh size (plastic, 1.25 cm by 1.25 cm)
was used to protect vine rows. However, the spatial patterns previously detected were no longer evident; bird damage was distributed randomly throughout the vineyard, with the exception that grape bunches high up on vines were more damaged than those near the ground.

**Bird Foraging Behaviour in Vineyards**

Observations in Somers (1999) of bird foraging behaviour indicated that the most damage to Baco Noir and Cabernet Sauvignon grapes was caused by small flocks of European Starlings (<200 birds). These birds exhibited a pattern of foraging behaviour that seems somewhat peculiar, but explains the spatial patterns in bird damage described above. Starlings perched in trees and on power lines adjacent to vineyards and regularly descended into the tops of the closest vines to feed. Each bird plucked a single grape and then returned to the perching site to eat it. Thus, starling foraging activities were focused near the edges of vineyards adjacent to perching sites and on grape bunches that were highest up on vines and encountered first as the birds descended into vine rows from the air. Small flocks of Cedar Waxwings (<20) also exhibited this foraging behaviour the few times that they were seen in the same vineyards. Interestingly, starlings were not observed foraging this way in the Vidal icewine vineyard, but it is likely that they did, given the similar spatial patterns in bird damage quantified there in 1998. However, the flocks of starlings foraging on icewine grapes were substantially larger, often estimated as thousands, rather than hundreds of birds.

Contrary to earlier studies in the Niagara Region, my research on region vineyards seldom detected American Robins. However, the small number that was observed used a different approach to foraging on grapes than that exhibited by starlings. Robins did not gather in flocks on tall perches adjacent to vineyards. Instead, individual robins made low flights into vineyards and landed on the ground, from which they reached or jumped up to remove grapes from low-hanging bunches. Robins spent considerable time in vineyards and moved among vines while foraging, rather than returning to an adjacent perching site with each grape. Thus, it is possible that robins may not focus on the edges of vineyards as starlings clearly do. These differences in foraging strategies suggest that the bird species responsible for causing the majority of damage to particular vineyards may be inferred in the absence of direct observations of foraging. Damage focused on the highest bunches of grapes in edge areas is likely caused by starlings or waxwings, whereas damage near the ground and more spread out in vineyards is likely caused by robins.

**Techniques for Deterring Bird Damage to Grapes**

Early techniques for deterring birds from vineyards involved application of chemical deterrents (emetics/taste aversion), such as methiocarb and mesurol, that were considered effective, but their safety for use on crops consumed by humans was questionable (Himelrick 1985; Curtis et al. 1994). Recent attempts to isolate and use naturally occurring chemical deterrents derived from fruits have met with mixed success (e.g., methyl anthranilate in Holden 1994). Thus, the current trend in the Niagara Region is to use a variety of scare tactics to temporarily reduce the number of birds foraging in ripening vineyards. Some of the most common approaches are use of propane bangers...
that produce a loud, explosive noise at irregular intervals, reflective tape and plastic bags that flutter in the wind and eye-spot balls that present a threatening visual stimulus. Despite their widespread use, the effectiveness of these devices has not been rigorously tested in vineyards. The only guaranteed way to reduce bird damage to grapes is through the application of small-mesh protective netting that completely covers vine rows and does not make direct contact with bunches of grapes (e.g., Fuller-Perrine and Tobin 1993). Unfortunately for growers, this protective measure is by far the most expensive, and it is not cost effective for any but the most valuable grape crops, such as icewine varieties.

Summary and Future Directions

There is no doubt that some level of conflict exists between the Niagara Region’s world-class wine industry and bird populations in the area. Growers perceive birds to be one of the main natural factors affecting grape production, and thus to have a significant economic impact on the industry. Research over the past four decades has shown that birds certainly do damage grape crops, but that levels of grape loss vary substantially by vineyard, and even within areas of the same vineyards. Assessing bird damage and understanding its economic importance is therefore not a simple undertaking. A cursory inspection of vineyards by growers may result in a false impression regarding the severity of bird damage. However, understanding spatial patterns in crop damage and the relationship between bird foraging behaviour and habitat features surrounding vineyards may provide clues for more effective management. For example, if starlings are the major offending species, then deterrent efforts could be focused near the edges of vineyards, where damage is likely to be the worst, or even at perching areas adjacent to crop fields. Growers who perceive bird problems as particularly severe should take the time to document levels and spatial patterns in damage to help them determine how significant bird damage really is to their production of grapes. Few, if any, growers currently quantify loss of yield caused by birds.

Future scientific studies in the region should address, on a larger scale, the spatial distribution of bird damage to grapes and attempt to understand potential relationships between such damage and habitat and landscape features. In addition, the efficacy of common deterrent measures in vineyards should be formally assessed. Finally, with even more pressure on the Niagara Region to accommodate increased human land use, the value of vineyards as habitat for rare or threatened species, and their place in conservation planning for the Niagara Region, needs to be assessed.

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Imagine yourself a starling. You spend warm, leisurely days flying around the Niagara Peninsula in the sun, and you have a veritable feast of fields to choose from. In the spring, there are big, fat, sweet cherries in large orchards beautifully cared for by the farmers. In the summer, the farmers’ toil results in neat rows of succulent raspberries. What’s more, in the wild, you can find an unlimited supply of other delicacies. As fall approaches, the seeds of a vast array of plants burst forth for you to swoop down upon and enjoy. This diet is also very nutritious — no fast food; no trans fats and a plentiful supply of water.
Then suddenly winter arrives. You are confronted by the harsh realities of a Canadian winter. Originating as a species from the much milder climate of the United Kingdom, you are shocked. Winter brings the end of the fruit season, your water supply is frozen, and whatever is left of seeds, insects or any of your former food supply is covered in deep snow. As you fly around in desperation, you grow very, very hungry. You also become cold, but because you are not indigenous to the region, you do not fly south.

All of a sudden, on your last, desperate, foraging effort to find a morsel of sustenance, you look down. What have we here? Could it be a hallucination? Spread out beneath you is a vineyard full of juicy, sweet grapes that some Niagara Grape King has left on the vines so that you will not starve. You are most grateful. You call your other starling friends, who are all in the same predicament. In vast numbers, you gather to descend on the vineyard to devour this delectable feast. You see that wires have even been provided for your perching pleasure. What a salvation! But now you are in for an unpleasant surprise. The grape grower has netted the vines so that the feasting proves to be tricky. Tricky, yes, but not impossible!

**Starlings and Icewine**

Farmers like me have always had a love-hate relationship with birds. There is nothing like waking up in the early morning to a magnificent chorus of songbirds. Yet as the day goes on, both man and bird confront the harsh realities of life. Growing up on a farm, I had to deal with the fact that certain birds liked to eat cherries, and, as a result, I came to resent those particular birds. In the nursery, I had a similar experience. I loved to watch the majestic male Ring-necked Pheasant (*Phasianus colchicus*) strut around our property, but these pheasants complicated my life as a young nurseryman. I would plant peach seeds in long rows about 2.5 cm deep and 2.5 cm apart to grow as wild seedlings that we would eventually graft to specific varieties. I often awoke after a day of such labour only to find that the pheasants had dug up large sections of the rows. The peach pits had provided them with dinner the night before and breakfast that morning.
In 1983, Karl Kaiser and I, partners at Inniskillin Wines and co-founders of the company, decided to grow icewine grapes. The icewine industry had its beginnings in Germany in the mid-eighteenth century and was introduced into Canada in the early 1980s when several winemakers immigrated here from Austria and Germany. Karl was among them. In general, the industry flourished, but there were the inevitable setbacks. One of these was birds that were competing with us for the grapes.

Visualize driving up the laneway into Inniskillin Wines on a chilly December day and seeing before you 13 rows of large bunches of juicy grapes hanging on completely leafless vines. The first year that we grew icewine grapes, visitors to the winery actually chided us for having forgotten to pick the grapes off the vines. But we soon had help.

On 3 December, Karl, returning home after a few days away at a conference in the United States, was very upset when he arrived at the winery. “I told you not to pick those grapes until we got temperatures of minus eight degrees so the grapes would freeze on the vine,” he stormed. Surprised, I replied, “I didn’t pick them. I thought you did.” What had happened was that the 13 rows of ripened Vidal grapes had been consumed by starlings. We learned a very costly but valuable lesson. These birds normally feed on seeds, wild berries and insects; however, overnight about 30 cm of snow had fallen covering most of their usual food supply. They had then discovered these succulent, sugar-laden berries and made a feast of them. From sunrise until the time we arrived at the office that morning, the birds had devoured all the grapes.

The birds that destroyed our first attempt at icewine were European Starlings (Sturnus vulgaris), and these misplaced foreigners have been part of the icewine story ever since. In the dead of winter, after a deep snowfall, it is an eerie sight when a huge, sky-darkening flock swoops down to land in trees adjacent to the vineyard. There can be so many birds that they seem to replace the leaves, turning the trees black. At times the starlings, which can number in the thousands, descend in massive formations and attack the vineyards. The scene looks like something straight from an Alfred Hitchcock movie.

Matthias Oppenlaender, Niagara Grape King of 2006, tells a story about one of his encounters with just such a flock. One afternoon in December, Matthias and his brother met with huge numbers of starlings in their vineyard in Queenston. The birds were on the ground and in the air. Matthias went back to the truck to get his big Golden Labrador to help chase away the birds, but the dog was so frightened that he refused to get out of the vehicle!

Whether or not the starlings distinguish among grape varieties is unclear but they do seem to have their preferences early in the season when they are not trying merely to stay alive. Each variety of grape has its unique characteristics. The berries of Vidal, for example, have thick skins, so they are difficult for the birds to pick at. However, as the winter goes on and the birds become more voracious, the thick skins do not seem to be a significant deterrent. Riesling grapes, in contrast, have very thin skins. The birds start early on them, and when they have been eaten or harvested, migrate to the Vidal. Since Cabernet Franc grapes are red, I suspect that they are more visible to the birds and therefore more easily discovered. And there is no doubt that once the birds discover a vineyard of grapes they tend to then stay there. The trick is to keep them from discovering the grapes for as long as possible.
Starling Deterrents

A number of procedures, ranging from primitive noisemakers to highly sophisticated attack mechanisms driven by computer programs, have been tried in the attempt to prevent birds from eating ripe berries, but the outcomes have been equivocal at best. Some of the methods used, with varying degrees of success, are discussed below.

At the least-complicated end of the scale are the simple disturbance techniques. Growers go into their vineyards with trucks or tractors and drive up and down the rows trying to scare the birds away. Workers are sometimes paid to walk up and down the rows banging tin cans and pots or anything that will make a noise. There are even twister noisemaking “bullets” that sizzle loudly enough to cover a wide area. In addition, a whole range of objects are designed to create a visual disturbance — twisters, banners, ribbons, shiny objects, stuffed owls, and so on.

The noise created by propane bangers is a common sound for anyone living near a vineyard. Since the bangers go on at sunrise, neighbours — especially those who moved to the country in search of serenity — often consider them a nuisance. The “Letters to the Editor” section of any local Niagara newspaper frequently contains heated exchanges on the subject. Many of the long-time Niagara residents come to the defence of the growers. These understanding neighbours have come to regard the bird bangers as a necessary part of the grape-growing ambiance.

In yet another category, we find techniques that attempt to frighten away birds by introducing real or simulated danger. Some vineyards use birds-in-distress signals that simulate warning calls. These tape-recorded calls are played over loud speakers in the vineyards and are intended to warn birds not to come into the area. Live falcons have been tried in vineyards, as at airports, but the need for handlers makes this method very costly. Besides, there would simply not be enough falcons to go around. Several years ago, Inniskillin tried some high-tech equipment. A video camera picked up the flight activity of the birds. These flight patterns were then recorded into a computer that compiled a large data bank of this information. A highly sophisticated computer program was designed to send out an attack mechanism, guided by a wire, which would scare off incoming birds. The mechanism was strung on wires in a predetermined pattern above each row and over the entire vineyard. This highly creative concept would probably have been effective, but the cost of the computers, installation and maintenance was prohibitive.

The most effective solution that we have discovered for protecting the berries from the birds is to place costly netting over each individual row. Placing the netting over the entire vineyard, as they do in northern Italy and elsewhere for hail protection, would be less expensive, but the amount of the snow and ice in Canada would make the entire canopy so heavy that it would come crashing down under the weight. The Canadian way that has evolved is to place netting over each individual row. The bottom of the netting is left untied or loose in order to let the leaves fall off the vines. Once all the leaves have fallen to the ground, the grapes are visible to the starlings. To protect the berries, the netting is then tied or secured underneath so that the birds cannot enter from below. As the season advances, less food is available to the birds, and they...
grow hungrier and hungrier. It is amazing to see how desperately creative they become in order to get at the berries. Even when the netting has been placed over the rows of vines, the birds will perch on the netting and struggle to pick away at berries within reach. They will also knock some berries off. These fall to the ground, where their partners are waiting.

Of course, we then have to go into the vineyard and release the birds that get trapped in the netting. One day while doing this, we discovered a woman who had decided to take matters into her own hands by cutting the netting herself. We politely explained to her that she was trespassing and destroying private property. We understand such concern for the welfare of the birds, but we do have to protect the grapes, while doing the best we can to manage the birds. As farmers, we are keenly aware of our responsibilities as stewards of the environment.

Summary

We still have not found a perfect method of protecting grapes from birds. Damage varies from year to year, and additional research is needed on the causes of this variation. We have speculated that in a wet year the birds can find sufficient water without resorting to attacks on the succulent grapes, and in years when insects are prevalent, the birds may be less interested in grapes. It is not uncommon for the birds to strip completely all the grapes adjacent to a forested area. They roost in the trees and make quick raids into the adjacent vineyards. It is almost impossible to keep them out of the rows nearest to the wooded areas once they have established themselves there. It is difficult to calculate losses caused by birds. If netting and the other berry-saving practices were not used, there would be no crop at all. In a mild winter, when there is little snow cover and the ground is not frozen, there is less damage because the birds can access sources of food and water other than grapes. However, during a cold winter with a heavy cover of snow, the damage from birds can amount to more than 50% — or millions of dollars.

Despite the problems with birds, icewine has become one of the great success stories of the Canadian wine industry (Ziraldo and Kaiser 2007). It is now recognized as a luxury product and a Canadian icon across the global wine market. Birds are only one of the risk factors inherent in the production of icewine, but a significant one. For the time being, with no perfect solutions in sight, it seems the vintners and the birds will have to continue their competition for the grapes.

LITERATURE CITED

See also www.ziraldo.ca.
Spring Season

(March to May)

The first day of March is a significant date for the raptor enthusiast in Niagara because it marks the beginning of the hawk watch at the Beamer Memorial Conservation Area in Grimsby. This activity continues until the middle of May. In his article "Hawk Migration in Niagara," John Stevens describes the hawk watch and summarizes the findings gleaned there over the years.

In April, migrants such as Killdeer, Hermit Thrushes, blackbirds and other hardy species begin to arrive in Niagara, but it is not until early May (surely the most exciting month for anyone interested in birds) that the bulk of the colourful warblers and other migrant passerines put in an appearance. On 17 May 1986 John Black, Brad Clements, Mary Ellen Hebb and Richard Knapton, while participating in a Baillie Birdathon in the Niagara Region, observed 148 species. They did so by visiting all the local hotspots, starting at Port Weller in the morning, going on to Point Abino in the afternoon, and ending at the Wainfleet Bog in the evening to listen for Whip-poor-wills. The Port Weller east pier, a particularly fruitful location at the mouth of the Welland Canal in St. Catharines, yielded 80 species of birds in the first two hours of the morning.

Two of the best places to look for spring warblers are the Port Weller east pier and Malcomson Eco-Park in St. Catharines. In his article "Monitoring of Migrants on the Port Weller Piers in May 1993-1997," John Black presents the results of a study that he conducted, with the help of many Niagara birders, on the birds that can be seen on the Port Weller east and west piers.

On the ground we see only a small fraction of the birds that migrate through. In an attempt to derive a more complete picture of the actual numbers in the air, Black devised a method for monitoring migrant numbers using a weather radar. In "Radar Monitoring of Bird Migration over the Niagara Region in the Spring," there is a description of the vast numbers of birds whose images have been captured on these weather radars as the birds migrate north over Niagara.

Since 1966 the Buffalo Ornithological Society has been holding bird counts in their study area during April and May. Mike Hamilton and Robert DeLeon in their article "April and May Buffalo Ornithological Society Bird Counts in Niagara," summarize the results of these counts from Niagara and comment on the interesting trends in bird numbers that they found in a careful study of the count data.
Hawk Migration in Niagara

John R. Stevens

DURING THE LATE WINTER AND THROUGHOUT THE SPRING, as birds return from wintering sites farther south, hawk, or more precisely diurnal raptor, migration occurs in Niagara. While migration undoubtedly occurs on a broad front throughout the region, the Beamer Memorial Conservation Area (Beamer) at the top of the Niagara Escarpment in Grimsby is the only site in Niagara where a concerted effort is made to monitor the passage of these migrants. There, from late February to the middle of May, a group of volunteers record a systematic tally of the flight on an hourly basis as part of a continent-wide program coordinated by the Hawk Migration Association of North America.
History of the Watch

At the North American Hawk Migration Conference held in Syracuse, New York, in April 1974 and sponsored by the National Audubon Society and the Hawk Mountain Sanctuary in Pennsylvania, the Hawk Migration Association of North America (HMANA) was founded. Initially it sought to standardize monitoring methods, assess migrations in spring and fall on a regional basis, publish the results and provide a clearing house for the data (Harwood 1975). Members of the Buffalo Ornithological Society (BOS) and the Hamilton Naturalists Club attended the conference.

At this time, hawk migration was being monitored in the spring at three sites in New York State along the southeastern shore of Lake Ontario and in the fall at a site on the northern shore of Lake Erie in Ontario (Hawk Cliff just east of Port Stanley). These sites are concentration points because the raptors rely for lift on rising currents of warm air called thermals so as to conserve energy. The cold waters of the Great Lakes produce little lift. When the northbound birds in the spring encounter one of the lakes, they quickly change direction and move parallel to the shore, hence the concentrating effect.

Following the conference, birders on both sides of the Niagara River noted the absence of a spring watch site at the western end of the southern shore of Lake Ontario, although they were aware of hawk movement along the escarpment. In 1974, avid
hawk watcher Dave Copeland began exploring eastward along the escarpment from the King’s Forest area in Hamilton in search of a good observation point. He arrived at Beamer, where he found the view from the escarpment edge looking east to be the best point. In 1975, he established the Grimsby Spring Hawk Watch and, with limited assistance from other members of the Hamilton Naturalists Club, began monitoring the migration.

Meanwhile BOS member Walter Klabunde began working his way westward along the escarpment from his home in Lewiston, New York looking for a suitable observation point. On a warm day in the spring of 1975, he encountered George Meyers of Grimsby at the lookout on the escarpment edge at Beamer. Klabunde explained that he was a member of an “ad hawk” committee of the BOS. “Is this a good place to watch hawks?” he inquired. Meyers, who had been watching them since his family had moved to the town in 1956, assured him that it indeed was!

Initially, observations were made at the lookout, but gradually it became apparent that longer views of a bird were generally available from the parking area. Comparative counts were conducted to see which location was better. The parking area sometimes referred to as the circle, consistently yielded more birds and fewer uncertainties as to species. Explorations at more inland sites found passing migrants in good numbers depending on wind conditions; nevertheless, the principal watch site became the parking area circle. Daily counts began in 1975, and the number of days and hours covered increased each year so that by 1980, with the assistance of people from the Hamilton Naturalists Club, the BOS and others, coverage extended from 1 March to the end of May. In 1981, official count forms were adopted that required hourly records of weather conditions as well as bird counts.

Over the years, several changes have been instituted. To ensure that the records had more statistical reliability, the practice of adding in birds seen at the lookout or at an inland site other than the parking area was discontinued and those records kept separately. In 1990, under the impetus of Bruce Duncan, a more formal organization, the Niagara Peninsula Hawkwatch, was formed. In addition to being responsible for monitoring the raptor migration, it would also reach out to educate the public about hawks and their annual migration. A steel tower donated by Co-Steel Recycling, a subsidiary of Co-Steel Canada (now Gerdau AmeriSteel Corporation), was erected in 1998 in the centre of the parking area from which the counts are now conducted. This tower provides a wider field of view than is possible from the ground and restores sight lines close to those that were present when counting began and the surrounding trees were much less mature.

It is not an accident that the tower area has been chosen as the best site from which to monitor the migration. In addition to the proximity of the southern shore of Lake Ontario, Beamer is the point where the Niagara Escarpment comes closest to the lake. Winds with a northerly component are deflected upward at the escarpment, producing the rising air currents required by the raptors. This flow is fairly steady during midday when the land is warmer than the lake and an onshore breeze develops. Many birds are seen using this lift as they cruise along the edge of the ridge.
The escarpment is also attractive to the raptors as a flight path for another reason — its woods. Late in the afternoon on a good day for migration, a “down flight” is often observed as high-flying birds come down for their evening roost.

To summarize, birds coming around the eastern end of Lake Erie and heading generally north, get to Lake Ontario, and veer either east or west. Probably five or six turn east for every one that turns west, but those going west over the lake plain work their way back to the escarpment to take advantage of the updraft. Other birds never get to the lake but ride the escarpment updraft once they encounter it. There is thus a kind of funnelling effect created by some birds flying along the lakeshore, some along the escarpment, and others from the eastern end of Lake Erie to the western end of Lake Ontario, all more or less converging on Beamer.

Beamer is owned and managed by the Niagara Peninsula Conservation Authority, which acquired the majority of the lands during the period 1964-1973. The circle was formerly part of a cleared agricultural field, and in the early days, a vineyard extended to the edge of the Beamer property. The Authority has allowed much of the area to regenerate naturally but continues to mow the circle and the immediate surroundings. Having this publically accessible property directly below the migration route of the raptors has greatly promoted the advancement of the monitoring program.

Seasonal Observations

During the first few years before complete seasonal coverage throughout the migration was established, sixteen species of raptors were noted passing the watch. These consisted of one vulture (Turkey Vulture), Osprey, two eagles (Bald Eagle and Golden Eagle), Marsh Hawk, which is now known as Northern Harrier, three accipiters (Sharp-shinned Hawk, Cooper's Hawk and Northern Goshawk), four buteos (Red-shouldered Hawk, Broad-winged Hawk, Red-tailed Hawk and Rough-legged Hawk) and four falcons (American Kestrel, Merlin, Peregrine Falcon and Gyrfalcon). Although it was not fully appreciated at the time, the Gyrfalcon observed in 1977 was a real rarity for the watch; it would be 29 years before a second one was tallied at the site. The remaining fifteen species constitute the “regular” migrants that are observed every year.

In succeeding years, there have been sightings of six additional raptor species. Of these by far the most frequently seen has been the Swainson's Hawk (17), the latest on 18 April in 2002. The others are Black Vulture (3), Ferruginous Hawk (3), Mississippi Kite (2), Swallow-tailed Kite (1) and Prairie Falcon (1). The single Prairie Falcon made a memorable appearance in 1995 by catching and making a meal of a meadowlark in the former vineyard area.

Five of the regular species occur in notably greater numbers than the rest. These consist of Turkey Vulture, Sharp-shinned Hawk, Red-shouldered Hawk, Broad-winged Hawk and Red-tailed Hawk. The inclusion of Red-shouldered Hawk in this list was the first significant finding that emerged from the Beamer watch site. According to Dave Copeland, when the HMANA initially received the first report of hundreds of this
species in a season, the identification skills of the counters were questioned. Only after some of the ‘experienced’ hawk watchers from the northeastern United States came and saw for themselves was this doubt put to rest and the outstanding spring Red-shouldered Hawk migration through Niagara fully accepted.

The results of the Red-shouldered Hawk counts for the 27 years from 1980 to 2006 have been combined and displayed in five-day intervals in Figure 1. It shows that the peak period for this species occurs between 21 March and 30 March, when almost half of the birds are seen. Almost another quarter of the birds are seen in the five days before and after this period. Considering the effect that weather conditions can have on the time of the flight, this is a very narrow window of passage.

In general, although by no means exclusively, when visible observations allow them to be distinguished, adult birds of a species are seen to migrate earlier in the season than younger birds. This is particularly true of the buteos for which two pulses of migrants can often be detected in a season, corresponding to the initial passage of the adults with a smaller echo of immature birds in a later period. This migration pattern has likely evolved because the young birds are unlikely to breed and are in no rush to reach and stake out a breeding territory as are the adults.

In the 27 years from 1980 to 2006, the average number of migrants seen per year has been approximately 14,000, ranging from a low of 10,508 in 1987 to a high of 19,275 in 1985. Aside from the few species trends discussed below, the variance from year to year mainly reflects the number of Broad-winged Hawks seen. This is the most abundant raptor that breeds to the north of Niagara (Szuba 2007) and is usually the most common species at other hawk watches in eastern North America (HMANA 2008). It has been the most common at Beamer in ten seasons, but the number seen is highly dependent on the weather, probably more so than for any other species. As the daily temperature maxima rise in May, the thermals become stronger and the birds fly at great heights. They become invisible even with eight or ten power binoculars. This is particularly the case for Broad-winged Hawks, a relatively small species, with the result that almost none of the immature birds, which are seen to migrate around mid-May at shoreline watches to the east, are ever seen at Beamer. This problem can also occur on warm days in April when skies are blue; the dark forms cannot then be discerned as they can against a light background of clouds.
Trends in Individual Species

Table 1 presents the data from the counts at Beamer for selected species over the period 1980-2006. The figures from earlier years are less useful to the following discussions because the coverage was incomplete.

During the 1970s, it had become apparent that chlorinated pesticides and herbicides had an adverse side effect on the natural environment. These chemically stable, synthetic compounds persist in the environment because microbes have not evolved to extract energy from them by breaking them down (Hoffman et al. 2003). Since they are fat-soluble and not biodegradable, they have a tendency to bioaccumulate and to get transferred from plants to invertebrates to vertebrates and on up the food chain (Hoffman et al. 2003).

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<td>1,753</td>
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<td>679</td>
<td>3,099</td>
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</table>
Raptors, at the top of the chain and relatively long-lived, were particularly affected. By the time use of these products was banned in North America during the 1970s, many of the larger raptors like Bald Eagle, Osprey and Peregrine Falcon had seriously declined in numbers.

Efforts to assist in the recovery of these species were commenced and their success for Osprey and Bald Eagle can be discerned by the increasing numbers of these species that were observed at Beamer as the years passed. Ospreys went from an average of 25 in the early 1980s to an average of 54 in the 2003-2007 period. The increase in Bald Eagle sightings has been even more pronounced, going from an average of 5 per year in the early 1980s to an average of 68 during 2002-2006. While the Osprey numbers have not increased now for close to 20 years, the number of Bald Eagles appears to be still generally rising. The number of Peregrine Falcons seen annually at Beamer has also increased from the early years, but the number seen each year at Beamer is still too small to be reflective of the comeback in that species that has occurred in all of Ontario.

The most obvious trend is the increase in the number of Turkey Vultures. Annual totals have risen almost tenfold between 1980 and 2006. Since 2002, except for 2005, Turkey Vultures have been the predominant species in the count. This trend is a result of a range expansion by Turkey Vultures, which was ongoing even before 1975. The Turkey Vulture counts are still increasing with a new record high total set every year or two. Given that the average annual total of birds of all species has been fairly constant since complete coverage of the site was initiated in 1980, clearly the annual number of non-vulture raptors has been declining.

Only a small proportion of the Northern Goshawk population migrates in most years, with the result that this species is very uncommon at Beamer, averaging about ten birds in a season. However, periodically, owing to a crash in one or more of their prey species (Squires and Reynolds 1997), there is an irruption of Northern Goshawks, a phenomenon that has been documented at Beamer twice since 1980. The years 1983 and 1994 yielded 73 and 72 birds respectively. It is believed that this 11-year cycle corresponds to the cycle of the prey species but there was no irruption noted in 2005 or the years before and after at Beamer. The next irruption year is predicted to be about 2016, and it will be interesting to see if another increase in goshawk numbers occurs at that time. Solar activity fluctuates on an 11-year cycle and the peak in the goshawk flights occurred about two years after the maxima. It is unclear if the two events are related in any way. At other watch sites, the irruptions occur more frequently and at differing time intervals (HMANA 2008).

The averages of the annual Red-shouldered Hawk counts at Beamer for the 1980-1983 and 2003-2006 periods are very similar (618 and 575 respectively) and consistent with the findings of a study conducted by the Ontario Ministry of Natural Resources (Badzinski 2007). This study as well as work by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) have deemed the population in Ontario to be stable. The species was then removed from the list of those considered to be at risk (COSEWIC 2006). The data from the Beamer watch site (Table 1) reveal that subsequent to 1983 there was a distinct trend to increased sightings of Red-shouldered Hawks that reached a peak in 1994, thereafter dropping by about 50% to the stable range seen currently. Curiously, this trend is diametrically opposed to that found by the Ministry’s breeding survey for the 1991-2006 period, which showed a decline to a population minimum in 1994 and a significant rise in population in 1995 (Badzinski 2007).
One species that has displayed a trend to lower numbers is the Sharp-shinned Hawk. In the early 1980s, the average annual count for this accipiter was around 4,400 birds, but in recent years, the counts have been averaging only 2,000 birds. Similar declines were noted at count sites in the northeastern United States, and it was suspected that, rather than depicting a population decline, this trend reflected an increasing tendency for this species to overwinter and take advantage of bird concentrations around feeders (Goodrich 1997). Another possibility was that larger numbers in earlier years reflected an unusually high population resulting from a boom in songbird prey associated with spruce budworm infestations, and that the current numbers reflect more normal conditions (Bolgiano 2005). It should also be noted that an unusual spike in the Sharp-shinned Hawk count at Beamer occurred in 1990, when almost 50% more birds were counted than in any year before or since.

The number of Rough-legged Hawks has varied considerably over the years from a low of 22 in 2002 to a high of 204 in 2004. As with the Northern Goshawks, only a fraction of the population migrates south of Grimsby in any year. Likely the weather and snow depth as well as the population of prey species is responsible for the rather erratic pattern of their passage by Beamer from year to year. Two colour morphs of this species are commonly observed at Beamer. The more common light morph is seen more than twice as often as the dark morph, although the records of this characteristic are incomplete.

The number of Red-tailed Hawks counted has been fairly uniform over the years from 1980 to 2006 with a long term average of 2,816 and extremes of 3,861 in 1992 and 2,033 in 2002. On balance, however, there has been a slight decline, with eight of the first 14 years having in excess of 3,000 birds compared to only two in the second 14 years.

**Median Passage Date**

In order to determine whether global warming has affected the migration of raptors, it is useful to consider their median passage dates. Because of the large effect that local weather conditions can have on the migration counts, it is expected that considerable variation will occur from year to year. However, by examining the median passage date (the halfway point of the total flight) over the 27 years for which complete counts for each species are available, it is hoped that the vagaries of the weather can be overcome. This should provide a better point of comparison than other measures such as the first date a species is observed or the peak flight date in each year.

For this analysis, larger raptor species have been selected because their size makes them more visible, and thus the count data should be more consistent from year to year. Both Osprey and Red-shouldered Hawk are included because their migration occurs entirely within the counting period, while Turkey Vulture and Red-tailed Hawks were chosen because they are seen in large numbers. Bald Eagle and Rough-legged Hawk are also seen in sufficient numbers today to warrant inclusion in this survey.
The median dates of passage are presented in Table 2 along with a mean date for the 27 years of the study.

For Turkey Vulture, Osprey and Bald Eagle there appears to be a trend developing toward movement earlier in the year, although considerable scatter is present in the dates. Over the 27 years of the study, the change amounts to about four days for Osprey (Figure 2), an astonishing number considering that their spring migratory period at Beamer lasts only approximately 40 days.

<table>
<thead>
<tr>
<th>Year</th>
<th>Turkey Vulture</th>
<th>Osprey</th>
<th>Bald Eagle</th>
<th>Red-shouldered Hawk</th>
<th>Red-tailed Hawk</th>
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<td>Apr 19</td>
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<td>Mar 27</td>
<td>Mar 27</td>
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</table>

Mean: Apr 4, Apr 20, Apr 1, Mar 26, Mar 29, Apr 4

* Only one bird in the year
There is no trend toward either earlier or later median dates for Red-shouldered Hawks; the trend line corresponds to the mean of their passage dates. By contrast, the apparent trend for both Red-tailed Hawks and Rough-legged Hawks, whose migration period extends over 75-80 days, is toward a later date of passage by four to five days over the 27 years. The scatter of the data points suggests that a longer period of study is essential before it can be determined whether climate change is affecting the timing of raptor migration in Niagara.

**Outlook**

The efforts of the counters at Beamer are producing a valuable historical record of raptor migration in Niagara. The collected data, along with that from other watch sites in North America, are being used to develop raptor population estimates that would otherwise be very difficult to determine (Bildstein et al. 2008). Because of the consistency of the observation point, the skill of the observers, the completeness of the seasonal coverage and the number of continuous years of data, the accumulated information represents the most important database related to raptors in Niagara. Furthermore, the location of the watch site in a readily accessible public conservation area provides a way of introducing the general public to raptors and their migration while fostering a greater overall appreciation for the natural environment.
ACKNOWLEDGEMENTS

The author acknowledges past and present hawk watchers, particularly Roy Baker, Barry Cherriere, Dave Copeland, George Meyers and Mike Street for the many hours of fruitful discussions at Beamer. In addition, the Newsletter and records of the Niagara Peninsula Hawkwatch have been a rich source of reference.

LITERATURE CITED


Monitoring Migrants on the Port Weller Piers in May 1993-1997

John E. Black

The Port Weller piers in St. Catharines, Ontario, have long been known by birders as an excellent location for finding migrating birds in the spring. However, since no one, prior to the study described here, had monitored the piers on a regular basis, information on the details of the migration was spotty. It seemed, then, that a more formal approach to monitoring the migrant birds on the piers would be of interest. In May 1993, with the help of over 25 local birders, I initiated a study of the birds present on the two Port Weller piers and in some of the surrounding woodlots. In particular, we sought answers to the following three questions: (1) what species and numbers of birds were present on the piers in the month of May?; (2) how did the migration pattern differ between the two piers?; and (3) how did the birds move around on the piers? To answer these questions, counts were taken at various times of the day at a number of locations on each pier and in nearby sites off the piers.
In subsequent years of the study (1994–1997), we concentrated on the first and second questions by recording the species and numbers of birds making use of the piers and the dates on which they were present. For this portion of the study, only two areas were counted, and these only once a day. Reports were prepared on the data collected from these two areas during each of the years from 1993 to 1997 (See Black 1993, 1994, 1995, 1996 and 1997). The 1997 report included a summary of all the preceding years.

**Procedures**

The counts were taken on two piers that extend northward for 1.6 kilometres into Lake Ontario on either side of the Welland Canal from an area known in St. Catharines as Port Weller. There were, at most, two counters and one note taker, who stayed together and counted the same birds. The counts were taken in almost all weather conditions, but they were not performed outside the designated count hours. The protocol was designed to be birder friendly; that is, it provided enough time for a counter who was also an avid birder to chase any interesting birds found during the count, but still finish in the required time.

**THE EAST PIER**

A gravel road runs the length of the east pier. A small woodlot, here termed the “north wood”, occupied an area at the east side of the road at the northeast end of the pier. East of this gravel road, some two-thirds of the way out, there were also two ponds built in the 1970s to accommodate material dredged from the canal. In 1993 the “south pond” was still open water, edged with some rushes, but much of the “north pond” had filled in at its south end with willow and other small trees approximately 7 metres high.
In the south pond there is a small piece of land called the “island”, which was known as a good spot for birds and for this reason was chosen to be the centre of the study area. The west end of this island lay approximately 10 metres in from the dirt road. The island measured about 30 metres in the north-south direction and 40 metres in the east-west direction. At the edge of the south pond and on the island, young, isolated black willows, white ash and a lone, noteworthy Bebb’s willow had not yet established a canopy. In the hedgerow were several invasive species, including perfumed cherry, white mulberry, European buckthorn trees and European highbush cranberry. Round-leaved dogwood, a native species, was establishing itself in the shrub layer.

The count area included everything visible between the east side of a 45-metre stretch of the dirt road and the west edge of the island. This consisted of a 5-metre wide hedgerow, a path to the east of the hedgerow and some trees on the northwest shore of the south pond and on the western portion of the Island. Birds in the trees of the hedgerow and on the ground beneath it were entirely visible from the road and/or the path.

The count protocol was as follows: (1) the counter was to divide his or her time between the dirt road and the path; (2) the start time of the count was to be between 0930 and 1030 hours EST; and (3) the duration of the count was to be 30 minutes. Even if there were no birds, the observer was to be present for the full 30 minutes.

THE WEST PIER

A Canadian Coast Guard Station is situated near the midway point of this pier. The study area consisted of the area north of the Coast Guard Station. A dirt road, 7 metres in width and 7 metres from the canal, runs from the station to the tip of the west pier. In 1993, willow trees lined the east side of the road. On the west side of the road ran a 9-metre wide hedgerow followed by a mowed, 12-metre wide strip of land with a power line down its centre. This strip converged with the roadway near the tip. West of the strip, an uneven canopy of aging 12-metre tall poplar trees, punctuated by cedar and spruce trees, had been established as a result of plantings made over 75 years ago. Pioneering white ash, black cherry, red maple and staghorn sumac trees (draped at times with Virginia creeper, European bittersweet or grapevines) now camouflage the original plantings. Various honeysuckles and silky and red osier dogwoods (presumably introduced in bird droppings) have produced a vigorous shrub layer, at the base of which downy arrowwood is surprisingly common. Similar species were present in the 9-metre wide central natural area between the dirt road and the mowed strip, although the understorey was not as tall or dense. The count area did not include the western side of the wooded area on the west side of the west pier.

The count protocol was as follows: (1) The counters were to walk the dirt road on the east side of the pier and/or the mowed strip in the centre of the pier. By choosing the road and/or the mowed strip, the observers would see most of the birds in the trees and shrubs east and west of the power line as well as those in the trees along the canal; (2) On the way back, the counters were to note if there were any birds on the extreme west side of the pier; (3) The start time was to be as close to 0800 hours as possible, at least no earlier than 0730 hours and no later than 0830 hours. (The overall impression, prior to the study, was that birds drifted through the count area at this time of the morning); and (4) The count duration was to be between 30 minutes and 90 minutes—30 minutes if there were no birds, and up to 90 minutes if there were many birds—but as close to 60 minutes as possible.
Results

GENERAL RESULTS FROM 1993

One question of interest concerned the movement of birds along the two piers, in particular, whether or not there was a systematic movement of birds off or on the piers during the day. To answer this question, in 1993 between 0615 hours and 0930 hours from 1 May to 28 May, one or more observers occupied an observation site north of the marina on the east pier. On most of those days, mist nets were also employed at the site and birds trapped, colour-marked and released. The main conclusion of this study was that there was very little drift of passerine migrants north or south along the east pier from 0615 to 0930 hours. Details of the drift at other times of the day were not studied. A total of 257 birds passed the observation site from north to south, and 176 birds passed from south to north. These totals include only flycatchers, vireos, thrushes, kinglets, warblers, tanagers, sparrows, grosbeaks and orioles. Notably, only two thrushes were observed—one Hermit Thrush and one Wood Thrush. The most impressive movement consisted of 23 warblers moving south between 0824 and 0850 hours on 15 May 1993. These same birds were found south of the observation site during a count taken at 1400 hours on the same day.

Large numbers of Red-winged Blackbirds and Common Grackles roosted in the north pond marsh in the evenings. These two species were also observed moving along...
the piers in the early morning. A number of additional resident (and possibly migrant as well) common Niagara species, namely, American Robin, American Crow, Bank, Barn, Tree and Northern Rough-winged Swallows, Black-capped Chickadee, European Starling, Northern Cardinal and House Sparrow were also observed on the piers, but their movements were not studied.

The one common resident species in which migration could be clearly discerned was the Blue Jay. On many days of the study, Blue Jays were observed moving from south to north past the observation station. The birds seemed to prefer the trees and frequently interrupted their northward journey to land in the treetops. The largest number of Blue Jays, 180 individuals, was observed on 8 May.

On several days, I drove out to the north end of the east pier and observed Blue Jays arriving from the south. One flock of birds, followed by car, proved to be travelling at 50 km/h. Several flocks were noted at the observation site by observers, who then, by means of a walkie-talkie, contacted me. A few minutes later flocks of the same number arrived at the north end of the pier.

The behaviour of the Blue Jays at the north end was complex, as the following typical scenario indicates. A flock of 10 to 20 Blue Jays would arrive at the north end of the east pier and land in the trees at the north wood. A few minutes later, they would fly off to the north and gain altitude over the north end of the canal. They would then circle somewhat, giving the impression that they were undecided about what direction to take. On occasion, they then flew north, and then after some time (visible throughout the flight in binoculars), they would return to the canal mouth or the trees of the north wood. On other occasions, birds were observed, until lost from view, flying east or west approximately parallel to the shoreline. On no occasion did any birds persist in travelling north across the lake. Similar movements were observed on the west pier. Note that the distance to Toronto directly across the lake is about 50 kilometres, and the city skyline was frequently visible from the end of the pier.

Other species, such as Yellow-rumped Warblers and Red-winged Blackbirds, were also observed starting north across the lake, but no detailed study was made of their movements. Non-passerines observed in 1993 included Northern Flickers and Downy Woodpeckers.

A few birds of interest, observed during the years of the study but not during the count hours, were the following: Whimbrels (one flock of 75 birds on 23 May 1993 and a second flock of 20 birds on 25 May 1993), single Louisiana Waterthrushes in 1993 and 1994, a Wild Turkey that flew past the observation site in 1993, a Yellow Rail that was observed near the island in 1995 by Kayo Roy, an American Bittern seen by several observers on the west pier in 1996 and a Little Gull observed by John Black at the entrance to the west pier in 1996.

**COUNT RESULTS FROM 1993 — 1997**

This study focused on transient passerines — birds that pass through Niagara on their way to breeding grounds further north. Not counted were American Robin, American Crow, Bank, Barn, Tree and Northern Rough-winged Swallows, Black-capped Chickadee, European Starling, Northern Cardinal, Red-winged Blackbird, Common Grackle and House Sparrow. Some individuals of these species were probably transient; however, since these species breed in the Niagara Region and are common here, it was not possible in this study to distinguish between resident and transient birds.
The only non-passerines counted were Ruby-throated Hummingbird, Red-bellied and Red-headed Woodpeckers and Yellow-bellied Sapsucker. We were also prepared to count cuckoos and swifts, but none were observed.

The five count years are summarized in Table 1. The extremely large number of individuals on the west pier in 1996 can be attributed to 1,576 Yellow-rumped Warblers — about 1,200 more individuals than in any of the other four years. Results for warblers only (excluding Yellow-rumped and Yellow Warblers, which would dominate the totals) are shown in the last column.

The detailed results of the study are presented in Table 2. Only the two daily counts are included, not observations outside the designated count times and areas. Note that the entries may reflect occurrences (i.e., the same bird seen on successive days) rather than numbers of individuals; for example, the Cerulean Warbler observed from 15 May through 20 May was a single bird that stayed on the Port Weller west pier rather than six different birds.

The dates when transients are most abundant can be seen, along with evidence of the arrival dates of transients and breeding birds such as Yellow Warbler and Baltimore Oriole. The number of some passerines known as permanent residents in the Niagara Region is interesting; for example, the number of House Finches is far in excess of the number of birds breeding (if any) on the piers, suggesting that a spring migration of this species takes place on the piers.

As part of a separate study in 1994, acoustic microphones were operated near St. Davids, a small town 20 kilometres southeast of Port Weller. Since many migrating birds call as they travel at night, the number of chips heard each night provided a measure of the number of migrating birds passing overhead. Almost all chips in our study could be identified as those of thrushes or smaller passerines (mainly warblers) (Blanchard and Black 1994).

When the numbers of nocturnal chips at St. Davids were compared with the numbers of passerine migrants on the ground at Port Weller the following day, a strong correlation was found. Notable exceptions occurred late in May, when the nocturnal flights involved large numbers of thrushes. On the night of 24–25 May, almost all the 2,000 chips heard were thrushes, yet the only thrush observed on 25 May on the piers was one Veery. This is consistent with our findings at the observation site that very few thrushes moved past the site while feeding in the daytime and that only small numbers of these species were found at any of the count sites. It is possible that some birds were not observed because they were hidden in the thick undergrowth on the two piers. However, over the study we heard almost no thrushes, and on those occasions when we walked through the undergrowth we did not encounter them. We conclude that the Port Weller piers are not a good site from which to monitor thrush migration.

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<th>Year</th>
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<th>West Pier Individual Numbers (Species Numbers)</th>
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<td>543(43)</td>
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Conclusions

A total of 13,376 birds and 95 species were observed on the daily counts of the study. Table 1 presents the numbers of individuals and species found on the two piers over the five years of the study. The numbers of individuals seen on the east pier are quite consistent from year to year. On the west pier, one very obvious inconsistency in numbers of individuals occurs in 1996, which can be understood as the result of an anomalously high number of Yellow-rumped Warblers that year. Individuals seen on the west pier number about three times those seen on the east pier, not surprising given that the west pier area surveyed was considerably larger than that of the east pier. On the east pier, the numbers of species varies from 49 in 1994 to 61 in 1996. On the west pier, the number of species varies from 58 in 1997 to 77 in 1996. The difference in the number of species on the two piers is reasonable given the larger study area on the west pier and the fact that there were some habitats, such as small, open grassy fields on the west pier, that were not present on the east pier.
### Table 2. Birds counted on the piers in May. All years combined.

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<td>4</td>
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</table>
Table 2 presents a more detailed breakdown by species and date in May. The two largest numbers of individuals (1,181 and 823) were found on 10 May and 11 May, and the largest numbers of species (60 and 62) on 10 May and 15 May.

The most frequently reported species, in order of decreasing occurrence, were Yellow-rumped Warbler (3,148), Yellow Warbler (1,370), American Goldfinch (1,044), House Finch (921), Brown-headed Cowbird (508), White-throated Sparrow (411), Baltimore Oriole (399), Ruby-crowned Kinglet (354), House Wren (346), Palm Warbler (330), Gray Catbird (320) and American Redstart (304).
3-nb/67-194 -pt2 all/sp/su

8/16/10

1:18 PM

Page 124

124 PA RT T W O : N I A G A R A B I R D S B Y S E A S O N

Table 2 continued.
Species/Date in May

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Black-throated Blue Warbler
Yellow-rumped Warbler
Black-throated Green Warbler
Blackburnian Warbler
Pine Warbler
Prairie Warbler
Palm Warbler
Bay-breasted Warbler
Blackpoll Warbler
Cerulean Warbler
Black-and-white Warbler
American Redstart
Prothonotary Warbler
Worm-eating Warbler
Ovenbird
Northern Waterthrush
Mourning Warbler
Common Yellowthroat
Hooded Warbler
Wilson's Warbler
Canada Warbler
Yellow-breasted Chat
Scarlet Tanager
Eastern Towhee
American Tree Sparrow
Chipping Sparrow
Clay-colored Sparrow
Field Sparrow
Vesper Sparrow
Savannah Sparrow
Lincoln Sparrow
Swamp Sparrow
White-throated Sparrow
White-crowned Sparrow
Dark-eyed Junco
Indigo Bunting
Bobolink
Rose-breasted Grosbeak
Eastern Meadowlark
Brown-headed Cowbird
Orchard Oriole
Baltimore Oriole
Purple Finch
House Finch
American Goldfinch
Wren-sp.
Thrush-sp.

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Total Individuals
Total Species

428 324 332 183 178 244 213 262 386 1,181 823 587 435 465 706 506 601
32 33 31 27 28 29 29 36 44 60 53 49 44 50 62 48 53

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The numbers of House Finches observed on the piers were far in excess of the number breeding on the piers (if any) suggesting that we are observing a spring migration of this species.
The discussion, in the 1993 results, of drift along the piers notes that Blue Jays are the species that most clearly demonstrate this tendency but that Red-winged Blackbirds and Yellow-rumped Warblers do as well.

It is evident from the data presented in the tables that many spring migrants use the piers on their journey northward. Just how representative of migration in the vicinity of Lake Ontario are these results? Interestingly, data from the Toronto Ornithological Club, which has been running a Spring Warbler Count in the Toronto area for almost all years since 1970, may provide an answer to this question (see Warbler Survey under Projects at http://www.torontobirding.ca/). In Table 3, the Port Weller results are compared with those of the Toronto Ornithological Club for the period 1993–1997. The measure used in the comparison is Warblers per Visit (data from the two piers at Port Weller are added together as one visit). As can be seen, there are three species of which many more birds are seen per visit on Port Weller, possibly because Palm Warblers and Yellow-rumped Warblers favour the lakeshore habitat, and we are counting Yellow Warblers that breed on the piers. It is also evident that Port Weller is not as good a location as Toronto for observing the woodland species Swainson’s Thrush, Rose-breasted Grosbeak and Scarlet Tanager. (Note that Malcomson Eco-Park, located immediately south of the west pier is a much better spot for observing woodland species.) Nevertheless, the remaining numbers are comparable given the rather different natures of the two studies.

Birds arriving at the shore of Lake Ontario toward the end of their nightly migration are often exhausted, and, upon confronting this formidable barrier, many do not attempt a crossing, particularly in the daylight hours when they could fall prey to gulls and other birds (Diehl et al. 2003). The migrating birds observed on the piers clearly indicate that these structures provide an important landing site for migrants reluctant to cross the lake. In fact, the piers are one of the few such sites remaining on the Lake Ontario shoreline of the Niagara Region where exhausted birds can safely land and feed prior to continuing their migration in the spring.

<table>
<thead>
<tr>
<th>Species</th>
<th>Port Weller Warblers per Visit</th>
<th>Toronto Warblers per Visit</th>
<th>Ratio Port Weller to Toronto</th>
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<td>Swainson’s Thrush</td>
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<td>Tennessee Warbler</td>
<td>0.15</td>
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<td>1.60</td>
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<td>2.84</td>
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<td>1.54</td>
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<td>1.68</td>
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<tr>
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<td>20.31</td>
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<td>10.47</td>
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<td>0.87</td>
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<td>Blackburnian Warbler</td>
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<td>Palm Warbler</td>
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<td>Bay-breasted Warbler</td>
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<td>1.73</td>
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<tr>
<td>American Redstart</td>
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<td>1.52</td>
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<tr>
<td>Ovenbird</td>
<td>0.52</td>
<td>0.82</td>
<td>0.64</td>
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<tr>
<td>Northern Waterthrush</td>
<td>0.43</td>
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<td>Mourning Warbler</td>
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<td>2.69</td>
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<tr>
<td>Canada Warbler</td>
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<td>0.24</td>
<td>0.83</td>
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<tr>
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<tr>
<td>Rose-breasted Grosbeak</td>
<td>0.21</td>
<td>0.90</td>
<td>0.23</td>
</tr>
<tr>
<td><strong>Averages</strong> <strong>excluding</strong></td>
<td><strong>Palm Warbler, Yellow Warbler and Yellow-rumped Warbler</strong></td>
<td>0.63</td>
<td>0.54</td>
</tr>
</tbody>
</table>
Postscript
In 2004 the canal was dredged and the spoils were placed in the north pond. In preparation for the dredging, the north pond was completely cleared of trees and vegetation, and a high berm was constructed on its south end to contain the dredged materials so that they would not run into the south pond. By 2007, the north pond had regenerated itself to the extent that it contains trees and vegetation as high as 2 metres. Moreover, the path to the west of the island is completely overgrown, and, as a result, the island study area on the Port Weller east pier no longer resembles what it was in 1993. The study area on the west pier, however, has changed little since 1993, although the hedgerow is denser, the power line has been removed and the poplars have aged. In 2008 the north pond was again cleared of vegetation and dredged material was introduced.

ACKNOWLEDGEMENTS
The study could not have been undertaken without the help of over 25 volunteers, some of whom have written articles for this book and/or have contributed bird records to the species accounts. I would also like to thank Michel Drolet and Bruce Tkachuk of the St. Lawrence Seaway Authority (now the St. Lawrence Seaway Management Corporation) and Larry Trudell and Dave McGinnis of the Canadian Coast Guard for their assistance in facilitating the study on the piers.

LITERATURE CITED
Copies of the references cited below (1993 - 1997) are located in the Brock University Library Special Collections and Archives.


Radar Monitoring of Birds Migrating over the Niagara Region in the Spring

John E. Black

On a typical day in May, an observer in Niagara can expect to see vireos, flycatchers, thrushes, warblers, orioles, grosbeaks and sparrows in large numbers. Many of these migrants arrive in the early morning hours. At night during their migration, the birds do not flock but spread out rather evenly in the sky at heights of 20 to several thousand metres above the ground, where they can be detected by radar (Eastwood 1967; Larkin and Szafoni 2008).
From 1997 until 2000, the spring migration of birds over the Niagara Region was monitored by means of images from a weather radar located at the Buffalo Niagara International Airport (BNIA) and data from a small marine radar mounted on the roof of B-block at Brock University (Brock) in St. Catharines. The weather radar provided a useful measure of bird density at distances up to 150 km from the BNIA. It could, therefore, be used to determine the density of birds above Brock, which is about 50 km from the BNIA. The smaller marine radar was used to determine the bird flow directly over the university.

In this article, results from the weather radar, then those from the smaller marine radar are presented. In a final section, data from the two radars are compared in order to estimate the number of birds aloft over the Niagara Peninsula during a strong nocturnal migration.

**The Buffalo Weather Radar**

An aircraft can suddenly drop 50 m if it encounters wind shear on its approach to an airport. In order to detect wind shear and alert pilots to its existence, a system of 154 sensitive weather radars had been installed at airports in the United States by 1993. Titled NEXRAD (Next Generation Radars), these radars were designed to be sensitive enough to detect the tiny irregularities in the air produced when wind shear is present (Diehl et al. 2003). The NEXRAD used in the study described here was located at the BNIA. For ornithologists the high sensitivity of these radars turned out to be a boon because they also proved sensitive enough to detect even the smallest birds as they migrate to and from their breeding grounds. Unfortunately, the radars are so sensitive that they can also detect bats and many insects. There is no simple procedure for determining what proportion of birds, bats and insects are contributing to the signals in any NEXRAD image. In this article, caveat notwithstanding, we shall assume that the signals represent birds unless otherwise indicated.

A night of bird migration captured on the weather radar at BNIA is shown in Figures 1a – d. The night of 15–16 May 1999 provides one of the most spectacular migrations seen on the weather radar that year. At 2020 hours EDT, the image depicts the situation at sunset. The setting sun produces the red line stretching out to the northwest. The radio signal of the sun, just as it sets, is strong enough to be detected by the weather radar. The green pattern close to Buffalo indicates the presence in the atmosphere of small anomalies, insects and possibly some pollution. The red patches in the northwest are weather-related.

At 2129 hours, the migration has started. The relatively circular pattern centred on the weather radar is typical of migration over a large front. The edges of the pattern are determined more by the range limitations of NEXRAD than by the number of birds aloft. At the larger distances, the radar beam looks out above the birds, thereby missing them. The clear holes in the pattern over both Lake Ontario and Lake Erie are precisely what one would expect unless birds such as waterfowl had taken off at some distance from the lake shore to participate in the nocturnal migration. (Some waterfowl probably did take off from the inshore areas.) Later that night (2258 hours) the holes fill in as the birds cross over the lakes. The migration is now at its strongest level.

Typically, the number of birds aloft gradually falls off in the hours before sunrise. At 0554 hours, one can see that some birds are still in the air. The rising sun produces the red line stretching out to the northeast. There is a concentration of birds along the south shores of Lake Ontario and Lake Erie. A concentration of birds along the south shores in
Note that the times on the NEXRAD images are Greenwich Mean Times. Subtract four hours to calculate the time (EDT) at St. Catharines.
above: Figure 1c. Buffalo NEXRAD 2258 hours EDT.
below: Figure 1d. Buffalo NEXRAD 0554 hours EDT.
the early morning occurred frequently in the spring, possibly because the birds, rather than immediately landing when they reach the lakes, continue their migration by travelling along the shore for a while. Diehl et al. (2003) found that in the early morning, birds over the lake climb to higher elevations, a phenomenon called “dawn ascent.” A small concentration of birds occurred as well along the north shore of Lake Erie on several mornings. There might also be a morning concentration along the north shore of Lake Ontario near Toronto that is not evident because the weather radar beam is too high above the ground to detect the birds as they land or fly along the shore.

Just how many birds are flying above the Niagara Peninsula when the migration is as intense as that shown in the image at 2258 hours? To answer this question, the data from a small marine radar located at Brock University was used.

The Brock University Radar

From 1997 to 2000 during the month of May, the author operated a 3-cm marine radar (Black 2000a) mounted on the roof of B-block at Brock. The beam of the radar pointed upward, thereby detecting birds flying above the university. From the number of birds detected, it was possible to estimate a bird flow, that is, the number of birds per hour crossing through an imaginary cylinder with a 1-km diameter extending above the university. On most nights of heavy migration in May, the predominant bird flow is toward the northeast. Note that the 3-cm radar is capable of detecting bats and insects. Discriminating between these and birds is not a simple matter. We shall assume that the signals on the 3-cm radar represent birds unless otherwise stated.

From the hourly flow data, it was possible to determine the number of birds crossing above Brock each night, here termed “Nightly Migration Total”. The results for 1999 are shown in Figure 2. In that year, nearly 187,000 birds passed above Brock during the month of May.

Figure 2. 1999 Nightly Migration Totals. Brock University radar.
The Brock radar could detect birds at altitudes as low as 250 m; however, it was found that insects were often present at these lower altitudes, especially later in May (Black and McNeil 2000). Since the insects are also seen on the radar, they make the calculation of the bird flow alone difficult. The data in Figure 2 are based on heights above 350 m. Thus, Figure 2, while it gives an idea of the variability of the nocturnal migration over the time period studied, does not present the full picture. For example, on the night of 15–16 May 1999, the number of birds that passed over Brock at heights above 350 m was 25,672, while at heights above 250 m, the number of birds was 40,716.

**The Two Radars and Birds Aloft**

Consider the image in Figure 1c at 2258 hours. The question that arises is this: Can we calculate the bird density by using the colours in the image? If we can, then NEXRAD can take its place as an important quantitative tool in the study of bird migration, one that would allow studies of bird migration across the entire United States and parts of Canada on a nightly basis. It can be shown that the colours in the NEXRAD image are a measure of the bird density at each location in the image. However, the colours also depend on how effectively the birds reflect the radar signal, a factor called the radar cross-section of the bird (Black and Donaldson 1999). Not surprisingly, a Canada Goose will reflect much more of the signal back to the radar than will a Magnolia Warbler.
To calculate the bird density from the colour, we need to determine the radar cross-section of the birds present at the time. Unfortunately, there is no simple method available for determining the radar cross-section. The problem is that, for the nocturnal migrants we see (primarily small birds), the radar cross-section has a very complicated dependence on the direction the bird is flying, the precise shape of the bird and its size. (Note that it is the body of the bird, not the wings or feathers, that reflects the radar signal.) What number, then, should we use for the radar cross-section if we want to calculate density from the NEXRAD colours?

The primary reason for setting up the radar at Brock was to answer the above question. The results on bird flow discussed in the previous section were fortuitous. The Brock radar was operated in what is called the conical mode (Eastwood 1967). As a consequence, it was possible to determine not only the bird flow but also the speed of the birds above Brock. Because bird density equals bird flow divided by bird speed, it was then possible to calculate from the Brock radar data, the bird density above the university during each night of the nocturnal migration. The density thus obtained is in units of birds per square kilometre.

Now let us return to Figure 1c and the image at 2258 hours. The small dark dot near the south shore of Lake Ontario shows the location of Brock University. As we can see, the Brock radar is pointed up at the same birds as those seen above Brock by the NEXRAD at BNIA (not all the same birds, however, as the NEXRAD detects birds at heights of 200 to 965 m over Brock, while the smaller Brock radar detects birds at 250 to 900 m over Brock). When we compare the colours of the NEXRAD image with the Brock radar results for bird density, we find that the radar cross-section ranges from 9 to 34 cm² (Black 2000a). This range of numbers was consistent with the radar cross-sections of passerines measured on the ground (Eastwood 1967) and suggested that we could use a radar cross-section in this range to estimate birds aloft from the colours on the NEXRAD images. (In the comparisons, 10 cm² was used. As a result the numbers could be high by as much as a factor of 3. Still, the image colours provide a valuable indicator of the numbers of birds aloft.)

**Figure 3.** Estimates of bird numbers.

Add the contributions from the three distances to obtain the total birds / km².
In Figure 3 one can see the approach used to evaluate bird numbers in a NEXRAD image. From the colour at each location and the radar cross-section of 10 cm², we can work out a density at each range. From the density we can then find the birds in a square column of known height. We can combine the column totals from 20 km, 75 km and 160 km in order to estimate the number of birds in a square column that stretches from 30 m to 4,300 m. (Strictly speaking we need to average densities in all directions at the three ranges, but our approximation is reasonable.) Using this approach, we find that there are about 140 birds in a column 1 km² in area at 2258 hours on the night of 15–16 May 1999.

It seems impossible that such small numbers could give rise to the migration north of millions of songbirds every spring. However, these numbers are reasonable. On the night of 15–16 May, the birds were moving at speeds of about 50 km/h. This means that approximately 50 square columns, each containing 140 birds, would, in one hour, cross over a 1-km line drawn through Brock. In other words, 7,000 birds would fly over Brock in one hour. Over approximately eight hours, 56,000 birds would cross over Brock University during the night! (The total of 56,000 birds calculated here is higher than the 40,716 calculated using the Brock radar. This difference is reasonable because the range of migration heights observed by the NEXRAD over Brock is larger than the range observed on the Brock radar.) Finally, consider the question of how many birds there are over the entire Niagara Region at 2258 hours. The area of the region is 1,851 km², and there are about 140 birds in a column 1 km² in area. Multipling these numbers, we conclude, therefore, that 259,000 birds — an enormous number — were flying over the Niagara Region at 2258 hours.

Finally, let us consider the question of how many birds we can expect to see on the ground following a night of migration as viewed on the NEXRAD. If all the birds in the column over Brock were to land in a field, there would be 140 birds in an area 1 km² or roughly one bird in an area the size of a football field. This would seem to be a very small number, and yet when the author ventured out after monitoring the radar all night and watching a seemingly large migration, these numbers were seen to be reasonable. Of course, the birds do not spread out evenly when they land; they tend to congregate at suitable food sources such as those found along hedgerows or the edges of woodlots. Now there might be approximately 140 birds along the 1-km edge of a field with an average separation between birds of about 7m. Alternatively, we can imagine the birds congregating at ponds or in small clumps of trees, bringing the totals in these locations up to the sorts of numbers one expects to see during the spring migration.
The Two Radars and Birds on the Ground

For many years the Toronto Ornithological Club has conducted an annual Toronto Warbler Count during which warblers are counted every day in May at a number of locations. Black (2000b) carried out a detailed comparison of the data from the Toronto Warbler Count and the data from the two radars for 1997–2000. A positive correlation was discovered between the numbers of birds flying over Brock and the numbers of birds viewed on the ground in the Toronto area the next day.

Concluding Remarks

The Buffalo NEXRAD offers a valuable tool for monitoring the migration of birds over the Niagara Region in the spring. We see that seemingly small numbers on the ground, for example one bird in an area the size of a football field, translate into large numbers when the overall migration is considered. We also see that as many as 259,000 birds at a time may be flying over the Niagara Region on a night of intense migration.

LITERATURE CITED

Copies of the references cited below (1999–2000) are located in the Brock University Library Special Collections and Archives.


April and May
Buffalo Ornithological Society
Bird Counts in Niagara

Michael Hamilton and Robert L. DeLeon

SINCE 1935 THE BUFFALO ORNITHOLOGICAL SOCIETY (BOS) has been conducting bird counts in the 28 sections of their study area. Four of these sections are in Regional Niagara, thus relevant to this discussion. (See the map in Natural History Clubs in Niagara.) The total for each species in each of these sections, observed in the 1996–2006 period, has been compiled and is analyzed herein. The discussions will cover the most common birds, the species numbers seen for the entire period, species rarely seen (and in what years), and significant species population changes from the first decade to the last.
Rare bird sightings are subject to a verification procedure developed by Harold Axtell in the 1950s, which involves writing a detailed report describing all the conditions under which the observation was made. These include time of day, light conditions, direction of the sun in relation to the observation, habitat, length of observation, activity of the bird, a detailed description of all field marks (including photographs and field drawings if possible), a statement as to why the bird was different from all other similar species, etc. These reports are reviewed by the BOS statisticians and, if accepted, are included in the count data and filed along with count reports at the Buffalo Museum of Science in Buffalo, New York. The purpose of this verification procedure is to make the data scientifically acceptable and sustainable to future scrutiny. This procedure has been adopted by other bird record committees around North America and is very much in use today.

The April Count occurs on the second Sunday of the month unless it is Easter in which case it shifts to the third Sunday. The May Count occurs on the third Sunday of the month.

The April and May Counts
Following are plots of the seven most common species recorded in the April and May counts followed by a comparison of the most common species seen in the first decade (1966 – 1975) and the last decade (1997 – 2006). Alpha codes are used as abbreviations in all charts in this discourse.

The alpha codes on the April plots are: RBGU for Ring-billed Gull, BOGU for Bonaparte’s Gull, EUST for European Starling, RWBL for Red-winged Blackbird, HEGU for Herring Gull, RBME for Red-breasted Merganser, and COGR for Common Grackle. The Ring-billed Gull is by far the most common bird for April, followed by the Bonaparte’s Gull. In the decade comparisons, it is interesting to note that the gull species have increased dramatically in the last decade over the first whereas the blackbird species have declined.
The alpha codes for the May plots include AMRO for American Robin and DCCO for Double-crested Cormorant. Ring-billed Gulls again dominate in numbers observed during the May counts with the increase beginning in the 1980s. In the late 1990s very large populations nested in the area of Port Colborne harbour alone (in 1999 the Canadian Wildlife Service recorded close to 4,000 nests on the breakwall and almost 32,000 nests on an area east and adjacent to the Welland Canal known as the Canada Furnace /Algoma Steel lands). Over the years this nesting population has decreased and it is suspected that many of the birds have relocated to a landfill area south of Buffalo’s outer harbour and adjacent to some wind turbines where 25,000 nests have been observed recently.

The other last decade winners are the Herring Gull and the Double-crested Cormorant, the latter of which was not even observed in the first decade. The bulk of the Bonaparte’s Gulls have migrated north. Again the blackbird numbers are down substantially from the first to last decade.

The graph opposite shows the total number of birds observed each year of the count period. April and October generally have higher counts than May because more birds are migrating in those months but the numbers observed during the May counts are steadily increasing. The approximately tenfold April Count increase between 1985 and 1995 reflects the expansion of the Ring-billed Gull population.
Infrequent Sightings During the Count Period

Blessed with a wide range of habitats, the Niagara Region has harboured a number of infrequently seen visitors and nesters during the count period. Following are 28 species seen three times or less during the April counts and 33 species plus two subspecies seen three times or less during the May counts over the 41-year period from 1966 to 2006, followed by the number and year(s) seen.

APRIL SIGHTINGS
King Eider: 1-1971, 2-1982
Red-throated Loon: 2-1997
Eared Grebe: 2-1994
American Bittern: 1-2005
Bald Eagle: 1-1994
Northern Goshawk: 1-1984
Peregrine Falcon: 1-2005
Sandhill Crane: 1-1995
Solitary Sandpiper: 1-1998
Upland Sandpiper: 2-1969
Purple Sandpiper: 2-1989
Dunlin: 1-2004
Northern Saw-whet Owl: 1-1994
Whip-poor-will: 1-1991
Pileated Woodpecker: 1-1975
Loggerhead Shrike: 1-1966
Cliff Swallow: 2-1980, 1-2004
Blue-gray Gnatcatcher: 1-2004
Palm Warbler: 1-2000
Harris's Sparrow: 1-1972
White-winged Crossbill: 1-1972

MAY SIGHTINGS
Northern Shoveler: 7-1990, 1-1997, 6-2004
Gray Partridge: 2-1966, 2-1970
Snowy Egret: 1-1975, 1-2004
Tricolored Heron: 1-1977
Bald Eagle: 2-2003
Rough-legged Hawk: 1-2003
Iceland Gull: 1-2004, 1-2005
Glaucous Gull: 1-1981
Barn Owl: 1-1980
Barred Owl: 1-1978, 1-1979
Long-eared Owl: 1-1977
Short-eared Owl: 2-1968, 3-1997
Bohemian Waxwing: 1-2006
“Audubon's Warbler”: 1-1971
Worm-eating Warbler: 1-2006
Kentucky Warbler: 2-1976, 1-2000
Summer Tanager: 1-1984
Clay-colored Sparrow: 1-1971
Significant Increases and Decreases Between First and Last Decade Populations (1966-1975 to 1997-2006)

T-testing has been used to compare the birds observed in the first and last ten-year periods covered in this analysis in order to determine if there has been a statistically significant change in the population of each recorded species. The species that are statistically significantly different at the 95% confidence level are listed below. The numbers shown are the total individual birds recorded by species in each of the decades 1966-1975 (First) and 1997-2006 (Last). Plots of the 41-year history are provided below for those species marked with an asterisk.

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In comparing the increases and decreases the single most notable finding is that the majority of increases (40) occurred in the April counts and the majority of the decreases (38) occurred in the May counts, suggesting shifting migration dates. Increases and decreases indicate range expansion or contraction, be it caused by global warming, new forest growth, loss of mature forests, loss of grasslands, loss of wetlands, reduction of mixed growth habitat, intrusion of Zebra mussels in Lakes Erie and Ontario (which has made the water clearer), new species introduction (House Finch), pesticide use, etc.

Whereas much work is being done by others to identify specific causes, we are able to plot what has actually been recorded during the three annual BOS Counts over the past 41 years.

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<td>American Goldfinch</td>
<td>2,728</td>
<td>1,562</td>
</tr>
</tbody>
</table>

In comparing the increases and decreases the single most notable finding is that the majority of increases (40) occurred in the April counts and the majority of the decreases (38) occurred in the May counts, suggesting shifting migration dates. Increases and decreases indicate range expansion or contraction, be it caused by global warming, new forest growth, loss of mature forests, loss of grasslands, loss of wetlands, reduction of mixed growth habitat, intrusion of Zebra mussels in Lakes Erie and Ontario (which has made the water clearer), new species introduction (House Finch), pesticide use, etc.

Whereas much work is being done by others to identify specific causes, we are able to plot what has actually been recorded during the three annual BOS Counts over the past 41 years.
Plot Introduction

The following figures show the number of birds of various species that have been recorded each year on the April, May and October BOS Counts in the Niagara sections described above. They constitute a sample of the birds present in this region on the count date on the given year. As such, they show an informative history of the population of each observed species. Since the counts are conducted during spring migration (April and May) and fall migration (October) the trends generally indicate the population during migration. As over 200 species have been observed on the counts, we do not have the space to show plots for all observed species. Instead we have selected a small fraction of them that are of interest either because of the trends in the data, the predominance of the species or other interesting features. Each plot shows the number of birds observed on the y-axis plotted against the observation year on the x-axis. For each plot the April data points are shown in dark blue, the May points in light blue and the October points in gold.
Figure 1. Ring-necked Pheasant (RNPH).
Ring-necked Pheasant is a game bird. As such its population is driven by stocking levels and hunting bag limits. There was a clear downward population trend from the 1960s to the mid-1980s and a very low level since.

Figure 2. Wild Turkey (WITU).
While Wild Turkey is also a game bird, it has exhibited a very strong population increase both in Ontario and in adjacent territory in New York State. In 1986 it was reintroduced by the Ontario Ministry of Natural Resources with great success. There is no sign yet that the population has peaked and further increases may continue in the future.

Figure 3. Double-crested Cormorant (DCCO).
The increase in the population of the Double-crested Cormorant can only be described as explosive. Previous to 1990, sightings were very rare. Presently the population has grown such that it is now one of the most common species on the spring counts (see the most common species plot previously shown for the May Count). This increase has been ascribed, at least in part, to clearer waters in the Great Lakes caused by Zebra mussel infestation that makes fishing more productive for the cormorants. There are currently some efforts being made to control the population of the cormorants by oiling eggs and disturbing nesting locations. Whether by natural or artificial means such explosive growth cannot be sustained.
Figure 4. Great Egret (GREG).
The datum is a bit sparse but this southern species has made a strong move northward. In the full BOS Count this is very evident, especially in the May Count data. Clearly we can expect rising populations of this handsome bird.

Figure 5. Turkey Vulture (TUVU).
This species has experienced a rapid population growth within the last 20 years that seems to be continuing to ever higher levels. The consistent April, May and October data and summer sightings seem to indicate that this species is growing in importance as a summer breeder.

Figure 6. Bonaparte’s Gull (BOGU).
Its spring migration numbers appear to have shown abnormal highs in 1997, 2000 and again in 2005. This could be due to inclusion of the observations of Gordon Bellerby who, during that time, monitored the evening “fly past” of up to 40,000 Bonaparte’s Gulls flying down river and out to roost on Lake Ontario at night.
Figure 7. Ring-billed Gull (RBGU).
This species is currently the most common bird observed in the BOS counts during both migration and breeding. The breeding population noted on the counts has grown from 3,000 to over 30,000 and the migrant population from 700 to over 26,000 with a peak of 70,000 in 1992. The Canadian Wildlife Service has established breeding populations much higher than the above at Port Colborne alone. In the 1990s, Ring-billed Gulls displaced the Common Terns nesting at Port Colborne and probably caused their relocation to a breakwall site in Buffalo harbour.

Figure 8. Herring Gull (HEGU).
Although the Herring Gull breeding population increased dramatically up to 1998 and has since declined somewhat in the Niagara Region, its population is currently stable over the Great Lakes area.

Figure 9. Great Black-backed Gull (GBBG). This species was much less common 20 years ago but its population has increased rapidly to its current level. This seems to be part of the general trend of large gull expansion on the Niagara River that also includes Ring-billed Gull and Herring Gull, two species that are generally found accompanying Great Black-backed Gulls.
Red-bellied Woodpecker

Barry Cherriere
**Figure 10. Caspian Tern (CATE).**
The population of this species has exhibited a large increase in the summer months, as indicated by the May Count data. Breeding is occurring on Mohawk Island in Lake Erie between Mohawk and Rock Points just outside of the Niagara Region, and the sight of Caspian Terns has become a much more common occurrence in the summer.

**Figure 11. Red-headed Woodpecker (RHWO).** Never a very common species, it has declined steadily over the last 40 years. Red-headed Woodpeckers thrive in old forests that have dead and dying trees that provide their food. This type of habitat is shrinking.

**Figure 12. Red-bellied Woodpecker (RBWO).** This plot shows the rapid growth of the Red-bellied Woodpecker population in our area. Over the last 20 years the population growth has been remarkable. This species is a prime example of a southern bird extending its range northward. One speculative theory for this expansion is climate changes caused by global warming.
PART TWO: NIAGARA BIRDS BY SEASON

**Figure 13. Warbling Vireo (WAVI).**
This species is a local breeder observed almost exclusively on the May count. After a very stable period lasting for almost 30 years of a low population, suddenly in the 1990s the population quadrupled. In many areas of North America the population of this bird is in decline due to brood parasitism by the Brown-headed Cowbird and to pesticide use. However, in this case these decreases seem to be offset by the expansion of its range into this region.

**Figure 14. Northern Mockingbird (NOMO).**
This is another example of a southern bird extending its range northward. Once again the timing of the move north, starting in the mid-1980s, indicates that global warming may be playing a role in this range increase.

**Figure 15. Brown Thrasher (BRTH).**
This species is primarily a summer breeder as indicated by the May Count records and the few October and April records. The population has obviously dropped precipitously to fairly low levels mirroring United States populations that have shown a severe decline over the last four decades. Once again, the decline is attributed to loss of suitable shrub/early succession habitat.
**Figure 16. Vesper Sparrow (VESP).**
This is another species that has declined rapidly. While it was never a very common species, it was reliably found on counts in the 1960s. Now, finding a Vesper Sparrow for one of the counts is an exciting event and it does not happen on every count.

**Figure 17. Eastern Meadowlark (EAME).**
This plot shows the rapid loss of Eastern Meadowlarks. While 41 years ago it was a common species both in the Niagara Region and in New York State, the population has dropped to less than one-tenth over this period. It is listed as one of the top 20 common birds in decline by the National Audubon Society. It is thought that the precipitous drop is mainly due to loss of grassland habitat.

**Figure 18. House Finch (HOFI).**
This is a species that was introduced with a very small population that rapidly spread across North America. Its arrival in the Niagara Region is seen on the plot to be in the mid-1980s. However, its population seems to have peaked in the mid-1990s and has been declining since. This is likely due to the lack of genetic diversity caused by the small initial population that has made the North American population susceptible to diseases such as Mycoplasmal conjunctivitis.
Bobolinks
Brandon Holden
Species such as Mourning Warbler, Alder and Willow Flycatcher and Whip-poor-will are infrequently reported before early June, but they can all be easily found in the Wainfleet Bog after that date. The four articles in this section describe projects undertaken primarily during the summer season on birds that breed in the Niagara Region.

During the two five-year periods from 1981 to 1985 and from 2001 to 2005, the summer months were particularly significant for about 3,000 volunteer birders who were occupied in gathering data for the first two publications of the *Atlas of the Breeding Birds of Ontario*. This enormous undertaking, coordinated by Michael Cadman, had as its objective the production of detailed maps identifying locations in the province for each breeding bird species, as well as an account of their abundance and distribution. In his article “Ontario Breeding Bird Atlases: 1981-1985 and 2001-2005, A Niagara Comparison”, Cadman presents the main findings of these two studies for the Niagara Region. In the most recent atlas, for example, 123 species of birds were confirmed to be nesting in the region.

The next two authors, Brad Clements and Bill Read, give the impression of taking a genuine delight in their object of study — the Eastern Bluebird. Both are members of the Ontario Eastern Bluebird Society, of which Read is founder and president. Both have been collecting and submitting nest data for many years that point to a significant increase in the number of Eastern Bluebirds in recent years in Niagara. In their article “The Eastern Bluebird in Niagara,” Clements and Read discuss several possible contributing factors in the revival of what many consider to be one of Niagara’s most appealing nesting birds.

The third article in this section, “Peregrine Falcon Hacking in Niagara (1986-1987) and the Legacy,” presents an account of a project that captured the imagination and support of birders and non-birders alike throughout the region. In 1985, the Ontario Ministry of Natural Resources (OMNR) was approached by the Peninsula Field Naturalists (PFN), which proposed a hack of Peregrine Falcons in the Niagara Region in cooperation with the OMNR and the Canadian Wildlife Service.

Early summer is the time to search for birds difficult to see during their spring migration.
For two successive summers, 1986 and 1987, and beginning on the roof of the tower at Brock University in St. Catharines, young Peregrine Falcons were hacked in boxes created for just such a purpose. The aim was gradually to release the falcons when they were old enough and skilled enough to secure their own food. Mary Ellen Hebb was at the time president of the PFN. Her dedication and persistence, along with the efforts of many other volunteers, led to the successful completion of this project. In her narrative-style account of the events, she describes the successes and disappointments that contributed to the amazing recovery of this magnificent species.

In a project that lasted for several years and required the assistance of many university students, Ralph Morris, a Professor of Biology at Brock University, studied a colony of Common Terns on the breakwater in the Port Colborne harbour. In his scientific article “Colonial Nesting Waterbirds in the Niagara Region,” he describes the experimental approach taken and the rigours of life at such a site—not only for those gathering data, but for the terns as well.
IN THEIR 1965 PUBLICATION *Birds of the Niagara Frontier Region*, Beardslee and Mitchell lament the relative sparsity of information on breeding birds in the Niagara Region: the month of June “is the best month to study the nesting birds, and much can be added to our knowledge if attention is paid to this interesting facet of bird study.” Beardslee and Mitchell would be very pleased, if they were alive today, to discover that two breeding bird atlases have been produced for each of Ontario and New York State.
The two Ontario Breeding Bird Atlas projects, completed over two five-year periods, 1981-1985 and 2001-2005, mapped the distribution and abundance of breeding birds in the province. These two extensive projects have generated valuable data leading to new knowledge about breeding birds in Ontario (Cadman et al. 1987, 2007).

Ontario spans over 1,500 km from the Niagara River and Lake Erie in the south to the shores of Hudson Bay in the north. An enormous field effort had to be undertaken to survey such a vast area, a good portion of which is wild and inaccessible. For atlas purposes the province was divided into regions, and the regions were subdivided into ten kilometre by ten kilometre squares (10-km squares). Squares in Niagara were in Atlas Region 11 which has almost the same area as the Niagara Region. Its boundaries and those of the Niagara Region are not quite congruent. The southwestern boundary of Region 11 along Lake Erie extends eight kilometres outside the boundary of the Niagara Region. The northwestern boundary of Region 11 along Lake Ontario lies eight kilometres inside the boundary of the Niagara Region. Refer to the Niagara Atlas map for more details. The systematic data collection undertaken for the two Ontario Breeding Bird Atlas projects has greatly increased our knowledge of the breeding birds of the area and has provided an excellent means of understanding the current status of the birds of the region and how that status has changed in recent decades. Thanks go to the many Niagara volunteers who contributed to the project, with a special mention for John Black, co-editor of this volume, who did an exceptional job as Regional Coordinator and worked very hard to ensure that the Atlas Region 11 was well covered and the data reliable.

This article summarizes some of the major themes arising from the two atlas projects in Niagara.

**TRENDS BETWEEN ATLASES**

Region 11 was one of the more thoroughly covered regions during both atlas projects. On average, 89 and 134 hours per 10-km square were spent in the first and second Atlases, respectively. This dedicated fieldwork by the many Niagara atlas volunteers resulted in a substantial amount of breeding data. Results summarized below are based on the number of squares in which each species was reported during each atlas. As a result of the extra effort in the second Atlas, actual increases may be somewhat smaller than reported here and actual decreases may be somewhat larger.

**Big Birds**

The second Atlas showed that 11 of the 12 largest species in the province had increased markedly between atlases. The trends for big birds in Niagara are similar to those throughout the province. The numbers are expanding and probably for the same reasons: introduction and reintroduction programs, less hunting and reduction of DDT in the environment. For example, the cormorant was “rare” in Niagara in 1965, but is now a common sight on all major water bodies, and it nests in large numbers on Mohawk Island, located marginally west of the Niagara Region on Lake Erie. (All references to 1965 in this and the following paragraphs are from Beardslee and Mitchell, 1965.) A few birds attempted to nest at the St. Catharines mouth of the Welland Canal in 2003, and 111 nests were counted there on 19 June 2008 (John Black pers. comm.). On the Lake Erie side of the peninsula, cormorant nesting was first observed on the Port Colborne breakwall in 2004.
In 1965, summering Canada Geese were listed as “not numerous... until recently” but were found nesting in every 10-km square in the region during the second Atlas. The Turkey Vulture was reported in 1965 to have “increased greatly over the past 60 years,” and atlas records show that expansion has continued, with breeding evidence now reported in every square in the region. The Bald Eagle, which was “formerly abundant” in the Niagara gorge, was “pitifully scarce” in 1965, but it is slowly building up its numbers as a summer breeder as well as a visitor at other times of the year. The Sandhill Crane was listed as an “accidental, very rare visitor” in 1965, the last record being of that of a bird shot in 1885. During the second Atlas, however, there were records of Sandhill Crane in three squares in the southeast corner of the region. The Wild Turkey was absent in 1965, but has, since then, been reintroduced. It was reported in all 10-km squares during the second Atlas. Only pinioned Mute Swans bred in the region in 1965, but breeding evidence of feral birds was reported in six squares during the second Atlas. The one large species that showed a decline between atlases in the province as a whole was the Great Blue Heron. Contrary to the provincial trends, breeding evidence in Region 11 for Great Blue Heron was confirmed in six squares (eight colonies) during the second Atlas, but in only three squares (four colonies) during the first Atlas. The total number of nests reported increased from 87 during the first Atlas to 115 during the second. Reasons for the increase in Niagara are not known.

Aerial Insectivores

The nightjars, swifts and swallows showed marked decline across the province between atlases. The reasons for the declines are unclear, but, given that all these species feed on flying insects, it is feasible that a reduction in insect populations could be a contributing factor. In Niagara, the Common Nighthawk and Whip-poor-will declined noticeably between atlases. Wainfleet Bog remains an important site for the Whip-poor-will, though it is increasingly isolated from other breeding sites. Chimney Swift numbers declined slightly between atlases. Adding metal liners to old-fashioned chimneys and/or capping them is likely affecting swift numbers. Interestingly, the six swallow species showed very little change overall in Niagara, and the Cliff Swallow actually increased between atlases (as it did in extreme southwestern Ontario). It was absent during the first Atlas, but breeding evidence was reported in eight squares during the second Atlas, though numbers are still very low in Niagara compared to adjacent parts of southern Ontario (Cadman 2007). The relative stability of the swallow population in Niagara may provide clues as to why swallows are declining in Ontario as a whole. The relatively mild climate of the Niagara Peninsula and the proximity of the Great Lakes are conditions that may encourage reliable insect numbers, which in turn may help swallows maintain their populations here. More research is required on this topic.

Birds in Early Successional (shrubland) Habitats

As was true in the rest of Ontario, there is no clear pattern of change for the group of birds in Region 11 that favours shrubland habitats. Occurrence of Brown Thrasher, Eastern Towhee and Golden-winged Warbler declined between atlases in Region 11, but Blue-winged Warbler occurrence increased. The Blue-winged Warbler is expanding its range to the north, and introgression between it and the Golden-winged Warbler is thought to be contributing to the decline of the latter species.

Curiously, although the Clay-colored Sparrow expanded greatly between atlases across most of southern Ontario, not one nesting was reported in Niagara.
Eastern Towhee
Kenneth Newcombe
Raptors

Birds of prey associated with grasslands (American Kestrel, Northern Harrier and Red-tailed Hawk) all decreased in numbers between atlases in Niagara, presumably owing to an overall decline in grassland habitat. In contrast, the woodland hawks, most noticeably the two smaller accipiters, made substantial gains: from 2 to 20 squares for the Sharp-shinned Hawk and from 0 to 22 squares for the Cooper's Hawk. These increases are consistent with trends over all of southern Ontario south of the Canadian Shield. Numbers are thought to be up in response to maturation of conifer plantations, increases in forest cover, and reduced shooting of birds of prey. A breeding evidence record for a Broad-winged Hawk during the second Atlas and a slight increase (from two to four squares between atlases) in Red-shouldered Hawk, are both consistent with modest increases in these species in southern Ontario. These increases are perhaps related to increases in forest cover. The Peregrine Falcon reappeared as a breeding bird in the region, with confirmed breeding reported in three squares during the second Atlas. Its re-establishment throughout the province is the result of reintroduction efforts and of the reduction of DDT and its derivatives in the environment. The Merlin expanded greatly in Ontario between atlases, but was not reported in Region 11 in either atlas. Breeding was confirmed, however, just across the Niagara River in *The Second Atlas of Breeding Birds in New York State* (2000-2005) (McGowan and Corwin 2008). That, combined with a report of an aggressive and territorial pair of Merlins in the Wainfleet Bog in August 2008 (Anne Yagi pers. comm.), suggests that breeding could be confirmed here soon.

Birds in Forest Habitats

As was true in the Carolinian region as a whole, woodland birds showed no clear pattern of increase or decrease between atlases in Region 11. However, there were some marked changes. Hooded Warbler, Pileated Woodpecker, Red-bellied Woodpecker, Tufted Titmouse, Red-breasted Nuthatch, Sharp-shinned Hawk and Winter Wren were among those species undergoing the largest expansions, while Red-headed Woodpecker, Ruffed Grouse and Yellow-throated Vireo experienced some of the largest declines. Between atlases, there was a marked expansion south of the Canadian Shield among species that breed in coniferous habitats. Presumably, this increase resulted from the maturation of conifer plantations and, in some areas, the expansion of forest cover. Although there is relatively little coniferous habitat in Region 11, Golden-crowned Kinglet and Blue-headed Vireo nested during the second Atlas (not during the first). While numbers remain very small, there were also increases in the number of squares with breeding evidence for Red-breasted Nuthatch and Nashville, Magnolia, Black-throated Green, Pine, and Black-and-white Warblers, all of which use coniferous forest.
Grassland Birds

As was true of the province as a whole, birds of grassland habitats in Region 11 declined substantially between atlases. Upland Sandpiper and Vesper Sparrow showed particularly large declines. Changing land-use patterns have reduced the habitat available to grassland-nesting birds. Grassy habitats such as pastures and hayfields have been converted to more intensively farmed (row-crop) land, or swallowed up by expansion of urban areas, or succeeded back to scrub and forest either naturally or through reforestation programs (Moss 1976). In more recent years, vineyards have been replacing grassy habitats. Pesticides may also play a role by reducing the numbers of insects and/or plants that the birds feed upon.

Although some of the common grassland birds, such as the Bobolink and Eastern Meadowlark, are still widespread in Region 11, their numbers are noticeably low in the eastern part of the region, presumably because there is less suitable habitat for them in that area. In keeping with the provincial trend, one grassland/agricultural species that thrived between atlases was the Eastern Bluebird, which expanded from 10 squares to 23 in Region 11. Milder winters over the past 20 years and an increase in the number of bluebird nest boxes likely contributed to this expansion.

Birds in Wetland Habitats

Wetland birds tended to show an increase throughout the province as a whole between atlases, but declined in the Carolinian region, including Niagara. The Black Tern has not bred in Region 11 since the first Atlas, and there were noticeable declines in the already uncommon Common Moorhen, Least Bittern and Marsh Wren, suggesting that marsh habitat is scarce and in decline in the region.

Long-distance and Short-distance Migrants and Permanent Residents

Although more neotropical (long-distance) and temperate (short-distance) migrants decreased than increased in the Carolinian region as a whole between atlases, there was no clear pattern in Region 11. However, more resident species increased than decreased in Niagara, perhaps reflecting the milder winters in recent decades. Notable exceptions are Ring-necked Pheasant and Ruffed Grouse, which showed a marked decline, and Gray Partridge which was not found during the second Atlas and is now believed to be extirpated from Regional Niagara.

“Carolinian” Species

In Region 11 between atlases there were some substantial increases among the so-called “Carolinian” species, which are, or were, largely limited to the Carolinian region in Ontario. Included in these species were Blue-winged Warbler, Carolina Wren, Northern Mockingbird, Orchard Oriole, Hooded Warbler, Red-bellied Woodpecker and Tufted Titmouse, all of which also increased in southern Ontario as a whole. The expansion of these southerly species to the north is consistent with the predictions of climate change (Price 2004), but in the case of the last three species, which are all forest-dwelling birds, the overall increase of forest cover in much of the northeastern United States might be a significant factor. Moreover, not all Carolinian species increased between atlases. Some of the rarest of the Carolinian species in Niagara were reported in fewer squares in the second Atlas than in the first. These include Barn Owl, Cerulean Warbler, Louisiana Waterthrush, White-eyed Vireo and Yellow-breasted Chat.
NIAGARA AS A GATEWAY TO ONTARIO FOR BREEDING BIRDS

Nestled between Lakes Erie and Ontario, and contiguous with adjacent New York State, the Niagara Region forms a natural gateway into the province from the south for expanding bird populations. This gateway effect is most apparent for resident (i.e., non-migratory) birds, which are unlikely to cross the Great Lakes, and therefore expand incrementally, often around the edges of the lakes. Species such as the Red-bellied Woodpecker, Tufted Titmouse, Northern Mockingbird and Carolina Wren fit into this category. The expansion of these species between the two Atlas periods (1980-1985 and 2000-2005) in adjacent parts of New York State (McGowan and Corwin 2008) presumably contributed to their expansion in Region 11.

The only other resident species in New York State undergoing expansion in a manner suggesting that it might expand through the Niagara gateway into Ontario in the foreseeable future is the Fish Crow. Since its expansions within New York, however, are wide-spaced and not incremental (McGowan and Corwin 2008), it could possibly hop right over Region 11, should its westward expansion continue from New York into southern Ontario.

A few migratory species, such as the Black Vulture and perhaps the Yellow-throated Warbler, are expanding northward and might soon nest in the region. However, the Niagara “gateway” is not as important to these species, and they are perhaps as likely to breed for the first time elsewhere in the southern part of the province. It will be interesting to see what the third Atlas reveals!

LITERATURE CITED


The Eastern Bluebird in Niagara

Brad L. Clements and Bill Read

The Eastern Bluebird, appreciated by birders and non-birders alike, is one of the most welcome species in the Niagara Region. What other bird combines the brilliant blue of a cloudless July sky with the blazing orange of an August sunset? Add a spirit-lifting song and there you have it — the Eastern Bluebird. Surely, any property owners in the Niagara Region would be thrilled to have a nesting pair in their backyard.

There are actually three bluebird species native to Canada: the Mountain Bluebird (Sialia currucoides), which is found from Manitoba west to British Columbia and north to Yukon, the Western Bluebird (Sialia Mexicana), which is restricted to the southern part of British Columbia, and the Eastern Bluebird (Sialia sialis), whose Canadian range extends from southeastern Alberta east to the Maritimes (Sibley 2000). Since only the Eastern Bluebird is found in the Niagara Region, all references to bluebirds in this article are to the Eastern Bluebird.

As with many other avian species, the presence of bluebirds in our region has varied considerably over the past forty years, in terms of both geographic location and abundance. During the pre-settlement era, the Eastern Bluebird would have been a rare
to uncommon sighting, limited as the species was to forest fire burn areas and edge openings. Populations increased dramatically as settlers cleared the dense forests to plant crops and build farms. Fencerows were lined with tree stumps creating ideal nest cavities for bluebirds. In the 1800s, the bluebird was a widely distributed resident in Ontario, from the boreal forest in the north to the Great Lakes in the south (Risley 1994). It was a common summer sight and a most welcome guest.

Since that time, however, Ontario has experienced several major population declines, the most recent of which took place from 1976 to 1978. Various reports estimated the declines as a 50% drop in nesting pairs (Pinkowski 1979), a 48% and a 63% reduction in bluebird sightings (Bystrak 1980; Graber and Graber 1979). Even before the 1976 to 1978 declines, there was serious, ongoing concern for the bluebird in Niagara. Sheppard (1970) describes the status of the bird in Niagara as follows: “Formerly a reasonably common summer resident, arriving and departing about the same time as the robin. The bluebird is now occurring in considerably reduced numbers, and is now quite a rarity in localities where it was once quite prevalent.” Sauer and Droege (1990) suggest that climatic events have been a dominant force in affecting the population trends over the period 1966-1987. Eastern Bluebird numbers as recorded by the Breeding Bird Survey (BBS) in Canada show a decline, percentage change per year, of 1.072% from 1966 to 1978 and an increase of 11.895% from 1978 to 1987 (Sauer and Droege 1990). Between 1981 and 2005, BBS data indicate an annual increase of 8% in Ontario.

Many reasons have been proposed for the reduction in bluebird numbers in Niagara. One of the most prevalent is competition for nest sites, either natural or man-made. Eastern Bluebirds are cavity nesters. Their natural preferences have been rural and urban habitats containing sparse vegetation and scattered trees or other perches. They typically nest in weedy fields, meadows and orchards, avoiding densely wooded and congested residential areas.

The main competition for nest sites comes from House Sparrows (Passer domesticus), House Wrens (Troglodytes aedon), European Starlings (Sturnus vulgaris), and Tree Swallows (Tachycineta bicolor). House Sparrows are most noticeable as competitors with bluebirds near buildings and cultivated farms (Risley 1994). According to Blancher and Couturier (2007), the House Sparrow population in Carolinian Canada is 1.2 million while there are only 7,000 bluebirds in the same area. House Wrens are a particularly serious threat when bluebirds nest near forest edges. Not only do the wrens compete for sites, but often they also puncture the eggs of any bluebird that nests near them (Felix Ventresca pers. comm.). European Starlings can be a problem if the cavity entrance of the site is large enough to admit the birds (Bent 1949). In the Niagara Region, as in most other areas of Ontario, the Tree Swallow is the most serious competitor for nest sites of the man-made variety (Zeleny 1976). Management techniques for peaceable coexistence of both species are discussed later.

Other reasons suggested for the reduction in bluebird numbers in our area include loss of habitat as a result of the elimination of small farm fields and pastures. Weather, however, is often cited as the primary factor influencing bluebird population fluctuations (Read 2007). Severe winters can have a negative effect on bluebird populations that choose to remain in our area through the season of ice, wind and snow. “Storms centred in the southeastern United States, where Niagara bluebirds often winter, appear to have caused some of the greatest declines in population” (Risley 1994). The ice storm of early April 2003 in Ontario caused very heavy adult mortality.
Christmas Bird Counts (CBCs) are excellent vehicles for providing insights into long-term trends in wintering bird populations. From 1954 to 1981, not one bluebird sighting was reported on any of the annual CBCs for the Niagara area or in the neighbouring areas of Western New York State. The first record was in 1982, when three bluebirds were observed during the St. Catharines count. The first sighting on a Niagara Falls count was not until 1990. Since that time, there have been very significant fluctuations in annual numbers. For example, on the St. Catharines count in the year 2000, 91 bluebirds were reported, while only 12 were seen in 2001. Factors contributing to these fluctuations could include the weather conditions on the day of the count, the number and experience of observers, the previous year’s weather in the wintering states, and the spring and summer breeding success rates. When fruit-bearing trees and shrubs such as European buckthorn and staghorn sumac produce very little fruit, as they did in summer 2004, fewer Eastern Bluebirds overwinter. The available food supply seems to be the primary factor determining whether bluebirds overwinter. With climatic changes producing both warmer winters and increased precipitation — conditions favourable to fruit-bearing crops — Eastern Bluebirds should continue to overwinter in the Niagara Region. The overall trend appears to be a positive one.

**Bluebird Nest Box Trails**

Happily, mainly through the efforts of many enthusiastic and caring residents, the prospects for bluebirds in Niagara appear to be improving. The founding of the North American Bluebird Society in 1978 by Lawrence Zeleny and the formation of the Ontario Eastern Bluebird Society in 1988 by Bill Read encouraged hundreds of individuals in the Niagara Region (and elsewhere in Ontario) to put up nest boxes for bluebirds. In the past 40 years, major efforts have been made to build and locate bluebird-friendly nest boxes in appropriate habitat throughout Niagara. Erecting boxes in pairs, about 3 to 4 metres apart, can often provide an advantage to bluebirds. When Tree Swallows nest in one box, they will not tolerate use of the nearby box by another Tree Swallow pair. They will, however, usually allow bluebirds to occupy the second box (Felix Ventresca pers. comm.).

The most important and successful intervention has been the creation of “bluebird nest box trails,” a strategy that began in the 1940s and has enjoyed steady growth since that time. A nest box trail consists of a number of predator-proof nest boxes designed specifically for bluebirds. The boxes are placed on metal poles in carefully selected locations in relatively close proximity and monitored on a regular basis. The most effective efforts have been with extensive, well-monitored and maintained bluebird trails. The numbers of boxes on these trails have ranged from ten to well over one hundred.
Nest Box Programs in Niagara

It is because of the dedicated work of all these individuals in the Niagara Region and others in Ontario that the Eastern Bluebird was delisted as an endangered species in 1996.*

George Coker and Ray Hughes built their trail in 1982 in the Winona area (now Grimsby) with 60 boxes. George’s brother Albert had put up some boxes in the 1930s, and George maintained a few boxes on his farm through the 1960s and 1970s. George and Ray’s trail grew to 120 boxes after George retired from fruit farming in 1989. George continued the project after Ray died in 1993. From 1982 to 2005 this trail has fledged 1,585 Eastern Bluebirds. George Coker’s famous “mudroom nest box” is specially designed to keep the young dry during wet weather. He has distributed hundreds of nest boxes to bluebird enthusiasts across Southern Ontario; half of the boxes are in Niagara. George was a mentor and inspiration to many in Niagara and Hamilton.

Don Cryderman started his bluebird trail in Beamsville in 1984, having been inspired by the sight of three male bluebirds on 29 February of that year. His best year was 1992 with 36 pairs and an estimated 350 bluebirds fledged. Don estimates that his trail of between 12 and 90 boxes fledged close to 1,000 bluebirds from 1984 to 1998, when he moved to Mount Hope. He continues to put up boxes around Mount Hope.

In 1982 the Niagara Peninsula Conservation Authority attracted bluebirds to a small trail at Allenburg. Between 14 and 28 boxes were monitored, and one and five bluebird nestings were reported each year until 1987. The Ontario Ministry of Natural Resources established a trail in Fonthill in 1985. A total of 40 boxes were placed, but no record of subsequent success was recorded. Another trail of 96 boxes was set out by the Port Colborne and District Conservation Club in 1987. Although most of the boxes were used by Tree Swallows, at least one pair of bluebirds was recorded in 1987.

Robert Eberly of Ridgeway is currently monitoring about 30 boxes and has averaged three nestings a year since their installation in 1982. His inspiration came from an article by Lawrence Zeleny (1977) entitled “Song of Hope for the Bluebird.” Since beginning his project, he has put up or given away over 1,000 boxes.

Dan Baarda and his son Manley have 45 boxes that they monitor in the Beamsville area. The boxes are located in vineyards along the escarpment bench and in apple orchards below the escarpment. From 1999 to 2008, they have averaged six to eight pairs of bluebirds and have fledged between 30 and 40 bluebirds each year. (For some additional comments, see Bergsma 2008.)
Donald MacDougall, who resides in Niagara-on-the-Lake, has 15 boxes on the family farm. From 1998 to 2008, they have averaged three nestings of bluebirds each year.

Rodney Wright and Henry Bauer have worked together on a trail of nest boxes around Fenwick for the last 20 years. Presently Henry has 11 boxes on his farm and another seven at his home in the town of Pelham. Rodney remembers his father building nest boxes in the 1940s and also having bluebirds nesting in fence posts at that time. Rodney and Henry have had between one and nine successful nestings of bluebirds each year.

Glen Lundy of Cook’s Mills started his bluebird trail in 1988 and hosted his first two pairs in 1990. He eventually acquired up to 60 boxes, which he distributed around the area. In the mid-1990s, Glen was able to attract 18 pairs, his best year. He still maintains a few boxes in the area.

Glen and Deborah Peterson, who were inspired by the legendary George Coker, have had a bluebird trail near Smithville since 1996. They have installed between 22 and 26 boxes and have had an average of two pairs of bluebirds each year.

David and Sandra Mitchell have had as many as 100 boxes on their 27-hectare property in Stevensville. Although the boxes are not monitored on a regular basis, they have housed bluebirds in some years and currently (2008) have two pairs.

Since 1987 Hank Zuzek has maintained a nest box trail near his home in Beamsville. He monitored about 60 boxes, all on greased steel t-bars, and fledged, on average, 75 bluebirds per year. Hank was killed in a farm accident in 2007. He was a long time member of the Ontario Eastern Bluebird Society and was one of the organizers of the 1996 North American Bluebird Society meeting, which was hosted by Ontario. He will be sadly missed.

One of the most extensive and successful Niagara area trails has been created in Short Hills Provincial Park by Felix Ventresca and Aurelio Munoz. This energetic pair began their project in the late 1990s and had their first success in 1999 when five bluebirds fledged from a box mounted on a solitary tree in an open field. In 2000 they erected 60 boxes, and by 2004 this number had increased to 120 boxes. From 1999 to 2008, this trail has fledged 597 Eastern Bluebirds.

As mentioned earlier, bluebirds face stiff competition for nest sites. Bluebird trails are very attractive to bluebirds, but they are also popular with other species, especially Tree Swallows, House Wrens and the occasional Black-capped Chickadee (*Poecile atricapilla*). It should be noted that the above species are protected under the Migratory Birds Act and their nests cannot be disturbed. Unprotected by law, House Sparrows may be humanely removed from nest boxes. Table 1 depicts the success of the bluebird trail monitored by Ventresca and Munoz from 2000 to 2008 (Felix Ventresca and Aurelio Munoz unpubl. data). The numbers describe how many young fledged. They also dramatically illustrate the competition that bluebirds face.

The number of bluebird chicks fledged has shown remarkable fluctuations as illustrated by the low of 30 in 2003 and the high of 112 in 2007. Reasons for the generally upward trend include strategic adjustments in the placement of the boxes, a consistent, weekly program of monitoring, an increase in the number of boxes and protection against predators such as raccoons by greasing support poles (Felix Ventresca pers. comm.).

Table 1. Bluebird and competitor fledglings compared (2000-2008).

<table>
<thead>
<tr>
<th>Year</th>
<th>Boxes</th>
<th>Bluebirds</th>
<th>Tree Swallows</th>
<th>House Wrens</th>
<th>Total</th>
</tr>
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<tbody>
<tr>
<td>2000</td>
<td>60</td>
<td>37</td>
<td>66</td>
<td>18</td>
<td>121</td>
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<td>3,159</td>
</tr>
</tbody>
</table>

Resident birders in the Niagara Peninsula will tell you they are seeing more bluebirds, more often and in more places than ever before. In the early 1990s, it was not uncommon to bird regularly all summer and, unless you visited one or two likely hotspots, not to see a single bluebird. In many cases, it took a special, targeted effort to add the Eastern Bluebird to your annual list. In 2006, however, the bluebird, while still not abundant, was regularly encountered on day trips throughout the region.

For statistical confirmation of the increasing numbers of bluebirds in our area, it is only necessary to compare the results in the Niagara Region of the two Ontario Breeding Bird atlases. For purposes of the atlases, the Niagara Region was divided into 25 squares, each 10 km x 10 km in size. When the first *Atlas of the Breeding Birds of Ontario, 1981-1985* (Cadman 1987) was published, it identified only 10 Niagara squares in which bluebirds were observed. The bluebird was listed as “possible” (Po) in two squares, “probable” (Pr) in two squares and “confirmed” (C) in six squares. In the second *Atlas of the Breeding Birds of Ontario, 2001-2005* (Cadman et al. 2007), one square was identified with possible breeding and 22 squares with confirmed breeding. Table 2 allows for easy comparison of the results.

### Table 2. A comparison of breeding bluebirds in the two atlases.

| Square Number | 24  | 25  | 26  | 27  | 28  | 34  | 35  | 36  | 37  | 38  | 44  | 45  | 46  | 47  | 48  | 54  | 55  | 56  | 57  | 58  | 59  | 64  | 65  | 66  | 75  |
|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| **First Atlas** | C   | C   | C   | C   | Po  | Pr  | Pr  | Po  | Pr  | C   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| **Second Atlas** | C   | C   | C   | C   | C   | C   | C   | C   | C   | C   | C   | Po  | C   | C   | C   |     |     |     |     |     |     |     |     |     |     |

Eastern Bluebird
*Raymond Barlow*
This data also demonstrates another aspect of the status of the Eastern Bluebird in Niagara. At the time of the first Atlas, bluebird breeding evidence was restricted almost entirely to areas along and below the escarpment and along the Niagara River. During the survey period for the second Atlas, the bluebird was found to have re-established itself throughout the entire Niagara Region.

There is no doubt that our natural environment is changing, and not always in a way that is favourable to all bird species. Loss of habitat, introductions of invasive species, global warming and increasingly severe weather patterns are just a few of the factors that will influence the numbers of Eastern Bluebirds in the Niagara Region in the foreseeable future. If current trends continue, however, there is every hope that the eye-popping blue and orange and the warm, welcome trill of the Eastern Bluebird will continue to delight us for many years to come.

**LITERATURE CITED**


Peregrine Falcon Hacking in Niagara (1986–1987) and the Legacy

Mary Ellen Hebb

The Peregrine Falcon (*Falco peregrinus*) is one of the most famous bird species in North America. Prized by kings and sheiks for its hunting prowess, especially its steep dives or "stoops" that can exceed 320 km/h (Terres 1980), this majestic bird of prey has only ever been common in a few areas of North America. "In [the] Niagara Region Peregrine Falcon records of migrant birds had decreased between 1954 and 1965, with less than half the number reported in the late-1940s being observed" (Austen et al. 1994). By the early 1970s, it had completely disappeared from eastern North America, with only small numbers remaining on the rest of the continent (Berger et al. 1969; Fyfe et al. 1976). The main culprit was dichloro-diphenyl-trichloroethane (DDT), a chemical developed in the 1940s...
to eradicate insects, especially malaria-carrying mosquitoes (Armstrong 2007). Peregrines, at the top of the food chain, were ingesting large quantities of this pesticide (Fyfe et al. 1988). The ensuing build-up in their tissues resulted in paper-thin eggshells, which collapsed under the weight of the brooding parent (Peakall and Kiff 1988). Although DDT was banned in the early 1970s in most North American jurisdictions — but not in Central and South America — the chemical lingered in the environment and continued to take its toll (Baril 1990; Johnstone 1996). In 1974, a program was designed at Cornell University in Ithaca, New York, to restore the peregrine to its earlier numbers by using the falconer’s hacking technique (White et al. 2002). Hacking is the carefully controlled release of young birds of prey from an appropriate site after several weeks of habituating them to the area and, in particular, to a well-marked food platform. The hope is that the birds, once fledged but not yet able to catch prey for themselves, will return to the site to be fed — often at first, and then with declining frequency as their hunting skills are sharpened. In spite of all the care that was taken, the procedure had a high failure rate in Ontario. In the wild, at that time, only about one in every four peregrines lived to adulthood (Brown and Amadon 1968; Enderson 1969; Tordoff and Redig 1999). Under the artificial conditions of the hack, the mortality rates were similar. Nevertheless, this method represented the best hope for the beleaguered species.

The 1985 Hack

The Ontario Ministry of Natural Resources (OMNR) adopted the hacking method in 1977 (Ontario Ministry of Natural Resources 1986). In 1985, the OMNR was approached by the Peninsula Field Naturalists Club (PFN), which proposed a hack of Peregrine Falcons in the Niagara Region in cooperation with the OMNR and the Canadian Wildlife Service (CWS). The proposal was a signal one in that it represented the first time in Canada that a private organization would conduct a Peregrine Falcon release.

Having reached agreement with the government, the club began its preparations. A committee was formed, and one of its first actions was to apply to OMNR for a grant from the Community Wildlife Involvement Programme to help fund the project. Next, a suitable hack site had to be found. The Schmon Tower at Brock University was the obvious choice. Some 13 storeys high and standing on the brink of the Niagara Escarpment, it would be visible from several kilometres to the peregrines once they were in flight. It had good security, excellent facilities for the workers, a wide buffer zone around the main building, and hosts who would be sympathetic to the project. Official permission from the university was quickly obtained. In April 1986, armed with dozens of questions, the whole committee travelled to Cornell University to consult some of the originators of the peregrine hacking method. There, a great deal of practical information was acquired. In early June, in order to be as fully informed about the species as possible, two members of the committee flew to Wainwright, Alberta, where the CWS maintained the captive Peregrine Falcon breeding facility that would supply the peregrine chicks.

By mid-June, a 1.5 m by 1.2 m by 0.9 m hack box, built by Vince Goldsworthy according to strict specifications, with a blind on one side, a large, barred window in front and a room to retreat to at the back (the “hide”), was in place on top of the Brock tower. Two hundred quail for feeding the peregrines had been ordered. Walkie-talkies
for tracking the birds once they were released had been rented. Requests for bird sitters for the post-release period had gone out to surrounding nature clubs and had generated a large, enthusiastic response. All seemed ready. Then a serious problem developed, one that could compromise the health and safety of the peregrines. Rising temperatures on the roof had softened the tar-and-gravel surface, and the increased human traffic had pressed the thin layer of gravel downward and the gooey tar up to the top. After release, peregrines wandering around the roof could find their feet heavily coated in the sticky substance.

Frantic consultations ensued. A solution (albeit a back-breaking one) was finally found in the form of 30 huge carpets, hauled up and spread around the roof. To hold the carpets down — we wanted flying peregrines, not flying carpets — we added more than a hundred 18-kg bags of sand and, where the carpets had not reached, 1.6 tonnes of gravel. Then in a final touch, garden hoses, discarded around the area below on garbage day, were slit lengthwise and wrapped around the guy wires on the roof. Where no hoses were available, coloured streamers were attached to the wires, all to warn off the young fliers.

On 24 June 1986, four downy Peregrine Falcons were shipped from Wainwright to the Toronto airport. Two of them, a male and a female, were 31 days old, and two, another male and female, were 30 days old. Amidst a surprising amount of press attention (The St. Catharines Standard was particularly generous in its coverage throughout), they were taken up to the hack box. We had decided after some deliberation to name the chicks. Not only did this help us distinguish them from each other, particularly over the scratchy transmission of the walkie-talkies, but it also personalized them for people in the community and helped generate concern for their welfare. “Margherita Howe,” “Isaac Brock,” “William Hamilton Merritt” and “Laura Secord” were the names we chose for these four newly arrived young birds.

The chicks spent the next week and a half in the hack box, eating voraciously, bathing in their water bowl, pumping their wings, plucking at their disappearing down as their flight feathers grew in, and showing great curiosity about everything around them, especially for whatever flew past the front of the box.

In early July, the birds were clearly ready for release. They were 42 days old. Their flight feathers had grown in; the down had disappeared. According to criteria established by the experts, it was important that the release occur before age 48 days. After that time, there was a chance that some birds would bolt straight out from the box without having familiarized themselves with their new surroundings, especially the all-important food platform. Those birds rarely returned and were likely to die of starvation. In need of the calmest day possible, we consulted the weather office and chose 4 July. Shortly before dawn, we removed the barred window from the front of the box and placed the white
food platform on the roof where it would be visible from the air. The weather proved to be ideal, and a calm and orderly release took place. The birds toddled out onto the roof to inspect their new surroundings. But on the morning of the second day, 5 July, the wind picked up. American Kestrels (*Falco sparverius*) that were nesting nearby, aware of the peregrines and determined to protect their own young, became an added complication. Thus the first protracted flight was taken on day two by the older female, Margherita Howe, after she had been attacked by a kestrel. She managed to fly to the much lower roof of a nearby building and stayed there. Shortly afterwards, the younger male, Isaac Brock, was blown off the roof. Over the course of the next few days, he made three unsuccessful attempts to return to the tower and then disappeared. Two weeks later, a young male peregrine was seen chasing birds in downtown Buffalo, New York. Responses to our inquiries indicated that it was almost certainly Isaac Brock, but what happened to him subsequently remains a mystery to this day.

Margherita Howe, after going from building to building for a few days, eventually became powerful enough to fly back up to the tower. Meanwhile, the older male, William Hamilton Merritt, and the younger female, Laura Secord, made steady, less spectacular first and subsequent flights. By the latter part of July, all three remaining birds were showing fairly good control and were building up speed. It may have been this increase in speed, combined with the lack of agility common in females, that led to the death of Laura Secord. On 21 July, she was found in west St. Catharines, dead from a massive cerebral haemorrhage, probably the result of flying into a plate-glass window. This was a terrible blow to us, even though we had known from the start that this kind of accident was a common cause of death in peregrines, especially juveniles. A picture of me holding the dead bird appeared on the front page of *The Standard*. Public reaction was immediate and impassioned. There was a deluge of sympathy calls, some from people in tears. On the street, a woman I had never met flung her arms around me and wept. If there was a positive side to Laura Secord’s death, it was that it demonstrated the extent to which the local public had embraced the idea that these fierce-looking raptors were worthy of its interest and affection.

The rest of the hacking period proceeded as planned. William and Margherita were clearly honing their flying and hunting skills. By August they were returning to eat at the hack board less and less often. To the delight of their many babysitters, they could be seen chasing everything from bats to one very startled Great Blue Heron (*Ardea herodias*). William particularly seemed to enjoy flying into the nearby garbage dump and sending up clouds of gulls. Then we began to see them less and less. On 8 August, Margherita disappeared, and on 17 August, William followed.

The hazards that awaited them were numerous, including being shot. Storms, high-tension wires, cars and windows also posed serious threats. If even one bird lived to the age of one year, the project would be deemed a success.

**The 1986 Hack**

In late May of the next year, a young male Peregrine Falcon showed up on a ledge of the Dunn Building in downtown Buffalo. It was identified as William Hamilton Merritt, arrayed in sleek new adult plumage and demonstrating fine pigeon-chasing form. For days, local birders flocked to see him. Then he disappeared, perhaps to head north.

By this time, the OMNR and the CWS had decided that a mass hack of 15 birds might be more effective than releasing only four a year in an area. This expanded plan
meant that two more hack sites had to be found for the 1987 release — three, if any of
the birds hacked in 1986 returned to Brock. Highly territorial, the older birds could quite
literally knock the newly hacked birds out of the air. When news of the search was made
public, E.L. Crossley Secondary School in Fonthill offered school facilities and the roof.
An agreement was also reached with the Shaw Festival in Niagara-on-the-Lake to install a
hack box on top of the Festival Theatre. The task ahead was onerous for a small club like
ours. Fortunately, birders from both sides of the border were volunteering hours of help,
and The Standard was again making stars of the peregrines. Media attention was not only
local: The Toronto Star, The Globe and Mail, The Hamilton Spectator, and virtually all the
Buffalo TV channels gave us plenty of highly sympathetic coverage. Upon the arrival of
the six Shaw birds on 28 June, the Shaw public relations staff held a media-heavy recep-
tion complete with invited dignitaries, dainty sandwiches and iced tea.

A closed-circuit TV for monitoring the six Shaw birds (“George Bernard Falcon,” “Mrs.
Patrick Campbell,” “Kay McKeever,” “Larry McKeever,” “Newark” and “Penner”) was set
up in the Green Room of the Festival Theatre. After several of the actors in Major
Barbara became so engrossed in the peregrines’ high jinks that they almost missed their
cues, the monitor was moved to a hallway. Nonetheless, when not on duty, a number of
the actors and stagehands continued to take an interest in the birds, helping to keep an
eye on them after their release and coming to their rescue when they were downed. One
usher, on learning that a bird had crashed in the back garden of the theatre where patrons
were enjoying their cocktails, produced a length of the theatre’s thick velvet fencing and
roped off that area. The bird was able to take off unaided some 20 minutes later.

On 10 July it was time to release the birds. In retrospect, it seems appropriate that a
venue designed for the dramatic should host an event so fraught with theatrical incidents.
There were many poor landings and crashes. Even after achieving some agility in flight,
the birds had a tendency, not at all common among the Brock birds, to carry their quail
away from the roof to eat elsewhere. This they did, flying low over the heads of smartly
dressed theatre patrons with cocktails in hand. Astonishingly, not once to our knowledge
did a patron look up, nor, luckily, did a half-eaten quail ever land in a martini!

The most egregious incident began with a poor landing. In her first flight foray, Mrs.
Pat, as we called her, stunned herself upon landing on the grounds of the hospital across
the street. When it became clear that she was not going to recover quickly, one of our
workers wrapped her in a blanket and proceeded to the theatre, where protocol decreed
that she be put back in the hack box for the night. The problem was that, in order to
reach the box, the worker would have to cross the stage to get to the ladder to the roof.
A very unhappy stage manager made him wait in the wings with his blanketed bundle until
the intermission, when he was able at last to speed up the ladder and deposit his charge.
As he descended the steps to the stage, the manager was waiting, a frozen smile on her
face. Through clenched teeth, she told him, “This will not happen again.”

An interesting change occurred in Mrs. Pat after this incident: she became a screamer.
She screamed when she took off, she screamed when she landed, she screamed when she
saw another bird. Much to the amusement of some of the actors, the screams could be
heard in the theatre. We hoped that patrons who heard her would assume that the racket
was part of the action. To the relief of many, by late August, all six birds had become
independent hunters and had left the hack site for good.
On 14 July, five male and four female peregrines arrived from Wainwright. They were placed in the hack boxes at Brock and E.L. Crossley, respectively. At Brock, as usual, the transfer from carrier to hack box went smoothly. The chicks — “Billy Bishop,” “Adam Beck,” “Sam McGee,” “Tom Longboat” and “Ernest Thompson Seton” — were frightened but docile. A similarly routine transfer was expected at E.L. Crossley. Instead, we opened the box and encountered a hissing female, rolled onto her back and striking out with huge talons. She slashed our hands as we tried to take hold of her. The look in her eye was fierce. Until that moment, we had planned to call her “Lucy Maude Montgomery,” clearly too tame a name for this holy terror. We saved that name for the next female and dubbed this one “Nellie McClung” after the fiery pioneer Canadian feminist. Fighting all the way, she was at last deposited in the hack box beside the alternate Lucy as well as “Emily Carr” and “Mrs. Dexter D’Everardo.”

Fortunately, the release of the five males on 22 July at Brock went without major incident. The birds rapidly became proficient at flying, so a skeleton crew was left to mind them at Brock, and the rest of us moved on to E.L. Crossley to deal with the females, whom we found to be much poorer at flying.

On 26 July shortly before dawn, we crept out on the roof of E.L. Crossley intending to remove the barred window that separated the birds from freedom. Timing was always crucial in this procedure: too long before dawn, and a startled bird could bolt into darkness, putting itself at risk of a collision; too close to dawn, and the birds might be awake rather than asleep in their hide at the back of the box. At the two previous releases that year, one bird had been awake and out front, but had been easily coaxed into returning to the hide. We were not so lucky with this release: all four females were out front, and not one of them was willing to retreat to the hide. Quickly improvising with a blanket held up to block their view, we managed to remove the window swiftly without disturbing any of our feathered tenants.

As expected, the females were slower and more cautious in beginning to fly. Perhaps surprisingly, Nellie was the least capable of all. She was afraid to try, and when she finally did, she lumbered. At times it seemed amazing that she got airborne at all, and her landings were crashes. Eventually, of course, she became proficient. By late August, all the females and three of the Brock males were hunting successfully before they disappeared.

The other two Brock males lingered until 2 September and 22 September respectively, and then they too were gone. Exhausted hack attendants, who had been averaging four hours of sleep a night for more than a month, were relieved. It was time to dismantle the hack boxes and, once again, to watch and wait. One bird had already perished: on 29 August Emily Carr had been found dead in Michigan, victim of some kind of collision.

The Legacy

The next news was good: Toronto birder and accomplished pen-and-ink artist Don Peuramaki, out for the day on the Leslie Street Spit (now known as the Tommy Thompson Park), found an adult male peregrine. It lingered long enough for Don to make five sketches of the bird in various poses and to read the band number. It was William Hamilton Merritt, now a year and a half old and in fine fettle. October is the month in which peregrines traditionally migrate through southern Ontario from their territories farther north, and it was quite reasonable to assume that William (possibly having nested) was on his way south from a territory in northern Ontario.
Hardly had the celebrations over William subsided before we received even bigger news. Birders in Toledo, Ohio, had been monitoring a peregrine pair since March 1987. They were full of hope: Ohio had historically never been home to a peregrine nest. Then early in 1988, the female had been found dead, to the great dismay of everyone concerned. Barely days later, however, another female had shown up in partnership with the male. They were seen together for a number of days before she disappeared.

In early June of that year, several businessmen and their lawyers were inspecting the premises of a vacant hotel, The Commodore Perry, which was up for sale in downtown Toledo. While up in the penthouse, one of the lawyers decided to step out on the balcony to look around. He had gone less than one metre when he was struck by a winged fury, clearly intent on doing damage. He fell to the ground and made a desperate hands-and-knees escape back into the building. Thus was Nellie McClung rediscovered, her nest with two chicks (the first in Ohio) less than one metre away. Still garbed in immature plumage (she was less than a year old when she had hatched her chicks), she was as ready to do battle as ever.

Wildly happy, a group of us went down to Toledo to see her and her chicks. By the time we arrived, the chicks had fledged and were learning, with some setbacks, how to negotiate the big city. It was wondrous to see Nellie and one of her chicks perched side by side on the edge of a building — indistinguishable from one another except for their legs and ceres (the bands across the tops of their bills). Nellie's were the bright yellow of the adult; the chick's were the watery blue-green of the juvenile.

Nellie reigned in Toledo for the next eight years until she was killed in a collision in 1996. She had a succession of mates, and she produced 17 chicks (16 chicks according to the Midwest peregrine database). Not all of them were banded, but some of those that were went on to repeat her success in other cities.

Notable among Nellie's offspring were “Toledo” and “Szell.” Szell, one of her first two chicks and named after the famous music conductor George Szell, showed up in Cleveland and became that city's first breeding peregrine male. He was there from 1990 until 1995 and produced 13 successfully fledged offspring. One of those chicks, “Calypso,” went to London, Ontario, where she was the resident breeding female from 1997 until 2000, when she was killed by lightning. She had successfully fledged 10 chicks. Another of Szell's offspring, “Erie,” turned up in St. Louis, Missouri, and had one successful nesting (four chicks fledged in 1998) before she was found dead the following year.

Meanwhile, Toledo, the other of Nellie's chicks whose history we know about, was living a tumultuous life. Hatched in 1995, she showed up in Buffalo in late winter 1997 and took on the resident female.
They ended up in a down-and-out, rolling-and-tumbling battle on the street, stopping all the traffic in downtown Buffalo. Toledo lost the fight but not her life. She was, however, sufficiently injured that she had to be taken to a local rehabilitator. On recovery and release, she made her way to Hamilton, Ontario, where in 1999 she eventually teamed up with the local male to produce four chicks. In 2000, she was killed in a collision of some kind. It may seem from these stories that Nellie’s offspring all led short lives and died violently. It must be remembered, though, that for the most part, the only offspring of hers that we were able to learn about were the ones that were killed or injured and then recovered. It is usually only in those circumstances that leg bands could be read and the birds identified. It was probable that more of her descendants, some banded, some not, live and thrive today in many parts of Canada and the United States. No doubt many of William Hamilton Merritt’s descendants are alive and breeding somewhere as well.

Our hope as we began the project that one or more of our peregrines would return to nest in Niagara has not been realized. Instead, a very satisfying compromise has occurred: while our peregrines have gone elsewhere, others have come from elsewhere to us. In 1998, a pair of peregrines nested on the Canadian side of the Niagara gorge about 200 metres north of Niagara Falls. This was the first confirmed nesting in the Niagara Region (Nature Niagara News 1998).

Peregrine Falcons have made a truly astonishing recovery, both in Canada and the United States, thanks in part to the inspired program developed at Cornell University and to the devotion and hard work of thousands of volunteers and wildlife officials in implementing it. The success of the Canadian program would not have been possible without the extraordinary efforts of the CWS and their captive Peregrine Falcon breeding facility in Wainwright, Alberta.

**LITERATURE CITED**


The main waterbird species with a long history of nesting within the Niagara Region are Ring-billed Gulls (Larus delawarensis), Herring Gulls (L. argentatus), Common Terns (Sterna hirundo), Caspian Terns (S. caspia), Double-crested Cormorants (Phalacrocorax auritus) and Black-crowned Night-Herons (Nycticorax nycticorax). Three other waterbird species have a more recent nesting history in the Niagara Region. Great Blue Herons (Ardea herodias) and Great Egrets (Casmerodius albus) began nesting on Motor Island in the United States (U.S.) waters on the Niagara River in the last decade (1997–2007), while single nests of Great Black-backed Gulls (L. marinus) were found on Mohawk Island and on the Port Colborne breakwall in several years between 1991 and 2001 (see below).
The four major sites in or near the Niagara Region that contain nesting waterbirds are (1) Mohawk Island in Lake Erie, (2) the offshore breakwater west of the Welland Canal entrance to Lake Erie at Port Colborne, (3) the peninsula east of the Welland Canal entrance to Lake Erie at Port Colborne and (4) various sites in the Buffalo harbour and the Niagara River south of Niagara Falls.

My objectives in this article are to provide current and historical census data for species nesting at the four main sites, and to review the history of the Common Tern colony on the breakwater at Port Colborne.

COLLECTION AND SOURCES OF CENSUS DATA

At approximate 10-year intervals between 1976 and 2007, the Canadian Wildlife Service (CWS) and U.S. Fish and Wildlife Service (USFWS) conducted four major surveys of the North American Great Lakes and their associated waterways and undertook a census of the colonial waterbirds nesting on them. The long-range objective of this program is to use trends in the data as aids in management and conservation decisions (Blokpoel et al. 1980).

Details of waterbirds nesting during the first three surveys have been published in separate government reports on a jurisdictional basis. Data for the Canadian waters of Lake Erie and the Niagara River for the first two surveys are in Blokpoel and McKeating (1978) and Blokpoel and Tessier (1996). The only available published report for the third survey is in Morris et al. (2003), which is restricted to Herring Gulls. Equivalent census data for the U.S. waters of Lake Erie and the Niagara River are in Scharf et al. (1978), Scharf and Shugart (1998) and Cuthbert et al. (2001). The only available published data from the fourth census are presented here for the Niagara Region and in Morris et al. (2010) for Common and Caspian Terns across the Great Lakes.

The quality of census data is entirely a function of the completeness and accuracy of the methods used to collect them (Bibby et al. 2000). Data in this article were obtained during an actual count of nests obtained by walking through a colony or estimated from the air during overflights. A nest was counted if it was empty but freshly completed, if it contained eggs and/or small chicks, or if it had contained young during that breeding season (i.e., it was an “active” nest). The accuracy of such counts varies as a function of timing and colony size (Morris et al. 2003).

COLONY LOCATIONS, DESCRIPTION AND CENSUS DATA

The first, second and fourth surveys of Lake Erie and the Niagara River were completed in Canadian and U.S. waters in the same years (1977, 1990, 2007). The third survey was carried out in 1997 (U.S.) and 1999 (Canada). In the text and tables that follow, count data are reported for each site for each year. To determine the average annual rate of change in the numbers within each species on each site between the census periods, I used the procedures described in Blokpoel and Tessier (1996).

Count data from the Canadian colonies were collected during relatively narrow date ranges in each census period. In 1977 the census took place between 11 May and 4 June, in 1990 between 7 and 14 May, in 1999 between 6 and 14 May and in 2007 between 3 and 8 May. Count dates at U.S. colony sites were more variable. No dates were recorded for the first census in Scharf et al. (1978). In 1990 data were collected between 2 May and late June, in 1997 between 3 May and 3 July and in 2007 between 9 and 22 May.
Two notes of caution are appropriate here. First, the nesting sites described below are on private or government property, and permits from various government agencies are required to visit them. Second, all waterbirds are non-game migratory avian species and their nest sites, chicks and adults are protected by an international agreement between Canada and the United States (Migratory Birds Convention Act), signed in 1917 but formally brought into force in 1994.

**Mohawk Island, Lake Erie**

**LOCATION AND DESCRIPTION:** The island is 6 km west of the Niagara Region, approximately 2 km from the north shore of Lake Erie, and 5 km east of the Grand River entry to Lake Erie at Port Maitland. It is accessed by boat from the Grand River or from a boat launch at Lowbanks. The island supports a lighthouse, built in 1848, decommissioned in 1969, and currently in advanced stages of deterioration.

The island is low-lying, except for an elevated mounded area on the north side. Most of the island surface is exposed limestone, currently devoid of permanent vegetation. Herring Gulls nest primarily on the eastern side of the mounded area, with scattered nests along the northern shoreline. Cormorants nest in high density on the ground at the western end of the mounded area. Ring-billed Gull nests are found in the low-lying area surrounding the lighthouse. Caspian Terns nest on a ridge of mussel (*Dreissena* spp.) shells that have accumulated along the southeastern shoreline during the past few years (David Moore pers. comm.).

**CENSUS DATA:** Ring-billed Gull nests counted on Mohawk Island were always more abundant than Herring Gull nests and increased at an annual rate of +4.9% while Herring Gull numbers remained relatively constant (+0.36%; Table 1). Except for two cormorant pairs in 1990, cormorants and Caspian Terns nested for the first time in 1999, and the numbers of both had increased by 2007 (cormorants +27.8% per year; terns +13.1% per year; Table 1).

Some historical data are available for Mohawk Island (CWS unpubl. data). Ring-billed Gulls were first recorded in 1945 (60 nests) and had increased to an estimated 6,300 pairs by 1964 (Ludwig 1974). Nest numbers in the early 1970s were estimated at 1,000 (1972) with a decrease to 520 nests by the first census (Table 1). Herring Gull nest numbers were usually in the 100–200 range. Caspian Terns were first recorded in 1996 (CWS unpubl. data) and they were present in each year thereafter to the 2007 census (range between 109 and 319 nests). Common Tern nest numbers ranged from 500 to 2,000 between the mid-1930s and mid-1950s (Cynthia Pekarik pers. comm.). Although no nests were recorded during any of the formal census periods, Common Tern nests were present during visits by CWS personnel in May 2002 (203), 2003 (63) and 2004 (86). Single nests of Great Black-backed Gulls were recorded on Mohawk Island in 1991 (Peck and James 1994), 1993 and 1996 (Moore et al. 2007).

**Port Colborne Breakwater, Lake Erie**

**LOCATION AND DESCRIPTION:** The first lighthouse associated with the Welland Canal entrance to Lake Erie at Port Colborne was constructed in 1834. In the early 1900s, an east-west breakwater was built on the west side of the canal terminus, and a lighthouse was added at the east end of the east leg in 1903. A third leg was extended south from the...
approximate center of the east-west leg in 1928 and supports a second, smaller light- 
house at the south end. There is a “rock pile” at the juncture between the east-west and 
southern legs consisting of variably sized limestone boulders driven up from the south 
outside edge of the breakwater by storms on Lake Erie (see photo). The breakwater is 
currently owned and maintained by the St. Lawrence Seaway Authority and functions to 
protect ships entering and leaving the Welland Canal from the prevailing southwest 
winds on Lake Erie.

Ring-billed and Herring Gulls nest primarily on the rock pile and on the flat substrate 
to the west of it. Cormorants and Black-crowned Night-Herons nest in the trees and 
shrubs west of the rock pile, while Common Terns nest exclusively on the shelf of the east 
leg. In recent years, increasing numbers of Ring-billed Gulls have nested on the east leg 
shelf, thus competing directly with Common Terns for nesting space (see “Conservation 
and Management” below).

CENSUS DATA: The Port Colborne breakwater currently (2007) has the highest biodiversity of nesting waterbirds 
in the Niagara Region with five species, only one less (Caspian Terns) than sites in Hamilton harbour (Quinn et 

The numbers of nests counted in each census year appear in Table 2. Ring-billed Gulls increased at an annual rate of +8.5% per year over the 30 years between the first and fourth census periods. Herring Gulls had a somewhat lower annual rate of increase (+3.3% per year), while the change in numbers of Common Tern nests was strongly negative (-11.6% per year). Although cormorant nests were present only in 2007, they were first recorded breeding in 2004 when 62 nests were counted on 9 June (Ralph Morris unpubl. data). The rate of increase over this three year period was +61.7% per year.

<table>
<thead>
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<tbody>
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<td>235</td>
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<td>3,733</td>
<td>2,740</td>
</tr>
<tr>
<td>Herring Gull</td>
<td>60</td>
<td>145</td>
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<td>158</td>
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<td>0</td>
<td>0</td>
<td>262a</td>
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<tr>
<td>Common Tern</td>
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</tr>
<tr>
<td>Black-crowned Night-Heron</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>10b</td>
</tr>
</tbody>
</table>

* 4 June 2007
* Extrapolated from count of 365 nests on 13 May 1999

**Table 2. Nest (pair) numbers on the breakwater offshore from Port Colborne, Ontario, Lake Erie, counted by personnel of Brock University and the Canadian Wildlife Service.**

**Figure 1.** The Port Colborne Breakwater, Lake Erie, in June 2009, viewed from the south showing the east leg and the rock pile at the intersection between the east and south legs. The “Canada Furnace” Ring-billed Gull colony is on the immediate east side of the Welland Canal.

David Walker
Small numbers (2–10 pairs) of Black-crowned Night-Herons have nested each year since 2002 at the base of willow bushes at the west end of the rock pile, but they have failed to hatch any eggs since cormorants began nesting above them in 2004. A single pair of Great Black-backed Gulls first nested on the east leg of the breakwater in 1995 (Moore et al. 2007, 2008). The nest contained two eggs, both of which failed to hatch. The following year, a pair (possibly the same pair) first nested at the western end of the east leg, then renested at the north edge of the rock pile following removal of their first nest by Brock University investigators to preserve the east leg substrate for Common Terns. Two large chicks, near fledging age, were observed in late June 1996. No nesting by this species was recorded in 1997 or 1998. However, in three successive years between 1999 and 2001, a single pair of Great Black-backed Gulls (again, likely the same pair) nested on the top of the rock pile near the north edge, but there is no information on the fate of eggs or chicks (if any successfully hatched) for any of these years (Moore et al. 2007, 2008).

Port Colborne, Canada Furnace

**LOCATION AND DESCRIPTION:** The site is a peninsula on the east side of the Welland Canal (Figure 1). Until the late 1970s it was used for a smelting operation (Canada Furnace) run by Algoma Steel for the processing of iron ore, and it is currently owned by Upper Lakes Shipping.
The substrate is sparsely vegetated with no trees and few shrubs. It is mostly flat land with the exception of steep sides surrounding a pond at the southern edge of the property. Ring-billed Gulls nest over the entire site, an area of approximately 16–20 ha. Small numbers of Herring Gull nests were present during the first three census periods, while Common Tern nests, present only in the first census, were found along the eastern edge of the property.

**CENSUS DATA:** Nest count data at this location appear in Table 3. Ring-billed Gulls again were the dominant species with an annual rate of increase between the first and fourth census periods of +2.7% per year. Numbers of Herring Gull nests gradually declined to zero by 2007.

In 1977, the Common Tern colony at Canada Furnace was the largest on the lower Great Lakes (Erie and Ontario), second only in number of nests to a Common Tern colony on North Limestone Island in Georgian Bay (1,082 nests in 1980). Pairs were distributed along the extreme eastern edge of the property in low grassy areas, separated from the nearest Ring-billed Gull nests by 10–20 m. The site was completely devoid of tern nests in all years thereafter. Many of these pairs apparently transferred their nesting location to the adjacent breakwater colony, approximately 0.75 km across the Welland Canal to the west. Nest numbers at the breakwater site had increased to 1,077 pairs by 1979 (Morris 2009).

**Niagara River/Lake Ontario**

**LOCATION AND DESCRIPTION:** The Niagara River connects Lakes Erie and Ontario and forms part of the international border between Canada and the United States. The majority of breeding waterbirds, with the exception of Black-crowned Night-Herons, nested on the U.S. side of the border (Tables 4 and 5). Thus, in each census period, the majority (14–39%) of Herring Gull pairs, more than 90% of Ring-billed Gull pairs, and all Double-crested Cormorant and Common Tern pairs were found in U.S. waters. Accordingly, the editors of this book agreed, that given the numerical importance of colonial waterbirds nesting in Buffalo harbour and in the New York State (NYS) waters of the Niagara River, these data be included as part of the Niagara Region.

**CENSUS DATA:** Canadian side of the Niagara River — Relatively few sites on the Canadian side of the river were used by each species in each period with the exception of Herring Gulls in the third period when nests were recorded at 13 different sites (Table 4).

The number of Ring-billed Gull nests increased slightly (+0.79% per year) between 1977 and 2007, and the number of Herring Gull nests decreased slightly (-0.89% per year) over the same time period (Table 4). Conversely, nest numbers of Black-crowned Night-Herons increased substantially at an annual rate of +6.04% per year.
**CENSUS DATA:** U.S. side of the Niagara River — All four species exhibited an increase in number of nests from the U.S. side of the Niagara River (NR) and in Buffalo harbour (BH) at the mouth of the river over the 30-year period from 1977 to 2007 (Table 5). The number of Ring-billed Gull nests increased from a single colony with 5,333 nests in the NR in 1977 to two colonies in the river (12,917 nests) and one colony in BH (24,490 nests) by 2007. This represented an average annual rate of increase for NR and BH sites combined of +6.7% per year. The number of Herring Gull nests increased at an average annual rate of +1.5% per year, and the main colony location shifted from the NR in 1977 to a single main colony in BH (north breakwall aka Donnelly’s Pier) in 2007.

Double-crested Cormorant nests were absent until the third census in 1997 when they were counted at sites in the NR and in BH (Table 5). Thereafter, however, their nest numbers increased virtually exponentially in the 10 years between 1997 and 2007 (average annual rate of +24.2% per year) although without intensive management activity at nesting sites to control numbers, nest numbers in 2007 would have been even higher (Connie Adams pers. comm.).

The number of Common Tern nests in the NR decreased between 1977 and 2007 at an average annual rate of -2.1%. However, terns began nesting at BH sites in 1990 and by 2007, there were 1,237 nests at three locations. When combined with the three sites in the NR, the total of 1,514 nests represented a +3.6% average annual rate of increase from 1977 to 2007 (Table 5).

Nests of three other colonial waterbird species were located and counted on Motor Island in the NYS waters of the Niagara River in 1997 and 2007. In each case, nest numbers increased over the decade. The species and nest numbers in 1997 and 2007 respectively were Great Blue Herons 40 and 67 (+5.3% per year), Great Egrets 7 and 20 (+11.1% per year) and Black-crowned Night-Herons 38 and 98 (+9.9% per year).

### Table 5. Nest (pair) numbers at various sites (number of sites in parentheses) in the U.S. waters of the Niagara River (NR) and Buffalo Harbour (BH) counted by personnel of the U.S. Fish and Wildlife Service.

<table>
<thead>
<tr>
<th>Species</th>
<th>Location</th>
<th>Year 1977</th>
<th>Year 1990</th>
<th>Year 1997</th>
<th>Year 2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ring-billed Gull</td>
<td>NR</td>
<td>5,333 (1)</td>
<td>11,427 (6)</td>
<td>16,859 (6)</td>
<td>12,917 (2)</td>
</tr>
<tr>
<td></td>
<td>BH</td>
<td>0</td>
<td>10,879 (3)</td>
<td>7,137 (2)</td>
<td>24,490 (1)</td>
</tr>
<tr>
<td>Herring Gull</td>
<td>NR</td>
<td>110 (3)</td>
<td>156 (5)</td>
<td>24 (3)</td>
<td>16 (n)a</td>
</tr>
<tr>
<td></td>
<td>BH</td>
<td>0</td>
<td>23 (2)</td>
<td>114 (2)</td>
<td>156 (1)</td>
</tr>
<tr>
<td>Double-crested Cormorant</td>
<td>NR</td>
<td>0</td>
<td>49 (2)</td>
<td>552 (4)b</td>
<td>277 (1)b</td>
</tr>
<tr>
<td></td>
<td>BH</td>
<td>0</td>
<td>46 (1)</td>
<td>277 (1)b</td>
<td></td>
</tr>
<tr>
<td>Common Tern</td>
<td>NR</td>
<td>518 (3)</td>
<td>105 (2)</td>
<td>113 (4)</td>
<td>277 (3)</td>
</tr>
<tr>
<td></td>
<td>BH</td>
<td>0</td>
<td>636 (4)</td>
<td>790 (3)</td>
<td>1,237 (3)</td>
</tr>
</tbody>
</table>

a scattered colonies
b numbers artificially reduced at two BH sites and one NR site by egg oiling, nest destruction and lethal control (shooting) of adults in 2005, 2006 and 2007.

The 2007 data are courtesy of Connie Adams (Dept. of Environ. Conserv. NY).

**Incidental Canadian Records**

There are a few incidental records of colonial waterbirds nesting at other Canadian sites within the Niagara Region. On 29 May 2003, at least three of about 12 Ring-billed Gulls appeared to be incubating on a small peninsula that projected into the Niagara River between Queenston and Niagara-on-the-Lake (Kayo Roy pers. comm.). No gulls were present at the site on 22 June.

Double-crested Cormorants (two individuals) were first recorded at Port Weller (Welland Canal exit into Lake Ontario) in December 1989 (Kayo Roy pers. comm.). By the spring of 2004, at least four nests were constructed in trees that line the west pier...
at Port Weller. Although these nests were later abandoned, 500–600 birds remained in the area throughout the summer. In May 2005, the area was occupied by 650–700 cormorants by 9 July, but only five nests were constructed, three of which contained young by late July.

There are two incidental reports of nesting Common Terns. In late May 2005, Common Terns (approximately 120 individuals, 20 incubating) were recorded at the south end of the small concrete breakwall perpendicular to the International Niagara Control Works structure in Chippawa (John Black pers. comm.). No chicks were observed when the site was revisited in late June. Also, a single pair of Common Terns successfully raised one chick in 2007 from a nest in the Grimsby sewage ponds east of Fifty Point, Lake Ontario (Bruce Mackenzie pers. comm.). A pair nested there in 2005, but the three eggs were disturbed and the nest was lost.

Finally, a single Herring Gull nest was recorded on a concrete pylon south of Lock 1 in the Welland Canal in 2004; fledged young were observed in late June (Brian Ahara pers. comm.).
PART TWO: NIAGARA BIRDS BY SEASON

POPULATION TRENDS IN THE NIAGARA REGION (1977 to 2007)

Five of the six colonial waterbird species nesting in the Niagara Region between the census period intervals of 1977 to 2007 or 1997/1999 to 2007 increased at rates ranging from +0.7% per year to +28.5% per year (Table 6). Only Common Terns experienced a negative rate of change with nest numbers decreasing at an annual rate of ~0.9% per year.

Numbers of Ring-billed Gull nests increased at sites in both Canada and New York State between the first (1977) and last (2007) census periods (Table 6). The rate of increase was greater in NYS than at Canadian sites, although approximately similar number of pairs nested in the two jurisdictional regions in 2007. The largest single colonies in both countries in 2007 were at mainland sites: Canada Furnace (31,194 nests) in Canada, and Bethlehem Steel (24,490 nests) in NYS. The overall annual rate of increase at all sites in the Niagara Region was +4.4 % per year.

Nest numbers and annual rates of change were substantially lower for Herring Gulls than for Ring-billed Gulls (Table 6). While nest numbers increased in both countries between the first and last census periods, the rate of change was greater at NYS sites. The largest Canadian colony in 2007 was at Mohawk Island with 253 nests (57.5% of all Canadian nests counted in that year in the Niagara Region). The largest U.S. colony in 2007 was on the north breakwall (Buffalo harbour) with 156 nests (90.7% of all NYS nests counted in 2007).

Double-crested Cormorants did not nest anywhere within the Niagara Region in 1977. By the third census, there was a single colony of 220 nests in Canadian waters on Mohawk Island, and three other colonies totalling 95 nests in NYS waters of the Niagara River. The annual rate of change between the third and fourth census periods represents double-digit growth in both Canada and the NYS (Table 6). The largest Canadian colony (1,563 nests) in 2007 was on Mohawk Island, whereas the largest NYS colony (277 nests) was at Reef Lighthouse in Buffalo harbour.

Common Terns were the only waterbird species that realized a net loss in number of nests between the first and fourth census periods (Table 6). While the number of Common Tern nests tripled at NYS sites between 1977 and 2007 (+3.6% per year), nest numbers plummeted at the Canadian sites (-14.4% per year) so that the overall annual rate of change was negative (-0.9% per year). By 2007, the Canada Furnace site had been abandoned and

<table>
<thead>
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<th>Species</th>
<th>1977</th>
<th>2007</th>
<th>Percent change 1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Canada</td>
<td>NYS</td>
<td>Total</td>
</tr>
<tr>
<td>Ring-billed Gull</td>
<td>15,129</td>
<td>5,333</td>
<td>20,462</td>
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<tr>
<td>Herring Gull</td>
<td>382(7)</td>
<td>110(3)</td>
<td>492(10)</td>
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<tr>
<td>Double-Crested Cormorant</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Common Tern</td>
<td>1,500(2)</td>
<td>518(3)</td>
<td>2,018(5)</td>
</tr>
<tr>
<td>Caspian Tern</td>
<td>65(2)</td>
<td>0</td>
<td>65(2)</td>
</tr>
<tr>
<td>Black-crowned Night-Heron</td>
<td>65(2)</td>
<td>0</td>
<td>65(2)</td>
</tr>
</tbody>
</table>

1 from 1977 to 2007 except where noted  2 from 1997 (NYS) and 2000 (Canada) to 2007  3 from 2000 to 2007
the Port Colborne breakwall colony was reduced to 14 nests. Losses of nesting pairs at the breakwall more than likely contributed to gains at colony sites in Buffalo harbour, although no banded terns have yet been found to confirm that suspicion. The two largest Common Tern colonies in 2007 were in Buffalo harbour with 747 nests (north breakwall) and 419 nests (short breakwall) respectively.

Caspian Tern and Black-crowned Night-Heron colonies were located solely in the Canadian waters of the Niagara Region. Mohawk Island was the only site that contained nesting Caspian Terns, and then only in the third (112 nests in 2000) and fourth (300 nests in 2007) census periods, an annual rate of change of +15.1% per year (Table 6). Black-crowned Night-Herons increased in both number of nesting sites and number of nests between the first and fourth census periods, at an average annual rate of +6.1% per year (Table 6). Three unnamed islands near the Horseshoe Falls contained 378 (97.4%) nests of the total number of heron nests counted in the Niagara area in 2007. The remaining 10 nests were at the Port Colborne breakwall site.

COMPARISONS TO POPULATION TRENDS ELSEWHERE ON THE GREAT LAKES

Numbers of any animal population within a particular geographic area can increase, decrease or remain relatively stable depending on a variety of extrinsic and intrinsic factors (Pianka 2000). Some of the reasons for numerical trends in the populations of colonial nesters within the Niagara Region may be found in explanations for numerical trends of the same species over the broader geographic region of the Great Lakes.

The increase in Ring-billed Gull numbers (nests) at colonies in the Niagara Region reflects a similar pattern elsewhere on the Great Lakes (Blokpoel and Tessier 1986). Ring-billed Gulls re-established in the Great Lakes in 1926 and have increased in numbers ever since at a rate equal to or greater than that recorded for the Niagara Region population. The increase in numbers has been attributed to the introduction and spread of Rainbow Smelt (Osmerus mordax) and Alewife (Alosa pseudoharengus) as food sources, the creation of new nesting habitat by low water levels in the lakes during the 1960s and 1990s, their omnivorous food habits and their accommodation to human disturbance (Ryder 1993).

The average annual rate of change in Herring Gull numbers (nests) in the Niagara Region (+0.7% per year) exceeded that of Herring Gull numbers in the entire North American Great Lakes system (-0.3% per year) over the same time period (Morris et al. 2003). As the slight decrease for the Great Lakes population was most likely within the range of measurement error, Herring Gull nest numbers on the Great Lakes over the past three decades have been relatively stable at around 60,000 breeding pairs (Morris et al. 2003). Current numbers on the Great Lakes and the East Coast of North America represent recovery from low numbers recorded in the nineteenth century due to human persecution, primarily egging and the killing of adults for the millinery trade (Pierotti and Good 1994).
Double-crested Cormorants first appeared on the Great Lakes at islands in the northwest part of Lake Superior in the early twentieth century (Weseloh et al. 1995). Although they only recently (1997) appeared in the Niagara Region, the average annual rate of increase of +28.5% per year over the past decade (Table 6) is similar to that reported elsewhere in the Great Lakes. Increases in the two decades between 1975 and 1995 have been explosive throughout the Great Lakes, with individual colonies increasing at rates between 22% and 31% per year (Hatch and Weseloh 1995). Cormorants have been persecuted throughout history as they are widely perceived as competitors with human fisherman for limited sport fish resources. However, legislative protection, reduction in the use of pesticides and abundant food supplies of forage fish have permitted numerical increases at local colonies, and expansion to new nesting sites throughout the Great Lakes.

Nisbet (2002) concluded that Common Tern numbers in the Great Lakes have remained approximately stable at 9,000 to 10,000 pairs since 1977. However, more recent data (Morris et al. 2010) indicate substantial declines in the numbers of nesting pairs across the Great Lakes system (especially on Lakes Ontario and Erie) that reflect the decline at colonies in the Niagara Region (Table 6). Comparison of nest numbers between the first and third census periods at sites in the Canadian and U.S. waters of the Great Lakes (Morris 2009) reveals a decrease in nest numbers from 11,189 (1976/1977) to 9,049 (1997/1998), an average annual rate of decrease at −1.04% per year. The primary cause of losses, at least at local colonies, is competition from Ring-billed Gulls for nesting space (Morris et al. 1992; Morris 2006) that without effective and ongoing management will continue to lead to local extirpation (see “Conservation and Management” below).

Mohawk Island is the only site within the Niagara Region that supports nesting Caspian Terns, and then only since 1999. This sparse spatial distribution is not unusual and represents the pattern of widely scattered and over-dispersed colonies throughout the Great Lakes including Lakes Michigan, Huron, Ontario and the St. Lawrence River (Cuthbert and Wires 1999). Numbers at colonies in the Great Lakes have increased steadily since the 1960s with the greatest increases in Lake Ontario. Paucity of nesting sites in the Niagara Region may explain the low frequency of colonies here, although the reasons for failure to colonize apparently suitable habitat on the numerous islands in western Lake Erie are unknown.

Davis (1993) suggested that Black-crowned Night-Heron populations in Quebec and Ontario were in decline, but noted that accurate estimates are difficult as nests are inconspicuous during aerial surveys and so counts often greatly underestimate true numbers. However, total nest numbers in the Canadian waters of the Great Lakes have increased from the first census (1,846 nests) to the third census (2,313 nests) with the only decline recorded at colonies in the western basin of Lake Erie (D.V. ‘Chip’ Weseloh unpubl. data). There is some suggestion that the decline at Lake Erie colonies is related to colonization of heron trees by Double-crested Cormorants although that relationship has not been substantiated (D.V. ‘Chip’ Weseloh pers. comm.). Numbers at the four colony sites in the Niagara Region (Table 6) reflect the general numerical increase across the Great Lakes system.
CONSERVATION AND MANAGEMENT: A COMMON TERN CASE STUDY

Census data collected between 1976/1977 and 1998/1999 at Common Tern colonies across Canadian and U.S. waters of the Great Lakes revealed that the greatest changes in nest numbers occurred in the Niagara Region. Canadian colonies declined from 1,524 to 540 nests (-4.6% per year), whereas U.S. colonies increased from 781 to 1,022 nests (+1.4% per year).

In 1977, the two Common Tern colonies at Port Colborne (breakwater and Canada Furnace) contained 98.4% (1,500 nests) of all nests recorded on the Canadian side of Lake Erie in that year. By the second census, terns had abandoned Canada Furnace for unknown reasons, but 935 (82.4%) of the 1,135 nests recorded on Lake Erie were on the Port Colborne breakwater. By the third census, all nests (515) counted on the Canadian side of Lake Erie were on the breakwater. Clearly, the site was an important one for Common Terns.

The Brock University “Waterbird Group” studied Common Terns on the Port Colborne breakwater from the mid-1970s through the mid-1990s. Most of our work was directed at understanding various aspects of tern behavior including courtship feeding and mate choice (Wiggins and Morris 1986; Blanchard and Morris 1998), parental care and parent-offspring interactions (Morris et al. 1991) and foraging behaviour (Burness et al. 1994). We also routinely conducted management procedures to preserve and protect tern pairs that used the site. These procedures included nesting substrate enhancement (Richards and Morris 1984), placement of chick shelters (Burness and Morris 1992) and control of Ring-billed Gull intrusion (Morris et al. 1992). Substrate enhancement and gull control procedures (egg and nest removal under permit) were conducted each year.

On 15 July 2001, with the support of the Port Colborne Town Council, the breakwater was officially dedicated an Important Bird Area (IBA) at a lake-edge ceremony attended by municipal, provincial and federal politicians. On that date, a group of dedicated volunteers from the Port Colborne and District Conservation Club, the Bert Miller Nature Club (Fort Erie), and the Niagara Falls Nature Club enthusiastically took over “ownership” of the tern colony from the Brock Waterbird Group and accepted the conservation plan associated with it (Wilson and Cheskey 2001).

History of Terns Nesting on the Port Colborne Breakwater

In late May every year for the past 30 years (1977–2007), I have counted the number of Common Tern nests at the breakwater colony. These data, arbitrarily arranged into 4-year blocks appear in Table 7 (arranging the data into 3- or 5-year blocks yielded the same trend.) The greatest numbers of nests were present in 1985, 1986 and 1987 (1,142, 1,091 and 1,311 clutches respectively). In late July 1987, the St. Lawrence Seaway Authority resurfaced the entire east leg of the breakwater after removing the chipped concrete material that had provided an ideal nesting substrate for terns (Richards and Morris 1984). By 25 May 1988, the nest count had dropped to 906, and in the 20 years since reconstruction, the number of tern nests on the breakwater has declined in all three measures (Table 7) with only 14 nests present on 4 June 2007.

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<th>Years</th>
<th>Average</th>
<th>Highest (year)</th>
<th>Lowest (year)</th>
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Table 7. The average number of Common Tern nests at the Port Colborne breakwater colony for four-year periods between 1977 and 2007, and the number of nests and year of highest and lowest numbers within each 4-year block.
Losses have been especially acute during the last 10 years. On 25 May 1997, the 894 nests counted were only 62 fewer (-6.5%) than the 956 nests recorded on 24 May 1996 (Table 7). However, two years later (21 May 1998), the number of nests had declined to 515, a loss of 379 (42.4%) nests from the previous year. Numbers remained between 515 and 633 from 1998 to 2002, and then decreased to 326 nests on 24 May 2003 and to 140 clutches on 26 May 2004. More significant than the low number of nests in 2004 was the complete nesting failure (no eggs hatched) of all tern pairs in that year, an event never previously recorded at this location. Hatching failure and egg disappearance continued through 2007. No Common Tern eggs have hatched at the Port Colborne breakwater since 2004 and local extinction of the colony is inevitable.

There are several reasons for this decline in numbers of nesting pairs. Annual rehabilitation of suitable nesting substrate was found to be a successful management procedure. However, the effort to prevent Ring-billed Gulls from nesting on the substrate prepared for terns was increasingly unsuccessful. Ring-billed Gulls annually arrive at the breakwater and initiate nesting in advance of Common Terns (Figure 2), and increasing numbers of gulls have established nesting territories on the east leg each year despite active management (egg and nest removal) to discourage them.

A significant related problem is the presence each year of one or two individual Ring-billed Gulls that specialize in tern eggs as a food source. Members of the Brock Waterbird Group were able to spend the time each spring to identify and shoot these individuals (under permit). Similarly, a mink on the breakwater in 1992 required that our

Figure 2. An example (from 1982) of the distribution of clutch starts (laying of the first egg) by Ring-billed Gulls and Common Terns at the Port Colborne breakwater colony.

The approximate 3-week interval between the first gull clutch and the first tern clutch is normal for this location. Small numbers of Common Tern pairs continue to initiate clutches throughout June.

Note. Count dates varied from 7 May to 3 June with an average annual count date between 23 and 24 May.
entire team from Brock observe 24 hours a day for a week to finally remove the predator. Expecting volunteers, however dedicated, to give the time and effort to control such predation events without adequate funding and motivational support is unrealistic. Consequently, the decline in numbers of nesting terns has continued to date.

Blokpoel and Tessier (1986) documented the extensive procedural and technical efforts required to prevent Ring-billed Gulls from nesting at sites in southern Ontario, including efforts to prevent nesting at locations occupied by Common Terns. A small Common Tern colony has been successfully maintained in Windermere Basin (Hamilton harbour) by the placement of a pair of raptors on the site in the weeks prior to the arrival of terns (Morris 2006). In this case, as in the situation at Port Colborne, successful control of gull nests requires a major commitment of time and funding each year.

Although a major Common Tern colony will be lost at the Port Colborne breakwater site, terns will continue to nest in the Niagara Region at least in the near future. Three breakwaters in Buffalo harbour have sustained breeding Common Terns since the first Great Lakes census in 1977. In the 1997 census, there were 483 tern nests on the north breakwater (Donnelly’s Pier), 294 nests on the short breakwater, and 13 nests on the south breakwater for a total of 790 nests (Cuthbert et al. 2001). In 2007, these three breakwaters contained 1,237 Common Tern nests (Connie Adams pers. comm.; Table 5).

Between 2002 and 2007, the number of tern nests at the three breakwater sites in Buffalo harbour increased by 706 nests (531 to 1,237), while numbers at the Port Colborne breakwater decreased by 619 nests (633 to 14). Buffalo harbour is approximately 35 km east of the Port Colborne site. It seems reasonable to assume that Port Colborne birds moved to Buffalo harbour, although without banded birds as evidence, the assumption cannot be confirmed.

Ring-billed Gulls have recently started to colonize the Buffalo harbour breakwaters, and some management protocols are in place to protect the sites for nesting terns (Lee Harper pers. comm.). However, it is essential that provincial, state and federal agencies provide annual funding for attendance by management personnel and for the placement of raptors at selected tern colonies on the Great Lakes that are threatened by gull encroachment. If such funding is not forthcoming, I predict that Common Tern numbers on the Great Lakes will continue to decline.

ACKNOWLEDGEMENTS

I acknowledge with thanks the many undergraduate and graduate students who worked with me on the terns and gulls nesting at Port Colborne sites and at study sites elsewhere across the North American Great Lakes over the years 1972 – 1995. They were a constant source of joy and stimulation. I thank D.V. ‘Chip’ Weseloh and F.J. Cuthbert of the Canadian Wildlife Service and the U.S. Fish and Wildlife Service, respectively, for permission to cite census data from the decanal Great Lakes Surveys (1976-2000), and Cynthia Pekarik and Dave Moore (Canadian Wildlife Service) and Connie Adams (NY State, Department of Environmental Conservation) for providing the 2007 census data reported in this article. I appreciate and acknowledge Hans Blokpoel and Gaston Tessier, both now retired from the Canadian Wildlife Service, who were instrumental in the data collection and database compilation for the first two Canadian census periods. My thanks also to Dave Moore, Cynthia Pekarik and Jim Quinn who critically reviewed an earlier draft of this article.
LITERATURE CITED


White-rumped Sandpiper
Kenneth Newcombe
Fall Season
(mid-August to November)

The Lake Erie shoreline, particularly at Waverley Beach, is well known for having provided excellent views of the extremely rare pelagic birds deposited inland by the remnants of Hurricane Fran in 1996. Robert Curry gives an account of these unfortunate visitors to the area in his article “Hurricane Fran Strikes Niagara: September 1996.”

Fall in the Niagara Region is the season for shorebirds. Mark Peck, in his article “In Search of the Purple Sandpiper: Reflections on Shorebirds and Birding Equipment,” describes what we can expect to see at this time of year. Shorebirds are among the most appealing birds to be observed and perhaps the favourite of veteran Niagara birder Alan J. Smith. Now in his ninety-fifth year, he could often be found when he was younger scoping these spectacular birds at area sewage ponds or along the Lake Erie shoreline during the spring and fall migrations. He relished the challenges of identification and kept a thorough record of his shorebird observations. Over an eight-year period (1991–1998), Alan submitted all of his Niagara Region shorebird observations to the Ontario Shorebird Survey for inclusion in its database. His records from this period reveal that he studied 32 shorebird species in the region, including American Oystercatcher, Hudsonian Godwit, Curlew Sandpiper, Western Sandpiper and Ruff.

The Lake Ontario shoreline, however, attracts few shorebirds — with one notable exception. In what now seems to be a regular occurrence, a few Purple Sandpipers (nine in 2006) put in an appearance early in November at the tip of the Port Weller east pier in St. Catharines. Further inland, particularly on sod farms, American Golden-Plover and on occasion Buff-breasted Sandpiper have been found. A visit to the few remaining sewage ponds in the region can also be very rewarding. While it may not yield many shorebirds, the Lake Ontario shoreline is now the place to look for waterfowl through the fall and winter months. In order to indicate how ingenious an amateur ornithologist can be, we have included an article by Paul Summerskill, “Fall Migration of Loons in Niagara, 1994,” which describes the unusual technique he devised for monitoring loons.

These are by no means the only birds to be observed in the fall. The article by Michael Hamilton and Robert DeLeon, “October Buffalo Ornithological Society Bird Counts in Niagara,” presents a thorough analysis of the findings of the 40 counts carried out by the BOS during the 1966 to 2006 time frame of this book.
Hurricane Fran Strikes Niagara

September 1996

Robert Curry

On rare occasions, hurricanes born in the eastern Atlantic off the west coast of Africa end their violent lives on our Great Lakes. One of the strongest hurricanes to do so, and certainly the richest in tropical seabirds, was Hurricane Fran (Curry 1996; Brinkley et al. 1997). On 15 October 1954 Hurricane Hazel caused much more damage in Ontario than did Hurricane Fran, but no tropical seabirds were reported from Niagara. Fran originated on 24 August 1996 southwest of the Cape Verde Islands. By the time it crossed the eastern end of Lake Erie on 7-8 September, it was a dying tropical depression.
Such storms are anticipated with great excitement by birders. It was thus with great hope that John Olmsted and I worked the northeast shore of Lake Erie on Sunday afternoon, 8 September. We were not disappointed. Peering out through fog and rain and into the teeth of a southwest gale we picked up the unmistakable shape and flight of a tubenose. Rushing to Waverly Beach in Fort Erie we found our bird again and this time noted all the plumage and behavioural details of Black-capped Petrel (*Pterodroma hasitata*). Great whoops of joy and handshakes followed as we realized we were the first ever to observe this exotic pelagic species alive in Ontario (see Curry and Olmsted (1996) for a full account of these observations). However, unknown to us, John Lamey was also watching these birds. His excitement was equal to ours: "Possibly the best birding day of my life" (Lamey 1996). Furthermore, at Port Colborne Alan Worthington watched another Black-capped Petrel. Subsequent sightings from Waverly Beach confirmed the presence of at least three Black-capped Petrels. Of course we put the word out immediately, and before the day was over perhaps 50 birders saw the petrels.

Fortunately for Ontario and Western New York birders, and even some from much farther afield, some petrels managed to survive for at least another week. Although some died almost immediately — John Olmsted and Bob Stamp found the first partly decomposed dead petrel at Windmill Point in Fort Erie on 12 September — at least some survived until 14-15 September, about 10 days after they were plucked from the tropical Atlantic Ocean. It was also fortunate for birders that a second intense depression, the remains of Pacific Hurricane Fausto from the U.S. southwest, passed just to the north of the lower lakes and stalled over eastern Ontario on 14-15 September, resulting in strong west-southwesterly winds blowing towards the low pressure. At Fort Erie the results were two days of an onshore gale and intermittent heavy rain causing local flooding. For hundreds of observers, the happy consequence was intermittent observations of Black-capped Petrels all day on both days but, apparently, no more than two birds seen at any one time.

Although other species of birds were carried to our shores, Hurricane Fran was a Black-capped Petrel event. It is extremely difficult to determine with any degree of precision the total number of Black-capped Petrels displaced from the tropical Atlantic Ocean and deposited inland in general and more specifically to the lower Great Lakes. Edward Brinkley (pers. comm.) estimated that roughly 200 might have been displaced by Fran from pelagic zones into the interior of North America, but that comparatively few of these (about one in four) were encountered. In Niagara there were at least 11 sightings of petrels between 8 September and 15 September, mostly from Fort Erie but as far west as Port Colborne. Some birds were seen intermittently all day. An additional six petrels were seen on Lake Ontario outside Niagara and another at Point Pelee (Curry 1996).
PART TWO: NIAGARA BIRDS BY SEASON

Although no more than three birds were ever seen at once at Fort Erie, many of the sightings were probably of different individuals as they drifted downwind until prevented by land from continuing. Encountering the narrowing of Lake Erie into the Niagara River, the petrels turned and flew back westward into the open lake. As birds became weaker from lack of food, some would drop into the lake to be washed up on the southwest-facing beaches and others would be blown inland. Some petrels must surely have drifted northeastward into the southern Niagara Peninsula on these strong winds of 14-15 September and died in fields and woodlots.

In fact, a total of 18 specimens of Black-capped Petrel were recovered in the Niagara Region (see Curry (1996) for a detailed listing). Including one bird that was rehabilitated and released, at least five more were found adjacent to the Niagara Region on or near the shores of Lake Erie and Lake Ontario. Most of the 18 were found as a result of systematic searching. John Olmsted and I, sometimes with other observers, on six days for a total of 20 hours, walked about 60 km of beach along the northeastern Lake Erie shoreline.

Based upon the 23 specimens found on or near the shores of Lakes Erie and Ontario and the other observations of flying birds far removed from these locations, there was an absolute minimum of 26 Black-capped Petrels brought to the lower Great Lakes: 21 in Ontario and five in New York State. It is highly likely that all the petrels brought to our area died but absurd to suggest that all the birds that died were found. If one assumes that some birds drifted inland from the lakes to die and that others were missed on the walked beaches or were washed up on unchecked sections, it does not seem unreasonable to suggest a ratio of 2:1 for birds:specimens. This works out to an estimate of about 70 birds on Lakes Erie and Ontario, probably a conservative figure. Most of these would have perished in the Niagara Region.

The tragedy of these displaced petrels is underscored by their unprecedented longevity. There are no previous known instances of Procellariiformes surviving on the Great Lakes for up to 18 days after they were removed from the ocean. Nonetheless, it seems unlikely that the petrels found adequate food resources on the lakes. Black-capped Petrels are crepuscular and nocturnal feeders with excellent night vision and are highly adapted to feeding on various nektonic cephalopods, fish, and crustaceans which migrate towards the surface at night (Imber 1985). Perhaps some birds survived longer by eating fish offal (Haney 1987) and obtaining some small fish. Nevertheless, whenever determination was possible (i.e., those specimens which were not so badly decomposed), the stomachs of dead birds were empty or the digestive system had itself dissolved. I believe the majority of birds died on 14-15 September, about ten days after they left the Gulf Stream. Gadfly petrels are structurally and behaviourally adapted to spending long periods of time foraging over low productivity waters (Haney 1987).

The inference is that they are able to fly enormous distances on relatively little food fuel. Those that survived longer probably initially had a full stomach and a heavy fat layer. John Warham (pers. comm.) estimated that a medium-sized bird like P. hasitata adequately supplied with fat could perhaps survive for 12-13 days, although storm-driven birds often have empty stomachs and have often not only metabolized all their fat but have begun to digest muscle tissue as well.
Fran is not the only hurricane to have brought Black-capped Petrels and other ocean waifs to Niagara. On 21 August 1955, Hurricane Connie brought Black-capped and Wilson’s Petrels to the Lake Erie shore. Nor were Black-Capped Petrels the only species brought to Niagara by Fran. On 10 September, three Wilson’s Storm-Petrels (*Oceanites oceanicus*) were observed flying off Waverly Beach by Glenn Coady, William Lindley and Al MacTavish. Wilson’s Storm-Petrels were reported flying over Lake Erie off Jaeger Rocks, Fort Erie: one on 9 September (Drew Campbell) and again one on 13 September (John Lamey). The 10 September birds were documented and accepted by the Ontario Bird Records Committee (OBRC). No documentation is available for the other two, but experienced observers reported both. In addition, unidentified storm-petrels were seen off Waverly Beach on 9 September and off Lorraine Road in Port Colborne on 14 September. In summary, Hurricane Fran brought at least three Wilson’s Storm-Petrels to Niagara with probable dates of occurrence between 9 September and 14 September 1996.

On the morning of 9 September Mary and Doug Hart found two American Oystercatchers (*Haematopus palliatus*) on the shore behind their house at Gravelly Bay, Port Colborne. Over the course of the day many birders were delighted with views of at least one of these birds. The birds flew, but later in the day one was seen and photographed at several locations between Gravelly Bay and Rathfon Point. Although neither oystercatcher was observed after this date, a child at Long Beach 11 km to the west reported that he saw, just after the hurricane, a large black and white bird with a big red bill running along the beach.

Sooty Tern (*Sterna fuscata*) is the quintessential hurricane bird, usually with more inland sightings than for any other pelagic species and, true to form, Fran brought
several to Niagara. On 8 September, the day of Fran’s passage, John Lamey watched a juvenile fly back out to Lake Erie past Jaeger Rocks. Later the same afternoon, several dozen excited observers standing on Waverly Beach watched an adult Sooty Tern as it flew east almost to the river mouth and then turned and flew back out into Lake Erie. Single adult Sooty Terns were again reported from Waverly Beach on 9 September (Hugh Currie, Dan Salisbury) and 10 September (William Lindley). Finally, on 28 September as part of our beach survey for dead hurricane birds, John Olmsted and I picked up a badly decomposed adult Sooty Tern at Long Beach, which is almost at the western extremity of the Niagara Region on Lake Erie. Only the 8 September adult and the specimen were documented. Nevertheless, probably at least two adult and one juvenile Sooty Terns reached Niagara as a result of Hurricane Fran.

About seven Laughing Gulls (Larus atricilla) were at or near the eastern end of Lake Erie from 8 September to 15 September. Four were at Fort Erie with another just across the Niagara River in Buffalo, New York, and two more at Woodlawn Beach State Park in Hamburg, New York. Normally these rare birds would have been cause for considerable birder attention but they were overshadowed by the “real pelagics”.

Several other species that are normally rare or uncommon in Niagara occurred in unprecedented numbers as the result of Hurricane Fran. At least 16 Red-necked Phalaropes (Phalaropus lobatus) and four Red Phalaropes (P. fulicaria) spent the period from 8 September to 15 September at the eastern end of Lake Erie, representing above normal but not unprecedented numbers. Pomarine Jaegers (Stercorarius pomarinus) and Parasitic Jaegers (S. parasiticus) occurred in unprecedented numbers and several Long-tailed Jaegers (S. longicaudus), both adults and juveniles, were reported by the many observers at Fort Erie from 8 September to 15 September. While perhaps not all were brought to Niagara by Hurricane Fran, at the very least the week of bad weather associated with the storms brought birds closer to shore where they were enjoyed by many observers.

In summary, Hurricane Fran brought more pelagic birds and Eastern Seaboard shorebirds to Niagara than any other hurricane. In this sense it was a truly historic hurricane that may not be repeated for many years to come.

LITERATURE CITED


In Search of the Purple Sandpiper

Reflections on Shorebirds and Birding Equipment

Mark K. Peck

Purple Sandpiper
Brandon Holden
I HAVE CLOSE FRIENDS WHO BELIEVE we are presently living in the golden age of birding. Effortless access to information on the Internet, the high optical quality of binoculars, spotting scopes and cameras, the numerous field guides and local bird books all combine to make the search for birds, especially rarities, easier than it has ever been. Most importantly, there are still birds to be watched, a situation that may not persist. As a group, shorebirds are presently one of the highest conservation concerns of all North American birds. Urbanization, drainage of wetlands, harmful agricultural practices, loss of food resources, pollutants, disease, hunting and climate change are all having a catastrophic impact on shorebird species around the world.

The Shorebirds of Niagara

The Niagara Region regularly hosts 26 species of breeding and migratory or staging shorebirds in substantial numbers and another 17 species on a rare or an irregular basis. Staging species make use of shorelines, mudflats, marshes, ponds, flooded fields and sewage ponds. They are shown in Table 1. The six breeding species in our area — Killdeer, Spotted Sandpiper, Upland Sandpiper, Wilson’s Snipe, American Woodcock and Wilson’s Phalarope — can be found in a variety of habitats: agricultural areas, shrubland, human habitation, disturbed areas and even deciduous and coniferous woods.

Several extremely rare shorebird records exist for Niagara. The rarest ever was a Slender-billed Curlew collected in the fall of 1925 at Crescent Beach in Fort Erie. The specimen (BSNS # 2092) for this first and only record for Ontario and all of North America (James 1983, AOU 1998) is in the collection of the Buffalo Museum of Science.
Buffalo, New York. Other rarities include a Spotted Redshank discovered on 25 July 1976 at the St. Davids sewage ponds, three Niagara records for Wandering Tattler (the only records for Ontario), two for American Oystercatcher and one for Black-necked Stilt.

Although southern Ontario is not a regular host to spectacular aggregates of shorebirds during the spring or fall migration, respectable numbers do pass through the area. Western Lake Ontario has recently been proposed for special designation as part of the Western Hemisphere Shorebird Reserve Network (WHSRN). Point Abino on Lake Erie and Rock Point Provincial Park just outside of Niagara are both considered Important Bird Areas (IBAs) for shorebirds. Many other locations may not boast the same quantities of birds, but the diversity of species recorded in them is certainly worth noting.

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<td>Limosa fedoa</td>
<td>Red Phalarope*</td>
<td>Phalaropus fulicarius</td>
</tr>
<tr>
<td>Ruddy Turnstone</td>
<td>Arenaria interpres</td>
<td></td>
<td>* rare in Niagara.</td>
</tr>
</tbody>
</table>
During the peak shorebird migration months of May, August and September, the Niagara sewage pond should be on everyone’s “to visit” list. Most importantly, make sure you have permission to enter the property. Viewing migrating shorebirds is unique compared to many other types of birding. The best way to observe shorebirds is to sit quietly at a suitable location and let the birds come to you. The first piece of equipment you need is a comfortable cushion or a lightweight, easy-to-carry folding chair. Simply position the sun at your back, your tripod and spotting scope at your front, a couple of field guides and your lunch at your side, and you are ready to begin. A good notebook for sketches and detailed observations, a comfortable hat and a good pair of rubber boots for tramping through the mud or marsh will complete your outfit.

If you prefer something more active than pond lounging you can spend the day searching for shorebirds along the Lake Erie shoreline from Jaeger Rocks in Fort Erie to Morgan’s Point near Burnaby. There are many locations along this shoreline where the birds may be observed. Drew Campbell’s article on hotspots in this book lays out an excellent itinerary.

Shorebird watching is best described as a pleasant, relaxing activity interspersed with short periods of intense confusion and frustration. Shorebirds tend to forage and roost in open areas making them much easier to observe than sparrows, warblers and other songbirds. The challenge is to become familiar with the different plumages that are often encountered.

Take, for example, the smaller shorebirds known as “peeps.” The five species of sandpiper likely to be encountered in Niagara — Semipalmated, Least, White-rumped, Baird’s and Western, if you are lucky — are the smallest of the North American waders. During spring migration, when these shorebirds arrive in their alternate or breeding plumage, they are easily identified by means of a few simple criteria such as body colour, leg colour and wing length. They often forage together allowing direct comparisons that make identification almost effortless. It is during the fall, southbound migration, however, that the real challenges begin. Dull, moulting adults mix with crisp, brightly-coloured juveniles. Leg colour on juveniles tends to be less distinct and more variable. Different sex and age classes of birds habitually pass through the area on different schedules, increasing confusion from one week to the next. Add a few medium-sized Dunlin and some dowitchers to the mix and even an experienced birder can be uncertain.

There is only one shorebird species that regularly winters here — the Purple Sandpiper. These birds typically arrive in the first week of November and stay until some time in April. Two or three birds may often be found on rocky ledges in the rapids of the Niagara River above Niagara Falls, along the Lake Erie shoreline and on the Port Weller east pier on the Lake Ontario shoreline. It is the hope of seeing this late-arriving species from the Arctic coasts of the North Atlantic that regularly brings me to Niagara in the late fall.
In Search of the Purple Sandpiper

For the past several years, I have driven down to Fort Erie from Oakville with friends, students and colleagues for a Niagara Purple Sandpiper/gull day. We make this an annual event during the last week in November or the first week in December. We drive along in a three or four-car convoy, counting Red-tailed Hawk, American Kestrel and any other raptors we see along the way. Cooper’s Hawk has become an uncommon but regular sighting in the last 20 years, and I will often mark these locations with my handheld or in-car Global Positioning System (GPS).

We are an eclectic group of individuals with diverse backgrounds and interests. Some are novices to birding, while others are highly skilled, long-time birders; all are talented observers committed to an enjoyable day of learning and birding. It is a pleasant drive, and we are able to communicate between cars using Family Radio Service (FRS) radios or, when someone gets seriously lost, cellphones. Our first real challenge is to make sure we exit off the Queen Elizabeth Way before we find ourselves on the Peace Bridge and heading to the United States. For some reason, in the last five years we have twice needed to execute a U-turn on the Peace Bridge, flashing passports and begging forgiveness from customs officials before re-entering Canada. I blame the error on the excitement of the day, while others suggest it results from my inability to multi-task even the simplest of responsibilities.

Once we are back on Canadian soil, our search begins a few kilometres south of the bridge at Jaeger Rocks and will finish at dusk 70 kilometres to the north in Niagara-on-the-Lake just in time for us to watch the evening fly-by of gulls at the mouth of the Niagara River. Our route is simple: follow Lakeshore Road and the Niagara Parkway northward, with stops at different sites along the way depending on the reports provided by members of the Buffalo Ornithological Society and other postings on the Ontario Field Ornithologists’ ONTBIRDS listserv. Our group’s goal is 10 or more gull species plus any other local specialties recently reported.

Our arrival at Jaeger Rocks on this particular day initiates a flurry of activity. Binocular straps slip over hats and around necks, and the recently developed “binocular bras” are placed awkwardly, at least by the men, around the shoulders and chest. Car trunks pop open. Spotting scopes and tripods of various sizes and descriptions are untangled and quickly set up. Field guides are slipped into knapsacks and pockets, and we are ready to begin. I make my way to the river side of the road and scan the surrounding area, not for the gulls or waterfowl that are found in abundance along the river, but for any shorebirds that may be lingering on the rocks below. I know it is late for shorebirds at this time of year, but I can’t help myself. Every birder I know has a favourite group of birds and mine happens to be shorebirds. There is nothing wrong with gulls, waterfowl or any of the other numerous families of birds. Even sparrows can be interesting. They are just not as intriguing as shorebirds. In August and September Jaeger Rocks is a good area for numerous shorebird species, but today, two months later, I am after only one — the Purple Sandpiper.

Along with the world’s greatest diversity of gulls in any one site, the Niagara area is also the winter home of a few Purple Sandpipers, or so say the reference guides and website reports. Until now, Purple Sandpipers have always eluded us during these late fall sojourns, and my reputation as a shorebird biologist is beginning to be questioned. How can a man who spends several months each year researching and observing shorebirds not find a commonly reported species such as the Purple Sandpiper? This year I am ready. I have the newest birding technology and birding equipment. I will not be denied!
A Birder’s Equipment

It is difficult for many of us to remember the challenges that faced birders only a short time ago. One of the best known and most respected birder/ornithologists in the province, James L. Baillie, began his birding career in the early 1920s. For the first few years he neither went without binoculars or made do with a pair of opera glasses that he had picked up for $3. A red-letter day of 52 species in Toronto’s High Park on 27 May 1923 was a personal best for that period. It should also be noted that the first edition of Peterson’s A Field Guide to the Birds was not published until 1934. Today, during the end of May, with the advances in optical technology and the quality of reference material available, it would be possible to observe over 100 bird species in High Park and the surrounding area in one day. In the 40 years since the publication of Roy W. Sheppard’s Bird Life of Canada’s Niagara Frontier (Sheppard 1970), the birding world has changed dramatically.

BINOCULARS

Binoculars are probably the most important tool in a birder’s arsenal. They are a must if you plan to expand your hobby outside the backyard. If you have bought this book you have, in all probability, already made that decision. Confirmation of your birding dedication occurs the first time you walk into a restaurant or a variety store with your binoculars around your neck, out in the open for anyone to see. Besides, today’s equipment is far too expensive to leave lying around in the car. Your binoculars will quickly become your best friend. They will bring you into an area of increasing interest and challenge and provide you with the ability to explore a whole new world in greater detail than you had previously imagined. Binoculars provide the opportunity to observe the clean cinnamon breast bands of an adult Cooper’s Hawk as it tears apart a Mourning Dove at the base of your birdfeeder, or the plumage differences of juvenile and adult Least Sandpipers migrating through Niagara in late summer. Move a little closer and you can compare the differences in the eye ring of a female Mourning Warbler and a female Connecticut Warbler.

Although binoculars have retained the same general shape for many years, the quality of the lenses now available have made viewing better than ever. Today’s binoculars offer armoured protection. They are waterproof, fog-resistant and nitrogen-purged with multicoated lenses that allow excellent light transmission even on the darkest and rainiest days. Some even have gyroscopes for increased stability or contain built-in digital cameras. The sky is the limit for both the number of accessories and the price. If you are in the market for new binoculars, research them carefully, talk to other birders and visit the local optical stores to try out some options, especially under low light conditions when the premium binoculars start to shine. Take enough time and buy the best pair you can afford. You will be happier in the long run and more presentable in the coffee shop.

SPOTTING SCOPES

If you grow dissatisfied with your binoculars, perhaps it is time for a spotting scope. Do not make the decision lightly because the purchase of a spotting scope will take you even further into birding than you may have thought possible. Spotting scopes have taken a huge leap forward in the past 20 years. A spotting scope is really a small astronomical telescope that has been modified to produce an upright image. It is very portable and should be easy to use with a standard photographic tripod.
Like binoculars, most spotting scopes are now armoured, waterproofed, and fog-proofed, with multicoated lenses for better light transmission. Armour coating and waterproofing may not be necessities but they are valuable features that I highly recommend. They allow you to bushwhack in the woods or stand in the mist and rain of Niagara Falls scanning birds in the gorge without fear of damaging your equipment. Waterproofing also keeps out dust and dirt, adding to the lifespan of the scope. Lens coating improves light transmission, a critical feature at higher magnifications. All premium model lenses are now fully multicoated. Some spotting scopes come with an eyepiece while with others, the eyepiece is sold separately. While I like the single eyepiece and would happily use 20 or 30 power magnification most of the time, a zoom lens which exceeds 30 power gives you extra magnification when you need it. The front or objective lens size is also critical as it controls the amount of light that is allowed into the scope. The larger the lens the more light it gathers. However, a large lens means greater size and weight.

Spotting scope quality and costs vary widely, just as they do for binoculars. Once again, and I cannot stress this enough, do your homework, check websites, talk to other birders and visit your favourite optical stores. Buy the best you can afford, or at least try to talk your birding friends into buying the best they can afford. Scopes can be shared more easily than binoculars, and it is better to wait impatiently to look through a friend's spotting scope than to buy one with which you are not entirely happy. Trying to talk your non-birding spouse into letting you upgrade your equipment is much more difficult. Most people I know are more than happy to let you look through their scope once they have located the bird and had a good look at it first. Offering to carry your friends' scopes and tripods occasionally will not only endear you to them but it will also give you an idea of how heavy and cumbersome scopes and tripods can be. At this point most birders begin to look longingly at the new carbon fibre tripods and try to justify the expense of buying one.

The big question concerning spotting scopes today is whether to buy a straight-bodied scope or an angled one. I personally recommend an angled scope for several reasons. Although it takes a little practice to locate birds with the scope, it is not difficult once you accustom yourself to the change. I find the angled scope allows greater flexibility in group situations and is easier to use if you are sitting on the ground or in a folding chair, especially in windy situations. The design also enables you to move the scope and eyepiece laterally, thus allowing additional viewing options in tight places. Owners of straight-bodied scopes, in my view, are more likely to be “old school” and less likely to share their scopes. During rare bird sightings they should be approached with extreme caution! Whatever you do, do not adjust the tripod for your own height. That is the owner's privilege.
DIGITAL CAMERAS

If you do buy a scope, you would probably be wise to hold back a little money for a new digital camera for digiscoping. Digiscoping, the practice of taking digital photographs through your telescope, is becoming very popular. Once you realize the potential of this technique, it is very difficult not to catch the bug. Digiscoping is fun and relatively easy. Furthermore, it allows you to expand your hobby or obsession into an interesting, related area. Of course, not all digital point and shoot cameras are suitable for digiscoping, I know this, alas, because I have already made the mistake of buying a digital camera that is not a good match for my scope. I will buy another one just as soon as I work out a plan to slip its cost into the next household budget. Once again my advice is to talk to the people who are digiscoping, check the websites on the subject and be sure to take your scope into the camera store when you buy your camera in order to test the combination. Repeat the test at home. Finally, I should mention that digiscoping is also a valuable tool for confirming identifications of bird sightings. As a former member of the Ontario Bird Records Committee (OBRC) and the ROM liaison for the OBRC, I can’t emphasize too strongly the added value of a good photo.
GLOBAL POSITIONING UNITS

Now that we have the essentials covered, let’s investigate some of the other important technology for the birder’s knapsack. For several years, thanks in large part to the Ontario Breeding Bird Atlas, I have been carrying a handheld Global Positioning System (GPS) that allows me to note precisely where I have seen birds and, just as importantly, where I am or where I have left the car. Prior to having a GPS in my bag, I tended to stay closer to well-known trails or geological monoliths that would allow me to find my way back home. I also carry a small compass attached to my knapsack, which serves as an emergency backup but I hope I will never have to use the ancient device. If I am careful to protect the GPS and as long as I have enough batteries, I feel free to wander around at will, somewhat oblivious to the direction I am taking. It is important to trust your senses, but it is even more important to trust 12 satellites and advanced technology. Over the years I have put the machine to the test. There have been times when I was convinced the GPS was in error and that the direction my brain was telling me to take was the right one. As it turned out, I was always wrong. Now I even carry a backup unit in my bag to lend to friends or in case of an emergency. All in all, a GPS unit is essential if you are planning to leave the roadside or trail. The recent addition of in-car GPS devices has made getting lost even more unlikely, but still not impossible.

RADIOS

Although finding a new or rare bird by yourself will give you great pleasure, it is even more enjoyable when you can provide quick and accurate information to people nearby. Family Radio Service (FRS) and General Mobile Radio Service (GMRS) radios are the new walkie-talkies of this generation and have become another handy device for birding. They are small, portable and use the same AA or AAA batteries that all of the other devices require. Originally introduced in 1994, they have become an important tool in fieldwork situations and car convoys. FRS radios are limited to 500 milliwatts, while the newer and more powerful GMRS radios are restricted to 5 watts and may require licensing in the United States and other countries. Channels 1-7 are shared between FRS and GMRS; channels 8-14 are FRS only, and channels 15-22 are GMRS only. Both radios are line-of-sight devices and have limitations depending on the ruggedness of the landscape or the number of objects in the way. They are cheaper than a cellphone, and once radio etiquette has been established, they are essential for group birding or fieldwork in isolated areas. Since eavesdropping is possible, always be succinct and polite.

A radio can also act as a very important health and safety device. The best example I can provide occurred in 2004 when I was birding in northern Ontario as part of a four-person team working on the Ontario Breeding Bird Atlas. During point counts we had separated by as much as one kilometre. We were working transects and stopping for point counts every 600 m. It was rough habitat, and I inadvertently broke through a beaver dam up to my thigh. Despite my best efforts, I was unable to free myself. My first thought was to make sure all of my optics and electronics were safe, and I quickly, but very carefully, tossed my digital camera, binoculars and GPS onto dry ground. I then got on the radio and called for help. The response was instantaneous. My three fieldworkers, Gerry Binsfeld, Glenn Coady and Karl Konze, offered to rescue me as soon as I could tell them where I was. I looked over at the GPS that I had recently thrown to dry ground, about one metre out of reach, and realized that I had made
a slight error in judgment. Eventually, I was able to remove my foot from my rubber boot and, after 15 minutes of hard work, extricated my boot from the dam. My recent upgrade to an all-in-one waterproof GPS/radio tied to a string and attached to my jacket should help prevent future misfortunes of this kind.

FIELD GUIDES
I would be remiss if I failed to mention bird books as part of the birder's equipment, even though I sometimes wonder how long it will be before everything we need is available as a downloadable application on the next generation of cell phones. Bird books have been around since Audubon's day and, in the form of field guides and local birding guides, these continue to be updated and improved. Good field guides and local reference guides are essential when you are working in new areas or areas you visit infrequently. A notebook and pen are also basic tools, far too often forgotten in today's high-tech world. Accurate notes, field sketches and other bits and pieces of information remain just as important today as they were 100 years ago.

The Future
In conclusion, despite all of the technological advances and all the information now available in various forms, we still did not find a Purple Sandpiper that day. It is not the fancy technology that will bring us back to Niagara but the elusive bird itself and the challenges of the hunt. The fact remains; sometimes you just have to be lucky and sometimes you just have to keep trying. As my father always says; "If it was easy, everyone would be doing it."

LITERATURE CITED
Fall Migration of Loons in Niagara, 1994

Paul W. Summerskill

The primary objective of the study described here was to determine the flight lines that Red-throated Loons (*Gavia stellata*) and Common Loons (*Gavia immer*) follow during their fall migration in the Niagara Region. My secondary objective was to monitor elevations and numbers of migrating loons. In this article the word “loon” refers to both Red-throated and Common Loons; otherwise, each species is specified.

My interest in this project grew out of a 1994 request from Gordon Bellerby, the coordinator of an informal group of birders whose research was called “Operation Red-throated Loon.” I was one of several birders invited to participate in one of their projects by monitoring, for two days in November of that year, the flight direction of Red-throated Loons in Niagara. I had also just reviewed Willie D’Anna’s intriguing article “The Migration of Red-throated Loons on Lake Ontario” (D’Anna 1994), which led me...
to conclude that monitoring, for an extended period of the fall migration, not only Red-throated Loons but Common Loons as well, would increase understanding of the fall migration of these two species throughout Niagara. (For additional information on the movement of loons along the Lake Ontario shoreline of New York State, see Ewald and Sherony 2001). During the monitoring process I observed numbers, flight directions and heights of the loons. In order to create a vertical and horizontal distance scale for my study, I made a full-size painting of a Red-throated Loon in flight, which I mounted at one end of a long straight section of road. I then recorded the size and detail that were visible through 7x35 binoculars as I moved farther and farther away from the painting. At 0.5 km from the painting, most of the detail was clear; at 1.5 km from the painting, the image was still identifiable as a Red-throated Loon; and at 2.5 km, it was seen as only a small dot. I repeated this procedure by observing through a spotting scope (Bushnell Spacemaster II, 22 power, wide angle). At 0.5 km from the painting, all detail was clear; at 2.5 km, the image was still identifiable as a Red-throated Loon; at 3 km, the image could not positively be identified as a loon; at 4 km, it was seen as only a dot. The observation of individual loons over extended periods of time proved necessary to determine changes in altitude and direction of flights. I monitored the fall migration of loons in Niagara from 25 October through 22 November 1994. Observing began at 0630 hours EST until 17 November, after which date it began at 0530 hours. I observed from two to six hours per day depending on the weather and the cessation of flight for the day. Note that at my observation sites the shoreline runs approximately east to west. Loons moving westward are, therefore, moving parallel to the shore, and those moving southward, are moving inland toward Lake Erie.

**Observations**

25 October to 31 October: From the north end of Ann St., Port Dalhousie, on Lake Ontario, only Common Loons were observed. Six flew west over the water at an estimated altitude of under 30 m, and four flew south at an estimated altitude of between 90 and 300 m.

1 November: An unobstructed view of the total sky is essential in order to follow accurately loons in flight. Starting on 1 November, therefore, I observed daily from a location 1.5 km west of Charles Daley Park, St. Catharines, which provides just such a view. No Loons were observed, no doubt because of inclement weather.

2 November: From west of Charles Daley Park, two Red-throated Loons were observed flying south, and, ten west. Six Common Loons were observed flying west.

3 November: From west of Charles Daley Park, one Red-throated Loon flew south, and four flew west. Ten Common Loons flew west.

4 November to 9 November: These days included considerable rain and poor visibility in spite of which a total of 57 Common Loons were observed from west of Charles Daley Park. Those loons flying west were at an estimated altitude of 10 to 100 m, whereas the loons flying south were overhead at an estimated altitude of 150 to 300 m.

In addition to monitoring the loon migration, I also observed and recorded other migrants, in this instance, a variety of passerines in westward flight along the shoreline of Lake Ontario. The largest numbers were seen between 7 November and 9 November. (Observed but not counted were many Monarch butterflies (*Danaus plexippus*), also in westward flight.)
7 November: From west of Charles Daley Park, I observed the westward flight along the edge of Lake Ontario of 660 American Goldfinches (*Carduelis tristis*), 960 Snow Buntings (*Plectrophenax nivalis*) and two Belted Kingfishers (*Ceryle alcyon*).

9 November: From west of Charles Daley Park, I observed the flight of an estimated 3,000 Snow Buntings flying west along the edge of Lake Ontario.

10 November: West of Charles Daley Park, northwest winds were strong. Waves on Lake Ontario were 1 m, and visibility 40 km. Red-throated Loons flew south overhead at an estimated altitude of between 100 and 300 m. Two Common Loons flew inland for 0.5 km at an estimated altitude of 150 m, then returned to the lake, where they were joined by two more; all four flew south. One Red-throated Loon flew south at an estimated altitude of 100 m and then returned to the lake to fly west. On that day, 12 Common Loons flew south, 48 Common Loons flew west, 9 Red-throated Loons flew south and 22 Red-throated Loons flew west.

11 November: West of Charles Daley Park, northwest winds were moderate. Waves were 0.5 m, and visibility was 40 km. Two Common Loons were observed flying south at an estimated altitude of 600 m.

12 November: West of Charles Daley Park, winds were calm; visibility was 30 km. Two Red-throated Loons flew south at an estimated altitude of 150 m, then returned to the lake to fly west. Two Common Loons flew west at an estimated altitude of 300 m, and seven Common Loons flew south at an estimated altitude of 150 m. That morning 64 blasts from the shotguns of hunters pierced the air.

13 November: West of Charles Daley Park, winds were calm; visibility was 3 km. No loons were flying, but four Common Loons and two Red-throated Loons were on the water.
14 November: West of Charles Daley Park, southeast winds were moderate; visibility was 24 km. From 0730 to 0800 hours, 13 Common Loons headed south at an estimated altitude of between 100 and 300 m. At 0800 hours, a sharp increase was noted in the wind velocity. From 0800 to 0830 hours, 10 Common Loons headed south at an estimated altitude of 150 to 300 m. At 0830 hours, one Common Loon, from an estimated altitude of 150 m, circled up to an estimated altitude of 300 m, where it was joined by a Red-throated Loon, and they both flew south at an estimated altitude of 300 m. At 0910 hours, a Red-throated Loon at an estimated altitude of 60 m flew inland for 0.5 km, returned straight north at an estimated altitude of 200 m, then flew south directly overhead with a second Red-throated Loon. At 0930 hours, four Common Loons, at estimated altitudes of 150, 250, 300 and 600 m respectively, headed south inland followed by two Red-throated Loons. One of the Red-throated Loons left the others at the shoreline and flew west while climbing to an estimated altitude of 450 m, where it was joined by another Red-throated Loon. They both flew south inland. Three Red-throated Loons, observed at an estimated altitude of 100 m, were last seen at estimated altitudes of 250 to 300 m, still headed west. That evening I consulted a map of the Niagara Peninsula. My observation point was southernmost of all those on Lake Ontario, that is, 6.5 km farther south than Niagara-on-the-Lake and 13 km farther south than Hamilton Harbour. From just to the west of Charles Daley Park to Camelot Beach on Lake Erie, the distance is 34.30 km. This is the shortest distance between the two lakes.

15 November: During an hour of observation west of Charles Daley Park, I saw 5 loons head south and 24 head west, so I too travelled 20 km south to continue my observations. From a spot in a field where I had a full view of the sky, I observed five loons in one hour, all flying south at an estimated altitude of 300 m and headed straight for Camelot Beach, Lake Erie. American Robins (Turdus migratorius), Northern Harriers (Circus cyaneus), Snow Buntings, Canada Geese (Branta canadensis), American Goldfinches, Red-winged Blackbirds (Agelaius phoeniceus), House Finches (Carpodacus mexicanus), ducks and other unidentified birds were all using the same route. By 1000 hours, I was back at my observation point west of Charles Daley Park, where I saw six loons in 30 minutes heading west at an estimated altitude of 150 to 300 m. I decided to follow their direction of flight and travelled 1 km west of Fruitland Road and east of Millen Road (slightly west of Niagara), where a full view of the sky is possible. From 1130 to 1230 hours, I observed four Red-throated Loons land on the lake 0.5 km off shore. Rough water prevented an accurate count of loons on the water, and none flew past this point.

16 November: From my observation point west of Charles Daley Park, I saw three of the first 11 Red-throated Loons observed fly south 0.5 km west of that location. Red-throated Loons were also flying west over the water at 1 km off shore at an estimated altitude of 30 to 300 m. I drove further west to continue my observations at 1 km west of Fruitland Road and east of Millen Road. Three Red-throated Loons were observed heading west. Others headed northwest over the water. The flock of Red-throated Loons had split in two. Some headed west, others northwest over the water. One Red-throated Loon made 0.5-km circles over the water, gaining altitude to an estimated maximum of 450 m before continuing northwest. I observed five loons over the water heading northwest until they disappeared. One disappeared after 2 minutes 37 seconds, and then another after 2 minutes 31 seconds. Estimating that the timed birds had flown 3 km northwest and assuming that more birds were following the same route, I began to leapfrog along the shoreline at 6-km intervals observing loons coming towards me, passing by and disappearing, all headed northwest. I continued leapfrogging west to Van Wagners Beach and further
west to Hamilton Beach. By 1100 hours all loons had vanished from Spencer Park, Burlington. Between 1130 and 1230 hours, from the tower at Beamer Memorial Conservation Area in Grimsby, I observed four Red-throated Loons flying southwest over the lip of the escarpment.

17 November: West of Charles Daley Park at 0540 hours, the meteors were spectacular. One loon called from the lake in the dark. At 0615 hours, the only loon seen before 1000 hours flew right across a full moon. At 1040 hours, a Common Loon flew south overhead at an estimated altitude of 250 m.

18 November: Concentrating on where loons leave Lake Ontario near Hamilton at Van Wagners Beach proved nothing, as rain interfered. From 1100 to 1200 hours west of Charles Daley Park with strong south winds, a continuous flight of over 12,000 ducks flew south-southeast at an extremely high altitude. One Common Loon flew west at an estimated altitude of 360 m, and another south at an estimated altitude of 450 m. Two Red-throated Loons flew south at an estimated altitude of 300 m, and one flew south at an estimated altitude of 450 m.

19, 20, 21 November: Heavy rain with strong southeast winds reduced visibility from 0.5 km to nil until 1300 hours each day, resulting in no loons being observed.

22 November: Two Red-throated Loons observed from west of Charles Daley Park headed south and four headed west. From the airfield of the St. Catharines Parachute Club on Burnaby Road, northwest of Camelot Beach, Lake Erie, a search produced two Red-throated Loons flying south and heading for Camelot Beach. At the tip of Morgan’s Point, Lake Erie, winds ripped the top off every wave and drove snow flurries parallel to the ground. Perhaps other migrating loons found a more sheltered location on that day.

Table 1. Summary of observations west of Charles Daley Park.

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<th>Red-throated Loon</th>
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<td>West of Charles Daley Park Only</td>
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<td>1</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>19-21-Nov</td>
<td>Inclement weather</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22-Nov</td>
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<td>4</td>
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</tr>
<tr>
<td>All Observations</td>
<td>56</td>
<td>154</td>
<td>4</td>
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Summary and Conclusions

An ideal location for observing migrating loons is an observation point that has an expansive view of the water and an uninterrupted view of the sky. Charles Daley Park is such a location. A successful observing technique proved to be leapfrogging by automobile along the direction of flight. This method works at 15-km intervals if the flight path is predictable; if it is not, leapfrogging at 6-km intervals is necessary.

The total number of loons counted was 424. Common Loons flying west numbered 252, those flying south numbered 59, and those sitting on the water numbered 21. Red-throated Loons flying west numbered 62, those flying south numbered 22, and those on the water numbered eight. Of the loons observed from west of Charles Daley Park, 20% flew south inland. Loons were observed flying anywhere between estimated altitudes of 10 and 600 m. Data on the loon movements from west of Charles Daley Park during my study are summarized in Table 1.

Adverse weather conditions and limited visibility hampered my observations on some days. Neither did looking for loons after 1300 hours contribute a single loon to the total count. From various vantage points along the shore, I observed individual loons for extended periods of time through binoculars and telescope to establish flight directions. During my study, I observed both Red-throated and Common Loons leaving Lake Ontario and heading south from the lake’s most southerly point, which is located just west of Charles Daley Park. This flight path offers the shortest distance between Lake Ontario and Lake Erie. The westward flight of large numbers of passerines along the Lake Ontario shoreline in the fall was unexpected and totally surprising. This phenomenon warrants future study.

LITERATURE CITED


October Buffalo Ornithological Society Bird Counts in Niagara

Michael Hamilton and Robert L. DeLeon

The Buffalo Ornithological Society (BOS) October Count occurs on the second Sunday of the month. There are no data for the 1977 October Count. As was done in the article on the April and May counts, both the most common and the least seen species during the count period are reviewed, and significant population increases and decreases from the first decade of the count period to the last decade are discussed.

American Goldfinch
Sam Barone
As there are no data for the 1977 count, values are based on 40-year totals. The alpha codes for these plots are EUST for European Starling, RBGU for Ring-billed Gull, COGR for Common Grackle, RWBL for Red-winged Blackbird, HEGU for Herring Gull, BOGU for Bonaparte’s Gull, MALL for Mallard and AMRO for American Robin. The European Starlings and the migratory Red-winged Blackbirds and Common Grackles are all easier to count in the fall when large flocks tend to congregate. The gulls, also in migration, move through in large flocks.

Comparing the first to the last decades is revealing for a number of reasons. The Common Grackle spike in the last decade was caused when, on the 11 October 1998 count, Lynne Landon, David Cooper and Jim Wojewodzki witnessed a “river”—not a “stream”—of mixed blackbirds, predominantly grackles, flying south directly overhead near Decew Falls, south of Brock University, St. Catherines. It started between 0900 and 1000 hours and lasted about 30 minutes.
When flocks dropped down to feed, the observers took turns, one person checking for the comparative percentage of grackles, redwings and cowbirds on the ground while the other two estimated the numbers going overhead. They did this independently of each other and then compared notes after the “river” had passed. Lynne said that when the last bird had gone they stood there in awe of what they had just seen, which, when they got their heads together, turned out to be an estimated 90,000 Common Grackles! This is by far the largest number of a single species recorded in BOS Count history, going back to 1935.

It is also interesting that the numbers of starlings were basically equal in both decades, that in the last decade Ring-billed Gull numbers were higher, Red-winged Blackbird numbers were lower (although there were still many of them around) and Mallard numbers were higher (part of a continuing trend). The third plot, April, May and October Counts, shows the total number of birds of all species seen each year of the counts from 1966 to 2006. Those seen during the October counts are plotted in gold. April (dark blue) and May (light blue) are included to give the viewer perspective on all three counts.

### Infrequent Sightings During the Count Period

Blessed with a wide range of habitats, the Niagara Region has harboured a number of infrequently seen visitors and nesters during the count period. Following are the 60 species seen three times or less during the October counts over the 41-year period from 1966 to 2006, followed by the number and year(s) seen.

<table>
<thead>
<tr>
<th>Species</th>
<th>Year(s)</th>
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<tr>
<td>Brant</td>
<td>2-1995</td>
</tr>
<tr>
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<tr>
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<td>1-1970</td>
</tr>
<tr>
<td>Northern Bobwhite</td>
<td>1-1975</td>
</tr>
<tr>
<td>Red-throated Loon</td>
<td>1-1979</td>
</tr>
<tr>
<td>Red-necked Grebe</td>
<td>7-1985, 1-1994</td>
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<td>American Bittern</td>
<td>2-1967, 1-1990</td>
</tr>
<tr>
<td>Least Bittern</td>
<td>1-1970</td>
</tr>
<tr>
<td>Great Egret</td>
<td>5-2004, 12-2006</td>
</tr>
<tr>
<td>Tricolored Heron</td>
<td>1-2006</td>
</tr>
<tr>
<td>Bald Eagle</td>
<td>2-2005, 1-2006</td>
</tr>
<tr>
<td>Northern Goshawk</td>
<td>1-1985, 1-1986</td>
</tr>
<tr>
<td>Virginia Rail</td>
<td>1-1996, 1-1998</td>
</tr>
<tr>
<td>Sora</td>
<td>1-1967</td>
</tr>
<tr>
<td>Sandhill Crane</td>
<td>2-1986</td>
</tr>
<tr>
<td>Piping Plover</td>
<td>1-2002</td>
</tr>
<tr>
<td>Black-necked Stilt</td>
<td>1-1979</td>
</tr>
<tr>
<td>Whimbrel</td>
<td>1-1970</td>
</tr>
<tr>
<td>Hudsonian Godwit</td>
<td>1-1983, 2-1992, 4-2005</td>
</tr>
<tr>
<td>Western Sandpiper</td>
<td>1-1966</td>
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<tr>
<td>Buff-breasted Sandpiper</td>
<td>5-2005</td>
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<tr>
<td>Short-billed Dowitcher</td>
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<td>Long-billed Dowitcher</td>
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<td>Red Phalarope</td>
<td>1-1987, 2-1988</td>
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<td>1-1990</td>
</tr>
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<td>Caspian Tern</td>
<td>2-2005</td>
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<tr>
<td>Yellow-billed Cuckoo</td>
<td>1-1970</td>
</tr>
<tr>
<td>Barn Owl</td>
<td>2-1967</td>
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<tr>
<td>Long-eared Owl</td>
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<td>Whip-poor-will</td>
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<td>Ruby-throated Hummingbird</td>
<td>1-1976, 5-1999</td>
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<td>Eastern Kingbird</td>
<td>1-1997</td>
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<tr>
<td>Yellow-throated Vireo</td>
<td>1-1974</td>
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<td>Warbling Vireo</td>
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<tr>
<td>Purple Martin</td>
<td>23-1966, 15-1976, 6-1979</td>
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<td>Bank Swallow</td>
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<td>Blue-gray Gnatcatcher</td>
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<td>Veery</td>
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<td>Henslow’s Sparrow</td>
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</tr>
<tr>
<td>Harris’s Sparrow</td>
<td>1-1991</td>
</tr>
<tr>
<td>Lapland Longspur</td>
<td>1-1972</td>
</tr>
<tr>
<td>Indigo Bunting</td>
<td>1-1970</td>
</tr>
<tr>
<td>Bobolink</td>
<td>1-1968, 3-1984, 15-1985</td>
</tr>
</tbody>
</table>
Significant Increases and Decreases Between First and Last Decade Populations (1966-1975 to 1997-2006)

T-testing has been used to compare the birds observed in the two ten-year periods covered in this analysis in order to determine if there has been a statistically significant change in the population of each recorded species. Those species which are statistically significantly different at the 95% confidence level are listed below. The numbers shown are the total individual birds recorded in each of the decades 1966-1975 (First) and 1997-2006 (Last). Plots of the 41-year history are provided below for those species marked with an asterisk.

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<tr>
<th>Species</th>
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<th>Last</th>
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<td>16,507</td>
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<tr>
<td>Mute Swan</td>
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<td>76</td>
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<tr>
<td>* Mallard</td>
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<td>12,371</td>
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<tr>
<td>Ring-necked Duck</td>
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<tr>
<td>Lesser Scaup</td>
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<td>Hooded Merganser</td>
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<td>Red-breasted Merganser</td>
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<td>375</td>
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<td>Ruddy Duck</td>
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<td>51</td>
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<td>Pied-billed Grebe</td>
<td>34</td>
<td>181</td>
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<tr>
<td>Double-crested Cormorant</td>
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<td>7,422</td>
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<tr>
<td>* Great Blue Heron</td>
<td>39</td>
<td>162</td>
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<tr>
<td>Turkey Vulture</td>
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<td>369</td>
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<tr>
<td>Red-tailed Hawk</td>
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<td>274</td>
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<td>Cooper’s Hawk</td>
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<td>23</td>
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<td>Merlin</td>
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<tr>
<td>American Coot</td>
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<td>Ring-billed Gull</td>
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<tr>
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<td>* American Crow</td>
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<td>N. Rough-winged Swallow</td>
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<td>Chipping Sparrow</td>
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<tr>
<td><strong>OCTOBER DECREASES</strong></td>
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<tr>
<td>* American Black Duck</td>
<td>1,027</td>
<td>157</td>
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<td>Ring-necked Pheasant</td>
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<td>5</td>
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<td>Ruffed Grouse</td>
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<tr>
<td>Dunlin</td>
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<td>1</td>
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<tr>
<td>Red-headed Woodpecker</td>
<td>25</td>
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<tr>
<td>Red-eyed Vireo</td>
<td>16</td>
<td>1</td>
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<tr>
<td>Brown Creeper</td>
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<td>80</td>
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<tr>
<td>Winter Wren</td>
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<td>20</td>
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<tr>
<td>House Wren</td>
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<td>1</td>
</tr>
<tr>
<td>Ruby-crowned Kinglet</td>
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<td>409</td>
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<tr>
<td>Swainson’s Thrush</td>
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<td>11</td>
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<tr>
<td>Brown Thrasher</td>
<td>11</td>
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</tr>
<tr>
<td>Tennessee Warbler</td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td>Cape May Warbler</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Blackburnian Warbler</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Bay-breasted Warbler</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>Black-and-white Warbler</td>
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</tr>
<tr>
<td>American Redstart</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>Scarlet Tanager</td>
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<td>0</td>
</tr>
<tr>
<td>Field Sparrow</td>
<td>113</td>
<td>28</td>
</tr>
<tr>
<td>Vesper Sparrow</td>
<td>69</td>
<td>2</td>
</tr>
<tr>
<td>Song Sparrow</td>
<td>1,395</td>
<td>617</td>
</tr>
<tr>
<td>Eastern Meadowlark</td>
<td>390</td>
<td>14</td>
</tr>
<tr>
<td>Purple Finch</td>
<td>109</td>
<td>11</td>
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</table>
As the October Count is the last count of the year, it is a good time to look at the broader spectrum of all three counts together. Of the 60 species that increased, ten were recorded in all three counts (Canada Goose, Red-breasted Merganser, Double-crested Cormorant, Turkey Vulture, Ring-billed Gull, Great Black-backed Gull, Red-bellied Woodpecker, Carolina Wren, Eastern Bluebird and House Finch). Of the 50 species that decreased, only three were noted in all three counts (American Black Duck, Ring-necked Pheasant and Eastern Meadowlark). Notably, these population changes occurred in all three counts, making them fairly reliable as indicators.

For the October counts, 25 increases and 21 decreases were recorded. Increases unique to the October counts include Lesser Scaup, Pied-billed Grebe, Great Blue Heron, Red-tailed Hawk, American Coot, Rock Pigeon, Northern Rough-winged Swallow and Chipping Sparrow. Decreases unique to October include Ruffed Grouse, Dunlin, Common Tern, Red-eyed Vireo, House Wren, Tennessee Warbler, Cape May Warbler, Field Sparrow and Song Sparrow.

Following are plots showing the 41-year history of various species that are more relevant to the October counts. As before, they constitute a sample of the birds present in Niagara on the count date on the given year. As such, they show an informative history of the population of each observed species. Since the counts are conducted during fall migration (October), the trends generally indicate the population during migration. Because over 200 species have been observed on the October counts, there is not space to show plots for all observed species. Instead we have selected a small fraction of those that are of interest, either because of the trends in the data, the predominance of the species or other interesting features noted in the October count data.
Each plot shows the number of birds observed on the y-axis plotted against the observation year on the x-axis. For each plot, the October data points are shown in gold, the April points in dark blue and the May points in light blue.

**Figure 1. Canada Goose (CAGO).**
There is a clear and very strong increase in the population of Canada Goose. April, May and October all clearly reflect this trend. While Canada Goose sightings were unusual as late as the early 1980s, this species now constitutes a major component of the counts. October and April count data generally reflect the increase in this species present during fall and spring migrations. The increasing trend in the May Count data indicates a strong increase in the breeding population.

**Figure 2. American Black Duck (ABDU).**
Once a common species of waterfowl in the 1960s or earlier, this species shows a strong downward trend. Overall, during migration the population has dropped by an order of magnitude.

**Figure 3. Mallard (MALL).**
The population of Mallards has increased strongly. Interestingly, the October data show a very strong increase, much stronger than the April or May data. This is probably the result of a very real increase in the fall migration population. Some of this increase may reflect shifts in the migration dates that align better with the October Count date.
Figure 4. Great Blue Heron (GBHE).
This species is regularly seen on all three spring and fall counts. In fact, its population has increased greatly over the last 20 years. This seems to be another example of a species expanding its range.
This species is seen regularly on all three counts. The numbers observed on the three counts are similar even though there is both a breeding population and a migratory population. Overall, there seems to be a real increase in the number of birds observed, especially on the October counts, and it seems to have escaped the threat of the West Nile Virus.

Figure 6. American Crow (AMCR).
Historically, populations of this species have been increasing in the area, a trend especially evident when records going back 50 or more years are examined. Counts over the last 20 years are clearly higher than those of the first 20 years plotted above. However, there have been massive deaths of crows due to West Nile Virus in many portions of North America. The recent downturn in the population trend seen in the figure at left may be related.

Figure 7. European Starling (EUST).
This species is one of the most common birds on all three of the counts. The count data suggest that the European Starling population has two components: a breeding population in the summer and a migratory population in the spring and fall. Notably, the fall migration numbers are much greater than the spring numbers. This is possibly because the October Count date hits the peak of the fall migration, but the April Count date misses the peak of the spring migration.
**Figure 8. Red-winged Blackbird (RWBL).**
This species is one of the more common birds on each of the three counts, numbering in the thousands. Its population has been reasonably steady with occasional very high counts when very large flocks are fortuitously observed.

**Figure 9. Common Grackle (COGR).**
This species is also one of the most numerous birds on all three of the counts. Whereas its population has been reasonably stable in Niagara, this species is listed as one of the top 20 common birds in decline by the National Audubon Society. The occasional very high counts are probably occasioned by fortuitously catching large migratory flocks on a given count day. The huge count of over 90,000 birds in 1998 has been described in the text.

**Figure 10. Brown-headed Cowbird (BHCO).**
This bird is a brood parasite that is a summer breeder in Niagara. Its summer population is declining slightly. However, some recent October counts have shown intriguingly high counts on migration.
IN ADDITION TO THE PERMANENT RESIDENTS, a surprising number of other species spend all or part of the winter in the Niagara Region, many feeding on the abundant fish in Lakes Erie and Ontario and the Niagara River. To enhance birding in the winter months, many birders keep a winter list of bird observations for the three months of December through February. Kayo Roy has done just that for the past 20 years (1987—2006). He chose as the area to be covered the Ontario portion of the Niagara Falls Christmas Bird Count circle, and he has over the years recorded 147 species of birds in this small half circle. Between 75 and 90 species were seen each year, and 54 of these bird species were seen in every year. Some rarities included Northern Gannet, Greater White-fronted Goose, Tufted Duck, King Eider, Turkey Vulture, Slaty-backed Gull, Ross's Gull, Razorbill, Rufous Hummingbird, Varied Thrush, Sage Thrasher and Yellow-breasted Chat.

Since 1966, John Black, in the company of many other birders, has ventured out annually on New Year's Day to see as many species as possible in Niagara. On a memorable day in 1970 a total of 81 species were observed. In 2006 Jean and Blayne Farnan found a total of 104 species in the month of January alone, the 104th bird being a Turkey Vulture.

Nineteen gull species have been observed on the Niagara River since 1966. One of the most satisfying activities for a birder in the winter is to spend time along this river studying these birds, some of which are notoriously difficult to identify. Should a birder show up on a weekend in December, he or she will encounter other gull enthusiasts at almost all locations where gulls are to be observed.

If a rare bird is present, the visitors will often be invited to look through a telescope trained on the bird. For many years Kayo Roy has enthusiastically led trips along the river in order to share his expertise in this area. In his article “Niagara's Dazzling Gull Spectacle,” he reveals the attraction these species hold for him.

Waterfowl are also of interest in the winter months. Along the length of the Niagara River from Niagara Falls to Fort Erie and west along the Lake Erie shoreline to the ice boom, a huge number of wintering ducks of many species can be found. In “Waterfowl in Winter,” Richard Knapton describes this impressive phenomenon.

The month of December is notable in the Niagara birding community for the four area National Audubon Society Christmas Bird Counts. The St. Catharines Count takes place first, often on the same day as the Buffalo Count, followed by the Niagara Falls Count after Christmas Day and the Port Colborne Count, usually in the first few days of January. The more energetic counters search for owls before sunrise and end their count after sunset, sometimes at a potluck gathering where the birds of the day are discussed. Marcie Jacklin, in her article “Christmas Bird Counts in Niagara,” provides a history of these valuable sources of information and a summary of the results the counts have yielded.
Long-tailed Ducks
Raymond Barlow
Niagara’s Dazzling Gull Spectacle

Kayo J. Roy

It was early morning. The winds had subsided, and the light from the sun rising above the American Falls turned the white feathers of thousands and thousands of gulls in flight over the Niagara River even whiter. “My God,” said Sandy Komito, my old Attu friend, “what a dazzling spectacle of gulls!”
The River

World famous for its dramatic waterfalls and treacherous rapids, the Niagara River connects Lake Ontario and Lake Erie. The City of Niagara Falls, Ontario, midway between the two lakes, is the prime location for birders such as Sandy Komito, who are eager to view the many species of gulls that congregate in the Niagara River Corridor annually from late October to early February. Many non-birders refer indiscriminately to all gull species as “seagulls,” but this is not a name recognized by ornithologists. Strictly speaking, neither is the term “river” an accurate designation of the atypical Niagara. Early geographers in the area referred to it correctly as a “strait,” that is, a narrow body of water connecting two larger bodies. In the 1620s, Frère Gabriel Lalemant used the old Iroquois term “Onguiaahra,” meaning “strait” or “thunder of waters” and from which the word “Niagara” would seem to have been derived (Siebel 1985).

Any description of the gulls of Niagara would be incomplete without an acknowledgement of the unique importance of the river setting itself:

The picturesque river habitat is quite varied ranging from many shoreline and river bottom boulders, rapids, large ponds and whirlpools, to many areas of very swift water currents. The elevation change from Lake Ontario to Lake Erie is 99 meters (326 feet), most prominent at Niagara Falls, where the fall of water at the Canadian Horseshoe Falls is 52 meters (170 feet). The cataracts have a combined water flow of 37.4 million imperial gallons (170 million liters) per minute, with a river speed at crest of nearly 64 kilometers (40 miles) per hour (Niagara Trivia 1998).

The depth of the Niagara River varies. The average depth above the Falls [where thousands of gulls congregate] is 4.5 meters (15 feet) with the deepest area being approximately 8 meters (27 feet). In the gorge below the Falls the depth is about 46 meters (150 feet) and at Queenston/Lewiston [near the Adam Beck overlook] it is roughly 30 meters (100 feet) (Bailey 2004).
The Continuing Ornithological Heritage

Niagara Falls has a rich ornithological heritage. Since the early 1800s, the Niagara River has been a magical attraction for birders, including Alexander Wilson (McIlwraith 1894), John James Audubon (Burroughs 1902) and John Muir (Bade 1924). Records of bird observations along the Niagara River Corridor have been maintained for more than a century. Soon after 1860, an increasing number of Buffalo-area observers began keeping bird records that were later extremely significant in the compilation of a checklist of the area (Beardslee and Mitchell 1965). In 1930, the Buffalo Ornithological Society (BOS) began to record more systematically bird data found in their extensive study area. By the late 1960s, other bird clubs in the Niagara Region began recording bird observations and Christmas Bird Count data in their local club bulletins.

Three events held in Niagara Falls, Ontario, illustrate the growing attraction of the Niagara River, not only for enthusiastic birders but for serious ornithologists as well. First, in December 1993, the American Birding Association held its Annual Regional Conference there, with Canada’s shorebird authority, Guy Morrison, as the keynote speaker. This conference was attended by one of the largest number of birders ever assembled for an ABA regional meeting. Then, in late November 2000, Birders Journal, a prominent Canadian publication, hosted the first and only North American Gull Conference in Niagara Falls. This sold-out, two-day conference brought gull experts and larophiles to Niagara from 15 American states, five Canadian provinces and three European countries. The featured convention speaker was Lars Jonsson, the internationally respected bird artist and author of

The Adam Beck overlook is a favorite location for observing gulls. Observers stand at the overlook just off the main road to the south of the buildings housing the sixteen generators.

David Walker
the field guide *Birds of Europe*. Finally, in November 2001, The Waterbird Society held their 25th Anniversary Annual Meeting in Niagara Falls. This body of scientists from around the world meets annually to evaluate the scientific study and conservation of the world’s waterbirds. The highlight of this meeting was a symposium entitled “Waterbirds of the Great Lakes.”

The Niagara Region has attracted the attention of ornithologists in other ways. The Niagara River Corridor had the distinction of being the first North American location to be named a Globally Significant Important Bird Area (IBA). The report of Knapton and Weseloh (1999) explains the purpose and procedure of this designation:

The Important Bird Areas (IBA) program is an international initiative which strives to conserve significant sites for birds throughout the world. The program was launched by Birdlife International in Europe in 1985….The goal of the IBA program is to identify and conserve a global network of sites that are essential for sustaining naturally occurring bird populations. A site which has been granted global IBA status must be a place of international significance for the conservation of … [four categories of birds, the fourth being] birds which congregate in large numbers on their breeding grounds, on stop-over sites during migration or on their wintering grounds. The Niagara IBA falls into the last category.

Bonaparte’s Gull (*Chroicocephalus philadelphia*) and Herring Gull (*Larus argentatus*) are two of the four bird species that occur annually on the Niagara River in globally significant numbers. (The other two are Canvasback (*Aythya valisineria*) and Common Merganser (*Mergus merganser*).) The Important Bird Areas (IBA) website states:

During fall and early winter 10,000 or more Bonaparte’s Gulls can regularly be observed along the Niagara River (over 2% of the global population). Peaks of more than 40,000 individuals have been observed on several occasions (1973, 1977, 1990, 1991) representing over 8% of the global population. Over the course of the fall and early winter season up to 100,000 birds have been estimated to pass through this site (over 20% of the global population).

Herring Gulls are also abundant; 20,000 or more individuals can be observed regularly with a maximum of 50,000 individuals being reported on a single day. This represents the regular occurrence of almost 6% of the North American Herring Gull population (ssp. *smithsonianus*) with upwards of 14% of the population being reported on a single day.

On 11 December 1996, the Niagara River Corridor was officially designated as the first Globally Significant Important Bird Area in the Americas.

Nowadays hundreds of gull enthusiasts make annual winter visits to Niagara Falls and the Niagara River, and are no doubt still dazzled by the sheer number of gulls. Annual bird club outings to Niagara from many Ontario centres are commonplace, as are group visits from New York, Pennsylvania, Ohio, Michigan and even from much farther afield, all for the purpose of viewing this yearly spectacle. Notable among the prominent tour leaders who have over many years led winter gull-watching tours to the Niagara area are Jon Dunn and the late Peter Grant.

We must also acknowledge the significant contributions of Gordon Bellerby (1919-2006). For some twenty years, Gordon recorded the numbers of Bonaparte’s Gulls, Little Gulls, and other gull species as they flew out to roost overnight on Lake Ontario (Bellerby 2000). Positioned at the mouth of the Niagara River in Niagara-on-the-Lake, he spent many evenings counting this “fly-past” (as he named it) of gulls.
The Numbers of Gulls and Diversity of Species

The Niagara River supports one of the largest and most diverse concentrations of gulls in the world. It is also one of the best locations in North America for viewing large numbers and a great variety of gull species as they circle and swoop to feed above the turbulent waters, especially between mid-November and mid-January when peak numbers are present. After mid-January, gull numbers begin to decline, but excellent opportunities remain for seeing a variety of gull species. The report of Knapton and Weseloh (1999) lists the origins of these birds:

Gulls come to the Niagara River from many parts of North America and beyond. Glaucous, Thayer’s, Iceland and Sabine’s Gulls come from the Arctic; Great Black-backed Gulls, Laughing Gulls and Black-legged Kittiwakes from the east coast; Bonaparte’s Gulls from the boreal forest of Canada and Alaska; California and Franklin’s Gulls from the prairies and the west; Lesser Black-backed Gulls from Europe (unless there is an as yet undiscovered breeding population in North America); Black-headed Gulls from Europe or the Maritimes; Little Gulls from Europe, the Great Lakes or the Arctic; and Ring-billed, Herring and Great Black-backed Gulls from the Great Lakes.

The main attraction for these thousands of noisy gulls in Niagara during their annual dispersal to the Atlantic seaboard and other destinations is the abundance of food found every winter in the open waters of the Niagara River. Andrle (1977) identifies “small fish such as shiners Notropis, alewives Pomolobus, gizzard shad Dorosoma, and smelt Osmerus,” as being “abundant in the Niagara River and the Great Lakes in autumn and early winter.” Larger fish sucked into the hydro turbines are chopped into small pieces, thereby providing additional food for gulls.

The Arrival Dates of Gulls

The arrival dates of gulls to the Niagara River Corridor vary somewhat from year to year and are likely affected by weather patterns. From my personal observation while leading birding tours along the river for over twenty years, the following generalizations can be made.

Of the more common gulls, Bonaparte’s begin to arrive initially in late August through September, and then diminish in numbers. By mid-October, they have returned to the river, reaching peak numbers by early December to early January. Although most of these gulls are winter adults, a good number of immatures can be found among them. Ring-billed are abundant year-round in the Niagara Region. While Herring are present in small numbers in the Niagara Region over the summer months, their numbers increase substantially in the fall through early January. Great Black-backed, while rare but regular in the summer months, become fairly common by December.

Of the less common gulls, small numbers of Little begin to appear on the river from late July and remain well into May, peaking during the month of March. On 5 April 1996, as many as 78 individuals were observed at the Niagara-on-the-Lake fly-past by Gordon Bellerby and Kayo Roy. Thayer’s can be found in small numbers from mid-November to mid-January, and Iceland of varying ages are present from late October, peaking in January and diminishing thereafter with some birds remaining into April and May. Lesser Black-backed are usually found on the river by late September to early October, peaking in November and thinning out by the end of February. While most of these gulls are adults, on occasion a few first-and second-year winter birds can be observed.
Glaucous usually begin to appear in small numbers by late October peaking by mid-January and diminish to small numbers that remain some years into April and May.

As for the rarer gulls, Black-legged Kittiwakes, when present, can be seen as early as mid-September but usually appear from early November to late December. Sabine’s and Franklin’s are irregularly observed in some years usually between mid-September and mid-December. With few exceptions, these three species are in immature plumage. The adult Black-headed Gull is an occasional visitor to the river over the winter months, and the status of the California Gull has changed, as it has become a more regular visitor between mid-November and mid-January. The exact number of different California Gulls observed over the years along the river is difficult to ascertain because one or more individuals may be making annual return visits to the area. Some almost certainly represent multiple sightings of the same individual. Extreme rarities such as Ivory Gull, Ross’s Gull, Laughing Gull, Mew Gull or Slaty-backed Gull are possible. Birders need to be vigilant in their search along the river for these rare avian jewels.
PART TWO: NIAGARA BIRDS BY SEASON

The Expectations of Birders

During the winter months, gull-watching along the Niagara River has become a way of life for a great many birders. Keen observers have found as many as 14 different gull species along the river during a single day. On any winter visit to the area, the four common gulls (Bonaparte’s, Ring-billed, Herring and Great Black-backed) can be easily seen. Of the white-winged gulls, one can expect to see Iceland since it has been present in good numbers in recent years. However, Thayer’s and Glaucous are more of a challenge as their numbers are smaller, and the birds are scattered throughout the viewing area. Fortunately, the number of Lesser Black-backed on the river may still be increasing, making it relatively easy to locate this visitor from Europe. Observations of the above eight gull species are likely on most days throughout the winter period. The California Gull has been annual for a number of years, and in late winter, the Little Gull becomes easier to locate. With the right date and a degree of luck, Black-legged Kittiwake, Sabine’s, Franklin’s and Black-headed Gulls are possible. A keen gull-watcher visiting the Niagara River during any of the winter months would have a very good chance of observing at least 8 to 10 species of gulls.

Challenges of Identification

The complexity of gull identification is a major factor in the vast interest in this taxon. One reason for this difficulty is that the gulls exhibit different plumages as they age. Moreover, not all gull species reach their adult plumage in the same number of years. Grant (1986) sums up the situation as follows: For Little Gull, the smallest of all the world’s gulls, adult plumage is reached in its third winter; in the small to medium-sized gull group, Sabine’s Gull is near adult plumage in its first summer while Black-legged Kittiwake, Ivory, Ross’s, Bonaparte’s and Black-headed Gulls reach adulthood in their second winter, and Laughing, Franklin’s, Mew and Ring-billed are deemed adults in their third winter; gulls in the large-sized group, California, Herring, Thayer’s, Iceland, Lesser Black-backed, Slaty-backed, Glaucous and Great Black-backed, become adults in their fourth winter.

Determining the age of immature birds in their various plumages can indeed be tricky. Adding further confusion are the numerous hybrid gulls, the progeny of two different gull species. These interbred gulls often show characteristics of both parent species, thus further complicating exact identification. Howell and Dunn (2007) state that “hybridism is frequent in certain of the large white-headed gulls but among most other [gull] species it occurs rarely or not at all.” According to Knapton and Weseloh (1999):

### The Nineteen

Since records have been kept, 19 different gull species (60% of all New World gull species) have been observed along the 11-kilometre (6.8 mile) stretch of the Niagara River between Queenston and Niagara Falls, Ontario.

- **Black-legged Kittiwake** Rissa tridactyla
- *Ivory Gull* Pagophila eburnea
- **Sabine’s Gull** Xema sabini
- **Bonaparte’s Gull** Chroicocephalus philadelphia
- **Black-headed Gull** Chroicocephalus ridibundus
- **Little Gull** Hydrocoloeus minutus
- *Ross’s Gull* Rhodostethia rosea
- **Laughing Gull** Leucophaeus atricilla
- **Franklin’s Gull** Leucophaeus pipixcan
- *Mew Gull* Larus canus brachyrhynchus
- **Ring-billed Gull** Larus delawarensis
- *California Gull* Larus californicus
- **Herring Gull** Larus argentatus smithsonianus
- **Thayer’s Gull** Larus thayeri
- **Iceland Gull** Larus glaucoides
- **Lesser Black-backed Gull** Larus fuscus
- *Slaty-backed Gull* Larus schistisagus
- **Glaucous Gull** Larus hyperboreus
- **Great Black-backed Gull** Larus marinus

*The Ontario Bird Records Committee (OBRC) Review List includes the species identified with an asterisk. This body has reviewed written documentation and photographs from observers for these rare species and all have been unanimously accepted.*
No group of birds has challenged the species concept more than the large white-headed gulls, particularly the Herring–Thayer’s–Iceland Gull complex. The Thayer’s and Iceland Gulls along the Niagara River underscore the dilemma. Many individuals can be clearly identified as Iceland or Thayer’s Gulls; however, others can show a range of intermediate plumages making identification difficult.

The Next “New” Gull Species to be Found on the River

The Black-tailed Gull (Larus crassirostris) is a possible new Laridae to look for along the Niagara River Corridor. This non-breeding straggler from Asia is a casual visitor to Alaska, the Pacific Coast of North America, the interior of North America and along the Atlantic Coast from Newfoundland south to Virginia (Howell and Dunn 2007). An exceptional find was an individual of this species discovered by several western New York birders at the Brownsville, Texas, landfill site. Perhaps these same Niagara area larophiles will record the first bird of this species on the Niagara River.

The Common Gull (Larus canus canus), the European nominate race of Mew Gull (Larus canus brachyrhynchus), is known mainly to be from Atlantic Canada, most frequently as a winter visitor to Newfoundland, and as a casual to rare visitor to eastern North America (Howell and Dunn 2007). The Common Gull is treated in Europe as a separate species while in North America it is presently considered a subspecies of Mew Gull. One individual, believed to be Larus canus canus, was observed on the Niagara River from the Adam Beck overlook in Niagara Falls on 17 November 1996 by Robert Curry, Richard Knapton, Kayo Roy and others. However, the submitted documentation by Curry and Knapton resulted in OBRC acceptance as Larus canus (Dobos 1997). This species is clearly in the running to be the twentieth gull species observed along the Niagara River.
The Yellow-legged Gull (Larus michahellis) is a casual non-breeding visitor to eastern North America from Atlantic Canada, mainly found in Newfoundland during the winter months, and south to the Mid-Atlantic coast (Howell and Dunn 2007). While this species may also have already occurred on the river (Willie D’Anna pers. comm.), certain identification requires an experienced eye. With so many skilled birders visiting the Niagara River every winter, the Yellow-legged Gull is a serious contender for the title of twentieth gull species.

The 11 km (6.8 miles) downstream from the Canadian Horseshoe Falls to Queenston and the roughly one-kilometre (0.62 mile) stretch above or south of the crest of the falls are the primary locations for observing gulls on the river. See the Hot Spots section of this book for specific details as to the best locations for scrutinizing size, colour, wing pattern and other identifying details.

The four most productive locations are (1) the Sir Adam Beck overlook in Niagara Falls, where observers are able to view below them gulls in flight over the river, (2) the gorge directly below the American Falls and Canadian Horseshoe Falls, (3) the rapids and rock formations above the Falls and (4) the concrete breakwall just north of the International Niagara Control Works structure near Chippawa. Finally, some birders may decide to conclude their day of birding by standing where Gordon Bellerby often stood at the mouth of the Niagara River and watching the spectacle of the fly-past as the gulls make their way out to roost on the darkening waters of Lake Ontario.

LITERATURE CITED
Portions from some of my previously published articles on this subject have been included and or expanded on for use in this article. (See Roy 1998a, 1998b; Roy and D’Anna 2002.)


Waterfowl in Winter

Richard W. Knapton

The Niagara River, famous for its waterfalls and rapids, has long been recognized as an important waterway for the gathering of large numbers of migrating and overwintering birds (Beardslee and Mitchell 1965). Known internationally for its huge congregations of gulls (their numbers sometimes exceeding 100,000), the river has also been acknowledged as a premier wintering area for waterfowl, with concentrations of many species regularly exceeding 20,000 individuals during fall and winter. These impressive numbers draw birders and naturalists alike by the thousands; it is indeed exhilarating to watch the birds in such stunning surroundings. The Niagara River may be the best-known location in Niagara for waterfowl, but it is not the only one. The shores of Lake Erie and Lake Ontario also provide refuge for migrating waterfowl and for those that winter here.

Greater Scaup
Brandon Holden
Waterfowl (ducks, geese and swans) arrive in Niagara from all parts of North America and sometimes from places beyond. Some 42 species have been recorded to date. They are listed in Table 1. Canada Goose, Mute Swan, Mallard and American Black Duck occur here throughout the year, breeding in summer and staying the winter, with numbers augmented by birds from other areas. Other less familiar waterfowl that breed in the Niagara Region but do not usually overwinter here are Wood Duck and Blue-winged Teal. In addition to the above species, there are 13 that are found only rarely, 10 that are seen mainly during the migration period and 13 that overwinter here. Two exceptional and extremely rare waterfowl records exist for Niagara. A female Smew was observed on the Niagara River between Chippawa and Fort Erie from 21 February to 30 March 1960, and an adult male Common Eider was present at the mouth of the Welland River in Chippawa from 18 December 1969 to 10 January 1971.

<table>
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<th>English Name</th>
<th>Latin Name</th>
<th>English Name</th>
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<td>Anas crecca</td>
<td>Ruddy Duck</td>
<td>Oxyura jamaicensis</td>
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* rare in Niagara
Birds that winter here arrive from various locations. Long-tailed Duck (formerly Oldsquaw) come from the tundra, some from above the Arctic Circle. Bufflehead and Common Goldeneye arrive from the boreal forest, Canvasback and Lesser Scaup from the prairie wetlands, American Black Duck from eastern mixed forests, and rare vagrants such as eiders likely make their way to Niagara from the Atlantic Ocean via the St. Lawrence River.

Birders might be surprised to find waterfowl that do not resemble the birds listed in Table 1 or that do not appear in their field guides. Some of these are “escapes,” birds that have probably escaped from the ponds of local waterfowl fanciers. The Mandarin Duck, which breeds in Eurasia, is a case in point. More challenging to identify are “hybrids,” birds that result from the interbreeding of two different species. Some examples of hybrid waterfowl that might be found here in Niagara are Mallard x American Black Duck, Mallard x Northern Pintail, Mallard x Gadwall (“Brewer’s Duck”) and Common Goldeneye x Hooded Merganser. Other hybrid ducks observed in the region will have to remain unidentified given the difficulty of recognizing their ancestry. While Canada Goose is known to regularly hybridize with other goose species, the strange looking multicoloured geese combinations observed on occasion in the region are likely the result of interbreeding with feral barnyard geese. Hybridization among swan species occurs, but no records exist in Niagara for this family group.
The Niagara River

The large gatherings of waterfowl along the Niagara River, especially above the falls and south to Buffalo, have been observed for many years. Only recently, however, has the significance of these spectacular concentrations been fully realized with the designation of the Niagara River Corridor in December 1996 as the first globally significant Important Bird Area (IBA) in the Americas (Knapton and Weseloh 1999).

The IBA program is a global initiative coordinated by BirdLife International, a partnership of organizations in over 100 countries that identifies and attempts to conserve sites important to all bird species worldwide. Currently, there are IBA programs in Europe, Africa, the Middle East, Asia, and the Americas, all of which use internationally accepted criteria to designate sites. Within Canada, the Canadian BirdLife copartners are the Canadian Nature Federation and Bird Studies Canada. The IBA program in Canada is implemented at the provincial level, with the Federation of Ontario Naturalists (now Ontario Nature) taking the lead in Ontario. The National Audubon Society is the BirdLife International Partner Designate for the United States. The Americas IBA program is made up of partners in Canada, the United States, Mexico, and 17 countries in Central and South America in order that all sites of importance can be conserved for birds migrating throughout the western hemisphere. The Niagara River Corridor IBA is renowned for the large congregations of gulls and waterfowl that use it as a migration staging area and a wintering site. Four species congregate in globally significant numbers: Canvasback, Common Merganser, Bonaparte’s Gull and American Herring Gull.

All four species are usually present during fall and winter at greater than 1% of their global populations. The IBA data on the two gull species are well documented in Kayo Roy’s article in this book. I shall focus here on the two species of waterfowl (Table 2).

There are also two species that occur in numbers that approach the threshold for globally significant IBA Congregatory Species. Common Goldeneye regularly approaches numbers of global significance (the global threshold for their North American population is 7,500 individuals), while Greater Scaup occasionally reaches numbers of global significance (two sightings greater than the 1% threshold of 7,300 individuals). This last statistic is especially important because this species appears to be in a sustained decline in numbers across the continent (IBA Canada 2002). Further information may qualify Common Goldeneye and Greater Scaup as globally significant IBA Congregatory Species.

Of these four species of waterfowl, perhaps Canvasback is of most concern biogeographically because it is a strictly North American species, whereas the other three have populations in Europe and northern Asia as well. Canvasback breeds mainly in western Canada and the northwestern United States and migrates through western Canada and southern Ontario, wintering from the northern United States (including the Niagara River) to the Gulf States and Mexico (Godfrey 1986). Numbers along the river fluctuate from year to year, partly in response to how successful the breeding season has been. In 2008, the estimate of breeding Canvasback from aerial surveys was

![Image of the Niagara River](image)

<table>
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<tr>
<th>Common Name</th>
<th>Numbers Regularly Recorded (single day maximum)</th>
<th>Level of Importance</th>
<th>% of Global or National Population</th>
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<tr>
<td>Canvasback</td>
<td>6,000 – 8,000 (15,750)</td>
<td>Global</td>
<td>&gt;1%</td>
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<tr>
<td>Common Merganser</td>
<td>&gt;5,000 (12,000)</td>
<td>Global</td>
<td>&gt;1%</td>
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</table>

(IBA Canada 2000)
489,000, some 44% below the 2007 estimate of 900,000 and 14% below the long-term average. Within the Niagara River corridor itself, the majority of waterfowl appear to use the upper river to feed, especially near the head of the Niagara River at Fort Erie. There are also large concentrations that feed near water intake structures further downstream. In the Niagara River, numbers of Canvasback tend to peak in mid-November, then decline from March to the end of May (Mullie et al. 1996).

The North American population of Common Mergansers is estimated at between half a million and one million birds, although this species is difficult to census using traditional aerial survey techniques. The majority of Common Mergansers pass through the Niagara River area in late December (Mullie et al. 1996), and numbers on the Niagara Falls Christmas Bird Counts (CBCs) have shown some consistency over the decades. Likewise numbers of Common Goldeneye show some consistency on the CBCs, whereas numbers of Greater Scaup, while erratic, appear to show a long-term decline.

The data derived to assess the number of waterfowl in the Niagara River corridor come largely from mid-winter waterfowl counts carried out by the Buffalo Ornithological Society (BOS). (See http://www.bosbirding.org/counts.htm.) Such counts have been conducted annually since 1973 and provide an invaluable source of information for determining not only absolute numbers of each species of waterfowl but also apparent population trends. The BOS Count covers the Niagara River corridor, including both channels of the Niagara River as it flows around Grand Island, as well as the shorelines of Lake Erie and Lake Ontario in New York State and several sites in upstate...
New York. The Niagara River corridor contributes the majority of waterfowl counted; in 2005, for example, out of about 38,100 waterfowl counted, 27,100 (71%) were found along the river. Of these 27,100, the vast majority were diving ducks, of which 15,750 were Canvasback, 2,100 Bufflehead, 850 Common Goldeneye, and 6,260 Greater Scaup. Similarly impressive numbers of Canvasback (22,000, and 21,000) occurred in 1999 and 2001 respectively. Most of the birds congregate in the upper river between Buffalo and the top of the falls. Obviously waterfowl along the river cannot be divided between the two countries, as birds recognize no national boundaries. On 23 January 2005, for example, 15,750 Canvasbacks were counted along the river, but only two of these were seen from the two vantage points along the Canadian side of the river.
Other waterfowl surveys reinforce the importance of the river corridor for these four species. Aerial surveys conducted in the winter by the New York State Department of Environmental Conservation show a 22-year average of 2,808 Canvasback (31.5% of state wintering population); 2,369 Greater Scaup (6% of state wintering population); 2,015 Common Goldeneye (29% of state wintering population) and 7,527 Common Mergansers (31% of state wintering population). Annual peak numbers range from 2,000 to 15,000 Canvasback; 2,500 to 15,000 Greater Scaup; 2,300 to 3,000 Common Goldeneye; and 2,500 to 12,000 Common Mergansers.

The Lake Erie Shoreline

The Lake Erie shoreline supports a few waterfowl during the early winter before the lake freezes over. However, an ice boom is put in place each winter to reduce the ice in the Niagara River. This ice boom, a series of large logs secured together in a line by heavy chains, extends from the Buffalo harbour breakwater to Fort Erie near Waverley Beach and keeps the eastern end of Lake Erie open. As the lake freezes, the birds either leave the Niagara area entirely or relocate in the river and in the lake north of the ice boom. From the BOS Noteworthy Records (available from the Buffalo Ornithological Society), we see that thousands of Canvasback, Common Goldeneye, Bufflehead and Common Merganser can be found north of the ice boom in the winter months. They feed and drift in the fast-flowing water of the river mouth to about the level of the Peace Bridge, then fly back toward the boom to begin the process all over again. Information about the waterfowl on the upper river and along the shoreline from the mouth of the river to Jaeger Rocks in Fort Erie is available in the BOS Christmas Bird Count data. There are no count data for the area from Jaeger Rocks to Sherkston Beach near Fort Erie, meaning wintering Tundra Swans at Point Abino are not counted. However, there are data in the BOS Noteworthy Records for this species.

The Port Colborne Christmas Bird Count (CBC) includes from Sherkston Beach to nearly Lowbanks along the Lake Erie shore. The count is usually held in early January, about the time that the lake begins to freeze over. An analysis of the 21-year data from 1986–2006 reveals the following trends. Canada Geese top the list with an average of 632 birds each count, ranging from almost 3,600 in 2003 to zero in the late 1980s. The increasing trend over the 21 years of the count is in keeping with the general continental increase in Canada Geese, although the low tally in 2006 of about 950 is somewhat surprising. The average of 202 per count for Canvasback results almost entirely from two large counts in the late 1980s; indeed, the species has been absent from five of the last 10 CBCs. Greater Scaup, at an average of 268, show considerable fluctuations from year to year, although the general direction is one of increase. The highest numbers were 1,238 in 2002 followed by 948 in 2004, both well above the long-term average. Three other species show reasonable yearly averages: Bufflehead, Common Goldeneye and Common Merganser. Bufflehead show some consistency, at an average of almost 200 birds per count, with perhaps an increasing trend in the last 10 years, and Common Goldeneye show a similar consistency, at about 110 birds per count. The Common Merganser average of about 130 birds per count is highly inflated owing to a huge count in 1988 of over 1,600 individuals. The average during the last ten years has been around 40, comparable with the long-term average for Red-breasted Merganser.
Part Two: Niagara Birds by Season

The Lake Ontario Shoreline

A number of ducks and geese in mid-winter can be found along the Lake Ontario shoreline, which does not freeze over except on the water’s edge. Since 1984, the Lake Ontario Mid-Winter Waterfowl Inventory has been conducted along the shoreline from Fifty Point in Grimsby to Niagara-on-the-Lake (see Bellerby 1984). The results of this inventory underscore the importance of the Niagara River corridor for wintering diving ducks, especially Canvasback. Indeed, since 1984, fewer than 100 Canvasbacks have been counted along the Niagara shoreline of Lake Ontario, and in 12 of those years no Canvasback at all were seen. Counts along the Lake Ontario shoreline are subject to the vagaries of ice conditions; sometimes, for example, ice pushes the ducks well out onto the lake, making counting difficult and a telescope essential.

The inventory also shows that other species occur in large numbers along the Niagara shoreline of Lake Ontario. Long-tailed Ducks are scarce within the Niagara River corridor. They are found mainly at the mouth of the river in Niagara-on-the-Lake. However, this species occurs in good numbers along the Lake Ontario shoreline; the inventory reveals an annual average of about 640, with a maximum of 2,528 in 2005. Similarly, both Common Goldeneye and Bufflehead numbers are high; Goldeneye numbers average annually about 1,050, with a maximum of 4,204 in 1999, and Bufflehead numbers average annually about 320, with a maximum of 1,043 in 2003. The corresponding figures for Red-breasted Merganser are an average of about 405, with a maximum of 1,898 in 2005, and for Common Merganser an average of about 490, with a maximum of 1,110 in 2004. From 1984 to 1999, White-winged Scoter numbers were quite small, rarely reaching 100 individuals. However, since 2000, numbers have been considerably higher, annually averaging about 1,200 birds, with a maximum of 4,825 in 2000.
Such increases may have resulted from the presence of zebra mussels (*Dreissena polymorpha*), an invasive species of aquatic bivalve mollusk, which was accidentally introduced into the Great Lakes by foreign ships in 1988 and which has spread rapidly throughout the Great Lakes and beyond. Populations of other waterfowl on the Great Lakes declined during the 1970s, but they also now appear to be increasing in response to the invasion of the zebra mussel, a new and abundant food source (Brown and Fredrickson 1997).

**The Future**

Historically the Niagara River and the shorelines of Lake Erie and Lake Ontario have provided essential refuge for waterfowl. Recently, however, the sustainability of this important resource has come under attack from three sources.

First is the toxicity created by the zebra and quagga mussels (*Dreissena rostriformis bugensis*) in conjunction with the round goby (*Neogobius melanostomus*), a fish that feeds on the mussels. The presence of these three invasive species has led to a strong concentration of Type E botulism in the lakes and, consequently, to the death of certain species of waterfowl.

Man-made chemical pollutants are a second source of concern. The Great Lakes Remedial Plan and the Niagara River Toxic Management Plan have, as their objective, the immediate reduction and eventual elimination of this form of pollution from the waterways of Niagara. A substantial reduction of key pollutants has been achieved at several point sources along the river (IBA Canada 2002).

A third threat to waterfowl comes from the pressure of pleasure crafts, primarily those of fishermen, and jet boats which travel the river between Queenston and Niagara-on-the-Lake in the summer and fall. In recent years, the number of such craft has increased substantially (Anne Yagi pers. comm.) and rafts of ducks, particularly on the river, can be disturbed as they feed or rest.

**LITERATURE CITED**


Christmas Bird Counts in Regional Niagara

Marcie L. Jacklin

Common Redpoll
Kenneth Newcombe
ON CHRISTMAS DAY 1900, THE NATIONAL AUDUBON SOCIETY (NAS) held its first Christmas Bird Count (CBC) in North America. Frank Chapman, the founder, proposed holding these counts because of his concern over declining bird populations. Until then, Christmas Side Hunts (as they were then known) had been held, and whoever shot the biggest pile of birds and animals on Christmas Day was the winner. The NAS established criteria for these counts so that the information gathered would meet the primary objective of monitoring the status and distribution of bird populations across the Western Hemisphere. The typical count area is a circle with a 12.1 km (7.5 mile) radius. Since that first count in North America in 1900 with 25 count circles and only 27 participants, the CBC has grown to include more than 2,000 count circles and more than 50,000 participants annually. More than 57 million birds have been tallied since its inception. The compilers for each count organize the participants into sections within the count circle and after each count submit information on the number of species observed, the number of individuals counted, the number of participants and weather conditions and the kilometres and hours the participants walked or drove. All of this data can be viewed on an online database on the NAS CBC home page (National Audubon Society 2008).

At the present time, there are four NAS CBCs in the Niagara Region. The Buffalo CBC began in 1909 and has always been associated with the NAS. Some other Niagara winter counts have taken place since 1926, but the data were never submitted to the NAS. These early counts consisted of a few individuals going out for one day within the Christmas week in a limited area and recording their sightings in a provincial or local club newsletter. The Niagara Falls CBC was established with the NAS in 1966, the St. Catharines CBC in 1982 and the Port Colborne CBC in 1986.

Although it is interesting to examine the data of Christmas Counts and speculate on whether certain species are increasing or decreasing, the count procedures are not considered to be those of hard science. They are often referred to as “citizen science.” Nevertheless, with over 50,000 participants volunteering their time each year across North America, many significant trends can be observed.

In order to determine these trends in the Niagara CBCs, I have followed Mike Hamilton and Robert DeLeon’s use of the T-test statistical analysis at the 95% confidence level. (See their articles in this book.) For the Buffalo, St. Catharines and Port Colborne Counts, the results from the decade 1985 to 1994 were compared with those from 1997 to 2006. The Niagara Falls Count has complete data from 1966 to 2006, and the results from the decades 1966 to 1975 and 1976 to 1985 were compared with those from 1997 to 2006. Applying the T-test allowed me to determine if there had been a statistically significant change in the population of each recorded species. Note that the Ontario portion of the Buffalo count circle covers only a small fraction of that entire count circle.

Even when a significant statistical change has been calculated, it is difficult to determine why the change has occurred. A single factor or a range of factors could be responsible for this change: the number and skills of the observers, the weather conditions, climate change, food crops and disease. Improved optical equipment, especially spotting scopes, and greater knowledge about bird identification are also contributing factors.

Species have been separated into the three categories used by Mark Chojnacki (2006). Rarities have been found on one to three of the 41 counts since 1966. Uncommon species have been found on 4 to 14 counts, and common species have been found on more than 15 counts.
Christmas Bird Count Circles

Lake Ontario

Lake Erie

Major Highways

Highways

Roads

Watercourses

Waterbodies

Niagara Region Municipal Boundaries

Christmas Bird Count Circles

Produced by the Niagara Peninsula Conservation Authority, 2009. See page 698 for details.
The Buffalo Ornithological Society Christmas Bird Count (Ontario sections only) from 1966 to 2006

The Buffalo CBC (Audubon Count Code NYBU) is conducted by the Buffalo Ornithological Society. The first NAS Buffalo Count was conducted on 24 December 1909. The count circle is currently centred on 43°00' N and 78°58' W on Baseline Road, halfway between Love Road and Staley Road in Grand Island, New York. It includes the upper Niagara River and adjacent territory from Niagara Falls to Buffalo. Five sections of this count are on the Ontario side of the Niagara River. There are several small extensions outside this circle. Added is an area that extends from Chippawa to the Niagara gorge area at the base of Clifton Hill Road, and an extension that extends from the mouth of the Niagara River to the ice boom in Fort Erie. On 26 December 1966, 38 observers counted 60 species and 90,018 birds.


Rarities and uncommon species whose numbers have changed significantly on the Buffalo CBC

From 1966 to 2006, 146 species were recorded on the Ontario side of this count circle with a record high of 71 species observed on count day in 1983. The following lists present Buffalo rarities and uncommon species whose numbers have significantly changed. Unfortunately, the data for the Ontario side of the Buffalo CBC is incomplete. Information is missing for the years 1970, 1975-1978, 1980, and 1995.

Buffalo Rarities (1-3 times on count)

Brant: 1-1989
Trumpeter Swan: 1-2005
Eurasian Wigeon: 1-1983
Northern Shoveler: 5-2005
Ruddy Duck: 3-1967, 1-1985, 5-2002
Wild Turkey: 30-2002, 19-2005
Red-throated Loon: 1-1968
Red-necked Grebe: 2-2003
Black-crowned Night-Heron: 2-1968
Turkey Vulture: 1-2003
Northern Goshawk: 1-1969
Merlin: 1-2003
Wilson’s Snipe: 1-1966
American Woodcock: 1-1983
Franklin’s Gull: 1-1979
Slaty-backed Gull: 1-1992
Gray Catbird: 1-1971, 1-1979
Orange-crowned Warbler: 1-1968
Pine Warbler: 2-1983
Palm Warbler: 1-2005
Common Yellowthroat: 1-2001
Field Sparrow: 3-1971, 1-1974
Savannah Sparrow: 1-1982
Lapland Longspur: 3-2005
Rose-breasted Grosbeak: 1-1985
Pine Siskin: 1-1989, 4-2005
Buffalo. Uncommon Species
(4 to 14 counts) showing a significant increase
Wood Duck
Green-winged Teal
Double-crested Cormorant was first seen in 1974 and then not again until 1990.
Eastern Bluebird was first seen in 1992.
Carolina Wren

Buffalo. Uncommon Species
(4 to 14 counts) showing a significant decrease
Little Gull

RARITIES AND UNCOMMON SPECIES WHOSE NUMBERS HAVE CHANGED SIGNIFICANTLY ON THE NIAGARA FALLS CBC
The following lists provide details about 37 rarities and those species whose numbers have changed significantly on the Niagara Falls CBC. The Niagara Falls CBC data are complete from 1966 to 2006 except for Rock Pigeon, which were not included on the data sheets from 1967 to 1972.

Niagara Falls Rarities (1 to 3 counts)
Greater White-fronted Goose: 2-1997, 3-2003*
Snow Goose (white form): 15-1999*
Trumpeter Swan: 1-2004
Tundra Swan: 16-1999
Green-winged Teal: 1-1968
Harlequin Duck: 3-1994*
(1-New York State)
Barrow’s Goldeneye: 1-2002*
Northern Gannet: 1-1998
American Bittern: 1-1971
Red-shouldered Hawk: 1-2005*
American Woodcock: 1-1987
Franklin’s Gull: 1-1979
Mew Gull: 1-2006
Sabine’s Gull: 1-1995
Parasitic Jaeger: 1-1988
Razorbill: 1-2006*
Pileated Woodpecker: 2-1994*, 1-2000*, 1-2006*
Eastern Phoebe: 1-2001
Townsend’s Solitaire: 1-2001*
Varied Thrush: 1-1997
American Pipit: 1-2001
Pine Warbler: 1-2000*, 1-2002*
Lark Sparrow: 1-2004*
Harris’s Sparrow: 1-2000

*Observed in the New York State portion of the count circle.
Brewer’s Blackbird: 1-1973
White-winged Crossbill: 13-1997
Hoary Redpoll: 1-1993

Niagara Falls, Uncommon Species
(4 to 14 counts) showing a significant increase
Wild Turkey was first seen in 1994 and has increased significantly in the last decade.
Peregrine Falcon was first seen in 1997 and has steadily increased since then.
American Coot has increased in the last decade.
Bald Eagle was first seen on the count in 1985 and has significantly increased since then.
California Gull was first seen in 1992 and has been annual in the past decade.
Ruby-crowned Kinglet was first recorded in 1990 and has increased significantly since then.
Chipping Sparrow was not recorded until 1986 and has always been found in low numbers.

Niagara Falls, Uncommon Species
(4 to 14 counts) showing a significant decrease
Snowy Owl is very unusual, almost rare.
It has not been recorded on a count since 1996.
Eastern Towhee was always found in low numbers. It has decreased significantly and has not been recorded since 1974.
Eastern Meadowlark was always in low numbers. It has decreased significantly and has not been recorded since 1996.

Niagara Falls, Uncommon Species
(4 to 14 counts) showing a significant decrease
(4 to 14 counts) showing a significant decrease

St. Catharines Christmas Bird Count from 1992 to 2006
The St. Catharines CBC (Audubon Count Code ONSC) is conducted by the Peninsula Field Naturalists Club. The first NAS St. Catharines Count began in 1982. The count area centre is located at 43°07’ N and 79°22’ W at the intersection of 19th Street and 8th Avenue Louth in the Town of Lincoln. The count circle covers Louth Township to Lake Ontario, east to Highway 406 and includes Fenwick, Boyle and St. Ann’s. In December 1988, an extension was made to the count circle to add a portion of the Lake Ontario shoreline from east of Port Dalhousie up to and including the western pier of the Welland Canal at Port Weller. On 26 December 1982, 56 observers counted 54 species and 9,046 individuals. The compilers of the NAS St. Catharines CBC have been Audrey Barnsley (1982-1986), Mary Ellen Foley (Hebb) (1987-1995), Marcie Jacklin and Richard Knapton (1996-1997) and Marcie Jacklin (1998 to the present).

Rarities and Uncommon Species Whose Numbers Have Changed Significantly on the St. Catharines CBC
From 1982 to 2006, 142 species have been recorded on the St. Catharines CBC with a record high of 99 species observed on count day in 1994. The following lists provide details about the 38 St. Catharines CBC rarities and those uncommon species whose numbers have changed significantly.

St. Catharines Rarities (1 to 3 counts)
Tundra Swan: 1-1994
Northern Shoveler: 3-2001, 3-2006
Green-winged Teal: 1-1995, 4-1996
Ring-necked Duck: 6-2004
King Eider: 7-1990, 4-1991, 2-1992
Harlequin Duck: 1-1991
Black Scoter: 5-1990, 2-1992
Ruddy Duck: 1-1987
American White Pelican: 2-1992
Osprey: 1-1986
Virginia Rail: 1-1993
Killdeer: 1-1991
Little Gull: 1-2006
California Gull: 1-1991
Ross's Gull: 1-1994. This was the first North American record of a Ross's Gull on the CBCs. Unfortunately only a few feathers were found the next morning at the site where the gull was last seen. It is presumed that a Great Horned Owl killed the bird.

Pomarine Jaeger: 1-1992

Barn Owl: 1-1995. Warm but dead near the Owl Foundation, probably released from there earlier in the year.


Yellow-bellied Sapsucker: 1-2006

Black-backed Woodpecker: 1-1985

Pileated Woodpecker: 1-1991

Eastern Phoebe: 1-1992

Brown Thrasher: 1-2005

Yellow Warbler: 1-2003

Common Yellowthroat: 1-1994


Dickcissel: 1-1997


White-winged Crossbill: 1-1997

St. Catharines. Uncommon Species
(4 to 14 counts) showing a significant increase

Mute Swan was first recorded in 1996. Red-throated Loon was first seen in 1992.

St. Catharines. Uncommon Species
(4 to 14 counts) showing a significant decrease

Ruffed Grouse has not been seen since 2000.

Port Colborne Christmas Bird Count from 1986 to 2006

The newest NAS Count in the Niagara Region is the Port Colborne Count (Audubon Count Code ONPC), first held on 28 December 1986, when 15 participants counted 62 species. The count is centred on Sugar Loaf Point at 42°52' N and 79°16' W. It is bounded by Welland to the north, Sherkston to the east and nearly Lowbanks to the west. The Peninsula Field Naturalists Club organized the first three counts.

The compilers for the Port Colborne CBC have been Brian Ratcliff (1987), Mary Ellen Foley (1988), John Black (1989-1990) and Drew Campbell (1991 to the present).
RARITIES AND UNCOMMON SPECIES WHOSE NUMBERS HAVE CHANGED SIGNIFICANTIY ON THE PORT COLBORNE CBC

From 1986 to 2006, 121 species have been recorded on the Port Colborne CBC with a record high of 73 species observed on count day in 2003. The following lists provide details about the 36 rarities and uncommon species whose numbers have significantly changed.

Port Colborne Rarities (1 to 3 counts)
Snow Goose (blue form): 1-2001
Mute Swan: 5-2003, 14-2004, 4-2006
Green-winged Teal: 1-2006
Ring-necked Pheasant: 3-1987
Northern Bobwhite: 1-1993
Great Egret: 1-2004
Merlin: 1-1997
Killdeer: 3-1991
Dunlin: 2-1987, 2-2001
Wilson's Snipe: 1-1996
American Woodcock: 1-1987
Iceland Gull: 1-2003
Black-legged Kittiwake: 1-1994
Hermit Thrush: 1-1987, 1-2006
American Pipit: 2-2000, 5-2001
Orange-crowned Warbler: 1-1995
Savannah Sparrow: 1-1991
Chipping Sparrow: 1-2003

Baltimore Oriole: 1-1992
Pine Siskin: 2-1987, 1-2005
Evening Grosbeak: 12-1993

Port Colborne Uncommon Species (4 to 14 counts) showing a significant increase
Tundra Swan
Redhead
Wild Turkey
Bald Eagle
Peregrine Falcon
Eastern Bluebird
Cedar Waxwing

Port Colborne Uncommon Species (4 to 14 counts) showing a significant decrease
Common Loon
Snowy Owl
Long-eared Owl
Short-eared Owl

Trends from all the Niagara CBCs
In total, 182 species have been recorded in all the NAS CBCs in Niagara. More than 3,500,000 individuals have been tallied. The following data include common species that show similar trends on three or more counts.

Common species (on 15 or more years) on three or more Niagara counts that showed a significant increase (exceptions are noted)
- Canada Goose
- Mallard (common on the St. Catharines Count but has not increased significantly)
- Cooper’s Hawk (common on the Buffalo Count but has not increased significantly)
- Red-bellied Woodpecker (common on the Buffalo Count but has not increased significantly)
- Tufted Titmouse
- Carolina Wren (rare until the mid-1980s, then uncommon on the Buffalo Count but has not increased significantly)
- House Finch (first seen on a CBC in 1978 but has declined since the onset of conjunctivitis in 1995)

Common species (on 15 or more years) on three or more Niagara counts that showed a significant decrease (exceptions are noted)
There is only one common species which has decreased significantly over three of the four CBCs, the American Kestrel. The one exception to this is the Niagara Falls Count where kestrels declined significantly in the mid-1970s, but increased significantly by the mid-1980s.
Concluding Remarks

Some species are counted in great abundance on the Niagara area bird counts, suggesting that this region offers favourable conditions for such species in the early winter.

**TOP 10 SPECIES WITH RECORD HIGHS ACROSS ALL FOUR NIAGARA COUNTS**

- **65,355 European Starlings** on the Buffalo Count in 1981. Also of interest are the 59,475 starlings observed in Ontario on the Niagara Falls Count and the 15,154 starlings observed on the 1995 St. Catharines Count, which are both record highs for those counts.
- **27,700 Herring Gulls** on the Buffalo Count in 1984. Other notable records for Herring Gulls are 27,464 on the Niagara Falls Count in 1990 and 2,510 on the Port Colborne Count in 2002, which are both records highs for those counts.
- **26,187 Bonaparte’s Gulls** on the Niagara Falls Count in 1991. Also of interest are 6,838 Bonaparte’s Gulls on the Buffalo Count in 1990, which is a record high for that count.
- **14,062 Ring-billed Gulls** on the Niagara Falls Count in 1990. Other notable records for Ring-billed Gulls are 3,425 on the Port Colborne count in 1990 and 3,077 on the St. Catharines Count in 2001, which are both records highs for those counts.
- **11,050 American Crows** on the St. Catharines Count in 1994.
- **9,500 Long-tailed Ducks** on the St. Catharines Count in 1993.
- **7,800 Greater Scaup** on the Niagara Falls Count in 1996.
- **7,518 Common Mergansers** on the Buffalo Count in 1979.
- **6,254 Canada Geese** on the Niagara Falls Count in 2006. Also of interest are the 3,575 Canada Geese found on the Port Colborne Count in 2003, which is a record high for that count.

It is interesting to note the number of gulls, ducks and invasive species that are found in high numbers in Niagara. Cannings (2007) listed the 16 species having totals exceeding 50,000 birds on the 107th Christmas Bird Count in all of Canada. Remarkably, 12 of these species were also abundant during the same count period in Niagara. Sadly, the top species for Niagara and Canada were both invasive species, the European Starling and the House Sparrow.

**LITERATURE CITED**


PART THREE

Species Accounts
A TOTAL OF 368 SPECIES OF BIRDS have been observed and documented in the Municipality of Regional Niagara over the years that records have been maintained. Part 3 contains an account of each of these species. For the more common birds, our focus is on records from the period 1966 to 2006. In the case of rare birds, records prior to 1966 are also included. In 2007 and 2008, a number of exceptional observations have been recorded in Niagara; these observations are described in a Post-2006 Observation insert in the species accounts.

The order of the species accounts and the English and Latin names of each species follow the American Ornithologists’ Union Check-list, 7th Edition (AOU 2008). Changes in nomenclature that have occurred after 2008 are not included.

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Introduction
John E. Black and Kayo J. Roy

A TOTAL OF 368 SPECIES OF BIRDS have been observed and documented in the Municipality of Regional Niagara over the years that records have been maintained. Part 3 contains an account of each of these species. For the more common birds, our focus is on records from the period 1966 to 2006. In the case of rare birds, records prior to 1966 are also included. In 2007 and 2008, a number of exceptional observations have been recorded in Niagara; these observations are described in a Post-2006 Observation insert in the species accounts.

The order of the species accounts and the English and Latin names of each species follow the American Ornithologists’ Union Check-list, 7th Edition (AOU 2008). Changes in nomenclature that have occurred after 2008 are not included.
Sources of Data Used

A rich and varied collection of sources was used in preparing these species accounts. Our starting points were Roy W. Sheppard’s *Bird life of Canada’s Niagara Frontier*, a three-part work that appeared in 1960, 1968 and 1970, as well as Clark S. Beardslee and Harold D. Mitchell’s comprehensive *Birds of the Niagara Frontier Region*, published in 1965 and updated in 1970 by Harold D. Mitchell and Robert F. Andrle. Additional information was obtained from many other sources including the following:

- *Birds of Hamilton and Surrounding Areas* (Curry 2006)
- Buffalo Museum of Science, Buffalo, New York

Buffalo Ornithological Society
- April Count (1966-2006)
- May Count (1966-2006)
- Noteworthy Records (1966-2006)
- October Count (1966-2006)
- Breeding Bird Survey (1966-2006)
- Fifty-Point Conservation Area, Grimsby
- Grimsby sewage lagoons, Grimsby
- Smithville sewage lagoons, Smithville
- Vanderliek farm pond, Bismark (now farmed)

Lake Ontario Mid-winter Waterfowl Survey or Inventory (1984-2006)

National Audubon Society publications
- *American Birds* (1966-2006 as well as earlier editions)
- *Field Notes*
- *North American Birds*

Natural Heritage Information Centre Database (1890-1998)

Niagara area birders’ records
- Harold L. Lancaster (1966-1978)
- Kayo J. Roy (1983-2006)
- Daniel (Dan) R. Salisbury (1966-1971)

Many other birders have contributed significantly to our knowledge of Niagara birds, but for the sake of brevity, they are usually not identified in the accounts.

Niagara area Christmas Bird Counts
- Buffalo Ornithological Society (1966-2006)
- Niagara Falls (1966-2006)
- Port Colborne (1986-2006)
- St. Catharines (1982-2006)
- Niagara area club newsletters (1966-2006 and many earlier editions)
- Bert Miller Nature Club, *The Rambler*
- Buffalo Ornithological Society, *The Prothonotary*
- Niagara Falls Nature Club, *Nature Niagara News*
- Peninsula Field Naturalists Club, *The Peninsula Naturalist*
- Niagara Peninsula Hawkwatch (1975-2006)
- Dave Copeland notes
- *Newsletter*

- Ontario Field Ornithologists *OFO News* (1966-2006)
- Ontario Nest Record Scheme database (1956 to 2006)
- Owl Prowl (1978-2006)
- Port Weller Migration Study (1993-1997) (Black 1997)
- Project Feederwatch (1976-2006)
- Royal Ontario Museum, Toronto.
The Accounts

With so many contributing authors, a single template for all species accounts seemed unnecessarily restricting. We have attempted, however, to establish some basic features in the accounts by which the species could be compared.

FREQUENCY, ABUNDANCE AND OCCURRENCE

Each account begins with a short statement on the frequency, abundance and occurrence of the species in Niagara. The terms used to define frequency, abundance and occurrence are based in part on those in the second edition of *Annotated Checklist of the Birds of Ontario* (James 1991).

Frequency and Abundance defined:

*Very Common*: Observed annually on most days at many locations, often in large numbers

*Common*: Observed annually on most days at many locations in small numbers

*Uncommon*: Observed annually on many days at a few locations in small numbers

*Rare*: Observed annually, or almost annually, at a few locations in very small numbers, often on only a few days and with difficulty unless the bird is at a known location

*Occasional*: Not observed annually but expected in some years, often only a single individual seen

*Extremely Rare*: An extraordinary observation; observed on only five or fewer occasions in Niagara, probability of recurrence very low

Occurrence defined:

*Resident*: Regularly spends one season or more in Niagara

*Transient*: Regularly migrates through Niagara while travelling to or from its breeding grounds

*Straggler*: Remains in Niagara after migration, usually in small numbers

*Visitor*: Irregularly wanders into Niagara, usually in small numbers

*Extirpated*: Formerly a resident in Niagara but no longer present

*Extinct*: Formerly present in Niagara but no longer alive anywhere

*Introduced*: Has had human assistance in establishing itself on the North American continent

*Escapee*: Birds of uncertain origin, possibly an escaped captive bird

The following species listed under hypothetical or uncertain status in Beardslee and Mitchell (1965) and Sheppard (1970) are not included in the species accounts presented here because the authors feel they can add no further information to the material already in print. These are: Cinnamon Teal (*Anas cyanoptera*), Great Skua (*Stercorarius skua*), Gray Jay (*Perisoreus canadensis*), Blue Grosbeak (*Passerina caerulea*), Black-headed Grosbeak (*Pheucticus melanocephalus*), Nelson’s Sharp-tailed Sparrow (*Ammodramus nelsoni*) and Le Conte’s Sparrow (*Ammodramus leconteii*).

From 9 December 2006 to 7 January 2007 a Barnacle Goose (*Branta leucopsis*) was found in Vineland. This bird was likely the same individual that returned to the Lake Ontario shoreline between Grimsby and Vineland in the winter months of 2007, 2008, 2009 and 2010. Its whereabouts during the summer months is unknown. Records committees have traditionally assumed that all Barnacle Geese were escapees rather than wild birds. Currently, at least with many Atlantic coast committees, the assumption is that perhaps most are not escapees. In Ontario this species is held in captivity in numerous aviaries and, while the identification of the bird is not disputed, the bird’s origin remains questionable. In light of this uncertainty we are not including this bird in the species accounts.

TABLES IN THE ACCOUNTS

The tabulation below for the Yellow Warbler exemplifies the typical presentation of the basic features for each species.

*First Atlas*: 24 squares confirmed, 1 probable, 0 possible

*Second Atlas*: 25 squares confirmed, 0 probable, 0 possible

*BOS April Count*: Not reported

*BOS May Count*: Reported on 41 of 41 counts, maximum of 355 birds in 1979

*BOS October Count*: Not reported

*Niagara Christmas Bird Counts*: Reported on 1 of 41 counts, maximum of 1 bird on the 2003 St. Catharines CBC

*Banding and Recovery Data*: A Yellow Warbler banded at Long Point on 4 August 1985 was encountered on 20 August 1985 in Georgia. Another banded at Long Point on 12 May 1994 was encountered on 27 August 1999 in Louisiana.

The organizers of the atlases divided Region 11 into 25 squares, each 10 km on a side. Observers in each square reported the breeding status of every species encountered, designating the breeding status as confirmed, probable, possible or observed. The reader is referred to the point count data in the second Atlas for additional breeding data. Information on the breeding range of species in Ontario is taken from the second Atlas.

BOS April, May and October Counts: Each year the Buffalo Ornithological Society (BOS) organizes bird counts in April, May and October. The number of BOS counts during the years 1966-2006 on which each species was found in the Niagara Region and the maximum number of individuals of that species are tabulated. Of the 41 October counts conducted, only 40 are reported here because data for the 1977 October count for the Niagara Region were not available.

Niagara Christmas Bird Counts: Data for the Niagara Christmas Bird Counts indicate the total number of counts during the years 1966-2006 on which birds were observed on one or more of the four Christmas Bird Counts in the Niagara Region.

Banding and Recovery Data: The Bird Banding Office of the Canadian Wildlife Service provided information on distant encounters with birds (some as far away as Belize) that had been banded at Rock Point, Ruthven and Long Point in southern Ontario. Such information provides some idea of where birds passing through Niagara might spend their winter months. Where the date of the encounter is uncertain, the term ‘about’ is used with the date.

Lake Ontario Mid-winter Waterfowl Survey: The survey started in 1984. Ducks on Lake Ontario are counted from Fifty Road in Stoney Creek east to the mouth of the Niagara River in Niagara-on-the-Lake.

BOS Shorebird Count 1952-1956 and 2001-2006: This August shorebird count was started in 1947 but was discontinued during the 1970s and 1980s. Counted are all shorebirds present on the Lake Erie shoreline from the Peace Bridge in Fort Erie to the mouth of the feeder canal in Port Maitland. In the accounts the five year periods 1952 to 1956 and 2001 to 2006 are compared.

SEASONAL GROUPING
In the species accounts, the four seasons have been somewhat arbitrarily assigned dates as follows:

Spring: 1 March to 31 May
Summer: 1 June to 15 August
Fall: 16 August to 30 November
Winter: 1 December to 28 February

EXTREMELY RARE SPECIES
Approximately one hundred of the species accounts are of birds considered to be extremely rare in the Niagara Region. These accounts typically contain a description of the documented records for the species in Niagara followed by some information on where the species is normally seen.

The Ontario Bird Records Committee (OBRC) keeps a Review List of rare species that require adjudication.

PHOTOGRAPHS
Our initial intent was to include only photographs taken in Niagara. We found fairly quickly, however that to obtain high quality photographs of many of the species required that we include images taken in locations outside Niagara. Most are from Ontario.

Additional Notes on Species Accounts

BIRD COUNTS (1966-2006)
The BOS April Count has been held for the past 41 years between 4 and 18 April on the second Sunday of the month unless Easter intervenes, in which case it is moved to the third Sunday. Only the results from the primarily Niagara portion of the BOS April, May and October Counts are reported in these species accounts (Sections 1, 2, 7 and 8). The western boundary of the Canadian portion of the counts is approximately a line extending from Beamsville to Dunville. The eastern boundary is the Niagara River.

The BOS May Count has been held for the past 41 years between 15 and 21 May on the third Sunday of the month. The BOS October Count has been held for the past 41 years between 8 and 16 October on the second Sunday of the month. (Niagara data is not available for 1977.)
The BOS and St. Catharines Christmas Bird Counts are held between mid-December and Christmas Day. The BOS CBC began in 1909 and the St. Catharines CBC in 1982. The results of the BOS CBC included here are only those obtained from the area on the Niagara side of the Niagara River. (Niagara data from the BOS count is not available for the years 1970, 1975-1978 and 1980.)

The Niagara Falls and Port Colborne Christmas Bird Counts are held between Christmas Day and the first week in January. The Niagara Falls CBC began in 1966 and the Port Colborne CBC in 1986. About one-half of the Niagara Falls CBC circle lies inside New York State. (For details, see the article “Christmas Bird Counts in Regional Niagara” by Marcie Jacklin in this book.)

BOS Noteworthy Records (BOSNR) for the Niagara Region were used. Note that only in cases of the rarer birds was an attempt made to identify multiple records for the same bird. Thus in some accounts the fact that 25 records exist for a species could include some duplicated records submitted by different observers.

SEASONAL GROUPING
Other than for rare birds the species accounts follow an approximately seasonal structure beginning with spring.

Spring: 1 March to 31 May. Note that the bulk of the passerine migration is over in the Niagara Region by 31 May, but a few stragglers are still present in the first week of June and are included in the spring section. Even fewer stragglers, or possible breeders, are found in the following weeks, but since at these later dates it is difficult to distinguish possible breeders from stragglers, those sightings reported after 7 June are placed in the summer portion of the species accounts. A few late May records from the second Atlas are also included in the summer section of the species accounts. In the description of bird occurrence, the absence of a spring transient designation does not mean that the bird does not migrate through our region in the spring, but only that its migration is difficult to recognize or has not been studied. In some cases, the large number of birds arriving to breed in the region makes it difficult to estimate the abundance of the spring transients; therefore, no spring transient abundance is given.

Summer: 1 June to 15 August. (A few late May birds are included in this period.) Most of the breeding ranges described in the species accounts are taken from the Atlas of the Breeding Birds of Ontario, 2001-2005. The Royal Ontario Museum made available to us its Ontario Nest Record Scheme database, which we used to obtain early egg dates. Note that in the species accounts, dates of eggs found in the period 1966-2006 were included unless no eggs were found, in which case dates from earlier years were used.

Fall: 15 August to 30 November. The earliest and latest fall dates on which birds were seen have been supplied by local observers or taken from the BOS Noteworthy Records and the HNC Noteworthy Bird Records. Early dates reported from locations in Niagara where the species does not normally breed may indicate that the species is beginning its southward migration. In the description of bird occurrence, the absence of a designation of fall transient abundance does not mean that the species does not migrate through our region in the fall, but only that it has not been studied by the authors. In the fall, the authors and other birders in the region tend to concentrate on shorebirds rather than passerines. Consequently, there are fewer data for fall transient abundance than for spring transient abundance. The best measure of abundance we have for many species in the fall is the number of October counts on which a species has been observed. Note that there is no organized hawkwatch at the Beamer Memorial Conservation Area in Grimsby in the fall.

Winter: 1 December to 28 February. BOSNR winter data and Christmas Bird Count data are used, along with the records of local and visiting observers.

LOCATIONS
In describing the locations of observations we identify the closest city, town or municipality in which the bird was seen. Descriptions of most of the locations cited in the species accounts can be found in the article “Hotspots and Day Trips” by Katherine Stoltz and Drew Campbell in this book. The notes below should prove helpful to those considering the locations frequently mentioned in the species accounts:
Adam Beck overlook: Note that this overlook lies in the Municipality of Niagara Falls, not in Queenston. Many of the gull observations reported in the BOSNR from this overlook describe it as being in Queenston. The overlook is actually in Niagara Falls.

Avondale sewage ponds: Now known as the Parmalat sewage ponds.

Cement Road in Wainfleet: Also known as Cement Plant Road, this road connects Highway 3 and Lakeshore road and lies at the boundary between Port Colborne and Wainfleet.

Fifty Point Conservation Area: Some of the Conservation Area is in Grimsby, but a portion is in Stoney Creek and, therefore, just outside the Niagara Region. Every effort has been made to ascertain if the Fifty Point records are of birds that were observed in the Grimsby portion of the conservation area. Note that the birds reported from the conservation area often move in and out of the Niagara Region, especially in flight over the lake.

Gate House building: The official title of the building is Gate House, Ontario Power Company. It is located south of the old Toronto Hydro building on the Niagara River.

Glendale sewage ponds: Also known as the Foster Wheeler sewage ponds, these ponds are now part of the Niagara College Wetland Ridge Trail.

Grimsby sewage ponds: Also known as the Grimsby sewage lagoons, the Winona ponds and the Winona lagoons.

International Niagara Control Works structure: Also known as the Control Weir, the Niagara Control Works structure or the International Control Weir, the gates in the river are used to reduce the flow of water over the falls thus diverting water to the power stations down the river.

Malcolmson Eco-Park: also known as Malcolmson Park.

Mud Lake, Port Colborne: Full name is Mud Lake Conservation Area.

Niagara: Used as a short form for the Niagara Region.

Old Toronto Hydro building: Also know as the Engineerium, the official title of the building is Electrical Co. Development of Ontario Limited 1906.

Port Weller piers: These two piers, known as the east and west piers, are located in St. Catharines and extend for about 1.3 km into Lake Ontario at the mouth of the Welland Canal north of Lock 1.

Rock Point Provincial Park: This park is located on Lake Erie about 6 km west of the Niagara Region. The point of land in the park is sometimes also referred to as Rockhouse Point. Mohawk Island lies 1.5 km to the southeast of the park in Mohawk Bay, also outside Niagara.

Rose Hill Road, Fort Erie: Harold Axtell’s residence was just off Rose Hill Road on Rebecca Street in Fort Erie from 1966 to 1991. Axtell, and the many visitors to his property, submitted documentation on birds to the Buffalo Ornithological Society on which the location was given as Rose Hill Road (also Rosehill Road).

St. Davids sewage ponds: Also known as the Kraft sewage ponds and the Canada Canners sewage ponds. (These ponds no longer exist and the property is up for sale.)

Smithville sewage ponds: Also known as Smithville lagoons.

ABBREVIATIONS IN THE ACCOUNTS
We have tried to keep abbreviations in the accounts to a minimum.

AOU American Ornithologists’ Union
BOS Buffalo Ornithological Society
BOSNR Buffalo Ornithological Society Noteworthy Records
HNCNR Hamilton Naturalists’ Club
Noteworthy Bird Records
JEB Field Notes of John E. Black
KJR Field Notes of Kayo J. Roy
OMNR Ontario Ministry of Natural Resources
OBRC Ontario Bird Records Committee
SARA Species at Risk Act
The Fulvous Whistling-Duck, formerly known as the Fulvous Tree-Duck, is one of the most widespread species of waterfowl in the world. While it breeds across the world’s tropical regions in four continents, distribution in North America is limited to the Gulf Coast of the United States (Hohman and Lee 2001). This local resident is known for some quite extensive seasonal movements and is also known to sometimes wander in small parties (Madge and Burn 1988).

The Fulvous Whistling-Duck is a very rare visitor to Niagara with only one reported sighting known to exist. On 20 August 1962, Richard Brownstein and Daniel Salisbury discovered two birds at Yacht Harbour, near Crystal Beach (Baillie 1964, Wormington 1986). Seen also by Harold Axtell, Arthur Clark, Harold Lancaster and Arthur Schaffner, the birds were photographed by Robert Andrle on the same day. Note that Sheppard (1970) gives the date of this sighting as 10 August 1961, and there is other evidence to suggest the date should be 20 August 1961. The year of the sighting may be reviewed by the Ontario Bird Records Committee.

In the Americas, the Fulvous Whistling-Duck breeds in the lowlands of northern and eastern South America south to northern Argentina in the east, and to Columbia in the west. The range extends northward through Central America to the southern United States. It winters throughout its breeding range (Madge and Burn 1988).

Kayo J. Roy

Greater White-fronted Goose *Anser albifrons*

Extremely rare visitor (observations increasing in southern Ontario)

There are no Niagara records of Greater White-fronted Goose prior to 1966 in Beardslee and Mitchell (1965). Sheppard (1970), however, identifies a White-fronted Goose found on 22-23 February 1964 at Port Weller by Daniel Salisbury and others. The individual had been banded, which caused some initial concern about its status as a wild bird.

During the 1966-2006 time frame of this book, only four known records exist for this extremely rare visitor to Niagara. Paul Benham, John Black and Dan Salisbury found a single bird on 29 October 1969 at the racetrack in Fort Erie. On 22 March 1989,
a flock of 18 Greater White-fronted Geese (14 adults and 4 immatures), all *frontalis*, were discovered in a ploughed cornfield near St. Ann’s (Wormington and Curry 1990). These birds remained until at least 1 April 1989. The third record is of two definitive basic adult birds found on 29 November 1997 by Michael Morgante at the Sir Adam Beck Reservoir in Niagara Falls (not Queenston as in Dobos 1999). They remained long enough to be included in the 1997 Niagara Falls Christmas Bird Count and were last seen on 22 February 1998 (Dobos 1999). The fourth record for Niagara of Greater White-fronted Goose is of 13 birds that Glenn Coady and Mark Peck discovered on 4 January 2004 at the Smithville sewage ponds (Curry 2006). The species has not been observed on any of the BOS April, May or October Counts.

Observations of Greater White-fronted Goose in Ontario have increased markedly since the 1980s, primarily in both the fall and the south (Curry 2006). Four subspecies of Greater White-fronted Goose breed in North America from western Alaska to the west coast of Hudson Bay and in northern Greenland (Godfrey 1986). The majority of North American birds belong to the mid-continent population (*frontalis*) and winter from the Mississippi River alluvial valley of eastern Arkansas west to eastern Mexico (Ely and Dzubin 1994). Greenland breeding birds winter in Europe (Cramp and Simmons 1977). The birds observed in Ontario likely come from the mid-continent population, which is much larger than the Greenland group. Its overall range has expanded eastward during the reporting period (Ely and Dzubin 1994), and its numbers have fluctuated widely (U.S. Fish and Wildlife Service 2008). This is in contrast to an apparent decline in numbers in Greenland.

*Kenneth F. Abraham*
Snow Goose Chen caerulescens

Occasional to rare spring and fall transient, occasional winter visitor

Spring migration of Snow Geese in Niagara is a March/April event. Earliest dates include a single bird on 1 March 1999 at Fifty Point Conservation Area (HNCNR) and 51 birds on 18 March 2001 at the Vanderliek farm pond in Bismark (HNCNR). The latter is also the high count for the region, and exceptional. The latest spring date is 12 May 1966, when one bird was at the Grimsby sewage ponds (HNCNR). May is the time of peak passage through James Bay. There are no summer records for Niagara. The earliest fall date is 7 October 1967, when eight birds were observed at Port Weller in St. Catharines (BOSNR). Small numbers of birds are seen in all months from October through February (BOSNR, HNCNR, CBCs).

Since the early 1990s, Snow Geese have been observed in most years in Niagara, albeit in small numbers. Exceptional migration events of the Lesser Snow Goose (C. c. caerulescens) occurred in 1934-1936 as described in Beardslee and Mitchell (1965) and Curry (2006). Over 10,000 birds were grounded in Niagara, probably owing to exceptional fog conditions; similar events have not recurred. The birds involved were predominantly of the blue morph. At that time, the blue and white morphs were more segregated than they are now, with the blue morph breeding and migrating along the eastern edge of the annual range of birds associated with the mid-continent region (Mowbray et al. 2000). Some migrated on a more or less direct line from James Bay to Louisiana (Cooch 1955), and it was likely these birds whose migration was interrupted by the inclement weather conditions.

The Snow Goose is observed in Niagara more frequently than either Ross’s Goose or Greater White-fronted Goose, but has only recently become more regular. In adjacent Hamilton, Curry (2006) describes the change in status over time from an accidental or occasional transient to a migrant occurring annually in both spring and fall. The pattern is much the same for Niagara, as would be expected, and becomes clear by comparison with the account of Beardslee and Mitchell (1965). Furthermore, although Snow Geese have been observed in all seasons, 50% of the sightings have occurred in winter, and all but two of the records were attributed to the Lesser subspecies.

The change in status is likely a result of the population growth of the species across its range. The numbers of Lesser Snow Geese have more than quadrupled since the mid-1900s (Kerbes et al. 2006), and those of the Greater Snow Goose (C. c. atlantica) have increased nearly tenfold since 1970 (U.S. Fish and Wildlife Service 2008). Niagara is not on a major migration corridor for either subspecies of Snow Goose. However, the migration of the Lesser Snow Goose has shifted eastward during the population increase, and that of the Greater Snow Goose has shifted westward such that both forms may be expected in small numbers (Pittaway 1992a). Morin reviewed the recent and increasing observations of Greater Snow Goose in eastern and southern Ontario (Morin 2004).
Ross’s Goose *Chen rossii*

Extremely rare visitor

The number of Ross’s Geese in North America has grown dramatically since the 1950s, when only a few thousand birds were counted on the Pacific coast wintering grounds, and all known breeding occurred in the Perry River region of the central Canadian Arctic. They had been rare for most of the century and were considered a species of the western part of the continent (Ryder and Alisauskas 1995).

Neither Beardslee and Mitchell (1965) nor Sheppard (1970) lists Ross’s Goose for Niagara, and Curry (2006) lists only four records for Hamilton and the surrounding area. It is presently an extremely rare visitor to Niagara, where only four records exist between 1966 and 2006, all of white morph birds. The first was of an adult bird discovered in early November 1970 by Dan Salisbury and Harold Lancaster at the Zimmerman’s farm pond on Casablanca Boulevard in Grimsby. This bird stayed until an unknown date in January 1971 (Curry 2006). On 27 January 1988, Mary Ellen Hebb, Edmund Johns and Kayo Roy carefully studied an adult Ross’s Goose at Henley Island in Port Dalhousie, St. Catharines. The bird was observed feeding daily on the grassy shoreline of Martindale Pond and was last seen on 31 January 1988. From mid-December 2005 to at least 23 February 2006, Rick Cudney and Kayo Roy observed two adult Ross’s Geese along the Lake Erie shoreline at Point Abino harbour (Crins 2007a). On 1 March 2006, Brad Clements discovered two adult Ross’s Geese in the open water of the Welland River off Merritt Island in downtown Welland. These two birds were last seen on 5 March 2006 (Crins 2007a).

It was estimated that there were over 880,000 nesting adults in spring 2008 (U.S. Fish and Wildlife Service 2008); and when yearlings and other non-breeding birds are included, that means there are now well over 1,000,000 Ross’s Geese in North America. Simultaneously with the numerical growth, an eastward expansion of breeding grounds and migration routes has occurred such that Ross’s Geese now breed in all areas of the central and eastern Canadian Arctic where Lesser Snow Geese breed (Kerbes et al. 2006), and more than 100,000 winter in the mid-continent area of the U.S. (Kelley et al. 2001). Observations of Ross’s Geese were tracked by the Ontario Bird Records Committee until 2006, by which time sufficient documentation had accumulated to securely establish their presence as annual migrants in southern Ontario. They have been established as breeders in small numbers in the Hudson Bay Lowlands since 1975 (Prevett and Johnson 1977, Kerbes et al. 2006). In northern Ontario, the second Atlas reported “a relatively small population of perhaps a few hundred pairs” concentrated near Cape Henrietta Maria (Abraham 2007a).

*Kenneth F. Abraham*
Brant *Branta bernicla*

Rare spring and fall transient, occasional winter straggler, extremely rare summer straggler

Ironically, the rare Brant, which is usually associated with ocean coasts, is the most abundant goose in Niagara after the Canada Goose. It usually occurs in small numbers on the days when it is seen. Spring migration occurs in a brief period from mid-May to early June, corresponding well with migration events across the rest of Ontario, including James Bay. The earliest date is 12 May 1993, when three birds were recorded at Niagara Falls (BOSNR), and the latest spring date is 5 June 1966, when seven birds were at the Fifty Point Conservation Area (HNCNR). One bird at Port Colborne on 25 June 1983 (BOSNR) was exceptional for summer. The earliest fall record is for 15 birds on 5 October 1995 at Fifty Point Conservation Area (HNCNR), and small numbers of birds are seen from October through January. Larger groups are observed in fall migration than in spring. The largest group was 350 on 10 November 1985 at the Fifty Point Conservation Area (HNCNR). Occasionally, a single or a few birds are recorded on winter waterfowl counts or Christmas bird counts, but there are no February, March or April records (BOSNR, HNCNR). The Brant is an annual migrant through Niagara.

Niagara’s Brant belong to the Atlantic Brant population, a light-bellied subspecies *(B. b. hrota)*, that winters on the mid-Atlantic coast of the United States (U.S. Fish and Wildlife Service 2008). The vast majority (80%) of observations in Niagara occur in May, October and November. The late spring passage is a reflection of their energy requirements and their migration and breeding strategies. They are the smallest in body size of all the arctic geese. This small size precludes their storing enough fat and protein to complete migration from wintering to breeding grounds without stopping at an intermediate staging ground to store nutrients for the final leg of the flight over Hudson Bay to their Arctic breeding range in Foxe Basin and farther north (Reed et al.1998). The migration re-fuelling stop for Atlantic Brant is James Bay, where habitats with spring foods sufficient for the purpose do not regularly become available until mid- to late May. Even after re-fuelling for the final migration, they cannot complete egg laying and incubation duties without regular feeding during incubation to maintain body condition (Ankney 1984). To do this, they need to nest in areas with high density sedges and grasses where the female can feed during brief recesses from incubation. Such areas are limited, and the best food supplies are in the lowest elevation salt marshes near the sea. Because of their low elevation, the areas receive melt waters from the inland areas and remain inundated longest.
Thus, while Snow Geese and Cackling Geese are initiating or incubating nests on higher ground in the upland areas, the Brant have to wait for their low elevation sites to be free of water, ice and snow before they can begin to nest. This usually occurs in mid-June or later, and as a consequence they are the last species of arctic goose to initiate nesting each year (Abraham and Ankney 1986).

The fall flight also follows a period of fall (late August to November) staging in James Bay during which they again store reserves for the migration leg from James Bay to the mid-Atlantic. The exodus from James Bay begins in mid-to late October, but peaks in the first 10 days of November, when ice begins to form on James Bay (OMNR unpubl. data). In both spring and fall, the main route from the mid-Atlantic to James Bay takes them across the southeastern part of Ontario, mainly over eastern Lake Ontario. Most migration is at night, so the birds observed on the ground in both seasons are just a small fraction of the population and probably represent birds that have fallen out of a main flight.

Kenneth F. Abraham

Cackling Goose *Branta hutchinsii*

Rare fall transient, winter straggler

In 2004, the Cackling Goose was reclassified as a full species by the American Ornithologists' Union. It comprises four small subspecies that were formerly part of the Canada Goose (*B. canadensis*) (Banks et al. 2004). Only the nominate subspecies (*B. h. hutchinsii*) has been recorded in Niagara. Beardslee and Mitchell (1965) carefully reviewed the status of small forms of Canada Geese in Niagara. They listed it as “Irregular, very rare” with only one winter record, but they provided details of several observations of small Canada Geese in surrounding areas of southern Ontario and New York State. Its abundance may have changed over the past several decades, but it is still uncommon in Niagara.

There are several records of Cackling Goose from Niagara during the 1966-2006 time frame of this book. The first observation since the reclassification of this species was of two birds discovered on 26 October 2004 by Don Mills at the Peninsula Lakes Golf Course in Fenwick. These two remained until at least 29 October 2004. Since this Fenwick observation, Cackling Goose has been studied and photographed on at least six other occasions in Niagara no doubt because birders are now spending more time looking through flocks of Canada Geese for this smaller form. Its status in Niagara is consistent with its status in the rest of southern Ontario, where it is an uncommon to rare transient (Abraham 2005), and in adjacent Hamilton, where it is considered a rare winter visitant and transient (Curry 2006).

Like most other geese in North America, this species has increased in abundance during the four decades of the reporting period (CWS Waterfowl Committee 2007), and observations in southern Ontario have increased correspondingly, mainly in the fall. The increase in abundance may be responsible for recent increases in the numbers of observations, but the lack of
historical observations may also be a reflection of its former subspecies status; in other words, it may have occurred more frequently in Niagara but was overlooked. As a result, the status of Cackling Goose in the region may change in the near future because birders are now looking for these birds in flocks of Canada Geese.

Beardslee and Mitchell (1965) were far-sighted in stating that "It seems best to confine our records of small Canada Geese, for the present, to B. c. hutchinsii." Although Cackling Geese breed across Arctic North America, most Ontario birds (based on banding records) originate in the eastern Arctic (Nunavut), in northern Hudson Bay and the Foxe Basin especially Baffin Island, which is the range of the nominate subspecies B. h. hutchinsii (Abraham 2005).

Kenneth F. Abraham

Canada Goose *Branta canadensis*

Spring transient, very common permanent resident

The Canada Goose is a permanent resident throughout southern Ontario and a very common permanent resident in Niagara. While these birds may migrate through Niagara in the spring, it is difficult to determine the abundance of spring transients from existing data. In the late 1960s, Canada Geese were rare summer residents in Niagara. The familiar V-shaped formations of these “honkers” migrating north over Niagara were generally regarded as a harbinger of spring (Sheppard 1970). In current times, one sees an occasional flock of Canada Geese that are probably transients, but given the large numbers of local flocks also flying about at the same time, it is difficult to be sure which, if any, are migrating north. Niagara is not on a major migration corridor of any of the subarctic breeding populations of Canada Goose. For an interesting discussion of the migration, or lack of migration, of the various races of Canada Goose in southern Ontario, see Curry (2006).

There was a significant increase, more than 100%, in the probability of observing Canada Goose between atlases in the Carolinian region (Hughes and Abraham 2007). This increase is clearly manifested in Niagara. In the first Atlas, breeding was confirmed in 14 squares and in the second Atlas 24 squares, a substantial increase. According to the Ontario Nest Records Scheme data, the earliest egg date for this species in Niagara is 14 April.
Presently a common bird on the Niagara Christmas Bird Counts, Canada Goose was first seen on a CBC in 1970. Numbers on a single count first exceeded 20 in 1980, and by 1989 they had exceeded 1,000 birds. Sheppard (1970) states that “very occasionally small groups or flocks of Canada Geese may be seen on the Niagara River in mid-winter.” Numbers of this species in Niagara have continued to grow over the years. In southern Ontario, the 2007 spring breeding pair estimate was approximately 72,000 (144,000 adults), and when goslings and non-breeding birds are included, the fall population is approximately 500,000 (CWS Waterfowl Committee 2007).

John E. Black

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**Post-2006 Observation**

On 25 January 2008, Rob Hanson and Kayo Roy independently located an all ‘white’ Canada Goose in the Welland River off Merritt Island in downtown Welland. The photographs were sent to Ken Abraham for his expert opinion, and he determined that the bird has a form of leucism. He suggests that the bird’s genetically based inability to produce pigments at normal levels (at least in feathers) or possibly a somatic inability to produce pigments (e.g., a developmental anomaly) or perhaps even hybridization may have caused this condition in the bird’s appearance. A true ‘albinistic’ Canada Goose is really a very rare bird (Kenneth Abraham pers. comm.). This individual was last seen on 29 January 2008.
Mute Swan *Cygnus olor*

Rare permanent resident

Mute Swans were introduced into Ontario during the early years of the 20th century. Widely kept in captivity, some escaped and bred in the wild, their numbers increasing as they gradually spread around the lower Great Lakes. They are currently resident around the shores of the lower Great Lakes, seldom appearing at inland sites. Individual reports by local birders (BOSNR) probably contain some duplication both by day and over time. Weather and season would also influence the number afield. From 1966 to 1979, 13 birds were reported, compared with 50 from 1980 to 1999 and 365 from 2000 to 2006 (BOSNR). Most of the observations occurred in Bertie Township, now Fort Erie. These data suggest a steady increase in Mute Swans over time, a trend consistent with the growing numbers on the lower Great Lakes (Petrie and Francis 2003).

According to the Ontario Nest Records Scheme data, the first record of breeding in Niagara for this species is of an adult on a nest on 3 May 2003. The nest was located on Martindale Pond in St. Catharines a few hundred metres south of the Queen Elizabeth Way. Since 1987 there had been a pair of Mute Swans wintering on the pond north of the Queen Elizabeth Way, and they were still there in January 2005. It is quite possible that this first nest to be discovered was theirs. The Mute Swan’s nest is a huge structure often 3 metres in diameter and usually located in a stand of cattail or similar vegetation. Four to ten eggs are laid, which hatch in about 35 days in mid-to late May (Harry Lumsden unpubl. data). The fidelity of Mute Swans to their nesting sites is highly developed. Cygnets fly from 120 to 150 days, and the broods break up in late fall.
Mute Swans seldom seem to migrate, but local movements take place so that concentrations occur in winter at Consecon Lake in Prince Edward County, the Toronto waterfront, La Salle Park in Burlington, Long Point and the Detroit River. The highest numbers tend to collect where the swans are fed.

The BOS CBC recorded only single birds in 1987 and 2002. The other CBCs first found six Mute Swans in St. Catharines in 1996. Every year since, they have been counted on the Port Colborne and St. Catharines CBCs. In January 2003, Jean and Blayne Farnan observed 37 Mute Swans on Gravelly Bay in Port Colborne.

*Harry G. Lumsden*

**Trumpeter Swan Cygnus buccinator**

*Occasional winter visitor*

The original population of Trumpeter Swan in southern Ontario was extirpated in the early 18th century. The Grimsby archaeological site contained six bone artefacts and a wingtip of Trumpeter Swan (Lumsden 1984b). Restoration of this species started in 1982 in southern Ontario. The species is now widespread in the Cambridge, Toronto and Midland areas, and it is at present an occasional winter visitor in Niagara.

On 21 February 1988, an immature Trumpeter Swan with no wing tag was observed on the Niagara River near Central Avenue in Fort Erie by Robert Andrle (KJR). In January 1997, a single bird was seen on Lake Erie at Point Abino (BOSNR). An immature bird was reported on the Welland River near Chippawa on 27 December 2004, observed there by John Miles during the Niagara Falls CBC. The BOS reported one bird at Niagara Falls on the CBC in 2005. From 18 December 2005 to 22 January 2006, a Trumpeter wearing the wing tag 928 was seen on the Niagara River on the brink of the Horseshoe Falls. This bird was hatched in 2003 and released at Lloydtown, Ontario, on 24 June 2005. It was joined by a wild hatched cygnet on 22 January. On 29 January 2006, there were four sightings of Trumpeter Swans on the river between Fort Erie and the Horseshoe Falls in Niagara Falls. Among them was a swan wearing the tag 847, too young to be the parent of the cygnet that was with it.

Swan 847 was hatched in 2004 and released at Grand Valley, Ontario, on 2 September 2004. It was last recorded on the river on 27 February 2006.
Marked Trumpeter Swans invading from Minnesota and Wisconsin bred in the Kenora-Fort Frances Districts of western Ontario. The first case of breeding was recorded in 1989. Michigan releases are likely the origin of two broods seen on St. Joseph Island in 2005 and a brood on Wabatongushi Lake east of Franz, Ontario, in 2006. In Ontario between Sudbury and Lake Erie and from the Bruce Peninsula to Prince Edward County, there were estimated to be 776 Trumpeters as of 1 September 2006. In southern Ontario there is a small breeding population in the Brockville-Rideau Lakes area descended from invaders from New York, supplemented by releases at Brockville, Cataraquai Creek near Kingston and Portland, Ontario.

Most Trumpeters winter in Ontario; only a very small number move to the United States. They concentrate on open water, particularly at La Salle Park in Burlington, but some can be found along the north shore of Lake Ontario at Bluffers Park and Frenchman’s Bay and at inland areas such as the Severn River mouth on Hudson Bay, the Wye Marsh in Midland, and Ramsey Lake at Sudbury.

All swans build huge nests, Trumpeters choosing a beaver house, a muskrat house in a marsh or sometimes a log or stump in drowned forest as a base. The nest is composed of stems of emergent vegetation close to the nest site. In a marsh the nest is often surrounded by a moat from which material has been collected. The nest may be as much as 3 metres in diameter at the base. Trumpeters take readily to artificial structures such as rafts for nesting. Unlike most other waterfowl, the Trumpeter does not use down to line the nest. Incubation is largely carried out by the female, but some males may cover the eggs when the female takes a recess to drink, feed and wash.

There is a good likelihood of Trumpeters breeding in Niagara in the future. A pair nested at Selkirk in 1999, and there is confirmed nesting to the west of Niagara and in the Hamilton area from the second Atlas. Wherever Mute Swans nest, there would be habitat for Trumpeters. They have nested in marinas and parks and are not bothered by people as long as they are left alone.

Harry G. Lumsden

Post-2006 Observation
There is only one record of Trumpeter Swan after 2006. On 13 April 2008, Kayo Roy observed and photographed an immature bird (as illustrated) feeding in Lake Gibson, Thorold (BOSNR). It was in the company of an adult Mute Swan. The Trumpeter was last observed on 22 May 2008. This sighting represents the only breeding season record for Niagara.

Tundra Swan *Cygnus columbianus*

Uncommon spring and fall transient, uncommon to rare winter resident

The Tundra Swan is an uncommon transient across the Niagara Peninsula. The April, May and October BOS counts miss the peaks of migration, which occur in the late winter and early spring in February and March and in the fall in October and November. The BOS April Counts totalled 268 birds with a mean of 11 per year. The May count totalled 39 and the October count 16. An early fall record of a returning bird is of one seen at the Smithville sewage ponds on 9 October 1989 (HNCNR).

BOS Noteworthy Records indicate that Niagara yielded peaks of 1,328 in March and 2,775 in November. Of the total 6,081 birds, 35% were counted in February and March and 26% in November. Only in September were no Tundra Swans observed.

The BOS CBC reported sporadic sightings of single birds from 1967 to 1994. The numbers began to increase in 1996, and this trend continued until 2006, when 167 Tundra Swans were counted as compared with a total of 53 birds for all the previous years. The greatest numbers were seen at Port Colborne, the highest count being 171 in 2005. The St. Catharines CBC has recorded only one bird since it inception in 1982.
Tundra Swans have been steadily increasing in North America. They have more than doubled their numbers since 1950 so that the eastern population now exceeds 100,000 (U.S. Fish and Wildlife Service 2000). There has been a steady rise in the numbers recorded in Niagara, part of which may be attributed to the increasing numbers of naturalists participating in counts since 1966. The New York Winter Waterfowl Survey (January) yielded a total count of 640 Tundra Swans from 1987 to 2006, the highest number counted after that of February, March and November.

The Niagara Peninsula lies on the route of migrating swans heading for Long Point, an important refuelling stop for them. Few stop in Niagara, probably since their objective is relatively close. The western population breeds on the west coast of Alaska south of Point Hope. They winter from Alaska and British Columbia to California and Nevada.

Extirpated as a breeding species during fur trade days on the Hudson Bay coast of Ontario, the Tundra Swan has recently returned. The first nesting record was in 1973, when a brood of two was photographed from the air about 32 km east of the Sutton River mouth near the Hudson Bay coast (Lumsden 1975). In 1984, five broods were found on an aerial survey of a 3,284-km² study area in Polar Bear Park. Since only 32% of this area was sampled, 15 broods are estimated to have been present (Lumsden 1984a). Recently many broods have been found along the Hudson Bay coast and west into Manitoba (Kenneth Abraham pers. comm.).

In the Niagara Peninsula, the best places to look for Tundra Swans during the migratory periods are at Gravelly Bay in Port Colborne on Lake Erie, on the Niagara River and close to the shore of Lake Ontario. Up to several hundred birds can be found at Gravelly Bay (Blayne Farnan pers. comm.). During the winter months they can be found in smaller numbers at Gravelly Bay, on the Niagara River and on the eastern shore of Point Abino.
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Large numbers of waterfowl are swept over Niagara Falls when certain weather conditions prevail. Foggy nights with a light downstream wind seem to be associated with such events, although occasionally losses occur without fog. Necropsy of dead ducks revealed that the sternum was cracked by the immense pressure of falling water at the bottom of the falls (Harry Lumsden pers. obs.). Some birds, however, survive this catastrophic ride, and Tundra Swans are frequently among the survivors. Fleming (1912b) records a loss of about 200 swans at Niagara Falls in 1912. There have been fewer casualties in recent years.

The eastern wintering population of Tundra Swans breeds in eastern Siberia (a few), the north slope of the Brooks Range in Alaska, and across the Canadian Arctic to Baffin Island and Ungava. These birds move south, crossing Minnesota, Wisconsin, Michigan and southern Ontario in a relatively narrow band. They winter in the Atlantic coast states from New Jersey to South Carolina (Limpert and Earnst 1994).

Harry G. Lumsden

Wood Duck
Brandon Holden

First Atlas: 13 squares confirmed, 4 probable, 2 possible
Second Atlas: 17 squares confirmed, 4 probable, 2 possible
BOS April Count: Reported on 28 of 41 counts, maximum of 31 birds in 1995
BOS May Count: Reported on 19 of 41 counts, maximum of 40 birds in 2004
BOS October Count: Reported on 23 of 40 counts, maximum of 15 birds in 1987
Niagara Christmas Bird Counts: Reported on 11 of 41 counts, maximum of 2 birds on the 1991 and 1998 St. Catharines CBC
Lake Ontario Mid-winter Waterfowl Survey: Reported on 1 of 23 counts, maximum of 1 bird in 1989

Wood Duck Aix sponsa
Uncommon spring and fall transient, uncommon summer resident, occasional winter straggler

A male Wood Duck in breeding plumage is one of the most attractive of all Niagara’s birds. The Wood Duck is probably an uncommon spring transient in Niagara, but it is not clear how to distinguish between transients and birds arriving in the area to breed. Two reported early dates of spring arrival are 16 March 1997, when five males were seen at the Port Robinson sewage ponds (KJR), and 27 March 1994, when four birds were seen at the Grimsby sewage ponds (HNCNR).

The Wood Duck, which breeds throughout southern Ontario, is an uncommon summer resident in Niagara. According to the Ontario Nest Records Scheme data, the earliest egg date for this species in Niagara is 3 June.
There are seven BOSNR records for November. An occasional winter straggler, the Wood Duck has been seen on five BOS Christmas bird counts, four Niagara Falls CBCs, two Port Colborne CBCs and three St. Catharines CBCs. There are three December records, eight January records and five February records from the BOSNR.

The Wood Duck winters in the southern United States and farther south (National Geographic 2006).

John E. Black

Gadwall Anas strepera
Spring and fall transient, occasional summer resident, rare winter straggler

It is not clear how to assign spring transient abundance or spring arrival dates to this species because the small number of possible migrant Gadwall cannot reliably be separated from the small number of birds that overwinter in the area.

The Gadwall is a scattered breeder throughout southern Ontario and an occasional summer resident or straggler in Niagara. In the first Atlas, breeding was confirmed in the square containing Mud Lake in Port Colborne, and in the second Atlas probable breeding was found in the same square, when a pair of birds was observed on 1 May 2003 in suitable habitat. A single bird was seen by an atlasser on 16 July 2004 in an area east of the Welland Canal in St. Catharines. In the BOS Noteworthy Records, Gadwall are often reported in the summer months. There are six records for June, six records for July and three records for August. There are five BOSNR records for November.

A rare winter straggler, Gadwall are seen on almost all BOS and Niagara Falls CBCs but less frequently on the St. Catharines and Port Colborne counts. Up to 20 birds are almost always found wintering on the river near the old Ontario Hydro building above Niagara Falls. On 21 December 1969, Harold Lancaster observed 26 Gadwall in the rapids above the falls. The Gadwall winters in the vicinity of Lake Ontario and Lake Erie and farther south (National Geographic 2006).

John E. Black
Eurasian Wigeon *Anas penelope*

Extremely rare visitor

A common, widespread bird of the Old World, the Eurasian Wigeon has become a regular visitor to all corners of North America. Two distinct populations exist: a few hundred birds in the Atlantic east, probably arriving from Iceland, and several thousand in the Pacific west, likely birds that moved eastward from Siberia (Bellrose 1976).

The Eurasian Wigeon, formerly known as European Widgeon, is an extremely rare visitor to Niagara at which times it is almost always found with its American counterpart, the American Wigeon. The date of the first recorded sighting for Niagara is difficult to ascertain as Beardslee and Mitchell (1965) identifies observations in the BOS study area in 20 out of 27 years, with no detail of dates or locations. One old record exists of a European Widgeon found “in March many years ago” by James Savage in Port Colborne. No exact date is known (Sheppard 1970).

There were five records of Eurasian Wigeon in Niagara during the 1966-2006 time frame of this book. Robert Andrlé, Richard Byron and Richard Knapton discovered a first-winter male on 15 November 1983 in Niagara Falls that remained there until 20 December 1983 (BOSNR), (not 15 November - 18 December 1983 as in Wormington 1985). On 28 March 1987, Robert Curry identified a very rare rufous morph female at the Smithville sewage ponds (photographed by Kayo Roy) that was last seen on 30 March 1987 (Coady 1988, Curry 2006). On 27 March 1993, Jean and Blayne Farnan observed a breeding plumaged male Eurasian Wigeon in a wet field on Dixie Road in Wainfleet that was last seen the next day, 28 March 1993. Kevin McLaughlin studied a molting male on 9 July 2000 at the Grimsby sewage ponds (Curry 2006). Barry Cherriere photographed an adult male on 20 May 2005, also at the Grimsby sewage ponds, that was last seen on 22 May 2005.

The breeding range for Eurasian Wigeon extends across northern Eurasia, and the species winters in southern Europe, northern Africa and southern Asia (Bellrose 1976). It is not known to breed in North America, but it is an annual spring and winter vagrant on both the Atlantic and Pacific coasts and more rarely inland (Madge and Burn 1988).

*Kayo J. Roy*
American Wigeon *Anas Americana*

Uncommon spring and fall transient, rare summer resident, rare winter straggler

The American Wigeon, formerly known as “Baldpate”, is an uncommon spring transient in Niagara. An earliest date of arrival is 15 March 1969, when three birds were seen at Fort Erie (BOSNR).

The American Wigeon breeds throughout southern Ontario and is a rare summer straggler in Niagara. In the first Atlas, breeding was confirmed in one square containing Mud Lake in Port Colborne; and in the second Atlas, probable breeding was found in the same square, when a pair of birds was observed on 1 May 2003 in suitable habitat. A single bird was seen by an atlasser on 11 June 2002 in the town of Fort Erie, an unlikely place for the bird to find suitable breeding habitat. In the BOS Noteworthy Records, American Wigeon is often reported in the summer months. There are 12 records in June, the maximum for these being 30 birds; nine records in July, the maximum being six birds; and four records in August, the maximum being nine birds.

There are six BOSNR records for November.

A rare winter straggler, the American Wigeon is seen on almost all BOS and Niagara Falls CBCs but less frequently on the St. Catharines and Port Colborne counts. As many as 20 wigeon can be found wintering in the gorge below Niagara Falls between the Maid of the Mist dock and an area a few hundred metres north of the Rainbow Bridge. Harold Lancaster observed an amazing number of wigeon (600) on the upper Niagara rapids on 1 January 1971. There are twelve December records, eight January records and five February records from the BOSNR. The American Wigeon winters in the southern United States and farther south (National Geographic 2006).

*John E. Black*
American Black Duck *Anas rubripes*

Spring and fall transient, uncommon summer and winter resident

The American Black Duck, once the most abundant dabbling duck in eastern North America, today is only half as numerous as in the 1950s. Strict harvest regulations have been in place in both Canada and the United States since the mid-1980s, which have helped slow down this population decline. The American Black Duck feeds mainly on plants, mollusks and aquatic insects by dabbling in shallow water and grazing on land. It is partially migratory; however, some remain year-round in the Great Lakes region. Unusual among dabbling ducks, the male and female American Black Duck are almost identical, distinguished in the breeding season only by the bright yellow bill of the male.

The American Black Duck is closely related to the Mallard, with which it regularly and extensively interbreeds (McCarthy 2006). About 5% of wild ducks that look like American Black Ducks in eastern North America are actually hybrids (McCarthy 2006).

The American Black Duck breeds throughout southern Ontario and is an uncommon summer resident in Niagara. While these birds migrate through Niagara in the early spring and fall, it is difficult to determine the abundance of transients because they cannot readily be distinguished from the residents.

Summer resident numbers of this species have declined over the years covered in this book. Beardslee and Mitchell (1965) state that “with the exception of the Blue-winged Teal it was until recent years our most common nesting duck.”

American Black Ducks are uncommon winter residents in Niagara. A good place to see them is in the rapids above the Horseshoe Falls by the Gate House building and in the ponds of Dufferin Island in Niagara Falls. This duck winters in the vicinity of Lake Ontario and Lake Erie and in the southern United States (National Geographic 2006).

John E. Black
Mallard *Anas platyrhynchos*

Spring and fall transient, common summer and winter resident

The colourful, eye-catching Mallard is perhaps the best-known and most recognizable wild duck in the world. When people think of a duck, they almost always think of a Mallard. It is the ancestor of all domestic ducks except Muscovy, and it inhabits most wetlands including parks, small ponds and rivers. Feral populations of tame ducks composed of mixtures of wild Mallards and domestic breeds live in urban areas throughout the world, where they habituate to humans who feed them (Drilling et al. 2002). The Mallard is a typical member of the surface-feeding group of ducks known as dabblers and has been recorded as living as long as 29 years (Klimkiewicz and Futcher 1989).

This common and widespread duck, the most abundant duck in North America, is known to hybridize in the wild with American Black Duck, Mottled Duck, and less frequently with Gadwall, Northern Pintail, Cinnamon Teal, Green-winged Teal and Canvasback (Drilling et al. 2002). In Niagara, interbreeding occurs with American Black Duck more often than with other wild or domestic duck species.

The Mallard is a common summer resident in Niagara and is found everywhere in the region. According to the Ontario Nest Records Scheme data, the earliest egg date for this species in Niagara is 3 May. While these birds migrate through Niagara in the early spring and fall, it is difficult to determine the abundance of transients because they cannot readily be distinguished from the residents.

The Mallard winters in the vicinity of Lake Ontario and Lake Erie and farther south (National Geographic 2006).

*John E. Black*

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Blue-winged Teal *Anas discors*

Uncommon spring transient, rare summer resident, fall transient, extremely rare winter straggler

The Blue-winged Teal is an uncommon spring transient in Niagara. An early date of arrival is 9 March 1969, when two birds were seen at Fort Erie (BOSNR). There are three other March sightings reported in BOSNR.

The Blue-winged Teal, which breeds in southern Ontario, is now a rare summer resident in Niagara. Sheppard (1970) described the Blue-winged Teal as a reasonably common summer resident in Niagara. According to the Ontario Nest Records Scheme data, the earliest egg date for this species in Niagara is 16 June.
In the BOS Noteworthy Records, there are six August reports; the one or two birds reported at various locations in Niagara between 1 August and 21 August could be migrants returning south from their breeding grounds. On 4 September 1982, 125 birds were observed at the Smithville sewage ponds (HNCNR). On 5 September 1971, 500 birds were observed at Mud Lake in Port Colborne by Harold Lancaster. On 19 September 1983, 250 were observed between Lowbanks and Morgan’s Point near Burnaby (BOSNR). One record exists in the HNCNR for November from the Grimsby sewage ponds.

An extremely rare winter straggler, the Blue-winged Teal has not been seen on any Niagara Christmas bird count. There are two December records, one January record and one February record in the BOSNR — all of single birds and all but one December record from Dufferin Island, Niagara Falls. A single female observed at Dufferin Island on 17 February 2000 was quite probably the same bird observed there on 7 January 2001 (KJR). The Blue-winged Teal winters in the southern United States and farther south (National Geographic 2006).

John E. Black
Northern Shoveler *Anas clypeata*

Uncommon spring and fall transient, occasional summer resident, occasional winter straggler

The Northern Shoveler is an uncommon spring transient in Niagara. An early date of arrival is 12 March 1990, when two birds were seen at the Grimsby sewage ponds (HNCNR). There is one March BOS Noteworthy Record. While it was seen on 25 of 41 BOS April Counts, it was seen on only three of 41 May Counts. The latest date is 28 May 2000, when two birds were reported from St. Catharines (BOSNR).

While some Northern Shovelers breed in various parts of southern Ontario, the species breeds primarily in western Canada. It is an occasional summer resident in Niagara. In the first Atlas, there were no reports of breeding, and in the second Atlas, possible breeding was reported from one square and confirmed breeding from two squares. (Young birds were seen at Vanderliek farm pond in Bismark and on the Lake Erie shore near Fort Erie).

In the BOS Noteworthy Records, there are six August reports; the one or two birds reported at various locations in Niagara between 3 August and 25 August could be early returning migrants. There are two records in BOSNR for November and five records in HNCNR for November from the Grimsby sewage ponds.

An occasional winter straggler, the Northern Shoveler was first recorded on a Niagara Falls Christmas Bird Count in 1986 and has been found on only one BOS count, five Niagara Falls counts and two St. Catharines counts since that date. BOSNR contains one December record, five January records and two February records. The Northern Shoveler winters in the southern United States and farther south (*National Geographic* 2006).

*John E. Black*

Northern Pintail *Anas acuta*

Uncommon spring and fall transient, extremely rare summer resident, rare winter straggler

The Northern Pintail is one of the top 20 common species in decline as determined by the National Audubon Society (*Audubon* 2007). It is an uncommon spring transient in Niagara. There are seven March records from the BOSNR. The earliest date of sighting is 18 March 1975, when Harold Lancaster observed 14 birds at Mud Lake in Port Colborne. The latest date is 30 May 1971, when one bird was reported from Morgan’s Point near Burnaby (BOSNR). Small numbers of these birds can often be found in Niagara on ponds and lakes during the migration period.

Northern Pintail, an extremely rare summer resident in Niagara, breeds from the lower great lakes north to Hudson Bay. There are no atlas breeding records. There is one record in the Ontario Nest Records Scheme data for Niagara, an earliest egg date for this species of 25 June 1969. There are six June records and eight July records from BOSNR.

In the BOSNR there are 15 August reports of birds that could be either early returning migrants or summer stragglers. There are four records in BOSNR for November.

A rare winter straggler, the Northern Pintail has been found on 14 BOS Christmas Bird Counts, 13 Niagara Falls counts, four Port Colborne counts and three St. Catharines counts. The largest number of birds reported on a count was 53 birds on the 2006 St. Catharines CBC. The Northern Pintail winters in the southern United States and farther south (*National Geographic* 2006).

*John E. Black*
Green-winged Teal *Anas crecca*

Uncommon spring and fall transient, occasional summer resident and winter straggler

The Green-winged Teal is an uncommon spring transient in Niagara. It is the smallest and one of the fastest-flying North American dabbling ducks (Hughes 2007). The earliest date of arrival is 18 March 1990, when two birds were found in Fort Erie (BOSNR). The latest date is 30 May 2000, when one bird was reported from West Lincoln (BOSNR).

The Green-winged Teal, which breeds from the Great Lakes north to Hudson Bay, is an occasional summer resident in Niagara. There are two June and seven July records in BOSNR.

In the BOS Noteworthy Records, there are 16 August reports; the one to six birds reported at various locations in Niagara between 6 August and 29 August could be early returning migrants. There is one exceptional record — 26 birds observed at Windmill Point, Fort Erie, by Willie D’Anna on 21 August 1999 (BOSNR). For November, the BOSNR contains five records.

There are two records of the Eurasian race of the Green-winged Teal *Anas crecca crec-csa* from Niagara. On 20 April 1969 Harold Lancaster and Alan J. Smith found an adult male at Mud Lake in Port Colborne. On 28 November 2004 an adult male was found by Willie D’Anna, Jean Iron and others in the Hydro One impoundment cell just south of the old Gate House building in Niagara Falls.

An occasional winter straggler, the Green-winged Teal has been seen on only six BOS CBCs (five of these between 1999 and 2003), one Niagara Falls count, one Port Colborne count and two St. Catharines counts. There are seven December records, fifteen January records and five February records from the BOSNR. A pair of birds found on 27 February 1966 by Dan Salisbury at the Happy Rolph Bird Sanctuary in St. Catharines could have overwintered there or been early migrants. The Green-winged Teal winters in the southern United States and farther south (*National Geographic* 2006).

John E. Black

Canvasback

*Aythya valisineria*

Very common (upper Niagara River) to uncommon winter resident, occasional summer straggler

The Canvasback is an uncommon spring transient in Niagara. Arrival is usually in early to mid-March. However, exact arrival dates are difficult to determine because many of the birds seen in March and April are likely birds that have spent the winter on the Niagara River.

The Canvasback is a very rare breeder in Ontario. It breeds primarily west from Manitoba to British Columbia and north to Yukon and Northwest Territories in Canada (Coady 2007a). There was no breeding documented in Niagara in either atlas, and the closest nests were found on the Toronto Islands, on the Leslie Street Spit in Toronto, and in Oshawa. It is an occasional summer straggler in Niagara. There are only three summer records (all individual birds) from Niagara in the BOSNR and an additional three in the HNCNR.
There are no August or September BOSNR reports. Arrival is usually in mid- to late October. The earliest migrant return date is of a single bird at the Smithville sewage ponds on 9 October 1989 (HNCNR). On 31 October 1981, Arthur Schaffner observed 15,000 Canvasbacks on the Niagara River in Niagara Falls, the maximum count in the BOSNR.

Most common in late fall and winter, Canvasbacks are recorded nearly annually on the BOS and Niagara Falls CBCs, regularly on the Port Colborne CBC, but irregularly on the St. Catharines CBC. Flocks in the hundreds and (low) thousands can be found on the upper Niagara River each winter, where numbers seem to be increasing over time but are highly variable from year to year (New York Winter Waterfowl Count).

Michael M. Morgante

Redhead *Aythya americana*

Uncommon spring and fall transient, occasional summer resident or straggler, uncommon to rare winter resident

The Redhead is an uncommon spring transient in Niagara. There are five sightings for March in BOSNR. The latest spring dates are 26 May 2000, when one bird was reported from Long Beach (BOSNR), and 27 May 1990, when one bird was observed at the Grimsby sewage ponds (HNCNR). The abundance of spring transients cannot be assigned because the small number of possible migrant Redhead cannot be readily distinguished from the small number of birds that overwintered in the area.

Although primarily a bird of western Canada, the Redhead is also found breeding in the vicinity of the lower Great Lakes. It is an occasional summer resident or straggler in Niagara. In the first Atlas, confirmed breeding was reported from Mud Lake in Port Colborne. In the second Atlas, no breeding was reported. There are four June records (all from the Port Colborne area, where they were known historically to breed) and one July record (BOSNR).
Three August reports of Redhead (BOSNR) could actually be an indication of early returning migrants. On 12 November 1972, Harold Lancaster observed 1,000 birds on the Niagara River off Chippawa.

An uncommon to rare winter resident, the Redhead has been seen in small numbers on many of the Niagara Christmas bird counts. A likely place to find these birds is on the upper Niagara River between Fort Erie and Niagara Falls. They are often with flocks of Canvasback or Greater Scaup. Harold Lancaster observed 250 birds on 10 January 1971 on the Niagara River above Niagara Falls. The Redhead winters in the vicinity of Lake Erie and Lake Ontario as well as in the southern United States and farther south (National Geographic 2006).

John E. Black

Ring-necked Duck
Aythya collaris

Uncommon spring and fall transient, rare winter straggler

The Ring-necked Duck is an uncommon spring transient in Niagara. Only five records appear in the March BOS Noteworthy Records. Early spring arrival dates are 6 March 1983, when four birds were found at the Grimsby sewage ponds (HNCNR), and 18 March 1992, when 87 birds were reported from the Smithville sewage ponds (BOSNR). On 30 March 1991, 200 birds of this species were reported from the Smithville sewage ponds (HNCNR). The latest spring date is 25 May 1999, when one bird was reported from the Vanderliek farm pond in Bismark (BOSNR). A few individuals of this species can often be found on small ponds and lakes in Niagara during the migration period.

Ring-necked Ducks breed from north of Lake Ontario to Hudson Bay. There are no summer records for this species. There was a significant increase (58%) in the probability of observing this species between atlases in Ontario (Leckie 2007a).

On 25 August 1996 a Ring-necked Duck was observed at the Smithville sewage ponds (HNCNR). The next earliest date of return for a migrant is for a single bird on 11 September 1977 at Mud Lake in Port Colborne. There are 10 records in BOSNR for November.

A rare winter straggler, the Ring-necked Duck has been seen on six BOS Christmas Bird Counts, 17 Niagara Falls counts, five Port Colborne counts and one St. Catharines count. A likely place to look for these ducks in the winter is on the Niagara River between Fort Erie and Niagara Falls. They are often with flocks of Canvasback or Greater Scaup. Eight birds found on 25 February 2003 at St. Ann's (Curry 2006) were probably early spring transients. The Ring-necked Duck winters in the southern United States and farther south (National Geographic 2006).

John E. Black
Tufted Duck

Extremely rare visitor

The obvious black tuft at the back of the head gives this Old World, freshwater diving duck its name. Increasing numbers of Tufted Duck are reaching North America in fall migration and are winter visitors mostly on the Atlantic and Pacific coasts. The species does wander inland on occasion and is usually found as a single individual mixed in with flocks of Greater Scaup or Ring-necked Ducks.

The Tufted Duck is clearly an extremely rare visitor to Niagara with only two known records. The first is that of a definitive alternate male bird found on 17 January 1999 by Michael Morgante in the Niagara River at Fort Erie. To the delight of many observers, this bird remained until 27 January 1999 (Roy 2001, BOSNR).

The second is that of another definitive alternate male found by Kayo Roy on 24 January 2004 in the Welland Canal near Lock 1 at Port Weller in St. Catharines. Persistently associating with a group of Greater Scaup, this Niagara rarity was not seen after 6 February 2004 (Crins 2005, BOSNR).

The Tufted Duck breeds widely across northern Europe and Asia, central Europe to northern Mongolia and northern Japan. It winters in the Mediterranean, Black and Caspian Sea lowlands and east to southern and eastern China and Japan (Madge and Burn 1988).

Kayo J. Roy
Greater Scaup *Aythya marila*

Very common winter resident on large bodies of water

The Greater Scaup is a common early spring transient on large bodies of water in Niagara. It is much less common on inland lakes and ponds. Arrival is usually in early March. However, exact arrival dates are difficult to determine because many of the birds seen in March and April are likely birds that have spent the winter in Niagara. It is uncommon after late April.

There was no breeding documented in Niagara in either atlas. In Ontario, Greater Scaup nests within the Hudson Bay Lowlands (S.S. Badzinski 2007a). A circumpolar breeder, it is widely distributed from Alaska to Labrador across arctic and subarctic regions (S.S. Badzinski 2007a). The Greater Scaup is a rare summer visitor to Niagara with approximately 12 summer records (maximum of three birds) in BOSNR and an additional three in the HNCNR.

The bulk of fall transients return between mid-October and early November, with the earliest typically returning in late September and early October. The earliest migrant return date that can be separated from a summer visitor record is 1 September 1982, when one bird was seen at the Grimsby sewage ponds (HNCNR). It is very common in fall migration on large bodies of water.

Greater Scaup are recorded nearly annually on all four Niagara Region CBCs. Impressive numbers of this diving duck can be found in winter on the upper Niagara River, especially when Lake Erie freezes. They are very common in winter in the waters between the ice boom and the Peace Bridge, near Strawberry Island and the southern tip of Grand Island, and near the water intakes above the International Niagara Control Works structure in Chippawa. Greater Scaup form large, compact flocks of hundreds and thousands of birds in these areas, often with other waterfowl species mixed in. The maximum count in the BOS Noteworthy Records is 30,000 birds reported by Brendan Klick on 17 January 1999 in Fort Erie.

Michael M. Morgante

Lesser Scaup *Aythya affinis*

Uncommon spring and fall transient, uncommon winter resident

The Lesser Scaup typically arrives in mid-March and is an uncommon transient through April. It is more likely to be seen on smaller bodies of water in Niagara than its congener the Greater Scaup.

There was no breeding documented in Niagara in either atlas. The closest confirmed breeding during the second Atlas occurred near Lake St. Clair. Lesser Scaup is most common within the Hudson Bay Lowlands in Ontario (S.S. Badzinski 2007b). It is a widely distributed breeder with a core breeding range from Alaska through Manitoba (S.S. Badzinski 2007b). It is an occasional summer visitor with approximately 16 records (maximum of four birds) from Niagara in the BOSNR and an additional 14 in the HNCNR.
Fall arrival of this species typically commences in mid-September, and it is a common transient through mid-October.

The earliest return date in Niagara was that of a bird identified at Port Weller in St. Catharines on 31 August 1986 (BOSNR); however, it is difficult to distinguish between summer records and those of early returning transients.

Lesser Scaup are recorded nearly annually on the BOS and Niagara Falls CBCs and regularly on the Port Colborne and St. Catharines CBCs. In winter, on the large bodies of water in Niagara, it is much less common than the Greater Scaup, although it is increasing in regularity and numbers. A documented increase in the numbers of Lesser and Greater Scaup at Long Point, Ontario (on Lake Erie to the west of Niagara) was found to correspond with the introduction and increase of non-native zebra mussels and quagga mussels on the Great Lakes in the late 1980s and early 1990s (Petrie and Knapton 1999). The maximum Niagara count in the BOSNR is 539 at Fort Erie on 19 January 2003.

Michael M. Morgante

King Eider *Somateria spectabil*

Rare winter visitor

King Eider sightings in the spring are usually of birds that have overwintered in Niagara; however, the greatest numbers of eiders have been found in March. A group of 40 birds was observed on 29 March 1997 on Lake Ontario in Vineland, and 36 birds were counted at the same location on 1 April 1997 (BOSNR). A few adult males were identified in this group, a very rare occurrence for Niagara since most sightings are of females or immature males. Other than maximum counts in the low 20s at Vineland in 1998 and at Niagara-on-the-Lake in 1967, all other sightings have been of eight or fewer birds, and usually just of one or two birds (BOSNR).
The King Eider breeds in the far north of Canada and was not documented as a breeder in Ontario in either atlas. There have been very few nests found in Ontario, the last one being at the Sutton River (Hudson Bay Region) in 1983 (Sutherland 2007a). There are no summer records within the time period (1966-2006) of this account.

It is occasionally observed in fall migration, most often in mid-November. The earliest migrant return date is for one bird seen at Niagara-on-the-Lake in 1976 and two seen at Niagara Falls in 1977, both on 31 October (BOSNR).

The King Eider is a rare winter visitor with even fewer sightings in other seasons. Usually there are only a handful of King Eider sightings each winter and those in small numbers. A breeding plumaged male spent the winter months of 1986-1987 at Niagara-on-the-Lake (BOSNR). It is found only occasionally on the CBCs, and all sightings have been from Lake Erie, Lake Ontario or the Niagara River. In recent years, it has been most often picked out among flocks of scoters on Lake Ontario.

The King Eider winters on the east and west coasts of Canada and the United States (National Geographic 2006).

Michael M. Morgante

Common Eider Somateria mollissima
Extremely rare visitor

The gregarious Common Eider, a Holarctic bird of northern seacoasts, is the largest duck in the northern hemisphere. Of the four North American subspecies, the most likely to be observed in Niagara is sedentaria, which breeds and winters on Hudson and James Bays. Dresseri, from the Atlantic coast, has also been recorded in southern Ontario. While Beardslee and Mitchell (1965) and Sheppard (1970) assign separate accounts in their publications for these two subspecies, all observations will be included in this account, and when known, the subspecies that were observed will be indicated.
Beardslee and Mitchell (1965) and Shepard (1970) describe in detail the early observations of Common Eider in Niagara. The first record for Ontario and for Niagara is that of three young males observed on the Niagara River off the Canadian side of Navy Island, one of which was collected on 21 November 1936 (Sheppard 1937, 1960). This bird was forwarded to Percy A. Taverner who verified the identification and confirmed the bird to be *sedentaria*. The specimen is at the Canadian Museum of Nature, Ottawa (CMNAV # 27502).

During the 1966-2006 time frame of this book, there are only four records of Common Eider from Niagara. On 28 December 1966 and also on 1 January 1967, Daniel Salisbury observed this extremely rare visitor in the Niagara River gorge, Niagara Falls. On 18 December 1969, Rachel and Harold Axtell discovered a first-winter plumaged male Common Eider on the Niagara River near Baker’s Creek; it moved to the mouth of the Welland River in Chippawa, where it remained continuously for some 18 months, being last seen on 10 January 1971 (Bain 1994, BOSNR, m. obs.). This Chippawa Common Eider may have been incapacitated in some way that prevented it from leaving the area, and during the period of its presence, the bird molted into full alternate plumage, to the delight of many observers.

On 3 June 1995, Kevin McLaughlin found an adult male in the Lake Ontario waters of Niagara off Fifty Point Conservation Area that was last observed on 4 June 1995 (Dobos 1996). Denys Gardiner and William Smith reported four female Common Eiders in Lake Ontario, again off Fifty Point Conservation Area on 20 October 1995. These four birds landed in Niagara waters near the tip of the conservation area and were observed to swim east and out of view beyond the Department of National Defense rifle range in Grimsby (Curry 2006).

In North America the Common Eider breeds from Arctic Alaska and Canada south to southern Alaska and Massachusetts. The species winters in southern Alaska, Hudson Bay and in the northern Atlantic south to New Jersey (Goudie et al. 2000).

Kayo J. Roy

Harlequin Duck *Histrionicus histrionicus*

Rare winter visitor

The only spring sighting of Harlequin Duck in Niagara occurred in 1981, when one lingered at Fort Erie until 10 May (BOSNR).

The Harlequin Duck has never been documented as a breeder in Ontario. Those observed in Niagara are believed to be from the Atlantic breeding populations in the Maritimes.
and northern Quebec. The eastern population of Harlequin Duck is designated as a Species of Special Concern in Ontario (OMNR 2007) and Canada (SARA 2008, Schedule 1). There have been no summer records in Niagara.

It is occasionally observed in fall migration, most often in mid-November. The earliest fall date for Niagara is 1 November 1970 at Fort Erie (BOSNR).

The Harlequin Duck is a rare but nearly annual winter visitor on the large bodies of water of Niagara. The majority of sightings are from the Niagara River in the vicinity of the Peace Bridge and in the rapids above Niagara Falls. The maximum count of three was reported at Fort Erie on 29 November 1975 (BOSNR). It is found only occasionally on the CBCs. The Harlequin Duck winters on the east and west coasts of Canada and the United States (National Geographic 2006).

Michael M. Morgante

**Surf Scoter** *Melanitta perspicillata*

Rare winter resident and spring transient, uncommon fall transient

A rare spring transient, the Surf Scoter appears in only a few spring BOS counts and BOS Noteworthy Records. The first spring arrival is often in the second week of April. The earliest date of a spring transient (as distinguished from a winter resident) in the BOSNR for Niagara is 27 March 1994, when Willie D’Anna recorded two birds at Port Weller in St. Catharines.

The Surf Scoter does not breed in Niagara. During the second Ontario atlas, all evidence of breeding was found in the Hudson Bay Lowlands (Ross 2007a). Its breeding range covers the boreal forest across North America. There are no summer records in the BOSNR. Fall migration represents the most common occurrence of Surf Scoter in Niagara. During this season, it is routinely found on Lake Ontario and Lake Erie but rarely in big flocks. The peak of migration takes place between the last week of October and mid-November. Birds usually arrive in the first or second week of October; the earliest arrival on record was of a single bird at the Smithville sewage ponds on 1 October 1989 (HNCNR). The maximum count for Niagara in the BOSNR is 130 at Fort Erie on 9 November 1968 as reported by Edward Rybczynski and others.

Only a few Surf Scoter remain in winter. It is recorded irregularly and in low numbers on the BOS and Niagara Falls CBCs, only rarely on the St. Catharines CBC and has not been recorded on the Port Colborne CBC.

The Surf Scoter winters on the east and west coasts of Canada and the United States. Some birds winter on the Gulf of Mexico (National Geographic 2006).

Michael M. Morgante
White-winged Scoter *Melanitta fusca*

Very common fall transient, common winter resident and spring transient (Lake Ontario), occasional summer visitor

The White-winged Scoter is Niagara’s most common and widespread scoter species. It is less common during spring migration than in the fall. Spring migration intensifies in mid- to late March and most birds have left the area by mid-May. However, exact arrival dates are difficult to determine because many of the birds seen in March and April are likely birds that have spent the winter in Niagara.

Breeding within Ontario takes place mostly in the northern Hudson Bay Lowlands (Ross 2007b). No breeding in Niagara was documented in either atlas. In North America, the White-winged Scoter breeds from Alaska to Quebec just east of James Bay (Ross 2007b). It is an occasional summer visitor in Niagara. Six summer records exist — all of one or two birds — from Niagara (BOSNR, HNCNR).

The White-winged Scoter is very common on Lake Ontario during fall migration and in winter. It is present on Lake Erie and the Niagara River in much smaller numbers. The fall migration begins in mid-September, a few weeks before that of the other scoter species, and peaks in the month of October. A second migration peak occurs on Lake Ontario during the month of December, possibly from a separate migratory population (Ewald and Sherony 2001). The earliest report considered to be of a migrant return is of one bird at Fort Erie on 15 September 1996 (BOSNR).

The White-winged Scoter is now recorded annually on the Niagara Falls and St. Catharines CBCs, while only irregularly and in low numbers on the BOS and Port Colborne CBCs. As evidenced by the CBC data and the Mid-winter Waterfowl Survey, its numbers have increased in winter on Lake Ontario starting in the 1990s. The maximum number of White-winged Scoter, aside from those reported on CBCs and waterfowl counts, is 5,000 on 9 January 1994 at the Fifty Point Conservation Area by Kevin McLaughlin, William Lamond and George Naylor (HNCNR). Systematic watching on Lake Ontario during the peak of fall migration would also likely produce higher maximum numbers.

*Michael M. Morgante*
Black Scoter *Melanitta nigra*

Rare winter resident and spring transient, uncommon fall transient

There are only three spring records of Black Scoter in the BOSNR for Niagara and an additional two in the HNCNR. Only four BOS April Counts and no BOS May Counts reported sightings of Black Scoter. It is difficult to distinguish a spring transient from a winter resident since they are rare in both seasons; however, a possible spring arrival date in the BOSNR for Niagara is 28 March 1967, when one bird was observed at Fort Erie.

The Black Scoter does not breed in Niagara, and it was not confirmed as a breeder in Ontario until 2006 (Ross 2007c). During the second Atlas, there was some evidence of breeding in the Hudson Bay Lowlands. The breeding range is poorly known but includes a population of birds on the taiga in Alaska and northwest Canada and a separate population in northern Quebec, from which the birds reaching Niagara likely originate. There is one late summer or early fall record of this species in Niagara. On 31 August 1969, Harold Lancaster observed a single Black Scoter off Morgan’s Point near Burnaby.

The Black Scoter occurs in Niagara most frequently during fall migration, when it can be found on both Lake Ontario and Lake Erie. The peak of migration falls between mid-October and mid-November. Arrivals are expected in the second week of October, the earliest in the BOSNR being nine birds at Fort Erie on 28 September 1981. This species is rarely found in very large numbers, and there are only two sightings for Niagara in the BOSNR that exceed 100 birds. The maximum count is of 450 birds observed by Robert Andrle and Richard Byron at Fort Erie on 31 October 1973, which greatly exceeds all other records. The maximum HNCNR count is 49 birds observed on 20 October 1985 by Denys Gardiner and Robert Curry at Fifty Point Conservation Area (HNCNR).

The Black Scoter is scarce in winter, especially beyond mid-January. It is recorded irregularly and in low numbers on the BOS, Niagara Falls and St. Catharines CBCs, and very rarely on the Port Colborne CBC.

Except for those that migrate to the Gulf of Mexico, this scoter winters on the east and west coasts of Canada and the United States (National Geographic 2006).

Michael M. Morgante
Long-tailed Duck *Clangula hyemalis*

Very common winter resident (Lake Ontario and lower Niagara River), uncommon to common spring and fall transient, rare summer visitor

The Long-tailed Duck, formerly known as 'Oldsquaw', is a very common winter resident in Niagara. Spring migrants, identified as such because they appear at locations other than the common wintering areas, start to return in mid-March. Spring season sightings may be of arriving migrants, or they may be of wintering birds remaining in the region. The latest observations in spring are usually in mid- to late May.

The Long-tailed Duck does not breed in Niagara. In Ontario, it is believed to breed in low density in tundra along the Hudson Bay coast of Ontario (Abraham 2007b). In North America, it breeds well north in tundra from Alaska to Labrador. It now occurs in summer in Niagara with increased frequency, as a result of post-breeding dispersal. Nearly all summer reports, typically of one to two individuals, have come from Lake Erie in July and August.

The first fall arrivals usually appear in mid-October. Long-tailed Ducks are most common on Lake Ontario but are also regularly found on Lake Erie in the fall, sometimes in the hundreds near the Peace Bridge. They are rare at inland locations during fall migration.

The Long-tailed Duck is a part of the traditional winter scene on the lower Niagara River, as they can be found in large numbers from Queenston to the mouth of the Niagara River at Niagara-on-the-Lake. Their unusual calls fill the air and add to the ambience of this portion of the river through the winter months. They are also very common on Lake Ontario in winter, as evident from the numbers found annually on the Mid-winter Waterfowl Survey and the St. Catharines and Niagara Falls CBCs. They are much less common, not even an annual occurrence, on the BOS and Port Colborne CBCs. Gordon Bellerby estimated 15,000 on 20 December 1985 at Niagara-on-the-Lake, the maximum count in the BOSNR.

Michael M. Morgante
Bufflehead *Bucephala albeola*

Common transient and winter resident (very common on Niagara River), occasional summer visitor

The Bufflehead is a common spring transient in Niagara, usually arriving in early to mid-March. Exact arrival dates are difficult to determine, however, because many of the birds seen in March and April are likely birds that have spent the winter in Niagara. The Bufflehead is increasing as a breeder in Ontario and throughout most of its range (Mallory 2007a). There was no breeding documented in Niagara in either atlas, and the closest nests were found southwest of Algonquin Provincial Park (Mallory 2007a). It is an occasional summer visitor in Niagara. There are seven summer records from Niagara in the BOSNR, all of one or two birds, and an additional five records in the HNCNR.

Fall arrival in Niagara is usually in mid-October. The earliest date of return for a migrant is 9 October, when single birds were seen at Fort Erie in 1970 (BOSNR) and at the Smithville sewage ponds in 1989 (HNCNR). Large numbers can be found on Lake Erie near the source of the Niagara River in early- to mid-November, when they stage there during fall migration. The maximum count from this area in the BOSNR is 10,000 birds reported by Fran Rew on 15 November 2003.

As a common winter resident, the Bufflehead is recorded annually in Niagara on all four CBCs and the Lake Ontario Mid-winter Waterfowl Survey.

*Michael M. Morgante*
Common Goldeneye *Bucephala clangula*

Common to very common (upper Niagara River) winter resident, rare summer visitor

The Common Goldeneye remains common on the upper Niagara River well into April as wintering birds are joined by some returning migrants in March. It quickly becomes uncommon to rare in May.

There was no breeding documented in Niagara in either atlas. The closest nests were found in nest boxes at Hullett Marsh near Clinton (Mallory 2007b). It is a relatively common breeder on small lakes, ponds, and rivers in the boreal forests of Ontario (Mallory 2007b). Common Goldeneye is a rare summer visitor in Niagara, with most reports (all of one to three birds) in the BOSNR coming from Lake Erie.

The Common Goldeneye usually returns to Niagara in mid-October. The earliest report that likely represents a returning migrant is for 8 September 1985, when a bird was sighted at the Grimsby sewage ponds by Robert Curry, George Bryant and John Olmsted (HNCNR). Common Goldeneye has been recorded every year on the Niagara CBCs and usually in high numbers on the BOS and Niagara Falls CBCs as it is most common on the Niagara River. While still very common on the Niagara River, this species has declined in numbers through the decades (New York Winter Waterfowl Count). The maximum count in the BOSNR is 3,000 on 1 January 1966 on the upper Niagara River.

Michael M. Morgante
Barrow’s Goldeneye *Bucephala islandica*

Occasional winter visitor

Named after the famed British Arctic explorer Sir John Barrow and for the brilliant golden colour of its irises, the Barrow’s Goldeneye is primarily a bird of the western mountain regions of North America. There is a smaller eastern population of Barrow’s Goldeneye that is Protected under the *Species at Risk Act* (SARA 2008). Interestingly, no evidence has been found of any exchange or interaction between these two populations (Eadie et al. 2000).

The Barrow’s Goldeneye is an occasional winter visitor to Niagara, and reported observations prior to 1966 are well documented in Beardslee and Mitchell (1965) and Sheppard (1970).

The eastern population of Barrow’s Goldeneye breeds along the north shore of the St. Lawrence River estuary, where a good number also overwinter. A smaller number of wintering birds can be found along the Gaspé Peninsula, the Maritime Provinces and Maine in the United States (Eadie et al. 2000).

*Kayo J. Roy*

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The following birds were observed in Niagara during the 1966 – 2006 time frame of this book.

<table>
<thead>
<tr>
<th>Year</th>
<th>Month, Day, Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970</td>
<td>1 January, female, Niagara gorge, Niagara Falls (Daniel Salisbury)</td>
</tr>
<tr>
<td></td>
<td>21 November, 2 and 29 December, male, Niagara Falls (Rachel and Harold Axtell, Daniel Salisbury and others, BOSNR)</td>
</tr>
<tr>
<td>1971</td>
<td>1 January, male, above the falls, Niagara Falls (Harold Axtell, Daniel Salisbury, BOSNR)</td>
</tr>
<tr>
<td></td>
<td>20 February, male, above the falls, Niagara Falls (Rachel and Harold Axtell, BOSNR)</td>
</tr>
<tr>
<td></td>
<td>27 November, female, Niagara Falls (Joseph Grzybowski and others, BOSNR)</td>
</tr>
<tr>
<td>1978</td>
<td>3 November, male, in the Hydro One impoundment cell adjacent to the old Gate House building, Niagara Falls (BOSNR, m. obs.) This bird is believed to be the same individual that returned annually to overwinter at the same location from 1978-1984. The bird was last seen on 22 January 1984 (BOSNR)</td>
</tr>
<tr>
<td>1987</td>
<td>16 January, adult, male, Frenchman’s Creek, Fort Erie (Kayo Roy)</td>
</tr>
<tr>
<td>1993</td>
<td>5-6 April, two, Point Abino (William Watson, Michael Galas, Gerry Rising, Michael Hamilton, BOSNR)</td>
</tr>
<tr>
<td></td>
<td>7 November, adult, male, Frenchman’s Creek, Fort Erie (Robert Andrle, Robert Brock, Kayo Roy, Alan J. Smith, BOSNR)</td>
</tr>
<tr>
<td>2000</td>
<td>6 February, adult, male, Fort Erie (Willie D’Anna, BOSNR)</td>
</tr>
<tr>
<td>2002</td>
<td>24 November, two, females, Niagara Falls (Dominic Shenon, Gary Chapin, BOSNR)</td>
</tr>
</tbody>
</table>
Smew *Mergellus albellus*

Extremely rare visitor

The Smew, a small Palearctic diving duck of the merganser family, is thought to have been in existence for some one and a half to two million years. Smew fossils from the earliest Pleistocene have been found in England (Mlikovsky 2002). This species has become an annual winter visitor in small numbers to the western Aleutian Islands and the Pribiloff Islands but is extremely rare outside of Alaska.

One well-documented record is known for Niagara of this extremely rare visitor. Initially found on 17 January 1960 by Robert Coggeshall, Robert Andrle and Joseph Thill in the Buffalo, New York harbour, the bird remained until 22 January 1960 when it was forced to leave as the harbour began to freeze over (Axtell 1960, Coggeshall 1960, Beardslee and Mitchell 1965).

Nearly one month later, on 21 February 1960, James L. Baillie with others rediscovered the Smew on the Canadian side of the Niagara River just north of Fort Erie at Miller’s Creek. This female bird was observed at various locations along the Niagara River: Miller’s Creek (21-22 February, 13 March and 28-30 March), Frenchman’s Creek (23 and 28 February) and Ushher’s Creek (27 February). Many birders travelled to the Niagara River to observe this mega-rarity, which was last seen on 30 March 1960 (Baillie 1964, Sheppard 1970, James 1991, Roy 2001). It was photographed by Donald R. Gunn on 26 February 1960.

The breeding grounds for the Smew are widespread across the taiga zone of northern Europe and Siberia. It winters on sheltered seas and lakes in eastern Europe, China, Korea and Japan (Madge and Burn 1988).

Kayo J. Roy

Hooded Merganser *Lophodytes cucullatu*

Uncommon spring and fall transient, uncommon winter resident, rare summer resident and visitor

The Hooded Merganser is an uncommon spring transient in Niagara. It usually arrives in mid-March and transients have passed through by the end of April.

Only evidence of possible breeding was documented in Niagara during both atlases. In the first Atlas, evidence of possible breeding was discovered in one square in Welland; in the second Atlas, the same square, as well as Navy Island, yielded evidence of possible breeding. While rare in Niagara, the Hooded Merganser is a relatively common breeder in the shield of Ontario and is increasing in most breeding areas (Bouvier 2007). It is a secretive nester and could have been overlooked during atlas efforts. A rare summer visitor in Niagara, Hooded Merganser may show up on ponds in August.

Except for late summer visitors, fall migrants typically arrive in mid- to late October.

The Hooded Merganser is recorded nearly annually on the St. Catharines, BOS and Niagara Falls CBCs, but irregularly on the Port Colborne CBC. Of the four regional CBCs, the largest numbers are usually found on the St. Catharines Count. While uncommon in winter, Hooded Mergansers are increasing in numbers during that season based on the CBCs and New York Winter Waterfowl Count, although the Lake Ontario Mid-winter Waterfowl Survey is not showing any upward trend. A few individuals are usually found above Niagara Falls throughout the winter. The maximum count from the BOSNR, as reported by James Pawlicki, Willie D’Anna and Betsy Potter at Niagara Falls on 13 January 2006, is 35 birds.

Michael M. Morgante
Hooded Merganser
Sam Barone

Common Merganser
Sam Barone
Common Merganser *Mergus merganser*

Very common (upper Niagara River) winter resident, rare to uncommon summer visitor

Almost all Common Mergansers have departed from the Niagara Region by late April. While most of the birds seen in the spring are those that have overwintered here, some may be transients that are migrating through Niagara on their way north.

The Common Merganser does not breed in Niagara and is nearly absent as a breeder in southern Ontario. It is one of the most widespread and common waterfowl species in the boreal forest throughout Canada (Dunn 2007). As a rare to uncommon summer visitor in Niagara, the Common Merganser is most often sighted along Lake Erie or at Niagara Falls in this season. By mid-July summer sightings tend to increase, peaking in August. The summer season maximum in the BOS Noteworthy Records is 27 at Point Abino on 19 August 2001, seen by Brendan Klick and Don Harris.

Except for late summer visitors, fall migrants typically arrive in mid-October. The Common Merganser is one of the most abundant waterfowl species on the Niagara River in winter. It is found in the thousands on the upper Niagara River, especially in the vicinity of Strawberry Island. It is also very common on the Great Lakes in winter. Overwintering numbers are often variable, likely attributable to available prey and nesting productivity from the previous summer. Common Mergansers are recorded annually on all four regional CBCs, with the highest counts on the BOS and Niagara Falls CBCs. Harold Axtell observed 12,000 birds on 20-21 December 1974 on the upper Niagara River, the maximum count in the BOSNR for Niagara.

Michael M. Morgante

Red-breasted Merganser *Mergus serrator*

Very common spring and fall transient, very common winter resident, rare summer visitor

Unlike the Common Merganser, the Red-breasted Merganser is more numerous in spring migration than in winter. It is very common in spring in Niagara as transients augment the numbers of overwintering birds. The greatest number of birds usually occur early to mid-April, and remain common into late May. It is easily the most common duck species on Lakes Erie and Ontario in April and May.
There was no breeding documented in Niagara in either atlas, and the closest nesting location was at Long Point (Craik 2007). Along extensive bodies of water outside southern Ontario, the Red-breasted Merganser is widely distributed as a breeder in the province. It breeds in tundra and boreal forest across Eurasia and North America (Craik 2007). It is a regular but rare summer visitor in Niagara. Summer reports are typically of six birds or fewer, larger groups, however, occasionally occur. A maximum of 74 birds was counted at Morgan’s Point near Burnaby by William Watson on 3 June 2003 (BOSNR).

Aside from summer visitors, fall transients begin to arrive in September. Numbers increase in mid-October and usually peak in mid-November.

Red-breasted Merganser is recorded annually on the four regional CBCs, with the Niagara Falls CBC regularly achieving the highest count. There is general evidence from the New York Winter Waterfowl Count and BOS counts that numbers are increasing slightly. Since this species is abundant in late winter and during migration, accurate counts are rarely made by birders. The maximum count in the BOSNR for Niagara is 6,000 birds at Jaeger Rocks in Fort Erie on 21 February 2000.

Michael M. Morgante

Ruddy Duck

Oxyura jamaicensis

Uncommon spring and fall transient, rare summer straggler, rare winter straggler

The Ruddy Duck is an uncommon spring transient in Niagara. There are three March BOSNR records. The earliest spring arrival date is 12 April 2004, when 14 birds were reported from the Grimsby sewage ponds and 10 from the Smithville sewage ponds (HNCNR). The latest spring date is 29 May 2000, when three birds were reported from West Lincoln (BOSNR). A few individuals of this species can often be found on small ponds and lakes in Niagara during the migration period.

The Ruddy Duck breeds in the vicinity of the lower Great Lakes but is mainly a bird of western Canada and a rare summer straggler in Niagara. There are 16 summer records in the HNCNR and two summer records in the BOSNR.

The earliest migrant return date is of a single bird on 11 September 2002 at West Lincoln (BOSNR). There are thirteen November records in BOSNR. Rare winter stragglers, Ruddy Ducks have been seen on only three BOS Christmas bird counts, six Niagara Falls counts, two Port Colborne counts and one St. Catharines count. A likely place to look for them in the winter is on the upper Niagara River between Fort Erie and Niagara Falls. The Ruddy Duck winters in the southern United States and farther south (National Geographic 2006).

John E. Bluck

First Atlas: 0 squares confirmed, 0 probable, 1 possible
Second Atlas: 0 squares confirmed, 0 probable, 0 possible
BOS April Count: Reported on 9 of 41 counts, maximum of 14 birds in 2000
BOS May Count: Reported on 11 of 41 counts, maximum of 13 birds in 2000
BOS October Count: Reported on 19 of 40 counts, maximum of 19 birds in 1979 and 1999
Niagara Christmas Bird Counts: Reported on 12 of 41 counts, maximum of 6 birds on the 1999 Port Colborne CBC
Lake Ontario Mid-winter Waterfowl Survey: Reported on 1 of 23 counts, maximum of 1 bird in 2002
Gray Partridge *Perdix perdix*

Exirpated in Niagara

The Gray Partridge, prior to its extirpation from Niagara, was more prevalent near West Lincoln. Robert Lewies, a Niagara area biologist with the Ontario Ministry of Natural Resources (OMNR) from 1978 to 1993, observed 15 to 20 birds near Caistor-Carn Borough Slough forest in the late 1970s. Historic records include two individuals observed on 28 May 1966 at Rainham Centre (BOSNR), 17 individuals observed near Rockway, St. Catharines on 27 December 1969 by Harold Lancaster and Gustave Yaki (Sheppard 1970), 21 during a Peninsula Field Naturalists count in the St. Catharines area on 19 December 1973, 12 on 1 January 1970 in Pelham and two on 12 March 1978 in Lincoln Township (BOSNR). According to Ontario Nest Records Scheme data, the only known nest of a Gray Partridge was discovered by H. Lounsbury on 5 May 1968 six kilometres southwest of Beamsville.

The most recent records are of three birds observed on Sann Road on the north service road of the Queen Elizabeth Way in Beamsville on 24 January 1988 by John Black and Drew Campbell. Two birds were observed at the same location on 18 March 1989 by Edmund Johns and Kayo Roy, and again on 19 March (BOSNR). The only record after 1989 was of a dead bird found by Richard Knapton on 26 October 1995 at the side of Regional Road 24 near 15 Road, Fenwick.

The very small number of recent observations from any source indicates a declining trend for this species in Niagara. Winter severity, removal of hedgerows, intensive farming and use of pesticides have adversely affected the distribution and abundance of this species throughout Ontario. Currently, the Gray Partridge closest to the Niagara Region are located at the Brantford Airport. Without active intervention on the part of the OMNR and/or other concerned parties, Gray Partridge will not reappear in Niagara.

Release programs undertaken in Niagara by the OMNR were not successful. There are several possible reasons for their failure, the most likely being low release numbers (<200 overall), poor genetic quality (birds reared in captivity), high predation, unsuitable habitat, herbicide and insecticide application and winter severity. Predation was determined to be the primary cause of a release failure in France (Bro et al. 2001) and in Scotland (Parish et al. 2007). The latter also attributed the high incidence of nest site predation to the release of birds reared in captivity.
Studies completed in Europe and midwestern North America attribute the decline of Gray Partridge to intensive agricultural practices, removal of hedgerows and use of pesticides (Allen et al. 1984, Rands 1985, Borg and Toth 2000). Winter severity may have played a role in the early 1970s as the region experienced higher than usual total snowfall and extreme minimum temperatures during the time of release. The release of Gray Partridge in 1969 was followed by the two consecutively severe winters of 1970/1971 and 1971/1972, when over 200 cm of snow fell. A 1973 release was followed by an average winter (154 cm), then the two consecutively severe winters of 1974/1975 and 1975/1976. (See also the article by Anne Yagi in this book.) However, Sandilands (2005) reports that cold weather and deep snow are not necessarily limiting factors because Gray Partridge are capable of tunnelling down 15 cm in snow to obtain food. Even so, freezing rain or prolonged blizzards may cover food supplies and result in high mortality. A reasonable hypothesis is that small release sizes coupled with winter storm events precipitated the release failure in Niagara.

This native of Europe is also known as “European” or “Hungarian” Partridge. It is a favoured game bird in much of the Midwestern United States and eastern Ontario and remains a species of Conservation Concern in Europe. It inhabits early successional lowlands, grasslands or abandoned farmland habitats. Adults are herbivorous, chicks insectivorous. The species requires an adequate food source all winter. For thermo-regulatory purposes, the birds often form large coveys (aggregations), especially during winter conditions.

**Chukar Alectoris gracea**

Occasional (released or escaped)

This colourful, attractive game bird has made an occasional appearance in Niagara during the last 50 years. The birds that have been observed over the years are believed to be released individuals or escaped pets. It is a normal practice to raise game birds for the purpose of training hunting dogs. Permits from the Ontario Ministry of Natural Resources (OMNR) are required in order to use these birds for training purposes. Normally, only small numbers are released at any one time. Historic observations include two birds at Sugarloaf Point in Port Colborne on 1 September 1959. Five birds were released (although three were immediately killed on the road) near Stanley Avenue in Niagara Falls in September 1963 (Frank Folemsbee), (Sheppard 1970). During the second Atlas, two Chukars were observed on 2 April 2004 in Beamsville by Paul and Elizabeth Akitt, and one was observed by Nancy Smith on 5 June 2005 in Beamsville. All were recorded as released individuals and not submitted to the Atlas.

Chukar is native to Europe and Central Asia. A search of the records at OMNR indicates no historic attempts to establish a naturalized population in Ontario (OMNR, Natural Heritage Information Centre, Mike Oldham pers. comm.). Neither is there today any potential to establish self-sustaining populations of this species.

Anne R. Yagi
Ring-necked Pheasant *Phasianus colchicus*

Rare permanent resident

Ring-necked Pheasants in Niagara originated from introduced individuals that adapted and became self-sustaining in some areas, especially below the escarpment. R.W. Sheppard (1970) reported them to be “quite common and well distributed… [with] numbers augmented by annual releases to compensate for hunting.” In 1922 the Ring-necked Pheasant was declared a provincial game bird, and in the 1950s and 1960s it was in high demand by local hunters in Niagara. In order to meet this recreational demand, supplemental stocking by the Ontario Ministry of Natural Resources (OMNR) was initiated. The OMNR supplied local conservation clubs with ten to eleven thousand pheasant poults per year to raise and release. During that time, the Association of Welland County Conservation Clubs released between six to eight thousand pheasants into the former townships of Bertie, Crowland, Humberstone, Pelham, Stamford, Thorold, Wainfleet and Willoughby. During the same period, the St. Catharines Game and Fish Club released over 1,000 pheasants per year, with the majority released in Niagara-on-the-Lake, Louth, Clinton, Gainsborough and South Grimsby. Townships sold pheasant hunting licenses to help raise funding for the ongoing release projects. After the 1950s the ministry gradually reduced its contributions to pheasant stocking, and by the 1980s, local releases by conservation clubs diminished to a few hundred birds per year (Robert Lewies pers. comm.).
Historically, pheasant hunting was more popular than it is today. Pheasant populations were probably supported entirely by the release of pen-reared birds. Robert Lewies (OMNR biologist in 1989) claimed that “current self-sustaining populations exist in small pockets in Grimsby, St. Catharines and Short Hills Provincial Park, where there is no legal hunting and no stocking occurs.” Niagara-on-the-Lake, with its moderate climate, was once considered ideal habitat for pheasants. However, the precise size of this population is not known, although it is considered low. In other words, the historic approach to large scale releases of pen-reared, non-native species did not result in a larger population. It is also possible that the mild winters of the 1960s followed by the more severe winters of the 1970s were contributing factors in the decline as were unsuitable habitats and use of pesticides. All Niagara records after the early 1970s show the same declining trend (first and second Atlases, BOSNR and CBCs), which coincides with a drastic decline in releases. (See the article by Anne Yagi in this book.)

During the 1980s and 1990s, pheasant hunting became a “put and take” harvest of all fall-released birds. A few individuals are observed during Niagara Christmas counts, especially in the northern portion of the region below the escarpment. In recent years, birds have been seen regularly in the fields around the Niagara District Airport and beside McNab Road south of Lakeshore Road, both in Niagara-on-the-Lake.

In 2002, the OMNR began a pilot project to rehabilitate wild pheasant populations, releasing 200 wild captured pheasants from a large self-sustaining population in Saskatchewan into Lambton and Elgin Counties in Ontario. There was no precedent for this type of release. Birds that were accustomed to an open-range grassland habitat, surviving in severely cold winters (-40°C) with shallow snow depth (0.3m), were captured and released into southern Ontario’s fragmented agricultural habitat consisting of meadows, shrubs and trees. For the first three breeding seasons in Ontario, there were signs of reproduction, dispersal and juvenile recruitment. Then in year four, the population declined.

A 2007 assessment of this pilot project conducted by the Long Point Waterfowl and Wetland Research Fund suggested that a higher number of birds, including more females, should be stocked, but it stated that the habitat, which allowed short-term survival, was of insufficient quantity and quality for long-term survival and that there were too many predators. According to Pud Hunter, formerly the OMNR coordinator for the Pheasant Rehabilitation project, the Saskatchewan birds were accustomed to a host of natural predators including birds of prey and mammalian predators such as coyote, cougar and red fox, but they were not accustomed to southern Ontario’s fragmented habitat and high density of predators such as raccoons, feral cats and opossums.

The Ring-necked Pheasant is a native species of Asia. It was first introduced into southern Ontario circa 1895 and naturalized in many rural areas. It prefers old field, meadow and grassland habitat for foraging, with shelter belts and hedgerows for winter cover, the very type of habitat that is lost through intensive farming and urbanization. We must conclude that habitat loss is a contributing factor in the decline of this species in southern Ontario.

Anne R. Yagi
Ruffed Grouse  
*Bonasa umbellus*

Rare and local permanent resident

Before 1970 the Ruffed Grouse was considered a “well known game bird [that continued] to hold its own in more extensive woodlands” (Sheppard 1970). However, during the second Atlas, observations declined in most of southwestern Ontario except for Norfolk County. Ontario’s Carolinian region exhibited the greatest declines in numbers of Ruffed Grouse between surveys, from 43% to 20.4% (Szuba 2007a).

During the second Atlas, one case of breeding was confirmed in Niagara. Anne Yagi recorded adult male drumming in the Wainfleet Bog during consecutive spring seasons from 2004 to 2006. Grouse populations are known to be cyclic in some areas, although the cycle has not been established for Niagara. In recent years, grouse have been observed regularly at the Stevensville Conservation Area.

The Ruffed Grouse inhabits early successional, mixed deciduous forests with small open areas and forested wetlands with a large component of aspen (*Populus sp.*). Although this region boasts extensive oak-maple swamp wetlands and unique slough forests, especially in the southern and western woodlands, aspen stands form a relatively minor component. When snow covers the ground, the grouse diet shifts to buds and catkins of trees and shrubs such as aspen, birch, cherry, ironwood and apple (Post 2005). Declining observations likely reflect the declining quality of habitat. Aspen regeneration, for example, requires a disturbance to open the forest canopy.
Disturbances include timber harvest, fire, wind throw and flooding. Many of these disturbances are suppressed through human intervention. These disturbances set in motion ecological successional processes involving the rapid colonization of light-tolerant plant species into the disturbed area. An example of an ecologically dynamic process that was eliminated in Niagara by the 1950s is the beaver meadow cycle. This cycle changes climax landscapes into open water early successional habitat, which is eventually recolonized by grasses, shrubs and trees. The beaver meadow cycle at one site may take up to 100 years to complete, and during that time waterfowl and herons are gradually replaced by grouse and then turkeys. Adult grouse use the openings created in the woodlands for courtship displays, and as the young poplar stand develops, it provides excellent insect production for young grouse and seed sources for adults. Mature poplar stands are about 40 years old, after which they become overgrown by Oak, Maple and Ash species, and the grouse decline.

By their very nature, Ruffed Grouse may have been more abundant during European settlement, when timber was harvested to build homes, thus creating openings in woodlands that poplar stands could rapidly colonize. In addition, when land that was once cleared for farming was abandoned and people moved into cities, poplar stands would recolonize these areas.

Anne R. Yagi

Wild Turkey *Meleagris gallopavo*

Uncommon permanent resident

Once extirpated from all of Ontario, this native game bird was successfully re-established throughout Niagara during the 1980s and 1990s. In Niagara the Ontario Ministry of Natural Resources (OMNR), the Ontario Federation of Anglers and Hunters and local conservation clubs began reintroductions of this species in 1986. The first birds were released in Short Hills Provincial Park in January on a snowy hilltop where a former barn and farmhouse had once stood.
The following remarks detail the first Niagara releases. On 13 January 1986, 12 females captured from Steuben County, New York State, were released into Short Hills Provincial Park. On 15 January 1986, one female was killed on the road about 3.5 km from the release site. At the same location, on 30 January 1986, three adult males from New York State were released. On 6 February 1986, five females from Vermont were released. One female was killed approximately 11 km from the release site. On 11 February 1986, eight females from New York State were released and one female was radio-collared. On 14 February 1986, one female and one jake from New York State were released. On 16 February 1986, two females and one jake were released. A third female was destroyed at the border because of a suspicious reaction to Salmonella pullorum typhoid antigen. On 28 February 1986, an additional jake from Vermont was released. The first breeding stock, therefore, consisted of six males and 26 females (Yagi 1986). In the late 1980s the offspring were relocated throughout the Niagara Peninsula. Priority transfer sites were the Humberstone Marsh in Port Colborne as well as Silverdale and the Caistor-Canborough Slough forest in West Lincoln. In the late 1990s, wild turkeys were transferred to the Dunnville and South Cayuga areas.

This species was first recorded on a Christmas Bird Count during the St. Catharines CBC of 1986, when 25 birds were seen. In 1988 the first turkey was observed on the Port Colborne CBC, and in 1994 two turkeys were reported on the Niagara Falls CBC. Since 1994 Wild Turkey have been recorded, on at least one Niagara count, every year except 1999. These recorded observations demonstrate an increasing population, a trend which is consistent with OMNR population information. (See the article by Anne Yagi in this book for further information.)

In the 1700s, wild turkeys were apparently common in Ontario. There are accounts of large flocks along the north shore of Lake Erie. The bird was an important source of food for aboriginal people and the first settlers (Williams 1986). Unfortunately, the turkey was over-harvested, so much so that by the end of the early 1900s it was extirpated from Ontario. By that time the bird had also vanished from Wisconsin, Michigan, Minnesota, Connecticut, Southern Illinois and New York. Historical attempts to re-establish the Ontario population by using the release of pen-reared birds began almost as soon as the population had disappeared. However, these attempts were not successful. During the 1970s the release of birds trapped in the wild was successful in establishing populations throughout their former United States range. Ontario followed, in 1984, with the first release in the Aylmer District. This project was part of an international wildlife exchange between the United States and Ontario. Turkeys were exchanged for Gray Partridge as well as moose and river otter. This wildlife management initiative is considered highly successful because self-sustaining populations now exist throughout southern Ontario, and they sustain a very popular annual spring gobbler season.

Anne R. Yagi

Northern Bobwhite *Colinus virginianus*

Extirpated in Niagara (occasional sightings are escaped birds)

The Northern Bobwhite is designated as an Endangered Species in the Province of Ontario’s Endangered Species Act of 2007. Following European settlement in the nineteenth century, the bobwhite increased in abundance and expanded its range across southwestern Ontario. Since 1900, however, land use changes, degraded habitats and pesticides have caused the population and range to decline to their 2007 status, which is
considered low but stable in southwestern Ontario. In Niagara the decline has been reported from many sources. In 1914 William Putman of the Horticultural Experimental Station in Vineland noted the disappearance of bobwhites from Smithville. Sheppard (1970) wrote “Many years ago, in the early part of the century, the bobwhite was apparently not uncommon throughout the Frontier district, and it appears on an old list as present near Stamford centre in the summer of 1913.”

Periodic observations of this species have been made by several people. In May 1935, two birds were observed at the Horticultural Research Station in Vineland and were believed to be released birds from Jordan. During the summer of 1961, 250 individuals were released by Adrian Dorst near Rockway, St. Catharines. Ontario Ministry of Natural Resources (OMNR) Conservation officer Roy Muma reported seeing three coveys in Willoughby Township near Chippawa in the 1960s. One individual was observed on a Peninsula Field Naturalists count in the St. Catharines area on 22 December 1973. Single birds were observed on 13 November 1966 and 3 September 1977 at Fort Erie and at Port Colborne on 9 July 1978 (BOSNR). Single birds were seen at the Smithville sewage ponds on 22 July 1984 and 10 May 1987 (HNCNR). The most recent sighting occurred on 25 March 2005, when a single bobwhite was found by Brad Clements near Humberstone Marsh in Port Colborne during the second Atlas.

The Northern Bobwhite is an open-meadow grassland species that is in severe decline throughout most of its North American range. In Ontario it is now found only in the extreme southwest in Lambton, Elgin and Middlesex Counties and on the St. Clair River islands (Pud Hunter pers. comm.). This decline in population has been attributed to many factors, including habitat loss, predation, disease and pesticides (Stewart 2003).

Anne R. Yagi

Red-throated Loon *Gavia stellata*

Rare to uncommon spring and fall transient, extremely rare summer visitor, rare winter straggler

Red-throated Loon can be seen in Niagara in all seasons, but most frequently in the fall and winter (especially November). In spring it is rare to uncommon, occurring from late April through May. The earliest date in spring is 6 March 1991, when one bird was seen at Port Weller in St. Catharines (BOSNR), and the latest date in spring migration is 20 May 1967, when one bird was seen at Fort Erie (BOSNR). A summer record of one bird seen by multiple observers at Fort Erie from 12–18 July 1999 (BOSNR) is exceptional for this arctic breeder. The earliest fall date is 7 October 1990 when one bird was observed at Fifty Point Conservation Area (HNCNR). Although single individuals or small numbers are the rule, high tallies for the region are 70 birds on 30 November 1995 and 58 birds on 15 November 1992, both reported by Rob Dobos and other observers and both occurring at Fifty Point Conservation Area (HNCNR). Numbers on CBCs were few to none in the first two decades of the reporting period, but since the late 1980s, Red-throated Loon has been almost annual and numbers appear to be increasing. Small numbers of birds are seen from October through February (BOSNR, HNCNR, CBCs).

The Red-throated Loon breeds on freshwater ponds in tundra areas throughout arctic North America and winters on both coasts, migrating on a broad front from northwest to southeast (Palmer 1962, Barr et al. 2000). In Ontario, it nests on the
Hudson Bay coast in the tundra zone west of Cape Henrietta Maria (Peck and Sutherland 2007), migrating along the west James Bay coast (Wilson and McRae 1993) and presumably wintering on the Atlantic coast.

Niagara birds belong to the Atlantic wintering group, but it is unknown whether Ontario breeding birds pass through the region. Regular observations during migration at Thunder Cape Bird Observatory since the early 1990s and elsewhere suggest a migration route that follows Lake Ontario, Lake Huron and Lake Superior, and this may reflect movements of birds from the central and western Arctic. Staging on Lake Ontario in large numbers in fall was reported in Palmer (1962). A few birds winter on Lake Ontario, but most continue to the Atlantic coast.

Kenneth F. Abraham

Pacific Loon
Gavia pacifica
Extremely rare visitor

The Pacific Loon, perhaps the most abundant loon in North America, is a widely distributed bird of the Pacific coast with scattered reports throughout the interior. The species returns to the Arctic tundra each year for only three months in summer for breeding purposes. The Pacific Loon and the Arctic Loon were once considered to be one species; however, the two are presently classified as distinct and separate species.
The Pacific Loon and Arctic Loon are treated as one species in Beardslee and Mitchell (1965), who make no mention of Niagara observations. There are only five known reports of Pacific Loon in Niagara. On 16 November 1968, Paul Benham and others observed a Pacific Loon in the Niagara River gorge at the base of the Horseshoe Falls, Niagara Falls. It was refound the next morning, 17 November 1968, but disappeared shortly after 0830 hours (Yaki 1969, Sheppard 1970). John Black, Paul Benham and Daniel Salisbury identified a Pacific Loon on 21 November 1981 at Niagara-on-the-Lake.

On 11 November 1995, Steve Kelling, Thomas Nix and Jeff Wells discovered a winter adult bird in the Niagara River gorge at Niagara Falls (BOSNR). On 16 November 1998, Daniel Salisbury studied an immature Pacific Loon also in the Niagara River gorge in Niagara Falls. On 31 October 2004, Brandon Holden discovered a bird in definitive prebasic molt along the shoreline of Lake Ontario off the Niagara portion of Fifty Point Conservation Area. To the delight of many birders, this individual remained in the area until at least 5 November 2004 (Crins 2005, Curry 2006). Although it was undocumented beyond 5 November, there is a possibility that this bird may have been observed as late as 16-17 November 2004.

The Pacific Loon breeds in Canada, Alaska and Siberia. It winters along the coasts of Japan and western North America as far south as California (Harrison 1987).

Kayo J. Roy

Common Loon \textit{Gavia immer}

Uncommon spring and fall transient, occasional summer straggler, rare winter straggler

Common Loon, Ontario’s official bird and an icon of Canadian wilderness, has been recorded in Niagara in all months and is usually seen as a single bird or in small groups. It is most abundant during migration in May, October and November on the larger lakes and rivers. The months of greatest activity are May (43 BOS Noteworthy Records), November (45) and December (46). Largest groups occur in October (e.g., 150 on 31 October 1993, 120 on 20 October 1985, and more than 40 on 19 October 1967 and on 26 October 1968). Paul Summerskill conducted a migration watch at Charles Daley Park in Beamsville in November 1994, recording 332 Common Loons, the majority of them flying west (252) or south (59). See his article in this book. No trend of change in status is apparent over the reporting period. Curry (2006) cautiously suggests that numbers in the Hamilton region are lower than they historically have been, having peaked in the late 1960s, but he cites recreational disturbance as a possible cause of lower numbers on staging areas and notes that systematic counts would undoubtedly yield higher numbers. In Niagara the number of recreational fishing boats on the Lake Ontario shore in April and May has increased substantially in recent years since the introduction of the Salmon Derby in the early 1980s.

The Common Loon was formerly a very rare breeder in Niagara (Beardslee and Mitchell 1965). It was seen in nine years in June and eight years in July between the first and second Atlases (BOSNR) but only twice in summer during the second Atlas, a single bird observed on a point count on 13 June 2003 at Point Abino and a single bird observed on 28 July 2005 at Morgan’s Point near Burnaby (BOSNR). The plumage of these birds was not recorded, and they may have been predominantly of non-breeding age (Ron Pittaway pers. comm.). The Common Loon’s Ontario breeding range had

BOS April Count: Reported on 29 of 41 counts, maximum of 21 birds in 1997
BOS May Count: Reported on 29 of 41 counts, maximum of 15 birds in 1990
BOS October Count: Reported on 20 of 40 counts, maximum of 205 birds in 1989
Christmas Bird Counts: Reported on 29 of 41 counts, maximum of 15 birds on the 1994 Niagara Falls CBC
Lake Ontario Mid-winter Waterfowl Survey: Reported on 4 of 23 counts, maximum of 2 birds in 2000
receded from the Carolinian region to closely match the boundaries of the Canadian Shield by the time of the first Atlas (Dunn 1987a). During the second Atlas, it showed a small expansion south of the shield and a significant increase in probability of observation in the Lake Simcoe-Rideau region since the first Atlas. Overall, the Common Loon population is stable or increasing (Jones and Timmermans 2007).

Kenneth F. Abraham

Yellow-billed Loon *Gavia adamsii*

Extremely rare visitor

The Yellow-billed Loon, an Arctic species found mostly north of the tree line in Eurasia and North America, is the largest of the world’s five loon species. They are increasingly being observed wintering inland, but it is not clear if this is a sign of range expansion or improved field identification (North 1994).

This species is an extremely rare visitor to Niagara with only four known observations. The first is that of a bird found on 11 May 1957 at Erie Beach in Fort Erie by Donald R. Gunn. A few days later the bird was observed by James L. Baillie, who added some controversy to the record by implying that it might be a hybrid Yellow-billed x Common Loon (Beardslee and Mitchell 1965, Sheppard 1970).
During the 1966-2006 time frame of this book, there have been three verified Niagara records of Yellow-billed Loon. On 7 May 1966, George North and Robert Westmore identified a loon in Lake Ontario off Winona, now part of the city of Grimsby (Curry 2006). Almost one year later, on 4 May 1967, and at nearly the same location, Robert Curry studied a Yellow-billed Loon in Lake Ontario at the foot of Oakes Road, Grimsby (James 1983, Curry 2006).

Thirty years later on 2 January 1997, John Lamey discovered an immature Yellow-billed Loon in the open waters of Lake Erie near the Point Abino pier. A great many birders raced to the area to see this exceptional visitor. The bird was not observed after 7 January 1997 (Dobos 1998, BOSNR).

The Yellow-billed Loon breeds in the High Arctic from Alaska east to northwest Canada and in Eurasia from Murmansk east to Siberia. It winters south to about 50ºN (Harrison 1987).

Kayo J. Roy

**Pied-billed Grebe**

*Podilymbus podiceps*

Spring and fall transient, rare summer resident, rare winter straggler

There are four March records in BOSNR. Because the Pied-billed Grebe is a rare winter straggler, it is not clear if these records are of arriving migrants or of birds that have overwintered in Niagara. Harold Lancaster reported one in Welland on 24 March 1968. The earliest spring arrival date in April is 3 April 1977, when a single bird was found on the BOS April Count. It is not clear how to assign spring transient abundance to this species because the small number of possibly transient Pied-billed Grebes cannot be readily distinguished from the small number of birds arriving to breed in the area.

Pied-billed Grebe, which breeds throughout southern Ontario, is a rare summer resident in Niagara. There was a significant increase (25%) in the probability of observing this species between atlases in the Carolinian region (Sandilands 2007a).

On 17 September 2006, 37 birds, presumably migrants, were observed in Port Colborne (BOSNR). The latest October date is 16 October 1983, when seven birds were seen on the BOS October Count. There is one BOSNR record in November.

Pied-billed Grebe is a rare winter straggler in Niagara. There are eight December records, sixteen January records and two February records in the BOSNR. It is a permanent resident in the southern United States. Northern breeding birds winter as far south as Panama (DeGraaf and Rappole 1995).

John E. Black

Kayo Roy
Horned Grebe *Podiceps auritus*

Uncommon spring transient, less common in fall, rare summer and winter visitor

The earliest spring migration date of Horned Grebe is difficult to determine as arriving transients in March are hard to separate from winter stragglers. The latest spring date is 30 May 1975, when seven birds were seen at Fort Erie (BOSNR). Although there are no June records, there are four observations in July and three for August. These may be early fall migrants, and a similar number (three) occur in September (BOSNR, HNCNR). The earliest fall record is of one bird on 12-28 September 1975 at Fort Erie (BOSNR). Birds (mostly singles) are observed throughout the fall and winter months of October, November, December, January, February and March.

The status of the Horned Grebe in Niagara has not changed from that described by Beardslee and Mitchell (1965). Although the bird is observed in almost every month, its primary designation is that of a migrant. It is an early spring migrant with more consistent presence in April than in May, as it needs to move on to its prairie and northwestern boreal nesting grounds from its wintering grounds on the southeast Atlantic and Gulf coasts. Summer records in Niagara are few, and there is no recent evidence of breeding, although historically it was a rare nester on the shore of Lake Ontario (Beardslee and Mitchell 1965).

“There is no proof that it [the Horned Grebe] ever nested in Niagara. Eaton’s mention of it in Beardslee and Mitchell is second hand (hearsay) and very much open to question. This species fools people into thinking that it is breeding when they see it in late spring or summer. Years ago Jim Baillie reported it breeding in Algonquin Park (even cited in Godfrey 1986, who missed his retraction) but Baillie later retracted this record.” (Ron Pittaway pers. comm.)

It is less common in autumn than in spring. Winter birds are confined to the larger water bodies, and there appear to be more January and February records in recent decades than in the past. Overall, numbers appear to have declined during the migration seasons compared with historical levels. In adjacent Hamilton, Curry (2006) indicates that Horned Grebe is present at almost all times of the year and that it is more common in spring than in autumn, patterns which mirror those in Niagara. In Hamilton, numbers lingering into January or February were higher in the late 1950s and the early 1960s than in recent decades.
Provincially, the Horned Grebe is a very rare breeder, but a locally common migrant, especially on the Great Lakes. Across North America, there is concern about the contraction of its breeding range to the northwest (Stedman 2000), and it is believed that the population is gradually declining. It is a nocturnal migrant and subject to high mortality in groundings associated with inclement weather (Stedman 2000). In Niagara these birds are confronted with additional danger. Both Beardslee and Mitchell (1965) and Bull (1974) mention incidents of a few dozen birds being swept over Niagara Falls and killed.

*Kenneth F. Abraham*

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**Red-necked Grebe* Podiceps grisegena**

Rare to uncommon spring and fall transient, rare winter straggler

As with other grebes, the earliest spring date is difficult to determine for the Red-necked Grebe because arriving migrants are difficult to separate from overwintering birds. However, groups of 34 and 44 at Fort Erie on 1 March 2003 are very likely indicative of spring influx. Most migrants have left Niagara by late April to early May, and a record on 20 May 1977, when one bird seen at Morgan’s Point near Burnaby (BOSNR), was exceptionally late. There are no summer records (June through September). The earliest fall date is 9 October 1994, when one bird was observed on the BOS October Count, and fall migration appears to be at its peak in late October. The largest fall group was 30 birds on 27 October 1975 at the Fifty Point Conservation Area (HNCNR). Birds (mostly singles) are seen from October through February (BOSNR, HNCNR, CBCs).

The Red-necked Grebe has increased significantly in the province over the past 20 years, primarily on its northwestern boreal breeding areas (Harris 2007). Breeding birds have re-established a foothold in western Lake Ontario during this period as well (Curry 2006), although it has not yet been recorded breeding in Niagara. Its migration from core breeding areas in western Canada southeasterly through the Great Lakes to Atlantic

*Brandon Holden*
wintering areas has also become better understood through a chain of migration monitoring stations. To find them in Niagara, it is best to search the Niagara River and the bays along the Lake Ontario and Lake Erie shorelines, from October to March.

Although almost all Red-necked Grebes observed in Niagara are found as single birds, they have been observed more frequently during autumn migration in the decades since Beardslee and Mitchell (1965) described them as uncommon to very rare. November is the month with the largest number of records, but individuals linger into January. The largest numbers observed together occur in February and March. This is consistent with the pattern in Hamilton described by Curry (2006), who expresses the view that this is an established spring migration phenomenon. Others suggest that late winter incursions may involve birds frozen out of the upper Great Lakes. See detailed discussion of both points of view in Tozer (2003).

The bones of two Red-necked Grebe were found among muskrat bones on an eroding river bank on the Welland River in Chippawa. They date from about 2000 B.C.E. (William Parkins pers. comm., Sadler and Savage 2003).

Kenneth F. Abraham

Eared Grebe

*Podiceps nigricollis*

Occasional visitor

The Eared Grebe is known for several superlatives. It is the most abundant grebe in the world. It is flightless for perhaps nine to ten months each year, having the longest flightless period of any bird capable of flight (Cullen et al. 1999).

The Eared Grebe is an occasional visitor to Niagara with the first accepted record being that of a female bird found dead in the Niagara River gorge on 6 February 1950 (Beardslee and Mitchell 1965). This bird, found by A. Roy Muma, was carried over the falls where it met its death with many other waterfowl. The specimen (skin) is at the Royal Ontario Museum, Toronto (ROM # 77014). With two exceptions, Beardslee and Mitchell (1965) detail all of the known sightings of Eared Grebe that have occurred in Niagara prior to 1966. The two exceptions are as follows: on 28 April 1959, a breeding plumaged Eared Grebe that was reported from Jordan Harbour by Harold Lancaster, and one found on 24 May 1964 in Port Colborne by Robert Curry and David Bissell and seen there the next day by Daniel Salisbury.

### The following birds were observed in Niagara during the 1966 – 2006 time frame of this book.

<table>
<thead>
<tr>
<th>Year</th>
<th>Date</th>
<th>Location</th>
<th>Observer(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1974</td>
<td>3 November</td>
<td>Fort Erie</td>
<td>Mary Louise Emerson and others</td>
</tr>
<tr>
<td></td>
<td>23-24 November</td>
<td>Chippawa</td>
<td>Harold Axtell and others</td>
</tr>
<tr>
<td></td>
<td>5 December</td>
<td>Chippawa</td>
<td>Robert Andrle and others</td>
</tr>
<tr>
<td>1976</td>
<td>7 November</td>
<td>Chippawa</td>
<td>Robert Andrle and others</td>
</tr>
<tr>
<td>1977</td>
<td>31 October</td>
<td>Niagara Falls</td>
<td>David Freeland, BOSNR</td>
</tr>
<tr>
<td></td>
<td>24 July</td>
<td>Fort Erie</td>
<td>Robert Andrle, Richard Byron, BOSNR</td>
</tr>
<tr>
<td>1980</td>
<td>17 November</td>
<td>Fort Erie</td>
<td>John Black</td>
</tr>
<tr>
<td>1991</td>
<td>26 March</td>
<td>Port Weller</td>
<td>Kayo Roy</td>
</tr>
<tr>
<td></td>
<td>2 December</td>
<td>Fort Erie</td>
<td>Kayo Roy</td>
</tr>
<tr>
<td>1999</td>
<td>31 December</td>
<td>Niagara Falls</td>
<td>Dean DiTommaso, Jeanne Skelly, BOSNR</td>
</tr>
<tr>
<td></td>
<td>26 April</td>
<td>Morgan's Point</td>
<td>Jean and Blayne Farnan</td>
</tr>
<tr>
<td>1996</td>
<td>11-12 May</td>
<td>Port Robinson</td>
<td>Marcie Jacklin, Richard Knapton</td>
</tr>
<tr>
<td></td>
<td>10 May</td>
<td>Port Weller</td>
<td>Kayo Roy</td>
</tr>
<tr>
<td>1998</td>
<td>26 March</td>
<td>Port Weller</td>
<td>Kayo Roy</td>
</tr>
<tr>
<td></td>
<td>2 December</td>
<td>Fort Erie</td>
<td>Kayo Roy</td>
</tr>
<tr>
<td>1999</td>
<td>31 December</td>
<td>Niagara Falls</td>
<td>Kayo Roy</td>
</tr>
</tbody>
</table>

The following birds were observed in Niagara during the 1966 – 2006 time frame of this book.

1974
3 November, one, Fort Erie (Mary Louise Emerson and others, BOSNR).
23–24 November and 5 December, one, Chippawa (Harold Axtell and others, BOSNR).
1976
7 November, one, Chippawa (Robert Andrle and others, BOSNR).
1977
31 October, one, Niagara Falls (David Freeland, BOSNR).
1980
24 July, one, Erie Beach, Fort Erie (Robert Andrle, Richard Byron, BOSNR).
1991
17 November, one, Fort Erie (John Black).
1994
26 March, one, Port Weller, St. Catharines (Kayo Roy, Alan J. Smith).
1995
2 December, one, Fort Erie (Robert Andrle and others, BOSNR).
1996
11-12 May, one, definitive alternate, Port Robinson sewage pond (Marcie Jacklin, Richard Knapton).
1998
10 May, one, Port Weller, St. Catharines (Kayo Roy).
1999
31 December, one, Niagara Falls (Dean DiTommaso, Jeanne Skelly, BOSNR).
2002
26 April, one, Morgan’s Point near Burnaby (Jean and Blayne Farnan).
In North America the breeding range for Eared Grebe extends from central British Columbia and Alberta east to south-central Manitoba, and through the northern plains states and the Great Basin to northern Arizona. The species is known to winter along the Pacific coast from Puget Sound to the Gulf of California, and across the southwestern United States into Mexico (Cullen et al. 1999).

Kayo J. Roy

Post-2006 Observation
On 26 December 2008, Paula Clark discovered a winter adult Eared Grebe in the Hydro One impoundment cell just south of the old Gate House building on the Niagara Parkway in Niagara Falls. The temperature dropped over the next few days, and by 31 December 2009 this impoundment cell was frozen over. The Eared Grebe (as illustrated) was forced to move and it was relocated on 1 January 2009 across the Parkway in an open water stream in Dufferin Island. Many observers and photographers enjoyed close-up views of this occasional visitor to Niagara; it was not reported after 5 January 2009 (BOSNR).

Western Grebe

**Aechmophorus occidentalis**

Extremely rare visitor

This large, energetic waterbird, the largest of all the seven North American grebes, is known for its very dramatic courtship ritual. Both the male and female partake in a unique mating display that finds both birds running rapidly side-by-side along the surface of the water in a very erect stance. They do so for an elective distance and then both immediately dive below the water surface. James A. Creighton recorded the first sighting of Niagara Western Grebe on 18 April 1936 in the Niagara River a few miles below Fort Erie (Beardslee and Mitchell 1965).

Three observations are known of this extremely rare visitor to Niagara during the 1966-2006 time frame of this book. On 23 April 1972, Robert Curry and John Olmsted identified a Western Grebe off Morgan’s Point near Burnaby as it swam with hundreds of other waterbirds along the edge of the ice mass held back by the ice boom at Fort Erie. On 27 November 1999, Eric Braaten, Donald Ford and John Sparling observed a Western Grebe in the Niagara River off McFarland Point, Niagara-on-the-Lake (Roy 2000). On 5 November 2004, a first-basic plumaged bird was found by Lois Evans in the Niagara waters of Lake Ontario off Fifty Point Conservation Area. This well-photographed bird was last observed on 12 November 2004 (Crins 2006, Curry 2006).

The lakes and ponds across the American west are common breeding grounds for the Western Grebe. They also breed in Mexico. This species winters primarily off the Pacific coast and on large bodies of water in the southwest, as well as in Mexico (Storer and Nuechterlein 1992).

Kayo J. Roy
Black-capped Petrel *Pterodroma hasitata*

Extremely rare straggler

This ocean wanderer of the southern Atlantic Ocean adjacent to the Lesser Antilles would seem a most unlikely candidate to occur in Niagara. The fact is, however, that Niagara has witnessed visitations of this gadfly petrel on three separate occasions, all associated with the passage of remnant hurricanes.

Following the passage of Hurricane Connie through southern Ontario on 13 August 1955, Alice Ulrich on 21 August 1955 picked up an emaciated specimen of this species at Morgan’s Point near Burnaby. The remains are now at the Royal Ontario Museum, Toronto (ROM # 76892), (Beardslee and Mitchell 1965, Dobos 1998).

One of the strongest hurricanes on record, Fran, cut a swath through the Niagara Peninsula on 7-8 September 1996. On the afternoon of 8 September, Robert Curry, John Olmsted and (independently) John Lamey found two Black-capped Petrels in Lake Erie, off Fort Erie (Curry and Olmsted 1996, Lamey 1996). At about the same time, Alan Wormington saw another off Port Colborne. The excitement spread rapidly, and before the afternoon was over perhaps 40 observers at Waverly Beach in Fort Erie watched up to three Black-capped Petrels (Dobos 1998).
Over the next 15 days, Black-capped Petrels were observed on both Lakes Erie and Ontario. The last living petrels on Lake Erie were seen on 15 September, and the bird observed by Theo Hoffman on 18 September flying off Fifty Point, Hamilton, undoubtedly strayed into adjacent Niagara waters. Approximately 12 Black-capped Petrels were observed in Niagara during this period (Dobos 1998). In addition, 18 dead specimens were picked up along the northwest shore of Lake Erie in Niagara and subsequently donated to the Royal Ontario Museum, Toronto (Dobos 1998). See Curry (1996) and the article on Hurricane Fran in this book for more complete accounts of this event.

Yet another hurricane, Isabel, struck southern Ontario on 19 September 2003. This storm brought two more Black-capped Petrels to Niagara. David Beadle and Alan Wormington found the first on 23 September 2003 off Waverly Beach in Fort Erie. Numerous observers saw this bird later the same day. On 27 September 2003, Brandon Holden found another petrel dead on Waverly Beach in Fort Erie; the skin is now at the Royal Ontario Museum, Toronto (ROM # 91639) (Crins 2004).

The Black-capped Petrel nests in Hispaniola and perhaps other West Indian Islands. Considerable numbers forage in the Gulf Stream off North Carolina, where they are regularly encountered by birding party boats. It is from these waters that they are roughly snatched by hurricanes and deposited, very rarely, in the waters and on the shores of Niagara.

Robert Curry

Wilson's Storm-Petrel

*Oceanites oceanicus*

Extremely rare straggler

Hurricane Connie passed through the Niagara Peninsula on 13 August 1955. The next morning Eric Bastin and George and Glenn Meyers of Hamilton were birding the Lake Erie shore. At Long Beach they found a dead Wilson's Storm-Petrel, which they donated to the Royal Ontario Museum, Toronto (ROM # 73077) (Beardslee and Mitchell 1965, Roy 2001). It is interesting that a resident of Long Beach reported to birders that, later the same day, he saw another storm-petrel in his yard. He placed it in a birdbath, but it flew away (Beardslee and Mitchell 1965).

Forty-one years later, in September 1996, Hurricane Fran brought at least four Wilson's Storm-Petrels to Niagara, all at the extreme eastern end of the lake at Fort Erie (Curry 1996). Drew Campbell saw the first bird off Jaeger Rocks on 9 September 1996, the day after Fran passed through. The next day, Glenn Coady, William Lindley and Alan McTavish observed three birds off Waverly Beach in Fort Erie (Dobos 1998), and John Lamey observed one off Jaeger Rocks on 13 September. Other unidentified storm-petrels observed on 9 and 14 September may have been some of these same individuals. In September 2003, Hurricane Isabel brought at least three more individuals of this species to Ontario to bring the total to six records (eight individuals) for the province (Crins 2004).

Wilson's Storm-Petrel occurs abundantly over much of the world's oceans. However, it is strictly pelagic and occurs inland only in the most adverse conditions, such as those encountered by these Niagara birds.

Robert Curry
Northern Gannet *Morus bassanus*

Occasional fall visitor

The Northern Gannet, the most handsome of pelagic birds, is a large, long-winged seabird of the family Sulidae. This graceful, sleek, agile and powerful flyer that spends most of its life at sea can travel far in almost any weather, and it is capable of gliding for hours just above the wave-tips, seldom moving its wings. The Northern Gannet is well equipped by nature for its spectacular plunges for fish from great heights. Unlike most birds, it has binocular vision; that is, its eyes are positioned such that both can see forward (Nelson 1978a).

The first record of Northern Gannet for Niagara is that of a young bird, reported by James H. Fleming, that was picked up dead about the last week of November in 1907 (exact date unknown). Joseph Gilmore found the bird on his farm in Wainfleet located several kilometres from Lake Erie (Beardslee and Mitchell 1965). This publication and Sheppard (1970) identify all known observations of Northern Gannet in Niagara prior to 1966.

While Beardslee and Mitchell (1965) refer to this species as “very rare,” and Sheppard (1970) calls it a “rare migrant,” today the Northern Gannet is an occasional fall visitor to Niagara. Near annual observations of juvenile birds are possible along the Lake Ontario shoreline from Fifty Point to Niagara-on-the-Lake and up the Niagara River to Queenston. The birds have on occasion been observed in the Welland Canal at Port Weller and along the Lake Erie shoreline at Fort Erie and at Point Abino. This species has become a rare but regular visitor over recent years to neighbouring Hamilton at the west end of Lake Ontario, where most records come from the Van Wagners Beach area. Depending on the weather, these birds begin to arrive from the Maritimes in small numbers from early November to mid-December (BOSNR).

In North America, the Northern Gannet’s breeding range is the North Atlantic of Maritime Canada. It winters along the eastern seaboard to Florida and the Gulf of Mexico (Nelson 1978b).

Kayo J. Roy

American White Pelican

*Pelecanus erythrorhynchos*

Extremely rare visitor

One historic record and only three other observations of American White Pelican are known to exist in Niagara for this extremely rare visitor from the American south and west. While not at risk in Canada, this species is listed as Endangered under the Species at Risk Act (SARA 2008). The historic record, and Niagara’s first American White Pelican, is of a bird reported by James Savage in the Niagara River near Fort Erie on 5 October 1894 (Sheppard 1970). Later that same day, “Jake” Koch shot this bird near the International Bridge in Fort Erie (Beardslee and Mitchell 1965).

Sixty-three years later, on 28 September 1957, Roy Muma observed the second American White Pelican for Niagara at Gravelly Bay near Port Colborne (Sheppard 1970). A front-page article in the 1 October 1957 Welland and Port Colborne newspaper, *The Evening Tribune*, includes a photograph taken on 29 September 1957 that confirms the two-day presence of the bird in the area.
A further 34 years elapsed before Niagara’s third American White Pelican was located. On 17 November 1991, two white pelicans were discovered at Jordan Harbour, Vineland (Bain 1992). Unwisely these two birds stayed for a period of time that proved fatal. Succumbing to a very cold spell early in January, one bird was found frozen on the ice (exact date unknown) while the second bird was observed in the ice-covered harbour until 13 January 1992. This second bird may then have suffered the same misfortune. These birds were well photographed by Robert Tymczyszyn and Alan Wormington and were probably the same two individuals that spent the previous six weeks at Mountsberg Conservation Area, near Campbellville, only 70 km north of Vineland. Finally, on 14 May 2002, Willie D’Anna photographed three American White Pelicans on the Niagara River above the Canadian Horseshoe Falls in Niagara Falls (BOSNR).

The main breeding areas for American White Pelican are the Canadian Prairie provinces east to Lake Nipigon in northwestern Ontario (G.K. Peck 2007a), with scattered colonies in the western United States. The species winters chiefly in the Gulf of Mexico, Florida and on the coasts of Central America south to the West Indies and Guatemala. In the west it winters along the coast of central California south through the Gulf of California (Harrison 1988).

Kayo J. Roy

**Brown Pelican** *Pelecanus occidentalis*

Extremely rare visitor

The Brown Pelican is unmistakably a bird of coastal waters and is an extremely rare visitor to Niagara. In the early 1970s, the Brown Pelican was seriously endangered. The halting of the use of DDT and other pesticides has resulted in a dramatic recovery for this now very abundant coastal species.

Over the years, there have been several sightings of Brown Pelican across the Niagara River in neighbouring Buffalo, New York; however, only one known record exists for
Niagara. On 25 September 1971, Paul Benham, Mary and William Kraetz, Richard Brownstein and others identified a Brown Pelican, first in flight over Lake Erie being pursued by Herring Gulls, and then perched on a rock some three hundred metres off Waverley Beach in Fort Erie (BOSNR, James 1991). Interestingly, there is no earlier sighting of Brown Pelican for the province, so this observation becomes the first record for Ontario.

An adult Brown Pelican spent two days in the Buffalo harbour off La Salle Park in July 1992. The presence of this close-by bird enticed many Ontario birders to camp along the Niagara River in Fort Erie in hopes of catching a glimpse of this coastal rarity. Regrettably, the second Niagara sighting did not happen as the bird was a no-show in Ontario waters.

The Brown Pelican is found on both coasts of North and South America from Washington to Peru and from North Carolina to the West Indies and Brazil. Breeding dates vary according to location (Harrison 1987).

Kayo J. Roy

Double-crested Cormorant

*Phalacrocorax auritus*

Very common summer resident, uncommon winter resident

The status of the Double-crested Cormorant in Niagara has changed dramatically in the last 50 years. Neither Beardslee and Mitchell (1965) nor Sheppard (1970) refers to this bird as anything other than an uncommon migrant or very rare winter visitor. McIlwraith (1894) mentions only that it is seen in southern Ontario. The first record listed by Beardslee and Mitchell was of a single bird seen off the south end of Grand Island in February 1932. There are only three records in the 1940s and three in the 1950s. Sheppard (1970) refers to it as “An uncommon migrant through the Frontier area, appearing only at rather wide intervals.”

At present the Double-crested Cormorant is a very common summer resident in Niagara. The birds begin to arrive in late March, and most have left the region by early November (Curry 2006). A few birds, however, overwinter here.

Cormorants first nested on the Great Lakes in Lake Superior in the early 1910s. They spread eastward, from Lake Superior, increasing in numbers to about 900 pairs by the 1950s. From the 1950s to the early 1970s, they suffered widespread reproductive failure and a dramatic population decline from the effects of environmental contaminants (Weseloh et al. 1995). Contaminants began to decline and cormorant populations on the Great Lakes began to increase in the early to mid-1970s. The first nesting in Niagara

Kayo J. Roy
(16 nests) occurred in 1983 on Mohawk Island, just west of the Niagara Region boundary in Lake Erie (Clarke et al. 1983). By 1994, there were 132 nests there, and since 2004, there have been >1,000 nests annually, with 1,586 in 2008 (CWS unpubl. data). Between 1992 and 2004, cormorants started nesting at five locations on the U.S. side of the Niagara River: 1992 — Buckhorn Weir (7 pairs); 1997 — Motor and Strawberry Islands (18 and 31 pairs, respectively); 2000 — Goat Island (9 pairs); and 2004 — Nimo Crib (7 pairs). In 2003, a few birds attempted to nest at the mouth of the Welland Canal in St. Catharines, and on 19 June 2008, 111 nests were counted there (John Black pers. comm.). At the Port Colborne breakwall, the first cormorant sighting was of 20 individuals on 24 May 2001. The number of birds roosting there increased until the first nests (n=35) were recorded on 2 June 2004 (Ralph Morris pers. comm.). On 22 April 2009, 444 nests were counted there (David Moore unpubl. data). Significant increases in cormorant numbers have occurred on all BOS Counts (see the article by Hamilton and DeLeon elsewhere in this book).

Since 2006, there has been an active program of lethal control over most United States Great Lakes cormorant colonies (U.S. Fish and Wildlife Service 2003). On the five U.S. colonies mentioned above, the population in 2006 was 705 nests; by 2008 it had been reduced to 528 nests (Connie Adams pers. comm.).

The Double-crested Cormorant is native to North America. It breeds coastally from Alaska to Baja, California, across the Canadian Prairies, in the Great Lakes Basin, along Atlantic coast and in the Caribbean (Hatch and Weseloh 1999). In Ontario, it breeds mostly on islands and along the shores of the Great Lakes. In the last decade, considerable numbers have started nesting inland from the Great Lakes (Weseloh 2007a).

D.V. Chip Weseloh

Great Cormorant *Phalacrocorax carbo*

Extremely rare visitor

The Old World Great Cormorant is the most widely distributed of all cormorants. This conspicuous waterbird, the largest of all the world’s cormorants, breeds in all continents except South America. A coastal rather than an oceanic bird, the Great Cormorant, while known to occasionally wander, can regularly be found in North America along the Atlantic coast (Hatch et al. 2000). There are no recorded observations of Great Cormorant in Beardslee and Mitchell (1965) or Sheppard (1970).

The Great Cormorant has been observed in Ontario on quite a few occasions, with 12 Ontario Bird Records Committee accepted records (Richards 2008). During the 1966-2006 time frame of this book, three Niagara records exist for this extremely rare visitor. On 1 January 1974, John Black, Paul Benham and Daniel Salisbury identified a Great Cormorant at Niagara-on-the-Lake. On 23 November 2002, Alan Wormington and others discovered a Great Cormorant at the mouth of the Niagara River in Niagara-on-the-Lake (Crins 2003). Brian Ahara observed what was probably this same individual later in the day at Port Weller as it flew west past the entrance to the Welland Canal. The third Niagara record, also from Niagara-on-the-Lake, is of a bird found by Thomas Bartlett on 8 December 2005 (BOSNR).

In North America the Great Cormorant breeds along the Atlantic coast from Maine northward to Newfoundland. It winters along the Atlantic coast from the Maritime provinces south to the Carolinas (Hatch et al. 2000).

Kayo J. Roy
American Bittern

*Barry Cherriere*

First Atlas: 1 square confirmed, 2 probable, 3 possible
Second Atlas: 0 squares confirmed, 2 probable, 3 possible
BOS April Count: Reported on 1 of 41 counts, maximum of 1 bird in 2005
BOS May Count: Reported on 12 of 41 counts, maximum of 7 birds in 1966
BOS October Count: Reported on 2 of 40 counts, maximum of 2 birds in 1967
Niagara Christmas Bird Counts: Reported on 1 of 41 counts, maximum of 1 bird on the 1971 Niagara Falls CBC

**American Bittern Botaurus lentiginosus**

Rare and local summer resident, extremely rare winter straggler

The American Bittern is one of the top 20 common birds in decline as determined by the National Audubon Society (Audubon 2007). There is little evidence to suggest that these birds migrate through Niagara in the spring. Given their secretive nature, however, we may simply fail to see them as they move through. The earliest spring arrival date is 10 April 2005, when a single bird was found on the BOS April Count.
The American Bittern, which breeds throughout southern Ontario, is a rare and local summer resident in Niagara. The numbers of these birds breeding in the region have declined substantially over the years from 1966 to 2006. In Ontario, however, only in the Carolinian region has the probability of observation declined significantly (Timmermans 2007a). According to the Ontario Nest Record Scheme data, the earliest egg date for this species in Niagara is 19 May. The most reliable location for finding this species is Mud Lake in Port Colborne.

The latest recorded date in October is 14 October 1990, when a single bird was observed on the BOS October Count. There are two November records of single birds: 6 November 1966 at Rose Hill Road (probably on the Lake Erie shoreline) in Fort Erie and 13 November 1972 at Thunder Bay in Fort Erie (BOSNR).

An extremely rare winter straggler, a single bird was seen on the Niagara Falls CBC of 1971. The American Bittern winters in the southern United States and farther south (National Geographic 2006).

John E. Black

Least Bittern *Ixobrychus exilis*

Rare and local summer resident

The Least Bittern is designated as Threatened in Ontario (OMNR 2007) and Canada (SARA 2008, Schedule 1). There is little evidence to suggest that these birds migrate through Niagara in the spring. Given their secretive nature, however, we may simply fail to see them as they move through. The earliest spring date is 3 May 1970, when Harold Lancaster and Dan Salisbury saw two birds at Mud Lake in Port Colborne.

The Least Bittern, which breeds throughout southern Ontario, is a rare and local summer resident in Niagara. Only in the Carolinian region was there a significant decline in the probability of observation of this species between the two atlases (Woodliffe 2007a). According to Ontario Nest Record Scheme data, the earliest egg date for this species in Niagara is 21 May. One of the most likely places to see the bird and hear its call (a soft “coo-coo-coo”) in Niagara is on the east side of Mud Lake in Port Colborne.

There is only one fall record. A single bird was found by Harold Lancaster on 9 and 12 September 1994 at Mud Lake (BOSNR).

There are no winter records for this species in Niagara. The Least Bittern winters in southern Florida and farther south (National Geographic 2006).

John E. Black
Great Blue Heron *Ardea herodias*

Uncommon summer resident, rare winter straggler

McIlwraith (1894) makes very little mention of the distribution of the Great Blue Heron in Ontario except to say that it breeds in North America from the Arctic regions southward to the West Indies and northern South America. He also notes that “In southern Ontario, Herons are seen occasionally wherever their favourite fish is to be found.” He describes one such colony near Ottawa in 1883.

According to Beardslee and Mitchell (1965), during spring and fall migration, this heron can be seen on all rivers and streams in the Niagara Frontier. They also discuss the location of several early colonies in the Niagara Frontier: Oak Orchard Swamp, Grand Island and sites near Wainfleet and Chippawa, Ontario. Between 1937 and 1956, they report 117-244 individuals for April Counts, 201-433 individuals for May Counts, 49-52 individuals for Fall Counts and 20 for Christmas Counts. These numbers, when compared to those in the sidebar, suggest a dramatic decline in the number of herons observed during the April-May period. Sheppard (1970) alludes to this decline: “Although not so prevalent in these days, this large heron was, in former years, a familiar sight during the summer months in the shallows of practically all the larger waterways within this Frontier area.” He also mentions a small (<45 nests) but long-standing colony on Navy Island.

In the New York waters of the river, the Great Blue Heron breeds on Motor Island, where there were 38, 65, 61 and 91 nests in 2005-2008, respectively. It also bred on Strawberry Island in 2005 (three nests) but not in 2006/2007, probably owing to the aggressive cormorant control begun in 2005 (Connie Adams pers. comm.).

Since 1966 the earliest spring record for this species in Niagara is 15 March 1967, when a single bird was reported at Thorold. In terms of late records, individuals are known to linger into January and February (BOSNR).

The numbers of Great Blue Herons reported on the three BOS Counts are amazingly consistent, as compared to, for instance, the numbers of Bonaparte’s Gull. The consistency of these numbers suggests that any post-breeding dispersal of these herons (Butler 1992) into Niagara, which may occur in August-September, is over by October. The 60 herons reported above on the 2006 Niagara Falls CBC are at least 50% greater numbers than any of the other counts listed. This suggests a build-up in numbers, with the open water sections of the River acting as a distinct wintering area for this species. Great Blue Herons often winter as far north as there is open water (Butler 1992).

Hamilton and DeLeon (see their article elsewhere in this book) show a significant increase in the number of Great Blue Herons reported on the May and October BOS Counts from 1966 to 2006.
The Great Blue Heron breeds throughout much of North America, from Cape Breton Island to central Alberta, south to Florida and Texas. On the Pacific coast, it breeds from southern Alaska south to Baja California (Butler 1992). In Ontario, it breeds commonly throughout southern Ontario and intermittently into the Boreal Forest (Naylor 2007a).

D.V. Chip Weseloh

Great Egret *Ardea alba*

Rare summer resident

McIlwraith (1894) states that this bird occurs primarily in the southern United States but straggles northward to “Canada West.” He considers it only an accidental visitor to Canada.

Until recently, the Great Egret was an extremely rare bird in the Niagara Frontier. Beardslee and Mitchell (1965) note that early writers considered it a “rare straggler” and listed only four occurrences of it between 1881 and 1927. From 1928 to 1932, it occurred on six occasions, and it has occurred annually since then. Sheppard (1970) calls it a “sporadic visitor to the [Niagara] Frontier waters.” From 1966 to 1996, in the Canadian sections of the BOS Counts in April and/or May, only one or two birds were seen in eight years. There was no known nesting of Great Egrets in the Niagara Region during either period of the Ontario Breeding Bird Atlas (G.K. Peck 2007b); nor were there any during the first New York Breeding Bird Atlas (Peterson 1988).

Since 1966 the earliest spring arrival date for this species in Niagara is 30 March 1988, when a single bird was seen at Fifty Point Conservation Area (HNCNR). The latest date of observation is 27 October 2004, when three birds were seen at Fort Erie (BOSNR).

BOS April Count: Reported on 5 of 41 counts, maximum of 2 birds in 1993
BOS May Count: Reported on 12 of 41 counts, maximum of 6 birds in 2004
BOS October Count: Reported on 2 of 40 counts, maximum of 12 birds in 2006
Niagara Christmas Bird Counts: Not reported

Brandon Holden

Great Egret
The first breeding record for the Great Egret on the Niagara Frontier occurred in 1995, when a small colony of two nests was established on Motor Island on the U.S. side of the Niagara River, just downstream from the Peace Bridge (Watson 2001). Reported sightings of Great Egrets on BOS Counts, however, remained scarce. From 1996 to 2006, they were reported during May in eight of ten years but never in numbers greater than six individuals. In spite of the few egret reports on specific count days, the colony on Motor Island has grown steadily since 1995. Nest numbers there were recorded as follows: at least five nests in 2001, nine nests in 2002, 15 nests in 2003, 29 nests in 2005, 31 nests in 2006, 20 nests in 2007 and 36 nests in 2008. (William Watson, Connie Adams pers. comm.).

In the summers of 2002 to 2009, Canadian Wildlife Service, New York State Department of Environmental Conservation and BOS colour-banded, with red leg-bands, more than 75 flightless young egrets on Motor Island. The goal of this work was to determine post-breeding movements, natal site fidelity and the origin of pioneering individuals at new egret colonies. During late summers of these years, these birds were seen again, primarily in areas to the east of the Niagara River in the Tonawanda Wildlife Management Area, where there is an overnight roost of more than 200 egrets, and at the Montezuma National Wildlife Refuge, where there is also a large autumn roost. Few birds have dispersed to the west, and no Motor Island banded birds have been reported from any other breeding colony. The Canadian nesting colony nearest to Niagara is in the Toronto Harbour. Since 1995, individuals have been seen regularly on the Niagara River, the Lake Erie shoreline, Mud Lake, Feeder Canal Road (Stromness) and Cement Plant Road pond in Wainfleet.

The Great Egret breeds throughout South and Central America. In North America, it breeds on the Atlantic Coast from southern Maine to Florida and into Mexico. It also breeds at scattered locations throughout the Midwest to the far west (McCrimmon et al. 2001). In Ontario, it breeds with other tree-nesting colonial waterbirds (herons and cormorants) in the St. Lawrence River and Lakes Ontario, Erie and Huron (G.K. Peck 2007b).

D.V. Chip Weseloh

**Snowy Egret *Egretta thula***

Occasional visitor

The beautiful and graceful aquatic Snowy Egret is the North American counterpart to the very similar Little Egret of the Old World. It inhabits swamps, ponds, lakes and shallow coastal wetlands and tidal flats, but prefers the coastal marshes of the Atlantic, Pacific and Gulf Coasts. In the late 19th century and the early 20th century, the delicate breeding plumes of the Snowy Egret were highly prized by the millinery industry as decorations for women’s hats, a style that reduced the Snowy Egret population to dangerously low levels. The Migratory Bird Treaty Act of 1918 protected the birds from this devastation, and the population has substantially rebounded. This treaty still stands today to protect the many species of North America’s migratory birds.

There are no sightings of Snowy Egret for Niagara in Beardslee and Mitchell (1965).
The following birds were observed in Niagara during the 1966 – 2006 time frame of this book.

1967
31 May-3 June, one, Port Colborne (Arthur Clark, Daniel Salisbury, Joseph Grybowski and others, Sheppard 1970, BOSNR).

1968
16 July, one juvenile, Port Colborne (Daniel Salisbury, Richard Brownstein).

1969
16 June, one (collected), Port Weller, St. Catharines (Daniel Salisbury).

1975
17 May, one, west of Fort Erie on BOS May Count (James Braunbemrs, Mary Louise Emerson, Marjorie Emerson).

1978
29-30 April and 2 May, one, Fort Erie (Robert Sommerville, Ralph Gardiner, BOSNR).

1983
14 May, one, Mud Lake, Port Colborne (Paul Hess, BOSNR).

1994
15-21 May, one adult, Kemp Road W, Grimsby (Robert Curry and others).

1997
4 May, one adult, Avondale sewage ponds (now known as the Parmalat sewage ponds), Niagara-on-the-Lake (John Black, Kayo Roy and others).

1999
8-11 November, one juvenile, Niagara-on-the-Lake (Gordon Bellerby and others, BOSNR).

2000
29 May, two adults, Fort Erie (Kayo Roy, Alan J. Smith, BOSNR).

2001
21-23 May, one adult, Fort Erie (Kayo Roy, Alan J. Smith, BOSNR).

2004
16 May, one adult, Richardson’s Creek, St. Catharines (Brian Ahara, Kayo Roy).

In North America, the Snowy Egret breeds along the Atlantic and Gulf Coasts and inland wetlands from New Jersey to Florida and Texas, also along the Pacific Coast from Oregon to California and inland from Montana to Arizona. It winters on the east coast from Virginia to Florida, Texas, along the west coast from Oregon to California and east to Arizona and New Mexico (Parsons and Master 2000).

Kayo J. Roy
Little Blue Heron *Egretta caerulea*

Extremely rare visitor

The Little Blue Heron of the southeastern United States is a small member of the heron family and is the only heron species in North America in which a dramatic color difference exists between first-year and adult birds. In its first year, juveniles are all white, turning into an overall slate-blue color in subsequent years. This species is declining in much of its range owing to loss of wetland habitat and other anthropogenic disturbances (Rogers and Smith 1995).

There are no reports of Little Blue Heron for Niagara in Beardslee and Mitchell (1965). The Ontario Bird Records Committee has accepted 57 records of this species up to 2006 (Crins 2007a). In that this bird wanders north to Canada from the United States, it is surprising that only five of these Ontario records exist for Niagara. Harold Lancaster found the first, a white juvenile bird he discovered on 21 June 1957 along Four Mile Creek in Niagara-on-the-Lake. This individual was not seen after 23 June 1957 (Sheppard 1970).

During the 1966-2006 time frame of this book, only four records are known for Little Blue Heron in Niagara. On 16 July 1968, Daniel Salisbury observed a white juvenile bird at the Cement Plant Road pond in Wainfleet (Sheppard 1970, BOSNR, Crins 2005). Daniel Salisbury also located Niagara’s third Little Blue Heron on 1 May 1970 at Mud Lake, Port Colborne. On 13 June 1979, David Freeland and others identified an adult Little Blue Heron at Fort Erie (BOSNR). Robert Curry, James Heslip and John Olmsted discovered a white juvenile bird on 24 July 1994 at the Smithville sewage ponds that was later photographed by Kayo Roy. This Little Blue Heron was last reported on 2 August 1994 (not 1 August 1994 as in Pittaway 1995; Curry 2006).

In North America, the Little Blue Heron breeds in the southeast United States from southern Ohio and the Missouri River valleys to the Gulf Coast of Texas and Florida, and up the Atlantic coast to New England. It winters along the coasts of the southeastern United States from New Jersey to Florida and south Texas (Rogers and Smith 1995).

*Kayo J. Roy*

Tricolored Heron *Egretta tricolor*

Extremely rare visitor

Formerly known as Louisiana Heron, the Tricolored Heron is a graceful, slender, medium-sized heron of the coastal shores and marshes of the southeastern United States. Built for marsh life with its long legs, this abundant bird is the only North American heron with an all white belly.

There are no Niagara records for Tricolored Heron in Beardslee and Mitchell (1965) or in Sheppard (1970).

During the 1966-2006 time frame of this book, six records exist of Tricolored Heron in Niagara. The first is that of a first alternate bird found on 23 May 1971 by Harold Lancaster, Alan J. Smith and Randy Waters at the Cement Plant Road pond in Wainfleet. The bird was not observed after 24 May 1971 (BOSNR, Roy 2002). Six years later on 11 May 1977, Blayne Farnan identified a definitive alternate Tricolored Heron at the same Cement Plant Road pond in Wainfleet. This individual was last seen on 18 May (BOSNR, Roy 2002). Roy E.C. Baker, Simon Baker and David Milsom
discovered a definitive alternate Tricolored Heron on 29 April 1984 at the Smithville sewage ponds (Wormington 1985).

On 27 May 2001, Kayo Roy and Alan J. Smith identified a first alternate Tricolored Heron along the Welland Canal near the Canadian Coast Guard Station in Port Weller, St. Catharines. Many birders were easily able to observe this bird, which was not seen after 2 June 2001 (Roy 2002, BOSNR). On 6 August 2006, Barbara Charlton and Rob Dobos were astonished to find a definitive alternate Tricolored Heron along the shoreline of the Niagara River above the Canadian Horseshoe Falls in Niagara Falls. One week later on 13 August, and to everyone's total surprise, George Naylor reported that a second definitive alternate Tricolored Heron had joined the first bird. Jerry Lazarczyk observed only one bird on 28 August, and this lone individual was not seen after 3 September 2006 (Crins 2007a, BOSNR).

On 5 October 2006, Michael Oldham reported a definitive alternate Tricolored Heron along the Lake Erie shoreline at Point Abino. This individual was last seen on 11 October 2006 (BOSNR). While it is difficult to know with any certainty, it is believed that the Point Abino bird was likely one of the two Tricolored Herons that had been observed earlier in the year in Niagara Falls.

The Tricolored Heron breeds along the Atlantic Coast from New Jersey south to Mexico, the Caribbean and South America. It winters in most of its breeding range (Frederick 1997). Non-breeding distribution is not very much different from that of the breeding distribution (Hancock and Kushlan 1984).

Kayo J. Roy

Cattle Egret *Bubulcus ibis*

Occasional visitor

The Cattle Egret has experienced a remarkable range expansion. First sighted in South America in 1877, it is generally believed that this common Old World species crossed the Atlantic Ocean from Africa by natural means, most probably by transatlantic flight (Hancock and Kushlan 1984). Initially discovered in North America in 1941, it reached Canada in 1952, and Ontario’s first record was that of a single individual reported from Port Rowan on 4 May 1956 (Godfrey 1986).
The first Niagara record for this occasional visitor was on 26 May 1964 when Robert Andrle, Arthur Clark, and Joseph Thill discovered a Cattle Egret in Wellandport (BOSNR). Five months later, on 30 October 1964, George Letchworth found a Cattle Egret at Thunder Bay, near Fort Erie (Sheppard 1970, BOSNR).

The Cattle Egret, a bird of Africa and Eurasia, has expanded its range in the New World from Chile, Argentina and Brazil north to the United States and Canada (Hilty and Brown 1986). It breeds all along the Atlantic coast from Maine south throughout coastal Mexico, and the entire length of the Pacific coast from British Columbia to Baja California, and inland in areas bordering the Gulf of Mexico (Hancock and Kushlan 1984).

The following birds were observed in Niagara during the 1966 – 2006 time frame of this book.

<table>
<thead>
<tr>
<th>Year</th>
<th>Date</th>
<th>Location</th>
<th>Observers</th>
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<td>19-20 May</td>
<td>one, Chippawa</td>
<td>(Mavis Folemsbee, Sheppard 1970)</td>
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<td>1969</td>
<td>23 October</td>
<td>one, St. Davids</td>
<td>(Paul Benham, BOSNR)</td>
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<td>1976</td>
<td>29 May</td>
<td>one, Sherkston</td>
<td>(Robert Andrle, Alice and Willard McKale, BOSNR)</td>
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<td></td>
<td>29 May</td>
<td>four, Welland</td>
<td>(Robert Andrle and others, BOSNR)</td>
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<td>17-31 July</td>
<td>two, Chippawa</td>
<td>(Robert L. Sommerville, BOSNR)</td>
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<td></td>
<td>31 July</td>
<td>five, Chippawa</td>
<td>(Robert L. Sommerville, BOSNR)</td>
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Post-2006 Observation

On 27 May 2007, returning to Fort Erie after looking for a nesting pair of Sandhill Cranes, Peter Yoerg discovered an adult Cattle Egret in a grassy cattle field along Highway 3 in Gasline (BOSNR). The bird was observed feasting on insects in the long grass along a wire fence line. This Cattle Egret was last observed on 3 June 2007.

The Cattle Egret, a bird of Africa and Eurasia, has expanded its range in the New World from Chile, Argentina and Brazil north to the United States and Canada (Hilty and Brown 1986). It breeds all along the Atlantic coast from Maine south throughout coastal Mexico, and the entire length of the Pacific coast from British Columbia to Baja California, and inland in areas bordering the Gulf of Mexico (Hancock and Kushlan 1984).

Kayo J. Roy

Green Heron *Butorides virescens*

Uncommon summer resident

The earliest recorded spring arrival date of this species is 21 April, when single birds were seen at Mud Lake in Port Colborne in 1968 by Harold Lancaster and at Port Weller in 1970 by Dan Salisbury. There is little evidence to suggest that there is a migration through Niagara of this uncommon species.

The Green Heron, which breeds throughout southern Ontario, is an uncommon summer resident in Niagara. According to the Ontario Nest Record Scheme data, the earliest egg date for this species in Niagara is 18 May. Green Heron prefer conifers for their nesting.

The latest fall date is 20 October 1985, when a single bird was noted on the BOS October Count. There are no winter records of this species in Niagara. The Green Heron winters in southern Florida and farther south (National Geographic 2006).

John E. Black
Green Heron
Sam Barone

Black-crowned Night-Heron
Sam Barone
Black-crowned Night-Heron

*Nycticorax nycticorax*

Uncommon summer resident, occasional winter straggler

The earliest spring arrival date for the Black-crowned Night-Heron in our area is 29 March 1998 (but see below), when 21 birds were reported at Niagara Falls. In terms of late dates, single birds are known to linger into January (BOSNR).

Beardslee and Mitchell writing in 1965 comment that this species had “increased considerably in numbers in the last half century.” They mention a colony of 574 nests that existed until 1939 on Grand Island and another at Port Weller, St. Catharines that had grown to 630 nests by 1948. Since 1965, this night-heron has been reported in the Canadian sections of the annual April and May BOS Counts in all but four years. Numbers reported in May are much lower (average for the last 10 years is 18) than those in April (average for the last 10 years is 126), probably as a result of greater amounts of foliage on the trees, which hides both birds and nests.

Black-crowned Night-Herons breed on several of the small islands just above Niagara Falls on both the Canadian and U.S. sides of the river. Sheppard (1970) noted 46 nests there on 5 April 1967. The second island east of the stranded barge just above the falls has been visited annually in late April since 1979 by biologists from Canadian Wildlife Service, whose purpose is to collect Herring Gull eggs for studies of contaminants (Pekarik and Weseloh 1998). Night-Heron nests have also been counted on most visits, and the number of nests has fluctuated from a low of 51 in 1983 to a high of 213 in 1991. Most Night-Heron nests have contained eggs. Occasionally some eggs have already hatched, with some young as old as two weeks. These dates suggest that eggs would have been laid as early as mid- to late March, making this the earliest known seasonal nesting site in Ontario; the earliest egg date in the Ontario Nest Record Scheme is 15 April. Night-Herons also currently nest in the Niagara River on Motor Island near Tonawanda (Watson 2002) and formerly (2000-2006) nested on the breakwater at Port Colborne (Ralph Morris pers. comm.).

In the summer months Black-crowned Night-Herons may be seen anywhere on the Niagara River, on the Lake Erie shoreline, at Mud Lake, Port Colborne and at Cement Plant Road pond, Wainfleet, as well as at Allanburg, Port Weller, and the Glendale sewage ponds. Banded birds from Ontario have been reported at a range of locations from the southern United States through Cuba and the Caribbean islands (Dunn et al. 2009).

The Black-crowned Night-Heron occurs worldwide (Davis 1993). In North America, it breeds from Washington through southern Alberta to the Great Lakes, down the St. Lawrence River and south to the Gulf coasts; it is absent from the Appalachian Mountains. It winters in the southern United States and Central America. In Ontario, it breeds mainly on the Great Lakes from Lakes Erie and Ontario north to the North Channel of Lake Huron as well as on the Detroit, Niagara, St. Lawrence and Ottawa Rivers (Weseloh 2007b).

_D.V. Chip Weseloh_
Yellow-crowned Night-Heron
*Nyctanassa violacea*
Extremely rare visitor

The Yellow-crowned Night-Heron is a short, stocky, medium-sized bird of the coasts and swamps of the southeastern United States. This handsome wading bird, with a diverse vocal repertoire of as many as 20 calls (Nice 1929), is primarily a solitary forager (French 1973) and usually but not entirely feeds at night (Burleigh 1958).

Sightings in Niagara prior to 1966 are well described in Beardslee and Mitchell (1965) and Sheppard (1970).

The Yellow-crowned Night-Heron is an extremely rare visitor to Niagara and has been observed on only two occasions during the 1966-2006 time frame of this book. On 26 August 1966, Daniel Salisbury identified and studied a juvenile bird along a stream in western St. Catharines. Willie D'Anna and Betsy Potter discovered another juvenile on 10 August 2002 at the Cement Plant Road pond in Wainfleet. This bird remained until 13 August 2002 to the enjoyment of many birders (Crins 2003, BOSNR).

The Yellow-crowned Night-Heron breeds along the Atlantic Coast from New York southward and up the large river systems in Central United States to Kansas and Indiana. It winters along the Atlantic and Gulf Coasts and southward (Watts 1995).

Kayo J. Roy

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**Post-2006 Observation**

On 24 August 2008, Raymond Barlow photographed a juvenile Yellow-crowned Night-Heron perched on a fallen tree limb some 100 metres from the rocky mouth of 40 Mile Creek in Grimsby (Richards 2009). Repeated efforts later in the day to relocate this bird and subsequent attempts to find it over the next few days proved to be unsuccessful.
Glossy Ibis *Plegadis falcinellus*

Extremely rare visitor

The red and iridescent green plumage of the Glossy Ibis can be observed on every continent except Antarctica (Davis and Kricher 2000). During the bird's range expansion, its population also grew significantly. From a few breeding pairs in Florida in the late 1920s, by 1975, an estimated 13,500 Glossy Ibis were breeding along the Atlantic coast (Davis and Kricher 2000).

There are no Niagara records of Glossy Ibis in Beardslee and Mitchell (1965).

A dark wading bird with a long down-curved bill, the Glossy Ibis is an extremely rare visitor to Niagara. The first reported sighting was in August 1939 (exact date unknown) when James Platt observed a Glossy Ibis on his farm between Beamsville and Vineland Station (Curry 2006). Four individuals were observed on 4 May 1962 in St. Catharines (Sheppard 1970). On 6 May 1965, Howard Martin and Gustave Yaki discovered a Glossy Ibis on the upper Niagara River between Dufferin Island and Chippawa in Niagara Falls (Sheppard 1970). Keith Culliford, Harold Lancaster and George Sparrow observed a Glossy Ibis at Mud Lake, Port Colborne on 9 May 1965 (Sheppard 1970).

In these early years, no one was expecting White-faced Ibis to appear in Ontario (John Black pers. comm.). This account will treat the above reports and all pre-1984 observations as Glossy Ibis.

In the 1966-2006 time frame of this book, four observations of Glossy Ibis have been reported from Niagara. On 27 May 1971, John Black reported finding two Glossy Ibis in Thorold, and Jim Dowall identified an adult bird on 7 May 1992 at the Smithville sewage ponds (Bain 1993). On 30 August 2002, Tom Crooks, David Don, Cheryl Edgecombe and Gerard McNaughton discovered two birds at the Grimsby sewage ponds, one in definitive basic plumage, the other a juvénal. These birds were last observed on 7 September 2002 (Crins 2003).

On 3 May 2005, Dayna Lee observed seven definitive alternate individuals. These Glossy Ibis were observed feeding in a cornfield in Fonthill and were last seen there on 4 May 2005 (Crins 2007a). David Milsom observed an *ibis* species in flight on 17 October 1996 near Queenston. Since this bird was unidentifiable as to its exact species, the bird was accepted by the Ontario Bird Records Committee as *Plegadis*, sp. (Dobos 1997).

The Glossy Ibis is a year-round resident along the southeast coast of the United States and throughout Florida. It moves north in the summer, breeding along the Atlantic coastline as far as Maine. Some individuals may wander into Nova Scotia and even west to Illinois and Missouri (Davis and Kricher 2000).
Black Vulture *Coragyps atratus*
Extremely rare visitor

The name “vulture” is derived from the Latin word *vulturus* that means teardrop, a reference to its feeding habits (Holloway 2003). The Black Vulture is a scavenger with no sense of smell; consequently, the bird hunts by sight for carrion and live young domestic or wild animals. The first occurrence of this extremely rare visitor to Niagara is that of an adult male bird found in worn breeding plumage when collected by Marion Miles on 21 July 1947 near St. Davids (Hope 1949, Baillie 1957, Sheppard 1960, Beardslee and Mitchell 1965, Richards 2009). The specimen (skin) of this first Ontario record is at the Royal Ontario Museum, Toronto (ROM # 74864).

There have been four records of Black Vulture for Niagara during the 1966-2006 time frame of this book. On 4 April 1992, 45 years after the first Niagara sighting, Kevin McLaughlin, George Meyers and George Naylor identified a Black Vulture in flight over Beamer Memorial Conservation Area in Grimsby (Bain 1993). On 31 May 1994 (not 1993 as in Curry 2006), Bruce Mackenzie observed a Black Vulture in flight over the Niagara portion of Fifty Point Conservation Area (Pittaway 1995).

On 31 March 2000, Robert Curry, Verne Evans and Donald Perks studied a Black Vulture in flight over Beamer Memorial Conservation Area (Roy 2001). Keith Sealy, David Sked and Tom Thomas noted the flight of a Black Vulture on 5 April 2004, also over Beamer Memorial Conservation Area (Crins 2005).

The Black Vulture is very widespread and common throughout the southern United States, Mexico, Central America and most of South America. In North America it breeds throughout much of the southern and mid eastern United States. It winters in a good portion of its breeding range and, while scarce, has been observed on numerous Christmas Bird Counts at the northern edge of these wintering grounds (Buckley 1999).

Kayo J. Roy

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Turkey Vulture *Cathartes aura*
Common spring transient, uncommon summer resident, fall transient, occasional winter straggler

The Turkey Vulture is currently the most commonly seen raptor at the Beamer Memorial Conservation Area (Beamer) during the spring migration. On occasion, birds have been observed in the last week of February, but their migration does not begin in earnest until after 15 March with the peak occurring during the last week of March and the first week of April. Transients are still seen passing in limited numbers when the watch ends in the middle of May. From the early 1980s to the present, there has been more than a sevenfold increase in the count numbers for this species. It has gone from being less than 5% of the total count to more than 35%. As recently as 1977, no Turkey Vultures were reported on the BOS April Count, which has averaged 100 birds per year in the 2003-2006 period.
Winter observations of single birds exist for eight dates in the BOS Noteworthy Records: 30 November 2003, 21 December 2003, 1 January 1997, 4 February 1996, 8 February 2004, 19 February 1995, 22 February 2002 and 26 February 1995. From Beamer there are two late February records. There are reports of Turkey Vulture overwintering in small numbers to the west of Niagara at a chicken farm near Caledonia, Ontario (Curry 2006). The February sightings may be early transients, and the isolated earlier sightings are likely wanderers.

Some Turkey Vultures migrate long distances with millions passing through Mexico on their way to Central and South America (Goodrich and Smith 2008). Others are sedentary or migrate short distances. It is believed that the farther north the birds migrate in the spring, the farther south they migrate in the fall, a process termed “leapfrog migration” (Boland 1990). Eastern birds, such as those in Niagara, are somewhat less migratory than their western counterparts (Goodrich and Smith 2008).

John R. Stevens

Post-2006 Observation

On 26 January 2008, about 60 Turkey Vultures were observed sitting in trees near a chicken farm not far from Wellandport. On 27 January 2008, there were 15 Turkey Vultures flying over the fields in the same area. According to the owner of the chicken farm, small numbers of vultures had been there for several winters (John Black pers. comm.). On 1 November 2009, during the Hamilton Fall Count, 43 Turkey Vultures were observed behind the West Lincoln chicken farm at 2322 Shurie Road, Smithville (Kayo Roy pers. comm.).

Barns and old buildings are favourite nest sites. On 26 June 2006, Elaine and Don Dimond took John Black, Brad Clements and Kayo Roy to a small run-down abandoned barn adjacent to 8582 Yokum Road in Niagara Falls where a Turkey Vulture pair was raising two young birds. The barn and the downy young were photographed (Kayo Roy) in a dark loft inside the barn. From the top of a nearby large tree the two adult birds kept a close watch.

Turkey Vulture
Brandon Holden
Osprey *Pandion haliaetus*

Uncommon spring transient, occasional summer visitor, fall transient, extremely rare winter straggler

This eagerly awaited mid- to late season transient at Beamer Memorial Conservation Area (Beamer) usually makes its first appearance around the beginning of April. It is then seen migrating in limited numbers until mid-May. On a handful of days between 1980 and 2006, more than ten individuals were counted. The earliest record at Beamer (20 March 2000) is almost a week earlier than the next (26 March 1977). In recent years the annual counts have averaged 54 birds, compared to an average of 23 in the early 1980s. The increase in population can be attributed to anthropogenic factors including provision of nest platforms, protection of nest sites and curtailment of the use of chlorinated pesticides (Naylor 2007b).

Ospreys have been seen in eight years of the April Counts and eight different years of the May Counts conducted by the BOS. Eleven of these 16 years with sightings fell within the last 18 years of the period of study (1966-2006). These observations are consistent with what one would expect of a migratory species with an increasing population.

The BOS significant records include summer sightings of individual birds on 23 June 1984, 8 July 1990, 26 June 1991, 23 July 1995, 22 July 1999 and 6 August 2002. In 2004 during the second Atlas, a pair of Osprey nested just west of the Niagara Region, part of a range expansion that was noted throughout southern Ontario between the two atlas periods (Naylor 2007b). On 25 May 2005 an Osprey was observed flying along the Lake Ontario shore in Niagara-on-the-Lake during a point count taken in the second Atlas. It may be only a matter of time before the species becomes a summer resident in Niagara.
Hawk watches on the northern shores of the Great Lakes report Osprey migrating from the time monitoring starts in mid-August (HawkCount). While no monitoring is conducted in Niagara during the fall flight south, there are 30 sightings listed for the mid-August to mid-October period (BOSNR). Interestingly, the average date of the 17 records between 1966 and 1971 is 26 September, with none in August, while for the 13 records between 1978 and 2005, it is 1 September, almost a month earlier. This difference in average dates suggests a significant shift in the migration period over the last 40 years. The Osprey migration is over 95% complete by mid-October at the watches on the north shores of the Great Lakes (Naylor 2007b). This is reflected in the BOS October Counts held, with one exception, between 8 and 16 October, which have found only seven birds in 40 years of effort. These sightings are spread over the four decades of this review.

A single winter record exists for Niagara. On the 21 December 1986, during the St. Catharines Christmas Bird Count, Mary Ellen Hebb observed an Osprey flying over Lake Moodie in Thorold. Ospreys are long distance migrants that spend the winters in the extreme southern regions of the United States and south to Central and South America (Goodrich and Smith 2008).

John R. Stevens

Swallow-tailed Kite *Elanoides forficatus*

Extremely rare visitor

The scientific name for Swallow-tailed Kite is a Latin-Greek hybridization of the words *elanus*, meaning “kite” and *eidos*, meaning “to resemble or be similar to”, and *forfex*, for “scissors” in reference to the forked tail (Gotch 1981). Of all the raptors, the Swallow-tailed Kite is the epitome of aerial grace. The tail, often spread, but frequently opened and closed like scissors, helps the bird maneuver in flight with ease.

This striking and unmistakable bird of prey is an extremely rare visitor to Niagara. Only one record exists, that of a bird found by Paul Rose on 15 April 1994 at Beamer Memorial Conservation Area, Grimsby (Pittaway 1995, Curry 2006). The bird flew over the hawkwatch in company with numerous Broad-winged Hawks while Gordon Bellerby, George Meyers and many other observers excitedly looked on.

The Swallow-tailed Kite breeds in the very southeastern United States, primarily in Florida, as well as in Central America and South America. The species winters in South America (Meyer 1995).

Kayo J. Roy

Mississippi Kite *Ictinia mississippiensis*

Extremely rare visitor

The scientific name for Mississippi Kite comes from *iktinos*, the Greek word for “kite”, and the Latinized name for Mississippi, where Alexander Wilson collected the first specimen. This agile, graceful, long-winged, falcon-like raptor is chiefly insectivorous. More often than not it catches and consumes its prey in mid-air.

The Mississippi Kite is an extremely rare visitor to Niagara, where only four records are known to exist. On 18 May 1975, George Meyers recorded Niagara’s first, an adult bird in flight over Beamer Memorial Conservation Area, Grimsby (Wormington 1986, Curry 2006). On 28 May 1977, Thomas Weir also identified an adult bird that he located at Long Beach (Wormington 1985).
Thomas Reavley, John Ryan and Paul Summerskill observed a definitive basic bird on 11 May 1997, gliding over Beamer Memorial Conservation Area (Dobos 1998, Curry 2006). The fourth Niagara record was of a first-basic Mississippi Kite that George Meyers observed on 14 May 2003 also in flight over Beamer Memorial Conservation Area (Crins 2004, Curry 2006).

The breeding range of Mississippi Kite extends across the southern United States from Arizona to northern Florida, and north to some localized areas from Nebraska to Virginia. The species winters in South America (Parker 1999).

Kayo J. Roy

Bald Eagle *Haliaeetus leucocaphalus*

Uncommon spring transient, rare summer resident, fall transient, rare winter resident

Although the Bald Eagle has become more common in Niagara in recent years, the sight of an adult bird remains a stirring event, one that captures the attention of even those people with no interest in birds. The species is an uncommon transient at the Beamer Memorial Conservation Area (Beamer) spring migration watch site, although since 1980 there has been more than a tenfold increase in the number seen annually. The migration period extends from late February until mid-May, with the prime time being the last two weeks in March and the first two weeks in April. The April and BOS May Counts are conducted after this prime period, and the species is seldom recorded on these counts.

One hundred years ago there were about 200 active nesting pairs in southern Ontario, but there were no successful nesting pairs at all in the late 1970s (Neilson and Pollock 2001). During the first Atlas (1981-1985) only a single possible breeding record was made in Niagara. Twenty years later, confirmed breeding was recorded in one area during the second Atlas. This was at an historical nesting site on Navy Island just above Niagara Falls that records suggest may also have been used during the late 1960s (BOSNR). Since individuals of this species tend to use the same nest from year to year, the species has re-established summer residency in Niagara. Bald Eagles are beginning to appear on the October BOS Counts and in the last 20 years have made almost regular appearances on Christmas counts throughout the peninsula. Beginning in 1985, there have been regular reports of Bald Eagles during the winter along the lower Niagara River and around Navy Island. A recent peak was recorded on 20 January 2002 when nine individuals (four adults and five immatures) were seen at Navy Island (BOSNR).

Kayo J. Roy
A major component of the species’ diet is large, often dead, fish. During the mid-twentieth century, the widespread use and release of persistent pollutants, such as polychlorinated biphenyls and chlorinated pesticides, which are prone to bioaccumulate, severely reduced the population of Bald Eagles in eastern North America as a result of the adverse reproductive effects they caused (Neilson and Pollock 2001). Following the enactment of legislation in Ontario in 1973, the Bald Eagle was categorized as Endangered, a designation for species at risk of imminent extirpation or extinction (OMNR 2007). Thanks to huge reductions in the release of pollutants and to recovery plans that help protect habitat and nest sites, the species has made a remarkable recovery in Ontario. It can now be enjoyed year-round in Niagara near bodies of water such as Lakes Ontario and Erie, the Niagara River and the Welland Canal. It remains, however, on the provincial Endangered List in southern Ontario.

John R. Stevens

Northern Harrier *Circus cyaneus*

Common spring transient, rare summer resident, fall transient, rare winter resident

Seldom seen in any large numbers, the Northern Harrier is still a regular, albeit the most eccentric, transient at the Beamer Memorial Conservation Area (Beamer) hawk watch. Rather than following the usual east to west route of most raptors, it is almost as likely to be seen moving west to east, often south to north and, on occasion, north to south. Coupled with the contrasting adult plumage of the two sexes, the species thus provides considerable variety and interest to the spectacle of spring migration. The migration period extends from mid-March to mid-May, during which time one to ten or more birds of this species can be seen on any day. The April BOS Counts average about five birds a year, but two counts have had 21. The May BOS Counts, conducted after the middle of month, have averaged only two birds a year. However, on 18 May 1969, thirteen birds were sighted. No dominant trend in the number of spring transients has developed in the Beamer counts between 1980 and 2006.

The breeding range of this species includes Niagara. During the second Atlas, it was confirmed to have bred in four squares above the escarpment and probably bred in six others around the region. This was fewer than the eight squares with confirmed breeding and four with probable breeding of the first Atlas. The decline may be the result merely of fluctuations in primary prey populations (voles), a condition that can dictate where harriers reside.

No monitoring of autumn migration is conducted in Niagara, but the BOS October Count results clearly indicate such activity in the middle of that month. The total of 22 birds counted on 15 October 1995 rivals an excellent spring count at Beamer. There are also three records in the BOS Noteworthy Records from 1967-1984 of five to seven harriers in a day at single sites near Fort Erie.

The Niagara Christmas Bird Count data clearly indicate that Niagara lies well within the current winter range of the harrier. With the advent of the Port Colborne CBC in 1986, the apparent population increased markedly in the southern portion of the peninsula. This continued until 1990, after which a rising population in the northern portion, particularly in the Niagara Falls CBC area, equalized counts for the two portions. Beginning in 1995, the population in the northern portion has exceeded that in the south. These trends almost certainly reflect the local population of voles, although the recent combined population of harriers on these counts is about an order of magnitude greater than it was 40 years ago.
Recent studies of migration data have shown conflicting trends at various watch sites (Farmer et al. 2008). Similarly, the second Atlas showed both increased and decreased breeding areas in Ontario (Sandilands 2007b). In Niagara, the winter population has grown and the summer declined, but the spring transient numbers have been fairly steady, suggesting a northward shift in winter and summer ranges that could result from climatic change associated with global warming.

John R. Stevens

Sharp-shinned Hawk *Accipiter striatus*

Common spring transient, uncommon summer resident, fall transient, uncommon winter resident

The Sharp-shinned Hawk, informally known as the “Sharpie,” is a common spring transient at the Beamer Memorial Conservation Area (Beamer) hawk watch. Next to the Broad-winged Hawk, it was the most abundant species between 1980 and 1994, but owing to a decline in numbers of Sharp-shinned Hawks observed and a rise in the number of Turkey Vulture sightings, this is no longer the case. It is best seen at Beamer on windy days skimming over the trees and crossing the parking lot just above the watchers’ heads. It typically migrates in small loose groups of two, three or occasionally more. Its small size means that it is easily missed and therefore undercounted especially when skies are blue and the flight is high. The migration begins slowly in early March and increases gradually to a peak in late April. Sharp-shinned Hawk becomes the most common transient in May, when numbers of all other species taper off.

Sharp-shinned Hawk has been recorded on most April BOS Counts, but the number seen is very erratic and probably reflects migration conditions on the day of the count. By contrast, less than half of the BOS May Counts have reported this species and usually as only single birds since the counts are conducted after the bulk of the migration is over.
The atlas results exhibit a tremendous growth in the breeding population in Niagara between the first and second Atlases. The species may now be found throughout the southern portion of Niagara and in rural areas of the northern portion of the region. Twenty years earlier, confirmed breeding evidence was not obtained anywhere in the peninsula during the first Atlas. There is only one summer sighting in the BOSNR of a single bird at Crystal Beach on 2 August 1977.

By contrast, Sharp-shinned Hawk has been recorded on most October BOS Counts with a significant peak in 1991, when the total of 61 birds recorded was more than three times the total of any other year. There are numerous records for the fall, mainly along the Lake Erie shoreline (BOSNR). Of particular note are sightings of 28 birds on 30 September 1983 and 67 on 12 October 1984, both south of Ridgeway. It is not known if these birds were migrating east or west to avoid crossing the lake.

Except for five individual counts, since 1988 this species has been seen every year on all four of the Niagara Christmas Bird Counts. The total number of birds seen in any year was usually between 20 and 30 during this period. Prior to 1988, it was recorded only infrequently (22 of 60 counts) with a maximum of eight birds in 1986 and none at all prior to 1977. The species has thus evolved as an uncommon winter resident throughout Niagara within the last 30 years. It has always been a common spring transient through Niagara (Beardslee and Mitchell 1965). This new tendency to overwinter has been termed “short-stopping” (Viverette et al. 1996) and helps to explain the decline in numbers of Sharp-shinned Hawks observed in migration. The change in behaviour likely results from the species discovering that bird feeders attract a reliable supply of prey food. It could also be related to climate change.

John R. Stevens
Cooper’s Hawk *Accipiter cooperii*

Common spring transient, uncommon summer resident, fall transient, uncommon winter resident

The Cooper’s Hawk has been the most consistent spring transient at the Beamer Memorial Conservation Area (Beamer) hawk watch. For the 27 years between 1980 and 2006, the annual count seldom varied more than 25 birds from the average of 207. The flight peaks in late March and early April before the push of Sharp-shinned Hawks begins. Nevertheless, there is much overlap of these two species; Cooper’s Hawk is easily mistaken for its smaller relative, generating the most identification discussions at all hawk watches. An average of one Cooper’s Hawk is seen per year on the April BOS Counts, which are held just at the end of their prime migration period. The May BOS Counts have a lower average of two birds every three years, probably because there are fewer transients at the time they are held.

The second Atlas documented an astounding expansion of the breeding range of the Cooper’s Hawk between atlases in southern Ontario, particularly in Niagara (Gahbauer 2007a). The species was not recorded during the first Atlas in Niagara, and only a single breeding season record of one bird near Point Abino on 24 June 1977 exists in the BOSNR. Yet during the 2001-2005 period, it was confirmed to be breeding in two-thirds of the squares and suspected in all but two of the others, essentially blanketing the region.

There are 17 autumn reports of the species in the BOSNR prior to 1986, and it has been seen on 24 of the October BOS Counts. Based on observations at hawk watches on the northern shores of the Great Lakes (HawkCount), the peak southward migration period extends from mid-September until mid-November, so most of these records are likely of migrants. No watch site is monitored in the fall in Niagara.

In recent years the Cooper’s Hawk has been a regular sighting on all four Niagara Christmas Bird Counts with the numbers generally increasing. It has been found on all 21 Port Colborne counts and on the last 21 Niagara Falls counts. By contrast, between 1966 and 1985, one or two birds were found on only ten counts in total. Clearly, the population increase in the summer is being duplicated in the winter. People with bird feeders are frequently seeing these birds in their yards.

Southern Ontario represents the northern limit of the breeding range of the Cooper’s Hawk, an area that extends across the United States and into Mexico (Goodrich and Smith 2008). Historically, the population has never been large but was depressed in Ontario during the mid-twentieth century, possibly as a result of chlorinated pesticide use (Gahbauer 2007a). Recent studies have documented a rebound in population in eastern North America since the 1970s, but a levelling off since about 2000 (Farmer et al. 2008). Although the increase in summer and winter resident populations in Niagara echoes these trends, an increase in the spring transient counts at Beamer has not been noted.

*John R. Stevens*
Northern Goshawk *Accipiter gentilis*

**Rare spring transient, fall transient, rare winter straggler**

The Northern Goshawk is an erratically occurring member of the Niagara bird community. It is seen in small numbers at the Beamer Memorial Conservation Area (Beamer) hawk watch every year, but occasionally there are years when irruptions occur that result in about a tenfold increase in the numbers seen. The spring migration period is not very well defined at Beamer because of the small number of birds observed. In non-irruption years Northern Goshawks can appear at any time from the beginning of March to early May. During irruption years, the bulk of the flight passes through during the last ten days of March and the first two weeks of April.

A pair of Northern Goshawks, migrating or possibly breeding, was recorded by the Ontario Ministry of Natural Resources in April 2000 at Ball’s Falls. Only two sightings have occurred on the spring BOS Counts: one on 8 April 1984, an irruption year, and one on 21 May 1967. The former date falls within the peak migration time period but the latter date falls after the usual migration period has ended at Beamer. Although regular counts at Beamer are no longer conducted after 15 May, for a time they were carried out until the end of May. The latest observed date at Beamer of a Northern Goshawk was on 18 May 1984. Thus, 21 May 1967 is the latest date of a Northern Goshawk during the spring.

The species was not identified as breeding in Niagara in either of the breeding bird atlas periods and there are no records of it during the summer in the BOSNR. A single bird was observed on 1 August 2002 east of Welland during the second Atlas (John Black pers. comm.).

There are two autumn records of single birds from the October BOS Counts on 20 October 1985 and 12 October 1986. Both sightings were made in the southern part of the peninsula and were likely of migrants. Watch sites on the northern shores of the Great Lakes see peak Northern Goshawk flights in October and early November (Hawk-Count). An immature bird at Niagara Falls on 22 November 1988 (BOSNR) may have been a late migrant.

The species has turned up on 18 of the Niagara Christmas Bird Counts, primarily in the northern portion of the peninsula. With two exceptions, these have occurred between 1982 and 2006 but in both irruption and non-irruption years. There was also a sighting on 31 December 1986 at Snyder (BOSNR). It appears then that Northern Goshawks are or have recently become infrequent winter residents of the region.

The breeding range extends throughout Ontario, but the species is sparsely distributed (Bush 2007). The irregular migration behaviour of Northern Goshawks is associated with populations of prey species that periodically crash and generate the irruptions (Squires and Reynolds 1997). Even in non-irruptive years a proportion of the birds migrate. Migration patterns are highly unusual, varying in distance and direction as well as frequency (Goodrich and Smith 2008). The birds seen in winter in Niagara may have come from the boreal forest, from neighbouring areas of southern Ontario where limited breeding has been documented (Bush 2007), or they may even be year-round residents that escape detection in the summer because of their secretive nature.

*John R. Stevens*
Red-shouldered Hawk
Buteo lineatus
Common spring transient, rare summer resident, fall transient, rare winter resident

For many hawk watchers, the best sighting of the entire spring migration at the Beamer Memorial Conservation Area (Beamer) is of an adult Red-shouldered Hawk in late March after a recent snowfall, when light reflected from the ground illuminates its gorgeous plumage. It is the one migrating raptor that prefers to travel around the western end of Lake Ontario past Beamer rather than fly east. As a result, in most years more birds of this species are counted at Beamer than at any other watch site in North America (HawkCount). Migration begins about 10 March, peaks about two weeks later, declines during the first two weeks of April and tapers off for the next month. The highest daily count of 655 was made on 23 March 1994. Rather surprisingly, it has been seen in more years on the BOS Counts in mid-May than on those in early April; however, only two birds have been recorded on the May Counts in the last 21 years.

Few summer records exist for Niagara. Birds were sighted once in two areas during the first Atlas, and a pair nested in Fonthill in the 1990s (John Black pers. comm.). During the second Atlas a pair was found nesting near Niagara-on-the-Lake every year from 2001 to 2005. The species was also seen in three other areas during the second Atlas, including a probable breeding site near Port Colborne. Without an autumn migration watch site in Niagara, there is little evidence of the species' presence at that time of year. The species is infrequently seen on October BOS Counts, which are held before the prime fall migration period at watches along the northern shores of the Great Lakes (HawkCount). There are ten records from the Fort Erie area from October and November between 1967 and 1989. These include flights of 15 birds on 4 November 1967, 12 birds on 1 November 1971 and 10 birds on 10 October 1967 (BOSNR). These last three are indicative of a migratory flight path near the shore of Lake Erie.

Almost half of the Niagara Christmas Bird Count records are of a bird or birds that nested in Fonthill and overwintered during the 1990s. There are also seven records between 1972 and 2003 of individual birds being sighted (BOSNR) above the escarpment (Niagara Falls to Lake Erie) between 19 December and 17 February. These infrequent winter sightings are likely of wanderers that appear because Niagara lies just north of the normal winter range of the species, which, except for areas of higher elevations, extends northward to the southern shore of Lake Erie (Dykstra et al. 2008).

Population trends from migration data for the Red-shouldered Hawk indicate a stable situation (Farmer et al. 2008). However, results from the second Atlas indicate a wider distribution, but similar abundance of the species, in the southern portion of the Canadian Shield and adjacent areas compared to the results from the first Atlas (D.S. Badzinski 2007a). The Niagara populations between 1966 and 2006 are consistent with those findings.

John R. Stevens
Broad-winged Hawk *Buteo platypterus*

Common spring transient, fall transient

The smallest of the buteo family seen in Niagara, the Broad-winged Hawk is also the greatest traveller, as it breeds primarily in the forests of the Canadian Shield and winters in South America (Szuba 2007b). At the Beamer Memorial Conservation Area (Beamer) spring hawk watch, it is the last species to appear and very rarely does so before the middle of April. The birds then flood through in a rush. Unlike most of the other raptors seen in Niagara, they tend to migrate in large flocks. On a warm day in late April with cumulus clouds overhead, it is possible to see thousands go by in swirling flocks (kettles) of hundreds of birds. Immature birds generally pass through in May but are seldom seen in large numbers at Beamer because of the great altitude they can attain in the warmer, hazy May air.

The species has been seen on only three of the April BOS Counts, which are held early in the month. However, the two birds seen on 8 April 1973 are a day earlier than the earliest record for the Beamer watch site, for which records begin only in 1975. The May BOS Counts are held during the time that the immature birds are migrating, yet the species has been seen in only six years and then only as one or two birds.

Niagara lies within the breeding range of the Broad-winged Hawk, but it is at best a rare resident in the summer. Single birds, which may have been late transients, were seen on 30 May and 4 June 1966 just west of Fort Erie (BOSNR). Two birds were seen in the same area near Fort Erie on numerous occasions during June and July of 1969 (BOSNR). There were no records of sightings during the first Atlas, but a single bird was seen near Fort Erie on 14 July 1990 (BOSNR). During the second Atlas, a single bird was seen on 1 June 2002 and again on 30 June 2002 just west of Niagara in Norfolk County.

The species leaves the province en masse around mid-September with a few laggards staying into early October (HawkCount). BOS Noteworthy Records from late August and September include 390 birds seen on 28 September 1970 at Fort Erie. Broad-winged Hawks have been seen on four of the October BOS Counts, including 20 October 1985, the latest date on record except for a report of one bird on 27 December 1976 observed on the Peninsula Field Naturalists annual winter count. There are no other winter records.

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First Atlas: 0 squares confirmed, 0 probable, 0 possible
Second Atlas: 0 squares confirmed, 0 probable, 1 possible

Spring Migration (Beamer): Average count 3,487, maximum 8,236 (1985), minimum 1,549 (1996)

BOS April Counts: Reported on 3 of 41 counts, maximum of 2 birds in 1973

BOS May Counts: Reported on 6 of 41 counts, maximum of 2 birds in 1981 and 1998

BOS October Counts: Reported on 4 of 40 counts, maximum of 2 birds in 1991 and 2000

Niagara Christmas Bird Counts: Reported on 1 of 41 counts, maximum of 1 bird on the 1996 St. Catharines CBC

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Broad-winged Hawk
*Brandon Holden*
There seems to be potential for a significant fall migration through Niagara, one that is not currently being monitored. An open area not far from the Lake Erie shoreline would make a suitable location for a monitoring station.

John R. Stevens

Swainson’s Hawk *Buteo swainsonii*

Occasional visitor

The Swainson’s Hawk is a bird of the dry grasslands of western North America. It is colloquially known as the locust or grasshopper hawk because of its intense craving for its favourite food. The scientific name comes from the Latin word *buteo* and the Latinized name for British naturalist William Swainson. The Swainson’s Hawk is declining throughout much of its range due to pesticide poisoning, especially on its wintering grounds (England et al. 1997).

There is no mention in either Beardslee and Mitchell (1965) or Sheppard (1970) of any records for Niagara prior to 1965 for this long distance western migrant.

In 13 of the 41 years from 1966 to 2006, there are 18 known observations of Swainson’s Hawk for Niagara. Seventeen of these records are of birds in spring migration over the Beamer Memorial Conservation Area in Grimsby, and the eighteenth occurred in nearby Grassie. All of these sightings occurred between 10 April and 5 May, a very short three-week window. Although they were reported by competent observers and published in the Niagara Peninsula Hawkwatch, the Ontario Bird Records Committee has not adjudicated many of the records shown here. The location “Beamer” below is the Beamer Memorial Conservation area in Grimsby.

1977
10 April, adult light morph, Beamer (George Meyers, Wormington 1986).

1985
21 April, juvenile, Beamer. (Eric Single, Coady 1988).

1988
21 April, juvenile dark morph, Beamer (Denys Gardiner and others, Curry 2006).
22 April, Beamer (George Meyers).

1989
5 May, Beamer (Niagara Peninsula Hawkwatch).

1990
12 May, two, one juvenile light morph and one juvenile dark morph, Beamer (George Meyers).

1993
20 April, juvenile light morph, Beamer (George Meyers and others, Bain 1994).
24 April, dark morph, Beamer (George Meyers).
27 April, Beamer (Niagara Peninsula Hawkwatch).

1994
15 April, Beamer (Niagara Peninsula Hawkwatch).
25 April, juvenile light morph, Beamer (Niagara Peninsula Hawkwatch).
PART THREE: SPECIES ACCOUNTS

The Swainson’s Hawk breeds from British Columbia to southern Manitoba and Minnesota, southward through parts of California and eastward to central Texas and northern Mexico. It winters in the South American Pampas (England et al. 1997).

Kayo J. Roy

Red-tailed Hawk *Buteo jamaicensis*
Common spring transient, uncommon summer resident, fall transient, common winter resident

The Red-tailed Hawk is the raptor most likely to be observed on any day at the Beamer Memorial Conservation Area (Beamer) hawk watch, having a migration period that extends from mid-February to late May. The adults migrate first and constitute most of the flight until early April, when the immature birds begin to appear. The migrating Red-tailed Hawks seen in May are almost all immature birds. In five of the years between 1987 and 1996, the Red-tailed Hawk was the most commonly seen transient. It has been recorded on every April and May Count conducted by the BOS.

Both the first and second atlases found the species to be a confirmed breeder throughout Niagara except for a few squares on the periphery of Atlas Region 11 with little land area. The species builds large stick nests high in trees.

Red-tailed Hawk

Brandon Holden

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1996
18 April, adult light morph, Beamer (Michael King, Michael Street, Dobos 1997).

1997
2 May, two, Beamer (Niagara Peninsula Hawkwatch).

1998
28 April, one, Beamer (Niagara Peninsula Hawkwatch).
29 April, two, Beamer (Niagara Peninsula Hawkwatch).

2000
27 April, Beamer (Niagara Peninsula Hawkwatch).

2002
18 April, Beamer (Niagara Peninsula Hawkwatch).

2005
10 April, juvenile light morph, Grimsby Air Park, Grassie (Linda and Barry Cherriere, Crins 2006).
These can be reused from year to year and are often visible from roads. The second Atlas estimated an abundance of between 0.6 and 2.6 birds within an area of 50-100 square kilometres. This represents a population in the order of 30-60 birds in Niagara.

Good numbers of Red-tailed Hawks have been found on the October BOS Counts, with a maximum of 68 birds in 1993. As with the highest totals for the April and May Counts, this date falls within the 1987-1996 period, when the species was most commonly seen during the spring migration. The population appears to have been somewhat larger in that decade than in earlier or later decades.

The population of Red-tailed Hawk in Niagara in the winter is considerably larger than in the summer and fall. The species has been seen, often in large numbers, on every Niagara Christmas Bird Count that has been conducted. In 1997 a total of 421 birds were tallied in the four counts, and in 1995, when data from the BOS count were not available, 402 birds were counted. Considering the primarily rural portions of Niagara not covered by the count circles, which roughly amount to one third of the region, these numbers suggest a winter population in the order of 600 birds — or at least ten times the number during the breeding season.

Occasionally birds with a plumage variation appear in Niagara. These include a near albino on 8 April 1989 at Beamer and a dark morph on 13 February 1994 near the Niagara District Airport (KJR). On several occasions, partially albino Red-tailed Hawk transients have been noted at the Beamer hawk watch.

John R. Stevens
Ferruginous Hawk *Buteo regalis*

Extremely rare visitor

The Ferruginous Hawk, the largest of American hawks and a raptor of the open country of the west, is an extremely rare visitor to Niagara. DNA studies have been conducted and it is the opinion in some quarters that Ferruginous Hawk should be reclassified as an eagle (Lerner and Mindell 2005). The common name Ferruginous Hawk comes from the Latin word *ferrugo*, meaning “rust,” and refers to the colour of the bird’s wings and legging feathers (Lerner and Mindell 2005).

Two accepted records exist for Ferruginous Hawk in Niagara. On 13 April 1992, Dave Copeland and Barry Cherriere identified a light morph juvenile bird in flight over the Beamer Memorial Conservation Area, Grimsby (Bain 1993). Bowie Bergsma, Verne Evans, Walter Klabunde, Kayo Roy and Paul Summerskill were among the lucky observers of this rare occurrence. Ten years later, on 24 April 2002, Cheryl Edgecombe, Verne Evans, John Niewiadomski, John Olmsted and Robert Stamp observed a dark morph Ferruginous Hawk, also in flight over Beamer Memorial Conservation Area (Crins 2003).

The Ferruginous Hawk breeds from eastern Washington and southern Alberta to southwestern Montana and eastern South Dakota, and south to Arizona and the Texas panhandle. It winters from northern California and southern Nebraska south to central Mexico (Bechard and Schmutz 1995).

Kayo J. Roy

Rough-legged Hawk *Buteo lagopus*

Common spring transient, rare winter resident

The Rough-legged Hawk breeds in the far north, generally beyond the treeline (Sutherland 2007b). Every year some birds migrate to southern Canada and the northern United States, but periodically, when there is a drop in northern prey populations, more birds come farther south for the winter. At the Beamer Memorial Conservation Area spring hawk watch, the migration period can extend from late February to mid-May, but the bulk of the passage occurs between 10 March and the end of April. From 1980 to 2006 the average number of birds seen was 78; if the major irruption years of 1982, 1991 and 2004 are omitted, the average is 60. The species has been recorded approximately every three years on the BOS April Counts but only once on a BOS May Count, no doubt because the latter count is held after the migration is largely complete in Niagara. The only spring record later than this (18 May 2003) is of a single bird seen on 3 June 1976 near Fort Erie (BOSNR).

There are no summer records of this species in Niagara and no monitoring of the fall migration. It has been recorded on four years, all prior to 1987, in the first half of October during the BOS October Counts. The earliest date was 12 October 1986. There are also nine records in the BOS Noteworthy Records from October, none before 16 October, and ten from November with a maximum of three birds on 30 November 1974 in Niagara Falls. These autumn birds could be transients because hawk watches on the northern shores of the Great Lakes see transients of the species during the second half of October and throughout November (HawkCount).
Niagara Christmas Bird Counts demonstrate that the species can be a common resident during the winter. On the four counts in 1989, a total of 74 individuals were recorded, and, as recently as 2003, there were 29. By contrast, in 2001 none were seen on any count, in 2005 only one and in 1998 and 2002 only two were seen.

Rough-legged Hawks are accustomed to terrain without trees or with only short trees and shrubs. When wintering in Niagara, they prefer open field habitats where they can perch atop bushes, small trees, poles or fence posts, in contrast to Red-tailed Hawks, which prefer to perch about three to five metres below the tops of larger trees. In contrast to Red-tailed Hawks, and like American Kestrels, the Rough-legged Hawks often hover when stalking prey, a necessary hunting tactic in mainly treeless territory.

Two distinct colourations (morphs) are commonly seen: a light form that is predominant and a striking dark form that occurs in about one bird in four in Niagara. Occasionally there are some birds that are intermediate between the two extremes.

John R. Stevens

Golden Eagle
Aquila chrysaetos
Rare spring transient

Although the Golden Eagle has been recorded every year since 1976, it still causes a great deal of excitement at the Beamer Memorial Conservation Area (Beamer) during the spring migration and remains a rare pleasure. Between 1980 and 1984, the average annual count for the species was five birds but in the latest five year period, 2002-2006, the average has been nine birds, so the number of transients has been slowly rising since full-season counting began in 1980. The earliest date on record is 24 February 1984 and the latest is 23 May 1987. There is no focused migration period: a Golden Eagle can pass through on almost any date between mid-March and mid-May. The species generally migrates as individual birds, but over the years observers at Beamer have often noted two or even three Golden Eagles within minutes of each other, often visible at the same time, as though moving together.
The Golden Eagle has not been recorded on either the April or May BOS Counts. Nor are there any records of sightings during either of the Atlases. Although no records for Golden Eagle have been made on the October BOS Counts, there is a record of a single bird near Fort Erie on 19 October 1968 (BOSNR). The first autumn transients begin appearing at the watch sites on the northern shores of Lakes Erie and Ontario around 10 October (HawkCount), so the 19 October sighting was likely of an early migrant. None of the four Niagara Christmas Bird Counts has ever recorded the species.

The Golden Eagles that migrate through Niagara are part of an eastern North American population that breeds in the extreme northern portion of Ontario and somewhat more extensively in northern Quebec (Sutherland 2007c). These birds winter in the eastern United States along the Appalachian Mountains from Alabama to Pennsylvania (Goodrich and Smith 2008). Recent migration studies indicate that the eastern North American population has been increasing steadily since the 1970s (Farmer et al. 2008). The species may be starting to repopulate more of its historical range, which is believed to have included all portions of the Canadian Shield within Ontario (Godfrey 1986). Although Golden Eagles have been known to winter in southern Ontario (northeast of Peterborough), Niagara does not have sufficiently extensive uninhabited lands to hope to have a bird stay in the area.

John R. Stevens

American Kestrel *Falco sparverius*

Common spring transient, uncommon summer resident, fall transient, uncommon winter resident

The American Kestrel is a regular spring transient and a fairly common resident, at least in the early part of the season when many overwintering birds are still present. The first transients begin appearing at the Beamer Memorial Conservation Area (Beamer) around 10 March (HawkCount). Birds of this species tend to migrate individually, although some are also seen in mixed kettles with buteos and accipiters. Migration typically peaks during the third week of April and, except for an occasional later sighting, is complete by mid-May. The record high daily count at Beamer (44) occurred on 14 March 1990 as part of the record annual count. The five-year moving average of kestrels rose during the 1980s, peaked in 1992, declined to 1999 and has stabilized at the early 1980s level since then. The 41-year data from the BOS spring counts have shown three times as many kestrels in April (15) as in May (5) on average. This is consistent with the Beamer migration data and implies that this species has mostly left the area by mid-May for breeding grounds farther north.

During the first Atlas, evidence of breeding was found throughout Niagara, but during the second Atlas, abundance was reduced to a pair or two per 100 square kilometres, and in two of the smaller territories, the species was not found at all. Consistent with this data, a mid-June 40-km Breeding Bird Survey route through the centre of Niagara found the species in only two of seven years between 1994 and 2006 (Breeding Bird Survey).
The average number of kestrel sightings on the October BOS Counts is about equal to that in April, reflecting the influx of fall transients, possibly to overwinter. While the most recent October Counts are similar to those of the 1960s, they are lower than the counts of the early 1990s. A good number of kestrels spend the winter in the area, when they are commonly seen on roadside wires or hovering over ditches and fields as they hunt for small rodents. The four Niagara Christmas Bird Counts recorded 232 individuals in 1988, while 1991 and 1993 had 209 and 201, respectively. The average count is 118 with a post-1985 low total of 49 in 2004.

The American Kestrel has recently been identified as undergoing a significant population decline in eastern North America (Farmer et al. 2008). While this decline has not been noted in Niagara, the following trends are evident.

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<td>Stable, peak in early 1990s</td>
<td>1980-2006</td>
<td>BOS April, BOS May, Beamer</td>
</tr>
<tr>
<td>Summer Residents</td>
<td>Declining</td>
<td>1980-2005</td>
<td>second Atlas</td>
</tr>
<tr>
<td>Autumn Transients</td>
<td>Stable, peak in early 1990s</td>
<td>1966-2006</td>
<td>BOS October</td>
</tr>
<tr>
<td>Winter Residents</td>
<td>Increasing, peak in early 1990s</td>
<td>1966-2006</td>
<td>CBCs</td>
</tr>
</tbody>
</table>

This pattern of relatively stable transient populations in the spring and fall, together with increasing winter and decreasing summer populations, suggests a possible shift to the north of the kestrel’s range, perhaps as a result of global warming.

John R. Stevens
Merlin *Falco columbarius*

Uncommon spring transient, fall transient, rare winter resident

Occasionally seen on the BOS April Counts, the Merlin is a regular transient at the Beamer Memorial Conservation Area (Beamer) hawk watch, albeit in low numbers, with a 27-year annual average of 11 birds per year. Unlike other raptors seen at the watch, it invariably migrates alone, and it almost never soars but flaps hard, just above the treeline, passing the watch in a few seconds. It is, therefore, likely undercounted except at times when multiple observers are present. The long-term trend for Merlins shows a definite increase in abundance during spring migration between the early 1980s, when there were two to three birds per year, and the late 1990s, when there were 16 to 17 birds per year. In the most recent 5-year period, 2002-2006, the annual average of 16 is within the latter range, suggesting the population may have levelled.

Merlins are more commonly seen at shoreline watches than at ridge watches like the one at Beamer. Consequently, it is likely that the number of spring transients passing through Niagara is much higher than the counts at Beamer would suggest. The second Atlas results demonstrate that this species had greatly extended its breeding range southward since the time of the first Atlas (Gahbauer 2007b). While no records exist to suggest that it has bred in Niagara or is even present as a vagrant in the summer, it may do so in the coming years if the range expansion continues.

There are 23 sightings in the BOSNR, mainly between September and January, but none between 5 April and 29 August. These sightings have been primarily in proximity to the Niagara River or the Lake Erie shoreline.

The species has made sporadic appearances on the October BOS Counts over the years, including five birds since 2001 compared to four birds in the preceding 35 years. Winter records were non-existent prior to 1993, but since then Merlins have occasionally shown up on various Niagara Christmas Bird Counts. These birds may be attempting to overwinter in Niagara. The eastern subspecies *F. c. columbarius* is normally a long distance migrant, spending the winter in the southern United States, Central America and northern South America (Goodrich and Smith 2008). *F. c. richardsonii*, which breeds in urban areas on the prairies, is more sedentary (Goodrich and Smith 2008). Nonetheless, Curry (2006) reports that George Meyers documented a Merlin of this subspecies on 6 January 1989 in Grimsby.

John R. Stevens

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**Post-2006 Observation**

On 7 August 2008, Anne Yagi encountered a pair of aggressive and territorial Merlins in the Wainfleet Bog.
Gyrfalcon *Falco rusticolus*

Extremely rare visitor

The sleek circumpolar Gyrfalcon is the largest of all the falcon species in North America. The bird's scientific name comes from the Latin word *falco* which means “hook-shaped”, and *rusticolus* meaning “someone who lives in the countryside.” The plumage of this powerful highly polymorphic bird of the tundra and mountains is extremely variable ranging from white to gray to dark. After the breeding season, the Gyrfalcon disperses widely, usually above or near the 49th parallel; however, in years of severe winters it is known to venture farther south.

There is no mention in Beardslee and Mitchell (1965) of any Gyrfalcon records for Niagara. The first is that of a bird in white plumage observed in flight eastward over the City of Niagara Falls towards the Niagara River on 17 December 1943 (Sheppard 1970).

During the 1966-2006 time frame of this book, nine records exist of Gyrfalcon for Niagara. On 13 November 1971, a Conservation Officer picked up a juvenile, female, dark morph bird with an injured eye in Wainfleet. The bird was taken to Kay McKeever at the Owl Foundation where Robert Andrle photographed it on 5 January 1972 (BOSNR, Richards 2008). On 25 November 1971, Kay McKeever discovered a Gyrfalcon in Vineland (Curry 2006). On 29 November 1972, Robert Andrle and Richard Byron observed one in Fort Erie (BOSNR). Walter Klabunde reported a Gyrfalcon on 20 April 1977 in flight over the Beamer Memorial Conservation Area in Grimsby (Curry 2006). In the same year on 7 November, Jack McInally located one along the Lake Ontario shoreline at Grimsby (Curry 2006).

Nearly twenty years later on 4 January 1997, while many were enjoying great views of a Yellow-billed Loon, a dark morph Gyrfalcon was identified in flight over the Point Abino Harbour (BOSNR). Kevin McLaughlin discovered a Gyrfalcon at Waverley Beach, Fort Erie on 18 February 2001 (BOSNR). George Meyers excitedly identified a white morph Gyrfalcon on 17 January 2003 in flight over the Queen Elizabeth Way near Casablanca Road in Grimsby (Curry 2006). On 16 March 2006, a dark morph Gyrfalcon was observed in flight over the Beamer Memorial Conservation Area in Grimsby (Curry 2006).

The Gyrfalcon breeds at high northern latitudes of Alaska, Canada, Greenland, Scandinavia and Siberia. While not completely understood, it is believed the bird winters year-round in its breeding range with incursions southward in years of poor food supply (Clum and Cade 1994).

*Kayo J. Roy*
PART THREE: SPECIES ACCOUNTS

Peregrine Falcon
Barry Cherriere
The Peregrine Falcon is a rare raptor sighting at the Beamer Memorial Conservation Area (Beamer) spring hawk watch. While the chance of seeing one has increased more than fourfold between the 1980-1984 period (seven birds) and the 2002-2006 period (32 birds), the change is not statistically significant because the number of sightings in a season is so small at Beamer, never having exceeded nine birds. The rarity of peregrines in Niagara is also reflected in the BOS Counts in April and May, which have reported only three sightings in 41 years, all in May between 1993 and 2003. There are also only four BOS Noteworthy Record sightings in March, April and May between 1965 and 2006.

Recent breeding records of Peregrine Falcon in Niagara began in 1998 with a pair that nested in the Niagara gorge in Niagara Falls, on a ledge just three metres below the sidewalk opposite the Riverview International Buffet (formerly the Victoria Restaurant) and within a few hundred metres of the busiest tourist area in Niagara. The Niagara Parks Commission immediately put up page wire fencing and modified pedestrian fencing along the sidewalk adjacent to the nest ledge in order to keep people from direct contact with the birds. The Victoria Day fireworks display was modified to help protect the nest site, and several people volunteered to keep an eye on the birds. Bill Kuhn and Bob Chambers provided detailed written accounts of the nest site activities. The bands on the adult female were identified and traced back to her origin in an urban nest in London, Ontario, where she was named “Amelia Earhart.” The adult male was not banded and became known as “Father Hennepin” after the first European to set eyes on the Niagara Falls. The parents continued their nesting activity and successfully hatched three young on 26 and 27 May. The chicks were successfully banded on 22 June in the company of several photographers and guests. On this day they were named “Misty,” “Cascade” and “Thunder.” They successfully fledged and spent the summer of 1998 delighting tourists, birders and honeymooners alike, with their aerial acrobatics.

In 1999, the same peregrine adult pair settled in to rear their young on the New York side of the Niagara River near Goat Island. They successfully raised two or three young each year until 2005. In 2006 there were rumours about a peregrine being attacked by a Red-tailed Hawk, but no one could confirm the nest site location. Then in the spring of 2007, New York State Department of Environmental Conservation biologist, Connie Adams, reported that the nest site was once again on the Canadian side of the river in a cavity on the old Hydro Generation building at the base of the falls (just below the 1998 nest ledge). Two chicks were successfully banded on 18 June 2007. Several observations of the adults were made in December.

This area around Niagara Falls has attracted Peregrine falcons since records were first kept, although no nests were reported in the early years of record keeping. Sheppard (1970) reported the species as “seriously endangered”. However, several
notable fall observations were made on the Canadian side of the border from 1936 to 1958. On 5 June 1967, during the breeding season, Frank Folemsbee reported two adults performing acrobatic flights across from Navy Island. Several fall sightings in 1970, 1972, 2002, 2003 and 2004 (BOS October Count) and spring sightings in 1993, 1994 and 2003 (BOS May Count) were also documented. Many noteworthy records originated on the shorelines of Niagara during migration seasons from 1961 to 2005 (BOSNR). No nesting sites were confirmed until that notable discovery in April 1998 in Niagara Falls.

In 1999 Peregrine Falcons attempted to nest in downtown St. Catharines on the Corbloc building on King Street. At this site, eggs were laid but did not hatch. A number of noteworthy observations of Peregrine Falcons were made in Port Colborne: Nadine Litwin in October 2001, Jean and Blayne Farran in September 2002 and Willie D’Anna and others in November 2003. In 2004 a nesting attempt in an “I-beam” 14 storeys above ground at a mill site on the Lake Erie shoreline in Port Colborne failed. Several subsequent nesting attempts also failed. In 2006 a nest box constructed by the Canadian Peregrine Foundation resulted in successful nestings at this site in 2006 and 2007.

The 1998 Niagara Falls nest was the first record of a peregrine nest in a natural cliff site in Southern Ontario since the population decline. This particular nesting territory helped provincial biologists confirm that the species was well on its way to recovery. In 2006 the Ontario Ministry of Natural Resources changed the status of the falcon from Endangered to Threatened.

Perhaps the best evidence from Niagara of the comeback of the Peregrine Falcon since the banning of chlorinated pesticides and the efforts at reintroduction is their presence during the winter season. The first BOSNR sighting during the winter period was in 1985, and in 1986 the first peregrine appeared on a Niagara Christmas Bird Count. Since then, at least one peregrine has been recorded on nine other CBCs including all five years from 2002 to 2006. Most of the recent winter records of the BOS Count originate in the vicinity of the summer nesting sites at Niagara Falls and Port Colborne.

The early results of the Raptor Population Index program, based on analysis of migration monitoring data, show an impressive rebound of the Peregrine Falcon population in northeastern North America since 1980 (Farmer et al. 2008). The shoreline watch site at Holiday Beach near Windsor, Ontario, for example, experienced an annual increase of 9.8% between 1980 and 1990. While this growth rate has decreased in more recent years, the trend still appears to be upward (HawkCount). The current presence of resident peregrines in Niagara, where none existed forty years ago, is thus consistent with a general population increase of this magnificent hunter.

John R. Stevens and Anne R. Yagi

Prairie Falcon *Falco mexicanus*

Extremely rare visitor

The scientific name comes from the Latin word *falco* meaning “hook-shaped” (which may refer to the beak and claws) and the Latinized name for Mexico, where the bird was first collected for scientific study. This skillful, crow-sized hunter, with great speed and acute eyesight, is found chiefly on the plains, the short grass prairie and the desert areas of the American west. Although thought to be hard to train and known to be an unpredictable bird, this species is often used in falconry.
The Prairie Falcon is an extremely rare visitor to Niagara. Proof of this fact is that only one record exists of its presence. On 19 April 1995, nine very fortunate birders (Roy Baker, James Fairchild, Jacques Giraud, Jerry Guild, Michael King, George Meyers, Terry Osborne, Jack Ryan and David Worthington) observed a Prairie Falcon in flight over Beamer Memorial Conservation Area, Grimsby (Dobos 1996, Curry 2006).

The breeding range of this spectacular bird extends from southwestern Canada south to northern Mexico, east to Saskatchewan and western Nebraska, and south to western Texas. It winters from the very southern portion of western Canada to central Mexico, and more eastward than their breeding range, going as far as Minnesota and eastern Texas (Steenhof 1998).

Kayo J. Roy

**Yellow Rail Coturnicops noveboracensis**

Extremely rare visitor

The Yellow Rail is a small, elusive waterbird that lives in the reeds and marshes of shallow wetlands. The bird prefers to walk or run through thick vegetation, grasses and sedge marshes. It is more often heard than seen and can easily elude observers even though it may be only inches away.

There is considerable discussion in Beardslee and Mitchell (1965) and Sheppard (1970) on sightings of Yellow Rail prior to 1966. No observations were identified in those publications for Niagara.

The Yellow Rail, while an extremely rare visitor to Niagara, must surely at times migrate somewhere through the region on its way to nesting grounds in northern Ontario. It seems inconceivable that the Yellow Rail has only been observed in Niagara on one occasion. On 3 May 1995, while participating in a study of migrating birds along the Port Weller east pier, Kayo Roy, walking along the north edge of the marshy small pond in an area referred to as “the island,” observed a small, chunky sparrow-sized bird that was all feet and no tail — Niagara’s first and only documented Yellow Rail (Ridout 1995).

The Yellow Rail breeds locally from Alberta to the west coast of James Bay, Quebec and New Brunswick, and southward to the northern United States. It winters along the coastal states from North Carolina to Texas (Bookhout 1995).

Kayo J. Roy

**King Rail Rallus elegans**

Extremely rare visitor

The slender figure and bold plumage of the King Rail inspired John James Audubon to name this species the “elegant rail.” This largest North American rail of freshwater marshes, whose secretive behaviour makes it difficult to detect, has declined alarmingly in much of its range over the past 40 years. This is largely due to loss of wetland habitat. After nesting, it goes through a complete molt and becomes flightless for nearly a month (Poole et al. 2005). The King Rail is currently listed federally as Endangered under the Migratory Bird Convention Act (1994) and provincially under Ontario’s Endangered Species Act (2007).

Numerous records prior to 1966 for King Rail in Niagara are fully detailed in Beardslee and Mitchell (1965) and Sheppard (1970). Not included there is Daniel Salisbury’s discovery of a King Rail on 31 May 1965 in Wainfleet Bog, Wainfleet.
During the 1966-2006 time frame of this book, only one record is known to exist for this extremely rare visitor to Niagara. On 2 June 1968, Harold Lancaster identified a King Rail, along the west dyke of Mud Lake in Port Colborne. Given the secretive nature of King Rail, it is possible that it bred at Wainfleet Bog in 1965 and Mud Lake in 1968.

The breeding range for King Rail extends from the Gulf Coast north to southern Ontario and from the Atlantic Coast west to the eastern Great Plains and southward. It winters generally where the species’ breeding range is most abundant, from Delaware Valley to southeast Georgia, through the interior of Florida to the Everglades and westward along the Gulf Coast of Louisiana and Texas, and north to Arkansas (Poole et al. 2005).

Kayo J. Roy

**Virginia Rail Rallus limicola**

Rare and local summer resident, extremely rare winter straggler

The Virginia Rail is a small, attractive marsh bird that feeds mainly on insects and aquatic creatures. This secretive bird is more often heard than seen. It prefers to escape danger by running through the marsh vegetation rather than flying. In spite of its apparently weak flight, the Virginia Rail migrates long distances each spring and fall between breeding and wintering grounds (Conway 1995).

There is little evidence for the migration of this species through Niagara in the spring. The earliest known date is 25 March 1972, when a single bird was found at Rose Hill Road (probably on the Lake Erie shoreline) in Fort Erie (BOSNR).

The Virginia Rail breeds throughout southern Ontario and is a rare and local summer resident in Niagara. According to the Ontario Nest Record Scheme data, the earliest egg date for this species in Niagara is 19 May. One of the best places to see and hear this bird is on the east side of Mud Lake in Port Colborne.
The latest fall date is 13 October 1996, when a single bird was noted on the BOS October count. There is one winter record of this species. A single bird was seen on 19 December 1993 on the St. Catharines CBC. Virginia Rail winters in the southern United States and farther south (National Geographic 2006).

John E. Black

Sora *Porzana carolina*

Uncommon summer resident

The Sora, a plump gray-brown rail that lives and breeds in the freshwater marshes of North America, is more often heard than seen. It is the most abundant and widely distributed North American rail, and its descending whinny call can be easily heard from the depths of weedy swamps, bogs and marshes. The Sora feeds on seeds, insects and snails (Melvin and Gibbs 1996).

There is one BOS April Count record of this species—a single bird found on 13 April 1997—which is also the earliest spring arrival date for this species. There is little evidence for the migration through Niagara of this uncommon species in the spring.

The Sora, which breeds throughout southern Ontario, is an uncommon summer resident in Niagara. One of the most likely places to see and hear this bird is on the east side of Mud Lake in Port Colborne. While there are no recent records of eggs on nests, according to the Ontario Nest Records Scheme data, the earliest egg date for this species in Niagara is 27 May 1862.

This species was observed on only one of the BOS October counts—8 October 1967, the latest recorded fall date for this species.

There are no winter records. The Sora winters in the southern United States and farther south (National Geographic 2006).

John E. Black
Purple Gallinule *Porphyrio martinica*

Extremely rare visitor

The Purple Gallinule is a bird of southern freshwater marshes and tropical wetlands. With its purple, blue and green plumage combined with the colours of the pale blue forehead plate and its red and yellow bill, this strikingly beautiful waterbird resembles a feathered rainbow.

The first Niagara record is that of a single adult bird (not two birds as in Beardslee and Mitchell 1965 and Sheppard 1970) that was located by G.J. Clout on 11 September 1937 at Jordan Harbour, Vineland. James L. Baillie writes about this “carefully identified” discovery in his 8 January 1938 Toronto Evening Telegram bird column “In Birdland” “Mr. Clout noted the diagnostic sky-blue frontal plate of the bird to satisfy the most critical naturalist of the correctness of his observation.”

Two further early observations of this extremely rare visitor are known for Niagara. On 20 May 1961, an adult Purple Gallinule was picked up off a road in Jordan Station by George H. Townsend (Sheppard 1970). He gave the bird while still alive to a game warden in Fonthill. William E. Hurlburt confirmed the identification of this bird when it was exhibited at the Welland County Fair. No further details are known as to what happened to this bird.

On 10 October 1962 (not 11 October 1962 as in Sheppard 1970), a Purple Gallinule in its pale brown immature plumage was captured on Cherry Avenue in Vineland by Charles Ankersmit and delivered to William E. Hurlburt. He managed to keep the bird alive for a while at his residence, and when it died, the remains were forwarded to the Royal Ontario Museum, Toronto (ROM # 93157).

It is interesting to note that up to 2006, there are only 13 documented reports of Purple Gallinule for all of Ontario that have been accepted by the Ontario Bird Records Committee (Crins 2007a).

The Purple Gallinule breeds along the Lower Coast Plain of the Gulf States and north along the Atlantic seaboard to South Carolina. This highly migratory species winters from south Florida to Argentina (West and Hess 2002).

Kayo J. Roy

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Common Moorhen *Gallinula chloropus*

Spring and fall transient, rare and local summer resident

The Common Moorhen, historically known in the Americas as the Common Gallinule, is a member of the rail family. This handsome bird with almost worldwide distribution is rarely found far from water and prefers freshwater habitats with still or slow-moving water. Unlike other rails, they fly well, which probably accounts for their wide distribution. They also prefer to swim more often than do other rails. This omnivorous bird feeds on a wide variety of freshwater plants, seeds and small aquatic creatures. The earliest spring arrival date is 4 April 1993, when a single bird was seen on the BOS April Count.

The Common Moorhen breeds throughout southern Ontario and is an uncommon and local summer resident in Niagara. According to the Ontario Nest Record Scheme data, the earliest egg date for this species in Niagara is 17 May. It should be noted that numbers are declining in Niagara as a result of habitat loss.
The probability of observation in the Carolinian region has also declined significantly (38%) between atlases (Timmermans 2007b).

This species was observed on eight of the BOS October counts. The latest date is 14 October 1990, when two birds were noted on the BOS October Count. There are no winter records for this species in Niagara. Common Moorhen winters in the southern United States and farther south (National Geographic 2006).

John E. Black

American Coot *Fulica americana*

Uncommon spring and fall transient, rare and local summer resident, rare winter straggler

The American Coot is one of the most familiar of North American waterbirds and the most abundant and widely distributed rail species in North America (Brisbin and Mowbray, 2002). An awkward and clumsy flier, it requires long running takeoffs along the surface of the water to become airborne and, like most rails, has considerable stamina once in the air. Surprisingly, the American Coot has crossed the Atlantic to reach Great Britain and western Europe at least 27 times. The oldest reported bird, based on banding, lived 22 years, 4 months (Klimkiewicz and Futcher 1989).

There are three March records in the BOS Noteworthy Records for this species. Because the American Coot is a rare winter straggler, it is not clear if these records represent arriving migrants or birds that have overwintered in Niagara.
Niagara Christmas Bird Counts:
Reported on 26 of 41 counts,
maximum of 75 birds on the
1999 Port Colborne CBC
Lake Ontario Mid-winter
Waterfowl Survey: Reported on
11 of 23 counts, maximum of
13 birds in 1995

The earliest spring arrival date is 29 March 1975, when Harold Lancaster saw eight birds at Mud Lake in Port Colborne. The American Coot, which breeds throughout southern Ontario, is a rare summer resident in Niagara. According to the Ontario Nest Record Scheme data, the earliest egg date for this species in Niagara is 5 May.

There is one October record of American Coot, a single bird found on 21 October 1983 at Niagara Falls (BOSNR). There are no November records.

American Coot is a rare winter straggler. It was seen on less than 50% of the Christmas Bird counts. The largest number recorded was 75 in 1999 on the Port Colborne CBC. This number is somewhat anomalous as the next largest number was 12 on the 2001 Niagara Falls CBC. There are fifteen December records, twenty-one January records and only four February records in the BOS Noteworthy Records. American Coot winters south of the Great Lakes and farther south (National Geographic 2006).

John E. Black

Sandhill Crane *Grus canadensis*

Rare spring transient, rare and local summer resident

The Sandhill Crane, the most abundant of the world’s cranes, is primarily found in freshwater wetlands utilizing habitats that range from bogs, sedge meadows and fens to open grasslands and cultivated fields. The Sandhill Crane has one of the longest fossil histories of any existing bird (Quantic and Hafen 2003). The oldest unequivocal Sandhill Crane fossil is “just” 2.5 million years old (Volz 2003). The earliest remains of most living bird species found after the Pliocene boundary is some 1.8 million years old (Miller 1944).

When heard, the trumpet-like call of this large wading bird is stirring, and the low-pitched rattle can be heard from a long distance. Sandhill Cranes engage in dancing rituals that include bowing, jumping, running and wing flapping. This courtship dancing strengthens their pair bonds, an important role for these birds that mate for life.


From 1966 to the mid-1980s, southern Ontario Sandhill Crane sightings were few and far between. However, over the past 15 to 20 years, this species has become much more evident, becoming virtually annual in Niagara. A good number of these sightings are from the Beamer Memorial Conservation Area in Grimsby. The first record of Sandhill Crane for Niagara is of a bird that Jack van Norstrand found in Vineland on 22 May 1967 (Curry 2006). Most of the following 10 records were observed near the small hamlet of Snyder.
In North America, the Sandhill Crane breeds from Alaska to Baffin Island, south to British Columbia, northeast California and the Dakotas to Michigan, also southeast United States from south Georgia to Florida and south Mississippi. It winters in central California, southeast Arizona, central New Mexico and south central Texas, also along the Gulf Coast, south Georgia and Florida (Tacha et al. 1992).

Kayo J. Roy

<table>
<thead>
<tr>
<th>Year</th>
<th>Date</th>
<th>Location</th>
<th>Observers</th>
</tr>
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<tr>
<td>1975</td>
<td>23 April</td>
<td>Grimsby</td>
<td>Barry Jones, Curry 2006</td>
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<td>1995</td>
<td>22 March</td>
<td>Lapp Road, Snyder</td>
<td>Cathy Sanderson, Kayo Roy, Alan J. Smith, BOSNR</td>
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<td>1996</td>
<td>18 April</td>
<td>six, in flight over Beamer Memorial Conservation Area, Grimsby</td>
<td>Curry 2006</td>
</tr>
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<td>1997</td>
<td>18 March</td>
<td>two, feeding on corn stubble along Lapp Road, Snyder</td>
<td>Kayo Roy, Alan J. Smith, Gustave Yaki</td>
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<td>11 April</td>
<td>adult, Baker Road and King Road, Snyder</td>
<td>Brian Ahara, Kayo Roy, Alan J. Smith</td>
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<td>26 April</td>
<td>adult, Ort Road and Baker Road, Snyder</td>
<td>Brian Ahara, Kayo Roy, Alan J. Smith</td>
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<td>2001</td>
<td>3 March</td>
<td>in flight over Beamer Memorial Conservation Area, Grimsby</td>
<td>Curry 2006</td>
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<td>2002</td>
<td>22 July</td>
<td>three, two adults and one juvenile, King Road north of Baker Road, Snyder</td>
<td>Jean and Blayne Farnan</td>
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<td>2005</td>
<td>9 August</td>
<td>adult, Vanderlick farm pond, Bismark</td>
<td>Kayo Roy</td>
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<td>2005</td>
<td>25 August</td>
<td>adult, Vanderlick farm pond, Bismark</td>
<td>John Black, Marcie Jacklin</td>
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First Atlas: Not reported
Second Atlas: 1 square confirmed, 1 probable, 1 possible
BOS April Count: Reported on 1 of 41 counts, maximum of 1 bird in 1995
BOS May Count: Not reported
BOS October Count: Reported on 1 of 41 counts, maximum of 2 birds in 1986
Niagara Christmas Bird Counts: Not reported

Sandhill Crane
Kayo Roy
Black-bellied Plover *Pluvialis squatarola*

Uncommon spring, summer and fall transient

Black-bellied Plovers do not breed in Ontario but are uncommon and irregular spring migrants and common fall migrants in Niagara. Leaving wintering grounds in coastal areas of Central and South America, they move through Niagara quickly in late spring heading to tundra breeding sites well above the treeline. Spring sightings of Black-bellied Plover are irregular, usually with fewer than five birds seen annually. The highest BOS May Count was 29 birds seen on 20 May 2000. Most spring records occur during the last two weeks of May; however, this species was reported by Alan J. Smith as early as 10 April 1994 at the Avondale sewage ponds in Niagara-on-the-Lake (Ontario Shorebird Survey). July records are rare and are likely non-breeders or immature birds that have stopped in the area while migrating northwards, having flown only part of the complete migration route.

Autumn observations of Black-bellied Plovers are more frequent than spring sightings, with only small numbers of birds reported in both seasons in most years. Individuals or small flocks of adults, often mixed in with other shorebird species, begin to arrive back in early August with observations continuing well into October. Frequently found along the Lake Erie shoreline between Fort Erie and Rock Point Provincial Park, which lies outside of Niagara, they may also turn up in cultivated
fields, marshy areas and sewage ponds. Beardslee and Mitchell (1965) report historical sightings into late November and early December. Juveniles, which arrive in the area in early September and use the same habitat as adults, can be identified early in the fall by their streaky breasts and neatly checkered back and wing coverts. The number of plovers varies considerably throughout the fall of each year from a few individuals to counts as high as 56 on 11 October 1970, 58 on 18 August 2002, and an unusually large group of 117 on 22 October 1966. The latest date of observation is 4 December 1970, when one bird was seen at Erie Beach in Fort Erie (BOSNR). The sporadic numbers observed throughout the years suggest birds may be stopping over in Niagara for short periods during adverse weather patterns and when food resources allow them to linger later into the autumn.

Mark K. Peck

American Golden-Plover
*Pluvialis dominica*

Rare spring and summer transient, uncommon fall migrant

The first documented Ontario nest of an American Golden-Plover was discovered in 1970 on a dry ridge of heath lichen tundra at the junction of the James and Hudson Bay coasts. This area represents the southernmost breeding location for this species throughout its range and, as the crow flies, is only 1,350 km from Niagara Falls. Despite the obvious proximity of this area to the southern part of the province, golden-plovers remain a rare spring and uncommon fall migrant in Niagara and the rest of southern Ontario. The reason is simple: the vast majority of American Golden-Plovers, like several other arctic shorebird species, follow the mid-continental flyway during spring, largely bypassing to the west of Niagara. In the fall, golden-plovers detour around to the east of the area heading toward the Atlantic coast and then south to their wintering grounds in the pampas of Argentina.

Spring records are rare in Niagara. The earliest spring arrival date for American Golden-Plover in Niagara is 9 April 2001, when a single bird was observed at the Smithville sewage ponds (HNCNR). Two of the most interesting sightings have involved flocks of birds, undoubtedly off course, moving around the general area for several days. In 1954, between 18 April and 6 May, there were regular reports of golden-plovers in flock sizes ranging from 11 to 210 birds in western New York and Niagara (Beardslee and Mitchell 1965). In spring of 1981, 40 birds were reported migrating west along the Niagara Escarpment in Grimsby. The next day, 125 were reported at the nearby Beamer Memorial Conservation Area, followed by a sighting of 23 the following day in the same area (Curry 2006).

Adult American Golden-Plover leave their breeding grounds as early as late June, having already commenced their body molt into winter plumage. Peak migration of adults through the Atlantic provinces takes place in late July and throughout August.
This is also the time one can expect to see adults first move into Niagara, when some individuals are forced inland upon encountering inclement weather. Reports are uncommon in August but expected in September and October, with rare sightings recorded into late November. Sightings are more common in the fall and are regularly, but not always, reported away from expected shorebird locations. Sod farms, pastures and recently harvested fields are favoured haunts for this species, where they are often found foraging with Killdeers and occasionally with Buff-breasted Sandpipers. They are also often reported in the lagoons and shallow ponds in western portions of Niagara and along the shoreline between Fort Erie and Port Maitland, which lies just outside Niagara, where 118 birds were reported in 10 of 37 recent BOS October counts. Juveniles begin showing up in early to mid-September and are often observed foraging in mixed shorebird flocks, occasionally with Black-bellied Plovers. Identification and aging at this time can be challenging. The latest date of observation is 26 November 1966, when a single bird was seen at Port Colborne (BOSNR).

Mark K. Pech

Semipalmated Plover *Charadrius semipalmatus*

Common spring, summer and fall transient

In the spring, Semipalmated Plovers leave coastal wintering sites from northern South America through to the southern United States and begin to make their way north. By early May small numbers are generally found scattered around the Niagara Frontier in sewage lagoons, shallow ponds and along the Lake Erie shoreline. They are often found in mixed flocks of shorebirds but have a tendency to congregate near the outer edges of the flock where they often loosely group themselves. The Semipalmated Plover is an Ontario breeding shorebird species, initiating nesting in early June along the coasts of Hudson and James Bays as far south as the Moose River. They are more common in Niagara during spring migration than are the larger arctic breeding plovers and are one of the more familiar northern shorebirds in the fall.

Most spring observations occur throughout May, but there are a few observations of birds returning to the area as early as the second week of April. The earliest spring arrival date for Semipalmated Plover in Niagara is 6 May 1977, when a single bird was observed at the Smithville sewage ponds (BOSNR). Males often arrive first in Niagara and can be distinguished from females by their richer, chocolate brown markings in the face and breast band. Small numbers have been consistently reported annually since the 1950s. This species is usually observed on the BOS May counts conducted on the third Sunday in May. Stopover time during the spring, as with most other low arctic breeding shorebirds passing through the area, is of longer duration than it is for more northern nesting species, peaking in the third week of May. Most birds have left by the end of the month or during the first week of June. Avondale sewage ponds in Niagara-on-the-Lake, Smithville sewage ponds and the Lake Erie shoreline are all good spring localities at which to search for this species.

Southbound migrants begin returning to Niagara in early July with most sightings centred in August and September. Birds are usually found individually or in small groups of up to 20 birds. During the BOS shorebird counts on the third Sunday in August, Semipalmated Plovers are one of the more common shorebirds encountered in the area, often along the Lake Erie shoreline. Likewise, a few stragglers are found in
most years during the BOS October counts, but they are certainly not as common as they are earlier in the fall. Females and failed breeding males move south first, followed by juveniles and successful breeding males in early September. Juveniles are easily distinguished from adults during this period by the light fringing and subterminal banding on the back and coverts. The latest date of observation is 31 October 1970, when one bird was seen at Erie Beach in Fort Erie (BOSNR).

Mark K. Peck

Piping Plover Charadrius melodus

Extremely rare visitor

From the early 1930s to the mid 1940s, this attractive, small, sand-coloured plover was a summer resident and a moderately common breeder in Niagara. Austen et al. (1994) identified the Lake Erie shoreline from the Niagara River to Point Pelee as likely harbouring the stronghold of the Ontario Piping Plover populations, with as many as 125 pairs (mostly at Long Point) breeding in the area at one time. Niagara certainly enjoyed having its share. The first recorded observation of Piping Plover was an individual found by Clark Beardslee and Harold Mitchell on 26 May 1929 at Cedar Bay, Gasline, and the first successful nesting evidence was of four young birds found by Mr. and Mrs. Thomas
By the mid 1950s, the increased human use of Niagara beaches along the Lake Erie shoreline, together with the introduction of motorized beach vehicles, resulted in a disastrous loss of habitat for this species. For a complete listing of nesting data and other observations of Piping Plover in Niagara prior to 1966, see Beardslee and Mitchell (1965) and Sheppard (1970).

This crisis of habitat loss for Piping Plover was not just a Niagara problem, but also clearly a national one, resulting in the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) designating in 1985 the entire Canadian population of Piping Plover as Endangered. In Ontario the Piping Plover has experienced major declines and in 1989 only 16 pairs were estimated to be breeding (Austen et al. 1994).

During the 1966-2006 time frame of this book there have been only three observations, all of single individuals, for this extremely rare visitor to Niagara. On 23 July 1988, Alec Humann found a Piping Plover at Crescent Beach, Fort Erie (Curry 1991), and he was also fortunate enough to record a winter adult at the same location on 23 August 1990 (Curry 1991). Jean and Blayne Farnan were excited about their discovery of a first-basic bird on 9 October 2002 at Gravelly Bay, Port Colborne. This Piping Plover was last seen on 18 October 2002 (Crins 2003).

Kayo J. Roy

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Post-2006 Observation

While outside Niagara and beyond the time period of this book, it is encouraging to report that on 13 May 2007, a Piping Plover nest was located at Sauble Beach on Lake Huron in south Bruce Peninsula (Richards 2008). More than 35 years have passed since Piping Plover has been reported from this beach. The nest contained four eggs that all successfully hatched; however, only three chicks survived to face the migration south. For a complete summary see Toews et al. (2008). In the summer of 2008, four Piping Plover nests were located at Wasaga and Sauble Beaches in the Bruce Peninsula (Richards 2009).

Kayo J. Roy

M. Kelly on 25 June 1933 at Sherkston Beach. The species winters on the Atlantic and Gulf coasts from North Carolina south to eastern Mexico, Bahamas, and Greater Antilles (Paulson 2005).
Killdeer *Charadrius vociferus*

Common summer resident, occasional winter straggler

The Killdeer winters throughout the southern United States and Central America and as far south as northern South America. They are one of Niagara’s earliest spring migrants and one of the last shorebirds to leave in the fall. They migrate in small groups during the day and at night. In spring, birds initially move into wet areas free of snow, where they are able to find seeds, insect larva and other invertebrate prey (Jackson and Jackson 2000). The earliest spring arrival date for Killdeer in Niagara is 1 March 1998, when two birds were observed at the St. Davids sewage ponds by Alan J. Smith (Ontario Shorebird Survey). Farmland, marshes, shorelines, short grass, bare ground, gravel areas and human-disturbed sites in urban and rural landscapes are all preferred habitat for this medium-sized plover. As the season progresses, Killdeer may often be observed in stiff-winged courtship flights calling loudly and flying in wide circles in open areas. Next to Dunlin, they are the most commonly reported shorebird on all BOS May Counts.

Killdeer begin breeding in early April and will use a variety of unusual sites including railway lines, roadsides, parking lots, rooftops and other sites near human activity. A recent nest found along the Niagara Parkway was built on top of wood chips protecting a young sapling that was surrounded by regularly mowed grass. The Killdeer will renest after nest failures, and double brooding has been reported in Ontario (Peck and James 1983). Both adults incubate and look after the young. They will vigorously defend eggs and offspring by means of a variety of behavioural distractions including alarm calls and the well-known false brooding and injury-feigning displays.

In late summer, Killdeer begin to assemble on shorelines and wetlands but maintain individual spacing in these areas. They are commonly reported on BOS August shorebird counts and are the most common shorebird reported during the October counts. The majority of birds leave by the end of October, but a few stragglers are regularly reported in November and even, rarely, in December.

*Mark K. Peck*
American Oystercatcher *Haematopus palliatus*

Extremely rare visitor

The American Oystercatcher is an attractive, large shorebird from the shores of the Atlantic Ocean that is clearly an extremely rare visitor to Niagara. Surprisingly, three Niagara records exist for this striking bird that is not known to travel great distances from the ocean. Mildred and Harold Mitchell together with Alice and Edward Ulrich observed a bird that resembled an oystercatcher in flight over Lake Erie on 2 July 1960. They were at Pinecrest Point near Gasline and watched the bird as it flew to the east and eventually out of sight. An immediate search for the bird commenced, but it was not until later in the day that the bird was refound by George Letchworth at Thunder Bay near Fort Erie. Many observers studied this first-for-Niagara bird as it remained for some three weeks in the Thunder Bay-Windmill Point areas just west of Fort Erie. On 21 July 1960, the bird was collected at Rose Hill Beach, Fort Erie (Beardslee and Mitchell 1965, Sheppard 1970). The specimen (skin) of this noteworthy bird is at the Royal Ontario Museum, Toronto (ROM # 90937) (Wormington 1987).

The second observation of American Oystercatcher for Niagara was also a bird that was first seen in flight. On 2 November 1985, Roy Baker was shrewd enough to drive to the Grimsby sewage ponds to look for the American Oystercatcher that had been reported earlier in the day from Windermere Basin in Hamilton. On his arrival at the ponds, he immediately observed the bird in flight heading west towards the Fifty Point Conservation Area. Racing there, he quickly relocated it on the beach and managed to take a few photographs to document the presence of this extremely rare visitor to Niagara (Wormington 1987, Curry 2006).

In September 1996, the remnants of Hurricane Fran displaced a number of seabirds from the Carolinas to Niagara, including the third recorded American Oystercatcher. On 9 September 1996, Mary and Douglas Hart discovered two American Oystercatchers along the Lake Erie shoreline directly behind their residence at Gravelly Bay in Port Colborne. One of these birds disappeared fairly quickly. The second oystercatcher was photographed and observed by many birders at several locations along the Lake Erie shoreline from Gravelly Bay to Rathfon Point, Port Colborne, before it too vanished later the same day (Curry 1996, Dobos 1997).

The American Oystercatcher is a resident of the Gulf and Atlantic coasts, northward to Nova Scotia. Southward, they can be found throughout the Caribbean and along both coasts of Central and South America to Chile and Argentina. It also inhabits the entire west coast of Mexico, rarely venturing north into southern California (Paulson 2005).

Kayo J. Roy

Black-necked Stilt *Himantopus mexicanus*

Extremely rare visitor

The Black-necked Stilt is a striking black and white, long pink-legged bird of marshy lakes and coastal salt ponds. There is only one record for this extremely rare visitor to Niagara. On 14 October 1979, while participating in the BOS Fall Count, Jerry Chapple and Aline and Gary Novosel flushed a Black-necked Stilt from the west cell of the Smithville sewage ponds. A review of the observers’ documentation to the Ontario Bird Records Committee revealed that when the bird was flushed, it circled the pond twice, then flew to the east and disappeared (Wormington 1986, James 1991, Curry 2006).
On 18 May 2004, Barry Jones discovered two Black-necked Stilt at the Jarvis sewage ponds. These ponds are located only 45.2 km (28 miles) from the southern border of Niagara in neighboring Norfolk Region. The pair nested in a cornfield adjacent to the ponds, producing Ontario’s first nest with three eggs. A fourth dropped egg was found nearby. Regrettably this nesting failed. For full details, see Peck et al. 2004, 2005.

The Black-necked Stilt is a tropical marsh bird that breeds from Washington, Alberta, Oklahoma and Virginia south throughout the lowlands of Middle America to northern South America and the West Indies. It winters from central and southern California, the Gulf coast, and southern Florida, and south through tropical America. Black-necked Stilt is a vagrant north across all of southern Canada and out to Bermuda (Paulson 2005).

Kayo J. Roy

American Avocet *Recurvirostra americana*

Extremely rare visitor

The elegant American Avocet with its large, striking profile and colourful, eye-catching appearance is a bird of the marshes, beaches, prairie ponds and shallow lakes of the mid-west and Pacific coast of North America.

Beardslee and Mitchell (1965) and Sheppard (1970) identify the first record of this extremely rare visitor to Niagara. On 8 August 1964, Richard Brownstein, Carl Mrozek, and Arthur Schaffner observed an American Avocet in flight and at rest at Jaeger Rocks near Erie Beach in Fort Erie (BOSNR).

Forty-one years later, on 19 July 2005, Kayo Roy and Brian Ahara identified the second American Avocet for Niagara when they discovered an adult female feeding in the shallow north cell of the St. Davids sewage ponds (BOSNR).
On 16 December 2008, Ronald Goodridge located and photographed an extremely rare American Avocet as it fed along the Niagara River shoreline at the foot of Bowen Road in Fort Erie. It was not seen on any succeeding days. This bird is very likely the same individual that was initially found on 6 December 2008 on the east branch of the Niagara River off Beaver Island State Park in Grand Island, New York, where it was last reported on 15 December 2008, the day before the Fort Erie sighting (BOSNR). Comparing photographs, this illustrated bird appears to be the same individual that spent most of November and early December 2008 at Ajax, Ontario (James Pawlicki pers. comm.).

It is inexplicable why only two recorded observations exist for Niagara given American Avocet is regularly found only a short distance to the west in neighbouring Hamilton. They are also now reported with some regularity in adjacent New York State in the Buffalo Ornithological Society study area. The American Avocet would be very difficult for observers to miss so it is likely that this species merely passes through Niagara undetected, en route to other regions.

The American Avocet is known to breed throughout western North America, from the southern parts of the Prairie Provinces, east to the western Great Plains and south through the Mexican Plateau. The bird winters in coastal and interior California, along the Gulf coast, as well as in southern Florida and southern Mexico (Paulson 2005).

Kayo J. Roy

Post-2006 Observation

On 16 December 2008, Ronald Goodridge located and photographed an extremely rare American Avocet as it fed along the Niagara River shoreline at the foot of Bowen Road in Fort Erie. It was not seen on any succeeding days. This bird is very likely the same individual that was initially found on 6 December 2008 on the east branch of the Niagara River off Beaver Island State Park in Grand Island, New York, where it was last reported on 15 December 2008, the day before the Fort Erie sighting (BOSNR). Comparing photographs, this illustrated bird appears to be the same individual that spent most of November and early December 2008 at Ajax, Ontario (James Pawlicki pers. comm.).

Spotted Sandpiper Actitis macularius

Spring and fall transient, common summer resident

The Spotted Sandpiper leaves the river banks and mangroves of northern South America to head north in March and April and, with a few annual exceptions, begins arriving in southern Ontario during the third week of April. The earliest spring arrival date for Spotted Sandpiper in Niagara is 20 April 1980, when a single bird was observed at the Smithville sewage ponds (HNCNR). Numbers peak in mid-May as resident birds and northbound migrants continue to mix in the area. The more heavily spotted, richly coloured females arrive first, followed by males a few days later.

Like the phalaropes, female Spotted Sandpipers are polyandrous, pairing with up to four males in their territory (Oring 1997). After the eggs have been laid, males will take over parental responsibilities, although the female will often assist her final partner with the care of young.

The Spotted Sandpiper breeds around the province and, according to the second Atlas, has a relatively high abundance in Niagara. The preferred breeding habitats are the semi-vegetated shorelines of Lake Erie and Lake Ontario and the shorelines and islands of the Niagara River. Numerous other sites, however, including small ponds, lagoons, wetland edges, rivers and streams, rural ditches, wet agricultural locations and human-disturbed areas provide additional nesting places. Breeding begins in mid-May; nests containing eggs have been found in Niagara well into July (Ontario Nest Records...
Spotted Sandpiper
Barry Cherriere

First Atlas: 17 squares confirmed, 6 probable, 1 possible
Second Atlas: 13 squares confirmed, 11 probable, 1 possible
BOS April Count: Reported on 3 of 41 counts, maximum of 2 birds in 1982 and 2004
BOS May Count: Reported on 41 of 41 counts, maximum of 90 birds in 1971
BOS October Count: Reported on 13 of 40 counts, maximum of 6 birds in 1993
Niagara Christmas Bird Counts: Not reported
BOS Shorebird Count Totals: (1952-1956) and (2002-2006), 1,493 and 541 birds

Scheme). Territories are usually established near water but nests may be in drier locations a considerable distance away.

In August, Spotted Sandpipers begin moving to more open wetland habitat individually or in small groups. The light fringing on the feathers of the back and wing coverts distinguishes juveniles from adults. Fortunately the molt out of juvenile plumage does not take place until the young birds arrive on the wintering grounds, allowing for accurate aging of birds in the Niagara area. They remain into late September and early October, with only a few remaining for the BOS October counts later in the month. The latest date of observation is 27 November 2005, when one bird was seen at Niagara Falls (BOSNR).

The Spotted Sandpiper is presently a common breeding species and a migrant throughout Niagara, but the number of birds found during the BOS August shorebird counts since 2001 suggest a sizeable decrease from counts taken in the 1950s. It has now been listed as a Species of Concern in Canada based on similar decreases in numbers found in other parts of Ontario, Quebec and the Maritime provinces (Ross et al. 2003). The cause of these shrinking numbers has not been determined.

Mark K. Peck
Solitary Sandpiper *Tringa solitaria*

Uncommon spring, summer and fall transient

Well named, the Solitary Sandpiper is most often found foraging quietly by itself in wooded and other small ponds, in sewage lagoons, in roadside ditches and occasionally on mudflats along the shores of Lake Erie and Lake Ontario.

Solitary Sandpipers winter in freshwater marshes and ponds throughout Central America, South America and the Caribbean. They move northward across North America, rarely in coastal areas, to breeding grounds in muskeg and boggy areas of boreal forest. They are much quieter during migration and on the breeding grounds than are yellowlegs. Like the closely related Green Sandpiper of Eurasia, Solitary Sandpipers nest in trees, using an old nest of a thrush, blackbird or other songbird.

Two subspecies are presently recognized: *T. s. solitaria* and *T. s. cinnamomea*. The nominate race *solitaria* passes through Niagara and the rest of eastern North America while *cinnamomea* is found further to the west. Recent DNA barcoding indicates discrete genetic differences between the two subspecies that may warrant a future taxonomic split.

In Niagara, they begin to arrive at the end of April. The earliest documented record is of a single bird on 5 April 1998 at the Avondale sewage ponds in Niagara-on-the-Lake (BOS April Count). Most leave by mid-May, but there are occasional sightings as late as mid-June. The southern limit of their breeding grounds is less than 500 km to the north, allowing failed or non-breeders to return by the end of June, scant weeks after the last individuals have left on the final leg of their northbound migration. Juveniles begin to show up in early August and are easily recognized by their fresh plumage and evenly spaced white spotting on the upperparts. Most Solitary Sandpipers have left the area by mid-September, but occasional sightings occur through mid-October. The latest record is of a single bird at Dufferin Islands in Niagara Falls on 30 October 1969 (BOSNR).

The BOS Shorebird Count points to a significant decrease in the numbers of this species in recent years. This trend has also been noted in other parts of Ontario and Quebec to the extent that the Solitary Sandpiper is now considered a Species of Moderate Concern throughout the province (Ross et al. 2003).

*Mark K. Peck*

Wandering Tattler *Heteroscelus incanus*

Extremely rare visitor

The name “wandering” refers to this sandpiper’s widespread occurrence over vast portions of ocean shoreline, and “tattler” refers to its voice (Gill et al. 2002). The Wandering Tattler is a characteristic bird of the western seacoast of North America where it spends some nine months of the year along the rugged rocks and spray of the Pacific Ocean. Surprisingly, there are three Niagara records of this extremely rare visitor.
from the west, and they comprise the only records for all of Ontario. The first observation was that of a bird in definitive prebasic molt found on 1 August 1948 by Harold Axtell, Harold Mitchell and others along the Lake Erie shoreline at Sugarloaf Beach, Port Colborne (Crins 2005).

On 12 July 1960, Robert Curry found the second Niagara Wandering Tattler, a bird in definitive alternate plumage along the Lake Erie shoreline at Windmill Point, Fort Erie. This bird remained for four days, last seen on 15 July 1960 (Crins 2005). Robert Andrle, David Freeland and others found another definitive alternate plumaged bird on 8 June 1977. Coincidently, this bird also frequented the Lake Erie shoreline at Windmill Point, Fort Erie, where it lingered until 13 June 1977 (BOSNR, Crins 2005). The flat rocks along the northeast shore of Lake Erie provide the best habitat in the province for this rock-loving shorebird.

The Wandering Tattler breeding grounds are in the mountains of Alaska and northwestern Canada. It winters along the Pacific Coast and offshore islands from British Columbia south to Peru (Gill et al. 2002).

Kayo J. Roy

Spotted Redshank *Tringa erythropus*

Extremely rare visitor

The Spotted Redshank has the most dramatic plumage changes in the genus *Tringa*, from largely black when breeding to largely white and grey in basic plumage (Marchant et al. 1986). This large Old World shorebird, found occasionally in North America, is an extremely rare visitor to Niagara.


John Black relates the following:

The gate to the sewage ponds was open so we moved inside the fenced-in area to look into the west pond where we observed about 300 Semipalmated Sandpipers, 25 dowitchers, 100 Lesser Yellowlegs and a few Greater Yellowlegs. I was attempting to untangle the yellowlegs by size but the light was not very
good however, I noted one bird that was intermediate in size between the two yellowleg species. I asked Harold if he could look at this individual from his location. He observed the bird through his telescope and replied "Oh my, oh my goodness, it’s a Spotted Redshank.”

The bird was in alternate prebasic molt, and this remarkable first for Niagara sighting was also the first-ever recorded observation of Spotted Redshank for Ontario (Roy 2001). The small likelihood of observing this species in Ontario becomes evident when one considers that the Ontario Bird Records Committee have accepted only four records for the entire province (Roy 2001).

The Spotted Redshank breeds in the Arctic from Scandinavia east through Siberia, and winters in the Middle East, Africa north of the equator, India and Southeast Asia. The species is a vagrant to both coasts of North America and less often in the interior (Paulson 2005).

Kayo J. Roy

Greater Yellowlegs *Tringa melanoleuca*

Uncommon spring, summer and fall transient

Greater Yellowlegs winter in the southern United States and Central America, a little farther north than do the smaller, closely related Lesser Yellowlegs. They breed throughout much of the southern Canadian boreal forest. Within Ontario their summer distribution extends a little farther south than does that of Lesser Yellowlegs, with breeding evidence as far south as Lake Nipigon and Lake Abitibi (Harris 2007). Their life history, however, remains poorly understood outside migration areas. Today, both yellowlegs are considered uncommon to common migrants in Niagara in both spring and fall. Despite the continued loss to urban growth and development of wetlands and other suitable staging areas, the number of birds passing through the area remains consistent with historical records and may even be increasing slightly.

Greater Yellowlegs arrive in Niagara earlier than most shorebird species, showing up as early as late March or early April. The earliest spring arrival date for Greater Yellowlegs in Niagara is 28 March 1987, when a single bird was observed at the Smithville sewage ponds (HNCNR). They often arrive a week earlier than Lesser Yellowlegs and are usually observed singly or in small groups. Flock sizes of more than 40 birds are uncommon in spring and very rare in fall.

Sewage lagoons, small ponds in rural areas and golf courses, marshes, flooded agricultural fields and other ephemeral wetlands all provide suitable stopover sites in the spring. Species sightings are more frequent in late April and May. A search of the Smithville sewage ponds, the Avondale sewage ponds in Niagara-on-the-Lake or the Lake Erie shoreline at this time is usually successful. By late May or early June, birds have continued northward and only immature or non-breeding adults are likely to be found in the area.

Adult Greater Yellowlegs begin returning to the Niagara area in early July, females returning earlier than males and adults peaking earlier than juveniles (Elphick and Tibbitts 1998). Juveniles begin to arrive in the area in late July and can be distinguished
from adults by the browner back and the more clearly defined white spots on the upperparts. Unlike Lesser Yellowlegs, adult Greater Yellowlegs molt primary and secondary feathers during migration, a process that aids birders in aging and identifying species. Greater Yellowlegs, especially juveniles, remain in the region well into October; sightings as late as November. The latest date of observation is 24 November 1969, when two birds were seen at Cement Plant Road pond in Wainfleet (BOSNR). Autumn numbers vary widely during the BOS August and October counts, but birds are usually seen annually. It is interesting to note that as the fall progresses, Lesser Yellowlegs move out of the area earlier, while Greater Yellowlegs remain longer and are often more numerous during the October surveys.

Mark K. Peck

**Willet** *Tringa semipalmata*

Occasional visitor

The Willet is a large, grayish, chunky sandpiper that can appear inconspicuous until it spreads its wings. When the bird takes flight, the striking black and white marked wing patterns are revealed on this bird that is well adapted to both coastal and interior grassland habitats. Two breeding populations exist for this species. The prairie population breeding in central North American is known as the western Willet *C. s. semipalmata*, and the Atlantic to the Gulf Coast subspecies *C. s. inornata* is known as the...
eastern Willet. The western race is slightly larger and paler gray than the eastern form and shows a stouter bill and a more heavily barred chest and back in alternate plumage (Lowther et al. 2001). Considerable sexual dimorphism exists in Willets so size comparisons should be used carefully.

Over the years there has been considerable discussion and debate about the Willet subspecies that occurs in Ontario. One would expect that observations here would be of the eastern form *C. s. inornata*, however, that is not the case. Other than one undocumented sight record from Long Point in 1985, no confirmed record of the eastern form is known for the province. The first documented Willet observed in Niagara is the bird found by Robert Andrle and John Doyle on 1 June 1947 at Point Abino (Beardslee and Mitchell 1965). This publication and Sheppard (1970) describe the Willet observations for Niagara prior to 1966.

During the 1966-2006 time frame of this book, the Willet has been observed in Niagara on relatively few occasions. Niagara area birders have reported nine observations, and a further 23 are known from the Niagara portion of the BOS study area (BOSNR). The earliest date this species was observed in Niagara is 14 May 1967 in Fort Erie, and the latest date is 24 November 1969, also from Fort Erie (BOSNR).

One interesting observation occurred on 27 June 2004. Kayo Roy, Alan J. Smith and Brian Ahara discovered an adult Willet feeding along the Lake Ontario shoreline at Jones Beach in the Port Weller section of St. Catharines. This individual exhibited numerous strongly marked upperpart feathers, strongly barred breast and flanks, and a clearly barred uppertail, suggesting the bird could be an eastern Willet. In e-mail communications with several prominent Ontario birders, and after a review of three photographs of the bird taken by Kayo Roy, it was recommended that further expert opinions be sought on ID Frontiers. There was considerable discussion in that forum about this bird, and the consensus of opinion was that this Jones Beach bird was a western Willet. This individual is a good example of a bird in which structure is more distinctive than plumage. While the plumage of this bird may be somewhat equivocal, the structure clearly indicates western Willet. The smoothly rounded contours of the breast and back, the thick chest, and the slim, very straight bill are all indicative of western (Michael O’Brien pers. comm.).

The Willet is the only North American sandpiper with a breeding range that extends south from the Canadian Maritime provinces to the Venezuelan tropics (Lowther et al. 2001). The Willet also breeds in the Great Basin and northern Great Plains. It winters on the Pacific coast from northern California south, the Atlantic coast from Virginia south through Middle America, and the West Indies to Ecuador and northern Brazil (Paulson 2005).

Kayo J. Roy

**Lesser Yellowlegs Tringa flavipes**

**Common spring, summer and fall transient**

Today, even in the spring, Lesser Yellowlegs are regarded as the more numerous of the two yellowlegs species. Historically, this was not always the case in southern Ontario and western New York. During the late 1800s, both species of yellowlegs faced heavy market hunting pressures, and the numbers passing through the area were impacted
negatively, especially in the fall. Lesser Yellowlegs winter in Central and South America, although some birds will stay as far north as southern New Jersey during mild winters. The northward spring migration occurs primarily throughout the interior portion of the continent, so numbers in Niagara tend to be lower in the spring and higher in the fall, when southbound migrants range farther to the east. The breeding distribution of this northern boreal forest nesting species is also more limited than that of Greater Yellowlegs; the eastern limits of the breeding range of Lesser Yellowlegs do not extend much beyond James Bay in Quebec.

Lesser Yellowlegs generally arrive a little later in Niagara than do their larger relatives. Spring sightings are focused throughout April and the first two weeks of May. The earliest spring arrival date for Lesser Yellowlegs in Niagara is 31 March 1986, when two birds were observed at the Smithville sewage ponds (HNCNR). Individual birds arrive early, but flock sizes of 100 to 200 birds are not uncommon in the last week of April and the first week of May. They begin leaving the area shortly thereafter. During the BOS May Count, which takes place on the third Sunday in the month, only small numbers of Lesser Yellowlegs are found throughout the region in most years. Potential breeding habitat lies within 1,000 km of Niagara Falls, so it is not surprising that that Lesser Yellowlegs would move north earlier than many arctic breeding shorebirds.

The best staging localities in Niagara, in either spring or fall, seem to be at the Avondale sewage ponds in Niagara-on-the-Lake and the Smithville sewage ponds, but birders should also be on the lookout in flooded agricultural fields, roadside ditches, ponds and other suitable wetland sites, where this species can be found in mud or shallow water, moving methodically and picking at the surface.

Lesser Yellowlegs are one of the earliest fall migrant shorebirds to arrive back in Niagara. The short distance to and from the breeding grounds, mild springs and poor breeding seasons allow some birds to return by the end of June or early July. Juveniles begin to appear in early August, often swelling Lesser Yellowlegs numbers to several hundred birds scattered throughout the region in August and September. In the fall, juveniles can be separated from adults by their more uniform colouration and the heavier concentration of white spotting on the back and wings. Lesser Yellowlegs pass through Niagara slowly, and they regularly turn up on BOS October Counts conducted during the second Sunday of the month. Most are gone by early November, but stragglers have been reported in southern Ontario well into December during mild autumns (Curry 2006). The latest date of observation is 5 November 2000, when three birds were seen at the Smithville sewage ponds (HNCNR).
Upland Sandpiper  

*Bartramia longicauda*

Rare summer resident

The iconic image of an Upland Sandpiper is that of an aberrant-looking bird fluttering stiff-winged to a landing atop a fencepost. Upon landing, the wings are momentarily raised for several seconds before the bird finally settles. It is one of a few shorebird species that rarely visits the shore, preferring prairies, pampas, grassland and pastureland. The species is thought to be monogamous and non-territorial, often nesting in loose colonies.

Historically, the Upland Sandpiper was uncommon to rare in Ontario but its numbers increased during land clearing in the 1800s. In Niagara, this species was considered an uncommon summer resident scattered throughout the region (Sheppard 1970).

Upland Sandpipers are primarily nocturnal migrants usually bypassing well-known shorebird staging areas and moving directly to suitable breeding habitat. Those seen in Niagara are returning to the area from their wintering grounds at inland grassland sites in eastern South America in late April or early May. The earliest spring arrival date for
Upland Sandpiper in Niagara is 13 April 1976, when one bird was observed at Rose Hill Road (probably on the Lake Erie shoreline) in Fort Erie (BOSNR). Birds often return to traditional sites, providing the habitat has remained suitable. Nesting habitat includes pastureland, hayfields and old fields. Nests are well hidden in areas of high vegetation. After hatching, broods are moved to adjacent foraging areas with low vegetation, a move that makes observation easier. Nest initiation and egg laying takes place in late May and early June (Ontario Nest Records Scheme). Incubation, which takes 21 days, is carried out by both sexes. The young are also tended by both parents and are able to fly in 30 days (Baicich and Harrison 1997).

Upland Sandpipers are rarely reported in Niagara away from their breeding habitat. Fall migration begins early for this species, with most adults and juveniles departing before the beginning of September. Sexes are similar in appearance, and juveniles are not easily distinguished from adults. Birds have not been reported on any recent BOS August shorebird counts or October counts, as a consequence of both timing and survey locations. The latest date of observation is 6 September 1999, when eight birds were seen at the Avondale sewage ponds in Niagara-on-the-Lake (BOSNR).

One of the best locations to look for Upland Sandpipers is the Avondale sewage ponds in Niagara-on-the-Lake. Throughout the 1990s, Alan J. Smith found a few birds there annually in May and in late July and August, suggesting that birds may have been breeding in the vicinity of the ponds (Ontario Shorebird Survey).

During the first Atlas in the early 1980s, Upland Sandpipers were probable or confirmed breeders in the majority of the 10 km squares throughout Niagara. The second Atlas, however, showed a sharp decline in numbers of Upland Sandpiper in the region. Birds were no longer found in approximately 30% of the squares previously documented. This figure is in line with the significant decline of 37% within the province as a whole (McIlwrick 2007). Habitat loss and changes in land use activities, such as natural succession, urbanization and altered farming practices have undoubtedly contributed to the recent decline. It is unclear what impact changes in wintering and migratory staging areas are having on this species.

Mark K. Peck

Eskimo Curlew Numenius borealis

One presumed record bordering Niagara

The Eskimo Curlew is now presumed extinct. The last confirmed sightings were of one photographed near Galveston, Texas, in March and April 1962, and one shot in Barbados in September 1963. Some subsequent sightings are compelling but lack documentation (O’Brien et al. 2006). The last recorded specimen of this species taken in Canada was at Battle Harbour, Labrador, on 29 August 1932 (Godfrey 1986). Ernest Doane collected the bird, a female, as it was feeding on berries (Van Tyne 1948). This specimen is at the University of Michigan Museum of Zoology, Ann Arbor, Michigan (UMMZ # 69908) (Michel Gosselin pers. comm.).

There are no documented records of Eskimo Curlew in Ontario (Austen et al. 1994); however, Beardslee and Mitchell (1965) makes mention of two presumed Eskimo Curlews collected by George A. Macallum in the Dunnville, Ontario area (no exact date indicated). Curry (2006) identifies
a specimen collected before 1883 in Hamilton by Thomas McIlwraith. It is housed at the Royal Ontario Museum, Toronto (ROM # 29156). The Eskimo Curlew is designated as Endangered in Ontario by the Ontario Ministry of Natural Resources to ensure that it would be fully protected should it ever occur here (Austen et al. 1994).

The snow-water ponds and the cobblestone bar and the dwarfed willows that stood beside the S-twist of the tundra river were unchanged. The curlew was tired from the long flight. But when a golden plover flew close to the territory’s boundary he darted madly to the attack. The Arctic summer would be short. The territory must be held in readiness for the female his instinct told him soon would come.

Reprinted with the kind permission of Fred Bodsworth.

The above is the closing paragraph from *Last of the Curlews* written by Fred Bodsworth (1954), a good friend of the authors of this book. Bodsworth’s book on the Eskimo Curlew is highly recommended reading for anyone with an interest in natural history, particularly those who have a special fondness for shorebirds.

Kayo J. Roy

**Whimbrel Numenius phaeopus**

Rare spring, summer and fall transient

Whimbrels winter in small flocks and are locally common along coastal areas of Central and South America and the Caribbean. During much of the non-breeding season they usually keep to themselves and are often found in small groups within grassy areas away from most other shorebird species. Of all the shorebirds passing through Niagara and the rest of southern Ontario in spring, the Whimbrel, or Hudsonian Curlew as it was once known, is the most predictable in its timing. Whimbrels leave their spring staging areas along Atlantic coastal areas of the southeastern United States and arrive in Niagara with unfailing regularity within a day or two of 24 May. Small flocks are annually observed heading northwest along the shorelines of Lake Ontario and Lake Erie, often in V-formation and calling to each other with a loud, clear, rapid series of single pitch notes, “piupiupiupiupiupiiupiu”. The majority pass
by a little east of Niagara, but annual sightings in the region do occur. An exceptionally early record is of twenty birds on 17 May 1966 at Fort Erie (BOSNR). Whimbrels may rest briefly, but most move through the region heading rapidly to subarctic breeding grounds in the Hudson Bay Lowlands of Ontario, Manitoba and Nunavut. Several thousand individuals move through southern Ontario within a few days in flocks varying in size from a few birds to several hundred individuals. Spring sightings outside of this period are unusual, smaller in number and worthy of note.

One of the wariest of shorebird species, Whimbrels appear to act as sentinels, warning other shorebirds of approaching danger. Unfortunately this tendency means that they are often the first shorebirds to leave a site when birders arrive.

Unlike the spring flocks, Whimbrel sightings in late summer and fall are irregular and usually consist of individuals or small groups along shorelines or in nearby marshes or mudflats. Autumn birds rarely remain in Niagara for more than a day or two. Because males stay with the young on the breeding grounds, early arrivals returning to Niagara in July and early August are likely to be females and failed breeders. Males and juveniles begin appearing later in August and September. Distinguishing adults from juveniles is challenging: juveniles will have more uniform, fresher body plumage with wing and tail feathers showing less wear and fading. Juveniles may also have much shorter bills than adults. By early October this species has moved through the area. The latest record is of a single bird on 11 October 1970 (BOS October Count).

Mark K. Peck

Slender-billed Curlew

One historic record (1925)

The extremely rare and highly endangered Slender-billed Curlew is a medium-sized shorebird of Europe, Siberia and Africa that is presently known to be in significant decline. Remarkably, Slender-billed Curlew has been recorded on one occasion in Niagara, comprising the only record for Ontario and North America (James 1983, AOU 1998).

Some of the following basic details are extracted from Beardslee and Mitchell (1965). In the fall of 1925, in October or early November (exact date unknown), Dr. Irvin L. Terry, a Buffalo area dentist, is alleged to have shot and collected an individual of this species at Crescent Beach in Fort Erie. The specimen was given to Joseph A. Santens to be prepared and mounted and was included in Dr. Terry’s collection when all of his specimens were donated to the Buffalo Museum of Science, Buffalo, New York (BSNS # 2092). When the specimen was given to the taxidermist, no data tag was found and it is believed that Dr. Terry removed the tags from his entire collection for fear of violating a new law about the collecting of migratory birds without an official permit.
Clark S. Beardslee and Harold D. Mitchell acknowledged that they had received verbal confirmation of this occurrence from Irvin L. Terry, Jr., the son of Dr. Terry, as well as two letters from W. R. Harris, the son of the hunter companion of Dr. Terry, in which Harris corroborates the details including the location and vague date when the bird was collected. He further states that he was at home when Dr. Terry and his father returned with the curlew. In December 2007, Robert Andrle and Richard Rosche checked the mounted specimen, examining overall plumage, flank, and primary feather patterns, and after reviewing Prater et al. (1977), concluded that this Slender-billed Curlew was an adult. Considering the year of occurrence (1925), it is very unlikely that human involvement played any role in this Slender-billed Curlew’s presence at Crescent Beach in Fort Erie. Interestingly, Beardslee and Mitchell (1965) include the measurements of this mounted specimen, and they draw comparisons to ten other specimens of Slender-billed Curlew found in Witherby et al. (1943). Clearly Slender-billed Curlew is extremely rare worldwide and perhaps on the verge of extinction. Recent winter records have been very few and no sites are currently known which regularly hold migrant or wintering birds. (Marchant et al. 1986).
Hudsonian Godwit *Limosa haemastica*

Occasional visitor

The Hudsonian Godwit is the smallest of the world’s four godwit species and lives at the extremes of North and South America. Its English name comes from its primary boreal and Arctic breeding grounds, and its Latin name is derived from the reddish colours of its breeding plumage. This attractive large shorebird with a long, upcurved two-toned, bill migrates north in the spring through central North America to its Arctic breeding grounds and is rarely reported in Niagara. After breeding is completed it undertakes an extraordinary non-stop Atlantic Coast flight to staging areas in northern South America, a flight of some 4,500 kilometres (Elphick and Klima 2002).

James Savage discovered the first Hudsonian Godwit for Niagara on 28 May 1934 at Point Abino (Beardslee and Mitchell 1965, Sheppard 1970). These two publications describe in detail all Niagara observations of this species prior to 1966.

During the 1966-2006 time frame of this book, the Hudsonian Godwit, as shown below, has been observed in Niagara on only a handful of occasions.

The Hudsonian Godwit breeds from western and southern Alaska through Arctic and subarctic Canada to the south shore of Hudson Bay. The wintering populations are concentrated in Tierra del Fuego and Chiloe Island in southern South America on both Atlantic and Pacific coasts (Paulson 2005), a distance of 14,000 kilometres from Hudson Bay.

Kayo J. Roy

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The following birds were observed in Niagara during the 1966 – 2006 time frame of this book.

**1966**

1 October, one, Fort Erie (Paul Benham, Daniel Salisbury, BOSNR).

**1967**

30 September - 1 October, one, St. Davids sewage ponds (Paul Benham, Daniel Salisbury and others, BOSNR).

16 October, one, Erie Beach, Fort Erie (Robert Andrle and others, BOSNR).

**1969**

28 September, one, Cement Plant Road pond, Wainfleet (Harold Lancaster).

**1979**

8 October, one, St. Davids sewage pond (David Freeland, BOSNR).

**1990**

29 August, one, Waverley Beach, Fort Erie (Willie D’Anna, BOSNR).

**1992**

30 August - 3 September, one, Avondale sewage ponds, Niagara-on-the-Lake (Kayo Roy, Willie D’Anna, Alan J. Smith and others, BOSNR).

**1998**

6 and 7 September, one, Jaeger Rocks, Fort Erie (Peter Yoerg, BOSNR).

**2002**

2 November, Grimsby sewage ponds (Brian Ahara, Alan J. Smith).

**2004**

3 October, one, Grimsby sewage ponds (Gordon Bellerby, Bruce Falls, Kayo Roy, Alan J. Smith).
Ruddy Turnstone *Arenaria interpres*
Uncommon spring summer and fall transient

It is difficult to watch a turnstone flip over stones, beg food from a fisherman, or dig a deep hole in search of horseshoe crab eggs and not be impressed with its tenacity. Unlike many shorebird species, turnstones feed on a wide range of prey items and may even be found scavenging in garbage dumps.

Ruddy Turnstones passing through Niagara belong to the subspecies *A. i. morinella*, the majority of which winter in coastal areas of northern South America. In May, the largest concentration of these birds stage along the Atlantic coast, specifically in Delaware Bay, before heading north to breed in the Canadian Arctic. Since the early 1980s turnstone numbers have declined by 50% in Delaware Bay.

In mid-to late May, turnstones begin to stage briefly in Niagara. The earliest spring arrival date for Ruddy Turnstone in Niagara is 8 May 1977, when three birds were observed at Erie Beach in Fort Erie (BOSNR). Though there is considerable variation in numbers during May BOS counts, probably due to weather related causes, recent totals reflect the decline noted previously. Like Sanderlings, Ruddy Turnstones are most likely to be found on the shoreline of Lake Erie between Fort Erie and Rock Point (just outside Niagara). They are less inclined to be in the ponds and on the marshy mudflats frequented by other shorebirds species. Although Ruddy Turnstones, Sanderlings and Red Knots all stage together on the Atlantic coast, the number of turnstones visiting Niagara is consistently greater than the other two species. Most turnstones have moved through the area by the first week of June.

By late July small numbers of adults commence moving back into Niagara staging briefly along the shorelines of Lakes Erie and Ontario. Juveniles arrive back in late August and early September and can be distinguished from adults by their fresh plumage with pale fringing on the back and coverts. Their head colour is highly variable but generally shows more brown than late summer adults do. Turnstones do not linger long, and most have departed for southern wintering sites by late September. The latest date of observation is 18 November 1979, when one bird was seen at Niagara Falls (BOSNR).

Mark K. Peck
**Red Knot** *Calidris canutus rufa*

Rare spring, summer and fall transient

The majority of Red Knots passing through Niagara migrate over 30,000 km annually, moving between wintering grounds in Tierra del Fuego and breeding grounds in the Canadian Arctic. Spring migrants largely bypass southern Ontario unless forced down by unfavourable climatic conditions or other migration-related difficulties. Stopovers in Niagara are generally short, erratic and restricted to the latter half of May and early June. The earliest spring arrival date for Red Knots in Niagara is 17 May 1966, when two birds were observed at Morgan’s Point near Burnaby by Dan Salisbury. Recent BOS May Count records include 40 birds on 18 May 1969 and 10 birds on 19 May 1991. Records of individuals and small numbers of knots are scattered throughout other years. In the important staging areas of Delaware Bay, the majority of knots leave during the last week of May migrating just east of southern Ontario.

Autumn observations of Red Knots are more common and extend over a longer time period. One or a few birds are seen annually in most years, but flocks as large as 45 on 18 September 1949 and 25 on 5 September 1950 have been reported (Beardslee and Mitchell 1965). The numbers seen in southern Ontario have dropped off considerably in recent years. Knots begin returning to the Niagara area in late July and early August, continuing throughout September with a few sightings occurring into the second week of October. Banding results from staging areas in other parts of eastern Canada show that the majority of early arrivals are females, followed by males and juveniles later in the season. Juveniles begin moving south in mid-to late August and may be molting into first-basic plumage by late September, making it more difficult to determine their age as the season progresses. Juvenile birds can be distinguished by dark subterminal bands edged with white on the scapulars and wing coverts and a complete lack of rust colouration on the breast throughout the fall. Adults have usually moved out of the area by late September, while juveniles may remain into early November.

During migration, Red Knots prefer sites along the shores of the Great Lakes and the Niagara River rather than the small ponds and sewage lagoons chosen by many other shorebird species. The shoreline of Lake Erie from Fort Erie west to Windmill Point and Fifty Point Conservation Area are two of the best areas for birders in search of this species in the fall. The latest date of observation is 9 November 1968, when one bird was seen at Fort Erie (BOSNR).

In April 2007, the eastern North America subspecies, *Calidris canutus rufa*, was designated Endangered in Canada as a result of precipitous population declines noted in the late 1990s in Tierra del Fuego, Florida and Delaware Bay (COSEWIC 2007). A colour-marked knot found in the Grimsby sewage ponds in the fall of 2004 was banded in Delaware Bay in spring of 2002 (Mark Peck unpubl. data). This sighting and several others around southern Ontario support the suggestion that Red Knots passing through Niagara belong to the *C. c. rufa* subspecies.

Mark K. Peck
Sanderling *Calidris alba*

Common spring summer and fall transient

Sanderlings are widely distributed on southern beaches and coastal areas throughout much of the world during Niagara's winter months. While migrating in the spring through Niagara, they are most often found along the shoreline of Lake Ontario and the shoreline of Lake Erie from Fort Erie west to Windmill Point. They typically run and feed along the water's edge on beaches and other sandy areas but are unexpected in marshes, lagoons, ponds and mudflats away from lake shorelines. The earliest record is of a single bird seen by Dan Salisbury on 17 May 1966 along the Welland Canal in St. Catharines. Sanderlings are less common in spring than in fall, but occasional weather-induced "fallouts" may result in a few individuals or flocks of 100 or more birds visiting the area for several days in late May or early June before heading for breeding grounds in the High Arctic.

Sanderlings are more frequent in the late summer and early autumn and begin to arrive back in the Niagara area in mid- to late July, their numbers peaking in late August and early September. Adults arrive in the region before juveniles and pass through reasonably quickly. Juveniles begin to arrive later in August and may remain much longer. Early in the fall juveniles are easily distinguished from adults by their distinctive black and white checkered upperparts and their black cap. Aging birds later in the fall can be more challenging as juveniles begin their molt into first basic plumage. It is not uncommon for individuals or small flocks to be found throughout October; the BOS counts during the last 40 years indicate small numbers of birds reported in most years. The latest record is of a single bird at Crystal Beach near Port Colborne on 28 October 1991 (BOSNR).

Recent population declines throughout Ontario and eastern North America have now placed this species in a category of high concern. BOS October counts, though variable, also reflect this population decrease.

*Mark K. Peck*
Semipalmated Sandpiper *Calidris pusilla*

Common spring summer and fall transient

Semipalmated Sandpipers winter in the coastal areas of Central America and northern South America. Small flocks move northward through Niagara from mid-May until mid-June. When away from their breeding grounds, they tend to be more territorial and aggressive than most other shorebird species and are often observed scuffling and posturing with other sandpipers, feathers fluffed and tail held upright. They make use of a variety of staging areas, including sewage lagoons, marshes and the muddy shores of small ponds and lakes throughout the area. The earliest record is of a single bird seen at the Smithville sewage ponds on 30 April 1996 (HNCNR).

In early July, southbound adults begin to return from subarctic and arctic tundra breeding grounds of Canada, including the Hudson Bay Lowlands of northern Ontario. Adults passing through Niagara later in the fall are likely to be in molt with a mixture of brown breeding plumage and greyer winter plumage on the back and coverts and more clearly defined streaking on the upper breast. Juveniles begin to arrive in Niagara in early August also sporting a grey brown appearance but with a much crisper look, often described as a scaly appearance with white fringing on much of the upper plumage. Distinguishing adults from juveniles becomes more difficult later in the fall when juveniles begin molting into their first-basic plumage. Commonly seen in flocks of several hundred, Semipalmated Sandpipers are one of the most frequently encountered species on the August shorebird counts. By mid-October, this species has become uncommon in the area. The latest record is of a single bird at Long Beach in Port Colborne on 12 October 1991 (BOSNR).

Note that recent population declines in eastern North America as a whole including Ontario have placed this species in a conservation priority category of high concern (Ross et al. 2003).

*Mark K. Peck*
Western Sandpiper *Calidris mauri*

Occasional visitor

The Western Sandpiper is a member of a group of small shorebirds collectively known as “peeps”. First described in 1857 by Jean Louis Cabanis, a German ornithologist, the Western Sandpiper is a close relative of the Semipalmated Sandpiper, which is a common bird in Niagara. Careful observation is required to separate the two species. It is one of the most abundant shorebirds in western North America. Despite this, the Canadian Wildlife Service has classified it as a Species of Moderate Concern as biologists fear that it may become a species in decline (Fernández et al. 2006). Western Sandpipers stage along the Pacific coast in spectacularly large numbers with a population estimated at 3,500,000 (Morrison et al. 2006). Congregating in such great numbers, a disaster such as an oil spill could have a devastating effect on its population.

Beardslee and Mitchell (1965) identify the first definitive record of Western Sandpiper for Niagara. In the first week of September 1897 (exact date unknown) James Savage collected one bird in Fort Erie (present location unknown). Sheppard (1970) states “The Western Sandpiper can only be considered as a rare to very rare migrant through the area.”

The Western Sandpiper has been an irregular visitor to Niagara during the 1966-2006 time frame of this book. In adjacent Norfolk Region, the shale and rocky Lake Erie shoreline at Rock Point Provincial Park has attracted shorebirds in fairly large numbers over the years with more than 55% of the Western Sandpiper records in the BOS Noteworthy Records coming from this location. Western Sandpiper numbers have clearly diminished in the last decade in Niagara. During this period Niagara area birders have reported six observations, and a further 26 are known from the Niagara portion of the BOS study area (BOSNR). Of the 32 sightings, 28 were found between the 30 years from 1966 to 1995, and only four in the 11 years from 1996 to 2006. The earliest date this species was observed in Niagara is 25 May 1994 at the Smithville sewage ponds (Jukka Jantunen, Kayo Roy), and the latest date is 15 November 1970 from Morgan’s Point (BOSNR).

The Western Sandpiper breeds in Alaska from the mouth of the Kuskokwim River north to the vicinity of Point Barrow and Camden Bay. It winters primarily along the Pacific coast from California to Peru and locally along the Atlantic coast from southern New Jersey to the Gulf Coast, inland to the Salton Sea in California and south to central Mexico (Wilson 1994).

Kayo J. Roy
Least Sandpiper *Calidris minutilla*

Common spring, summer and fall transient

The smallest of the North American “peeps,” Least Sandpipers are birds of sewage ponds, mud flats and marshy areas, at least in Niagara. Eastern populations passing through Niagara winter in northeastern South America and breed along coastal tundra in northern Ontario and farther south in peat lands and sedge fens in the northern boreal forest. This is an impressive migration for a bird that weighs only about 20 grams.

Historically, Least Sandpipers have been a fairly common migrant throughout Niagara in spring and fall. Spring migrants travel through the region relatively quickly beginning in the last week of April, with most birds having moved on by the last week of May. The earliest spring arrival date for Least Sandpiper in Niagara is 27 April 1980, when a single bird was observed at the Smithville sewage ponds (BOSNR). Numbers vary annually from lows of only a few birds to highs of nearly 70 at the peak of the migration period. Extraordinary counts of up to 200 individuals have been recorded in favourable habitat, but numbers are usually much lower. Least Sandpipers are habitually found probing or pecking in damp mud at the margins of ponds, sewage lagoons, marshes, ditches, river banks and flooded agricultural fields and are often mixed in with Semipalmated Plovers, Semipalmated Sandpipers and other shorebirds.

During the southbound migration individuals or small numbers of adults return to Niagara as early as late June or early July. Research at Northbluff Point in James Bay in the 1970s was able to determine that fall migrants banded in James Bay, moved to staging areas in southern Ontario and other eastern provinces (Morrison 1978). The adults have already begun their body molt and appear dull brown and a little dishevelled in appearance. Adults do not usually stay long in Niagara and by the time juveniles begin to arrive at the end of July, most of the adults have already passed through the region. Juveniles have a much crisper appearance than the adults and can be distinguished by their bright rufous colouration. They are often one of the more common shorebirds in the area during late August. Since 2000 most BOS August shorebird counts contain several hundred Least Sandpipers, including a high of 420 in 2005. This species remains common throughout much of September, but by early October most birds have moved out of the area. They are usually absent from the BOS October counts during the second Sunday in the month, but a few individuals have been reported in the area as late as the first week of November. The latest date of observation is 7 November 1999, when a single bird was seen at Fifty Point Conservation Area (HNCNR).

*Mark K. Peck*
PART THREE: SPECIES ACCOUNTS

White-rumped Sandpiper *Calidris fuscicollis*
Uncommon spring, summer and fall transient

The White-rumped Sandpiper, weighing only 40-60g, accomplishes one of the most remarkable annual migrations between its breeding grounds in the northern Canadian arctic and its wintering areas in southern South America, a one-way flight of well over 13,000 km. In spring, the majority move northward, west of Niagara, traveling through central North America to their arctic breeding grounds. During southward migration, most travel east of Niagara through James Bay, the Gulf of St Lawrence and the northeastern United States before flying to northern South America across the Atlantic Ocean.

White-rumped Sandpipers are one of the more uncommon annual shorebird species to be found in Niagara in both spring and fall (Sheppard 1970). Most daily sightings involve fewer than 10 birds, usually one or two individuals mixed in with a flock of Semipalmated Sandpipers. They are one of the last shorebird species to move through the region in the spring. Considered an uncommon transient during the May BOS counts, White-rumped Sandpipers usually do not arrive in Niagara until mid-to late May or early June and may be found until mid-to late June. The earliest record is of a single bird seen at the Smithville sewage ponds on 20 April 1994 (HNCNR).

Most adults begin to return from their breeding grounds in mid-to late August and remain uncommon and unreliable on both the August and October shorebird counts. As in the spring, they are often encountered in mixed flocks on mudflats and marshy areas on or near the Lake Erie shoreline. Juveniles are similar in shape to adults but have a crisper look with white fringing on back feathers and coverts. Like the adults, juveniles also move through Niagara later than most species, often not arriving until late September or early October, some remaining into November. The latest fall record is of a single bird seen by Dan Salisbury at Morgan’s Point near Burnaby on 11 November 1969 (BOSNR).

*Mark K. Peck*

Baird’s Sandpiper *Calidris bairdii*
Uncommon summer and fall transient

Baird’s Sandpipers are similar in size, shape and appearance to White-rumped Sandpipers. They also share a comparable and just as remarkable spring migration starting in the pampas of southern South America, continuing through interior North America and finishing in the Arctic tundra regions of northern Alaska and Canada. They tend to favour grassland and drier habitat throughout their winter and staging areas, while White-rumped Sandpipers frequent more coastal environments. In Niagara, both species are often found in mixed flocks with other “peeps” and medium-sized shorebirds.
During spring, migrating Baird’s Sandpipers are seldom found east of the Prairies, and observations of individuals in southern Ontario are extremely rare. There have been no sightings reported during BOS May shorebird counts, and only a few records exist from nearby Hamilton, usually in late May or early June (Curry 2006). The earliest Niagara record is of two birds seen at Fort Erie on 9 June 1994 (BOSNR).

There are irregular records of adults returning through southern Ontario in late July and August, but most of the birds passing through Niagara are juveniles, which are known to be more widely distributed during their southward migration. They begin to show up in mid-August and, like the adults, are found individually or in small numbers often in sewage lagoons or mudflats but also occasionally along the Lake Erie shoreline. Juveniles can be distinguished from adults by their fresh, clean plumage and their scaly appearance caused by whitish terminal banding on the upperparts of the bird. During the BOS August counts one or two Baird’s Sandpipers are generally reported annually with high counts of 11, 11, and 13 in 2002, 2004, and 2005, respectively. They are often found in mixed shorebird flocks containing Semipalmated and Least Sandpipers. By mid-October most of the Baird’s Sandpipers have passed through Niagara and sightings during the October BOS counts are rare. The latest fall record is of a single bird seen at the St. Davids sewage ponds on 11 November 1981 (BOSNR).

Mark K. Peck

Baird’s Sandpiper
Harold Stiver
Pectoral Sandpiper *Calidris melanotos*

Common spring, summer and fall transient

Pectoral Sandpipers are one of the first arctic breeding shorebirds to arrive into Niagara each year. Wintering in southern South America, they move northward rapidly, arriving as early as late March or the beginning of April. While most pectorals migrate through the central flyway, it is not uncommon to have several hundred stage in Niagara for several weeks. The largest concentrations, up to 1,000 birds, have been reported from local sewage ponds like Smithville or Avondale, but they may also be found in ephemeral wet grassy areas, pond and river shorelines or along the Lake Erie and Lake Ontario shorelines. The earliest spring arrival date for Pectoral Sandpiper in Niagara is 30 March 1986, when nineteen birds were observed at the Smithville sewage ponds (HNCNR). Males usually arrive first. Flock sizes vary from year to year but tend to peak in late April. Too early to head to the Arctic, birds are likely leaving Niagara and moving westward prior to their continued migration northward. The number of birds found in May usually decreases but considerable variation still exists annually. Sightings of this species in early June are rare.

Pectoral Sandpipers breed in wet grass tundra throughout North America and eastern Asia and are often found staging in grassy areas throughout their migration routes and on their wintering grounds. In Ontario, they are frequently found with Greater and Lesser Yellowlegs, usually foraging close to shore rather than on open mudflats.

Males are promiscuous, leaving females the sole responsibility for incubation and care of the young. Lack of parental care allows males to leave the breeding grounds early and they often arrive back into Niagara by mid-July. Females start to arrive several weeks later followed by juveniles in early September. Females are noticeably smaller, have less streaking on the breast and may have an all dark bill. Juveniles can be distinguished from adults by their crisp appearance and white-tipped coverts.

The number of Pectoral Sandpipers is generally lower in late summer and autumn than spring but birds can usually be found throughout August and September with a few remaining well into October in most years. The latest date of observation is 17 November 1991, when one bird was seen at Niagara Falls (BOSNR). One of the few shorebird bright spots, Pectoral Sandpipers appear to be showing up more frequently in Niagara and staying around longer into the fall. Whether this is due to increased population numbers, improved habitat or climactic changes is unclear at the present time.

*Mark K. Peck*
Purple Sandpiper *Calidris maritima*

Extremely rare spring transient, rare fall transient, winter straggler

As a shorebird migrating through Niagara, the Purple Sandpiper seems to break all of the rules. Individuals of this species begin to arrive in mid-October after all sensible shorebirds have left the area! The earliest arrival date is 12 October 1995, when Alan J. Smith observed a single bird at the Avondale sewage ponds in Niagara-on-the-Lake (Ontario Shorebird Survey). They are more commonly found foraging and roosting on the icy rocks of the Niagara River, Port Weller or the Lake Erie shoreline as far west as Morgan’s Point. There have also been rare reports of this species in sewage lagoons. By April, when other shorebirds are starting to return, they have already left the area and are beginning to move northward to breeding grounds in the High Arctic. The latest Niagara record is of three birds on 20 April 1981 in the rapids above Niagara Falls (BOSNR). There is also a Fifty Point Conservation Area sighting of three birds on 26 and 27 May (HNCNR); however, it is not known if these birds were on the Hamilton or Niagara side of the Conservation Area.

Purple Sandpipers are the only shorebird that one might expect to see during the Niagara Christmas Bird Counts, though a sighting is far from certain in most years. One or two birds are regularly reported on some of the rocky outcrops in the upper rapids above Niagara Falls during peak gull watching in late November; however, any rocky shores with bivalves and other aquatic invertebrates and vegetation is worth checking. With the greater potential for open water shorelines during winter and the introduction of zebra mussels into this area, birders might expect to see more of these chunky shorebirds in the future.

The majority of Purple Sandpipers winter along the rocky coastlines of the North Atlantic including Iceland, southwest Greenland, the Atlantic Provinces and the New England states. In Ontario, they are found in small numbers in suitable sites around the Great Lakes and the St Lawrence River. They are often observed quietly roosting on rocks near the water’s edge and are habitually quite approachable. Most sightings in Niagara are of one or two birds, although larger flocks are occasionally reported (Sheppard 1970). A record number of nine birds were observed on 12 November 2006 on the rocky shoreline of the Port Weller east pier (JEB, KJR).

Owing to the late arrival of the Purple Sandpiper in Niagara, the juvenile plumage has already been molted, making the aging of birds in the field challenging. Adults will look clean and crisp in their winter plumage with freshly molted primaries and secondaries. Birds born the previous summer will have slightly faded primaries and white-tipped coverts on the lower wing.

*Mark K. Peck*
Dunlin *Calidris alpina*

Common spring, summer and fall transient

Dunlins are a cosmopolitan species with several populations recognized around the world. The subspecies *C. a. hudsonia* winters in coastal areas in eastern Mexico and the eastern United States, commonly occurring as far north as New Jersey. This is the subspecies that migrates through southern Ontario. Common historically, in both spring and fall (Sheppard 1970), Dunlin stage in Niagara throughout April and May before continuing their migration to breeding grounds along the western side of Hudson Bay and the central Canadian Arctic. In Ontario, they nest in wet grassy tundra along the northern shores of James Bay and the southern shores of Hudson Bay from mid-June to late July. They are considered an uncommon breeding species in the province with an estimated population of a few thousand (Ross et al. 2003).

Small numbers of Dunlin begin arriving in Niagara in mid-April, with numbers reaching their peak during the last two weeks of May. The earliest spring arrival date for Dunlin in Niagara is 8 April 1981, when a single bird was observed at Erie Beach in Fort Erie (BOSNR). In good years, there may be several hundred birds scattered on mudflats and marsh shorelines throughout Niagara. The northeast corner of Lake Erie from Fort Erie to Mohawk Point and all sewage ponds provide excellent feeding sites for this species in spring and fall provided mudflats are exposed. As with most other shorebird species in Niagara, numbers quickly dissipate by early June; any stragglers in the area are likely immature birds or non-breeders.

Dunlin are one of the last shorebird species to return to southern Ontario in the fall. Most birds delay their southbound migration until they have completed their prebasic molt on the breeding grounds (Holmes 1971). Juveniles and adults often arrive together but can be distinguished from each other with careful observation. Adults have a grey-hooded appearance while juveniles appear whiter on the throat and usually retain some rufous-coloured coverts and tertials throughout the winter. It is unusual to have Dunlins reported during the BOS August shorebird counts. Most sightings of this species occur after mid-September with some birds remaining in the area into January. Sitting on rocks above the falls, the winter birds can easily be mistaken for Purple Sandpipers. Dunlin is usually the most common shorebird encountered during the BOS October counts, but since 1994, numbers have declined dramatically with only a few birds now being reported annually. The cause for this decrease is unclear, but it is interesting to note that Dunlin are the only shorebird to show such an obvious autumnal decline. Interestingly, the decline is only in the autumn, since spring numbers remain reasonably high. This would suggest that localized conditions such as loss of suitable habitat, changes in water levels or climatic conditions may have impacted this species in this area. However, declines have also been noted in the Hamilton area (Curry 2006) and recent population trends indicate a significant decline since the 1970s (Morrison and Hicklin 2001).

Mark K. Peck
Curlew Sandpiper *Calidris ferruginea*

Extremely rare visitor

The Curlew Sandpiper is an elegant Eurasian shorebird and is an extremely rare visitor to Niagara. This species is known to wander, and a number of individuals appear annually in North America along the Atlantic and Pacific coasts as well as at numerous inland locations.

There are four recorded observations for Niagara. The first was a definitive basic plumaged bird that was discovered by Robert Curry and Angela Thomas at Morgan’s Point near Burnaby on 21 August 1965. It remained in the area until collected on 11 September 1965. The specimen (skin) is at the Buffalo Museum of Science, Buffalo, New York (BSNS # 5072) (Roy 2001). The second record is that of a definitive alternate plumaged individual that was located by John Black, Paul Benham and Daniel Salisbury on 18 July 1971 at Waverley Beach, Fort Erie. It was last seen there on 20 July 1971 (Roy 2002).

Kayo Roy, Alan J. Smith and Rob Wilson identified a molting adult bird on 30 August 1992 as it fed in the west cell of the Avondale sewage ponds (now known as the Parmalat sewage ponds), Niagara-on-the-Lake. This very colourful individual, still retaining a considerable amount of its bright chestnut breeding plumage, was last observed on 31 August 1992 (Bain 1993). On 16 May 2002, Thomas Crooks, David Don, and Cheryl Edgecombe found a definitive alternate plumaged male at the Smithville sewage ponds (Crins 2003, 2006).

The Curlew Sandpiper breeds on the Arctic tundra of northern Siberia and winters widely in Africa, southern Asia, and Australia (Paulson 1993).

Kayo J. Roy

Stilt Sandpiper *Calidris himantopus*

Extremely rare spring transient, rare summer and fall transient

Stilt Sandpipers winter in freshwater inland sites of Central America and central South America prior to leaving for breeding grounds in low arctic coastal sites in central and western North America, including northern Ontario. In spring, birds move northward through the central states and provinces. Sightings in Niagara or elsewhere in southern Ontario during this time are rare. The recent spring records are of individuals or very small numbers of birds arriving between mid-May and mid-June. Most stay for only a day or two before moving on. The earliest record is of one bird seen at the Smithville sewage ponds on 12 May 1980 (BOSNR).

The southbound migration occurs on a slightly broader swath, especially for juveniles, and sightings of Stilt Sandpipers are more common at this time. Sexes cannot be
determined in the field, but, like most other shorebird species, juveniles can be identified by their fresher plumage and the pale fringing on wing coverts and upperparts.

Stilt Sandpipers are most often found in sewage lagoons or shallow ponds. Typically two to three birds are found in an area, and flocks are rarely larger than 15. They often forage in water up to their bellies with their heads fully submerged. In southern Ontario, they are regularly seen in the company of yellowlegs and dowitchers. Birds have been reported from early July through mid-October, with most sightings occurring from late July to mid-August. The latest fall record is of seven birds seen at the Smithville sewage ponds on 14 October 1996 (HNCNR).

Mark K. Peck

Buff-breasted Sandpiper

Tryngites subruficollis

Rare summer and fall transient

There is something serene about Buff-breasted Sandpipers whether on the breeding grounds or during migration. The birds are quiet and trustful, often allowing close approach. Their short bill and dovelike appearance while foraging are unique among shorebirds.

The forested areas of eastern North America were never particularly conducive to most shorebird species, and Buff-breasted Sandpipers are not reported in Niagara during spring migration. Birds leave the grasslands of southern South America in February and March and head to breeding sites in the western and central Arctic of North America. During southbound migrations, adults return along a similar course, while juveniles disperse over a broader range (Lanctot and Laredo 1994), infrequently passing through Niagara in late August through mid-September. The earliest date is 12 August 1997, when two birds were reported from the Grimsby sewage ponds by Alan J. Smith (Ontario Shorebird Survey).
In Niagara Buff-breasted Sandpipers have been found in a variety of habitats including shorelines, beaches, small ponds, sewage lagoons, pasturelands and sod farms. They are usually found individually or in small numbers and are generally apart from other shorebird species. They often remain in the area for several days before moving on. Juveniles can be differentiated from adults, with careful observation, by their clean, fresh plumage and scaly appearance on their back and scapulars. The latest date is 27 September 1980, when one bird was seen at the St. Davids sewage ponds (BOSNR).

Mark K. Peck

**Ruff Philomachus pugnax**

Extremely rare visitor

A breeding male Ruff has the most varied individual plumage within a species as no two males are ever identical (Bird 2004). This remarkable Old World shorebird (the female is called a Reeve) is regularly found in North America. Nonetheless, the species is an extremely rare visitor to Niagara. Over the years, there have been numerous reports of Ruff observations from neighbouring Norfolk Region and Hamilton, but the first record of this species for Niagara is that of a Reeve found by Richard Brownstein, Robert Andrle and Arthur Schaffner on 26 July 1957 near Crystal Beach. This individual was collected and is at the Buffalo Museum of Science, Buffalo, New York (BSNS # 4061) (Beardslee and Mitchell 1965, Sheppard 1970). On 21 July 1962, Kenneth Able and Richard Rosche observed a Ruff at Erie Beach in Fort Erie (Beardslee and Mitchell 1965, Sheppard 1970).

During the 1966-2006 time frame of this book, there have been only eight reported occurrences of Ruff for Niagara. A Ruff was reported from Morgan’s Point near Burnaby from 30 July-4 August 1966 (Daniel Salisbury and others, BOSNR). On 26 July 1967, exactly ten years to the very date he collected his first Niagara Reeve, Robert Andrle collected his second, this time at Rathfon Point near Port Colborne (Sheppard 1970). On 22 August 1971, Edward Seeber located a Ruff at Port Colborne (BOSNR). On 16 July 1981, Harold Axtell and others identified a Ruff at the St. Davids sewage ponds. It was last observed there on 19 July 1981 (BOSNR). On 18 July 1984, Harold Axtell and others observed a Ruff at Erie Beach in Fort Erie that was last seen there on 19 July 1984 (BOSNR).

The Smithville sewage ponds have provided three of the four most recent Niagara records of Ruff. On 3 July 1989, Kevin McLaughlin studied two early males in the southwest pond. One bird, an alternate plumaged individual in rich chestnut-orange-black colours remained for only one day; the second bird, in prebasic molt, mostly black with some white and chestnut colours, was last seen on 15 July 1989 (Curry 2006). On 23 April 1994, at the same Smithville sewage ponds, Michael King located an extremely early black plumaged Ruff that was last observed on 29 April 1994 (Curry 2006). On 16 May 1992, William Crins discovered a Ruff at the Grimsby sewage ponds. This bird was not seen after 17 May 1992 (Curry 2006).

The Ruff is a common breeder from Britain and Scandinavia east to eastern Siberia and once in Alaska. Wintering grounds are primarily in sub-Saharan Africa, with smaller numbers through Western Europe, the Middle East, India, Indochina and southern Australia. It is a rare but a regular migrant in Alaska, along the Atlantic and Pacific coasts and casual through the interior (O’Brien et al. 2006).

Kayo J. Roy
Short-billed Dowitcher *Limnodromus griseus*

Uncommon spring, summer and fall transient

Short-billed Dowitches migrating northward from their coastal wintering sites in the southern United States, Central America and northern South America move into Niagara from mid-May to early June. They arrive individually or in small flocks and then move on a day or two later. Rare sightings have also occurred in early May and usually involve one or two birds only. An exceptionally early sighting is of a single bird at the Smithville sewage ponds on 28 April 1978 (HNCNR). Short-billed Dowitches are poorly named. Their bill is almost twice the length of the head and easily distinguishes both dowitcher species from most other shorebird species except snipe and woodcock. Sewage ponds and shallow muddy ponds are the preferred habitat, but this species has also been recorded in similar, suitable habitat along the Lake Erie shoreline.

Sightings in late summer and fall are more common and extend over a wider time period as birds move at a more leisurely pace southward to coastal wintering sites of the southern United States, Central America and northern South America. Arrivals may begin in late June though most observations take place from mid-July to early September. Numbers are variable. Most sightings involve fewer than five individuals, but rare flocks of up to 50 birds have been recorded. Juveniles begin to arrive as early as mid-August. Their fresh, newly grown feathers distinguish them from most adults which already show signs of heavy body molt. Subspecies identification of adults and juveniles during autumn can be extremely difficult. Most dowitches have left the area by early October. The latest date is 28 September 1998, when Alan J. Smith observed a single bird at the Avondale sewage ponds (Ontario Shorebird Survey).

Mark K. Peck
Long-billed Dowitcher

*Limnodromus scolopaceus*

Extremely rare spring and rare fall transient

Long-billed Dowitchers winter in the southern United States and Mexico. Their ranges overlap with Short-billed Dowitchers and distinguishing between the two species in basic plumage is difficult. Fortunately, with careful study, birds passing through Niagara en route to wet, grassy breeding sites in eastern Russia and the northwest corner of North America can be reliably identified. Spring sightings in Niagara are rare, but most occur in late April to mid-May, earlier than most migrating Short-billed Dowitchers. The earliest recorded date is of a single bird at the Smithville sewage ponds on 2 May 1987 (HNCNR). Like all dowitchers, they favour lagoons and other mudflats and are easily identified by their “sewing machine” probing. When actively foraging, their heads are often submerged below the surface. Spring visits are of short duration.

Autumnal visits by Long-billed Dowitchers generally occur later than the visits of Short-billed Dowitchers, although it is not unheard of to have a mixed dowitcher flock with one or two long-bills included. Birds will often stay in the area for a week or more. Once again sewage lagoons and marshy mudflats provide favoured habitat. Juveniles are much less colourful than adults and are more likely to be confused with Short-billed Dowitchers. Due to their late arrival, juveniles may have already started their molt into their winter plumage. There have been a few sightings in early August, but most observations occur in September and October and involve one or two birds. The latest record is of a single bird observed on 1 November 1966 at Port Colborne (BOSNR).

Mark K. Peck

Wilson’s Snipe

*Gallinago delicata*

Uncommon summer resident, extremely rare winter straggler

Wilson’s Snipe is one of the most abundant and widespread shorebirds in North America, with an estimated population size of 2 million birds (Morrison et al. 2006). In 2002 they were recognized and separated from several other snipe species on the basis of winnowing sounds associated with differences in their outer tail feathers (Banks et al. 2002).

Wilson’s Snipe return from their wintering grounds in central America and the southern United States in late March through to May. The earliest spring arrival date for Wilson’s Snipe in Niagara is 24 March 1989, when a single bird was reported from Lincoln Township (BOSNR). Although they breed in Niagara, snipe are more apt to be

Mark K. Peck
seen and heard on spring evenings during migration as they perform their winnowing display flights. The display flight begins with the bird rising into the air in a wide circle, steadily increasing in height. This is followed by a rapid zigzag pattern upward and then a straight 45 degree winnowing dive. The winnowing sound is produced by air directed from the wings being pushed through the outer retrices or tail feathers (Tuck 1972). Unlike the similar American Woodcock display, the flight is louder and often repeated several times in succession without the bird landing. This display is performed by both sexes, although less commonly by females. In the south, the display is usually observed in the evening; however, in more northerly Ontario regions, it can be observed both day and night.

Wilson’s Snipe breed in shrub wetlands, fens, bogs and wet grassy meadows throughout much of Ontario and are found in similar habitat during migration. During their Niagara breeding season, snipe are usually found individually or in small numbers in the habitats described above. In May and June, males may be seen sitting atop fence posts or similar perches along rural roads. Males do not assist with incubation but do assist with the care of the young after they leave the nest. Nests have rarely been documented in Niagara, although adults with recently fledged young are occasionally reported. Determination of the age and sex of birds is difficult or impossible in the field. In the late summer and autumn, some Wilson’s Snipe leave their wetland habitat to congregate at sewage ponds, in open areas, agricultural fields and sod farms throughout the region. Snipe have not been reported in the August shorebird counts but are found occasionally during BOS October counts.
American Woodcock *Scolopax minor*
Common summer resident, extremely rare winter straggler

The American Woodcock is one of the first shorebirds to return to Niagara in the spring and one of the last to leave in the fall. They breed in the region, are one of only two shorebirds still legally hunted, and, unfortunately, are a common window or tower kill casualty. Yet they are easily missed by many birders each year. The reason is simple. Woodcocks are a little different from other shorebirds. They are largely nocturnal, solitary and secretive, and they do not often associate with other species of shorebirds. Although they feed during the day and are found in a variety of habitats including shrubby fields, willow and alder thickets, secondary growth wooded areas, swamps and bogs, they are repeatedly overlooked because they are magnificently camouflaged.

American Woodcock begin to arrive in Ontario from wintering sites in southeastern United States as early as late February, though most birds are discovered in mid- to late March (Curry 2006). The earliest spring arrival date for American Woodcock in Niagara is 15 March 1971, when a single bird was reported from Rose Hill Road in Fort Erie (BOSNR). This is also the time when woodcock regularly show up in cities and other urban environments, seemingly disoriented from their nocturnal migrations.
During cold spells, birds will occasionally congregate in areas of open water, roadside ditches, creeks and ponds near wooded areas and fields where they are able to probe for earthworms and other invertebrates.

American Woodcock are polygamous and the larger females are responsible for incubation and brood rearing. They are one of Niagara’s earliest ground nesting species. Six nests, with egg dates ranging from 6 April through 29 May, have been documented throughout Niagara (Ontario Nest Records Scheme). Young leave the nest within hours of the eggs hatching.

The fall migration begins in late September with the bulk of the birds leaving Niagara throughout October (Keppie and Whiting 1994). In mild years birds may remain in the region into late December. American Woodcock are undoubtedly under-represented on BOS spring counts and fall shorebird surveys because of their unique habitat requirements and cryptic colouration. However, recent studies indicate declining populations, and they are now considered a Species of High Concern in Canada and are rated a medium conservation concern in southern parts of the province according to the Ontario Shorebird Conservation Plan (Ross et al. 2003). Recent records from Niagara surveys appear to support this finding.

Mark K. Peck

Wilson’s Phalarope *Phalaropus tricolor*
Occasional spring transient, rare summer visitor (two nest records), rare fall transient

Although shorebirds spend much of their time near water, very few species are observed swimming on a regular basis. Phalaropes are the exception to the rule. The Wilson’s Phalarope is the most terrestrial of the three phalarope species and is often found foraging along pond shorelines or in the wet grasses nearby. It can be easily distinguished in flight by the white rump and lack of wing bars. Red-necked and Red Phalaropes are circumpolar in their distribution and spend much of their winter on the ocean. Wilson’s Phalarope, on the other hand, spends little time at sea and has a distribution restricted to North and South America. While on migration and during the breeding season, all three species can be found on shallow ponds and lakes with grassy edges.

Wilson’s Phalaropes commonly breed inland in the shallow prairie marshes of central North America. In Ontario, small numbers are thought to breed annually in western parts of the province, along the James Bay coast and in a few selected breeding locations in southern Ontario. In Niagara, they are best described as an occasional migrant and a rare sporadic breeder with only two documented breeding records.
Phalaropes have a polyandrous mating system that involves the more colourful female laying sequential clutches with as many as four different males. Nesting may be solitary or loosely colonial. Males alone incubate the eggs and care for the young, usually in close proximity to the nest site.

The Wilson’s Phalarope usually arrives in Niagara in late April or May and may quickly pass through or, if conditions are suitable, stay to breed. The earliest spring arrival date for Wilson’s Phalarope in Niagara is 3 April 1998, when one bird was observed at the St. Davids sewage ponds by Alan J. Smith (Ontario Shorebird Survey). In most areas females arrive before males, although it is not unusual for birds to arrive already paired. Females will stay in an area after incubation has begun and will lay another set of eggs if the first nest is destroyed. There are only two records of nesting from Niagara. On 3 June 1959 two birds were observed at a nest at Long Beach (Beardslee and Mitchell 1965). The second record is of a nest containing three eggs observed on 8 June 2002 at the Smithville sewage ponds (HNCNR). In 2004 several other pairs were thought to have bred in sewage ponds just outside the Niagara area. Females generally leave Niagara by mid-July. Males and juveniles stay longer but have left by the beginning of October. The latest date of observation is 1 October 1977, when a single bird was reported from the St. Davids sewage ponds (BOSNR).

Juveniles and wintering birds have yellowish legs, while adults in breeding plumage boast dark grey or black leg colourings. Females are more brightly coloured and are almost one third larger than males.

Mark K. Peck

Red-necked Phalarope
Phalaropus lobatus
Occasional visitor

The delicate and colourful Red-necked Phalarope, formerly Northern Phalarope, is the smallest of the three North American phalaropes. In all of the phalarope species, the female has a more colourful plumage than the males, and their sex-role mating system is reversed. Females compete for males, defend mates, and have the potential to mate with more than one male sequentially while previous mates incubate the eggs and care for the young (Reynolds and Cooke 1988). A Holartic breeder, the Red-necked Phalarope is well adapted to spending a lot of time on water foraging for food. Unlike other shorebirds, phalaropes have lobed toes that enable them to swim strongly.

Beardslee and Mitchell (1965) identify several Niagara records of Northern Phalarope prior to 1966. “The Northern Phalarope in the late forties and fifties became almost regular in its appearance on the Niagara, particularly on the wide expanse of river within the gorge immediately below the Falls” (Sheppard 1970).
During the 1966-2006 time frame of this book, the Red-necked Phalarope appears to have reverted back to its rare and irregular status. In this 41-year period, 25 records are shown in the BOSNR for Niagara with a further three observations by Niagara area birders. The earliest date this species was observed in Niagara is 23 May 1969 in West Lincoln (BOSNR), and the latest date is 23 December 1968 from Niagara Falls (Harold Lancaster, Gustave Yaki, Sheppard 1970). The present scarcity of this species in Niagara becomes apparent when one considers that out of this total of 28 records, 21 were observed in the 30 years between 1966 and 1995, and only seven in the 11 years from 1996 to 2006. This was the case before the remnants of Hurricane Fran reached Lake Erie from the Carolinas. At least 16 Red-necked Phalaropes spent the period from 8-15 September 1966 at the eastern end of Lake Erie (Curry 1996).

The Red-necked Phalarope breeds across the Arctic and subarctic latitudes from Alaska to Newfoundland. It winters on the southern oceans (Paulson 2005).

Kayo J. Roy

Red Phalarope *Phalaropus fulicarius*

Occasional visitor

The circumpolar Red Phalarope, first described by Linnaeus in his work *Systema Naturae* published in 1758, is the most pelagic of the three North American phalaropes. Unusual for a shorebird, its migratory route and wintering grounds are entirely pelagic (Tracy et al. 2002). With its striking rich chestnut colour during the breeding season, the female exhibits a more colourful plumage than the male. Like other phalaropes, the Red Phalaropes sex-role mating system is reversed with the male incubating and caring for the young, while the female may mate with more than one male sequentially (Mayfield 1978). Phalaropes forage along shorelines and, in addition, have a unique feeding technique in water. They swim in a small rapid circle forming a small whirlpool. This spinning action raises food to the surface from the edges or bottoms of shallow ponds for easy consumption.

Edward Ulrich discovered the first Red Phalarope for Niagara on 6 October 1935 at Erie Beach, Fort Erie (Beardslee and Mitchell 1965). This publication describes in detail all observations of Red Phalarope in Niagara prior to 1966.

The Red Phalarope has in the last decade become extremely rare with only one reported Niagara observation in the 11-year period from 1996 to 2006. Four Red Phalaropes were observed between 8-15 September 2006 at the eastern end of Lake Erie, likely displaced there from the Carolinas by the remnants of Hurricane Fran (Curry 1996). In the prior 30-year period from 1966 to 1995, 15 records were reported by the BOSNR for Niagara, and a further four observations were documented by Niagara area birders. The earliest date this species was observed in Niagara is 16 September 1972 in Chippawa, and the latest date is 21 December 1975 from Niagara-on-the-Lake (BOSNR).

The Red Phalarope breeds across the Arctic from northern Alaska to northern Quebec and across northern Eurasia. It winters on tropical and southern oceans, but mostly on the eastern Pacific and the eastern Atlantic (Paulson 2005).

Kayo J. Roy
Black-legged Kittiwake *Rissa tridactyla*

Occasional fall and winter visitor

This relatively small, slender, circumpolar seabird is closely related to the gull family Laridae. Probably the most abundant of all gull species, this bird is truly a “seagull” because it spends all of its life on the oceans (Gustave Yaki pers. comm.). Grant (1986) suggests it is almost exclusively a marine and coastal gull. The name kittiwake is derived from the bird’s peculiar cry, and the scientific name meaning “three-toed” comes from the fact that the hind toe on the foot is just a slight bump rather than a full fourth toe (Baird 1994).

The Black-legged Kittiwake is an occasional fall and winter visitor to Niagara, likely travelling down the St. Lawrence River from the large nesting colonies along the Atlantic coast. The first known recorded observation of this species in Niagara was on 9 November 1939, and Beardslee and Mitchell (1965) and Sheppard (1970) describe the occurrences of this species up to 1965.

The Black-legged Kittiwake, when present, can be found in Niagara as early as mid-September (1972 and 1996) but usually begins to appear from early November to late December (BOSNR). It has also been observed into the New Year with six known reports for January (1968, 1970, 1994 and 1995), one in February 1999, two in March 1970, and one in May 1968 (BOSNR). There also is one very unusual record for August 1990 (BOSNR). The bulk of these sightings are from the Niagara River between Queenston and Niagara Falls; however, the species has on occasion been discovered along the Lake Ontario shoreline between Niagara-on-the-Lake westward to the Niagara portion of the Fifty Point Conservation Area, the Welland Canal, and Lake Erie in both Fort Erie and Port Colborne.
Ivory Gull 

During the 1966-2006 time frame of this book, only a very few of the more than 100 sightings of Black-legged Kittiwake on the Niagara River have been verified as birds in adult plumage (BOSNR). Multiple numbers of this species observed on a single day is uncommon; however, Daniel Salisbury discovered five birds on 29 November 1969 (Sheppard 1970). There are seven records of two birds, and only one record of three birds (BOSNR).

The Black-legged Kittiwake is known to breed on the Arctic coasts of Alaska and Canada, south in the west to the Alaska Panhandle, and in the east to the Gaspe Peninsula. It winters at sea in the Pacific Ocean from southern Alaska to Baja, California, and in the Atlantic Ocean from Labrador to Florida (Baird 1994).

Kayo J. Roy

Ivory Gull 

Extremely rare visitor

The Ivory Gull is a delicate seabird as rare as it is beautiful. It is Holarctic, nesting at very high latitudes in both the Old and New Worlds. Ivory Gull numbers have declined sharply in Canada, Norway and Russia. In fact, it has experienced one of the greatest population declines ever detected for any bird species in North America, and there is no clear explanation as to the cause (Mallory et al. 2003). Breeding colony surveys suggest that Ivory Gulls have declined by up to 85% in Canada since the 1980s (Stenhouse 2004). As a consequence Ivory Gull is now listed as Endangered under Canada's Species at Risk Act (SARA 2008).

The Ivory Gull is an extremely rare visitor to Niagara. On 12 March 1910, a gull initially believed to be an Ivory Gull was found and collected in the Niagara River (Reinecke 1912). This bird was later re-examined and measured by James Savage and was determined to be an Iceland Gull (Beardslee and Mitchell 1965). An Ivory Gull in pure white adult plumage, the first record of this species for Niagara, was found in December 1924 (exact date unknown, not 1942 as in Sheppard 1970), in flight over
the Niagara River gorge below the Canadian Horseshoe Falls in Niagara Falls (Sheppard 1960). Nearly ten years later, on 10 February 1934, (not 19 February 1934 as in Sheppard 1970), William Vaughan observed the second Niagara Ivory Gull, a first-winter, immature bird flying over the rapids above the Canadian Horseshoe Falls in Niagara Falls (Beardslee and Mitchell 1965).

The scarcity of this species in Niagara becomes very evident when one considers that it was another 39 years before the third Ivory Gull was found. On 29 December 1973, Alice Ulrich and William Vaughan discovered a first-winter bird in the Niagara River off Dufferin Island in Niagara Falls (BOSNR, Wormington and Curry 1990). This bird was observed at rest on rocks and in flight over the upper rapids of the river. The next day, Harold Lancaster observed the bird off Dufferin Island, and it was last seen on 31 December 1973 at Buckhorn Island State Park in Grand Island, New York (Harold Lancaster pers. comm.). On 22 December 1980, while birding with Robert Andrle and Harold Axtell, Mary Gustafson found Niagara’s fourth Ivory Gull, an immature bird that was easily observed as it foraged for food along the Canadian shoreline of the Niagara River gorge below the Horseshoe Falls in Niagara Falls. This bird was last observed on 1 January 1981 (BOSNR, Wormington and Curry 1990).

Largely a scavenger, the Ivory Gull shares the territory of the polar bear and Canada’s Inuit hunters, feeding on the remains of their kills. This species breeds in the Canadian High Arctic on Ellesmere, Seymour, Devon, Baffin, and Perley Islands and in northern and southeast Greenland. Most of the Ivory Gull population generally winters in and around the ice pack in the Bering Sea, Labrador Sea and Davis Strait, and probably off eastern Greenland, ranging south irregularly to Newfoundland (Howell and Dunn 2007).

Kayo J. Roy

Sabine’s Gull Xema sabini

Occasional visitor

The fork-tailed Sabine’s Gull is a small, graceful and delicate gull with circumpolar distribution throughout northernmost North America and Eurasia. Named after Irish scientist Sir Edward Sabine, this long distance migrant is almost exclusively oceanic. While juveniles and some adults can be seen inland, sufficient regularity exists to suggest that a small percentage of the population must use an overland north-south migration route across North America to wintering areas (Day et al. 2002).

The first Sabine’s Gull record for Niagara is that of an individual observed by Mrs. Thomas M. Kelly on 3 October 1937 as it flew along the Ontario shoreline at Fort Erie (Beardslee and Mitchell 1965, Sheppard 1970). These two publications identify the many other records for Sabine’s Gull prior to 1966.

The Sabine’s Gull is an occasional visitor to Niagara. During the 1966-2006 time frame of this book, the bird has been generally observed between mid-September and mid-December. A total of 33 documented sightings are known from the Niagara River with seven reports for September, 10 for October, 14 for November and only two for December. Most of the birds found are in immature plumage. The Queenston to Niagara
Niagara Falls corridor has produced 20 records and 13 are known from the Fort Erie area (BOSNR).

One further observation exists from Port Weller. On 24 September 1997 Kayo Roy and Alan J. Smith observed one bird associating with Common Terns (BOSNR). Multiple sightings on a single day are somewhat uncommon. The four birds on 26-27 October 1988 at Fort Erie (Willie D’Anna, Peter Yoerg and others) is the record high. On four occasions (1988, 1990, 1995, 1996) three birds were noted, and on two other occasions (1966, 1993) two birds were observed (BOSNR).

In North America, the Sabine’s Gull breeds in the coastal wet tundra of the High Arctic from Alaska east to Hudson Bay. It winters in the Southern Hemisphere off the coast of western South America and South Africa (Day et al. 2002).

Kayo J. Roy

Bonaparte’s Gull *Larus philadelphia*

Spriing and fall transient, rare summer straggler, very common winter resident

The Bonaparte’s Gull has been the object of much study on the Niagara River. Beardslee and Mitchell (1965) note that prior to 1900 it was classed as a rare migrant by Bergtold (1889) and Short (1893). By 1963, however, it was at times the most common water-bird in the region. On one occasion as many as 10,000 birds gathered in one flock above Niagara Falls. Harold Axtell (Beardslee and Mitchell 1965) notes that years when Bonaparte’s Gulls are in great abundance may correlate with years of abundant Emerald Shiner. Hamilton and DeLeon (see their article elsewhere in this book) describe significant increases in numbers of these gulls on April BOS Counts since 1966. Beardslee (1944) provides a month-by-month discussion of numbers, age classes and moults of Bonaparte’s Gulls on the Niagara River for an average year. He finds that it became abundant in early April and that by 7 April only about 10% of the birds had developed their full breeding plumage or “hood”. But within 10 days, 90% of them had done so. He also describes two waves of autumn migration: one in August-September and one in November-December.

Early spring arrival dates for this species in western Lake Ontario are 7-9 March with scattered individuals lingering through the summer. Autumn arrival dates are 11-12 July with a few individuals lingering until 14-15 January (Curry 2006).

Bellerby (1994) brought to the attention of all birders the spectacular late afternoon–early evening flight of Bonaparte’s Gulls down the Niagara River (the “fly-past”) to their nocturnal roost at the river’s mouth. Kirk et al. (2008) statistically analyzed Bellerby’s 1986-1996 data and noted that the roosting flights consisted of 6,300 to 40,000 Bonaparte’s Gulls and occurred during October to January or February. The roosting area, which is difficult to see from shore, was visited by boat on 13, 17 and 25 November 1998. It was estimated to extend approximately one kilometre west and three kilometres north of the Rumsey Shoal, which is approximately two nautical miles north of Fort Niagara (Terry Yonker unpubl. data). On those dates, there were an estimated 1,300-1,900 gulls present, but some birds may have been missed and others may have flushed before they were illuminated by the boat’s lights. Shore-based radar studies of the roosting activity were undertaken in April 2005; masses of roosting birds in the above area were detected, and the technique will be more extensively applied in the future (Terry Yonker unpubl. data).
In November 2000, a study was undertaken by the Canadian Wildlife Service and the New York State Department of Environmental Conservation to determine how long individual Bonaparte's Gulls remained on the river. Gulls were cannon-netted at a loafing site on the New York side of the river just upstream from the Adam Beck Generating Station on 28 November. Over 50 birds were captured, and 25 individuals were fitted with radio transmitters (the rest were released). All tagged individuals had left the river by Christmas or within a month of their capture (Chip Weseloh unpubl. data).

The Bonaparte's Gull breeds from western Alaska eastward across northern Alberta to northern Ontario and Quebec. It winters from the mid-Atlantic coast south through the Gulf of Mexico; it also winters on coastal Baja California and the Sea of Cortez (Burger and Gochfeld 2002). In Ontario, it breeds north of Lake Superior in both the Northern Shield regions and the Hudson Bay Lowlands (Sutherland and Pittaway 2007).

D.V. Chip Weseloh

Black-headed Gull *Chroicocephalus ridibundus*

Rare winter visitor

The Black-headed Gull is a small migratory Old World gull species which, despite its name, shows a chocolate brown hood rather than a black head for adults in breeding plumage. This noisy, sociable, opportunistic gull of Europe and Asia has successfully spread into the coastal regions of eastern Canada. The Black-headed Gull is not a pelagic species and is rarely seen at sea far from the coastline. It has a long life expectancy, living in the wild to a maximum age of 63 years (Animal Ageing and Longevity Database).
Beardslee and Mitchell (1965) identified the first two records of Black-headed Gull for Niagara, both in 1959. George North found a breeding plumaged adult on 12 April 1959 at Niagara-on-the-Lake, and Rachel and Harold Axtell discovered a winter adult bird on 22 November 1959 on the Niagara River in Fort Erie.

The Black-headed Gull is a rare winter visitor to Niagara, having been recorded in 30 of the 41 years of 1966-2006 (BOSNR). Forty-four records of this species are known along the Niagara River from Niagara-on-the-Lake to Niagara Falls. In the years the bird was present, it typically arrived sporadically from early November remaining to late March. Each bird was frequently observed for only a short period of time, with the peak month being November with 15 sightings. There were eight records in December, seven in January, six in February and four into March. Two late records are known for April, and one unusual sighting in August, a straggler Willie D’Anna found on 19 August 1983 in Niagara Falls (BOSNR). On 28 February 1968, Howard Martin and Gustave Yaki discovered a Black-headed Gull on the Niagara River at Niagara-on-the-Lake that was exhibiting some early seasonal plumage change (Sheppard 1970). Additionally there are four records from Fort Erie (Harold Axtell, Paul Benham, Willie D’Anna) and two from Port Weller in St. Catharines (Kayo Roy, Gordon Bellerby, BOSNR). The species was most often viewed at water level from the boat launch area in Queenston where 22 observations were documented.

The Black-headed Gull breeds in Eurasia, and in North America likely only in Newfoundland. It winters in Newfoundland and is uncommon to rare along the St. Lawrence Seaway and the Atlantic Coast south to New Jersey, and casual in the Great Lakes region (Howell and Dunn 2007).

Kayo J. Roy

**Little Gull** *Hydrocoloeus minutus*

Uncommon winter visitor

The Little Gull is a common gull of northern Europe and Asia and is the smallest gull worldwide (Grant 1986). It typically frequents marshes, inland lakes and sheltered coasts and has become regular in small but increasing numbers along the eastern Atlantic seaboard, the Great Lakes basin and Canadian wetlands further north (Ewins and Weseloh 1999).

Prior to 1938, the Little Gull was unknown in Niagara (Beardslee and Mitchell 1965). This was perhaps the feeling at the time but more than likely the species may have been overlooked as they flew among the huge flocks of Bonaparte’s Gulls in the Niagara River (Bellerby et al. 2000). Sheppard (1970) on the other hand suggests “the Little Gull has been occurring on the Niagara River with surprising regularity for the past three decades.” Beardslee and Mitchell (1965) describe in detail observations of this species in Niagara up to 1965.

A comparison of Little Gull staging areas in Ontario indicates that the Niagara River and Long Point might be the most important spring staging areas on the continent for this species (Bellerby et al. 2000). This may perhaps account for the large numbers observed in Niagara, especially in 1995, 1996, 1997 and 1999 (BOSNR). On 2 April 1996, while the “fly-past” of gulls at Niagara-on-the-Lake was being recorded, 78 Little Gulls were observed heading for their nocturnal roost sites on Lake Ontario by Gordon Bellerby, Kayo Roy and Alan J. Smith.
The Little Gull is an uncommon winter visitor to Niagara and has been present in each of the 41 years (1966-2006) of this book. The Little Gull begins to appear on the Niagara River in late July and remains well into May. Over those 41 years, 24 reported sightings were in August, September produced 60 records, and 87 are known for October. In November, sightings increased to 171 while December numbers diminished somewhat to 90 records. January observations increased to 140 and slipped to 130 in February. The number of sightings escalated substantially in March to peak at 289, and while still impressive, April numbers diminished to 251 observations. There were 49 reported for May (BOSNR).

The North American breeding range is poorly known. Confirmed repeated breeding is restricted to the Great Lakes, Hudson Bay and James Bay; isolated single breeding has occurred in the St. Lawrence River and southern Minnesota. In North America, it winters primarily in the Great Lakes area and Hudson-Delaware Region, and the Atlantic provinces south to the Middle Atlantic states (Ewins and Weseloh 1999).

Kayo J. Roy

Ross’s Gull *Rhodostethia rosea*

Extremely rare visitor

This small, elegant Arctic gull of circumpolar distribution is an extremely rare visitor to Niagara. Named after the North Pole explorer James C. Ross, this species is presently listed as Threatened under Canada’s Species at Risk Act (SARA 2008). Incredibly, over an eleven-month period, three different individuals, all adults in winter plumage, were observed in Niagara at Port Weller, St. Catharines. On 18 December 1994, Barbara Charlton, Rob Dobos and Kevin McLaughlin, while participating in the St. Catharines Christmas Bird Count, found the first Ross’s Gull for Niagara. They observed the bird going to roost on the east pier of the Welland Canal, and early the next morning birders found only pink feathers at the roost site where the bird was likely killed by the resident Great Horned Owl. Feather specimens were collected and deposited with the Royal Ontario Museum, Toronto (ROM # 159517) (Dobos 1996).
On 26 February 1995, only two months after the first sighting, Roy Baker and David Milsom found the second Port Weller Ross's Gull. Only traces of its unique black collar and merely a hint of the pink hue of the breast were observed on this winter plumaged adult bird that was last observed on 1 March 1995 (Dobos 1996, m. obs.). Remarkably, on 12 November 1995, Glenn Coady recorded the third Niagara sighting at Fort Erie. This bird, also a winter plumaged adult, moved around Niagara considerably, and it is believed that all of the following sightings are of the same individual. This High Arctic rarity was observed along the Niagara River at Queenston on 19-20 November, over the Whirlpool Rapids on 24-25 November, and at Port Weller, the third observation here in eleven months (where Mary Ellen Hebb found it on 27-28 November). On 1 January 1996, Drew Campbell and Marcya Foster rediscovered this bird at Fort Erie back where it was originally observed seven weeks earlier (Dobos 1997, m. obs.). As rare as this species is and found so far south of its normal winter range, the 1994-1995 winter months were a banner year for observing Ross's Gulls in the northeast. Accepted records were noted from Montreal, Quebec, 1-11 December, Cape Vincent, New York on 4 January, and Cayuga Lake, New York on 13 January (Dobos 1996).

The fourth record for Niagara is that of a definitive basic Ross's Gull found on 1 December 2002 by Ronald Scovell and others at Niagara Falls, Ontario (Crins 2003). This stunning inhabitant of the Arctic was observed in flight in the Niagara River gorge, weaving in and out of the mist near the base of the Canadian Horseshoe Falls, clearly revealing its diagnostic white, wedge-shaped tail.

The Ross's Gull breeds very locally in northern Canada on southwest Hudson Bay and in Cheyne Island, Nunavut. The main nesting range is along and near the Arctic coast of Russia from the Kolyma Delta west to Taimyr Peninsula. It also breeds in west-central and northern Greenland. It is believed that the Ross's Gull winters in the open waters of the Arctic at the edge of the ice pack and along the northern coast of Alaska. A few birds reach more temperate areas, and on very rare occasions southern Canada and the northern United States (Howell and Dunn 2007). The species much celebrated breeding in the late 1970s on the Hudson Bay lowlands near Churchill, Manitoba was minimal and not considered, by some, to be permanent (Olsen and Larsson 2005).

Kayo J. Roy

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**Post-2006 Observation**

On 28 January 2008 Brandon Holden observed a definitive basic Ross's Gull in flight over the Ontario side of the Niagara River between the crest of the Canadian Horseshoe Falls and the rusting old barge in the rapids above the falls (Richards 2009, Winnie Poon). Willie D'Anna originally discovered this fifth record of Ross’s Gull, as shown, for Niagara the day before on 27 January 2008, while scooping the Niagara River for gulls. He first observed this Ross’s Gull at rest on the ice off Goat Island in Niagara Falls, New York. On 29 January 2008, it was identified flying over the Niagara River gorge off the Maid of the Mist boat dock area (Bryan Wylie), and above the Horseshoe Falls at rest on the long, now ice covered, rock island in Canadian waters near mid-river (Peter Gilchrist, Donald Perks, Wayne Renaud and others). A significant winter storm arrived on 30 January 2008 reducing visibility to near zero; however the bird remained in Ontario waters to 31 January 2008 (Richards 2009). This six-day visit ended at mid-morning on 1 February 2008 when the gull was last observed on Goat Island, New York (Terry Yonker, Lynne Landon).
Laughing Gull *Leucophaeus atricilla*

Occasional to rare visitor

Named for its laughter-like call, the attractive Laughing Gull is known to wander from time to time and is an occasional to rare visitor to Niagara. All sightings, with one exception, have been of single individuals that have strayed into the area likely from the east coast of North America. The first known record of Laughing Gull for Niagara occurred on 21 October 1935 when Robert Allen, Warren Eaton, Roger Tory Peterson and L. Walsh observed a bird of this species in Niagara Falls, Ontario (not Niagara Falls, New York, as in Beardslee and Mitchell 1965) when they stopped briefly in the falls area on their way to attend the American Ornithological Union meeting in Toronto (Sheppard 1938).

Six known spring and fall records for Niagara that occurred prior to 1966 are well described in Beardslee and Mitchell (1965) and Sheppard (1970).

Seven Laughing Gull sightings exist in Niagara between 1966 and 1996, and surprisingly only one record was reported over the next 10-year period, 1997 to 2006. On 28 October 1967, Daniel Salisbury identified a first-winter plumaged bird at Niagara Falls. On 19 May 1968, an adult bird was discovered at Point Abino on a Niagara Falls Nature Club outing (Sheppard 1970). Seventeen years later on 1 August 1985, Margaret Bain located a summer adult at Niagara-on-the-Lake (Wormington 1986). In the same year on 11 October, Gordon Bellerby found a second-winter plumaged bird also at Niagara-on-the-Lake that remained to at least 18 October 1985 (Wormington 1987). A summer adult bird was studied by Kevin McLaughlin and photographed by Alan Wormington on 3 May 1989 on the grassy grounds of Place Polonaise in Grimsby (Curry 1991, 2006). On 24 January 1993, John and Victoria Carley and Doug McRae identified a first-winter plumaged Laughing Gull at Queenston (Bain 1994). In 1996 the remnants of Hurricane Fran displaced numerous pelagic birds into Lake Erie and Lake Ontario among them numerous Laughing Gulls. From 8-15 November 1996, at least four first-winter plumaged birds were discovered in Fort Erie (Curry 1996). These four birds are the only known multiple number of Laughing Gulls ever observed in Niagara.

On 17 September 2006, Peter Yoerg, William Watson and others identified a second-winter Laughing Gull in Lake Erie at the foot of Kraft Road in Fort Erie (BOSNR).

This very common North American gull breeds from coastal Maine south along the Atlantic coast, in the Caribbean to southern Texas, and at isolated locations in western Mexico. The species winters from North Carolina south through to southern South America (Burger 1996).

*Kayo J. Roy*

Franklin’s Gull *Leucophaeus pipixcan*

Rare fall and winter visitor

The Franklin’s Gull, formerly known as Franklin’s Rosy Gull, was at one time no stranger to Regional Niagara. The first known recorded observation of this species is that of an individual found in Fort Erie on 17 October 1937 (Beardslee and Mitchell 1965, Sheppard 1970). Observations to 1965 are well discussed in these two publications.
Franklin’s Gull was at one time found annually in Niagara. From 1966 to 1989, more than 160 individuals were well observed and duly documented (BOSNR). The bulk of these observations are of individuals that were located on the Niagara River from the Sir Adam Beck overlook to the Whirlpool Rapids in Niagara Falls. Other locations include Queenston and below and above the Canadian Horseshoe Falls in Niagara Falls. Significant numbers were also recorded from the Fort Erie area where Franklin’s Gull was often observed feeding over the Niagara River or at rest on the grassy areas below or near the Peace Bridge.

In the 1960s and 1970s, Franklin’s Gulls began to appear in Niagara around mid-August; however, in more recent times, and in smaller numbers, they seem to arrive by mid-September. More often than not, the birds are in immature plumage and have generally left the area by mid-December. One extremely early record exists for Niagara, an adult bird resting on a rock in Lake Erie off Harbourview Road near Burnaby that was discovered by John Black, Drew Campbell, Brad Clements and Kayo Roy on 19 May 2001. Two records are known for January, both in 1972, a single bird found on 2 January at Niagara Falls and another individual observed from 15-24 January at Fort Erie (BOSNR).

While most observations are of single birds, numerous multiple observations have occurred with some regularity. The 11 birds recorded by Harold Axtell on 12 September 1975 in Fort Erie and the 10 individuals reported by David Freeland on 14 November 1976 at Niagara Falls are certainly noteworthy numbers (BOSNR).

The Franklin’s Gull has today become an irregular visitor with only a few sporadic observations of its presence noted. The diminished presence of this species in Niagara becomes immediately apparent with only 15 sightings recorded during the 16-year period 1990 to 2006 (BOSNR). Willie D’Anna and Betsy Potter identified the last known sighting, a bird they discovered on 29 October 2006 in Niagara Falls (BOSNR).

The Franklin’s Gull breeds in the interior of western North America and winters along the coasts of Peru and Chile (Howell and Dunn 2007).

Kayo J. Roy

Mew Gull Larus canus
Extremely rare visitor

The Mew Gull, formerly known as Short-billed Gull, is a delicate and gentle-looking bird that has an extensive range spanning all of the Northern Hemisphere. It is found in Europe, Asia, and North Africa (Felix 1998), where it is known as Common Gull, and considered a separate species.

The complexity of the name of this species is best described by the following. Taxonomically and collectively, the “Mew Gull” is comprised of three subspecies, some
of which are sometimes treated as full species. Those are the European and central Asian breeders (L. c. canus group, often referred to as the Mew Gull or the Common Gull), the northeastern Asian breeders (L. c. kamtschatschensis group), formerly the Kamchatka Gull and the North American breeders (L. c. brachyrhychus) referred to as the Short-billed Gull, but now known as the Mew Gull), (AOU 1998, Moskoff and Bevier 2002).

In North America, this smallest of all the white-headed gulls is a bird of the Pacific Coast and boreal forest that does not stray far from land (Moskoff and Bevier 2002). It is known to be among the first to seek the shoreline in the occurrence of stormy weather (Bent 1963).

There are no records of Mew Gull prior to 1966 in Beardslee and Mitchell 1965 or Sheppard 1970.

During the 1966-2006 time frame of this book, seven records exist in Niagara for this extremely rare visitor. On 24 October 1967, Daniel Salisbury and Robert Andrle discovered an adult Mew Gull, the first record for Ontario and Niagara, in the Welland Canal, Port Weller, in St. Catharines. This bird was collected and the specimen is at the Buffalo Museum of Science, Buffalo, New York (BSNS # 5102), (BOSNR, Andrle and Axtell 1969, Sheppard 1970, Wormington 1987, James 1991). Later the same year, on 28 November 1967, Daniel Salisbury discovered another Mew Gull, this one an immature bird he found at Lock 4 of the Welland Canal in St. Catharines. This bird was observed again on 29 November 1967 (Daniel Salisbury) and on 30 November 1967 (Daniel Salisbury, Robert Andrle). It was collected and the specimen is also at the Buffalo Museum of Science, Buffalo, New York (BSNS # 5103), (BOSNR, Andrle and Axtell 1969, Sheppard 1970, Wormington 1987). On 27 January 1968 (not 27 January 1969 as in Sheppard 1970), Daniel Salisbury found his third Mew Gull in Niagara, an immature bird he studied in the Niagara River below Queenston. On 3 February 1968 and on 26 February 1968, Salisbury and others saw this bird again in the same general area of the river near Queenston (Sheppard 1970).

Thirty-four years later, on 25 November 1992, Marlene and Rod Plank with Alan Wormington, Richard Knapton and others identified a winter adult Mew Gull at Niagara Falls (Bain 1993, BOSNR). On 10 November 1996, Sharon Skelly and others located an adult bird in flight over the Niagara River gorge in Niagara Falls (BOSNR). Fifteen days later on 17 November 1996, Robert Curry, Richard Knapton, Kayo Roy and others, standing at the Adam Beck overlook in Niagara Falls, studied a second-basic individual at rest and in flight over the Niagara River (Dobos 1997). On 6 December 2003, Colin Jones, Peter Burke, Willie D’Anna, Burke Koral and others discovered a definitive basic Mew Gull in Niagara Falls. This bird moved to the Queenston area where it was seen on 13, 16 and 18 December 2003 (BOSNR, Crins 2005).

In North America, the Mew Gull breeds through most of Alaska eastward through Yukon, southwestern Northwest Territories, and into northern Saskatchewan, and south along coastal British Columbia to Baja, California. It winters mainly along the Pacific Coast from southeast Alaska south to Baja, California (Moskoff and Bevier 2002).

Kayo J. Roy

Post-2006 Observation

On 6 December 2008 while scoping the Niagara River in Niagara Falls for gulls, Jean Iron drew attention to a different-looking gull that was eventually identified to be a definitive basic Mew Gull, the eighth record of this species for Niagara. Others that contributed to the identification included Willie D’Anna, David Gordon, Kevin McLaughlin, James Pawlicki, Betsy Potter and Ron Pittaway. After a period of study the observers noted some differences in the bird’s overall plumage; however, the record was accepted by the Ontario Bird Records Committee as Larus Canus (BOSNR, Richards 2009).
The Ring-billed Gull can be found year round in southern Ontario, at least in small numbers, wherever there is open water. There is, however, a dramatic increase in numbers in western Lake Ontario in early February, which represents the arrival of many migrants (Curry 2006). In the autumn, numbers decline during November-December (Weir 2008).

Although this species is now a very abundant breeding bird in Niagara and the Great Lakes, this has not always been the case. McIlwraith (1894), Eaton (1910), Ludwig (1943), Beardslee and Mitchell (1965) and Sheppard (1970) all speak of a time when it was much less common. McIlwraith claims it was common on Lake Ontario but only in winter. Eaton calls it a rare winter visitant in western New York and a sometimes abundant spring migrant on Lake Ontario.

The Ring-billed Gull was not known to nest in the Niagara Region until 1945, when about 50 nests were found on Mohawk (Gull) Island, just west of the boundary of Niagara. By 1960, this colony had grown to 2,000 pairs (Beardslee and Mitchell 1965). In 1956, Ring-billed Gulls started nesting in the Niagara River on the old cable-tower island (Tower Island) at the end of the then new 15-arch hydroelectric control-gate weir, part of the International Niagara Control Works structure in Chippawa (Sheppard 1970). Within three years, the Common Terns that had been nesting there...
were driven away (Beardslee and Mitchell 1965). Sheppard (1970) reported that in 1959 about a dozen pairs of Ring-bills first nested “on the Tern colony island near the brink of the Falls” (presumably Table Rock), and by 1970 they had become so numerous that the Common Terns there were nearly eliminated. Also, by 1970, Ring-billed Gulls had started nesting at the Port Colborne lighthouse breakwall.

In the 2007 Great Lakes Colonial Waterbird Decadal census, Ring-billed Gulls were found nesting in the Niagara Area as follows: Mohawk Island (2,201 nests), Port Colborne lighthouse breakwall (2,740 nests), Canada Furnace (Algoma lands) in Port Colborne (31,194 nests), Tower Island (0 nests, but 2,035 nests in 2003) and Table Rock (508 nests), for a total of 36,643 nests in Canada. Five other colonies, totalling over 37,000 nests, were counted in the United States portion of the river and Buffalo Harbour (Connie Adams pers. comm.). Hamilton and DeLeon (see their article elsewhere in this book) show significant increases of this gull species during spring and autumn BOS Counts since 1966. The large numbers of Ring-billed Gulls reported on the BOS Counts can be accounted for by the presence of locally breeding birds from the American and Canadian waters. However, in all likelihood, they also include many passage migrants.

The Ring-billed Gull breeds across central temperate North America from the Atlantic coast to central British Columbia. It winters as far north as the Great Lakes and along the Atlantic and Pacific coasts south of its breeding range but is more common along the shorelines of the Gulf of Mexico and the Gulf of California (Ryder 1993). In Ontario, it breeds abundantly on the shores and islands of Lake Ontario and eastern Lake Erie, commonly on Lake Huron and much less so on Lake Superior. It also breeds at scattered inland sites (Weseloh 2007c).

D.V. Chip Weseloh

California Gull *Larus californicus*

Rare winter visitor

This mid- to large-sized, white-headed gull is commonly found along the Pacific coast and in the western interior of the United States and Canada. A scavenger, this opportunistic bird will eat anything it can catch. It can be found feeding almost anywhere, in lakes, beaches, landfill sites, farm fields following plows, and like many other gull species, even in public fast food outlet parking lots. In 1848, the California Gull devoured a plague of grasshoppers that threatened the newly settled Mormon first food crop in Utah. To commemorate the averting of this disaster, a gilded statue was erected known as the “Miracle of the Gulls” that still stands today in Temple Square in Salt Lake City, Utah (Winkler 1966).

There is no mention in Beardslee and Mitchell (1965) or Sheppard (1970) of the presence of California Gull in Niagara, and there are no records for Ontario prior to 1981. Today however, the species is a rare winter visitor and over the last decade has become more of an annual visitor along the Niagara River. All California Gull records for Niagara are during the months of November, December, January and February. The majority of these records are from mid-November to the end of December, with three records documented for January and two for February (BOSNR).

During the period 1981-2006, 50 Ontario records of California Gull have been accepted by the OBRC (Richards 2008). Of this number, 22 were reported from the Niagara River. The exact number of California Gulls observed over the years along the
river is difficult to ascertain as it is believed that one or more individuals are making return visits to the area, perhaps even annually. Some reports almost certainly represent multiple sightings of the same individual.

On 29 November 1992, Marlene and Rod Plank with Tony Leukering and others discovered Niagara’s first California Gull on the Niagara River. They observed an adult bird both in flight and at rest from the Adam Beck overlook in Niagara Falls. The bird remained until 14 February 1993 to the delight of the many birders that flocked to Niagara to add this rare species to their life list or winter list (BOSNR, Bain 1993). Since this first 1992 sighting, the California Gull has been observed on the Niagara River in every year up to 2006 (BOSNR, Bain 1993). Most of these birds have been winter adults, and on occasion more than one California Gull has been present (BOSNR). Away from the Niagara River, on 19 December 1999 during the St. Catharines Christmas Bird Count, Kevin McLaughlin, Rob Dobos, George Naylor and Robert Waldbucher discovered a definitive basic California Gull on the Lake Ontario shoreline of Municipal Beach, Port Weller, St. Catharines (Roy 2000).

Jehl (1987) identifies two subspecies of California Gull: *L. c. californicus* (smaller and darker mantled), and *L. c. albertaensis* (larger and lighter mantled). In November 1996, careful observers studied two adult California Gulls on the Niagara River that appeared to have distinctly different mantle shades. While organized records of subspecies are not generally maintained, it is certainly conceivably that both subspecies may occasionally be present on the Niagara River during early winter periods.

The California Gull breeds from southern Northwest Territories south to Oregon and San Francisco Bay, and from Central Alberta and Manitoba south to Colorado and eastern North Dakota. It winters along the Pacific Coast from southern British Columbia to southern Mexico and inland at scattered western localities (Winkler 1966).

Kayo J. Roy

**Herring Gull *Larus argentatus***

Very common winter resident, uncommon summer resident

The Herring Gull is one of the few birds that is both a well-known breeder in Niagara and a very common winter resident; however, this has not always been true. McIlwraith (1894) remarks that “In southern Ontario it is seen only during the winter.” It was not reported breeding in (or near) the Niagara until 1943, when a single nest was found at Mohawk Island; there were six nests in 1948 and 35 by 1960 (Beardslee and Mitchell 1965). More recently, there were 253 nests counted on Mohawk Island in 2007. (See the article by Morris elsewhere in this book). Sheppard (1970) noted the first Herring Gulls nesting in the Niagara River in 1956 on the large island almost at the brink of the Horseshoe Falls. Herring Gulls also nest on one of the islands in the middle of the river near the stranded barge just above the falls. This location has been used as an annual
monitoring site for contaminants in Herring Gull eggs by the Canadian Wildlife Service since 1979, when 44 nests were counted. Since then the number of Herring Gull nests has fluctuated from a high of 66 in 1993 to a low of only 20 in 2009. Additional documentation on the increase in Herring Gulls on BOS April Counts, since 1965, is available in the article by Hamilton and DeLeon elsewhere in this book.

Another well-known colony in Niagara is at the Port Colborne breakwall. The earliest count for this site indicates 28 nests there in 1972. This number increased steadily to 226 nests in 1999. However, by 2007, the number had declined to 158. At the nearby Canada Furnace (Algoma lands) colony, there were 21 nests in 1973 and 75 in 1987. Since then, the nest numbers there have steadily declined to 32 in 1990, 4 in 1999 and 0 in 2007. (See the article by Morris elsewhere in this book for further details.)

The numbers of Herring Gulls reported above during the BOS Counts, especially in April and May, seem unusually high, given only the few hundred which nest in the region. Perhaps many of them are immature birds congregating there at those times. The much larger numbers recorded on the Christmas Bird Counts indicate the scale of the winter influx (Beardslee and Mitchell 1965) and probably reflect numbers of migrant Herring Gulls from the upper Great Lakes coming into the region.

The Herring Gull has been an accurate indicator of concentrations of environmental contaminants in wildlife on the Great Lakes. Concentrations of two widespread legacy contaminants, PCBs and DDE, in gull eggs from the Niagara River, have declined by 92.3% and 87.5% respectively, from 1974 to 2007 (Pekarik and Weseloh 1998, CWS unpubl.data). A similar pattern is observed at the Port Colborne breakwall colony, where PCBs and DDE in Herring Gull eggs have declined by 93.5% and 96.0%, respectively, over the same time.

The Herring Gull breeds in Alaska and across the mainland of northern Canada, in the lake district of Manitoba, on the Great Lakes and in New England (Pierotti and Good 1994). In Ontario, it breeds on all the Great Lakes and many of the inland lakes from the Canadian Shield northward (Weseloh 2007d).

D.V. Chip Weseloh

Thayer’s Gull  *Larus thayeri*

Rare fall and winter visitor

The Thayer’s Gull, named after ornithologist John E. Thayer, is a large gull similar to a Herring Gull. The taxonomic status of Thayer’s Gull has been the subject of considerable dispute and its status as a separate species has been contested in many quarters. While the taxonomy of the Thayer’s, Iceland, Kumlien’s complex remains unsettled, this account follows the current AOU (1998) treatment of Thayer’s Gull as a full species. There will continue to be controversy on this confusing gull and no doubt one day there will be a resolution to all the skepticism currently surrounding this entire complex. Birders interested in the dilemma and complexity of this taxon should consult Ron Pittaway’s “Taxonomic History of Thayer’s Gull” (1999) and the extensive research summarized in Pittaway’s references.
Thayer’s Gull is a rare fall and winter visitor to the Great Lakes (Snell 2002), and the Niagara River is one of the best places in interior eastern North America to see this interesting gull. It is generally present in small numbers from mid-December to mid-January, most often observed in the gorge between the two power plants from the Adam Beck overlook in Niagara Falls. Because of distance, viewing gulls from this overlook can challenge birders even with the finest high quality optical equipment.

Thayer’s Gull is not on the OBRC Review List because it occurs regularly in the province. The BOS statisticians have for many years been reluctant to review documentation for Thayer’s Gull given the confusion that exists and consequently there are only three adjudicated BOSNR records for Niagara.

The Thayer’s Gull breeds in the Canadian High Arctic as far east as Baffin Island and Greenland. It winters primarily along the North Pacific Coast from British Columbia to Baja, California, with small, scattered populations through the Midwest to the Great Lakes (Snell 2002).

Kayo J. Roy

Iceland Gull *Larus glaucoides*

Uncommon winter visitor

The Iceland Gull is a migratory species that breeds in the Arctic regions of Canada and Greenland but not in Iceland where it is only observed in winter. Somewhat smaller than the Herring Gull, it is closely related to the Thayer’s Gull and disputes over their separation or combination have long interested gull geneticists and others. A further complication exists when Kumlien’s Gull, a subspecies of Iceland Gull is drawn into the discussion. The taxonomy of this Iceland, Kumlien’s, Thayer’s complex remains for now unsettled. Beardslee and Mitchell (1965) and Sheppard (1970) treat the Iceland Gull as two forms separating the nominate *glaucoides* from *kumlien*s. They report in considerable detail all observations prior to 1966.

The complexity of separating *kumlien*s from *glaucoides* with any certainty continues to be an identification concern. This account will treat all sightings of Iceland Gull as *L. g. kumlieni*. Supporting this decision to do so are the comments in Pittaway (1992b) that *kumlien*s is by far the most likely race found in Ontario, and that there are only a handful of authenticated records of the nominate “Greenland” race *glaucoides* for the province.”

During the 1966-2006 time frame of this book, the Iceland Gull, an uncommon winter visitor, has been observed along the Niagara River in every year. In the Niagara River alone from Niagara-on-the-Lake to Fort Erie, 539 observations of both adults and immature birds have been reported during this time period (BOSNR). The Iceland Gull begins to appear by late October with two known sightings, growing in November to 92, increasing to 124 in December, and peaking in January substantially with 208 individuals being located. The bird’s presence begins to diminish in February as only 70 sightings were reported, 37 were found in March and only five in April. One late May record is known, a bird found by Michael Morgante on 24 May 1997 in Niagara Falls (BOSNR). Modest numbers of this species have also been reported from Port Weller, the Welland Canal and Port Colborne; however, dates and numbers over the years were not retained. The Niagara portion of the Fifty Point Conservation Area is another locale where the Iceland Gull can be observed; however, the documentation available in the

Kayo J. Roy

**BOS April Count:** Not reported  
**BOS May Count:** Not reported  
**BOS October Count:** Not reported  

**Niagara Christmas Bird Counts:**  
Reported on 24 of 41 counts, maximum of 5 birds on the 1997 Niagara Falls CBC  
Earliest date: 17 November 1990, 1 bird, Adam Beck overlook, Niagara Falls (BOSNR)  
Latest Date: 3 March 1970, 1 bird, Niagara River gorge, Niagara Falls (Daniel Salisbury)

**BOS April Count:** Reported on 11 counts of 41 counts, maximum of 2 birds in four years  
**BOS May Count:** Reported on 2 of 41 counts, maximum of 1 bird in 2004 and 2005  
**BOS October Count:** Not reported  

**Niagara Christmas Bird Counts:**  
Reported on 37 of 41 counts, maximum of 21 birds on the 2004 Niagara Falls CBC  
Earliest Date: 30 October 1977, 1 bird, Queenston and 1993, 1 bird, Adam Beck Overlook (BOSNR)  
Latest Date: 24 May 1997, 1 bird, Niagara Falls (BOSNR)  

**Earliest Date:** 30 October 1977, 1 bird, Queenston and 1993, 1 bird, Adam Beck Overlook (BOSNR)  
**Latest Date:** 24 May 1997, 1 bird, Niagara Falls (BOSNR)
HNCNR did not identify with certainty whether the gulls were observed in the Niagara or the Hamilton portion of this conservation area.

The Iceland Gull breeds in coastal colonies in the Canadian Arctic and in Greenland. Its winter range is not fully understood. Most nominate *glaucoides* and, in all likelihood, many *kumlieni* are intraregional Arctic migrants, overwintering in Greenland and in the Canadian Arctic. It is a regular but uncommon or rare winter visitor throughout the Great Lakes including Minnesota, Wisconsin, Illinois, Ohio, Pennsylvania, Ontario, New York and the Niagara region (Snell 2002).

Kayo J. Roy

**Lesser Black-backed Gull *Larus fuscus***

*Uncommon winter visitor*

This Western Palearctic gull is a common migratory species that is a regular winter visitor to the east coast of North America. With a very complicated taxonomy which comprises several different subspecies, most birds observed in North America are of the northern European race *graellsii*, which is the lightest black-backed gull of its genus.

Sheppard (1970) identifies a Lesser Black-backed Gull that was collected near Lock 1 of the Welland Canal in St. Catharines on 20 December 1968. Daniel Salisbury, who was present when the bird was collected, advises that the specimen, initially thought to be a first-winter bird, was sent to the American Museum of Natural History in New York City where it was identified as a second-winter Lesser Black-backed Gull. Harold Axtell was not convinced and forwarded the specimen to the National Museum of Canada in Ottawa for their assessment. Earl Godfrey was unwilling to make a decision, and he sent the specimen to the Natural History Museum in London, England for their expert opinion. After careful evaluation, they identified the bird to be an immature Herring Gull. Here is proof positive on how difficult it can be to identify immature gulls. This Sheppard (1970) record in print of Lesser Black-backed Gull needs to be disregarded.

The first confirmed record of this uncommon winter visitor to Niagara is that of an adult bird found on 27 December 1972 by Robert Andrele and Arthur Clark at St. Davids.
In November and December of 1976, three birds were observed in Niagara Falls (BOSNR, Harold Lancaster). Every year since 1976, Lesser Black-backed Gulls have been observed somewhere along the Niagara River and at a few other Niagara locations (BOSNR).

The presence of Lesser Black-backed Gulls in North America has increased dramatically in recent years as the distribution of this species has clearly changed. In Niagara, this species usually makes its first appearance in late September with nine sightings in 1996, 1997 and 1998. October has recorded 34 sightings, increasing dramatically in November to peak with 145 sightings, and diminishing somewhat in December with 93 recorded sightings. Three unexpected records are known for August in 1996 and 1997 (BOSNR). Some believe that the Lesser Black-backed Gull leaves Niagara by year-end and moves to the Atlantic seaboard when the colder weather sets in. This may not be altogether true given that 71 records are known to exist in Niagara for January and seven for February. Other birds have lingered even longer as there are four records for March in 1996, 1999, 2002 and 2003, one for April 2000, and two in the month of May 1999 and 2000 (BOSNR).

In the 31 years from 1976 to 2006, the OBRC, BOSNR and other reports identify at least 369 observations of Lesser Black-backed Gull for Niagara. This number is an approximate estimate after eliminating known duplicate reports from observers over the same time period. Of this total, some 252 records are along the Niagara River from below and above the falls in Niagara Falls, 98 from the Queenston boat launch and Adam Beck overlook area in Niagara Falls, and the balance of 18 from other Niagara locations. Record daily highs were of nine individuals found on each of 21 November 1998 and 21 November 2001, and two in December 2001, all from Niagara Falls. In 1997, 36 individuals were discovered in Niagara peaking at 43 in 1998. In the years 2003 to 2005, more modest numbers were observed; however, in 2006, 20 individuals were studied. This substantiates the ever-changing distribution of this migratory species.

The Lesser Black-backed Gull breeds in northwest Europe, Greenland and Iceland, and there is no current evidence to indicate that breeding has occurred in North America. Non-breeding birds of this species winter mainly from Newfoundland and the southern Great Lakes south along the Atlantic Coast to southern Florida, and west along the Gulf of Mexico to Tamaulipas and to the northern Yucatan Peninsula (Howell and Dunn 2007).

Kayo J. Roy
**Slaty-backed Gull *Larus schistisagus***

Extremely rare visitor

This common large gull of coastal northeastern Asia frequently wanders to the Aleutian Islands, the Pribilof Islands and the western shoreline of Alaska (Harrison 1987). In more recent years, this species is being somewhat regularly observed along coastal California. “Here at Half Moon Bay, California we have had more than twenty birds of all age classes, maxing out at thirteen in one winter for this species whose distribution is changing” (Alvaro Jaramillo pers. comm.).

The Slaty-backed Gull is an extremely rare visitor with only two known observations of its presence in Niagara. On 24 November 1992, Marlene and Rod Plank discovered a winter adult bird, the first record for Ontario and Niagara, at the Niagara Falls Mountain Road landfill site. It moved to the Niagara River where it was relocated on 28 November resting on the concrete breakwall just north of the International Niagara Control Works structure near Chippawa. To the delight of an incredible number of birders, it remained until 29 December 1992 (Bain 1992, BOSNR).

The second record for Niagara is that of a third-winter bird studied by Kevin McGowan and others in Niagara Falls on 2 December 2006. This bird was originally observed resting on exactly the same concrete breakwall where the 1992 bird was seen, and it remained along the Niagara River in Niagara Falls to at least 13 December 2006 (BOSNR, Richards 2008).

The origin of these two birds to Niagara is unknown. Numerous inquiries were sent to several experts who provided the following responses: “Given there are no records of this species in the Western Palearctic, my guess is they come from the northwest — Alaska etc” (Alvaro Jaramillo pers. comm.). “The likely source would be Alaska. To my knowledge, there are no authentic records yet of Slaty-backed in Europe” (Klaus Malling Olsen pers. comm.).

This species breeds along the North Pacific coastline of Asia and winters south as far as Japan (Harrison 1987).

Kayo J. Roy

**Glaucous Gull *Larus hyperboreus***

Rare winter visitor

The Glaucous Gull is a large, gregarious and powerful all white gull with circumpolar Arctic distribution. The name glaucous describes the bird’s colouration. This migratory scavenger is the only large gull that is common in the High Arctic, and it is known to be one of the most predatory of all gulls.

The first record for Niagara of this omnivorous gull is an old historical record of a bird collected from the Niagara River on 29 January 1895 by John Savage. Beardslee and Mitchell (1965) and Sheppard (1970) identify the numerous observations prior to 1966.

During the 1966-2006 time frame of this book, the Glaucous Gull, a rare winter visitor, has been observed along the Niagara River in each of the 41 years. In the Niagara...
River alone from Queenston to Fort Erie, 569 known observations have been documented during this time period (BOSNR).

The Glaucous Gull begins to appear by late October with 3 known sightings, growing in November to 55, increasing substantially in December to 134 sightings, and peaking in January dramatically with 231 individuals being located. The birds presence begins to diminish in February as 109 sightings were reported, 23 were found in March and only 11 in April (BOSNR). One late August record is known, a bird found by Arthur Schaffner and Fran Rew on 22 August 1984 at Waverley Beach in Fort Erie (BOSNR). This species has also been reported from several Niagara landfill sites as well as from Niagara-on-the-Lake, Port Weller, the Welland Canal and Port Colborne; however, dates and numbers over the years were not retained. The Niagara portion of the Fifty Point Conservation Area in Grimsby is another locale where Glaucous Gull can be observed; however, the documentation available in the HNCNR did not identify with certainty the gull's presence in the Niagara portion of this conservation area.

In North America the Glaucous Gull breeds along the north coasts of Alaska and the Canadian Arctic east to Labrador. It winters south along the Pacific Coast as far as the temperate maritime regions of California, and along the Atlantic Coast from Newfoundland to Virginia, with small numbers wintering regularly on the Great Lakes and the St. Lawrence River (Gilchrist 2001).

Kayo J. Roy

Great Black-backed Gull *Larus marinus*

Uncommon winter resident, rare summer resident

A few Great Black-backed Gulls may linger in the Niagara area year round. Generally, however, they arrive in western Lake Ontario in July or August and remain through April (Curry 2006).

McIlwraith (1894) reported the presence of the Great Black-backed Gull in western Lake Ontario until March, when it disappeared for the season. On the Niagara Frontier, Beardslee and Mitchell (1965) reported a specimen taken in 1894 and four to six individuals observed in February 1895, when the species was classed as an uncommon winter visitor. By the 1930s, numbers had started increasing, and 27 were reported on 27 January 1935; the first summering birds were reported later that year. On 1 January 1960, over 100 birds were reported on the BOS Christmas Bird Count (Beardslee and Mitchell 1965). Sheppard (1970) states that the bird was then “quite common and very regular in its appearance on the River during the winter months.” He describes their location: “The little rocky islets scattered throughout the upper rapids, immediately above the falls, are much favoured by the Great Black-backed Gull as resting places, and in that location it may be spotted at almost any time throughout the year.” Significant increases in black-backed gull numbers during April, May and October BOS Counts have been documented (see the article by Hamilton and DeLeon elsewhere in this book).

In 2002, the Canadian Wildlife Service (unpubl. data) put satellite transmitters on two breeding black-backed gulls on Pigeon Island in eastern Lake Ontario near Kingston. During 2002 and 2003, both birds spent one to two weeks on the Niagara River in December during their migration to their wintering area in western Lake Erie. The numbers of this species observed on the BOS Counts are also suggestive of its migratory nature on the Niagara River. Maximum numbers in April are twice as great as those
Glaucous Gull
Brandon Holden

Great Black-backed Gull
Brandon Holden
in May. Their numbers build up in the autumn and by Christmas the species is relatively common on the river. Band returns of birds found in the Great Lakes suggest that most birds come from the St. Lawrence Estuary and the Atlantic coast (Angehrn et al. 1979). However, each of the satellite-tagged birds from Pigeon Island moved from western Lake Erie through the Niagara area and returned to Pigeon Island during a five-day period from 21-26 March 2003.

Great Black-backed Gulls breed regularly in eastern Lake Ontario and are usually laying/incubating eggs by late April or early May. This suggests that birds observed on BOS Counts in April and May are not local birds but probably migrants from the St. Lawrence Estuary or the Atlantic coast. During the second Atlas, a single pair bred on the Port Colborne breakwall. The species has also bred on Mohawk Island (Moore et al. 2007, 2008), just outside the western boundary of Niagara.

The Great Black-backed Gull breeds primarily on islands on both the western and eastern shores of the North Atlantic Ocean. In winter it retreats to the southern portions of these areas, including the Great Lakes and the Mediterranean Sea, and farther south (Good 1998). In Ontario, small numbers breed in the St. Lawrence River, eastern Lake Ontario and Lake Huron (Weseloh 2007e).

D.V. Chip Weseloh

**Sooty Tern** *Sterna fuscata*

Extremely rare straggler

In early September 1996, Hurricane Fran brought the only Sooty Terns ever to have occurred in Niagara. It is impossible to determine precisely how many individuals were involved, but the following were reported (Curry 1996).

8 September: One juvenile off Jaeger Rocks, Fort Erie (John Lamey)
8 September: One adult off Waverly Beach, Fort Erie (many observers)
9 September: One adult off Waverly Beach, Fort Erie (Hugh Currie, Daniel Salisbury)
10 September: One adult off Waverly Beach, Fort Erie (William G. Lindley)

In the late afternoon of 8 September as about 40 observers gathered at Waverly Beach in Fort Erie to observe Black-capped Petrels, they were treated to a marvellous view of an elegant adult Sooty Tern that circled the extreme eastern end of Lake Erie and flew west out to the open lake past the ecstatic crowd (Curry and Olmsted 1996).

On 28 September 1996, Robert Curry and John Olmsted found the badly decomposed body of an adult Sooty Tern at Long Beach. This represents the only specimen for the province. The skeleton is at the Royal Ontario Museum, Toronto (ROM # 159642).

The Sooty Tern is an abundant inhabitant of tropical oceans worldwide. It nests in the Dry Tortugas, Florida, and forages regularly over the warm Gulf Stream current off the Carolinas. It is probably in these waters that the Niagara Sooty Terns originated.

Robert Curry
**Least Tern *Sterna antillarum***

Extremely rare visitor

The delicate Least Tern is the smallest member of the North American gull and tern family. This migratory bird, similar in appearance to the Old World Little Tern, is a United States Fish and Wildlife Service bird of Conservation Concern (Audubon 2007). The species is continentally vulnerable and classified as Threatened and Endangered throughout its North American range (Thompson et al. 1997). Sparingly vegetated sandy beach areas are the bird’s favourite nesting habitat. This same terrain is prized for human recreation and residential development and subject to alteration by water diversion (Thompson et al. 1997).


The Ontario Bird Records Committee has accepted only three records of Least Tern for Ontario, all coincidentally found along the Lake Erie shoreline. The first Ontario record is of a bird located outside of Niagara on 9 June 1953 at Wheatley Harbour (Bain 1994). To the delight of many birders, a first-winter bird was observed on 4-7 November 1995 near Sweet’s Corner, Cayuga (Dobos 1996).

Least Terns breed widely along coastal beaches of the Atlantic, Gulf and Pacific coasts and the major interior rivers of North America. While wintering areas remain uncertain and poorly known, it is believed they winter broadly across marine coastlines of Central and South America (Thompson et al. 1997).

Kayo J. Roy

**Caspian Tern *Hydroprogne caspia***

Uncommon summer resident

There are several records of single Caspian Terns during the 1880s and 1890s in the Buffalo area (Beardslee and Mitchell 1965). McIlwraith (1894) considered it rare in southern Ontario and made no mention of local nesting. Beardslee and Mitchell (1965) note that “During June and July… a number of Caspian Terns had been seen along the Canadian shore of Lake Erie… especially in the vicinity of… Rockhouse Point.” They suggest that Mohawk Island should continue to be checked to see if Caspian Terns nest there in the future. Sheppard (1970) refers to this large tern as “uncommon, but by no means rare in the Frontier area.” He listed April and May, and August and September as the months of most frequent occurrence but indicated that there were enough June and July records to suggest that the species may have been breeding somewhere in the western part of the region. The earliest spring arrival date for this species is 3 April 1999, when a single bird was reported at Fifty Point Conservation Area (HNCNR).

All the speculation about possible nesting of Caspian Terns on Mohawk Island came to fruition on 5 May 1996, when Laird Shutt, Craig Hebert and Kim Williams, all of Canadian Wildlife Service, Ottawa, found 40 nests on the southeast shore of the island.

The terns nested on the ridges of dead Zebra Mussel shells that had accumulated there. The researchers had visited the island a year earlier, on 6-7 May 1995, but they did not see any Caspian Terns. On 14 June 1995, they observed 20 terns on the island but no sign of nesting. Obviously, the terns immediately took to the island and have

Numbers of these terns reported on BOS April and May Counts, 1966-2006, have increased significantly (see the article by Hamilton and DeLeon elsewhere in this book). Caspian Terns are seen regularly at Mud Lake and Cement Plant Road pond in Wainfleet and at Lake Gibson in Thorold. These are probably birds from the breeding colony on Mohawk Island. The latest date is 10 October 1971, when a single bird was observed at Port Dalhousie by Harold Lancaster on the BOS October Count.

The Caspian Tern breeds on all continents except Antarctica. In North America, there are six distinct populations: the Pacific Northwest including Alaska, central Canada, west-central interior U.S., the Gulf Coast, northeastern Atlantic coast and the Great Lakes (Cuthbert and Wires 1999). In Ontario, it breeds at several sites on Lake Ontario and Lake Huron, a single site on Lake Erie, and one to two pairs have been reported breeding on Lake Superior (Brian Ratcliff pers. comm., Weseloh 2007f).

D.V. Chip Weseloh
Black Tern *Chiliondias niger*

Rare spring and fall transient (last bred here in 1982)

On the Niagara Frontier, the numbers and status of the Black Tern have fluctuated greatly over extended periods of time during the last 100 years. McIlwraith (1894) claims that this tern bred on Mohawk Island, just outside Niagara. However, the solid limestone of the island would make very unsuitable habitat; perhaps he was referring to the nearby marshy area at the mouth of the Grand River. The Black Tern was considered a rare to uncommon migrant from before the turn of the last century until at least 1910 (Beardslee and Mitchell 1965). However, by the late 1940s, and until at least the early 1960s, daily autumn numbers of 5,000 – 6,000 individuals on the upper Niagara River, both above and below the Peace Bridge, were not unusual, and the species bred at several local sites, e.g., in Round Pond, Buck Pond at the mouth of Sandy Creek, Oak Orchard Swamp in New York and the Dunnville Marshes in Ontario (Beardslee and Mitchell 1965). Since the 1960s, unfortunately, their numbers have plummeted and now, once again, the Black Tern is an uncommon species. Currently, the nearest Canadian nesting location is at Long Point.

Of the Black Tern, Sheppard (1970) comments that “it becomes abundant on the upper reaches of the Niagara every year from the latter part of July until mid-September or beyond.” He also finds it to be much less common in the spring, occurring “from the latter part of April until sometime past the middle of May.” The earliest spring arrival date for the Black Tern is 24 April 1997, when a single bird was seen at Mud Lake (H. Lancaster).
A recent tabulation of observational records of Black Terns listed in *The Prothonotary* shows the extent of the latest decline. From 1940 to 1968, the average number of Black Terns reported on the BOS May Count was 198; however, for the period 1969 to 2001 the number was 26. The average number of individuals observed and reported per year for the period 1940 to 1970 was 3,265, and for the period 1971-2000 it was 317 (Chip Weseloh unpubl. data). Something quite dramatic happened during the period 1968-1970 and for whatever reason Black Terns no longer congregated along the Niagara River near Fort Erie...or anywhere else on the River.

As for recent nesting, the Black Tern was a rare nester in Niagara and on the New York side of the Niagara River during the first Ontario and New York Breeding Bird Atlases (Dunn 1987b, Spahn 1988). The last known nesting of Black Tern in the Niagara Region occurred at Mud Lake in Port Colborne in 1982. It was not found nesting, however, anywhere in our area during the second Ontario and New York Breeding Bird Atlases (Weseloh 2007g, Mazzocchi and Muller 2008). The latest date of observation in Niagara is 1 December 1991, when a single bird was reported from Fort Erie (BOSNR).

The Black Tern breeds mostly in central northern North America, from central Oregon, Washington and British Columbia to Quebec and from northern Alberta to Colorado. There are scattered “pockets” of breeders outside that area (Dunn and Agro 1995). In Ontario, it breeds at scattered locations across most of the Great Lakes and in the Trent-Severn/Rideau Canal systems. It also breeds at a few sites in the Boreal Forest north of Lake Superior (Weseloh 2007g).

D.V. Chip Weseloh

**Common Tern *Sterna hirundo***

Spring and fall transient, uncommon summer resident

Beardslee and Mitchell (1965) refer to the Common Tern as an abundant transient visitor and a very common summer resident; they include an 1889 breeding record (Bergtold), apparently of a bird “on the Canadian shore of Lake Erie, not far from Buffalo.” McIlwrath (1894) included Gull (Mohawk) Island among its known nesting sites more than 100 years ago but gave no details. Based on comments by Eaton (1910) that “this tern formerly bred on the Canadian shore of Lake Erie, not far from Buffalo...but now is not known to nest on the Great Lakes nearer than...western Lake Erie,” there may have been a hiatus of its nesting in Niagara for nearly 30-40 years. The tern was next mentioned as nesting locally (at least 500 pairs), in 1933 on Mohawk Island, just west of the boundary of the Niagara Region (Beardslee and Mitchell 1965). Sheppard (1970) described this tern as “very common ...from April to September” and stated that it apparently “has always nested, here and there, along the north shore of Lake Erie, but only in...recent times has it formed breeding colonies on the River.” The earliest spring arrival date for the Common Tern in Niagara is 5 April 1997, when eight birds were reported from Fifty Point Conservation Area and a single bird from Niagara Falls (BOSNR).

The numbers of Common Tern nests on Mohawk Island peaked at about 1,800 in 1946 but declined to about 1,100 by 1948, to 800 in 1949 and to only about 130 nests by 1960 (Beardslee and Mitchell 1965). Common Terns began nesting as well on...
the Port Colborne breakwall in about 1945 and by 1950 there were an estimated 50 pairs (Beardslee and Mitchell 1965). These authors, as well as Sheppard (1970), discuss nesting Common Terns on Tower Island (also known as Cable-tower Island) and on Table Rock, at the lip of Niagara Falls. Terns apparently deserted these sites in 1956 and about 1970, respectively, probably as a result of competition from gulls (Sheppard 1970). Sometime prior to 1969, a second Common Tern colony developed in the Port Colborne harbour area on property owned by Canada Furnace (Algoma lands); it contained 1,250 nests in 1973 (Morris and Hunter 1976, Courtney and Blokpoel 1983), fewer than 300 nests in 1980, 43 nests in 1987 and no nests in 1990 (Canadian Wildlife Service unpubl. data). By 1990, the Port Colborne breakwall colony had reached 935 nests but declined to only 14 nests in 2007 (see the article by Morris elsewhere in this book). Extensive histories of the Common Tern in the Niagara Region are available from Courtney and Blokpoel (1983), Morris et al. (1992) and Morris (2009).

In 2007 and 2008, extensive work was done to improve nesting habitat for Common Terns in Buffalo Harbor (Lee Harper pers. comm.). Subsequently, nest numbers there increased to 1,425 and 1,721, respectively (Connie Adams pers. comm.). The latest date of observation in the region is 5 January 1966, when a single bird appeared at Fort Erie (BOSNR).

The Common Tern breeds throughout the temperate northern hemisphere in both the Old and New Worlds; it winters throughout the southern part of its breeding range and into the southern hemisphere (Nisbet 2002). In Ontario, its main nesting area is Lake Huron and the St. Lawrence River, but it also breeds in Lakes Ontario and Erie and at scattered inland sites, especially in the Trent-Severn area and north of Lake Superior and Lake of the Woods (Moore and Weseloh 2007).

D.V. Chip Weseloh
Arctic Tern *Sterna paradisaea*

Extremely rare visitor

The Arctic Tern is a relatively small, slender, avian wonder of circumpolar distribution that performs the longest regular migration of any known bird. The Arctic Tern's long journey back and forth from breeding grounds in the Arctic to wintering grounds off Antarctica requires a flight of some 38,600 km annually (Bird 2004).

The Arctic Tern is an extremely rare visitor to Niagara and has been reported on only two occasions. On 11 November 1989, Eric Blom and Wayne Klockner identified the first record of this species for Niagara as it fed over the Niagara River in Fort Erie. This exceptionally late first-basic plumaged bird was not observed after 19 November 1989 (Crins 2007a).

The second Niagara record was a definitive alternate plumaged Arctic Tern discovered on 17 August 1990 by Alec Humann at Waverley Beach in Fort Erie (Crins 2005).

The Arctic Tern breeds in the Arctic and subarctic regions of North America from Alaska and Canada south to British Columbia in the west and Massachusetts in the east. It winters along the Antarctic pack ice travelling there via the western coasts of Europe and Africa (Harrison 1988).

Kayo J. Roy

Forster’s Tern *Sterna forsteri*

Rare spring and fall transient

The Forster’s Tern is named after German naturalist-pastor Johann Reinhold Forster, who accompanied his friend Captain James Cook around the world in 1772. It is the only tern that is restricted almost entirely to North America throughout the year (McNicholl et al. 2001). The Forster’s Tern enjoys a variety of aquatic habitat such as estuaries, inlets and bays; however, it highly favours fresh and saltwater marshes. Known by many as the marsh tern, this species is rarely out of sight of land. The Forster’s Tern is widely distributed and globally secure. Data from breeding bird surveys showed a significant increase in the North American population since 1966, mostly in the 1960s and 1970s (Sauer et al. 1997).

The first record of Forster’s Tern for Niagara is of three birds found on 19 October 1936 at Frenchman’s Creek, Fort Erie, by Roy W. Sheppard (Beardslee and Mitchell 1965, Sheppard 1970). These two publications discuss observations of Forster’s Tern in Niagara prior to 1966.

During the 1966-2006 time frame of this book, the Forster’s Tern has been seen on a fairly regular basis in Niagara, albeit in small numbers. While there are very few spring reports, the species does pass through the area presumably on its way to breeding grounds. In early to mid-August the Forster’s Tern begins to make its fall appearance with a few birds beginning to pass through the region. This migration south continues into early November, however, still in only small numbers. Only two reports are known for December.

Jaeger Rocks in Fort Erie appears to be a magnet of sorts for Forster’s Terns, as this location seems to attract them with some regularity. Along the Lake Erie shoreline south from Fort Erie, Erie Beach, Windmill Point, Point Abino, Pinecrest Beach, Port Colborne and Morgan's Point have all been locations where the Forster’s Tern has been reported.
The Lake Ontario side of Niagara, the Welland Canal at Port Weller and west along the lake to Fifty Point Conservation Area are excellent locations to look for this species.

The Forster's Tern breeds along the Atlantic, Gulf and Pacific Coasts as well as in the prairies and Great Lakes regions of the US and Canada. It winters on the Atlantic Coast from southern New Jersey south to the Gulf Coast states and on the Pacific Coast from central California to Mexico (McNicholl et al. 2001).  

Kayo J. Roy

Pomarine Jaeger *Stercorarius pomarinus*

Rare visitor

In 1815, Dutch aristocrat and zoologist Coenraad J. Temminick first described the Pomarine Jaeger, the largest of the three North America jaegers. This powerful seabird of the skua family Stercorariidae derives its name from the Greek word Pomarine meaning “lid-nosed” referring to the sheath that covers the base of the bill, and from the German word jager, meaning hunter. For successful reproduction, the Pomarine Jaeger relies almost exclusively on a high concentration of Brown Lemming on their breeding grounds. In years when the lemming population is low, the species is known to leave the Arctic almost immediately. The Pomarine Jaeger, like all jaegers, terrorizes gulls, terns and other seabirds forcing them to regurgitate recently found food. They show their great agility in flight as they harass their victims.
Parasitic Jaeger *Stercorarius parasiticus*

Occasional visitor

The Parasitic Jaeger, a fierce mid-size member of the jaeger family, is a seabird in the skua group Stercorariidae. Like all jaegers, when away from nesting areas where the Brown Lemming is the primary source of food, the Parasitic Jaeger moves into a piratical behaviour of relentlessly pursuing gulls, terns and other seabirds in mid-air forcing them to surrender newly caught food. This method of stealing food is known as “kleptoparasitism” from which the first half of this bird’s name is derived. The second name comes from the German word *jager* which means hunter.

Niagara’s first documented record of Parasitic Jaeger was on 25 July 1959 when Harold Axtell and Robert Andrle found this species at Morgan’s Point near Burnaby. Other early area records of Parasitic Jaeger are well discussed in Beardslee and Mitchell (1965) and Sheppard (1970).
The following birds were observed in Niagara during the 1966 – 2006 time frame of this book.

<table>
<thead>
<tr>
<th>Year</th>
<th>Date</th>
<th>Location</th>
<th>Observers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1967</td>
<td>18 October</td>
<td>one adult, Port Weller, St. Catharines (Daniel Salisbury, Sheppard 1970, BOSNR)</td>
<td></td>
</tr>
<tr>
<td>1968</td>
<td>15, 21 and 28 September</td>
<td>eighteen, observed on three boat trips off Port Dalhousie to Niagara-on-the-Lake (Harold Axtell, Paul Benthem and others, BOSNR, Sheppard 1970)</td>
<td></td>
</tr>
<tr>
<td>1970</td>
<td>14 October</td>
<td>one, Erie Beach, Fort Erie (Robert Andrle, Richard Byron, BOSNR)</td>
<td></td>
</tr>
<tr>
<td>1972</td>
<td>19 September</td>
<td>one, Niagara Falls (Harold Axtell, BOSNR)</td>
<td></td>
</tr>
<tr>
<td>1974</td>
<td>22 September</td>
<td>five, Vineland (Arthur Schaffner, Arthur Clark, BOSNR)</td>
<td></td>
</tr>
<tr>
<td>1977</td>
<td>4 December</td>
<td>two, Niagara Falls (Harold Axtell, David Freeland and others, BOSNR)</td>
<td></td>
</tr>
<tr>
<td>1978</td>
<td>1 October</td>
<td>two, St. Catharines (Robert Andrle, David Freeland and others, BOSNR)</td>
<td></td>
</tr>
<tr>
<td>1984</td>
<td>20 September</td>
<td>one, Fort Erie (Robert Andrle, Richard Byron, BOSNR)</td>
<td></td>
</tr>
<tr>
<td>1991</td>
<td>28-29 November</td>
<td>one each day, Niagara Falls (Richard Collins, William Watson and others, BOSNR)</td>
<td></td>
</tr>
<tr>
<td>1993</td>
<td>28 September</td>
<td>one, Fort Erie (Willie D’Anna, BOSNR)</td>
<td></td>
</tr>
<tr>
<td>1996</td>
<td>8 September</td>
<td>two, Fort Erie (Jukka Jantunen, Kayo Roy)</td>
<td></td>
</tr>
<tr>
<td>1996</td>
<td>14 September</td>
<td>three, Fort Erie (Jukka Jantunen, Kayo Roy)</td>
<td></td>
</tr>
<tr>
<td>1996</td>
<td>15 September</td>
<td>one, Fort Erie (Willie D’Anna and others, BOSNR)</td>
<td></td>
</tr>
</tbody>
</table>

During the 1966-2006 time frame of this book, the Parasitic Jaeger has been present but undetected or unreported on an untold number of occasions along the Niagara shores of Lakes Ontario and Erie and even in the Niagara River. The fall of 1996 was a banner year for jaegers in Niagara, nearby Hamilton and other locations as unprecedented numbers were observed well into the fall. Hurricane Fran almost certainly added to these numbers during hurricane week (Curry 1996). Hurricane week Parasitic Jaegers were observed by many in Niagara, but other than those shown in 1996 above, most remained unreported.

The Parasitic Jaeger breeds in the Arctic tundra of western Alaska and the Aleutian Chain, in northern Canada to Hudson Bay and northern Labrador, and also in Europe and Asia. Its exact winter range is not clearly known but likely includes the southern Atlantic and Pacific oceans and off South America and Africa (Harrison 1988).

Kayo J. Roy
Long-tailed Jaeger *Stercorarius longicaudus*

Extremely rare visitor

The graceful Long-tailed Jaeger with circumpolar range is the most abundant and widely distributed jaeger in the High Arctic, and one that breeds the furthest north. This pigeon-sized seabird of the skua family Stercorariidae is the smallest of the three North American jaegers and relies heavily on the Brown Lemming as a source of food on their breeding grounds. The Long-tailed Jaeger, like all jaegers and skuas, persistently chase after gulls, terns and other seabirds in mid-air until they regurgitate any food they have just found.

There is no mention of Long-tailed Jaeger observations in either Beardslee and Mitchell (1965) or Sheppard (1970).

This species has become a rare but regular visitor over recent years to neighbouring Hamilton at the west end of Lake Ontario where most records come from the Van Wagners Beach area (Curry 2006). The species is, however, an extremely rare visitor to Niagara. The Long-tailed Jaeger has almost certainly flown east on occasion from Hamilton and passed Port Weller and Niagara-on-the-Lake unobserved, or if observed, it has regrettably remained unreported.

A strong migration of Long-tailed Jaegers occurred through the Great Lakes in mid September of 1996 (Sherony and Brock 1997), and perhaps this journey may have played a role in this species being observed at Fort Erie. It is however believed by many that the remnants of Hurricane Fran that passed over the eastern end of Lake Erie on 8 September, either knocked these jaegers down as they migrated over the area, or transplanted them to Lake Erie from off the Carolinas. While some duplication may be involved, a totally unprecedented showing of Long-tailed Jaegers made the headlines: up to 12, including several adults, were reported from the west end of Lake Ontario and the east end of Lake Erie during hurricane week (Curry 1996).

There are only three documented records of Long-tailed Jaeger for Niagara during the 1966-2006 time frame of this book. On 8 September 1996, Robert Curry, Alan Wormington and others located three Long-tailed Jaegers (one definitive alternate and two juvenals) at the mouth of the Niagara River in Fort Erie (Dobos 1998). On 14 September 1996, Richard Knapton and others observed five Long-tailed Jaegers (two definitive alternates and three light morph juvenals) at Waverley Beach, Fort Erie (Dobos 1998, BOSNR). On 27 August 2000, Kevin McLaughlin discovered two juvenal birds in Grimsby (Roy 2001).

Long-tailed Jaeger breeds in Alaska and Canada north of the Arctic Circle. It winters widely in both the Atlantic and Pacific oceans (Harrison 1988).

Kayo J. Roy

Dovekie *Alle alle*

Extremely rare visitor

The Dovekie, formerly known as Little Auk, is an extremely rare visitor to Niagara. This auk is decidedly more pelagic than any other Atlantic alcid and is alone among them in being permanently satisfied with a planktonic diet, thus able to wander at large on the high seas (Wynne-Edwards 1935). Although these black-and-white, robin-sized seabirds with no visible neck spend much of their lives in the High Arctic, they are
part three: species accounts

notoriously liable to be driven in large numbers far outside of their normal winter range by storms or high gales at sea (Murphy and Vogt 1933).

On 23 October 1988, J. Butler found a Dovekie along the shoreline of Municipal Beach on Lake Ontario at Port Weller, St. Catharines (Curry 1991). This very emaciated adult female bird survived for only a few hours and is the only Dovekie ever recorded in Niagara. The specimen (skin) is at the Royal Ontario Museum, Toronto (ROM #154509) (Curry 1991).

Incredibly, there are nine records of Dovekie for Ontario between 1924 and 1993; however, not all have been reviewed by the Ontario Bird Records Committee. For further reference and a complete summary of these Ontario records, see Di Labio (1995).

The bulk of the world population of Dovekie breeds on the coasts of Greenland (Murphy and Vogt 1933). Primarily found in the North Atlantic but more recently found in small numbers in the Beaufort, Bering and Chukchi Seas where it may also breed. It winters off Newfoundland and Nova Scotia south to Long Island (Harrison 1987). This area is the likely source of this Niagara bird.

Kayo J. Roy

Thick-billed Murre *Uria lomvia*

Historic record (1950-1951)

Formerly known as Brünnich’s Guillemot, the Thick-billed Murre was named after Danish zoologist Morten Thrane Brünnich. This abundant circumpolar seabird inhabits the northernmost reaches of the Arctic coasts and islands (Gaston and Hipfner 2000).

Beardslee and Mitchell (1965) identify numerous Niagara River historical records from the late 1800s and early 1900s where specimens (present location unknown) were collected.

In late November 1950, a very severe northeast gale caused great damage along the shores of Lake Ontario. On 25 November 1950, this storm brought a flight of some 150 Thick-billed Murres along the north and west shores of the lake and deposited 11-13 birds into the Niagara River gorge (Beardslee and Mitchell 1965, Sheppard 1970). Weakened by the storm, none of these birds survived, and most of the emaciated specimens (skins) were sent to the Royal Ontario Museum, Toronto. One specimen was given to the Buffalo Museum of Science, Buffalo, New York (BSNS # 3439), (Beardslee and Mitchell 1965, Sheppard 1970). William E. Hurlburt found a dead Thick-billed Murre at Jordan Station on 11 January 1951 (Sheppard 1970), this was clearly part of the November 1950 wreck and it was also forwarded to the Royal Ontario Museum, Toronto (ROM # 78886).

During the 1966-2006 time frame of this book, there have been no observations of this extremely rare visitor to Niagara.

The Thick-billed Murre breeds in Atlantic and Arctic Canada, Alaska and south to British Columbia and Newfoundland. The species winters at sea from the edge of open ice south to Nova Scotia and northern British Columbia. Wintering birds can also be observed off Greenland, northern Europe and in the Pacific, south to northern Japan (Gaston and Hipfner 2000).

Kayo J. Roy
**Razorbill** *Alca torda*

Extremely rare visitor

The English name for this large, elegant member of the auk family is derived from the bird’s bill and its resemblance to a sharp-edged razor (CWS, Environment Canada). Exclusively an Atlantic Ocean species, this stocky, heavy-billed bird is the closest living relative of the extinct Great Auk (Hipfner and Chapdelaine 2002).

The Razorbill is an extremely rare visitor to the Lake Ontario waters of Niagara with only three known records. The first was on 27 November 1982, when Bruce Duncan and Kevin McLaughlin observed a Razorbill at the mouth of the Niagara River off Queen’s Royal Park, Niagara-on-the-Lake (James 1983). On 2 January 1985, Harold Axtell, Paul Benham and John Black discovered a winter adult bird at the mouth of the Niagara River in Niagara-on-the-Lake as it moved out to feed in Lake Ontario (Wormington 1987).

The third sighting, on 19 November 2006, was a juvenile or first-basic Razorbill found by Norma Platt, Robert Spahn, Michael Hamilton and others in the Niagara River just off Fort Niagara in Youngstown, New York. Fortunately, unlike the first two Razorbills, this alcid remained at the mouth of the Niagara River for 50 consecutive days, affording the opportunity for hundreds of Ontario and New York State birders to observe this rare visitor. Each morning this bird, illustrated here in two photographs, began to feed on the United States side of the river near Fort Niagara, and by mid-morning it had moved well into Lake Ontario waters off Fort Mississauga in Niagara-on-the-Lake, where it remained to feed for the rest of the day. The last known date of its occurrence was 7 January 2007 (Richards 2008).

The Razorbill breeds along the coasts from western Greenland, Iceland, Norway, and northern Russia, south to Maine, northern France and southern Finland. In winter the species ranges south to South Carolina (rarely) and the Canary Islands (Godfrey 1986).

Kayo J. Roy

**Ancient Murrelet** *Synthliboramphus antiquus*

Extremely rare visitor

The Ancient Murrelet is a small seabird in the auk family from the North Pacific that is protected federally under the Species at Risk Act (SARA 2008). The species is also protected under the Migratory Birds Convention Act (1994), although native peoples are allowed to hunt the birds for subsistence purposes. Ancient Murrelets are more likely than any other alcid to be displaced inland, often by heavy storms. Records exist for most Canadian provinces and many American states.

There are two records of this open ocean species for Niagara, one historical and the second a more recent observation. On 15 November 1908, Everett P. Wheeler found a deceased adult male at Crystal Beach near Ridgeway. The specimen (wing, foot and head) is in the Royal Ontario Museum, Toronto (ROM # 39908), (Pittaway 1995).
This sighting was originally believed to be that of a Dovekie; however, in September 1910, the remains were re-examined and measured, and the identification was conclusively confirmed to be that of an Ancient Murrelet (Fleming 1912b, Beardslee and Mitchell 1965, Sheppard 1970, James 1991).

Eighty-six years later, on 13 November 1994, Willie D’Anna discovered Niagara’s second Ancient Murrelet in Lake Ontario, feeding near the tip of the east pier entrance to the Welland Canal in Port Weller, St. Catharines (Pittaway 1994). This bird moved to the tip of the west pier of the canal just off the Canadian Coast Guard facility where it remained for the rest of the day. As one would expect, this mega-rarity attracted hundreds of birders. When David McGinnis, the Canadian Coast Guard duty officer, was made aware of the rarity of the bird, he generously allowed more than 300 birders access to the tip of this private government property to observe and study this extraordinary visitor to Niagara. It was gone the next day. For a detailed account of the bird’s presence at Port Weller, St. Catharines, see D’Anna (1994).

Arguably this extremely rare visitor to Niagara must surely be the same individual that was observed for five days only 138 km away at the mouth of the Genesee River in Rochester, New York. The bird was last seen there nine days earlier on 4 November 1994 (Marcotte 1995, Andrle 1996).

Breeding for this species is known from the Aleutian Islands of Alaska eastward to the Alaskan Peninsula and then south to the Queen Charlotte Islands of British Columbia. While some of these birds winter at sea near their breeding areas, a good number disperse south to California (Harrison 1988).

*Kayo J. Roy*
Rock Pigeon *Columba livia*

Very common permanent resident (introduced)

Rock Pigeons were introduced into North America about 400 years ago by European settlers. They are now permanent residents throughout southern Ontario and are very common in Niagara. In 2003 the species name was changed from Rock Dove to Rock Pigeon by the American Ornithologists’ Union. These birds nest throughout the year, with the peak number of nests between December and April (Sandilands 2007c). According to the Ontario Nest Record Scheme data, the earliest egg date for this species in Niagara is 10 May.

*John E. Black*

White-winged Dove *Zenaida asiatica*

Extremely rare visitor

The White-winged Dove is a large, chunky, semi-tropical, gregarious pigeon that occurred historically only in the southern regions of Texas, New Mexico, Arizona and California (Schwertner et al. 2002). It has expanded well outside of this historical range and is now found in Arkansas, Oklahoma and Kansas. The White-winged Dove was introduced into Florida in the 1970s when several hundred birds were released, and breeding occurs there only within this introduced population (Conti and Forrester 1981). There are no reports of White-winged Dove in Beardslee and Mitchell (1965) or Sheppard (1970). Nor was this species reported during the 1966-2006 time frame of this book.

The White-winged Dove breeds throughout much of the southern United States as far north as Oklahoma. It winters throughout its breeding range except in California and western Arizona (Schwertner et al. 2002).

*Kayo J. Roy*

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**Post-2006 Observation**

A White-winged Dove, the first recorded for Niagara, was discovered on 21 July 2008 in the north St. Catharines residence backyard of Sue and Paul Chapman. The Chapmans initially heard this bird calling but did not recognize the call. They knew, however, that it was different from the Mourning Dove’s call. They left for vacation and three weeks later, on their return home, the vocalizing bird continued to be heard. Kayo Roy was contacted and on 12 August 2008, he and Brian Ahara observed the bird in the Chapman’s backyard crabapple tree, and the identification was confirmed. While many birders saw this rare visitor to Niagara, this individual, as shown, for the most part, remained quite secretive and was most easily observed during periods of feeding on the backyard wooden patio floor. In the fall the bird became considerably more difficult to locate and was last reported on 18 October 2008 (Richards 2009, BOSNR).
Mourning Dove \textit{Zenaida macroura}

Very common summer resident, common winter resident

A permanent resident only in the southernmost parts of Ontario, the Mourning Dove is very common in the summer in Niagara. According to the Ontario Nest Record Scheme data, the earliest egg date for this species in Niagara is 6 April.

The Mourning Dove is a common bird on the Christmas Bird Counts. While many are found throughout the winter months, additional birds arrive from farther south in the spring to swell the number of residents. This was certainly not the case in the late 1960s when Mourning Dove was a rare winter straggler and most birds arrived in the spring. It is only since 1980 that numbers in excess of 100 have begun overwintering in Niagara. This trend is not limited to Niagara. According to the atlas, in recent years Mourning Dove has been overwintering in increasing numbers in Ontario (Armstrong 2007). On the St. Catharines Christmas Bird Count of 17 December 1989, 540 Mourning Doves were counted as they came in at dusk to roost in the courtyards of Brock University in St. Catharines (JEB).

\textit{John E. Black}
Passenger Pigeon *Ectopistes migratorius*

Extinct

Named in 1766 by Linnaeus, the Passenger Pigeon was also called Wild Pigeon, Turtle Dove, Wood-Pigeon or simply Pigeon. Described by Aldo Leopold (1949) as “no mere bird” but a “biological storm,” it was once the most abundant land bird in North America (Blockstein 2002). William King, a soldier at Fort Mississauga in Niagara-on-the-Lake, reported having seen in May 1866 a “grand migration of the Passenger Pigeon.” He estimated there to be millions of pigeons in a flock that was a mile wide and 300 miles long and that took 14 hours to pass overhead (King 1866). Nonetheless, during the 19th century, the species was driven to extinction, predominantly by uncontrolled commercial hunting for food.

In 1926 staff at the Royal Ontario Museum of Zoology conducted a survey of Ontario residents who remembered having seen or having hunted Passenger Pigeons. The results of this questionnaire and other materials from early Canadian and American literature are documented in the book *The Passenger Pigeon in Ontario*, written by Margaret H. Mitchell (1935), who gained a reputation as Canada’s first internationally known woman ornithologist (Ainley 1990).

In Niagara, Mitchell documented nesting colonies in Humberstone, Niagara-on-the-Lake, Pelham, Stamford (now Niagara Falls) and Wainfleet, without giving any specific dates. She also reported on small nesting colonies between 1850 and 1870 along the Lake Erie shoreline, a nesting colony of 25 birds between 1864 and 1868 in South Lincoln, a nesting colony between 1870 and 1872 in South Pelham, and a large colony with thousands of nests in South Pelham in 1874. The birds preferred beech, oak and tamarack trees and huckleberry marsh for nesting. Mitchell identifies the year of the last Passenger Pigeon record for Niagara as 1883.

Sheppard (1970) questioned this last record and cited Beardslee and Mitchell (1965). Clark Beardslee and Harold Mitchell devoted three pages to the local history of the Passenger Pigeon. They described Regional Niagara records obtained in 1872, 1883, 1890 and 1891. The last two records are particularly interesting. On 5 September 1890, a pair of Passenger Pigeons was shot in Fort Erie by H.D. Flint, and in mid-September 1891, a young male was shot in Niagara by Ottomar Reinecke. This bird, believed to be the last Passenger Pigeon shot in Ontario, was taken at Sherkston (Snyder 1951).

The last known observation of Passenger Pigeon in Canada was recorded on 18 May 1902 at Penetanguishene, Ontario (Godfrey 1986).

Martha, thought to be the world’s last Passenger Pigeon, died on 1 September 1914 at the age of 29 in the Zoological Gardens in Cincinnati, Ohio.

Marcie L. Jacklin and Kayo J. Roy
Yellow-billed Cuckoo
Harold Stiver

First Atlas: 3 squares confirmed, 5 probable, 4 possible
Second Atlas: 3 squares confirmed, 8 probable, 3 possible
BOS April Count: Not reported
BOS May Count: Reported on 6 of 41 counts, maximum of 2 birds in 1989
BOS October Count: Reported on 1 of 40 counts, maximum of 1 bird in 1970
Niagara Christmas Bird Counts: Not reported
Yellow-billed Cuckoo
*Coccyzus americanus*

Uncommon summer resident

Yellow-billed Cuckoos are observed infrequently in the spring. It is not clear whether the few birds seen are transients or whether they are arriving in the area to nest. There are no April reports. The earliest arrival date is 15 May 1989, when two birds were found on the BOS May Count.

The Yellow-billed Cuckoo, which breeds throughout southern Ontario, is an uncommon to rare summer resident in Niagara. Seen infrequently in the summer months, this somewhat shy bird may be more common than one expects. It has been known to lay its eggs in the nests of other species, particularly the nests of the Black-billed Cuckoo (Sandilands 2007d).

The latest recorded date is 28 October 1989, when a single bird was observed at Morgan’s Point near Burnaby (BOSNR).

There are no winter records for Niagara. Yellow-billed Cuckoos winter east of the Andes from northern Venezuela to northern Argentina (Brewer et al. 2000).

*John E. Black*

Black-billed Cuckoo
*Coccyzus erythropthalmus*

Uncommon summer resident

Black-billed Cuckoos are observed infrequently in the spring. It is not clear whether the few birds found are transients or whether they are arriving in the area to nest. There are no April reports. The earliest arrival date is 6 May 1977, when a single bird was seen at the Smithville sewage ponds (BOSNR).

The Black-billed Cuckoo, which breeds throughout southern Ontario, is an uncommon summer resident in Niagara. According to the Ontario Nest Record Scheme data, the earliest egg date for this species in Niagara is 28 June. Found infrequently in the summer months, this somewhat shy bird may be more common than one expects. Both the Black-billed and Yellow-billed cuckoos prefer to eat hairy and spiny caterpillars such as Fall Webworm, Gypsy Moth and Tent Caterpillars (Sandilands 2007e).

The latest recorded date is 4 October 1970 when a single bird was observed at Rose Hill Road in Fort Erie (BOSNR). There are no winter records for Niagara. Black-billed Cuckoos winter in northwestern South America from Columbia and Venezuela (including Trinidad) to Ecuador and northern Peru (Brewer et al. 2000).

*John E. Black*
**Barn Owl Tyto alba**

Formerly a rare resident, currently an extremely rare visitor

Although the Barn Owl is one of the most widespread species of any bird, occurring worldwide on all continents except Antarctica, it is designated as Endangered in Ontario (OMNR 2007) and Canada (SARA 2008, Schedule 1). This owl’s unusual facial pattern accounts for its common name, “monkey-faced owl.” It is more nocturnal than any other North American owl species.

The first reported Barn Owl for Niagara is a bird that was shot by George Ackerman in September 1903 north of Gasport (Beardslee and Mitchell 1965). Recorded observations of this species prior to 1966 are well-documented in Beardslee and Mitchell (1965) as well as in Sheppard (1970). A number of these recent Barn Owl sightings may be attributed to the more than 200 Barn Owls that have been bred and released by the Owl Foundation in Vineland Station (Vineland) since 1974 (Kay McKeever pers. comm.).

**Known observations of Barn Owl in Niagara from 1966 to 2006.**

**1966**
- **1 January**, 2 birds in silo, Niagara-on-the-Lake (Harold Lancaster).
- **23 January**, 3 birds in silo, Niagara-on-the-Lake (Harold Lancaster).
- **3 July**, nest with young in a stone barn, Queenston (Daniel Salisbury).
- **29 July**, one at Harold Axtell residence, Fort Erie (BOSNR).
- **19 August**, one at Harold Axtell residence, Fort Erie (BOSNR).

**1967**
- **26 March**, one at Harold Axtell residence, Fort Erie (BOSNR).
- **6 June**, nest with young in a stone barn, Queenston (Daniel Salisbury).

**1968**
- **17 June**, nest with 3 young on a gate lifter, Lock 1, Welland Canal, Fort Weller, St. Catharines (John Black, Daniel Salisbury).

**1969**
- **13 March**, one flying along Beechwood Road, Thorold (Harold Lancaster).
- **22 April, 26 May and 5 June**, one each day at Lock 1, Welland Canal, Fort Weller, St. Catharines (John Black, Daniel Salisbury).
- **17 August**, nest with 2 eggs, Queenston (ONRS, P.M. Cailin).

**1970**
- **3 and 22 January**, one bird each day at Allamburg (David Rybczynski and others, BOSNR).

**1971**
- **4 January**, one in a barn, Allamburg (John Black) and again on 16 January (Roger Taylor).
- **29 July**, one female, Niagara-on-the-Lake (ROM, H. Wilson).
- **2 November**, one at Harold Axtell residence, Fort Erie (BOSNR).

**1974 – 1975**
- **31 December-2 January**, one at the Genstar Plant, Welland (Harold Lancaster, Harold Axtell, Paul Benham).

**1976**
- **20 June**, nest in a silo with 6 young, Queenston (Doug McRae).

**1977**
- **July**, nest with young, Abitibi Price, St. Catharines (NHIC, Kay McKeever).
- **20 August**, nest in a flour mill with 3 young, Thorold (Harold Lancaster, Alan J. Smith).

**1980**
- **June**, nest with 4 young in a box outside the Owl Foundation, Vineland Station (NHIC, Kay McKeever).

**1981**
- **June**, nest with 5 young in a box outside the Owl Foundation, Vineland Station (NHIC, Kay McKeever).

**1982**
- **13 March**, one, West Camboro Road, Pelham (Kay McKeever).
- **27 March**, one, adult, agitated behaviour and anxiety calls outside the Owl Foundation, Vineland Station (NHIC, Kay McKeever).

**1983**
- **18 August**, nest with young on Skyway Bridge, St. Catharines (NHIC, Mary Ellen Hebb).

**1987**
- **10 March**, flying just above the streetlights along King Street, St. Catharines (Brian Ratcliff).

**1988**
- **17 and 26 March**, one each day just outside the Owl Foundation, Vineland Station (NHIC, Kay McKeever).

**1989**
- **16 July**, nest with 5 eggs, Smithville (Jean and Blayne Farnan, Brad Clements). This nest was found abandoned on 19 September 1989.

**2001**
- **16 June**, in flight over Port Colborne (Jean and Blayne Farnan).
Kay McKeever of the Owl Foundation submits the following interesting commentary:

The bare bones of the Barn Owl propagation, outside of captivity, on the premises of The Owl Foundation began on 19 April 1980, when two unbanded owls were seen in an oak tree from the east window of the house that faces over the forested slope and marsh of the 20 Mile Creek. These two owls were seen coming to shelter on a fibreglass roof under the wooden deck of our second floor veranda. A nesting box suitable to Barn Owls had been fastened to the east wall of a garage some 50 feet up hill from the house. This box was removed from the garage wall and simply placed on the wooden deck above the owls’ shelter. This box was almost immediately occupied and egg-laying began; copulation was seen in the oak tree above the deck on 20 May. Four eggs were seen in the box on 23 May and the first hatched on 25 June. I caught the female in the box and banded her left leg.
The three young were caught on 23 July and banded on their right legs. On 19 August the three young birds were observed flying around. In 1981, two birds returned to the Owl Foundation and on 14 April were observed in the oak tree. By 19 April both were seen in the box and by 20 May, the unbanded female was observed incubating. On 23 August five young were banded and placed back into the box. The Barn Owl family used this box for all of the summer of 1981 and through the winter of 1981-1982. During the fall of 1981 and spring of 1982, litter on the ground below the box was almost 100% feathers of blackbirds that massed in the adjacent marsh. Between December 1981 and March 1982, all of the pellets below the box were of dark mice (we did not feed these wild owls). Blackbird feathers in the pellets began again in April of 1982. There was no evidence of breeding in this box in late spring of 1983 although wild barn owls were heard and seen through the spring and summer of 1983.

Currently, in Niagara, the species is an extremely rare visitor. Wild Barn Owls are still seen and heard in Niagara in the spring and summer (Kay McKeever pers. comm.). The likelihood of seeing these highly nocturnal birds is extremely small.

The Ontario Nest Record Scheme lists 29 Barn Owl nests across southern Ontario prior to 1980 (Peck and James 1983). In the past decade, the Ontario Barn Owl Recovery Team has received only a few sightings from southwestern Ontario despite the placement of nest boxes and a public awareness program.

Brian D. Ratcliff

**Eastern Screech-Owl Mergus asio**

Uncommon to common permanent resident

The Eastern Screech-Owl is an uncommon to common resident in Niagara. This species is probably under-reported in Niagara because it is nocturnal and roosts in tree cavities during the day. For many winters, Blayne Farnan has alerted the birding community to the presence of one or two screech-owls in Port Colborne sitting at the entrance to holes in trees. Results of the St. Catharines Christmas Bird Count indicate that, since 1989, screech-owls have been recorded each year (except 1992), with a maximum of 11 birds in 1994 and in 1998. There have been 133 screech-owls located on the Niagara Falls CBC since 1966 and at least one bird every year since 1986, with a maximum of 14 in 2004. The Port Colborne CBC has reported at least one owl every year since 1986 (except 2001), with a maximum of 12 birds in each of 1989, 1994 and 2003. These owls have been seen on 15 of the February-March owl prowls (1978-2006), with a maximum of 11 birds in 2004. The Owl Foundation has received more than 200 screech-owls from Niagara, among which all three colour morphs have been represented. Of these, approximately 95% were the grey morph, 5% were the red, and three individuals (less than one percent) were the brown.

The Eastern Screech-owl breeds in Mexico, the eastern United States, southern Manitoba and southern Ontario (National Geographic 2006).

Brian D. Ratcliff
First Atlas: 20 squares confirmed, 5 probable, 1 possible
Second Atlas: 18 squares confirmed, 5 probable, 1 possible
BOS April Count: Reported on 7 of 41 counts, maximum of 7 birds in 1966
BOS May Count: Reported on 19 of 41 counts, maximum of 7 birds in 1972
BOS October Count: Reported on 13 of 40 counts, maximum of 5 birds in 1967
Niagara Christmas Bird Counts: Reported on 37 of 41 counts, maximum of 23 birds on the 1993 St. Catharines CBC

Great Horned Owl *Bubo virginianus*
Uncommon permanent resident

Great Horned Owls are probably the most commonly detected owl in Niagara. They have been seen on 18 of the February-March owl prowls (1978-2006), with a maximum of three birds in 2004. They are most easily seen during late January and February when the females are already on nests. Most of the larger mature woodlots in Niagara should support a territorial pair. A Yukon study showed that there can be a significant population of under-detected silent “floaters” for this species. These individuals eke out an existence travelling between territories or along their boundaries waiting for a vacancy (James Duncan pers. comm.).

Great Horned Owls were known to nest in three woodlots in the late 1980s: at Ball’s Falls Provincial Park, off Maple Street in north Fenwick and east of Hwy 24 south of Vineland. These nests were visible from the adjacent roads and were occupied by mid-February. The arctic form of the Great Horned Owl, *B. v. wapaccuthu*, was observed by Edward Seeber near Welland on 12 January 1947 (Beardslee and Mitchell 1965). There are four subspecies of the Great Horned Owl in Ontario (Pittaway 1993), and the Seeber bird may be considered the very pale gray *B. v. scalariventris* or “Snyder’s” Great Horned Owl, which breeds in northern Ontario (Snyder 1961, James 1991).

Great Horned Owls are widely distributed in North and South America (Backhouse 2008) and are found across all of Ontario up to and including the Hudson Bay shoreline (Cadman et al. 1987). This large, powerful owl is very territorial, and many nests are already established in late winter in southern Ontario. Note that Great Horned Owls do not build their own nests but expropriate those built by other species such as the Red-tailed Hawk.

*Brian D. Ratcliff*

Snowy Owl *Bubo scandiacus*
Rare winter visitor

This large northern owl is a rare and somewhat irregular late fall or early winter visitor in Niagara. Most of the sightings have been along the Lake Ontario and Lake Erie shorelines or along the Niagara River (BOSNR). Good locations at which to see this bird include the Niagara District Airport, the International Niagara Control Works structure in Chippawa and the open fields and Algoma Steel lands around Port Colborne. The earliest fall date is for a single bird at Fort Erie on 27 October 1971 (BOSNR). Single Snowy Owls were seen on only three of the February-March owl prowls (1978-2006). The latest spring record is of a single bird on 13 May 1992 at Niagara Falls (Ridout 1992:418).

This large, daytime-hunting owl breeds in the arctic tundra area of North America, Greenland and Eurasia (Backhouse 2008). In most winters there are some reports of Snowy Owl in southern Ontario, and during years of low prey populations on the breeding grounds, there can be numerous observations. When they show up in southern urban areas they are quite conspicuous and prey on rabbits and rodents often common in urban environments. One pellet (regurgitated prey remains) contained no less than 27 meadow vole skulls! They have even been observed catching Rock Pigeons in flight. Satellite-telemetry studies of urban winter Snowy Owls document that most survive to return to the Arctic in spring (James Duncan pers. comm.).

*Brian D. Ratcliff*
SPECIES ACCOUNTS

Snowy Owl
Sam Barone
Northern Hawk-Owl

*Surnia ulula*

Extremely rare visitor

The Northern Hawk-Owl is a bird of the boreal forests of North America and Eurasia. It is an attractive, bold, diurnal owl that feeds on voles and birds. While not migratory, the Northern Hawk-Owl does irrupt south of its breeding range into southern Ontario, as do other boreal owl species during years when a scarcity of food exists in its permanent residence (James 1991).

A notable incursion of Hawk-Owls (as it was once known) to southern Ontario occurred in the fall of 1962 with ten reports noted from within the boundaries of Metropolitan Toronto (Beardslee and Mitchell 1965). Late in November 1962 (exact date unknown), E.F. Palmer discovered a Northern Hawk-Owl in his residence garden at Vineland Station (Sheppard 1970).


*Kayo J. Roy*

**Post-2006 Observation**

On 1 December 2007, Manley Baarda discovered a third Northern Hawk-Owl for Niagara. Baarda, Brian Ahara and Scott Watson were approaching the north end of Seaway Haulage Road leading to the Welland Canal east pier at Port Weller, St. Catharines, when Baarda observed the bird in a tree along the edge of the road. Many birders (John Black, Cindy Cartwright, Janice Haines, Joan Iron, Marcie Jaklin, Jeremy Knapton, Kayo Roy, Katherine Stoltz, Maggie Smiley, Ron Tozer) reached the location in time to observe this rare visitor to Niagara. The bird was seen for only the one day (Richards 2008).
Barred Owl

*Strix varia*

Extremely rare visitor

The Barred Owl was fairly common locally in the entire BOS study area (Beardslee and Mitchell 1965), but it would appear, based on other sources, that this species is extremely rare in Niagara. There are only five reliable records for Barred Owl, two from the 1950s and three from the 1970s. The first record is of a bird seen on 5 April 1954 in a row of tall cottonwoods in Roy W. Sheppard’s residential garden near the Hydro Electric Canal in Niagara Falls (Sheppard 1970). The second bird, also from the R.W. Sheppard residence, was observed on 24 September 1956 (Sheppard 1970). A single bird was reported on the BOS April Count of 8 April 1973. On the BOS May Count of 21 May 1978 a single owl was located, and on the BOS May Count of 21 May 1979 a single bird was observed.

The Barred Owl was the most commonly detected owl species during the 2006 Ontario Nocturnal Owl Survey in central and northern Ontario; most of the birds were located in central Ontario (Badzinski 2006). Widely distributed across southern Canada and the United States east of the Great Plains, the Barred Owls breeding range also extends west along the southern edge of the boreal forest and widens to include much of the west from southern Yukon to central California. Isolated populations are also found in Mexico (Backhouse 2008).

*Brian D. Ratcliff*
Great Gray Owl *Strix nebulosa*

Extremely rare visitor

There have been two reports of the Great Gray Owl in Niagara, one clearly of a wild bird and the second likely of an escaped bird. On 14 May 1979, a male owl with a broken wing was taken to the Skyway Veterinary Clinic in St. Catharines. The owl had been hit by a car in downtown St. Catharines (Kay McKeever pers. comm.). This bird was part of a large influx of Great Gray Owls that showed up in southern Ontario during the winter of 1978-1979 (Cadman et al. 1987). There is no mention in Beardslee and Mitchell (1965) or Sheppard (1970) of Great Gray Owl in Niagara.

On 14 September 2006, a severe wind storm that blew across the Niagara Region toppled a huge hickory tree at the Owl Foundation. An enclosure that housed Great Gray Owls was hit by the falling tree, causing extreme damage and allowing two owls to escape. There were two sightings of Great Gray Owl in mid-December 2006 at Short Hills Provincial Park. On 29 December 2006, one was hit and killed by a car about halfway between the Owl Foundation and Short Hills Provincial Park (Kay McKeever pers. comm.). The fate of the other owl is unknown.

It was only in 1977 that breeding of Great Gray Owls was confirmed in Ontario (Austen et al. 1994). Despite its large size, this species is a prey specialist and eats mainly small mammals such as voles and lemmings (James Duncan pers. comm.). Approximately every 3-5 years there appears to be a crash in the small mammal population within the boreal forest, sometimes resulting in a large influx of Great Gray Owls into southern Ontario.

The Great Gray Owl breeds across much of northern North America and Eurasia (Backhouse 2008).

*Brian D. Ratcliffe*
Long-eared Owl *Asio otus*

Rare permanent resident

In Niagara the rare Long-eared Owl is known in only a few locations. For some years these owls were present in the Harold Mitchell Nature Reserve near Long Beach. More recently, they have been present in the Stevensville Conservation Area. In most winters, Blayne Farnan was able to find a bird or two for the owl prowl, and they were seen on 14 of the February-March owl prowls (1978-2006), with a maximum of seven birds in 1972. Early records include two birds from Welland County in 1947 and three birds observed on 7 January 1957 at the Horticultural Experimental Station, Vineland (Sheppard 1970). The first Atlas reports confirmed nesting in three squares. Two nests with eggs were discovered in 1983 and 1985 south of St. Catharines; one nest with fledged young was discovered in 1984 near Port Colborne, and one nest with young in 1985 in the Fenwick area. Information collected for the second Atlas had breeding confirmed in the Chippawa Creek Conservation Area in 2001. A pair of birds probably bred in a coniferous woodlot on the Niagara Parkway in 2003 (JEB).

In southern Ontario, Long-eared Owls are often located in communal winter roosts of up to 75 birds in mature conifer stands (plantations) (Cadman et al. 1987). Maintaining mature conifer stands will help to ensure that this owl species will continue to breed in Niagara. Note that Long-eared Owls do not build their own nests but expropriate those built by other species such as the American Crow (James Duncan pers. comm.).

Long-eared Owls breed in woodlands across Eurasia, northwest Africa and North America (Backhouse 2008).

Brian D. Ratcliffe
Short-eared Owl *Asio flammeus*

Rare summer resident, rare winter resident

The Short-eared Owl is a rare breeding species in Niagara. It is designated a species of Special Concern in Ontario (OMNR 2007) and Canada (SARA 2008, Schedule 1). Historically they were reported as rare in the northern part of Niagara, while in the south they were regarded as almost numerous in the open sections of Welland County from Niagara Falls to the Lake Erie shoreline (Sheppard 1970). Sheppard also notes some interesting behaviour that these owls were engaged in during December 1960 and in March 1967. There were deep snow conditions in both of these years, and these two reports noted eight and ten birds respectively roosting in willow trees along Niagara Boulevard near Chippawa. These birds were described as “fishing” as they were observed taking short flights out over the water to obtain food. Jim Duncan offers an alternative explanation:

While it is possible that the owls were indeed fishing or hunting over the water for fish (barred, great horned and eastern screech are all known to hunt for fish), my money is on the likelihood that the owls were going after “short-tailed field mice” or meadow voles. These rodents are remarkable swimmers, and I have observed them diving under icy water and swimming considerable distances. They are like miniature muskrats (Jim Duncan pers. comm.).
During the first Atlas, Short-eared Owls were confirmed breeding in two squares in the Wainfleet area, and possibly in one square near Port Colborne. Results from the second Atlas indicate that a displaying bird was observed on 11 April 2001 off Garringer Road in Wainfleet. The fields where it was seen were cultivated in 2002. Short-eared Owls had been present in the winter at this site for many years before the second Atlas began, but they were not seen following the cultivation. In the summer of 2004, they were observed south of Grimsby on Spring Creek Road, and a single bird was observed at the same location in April 2005. This species has been seen on 19 of the February-March owl prowls (1978-2006), with a maximum of 20 birds in each of 1987 and 1999. Currently, wintering birds are present on Ott Road near Stevensville.

Short-eared Owls are found throughout North America, Eurasia, parts of South America and on numerous major islands (Backhouse 2008). In Ontario they are known to breed across the southern regions and also along the James Bay/Hudson Bay lowlands (Cadman et al. 2007).

Boreal Owl

**Boreal Owl Aegolius fenereus**

Occasional late fall, winter and early spring visitor

The Boreal Owl is an occasional visitor to Niagara. There have been only eight individuals sighted, and all but two are from the 1960s (BOSNR). Sheppard (1970) identifies four records. The first in Niagara was of a bird photographed on 25 November 1961 at Effingham by Norm Haultain and Grant Hawes. Hawes also reported the second sighting of this species, a bird found in St. Catharines on 16 February 1963. The third record was of a bird at the Horace Troup farm near Jordan — a single bird observed from 23-25 March 1963, which may have been the same bird first observed by Hawes. The fourth record is of a specimen (BSNS # 6148) collected at the Horace Troup farm on 19 February 1967 and given to the Buffalo Museum of Science, Buffalo, New York. A Boreal Owl was first discovered by Dan Salisbury on 22 February 1969 at the Troup farm. On 24 February, the owl was captured and it sang while sitting passively on the hands of Dan Salisbury and George Bryant. This bird was also observed on 23-25 February and 16 March 1969 by Robert Andrle, Richard Byron and Harold Axtell (BOSNR). There are two more recent reports of Boreal Owls. The Owl Foundation picked up an injured female from Lakeshore Road, St. Catharines on 13 December 2004 (Kay McKeever pers. comm.). Eric Denee and Irene Lucas observed a single bird on 16 April 2005 on Lakeshore Road near McNab Road in Niagara-on-the-Lake (BOSNR).

Sightings of Boreal Owls in southern Ontario coincide with the irruptions of Great Gray and Northern Hawk-Owls. These irruptions are thought to be associated with changes in small mammal populations on the breeding territory (D.S. Badzinski 2007b).

The Boreal Owl is a permanent resident in the northern latitudes of North America and Eurasia (Backhouse 2008). Its biology is not very well understood in Ontario. The first provincial record was not until 27 June 1919 at Kapuskasing (Austen et al. 1994).

*Brian D. Ratcliff*
Northern Saw-whet Owl *Aegolius acadicus*

Occasional summer resident, rare winter resident

The Northern Saw-whet Owl, the smallest owl found in Niagara, is a rare winter resident that has also been known to breed in the area. It has been found on a number of occasions in suburban gardens, usually in the fall but sometimes in late summer (Sheppard 1970). A number of birds likely migrate through Niagara in both fall and spring, but its small size, nocturnal habits and secretive daytime roosts probably explain why it may be under-reported. Single birds have been observed on 13 of the February-March owl prowls (1978-2006), and over the years, Blayne Farnan has usually found these owls between 19 October and 22 March. An unusual record is that of a bird that responded to a taped call along the upper Niagara River on 28 February 2004 (JEB). Most observations are from late fall and winter, and there are only three breeding records. On 20 June 1955 a juvenile was found by William Putman at the Horticultural Experimental Station at Vineland (Sheppard 1970). In July 1979, a juvenile was hit by a car on the QEW Highway and taken to the Owl Foundation (Kay McKeever pers. comm.). On 3 July 1985 a recently fledged juvenile female flew into a window near Beamsville. It was one of three chicks that had fledged from a nest cavity in a nearby maple tree (Kay McKeever pers. comm., Cadman et al. 1987). There are two other summer records. A specimen, presumably killed by an automobile, was picked up in Fort Erie on 24 June 1969 (Goodwin 1969:656). There is also a record for 18 August 1970 from Morgan’s Point near Burnaby (BOSNR).

In Ontario the Northern Saw-whet Owl is a spring and fall migrant. Large numbers have been banded at stations along the north shore of Lake Ontario (Prince Edward Point and Toronto Islands) and at Long Point on the north shore of Lake Erie.

The Northern Saw-whet Owl breeds from southern Canada to northern Mexico (National Geographic 2006).

Brian D. Ratcliffe

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Post-2006 Observation

The Northern Saw-whet Owl is a shrewd and cunning breeder with no confirmed or documented records of nesting in Niagara. No nest card has been submitted for Northern Saw-whet Owl to the Ontario Nest Records Scheme in the last 25 years during which Brad Clements has been the area compiler. On 18 April 2009, when Joseph Pierrynowski opened a nest box in his Niagara Falls backyard to clean it out, he was stunned when a Northern Saw-whet Owl exploded out of the box. Four very young owlets were observed at the bottom of the box. The date of this first known documented Niagara breeding record is incredibly early. In the BOS study area the earliest date is 2 May (Beardslee and Mitchell 1965). The four owlets all survived.

above: Northern Saw-whet Owl female /Dawn Pierrynowski
top right: Northern Saw-whet Owl male /Kayo Ray
right: Saw-whet female in Joseph Pierrynowski’s nest box /Kayo Ray
four newborn chicks and four young owlets near fledging / Dawn Pierrynowski
Note the food (mice) in each corner of the box.
Common Nighthawk *Chordeiles minor*

Spring transient, currently a rare summer resident, rare fall transient

The Common Nighthawk is designated by the Committee on the Status of Endangered Wildlife in Canada as Threatened in Canada (SARA 2008). It is observed infrequently in the spring in Niagara. It is not clear whether the few birds seen in the spring are transients or whether they are arriving in the area to nest. The earliest arrival date is 18 April 1968, when a single bird was found at Grimsby (HNCNR).

The Common Nighthawk, which breeds throughout southern Ontario, is now a rare summer resident in Niagara. Its decline in numbers has been dramatic. Sheppard (1970) says of this species: “A common summer resident of the Frontier district, arriving late in May and favouring the urban and suburban areas.” In 1970 at least one nighthawk could be heard every early summer evening hawking over south St. Catharines (JEB). During the five summers of the second Atlas, Common Nighthawks were scarce and seen by only a few individuals. The probability of observation of this species in the Carolinian region has declined by 60% between atlases (Sandilands 2007f). According to the Ontario Nest Record Scheme data, the earliest egg date for this species in Niagara is 4 July.

Fall is the most likely time to see this species because then the birds tend to fly in slightly larger flocks as they migrate through Niagara. The following examples of these larger numbers are identified in BOS Noteworthy Records: 34 and 27 birds at Rose Hill Road in Fort Erie on 29 and 30 August 1974 respectively; 60 birds at Niagara Falls on 30 August 1978; 60 birds at Niagara Falls on 29 August 1987; 13 birds at Wainfleet Township on 1 September 2001; and 47 birds at Fort Erie on 5 September 2001.

Sheppard (1970) refers to the Niagara River as a migration corridor for this species. The latest recorded fall date is 17 October 1979, when a single bird was observed at Port Colborne (BOSNR). There are no winter records of Common Nighthawk from Niagara. It winters mainly in northern and central South America (Brewer et al. 2000).

*John E. Black*

Whip-poor-will *Caprimulgus vociferus*

Rare and local summer resident

The Whip-poor-will is one of the top 20 common birds in decline as determined by the National Audubon Society (*Audubon* 2007). It is observed infrequently in the spring in Niagara. The earliest record is 14 April 1991, when a single bird was seen on the BOS April Count. There is little evidence to suggest that these birds migrate through Niagara in the spring. Given its nocturnal habits, however, one may simply not see them moving through. The Whip-poor-will, which breeds throughout southern Ontario, is a rare and local summer resident in Niagara. According to the Ontario Nest Record Scheme data, the earliest egg date for this species in Niagara is 14 June. Whip-poor-wills are residents...
of the Wainfleet Bog, where birders have been hearing and seeing them for many years. On 2 July 2001, a surprising 15 birds were heard in Wainfleet (Hoffman 2001:431). On any evening in June, if a birder were to stand on Wilson Road near the intersection with Garringer Road in Wainfleet, Whip-poor-wills would be heard calling at dusk. With luck, one will fly in and land on the road. There are 46 sightings in BOS Noteworthy Records from May to October. All but one of these sightings are from the Port Colborne and Wainfleet area. The other record is from the Humberstone Marsh in Fort Erie.

The latest fall record is for 13 October 1966, when a single bird was found at Morgan’s Point near Burnaby (BOSNR). There are no winter records for Niagara. Whip-poor-wills winter from southeastern United States and northern Mexico to Honduras (DeGraaf and Rappole 1995).

John E. Black

Chimney Swift  *Chaetura pelagica*

Uncommon spring transient, uncommon summer resident, uncommon fall transient

The Chimney Swift is designated by the Committee on the Status of Endangered Wildlife in Canada as Threatened in Canada (SARA 2008). It is observed infrequently in the spring in Niagara. The earliest date, 11 April 1998, is of two birds at Grimsby (Ridout 1998:327). The next earliest date is 17 April of the same year, when a single bird was reported at Niagara Falls (BOSNR). It is difficult to estimate a late date for spring migration, because transient Chimney Swifts cannot be readily distinguished from birds that have arrived to breed in Niagara.

Chimney Swifts, which breed throughout southern Ontario, are an uncommon summer resident in Niagara. On 28 September 1996, 600 birds were observed by Robert Curry and John Olmsted at Fort Erie (Ridout 1997:50). The latest recorded date is 26 October 1972, when a single bird was found at Crescent Beach in Fort Erie (BOSNR). On 5 October 2005, 192 swifts, presumably migrants, were observed entering an unused brick chimney on a plant across the tracks from the VIA Rail Station platform in St. Catharines (JEB).

There are no winter records for Niagara. The Chimney Swift winters in northern South America (Brewer et al. 2000).

John E. Black
Ruby-throated Hummingbird
Archilochus colubris
Spring and fall transient, uncommon summer resident

The earliest date for the spring arrival of this species is 2 May 2003, when one bird was observed at Port Weller east pier (KJR). Ruby-throated Hummingbirds were observed on the Port Weller piers from 10 May to 30 May during the Port Weller Study. They were never common on the piers during the formal count hours, the highest number being three birds on 10 May 1996. On 9 May 1996, during observations outside the count hours, 14 birds were reported. On the evening of the following day, 30 birds were found on the east pier at the north end of the island, and an additional eight birds were seen at the south end of the pond during the Port Weller Study. Spring transient abundance is unclear because it is not evident which of the small numbers of birds found outside known breeding areas in the spring are transient and which are arriving in Niagara to breed.

The Ruby-throated Hummingbird breeds throughout southern Ontario as far north as the southern boreal forest. Ontario's only regularly occurring hummingbird, it is an uncommon resident in Niagara. According to the Ontario Nest Records Scheme data, the earliest egg date for this species in Niagara is 22 June.

This species was observed on only one of the BOS October Counts, 10 October 1976, the latest fall date for this species.

There are no Niagara winter records of this species. Ruby-throated Hummingbirds winter from southern Florida to Central America (DeGraaf and Rappole 1995).

John E. Black
Rufous Hummingbird *Selasphorus rufus*

Extremely rare visitor

The Rufous Hummingbird is an extremely rare visitor to Niagara. All sightings in Ontario have been of single individuals at residential feeders. There are 16 accepted OBRC records between 1966 and 2004 (Crins 2005, Chartier 2006). The first Niagara sighting is that of a bird found on 2 September 2005 by Janice and Art Haines at their residential feeder in Niagara Falls. The bird, an immature female, was identified and banded by Allen Chartier on 4 December and was found dead on 18 December (Bain 2005, Crins 2005, Haines 2005, Chartier 2006).

The second Niagara record of Rufous Hummingbird occurred on 13 July 2006. Mary McNeil observed a different looking hummingbird at her Port Colborne residence feeders and called Jean and Blayne Farnan to come and identify the bird. It turned out to be a definitive basic male Rufous Hummingbird that was photographed on the
morning of 14 July 2006 by Kayo Roy and was not seen after the late afternoon of that date (Crins 2007a).

During fall migration, the Rufous Hummingbird has been recorded in every US state and nearly every Canadian province and is the most frequently reported vagrant hummingbird throughout eastern North America. Adult males depart the breeding grounds as early as late July, and eastern vagrants frequently overwinter in southern states. Due to their metabolism, they can survive well into early winter in northern states and southern Canada. As more homeowners leave their feeders up later into the fall season, there will undoubtedly be more records from the Niagara Region.

The Rufous Hummingbird breeds in the Pacific Northwest, north to southern Alaska and south to extreme northern California; it winters primarily in central and southern Mexico, with a small number (perhaps a few thousand) wintering on the US Gulf Coast (Calder 1993).

Allen T. Chartier

Rufous/Allen’s Hummingbird
Selasphorus sp.

Extremely rare visitor

The Rufous Hummingbird (see species account) and the closely related Allen’s Hummingbird are extremely similar in appearance. Both are in the genus Selasphorus, along with the Broad-tailed Hummingbird of the Rocky Mountains and three species in Central America. Distinguishing Rufous from Allen’s Hummingbird is one of the greatest bird identification challenges in North America. The Allen’s Hummingbird breeds in a narrow, mostly coastal strip from southern California to extreme southwestern Oregon and winters in western and southern Mexico (Mitchell 2000). Interestingly, there are numerous records of Allen’s from the southeastern United States, and even a few records from southern New England (Howell 2002, Williamson 2001). Many individuals cannot be accurately identified in the field as Rufous or Allen’s, and measurements are required of several characteristics, including widths of tail feathers, to confirm identification.

Although there have been no confirmed records of Allen’s Hummingbird from Canada, it is clearly possible for one to occur. Many female and immature Rufous/Allen’s Hummingbirds are never identified if they are not photographed extremely well, or examined and measured in-hand by a licensed hummingbird bander. As a result, these records remain as “Rufous/Allen’s” to reflect that the bird was one of these two species but not confirmed.

The OBRC and other record committees label these observations as Selasphorus sp. (Chartier 2006). Since the only other North American possibility, the Broad-tailed Hummingbird, can be easily eliminated from consideration, it makes more sense to label them as “Rufous/Allen’s”.

Editors’ Note
For more than 120 days the Rufous Hummingbird frequented a feeder at the Haines residence in Niagara Falls. During that period over 500 birders came to observe this rare visitor. The bird died on 18 December 2004. Janice Haines (2005) comments on this bird, which she named Hannah:

As winter neared, my husband and I set up a Scotch pine tree with Christmas lights on it hoping that Hannah would go into it for the night and get some warmth. Being the curious one that she had always been, within five minutes, she made the tree her new home for the night. I also noticed a Song Sparrow fly into the same tree and from that day on, the two of them slept in it together. Hannah had made her first friend. We also purchased a heating lamp to put near her feeder so the solution would not freeze up.

On the 16th of December Hannah flew off into the distance. I had never seen her do this, maybe the instinct to fly south had registered. I was hoping this was the case as the last two nights had been below freezing. The next day she was at the feeder at 7 a.m., which had been her habit since she arrived. The feedings that day were limited, as she preferred to sit on the Trumpet Vine branches closer to the ground the entire day. I saw her go into the Christmas tree just after 5 p.m. The 18th of December proved to be a bit milder than the previous few days. I proceeded to put up Hannah’s feeder early in the morning. A few people arrived to see her, but I could not find her anywhere. I was told there had been a south wind the night before and maybe she had decided to leave. That was not the case.

I found Hannah shortly before 10 a.m. perched at the top of her tree. She had died through the night even though she had tried so hard to survive.

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For more than 120 days the Rufous Hummingbird frequented a feeder at the Haines residence in Niagara Falls. During that period over 500 birders came to observe this rare visitor. The bird died on 18 December 2004. Janice Haines (2005) comments on this bird, which she named Hannah:

As winter neared, my husband and I set up a Scotch pine tree with Christmas lights on it hoping that Hannah would go into it for the night and get some warmth. Being the curious one that she had always been, within five minutes, she made the tree her new home for the night. I also noticed a Song Sparrow fly into the same tree and from that day on, the two of them slept in it together. Hannah had made her first friend. We also purchased a heating lamp to put near her feeder so the solution would not freeze up.

On the 16th of December Hannah flew off into the distance. I had never seen her do this, maybe the instinct to fly south had registered. I was hoping this was the case as the last two nights had been below freezing. The next day she was at the feeder at 7 a.m., which had been her habit since she arrived. The feedings that day were limited, as she preferred to sit on the Trumpet Vine branches closer to the ground the entire day. I saw her go into the Christmas tree just after 5 p.m. The 18th of December proved to be a bit milder than the previous few days. I proceeded to put up Hannah’s feeder early in the morning. A few people arrived to see her, but I could not find her anywhere. I was told there had been a south wind the night before and maybe she had decided to leave. That was not the case.

I found Hannah shortly before 10 a.m. perched at the top of her tree. She had died through the night even though she had tried so hard to survive.
There are seven OBRC accepted records of Rufous/Allen’s Hummingbird from Ontario (Dobos 1999). Two are from Niagara, both from the Grimsby area. One female or immature male was observed by George Meyers at Grimsby from 1 October to 4 October 1984 (Weir 1985:48), and one immature male was observed by George Meyers at Grimsby Beach from 1 October to 10 December 1990 (Weir 1991:100; Curry 1991, 2006).

Allen T. Chartier

Belted Kingfisher *Megaceryle alcyon*

Uncommon summer resident, uncommon to rare winter resident

Niagara lies at the northern limit of the Belted Kingfisher’s range, where it is regarded as a permanent resident. There are two March BOS Noteworthy Records of this species. While one or two birds are often reported throughout the winter months, it is clear that additional birds arrive in the spring to swell the number of residents here.

The Belted Kingfisher breeds from southern Ontario north to the limit of dense boreal forest (Brewer et al. 2000). It is an uncommon summer resident in Niagara, with no more than one pair in most, if not all, squares.

The kingfisher is regularly seen on the CBC counts, usually in small numbers. There are BOS Noteworthy Records of 21 sightings in December, 25 in January and 8 in February. Birds that survive into early January are often found in an area (for example, Dufferin Island in Niagara Falls) that is frozen over by the end of the month. Belted Kingfishers winter from Ontario south through much of Central America and the West Indies. Occasionally they reach northern South America (Brewer et al. 2000).

John E. Black

First Atlas: 18 squares confirmed, 5 probable, 1 possible
Second Atlas: 12 squares confirmed, 6 probable, 6 possible
BOS April Count: Reported on 41 of 41 counts, maximum of 28 birds in 1992
BOS May Count: Reported on 40 of 41 counts, maximum of 19 birds in 1989
BOS October Count: Reported on 39 of 40 counts, maximum of 15 birds in 2003
Niagara Christmas Bird Counts: Reported on 39 of 41 counts, maximum of 15 birds on the 1991 Niagara Falls CBC
Red-headed Woodpecker  
*Melanerpes erythrocephalus*

Spring and fall transient, rare and local summer resident, very rare winter straggler

The Red-headed Woodpecker is designated a species of Special Concern in Ontario (OMNR 2007) and Canada (SARA 2008, Schedule 1). It is a permanent resident over much of North America from Niagara south and breeds as far north as the northern Great Lakes (*National Geographic* 2006). This bird overwinters in small numbers, making it difficult to identify an early migrant arrival date. The earliest arrival date recorded on a count is 8 April 1984, when two birds were found on the BOS April Count. During the Port Weller Study, two birds were seen on 8 May, and single birds on 11, 14, 15 and 22 May on the Port Weller piers.

The Red-headed Woodpecker, which breeds throughout southern Ontario, is now a rare summer resident in Niagara. In the first Atlas, confirmed breeding was reported from 20 squares, but during the second Atlas from only 10 squares. The decline in numbers of this species was already in progress prior to the first Atlas. Sheppard (1970) notes: “Formerly a common and conspicuous summer resident throughout the general area, but for the past three or more decades this woodpecker has become increasingly scarce during the nesting season.” There are no recent records of eggs on nests. According to the Ontario Nest Records Scheme data, the only early egg date for this species in Niagara is from Welland County on 31 May 1895.

The latest October Count date is 16 October 1983, when two birds were noted on the BOS October Count. Six records for November appear in BOS Noteworthy Records.

The Red-headed Woodpecker is a very rare winter straggler in Niagara. It has been seen on only a small fraction of the Niagara Christmas Bird Counts and has been found less frequently in the last decade than previously. In 1966 a Red-headed Woodpecker could be found regularly in January in Paradise Grove, a forest of oak trees in Niagara-on-the-Lake. They can no longer be found there at any time of the year (JEB). There are three December records, four January records and one February record from the BOS Noteworthy Records. In recent years, one or two overwintering Red-headed Woodpeckers may be found at the feeders located at the gated entrance to Point Abino in January.

*John E. Black*

Red-bellied Woodpecker  
*Melanerpes carolinus*

Uncommon permanent resident

The Red-bellied Woodpecker, a permanent resident throughout southern Ontario, is uncommon in Niagara, which lies along the northern edge of its breeding range. The growth in the numbers of this species in the last 20 years has been remarkable. (See the article by Hamilton and DeLeon in this book for further details.)
In the first Atlas, breeding was confirmed in only one square. In the second Atlas, breeding was confirmed in 19 squares, an enormous increase. The probability of observation of this species between atlases increased by 200% in the Carolinian region (Bavrlic 2007a). According to the Ontario Nest Record Scheme data, the earliest egg date for this species in Niagara is 27 June. Sheppard (1970) noted that, aside from one record in 1891, there were no further records for the Niagara Frontier area until Harold Lancaster found a bird in Niagara-on-the-Lake on December 1962. Harold Axtell commented that on 4 June 1973 a rare Red-bellied Woodpecker appeared at Fort Erie (Goodwin 1973:865). In June 1999, three bird territories were found in Marcy’s Woods near Point Abino, and one was found on Point Abino (McCracken et al. 1999).

Still an uncommon bird on the Christmas Bird Counts, Red-bellied Woodpecker has increased noticeably in numbers over the years. From 1966 to 1982 there were only two records of single birds on the BOS CBC; subsequently the birds were seen every year except 1984, and their numbers slowly grew. A total of 125 birds were found in 2005 on the four Niagara Christmas Bird Counts.

John E. Black
Yellow-bellied Sapsucker *Sphyrapicus varius*

Uncommon spring transient, occasional summer straggler, fall transient, occasional winter straggler

The Yellow-bellied Sapsucker is a permanent resident over much of North America to the south of Niagara and breeds as far north as Hudson Bay (*National Geographic* 2006). In Niagara it is an uncommon spring transient. There are two March records from BOS Noteworthy Records, and on 30 March 1970, Harold Lancaster observed a single bird in Welland. Because the Yellow-bellied Sapsucker is a rare winter straggler, it is not clear if these records indicate arriving migrants or birds that have overwintered in Niagara. The earliest BOS April Count arrival date is 4 April 1971, when two birds were found. During the Port Weller Study, single birds were found on 1, 2, 4, 10, 15, 16 and 17 May.

Yellow-bellied Sapsuckers breed throughout much of southern Ontario. They are found north of Hamilton and in the Long Point area, but they are all but absent from Niagara. In the second Atlas, possible breeding was reported on 11 July 2002 in the Fort Erie area and 8 June 2005 in West Lincoln.

There is one record of an early fall migrant: a single bird was seen at Grimsby Beach on 25 August 1971 by George Meyers (*Curry* 2006). There is one BOS Noteworthy Record for November. A single bird was observed on 14 November 1976 at Niagara Falls.

The Yellow-bellied Sapsucker is an occasional winter straggler in Niagara, seen only 11 years on the Niagara Falls CBC and one year on the St. Catharines CBC. The BOS Noteworthy Records contains one December record, one January record and five February records. One January sighting was of a single bird found in St. Catharines on 8 January 1969 by Art Briggs Jude. The bird visited his feeder in St. Catharines for several days (JEB). Yellow-bellied Sapsuckers winter from Florida and the Gulf Coast south to western Panama and in small numbers in the West Indies (*Brewer et al.* 2000).
Downy Woodpecker *Picoides pubescens*

Common permanent resident

The Downy Woodpecker is a permanent resident throughout Southern Ontario. It is a common species in Niagara and a sighting of a few individuals of this species can be expected on almost any outing by a birder. The Downy Woodpecker is North America’s smallest woodpecker. Females forage on tree trunks and large branches, while the males forage on smaller branches and weed stems (Bavrlic 2007b).

*John E. Black*
Hairy Woodpecker *Picoides villosus*

Uncommon permanent resident

The Hairy Woodpecker is a permanent resident throughout southern Ontario. It is uncommon in Niagara and is not always observed on bird outings or counts. Abundance maps in the second Atlas show that its population is densest on the Southern Shield, well to the north of Carolinian Niagara (Bavrlic 2007c). While Hairy Woodpecker was found breeding in most squares in the second Atlas, there were very few pairs in each square.

John E. Black
American Three-toed Woodpecker

*Picoides dorsalis*

Extremely rare visitor

The American Three-toed Woodpecker, formerly known as Northern Three-toed Woodpecker, is a medium-sized bird with a large range across boreal North America. This species breeds farther north than any other woodpecker and forages in its ideal habitat of mature conifer forests containing stands of dead trees as well as burns and clear-cuts. While not wary of humans, the American Three-toed Woodpecker is difficult to see because of its quiet and inconspicuous nature.

There is only one record of this extremely rare visitor for Niagara. On 28 November 1963, Harold Axtell and Robert Andre discovered a female American Three-toed Woodpecker at Thunder Bay near Fort Erie (Beardslee and Mitchell 1965, Sheppard 1970). The bird remained in the area for more than two weeks providing many Ontario and western New York birders an opportunity to view this rare northern visitor. The bird was collected on 12 December 1963; the specimen is at the Buffalo Museum of Science, Buffalo, New York (BSNS # 5068).

The American Three-toed Woodpecker breeds throughout most of Alaska, the northern Rocky Mountains, and across Canada’s boreal regions eastward to Newfoundland and the Maritime provinces. It winters primarily throughout its breeding range with the most northerly birds moving somewhat southward, and the birds of higher elevations moving to lower levels (Leonard 2001). There is sometimes a small southward irruption in the fall to the southern Prairie provinces, northern Great Lakes, New England states and southern Ontario (Leonard 2001).

Kayo J. Roy
Black-backed Woodpecker *Picoides arcticus*

Extremely rare visitor

The Black-backed Woodpecker is a bird of the boreal forest that is superbly adapted to life after a forest fire. This species is strongly attracted to forests where there has been a recent burn, and they are known to travel long distances in search of this preferred habitat. The Black-backed Woodpecker also seeks areas recently logged or swampy forests, where they feed on the outbreaks of bark and wood-boring beetles.

Beardslee and Mitchell (1965) include a lengthy account of the early presence of Black-backed Woodpecker in the BOS study area. They also bring to the reader’s attention some detail of two small invasions or irruptions of this species to the area in 1953 and during the winter of 1956-1957.
In the early 1960s, there are three Niagara observations for Black-backed Woodpecker, all from the Harold Axtell residence in Fort Erie. The first was on 28 October 1962 (BOSNR), followed by another on 14 November 1963 when two birds were seen (Sheppard 1970), and the third on 21 November 1965 (BOSNR). There were no reports of Black-backed Woodpecker from Niagara during the 1964-1965 irruption, and this 1965 individual is the only bird of the 1965-1966 irruption that reached Niagara.

During the 1966-2006 time frame of this book, only one report of Black-backed Woodpecker exists for Niagara. On 22 December 1985 during the St. Catharines Christmas Bird Count, Richard Knapton discovered one at the Beaverdam Road woods in Thorold (Weir 1986:276). It appears that a minor irruption may have occurred in 1985, certainly the most since the 1982-1983 irruption, as 24 Black-backed Woodpeckers were reported south of their normal breeding range. In addition to this Thorold observation during the winter of 1985-1986, single birds were reported as far south as Stouffville, Stratford, and Ivy Lee (Weir 1986:276).

The Black-backed Woodpecker breeds throughout the boreal regions of Central Alaska, Canada, the northern United States Rocky Mountains and south to New England. It winters at lower levels in much of its breeding range (Dixon and Saab 2000). Southward irruptions into southern Ontario and Niagara can occur in those years when food shortages and habitat conditions warrant such action.

Kayo J. Roy

Northern Flicker *Colaptes auratus*

Common spring transient, common summer resident, fall transient, rare winter straggler

Formerly known as Common or Yellow-shafted Flicker, the Northern Flicker is a permanent resident over much of North America south of Niagara and breeds as far north as Hudson Bay (National Geographic 2006). It is a common transient in Niagara. There are five March records from BOSNoteworthy Records. Because the Northern Flicker is an uncommon winter straggler, it is not clear if these records indicate arriving migrants or birds that have overwintered in Niagara. The earliest April arrival date is 3 April 1977, when 15 birds, far more than could be expected to have overwintered here, were seen on the BOS April Count.

Kayo J. Roy
The Northern Flicker, which breeds throughout southern Ontario, is a common
summer resident in Niagara. According to the Ontario Nest Record Scheme data, the
earliest egg date for this species in Niagara is 26 June.

There are seven BOS Noteworthy Records for November.

In Niagara, the Northern Flicker is a rare winter straggler. There are fifteen
December records, seventeen January records and seven February records from the
BOS Noteworthy Records.

John E. Black

Pileated Woodpecker *Dryocopus pileatus*

Rare and local permanent resident

The Pileated Woodpecker, a permanent resident throughout southern Ontario, is rare
and local in Niagara. In the second Atlas, confirmed breeding was reported from the
vicinity of Marcy’s Woods near Point Abino. See also McCracken et al. (1999), which
finds a possible breeding bird in Marcy’s Woods, and Wood (2004), which notes a pos-
sible breeding bird at Twelve Mile Creek in Pelham.

An extremely rare bird on the Christmas Bird Counts, Pileated Woodpecker appears
in only four records: St. Catharines CBC in 1991 and Niagara Falls (New York section)
CBC in 1994, 2000 and 2006. On the morning of 1 January 1970, at the south end of
Holloway Bay Road near Point Abino, a number of birders were amazed to see a
Pileated Woodpecker fly through Marcy’s Woods. This was the first sighting in the
Marcy’s Woods area, and there have been many others there since that date, culmin-
ating in evidence of breeding in the second Atlas (JEB).

John E. Black
Pileated Woodpecker female
inset: male
Jukka Jantunen
Olive-sided Flycatcher *Contopus cooperi*

Occasional spring transient, fall transient

There has been a long-term decline in the number of Olive-sided Flycatchers in North America (Cheskey 2007a). As a consequence, this species is now designated by the Committee on the Status of Endangered Wildlife in Canada as Threatened in Canada (SARA 2008). The cause of this decline is unclear. The earliest Niagara date for this occasional spring transient is 29 April 2000, when a single bird was seen at the Beamer Memorial Conservation Area in Grimsby (HNCNR). The latest spring date is 3 June 1970, when one bird was observed on Nigh Road, Fort Erie (BOSNR).

The Olive-sided Flycatcher breeds north of Lake Ontario. There are no summer records of this species in Niagara.

There are three BOS Noteworthy Records for August, all on 19 August: single birds at Rose Hill Road in Fort Erie in 1970 and 1979, and a single bird at nearby Thunder Bay in Fort Erie in 1985. The latest recorded observation is of a single bird on 12 September 1981 in Wainfleet (BOSNR).

There are no winter records of this species in Niagara. The Olive-sided Flycatcher winters from northern South America south to Bolivia (DeGraaf and Rappole 1995).

John E. Black

Eastern Wood-Pewee *Contopus virens*

Spring and fall transient, common summer resident

The earliest spring report for this species is of a single bird seen on 3 May 1970 at Mud Lake in Port Colborne by Dan Salisbury and Harold Lancaster. The latest spring sightings occurred on 31 May of 1993, 1995 and 1996 on the Port Weller piers during the Port Weller Study. Spring transient abundance is uncertain. It is not evident which of the small numbers of birds seen outside known breeding areas in the spring are transient and which are arriving in Niagara to breed.

The Eastern Wood-Pewee breeds throughout southern Ontario and is a common summer resident in Niagara. The distinctive “pee-a-wee” of this species will almost certainly be heard in any reasonably-sized deciduous woodlot in Niagara.

The latest record from a fall count is 14 October on the 1980 and 1984 BOS October Counts. A single bird was observed at Erie Beach in Fort Erie on 2 November 1997 (Ridout 1998:54).

There are no winter records of Eastern Wood-Pewee in Niagara. This species winters mainly in northwest South America (DeGraaf and Rappole 1995). It is territorial both during migration and on its wintering areas, with both sexes using one of the breeding male’s several songs, the pewee phrase. Because of this, several indigenous peoples in Amazonia call “their” bird “pweee” (Eugene Morton pers. comm.).

John E. Black
Yellow-bellied Flycatcher *Empidonax flaviventris*

Rare spring transient, fall transient

The Yellow-bellied Flycatcher is an occasional spring transient in Niagara. The earliest arrival date is 5 May 1967, when one bird was reported at Long Beach in Wainfleet (BOSNR). The latest spring dates are 3 June 1984, when one bird was reported at Fort Erie (BOSNR), and 4 June 2002, when one bird was reported at Niagara-on-the-Lake (KJR).

The Yellow-bellied Flycatcher breeds north of Lake Ontario. There are no summer records of this species.

The BOS Noteworthy Records contain five sightings of this species in the fall. The earliest of these is of one bird seen on 12 August 1985 at Port Colborne. The latest is of one bird seen on 26 September 1968 at Morgan's Point near Burnaby.

There are no winter records of the Yellow-bellied Flycatcher in Niagara. This species winters from northeast Mexico south to Panama (DeGraaf and Rappole 1995).

John E. Black

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Acadian Flycatcher *Empidonax virescens*

Occasional spring transient, extremely rare summer resident and straggler, extremely rare fall transient

The Acadian Flycatcher is designated as Endangered in Ontario (OMNR 2007) and Canada (SARA 2008, Schedule 1). In Niagara it is an occasional spring transient. There is only one May observation from local birders at locations other than Marcy’s Woods, where this species was once known to breed. A single bird was seen on 22 May 2002 at Port Colborne (KJR). There are only five records from BOS May Counts: two birds on 17 May 1975 and single birds on 15 May 1977, 21 May 1979, 15 May 1983 and 21 May 2000. These numbers are perhaps low because migrant males do not always call in May, and identification without the call is difficult. A single bird was found in a woodlot on Kalar Road not far south of Mountain Road, Niagara Falls, on 1 June 2005 but not found a week later, when the site was revisited (JEB).

Niagara lies at the northern edge of the breeding range of the Acadian Flycatcher. It is an extremely rare summer straggler here. There are no records in the second Atlas of confirmed breeding in Niagara. Nor are there any confirmed records in the squares of Atlas Region 15 (Hamilton), immediately to the west, but six squares reported confirmed breeding in Atlas Region 5 (Long Point).

In the first Atlas, possible breeding was reported from Marcy’s Woods and probable breeding from a location near Winger. In the second Atlas, possible breeding was reported from two squares and probable breeding from one square. A single bird was found on 18 June 2001 in a woodlot at the intersection of Barrick and Minor Roads in Port Colborne. This bird was last seen on 28 June and not found after that date (JEB). A single bird was seen in the Decew gorge in Thorold (Cheskey 2003) on 11 June and 14 June of 2003 and not found subsequently.

Acadian Flycatchers were known to breed in Marcy’s Woods for some years. A calling bird was present from 1968 to 1971 but was not observed in 1976 (JEB). A bird was present in 1998 but not in 1999 (McCracken et al. 1999).
According to the Natural Heritage Information Centre database, birds were encountered in Marcy's Woods in the following years: in 1970 (observed), in 1972 (one nest), in 1974 (two nests), in 1975 (observed) and in 1984 (calls heard). A pair was also observed near Winger in 1983.

There is only one fall record for this species — a single bird observed on 16 August 1971 at Abino Hills in Fort Erie (BOSNR).

During winter, as do all the Empidonax flycatchers, both sexes defend territories in the understory of tropical forest using a species-distinctive call note, a sibilant “wheezt” (Eugene Morton pers. comm.). There are no winter records of this species in Niagara. The Acadian Flycatcher winters from Costa Rica south to western Colombia and northwest Venezuela (DeGraaf and Rappole 1995).

John E. Black

Alder Flycatcher
Empidonax alnorum
Spring and fall transient, uncommon summer resident

Formerly known as Traill’s Flycatcher, this species was seen on four of 41 BOS May Counts: two birds were reported on 21 May 1995, and single birds were reported on 17 May 1987 (the earliest recorded spring date for this species), 21 May 1989 and 20 May 2000. The abundance of the Alder Flycatcher as a spring transient is difficult to determine. In the early spring, when the males are not calling, many birders cannot distinguish this species from the very similar Willow Flycatcher. A number of Alder or Willow Flycatchers were seen, but not distinguished, between 14 May and 31 May on the Port Weller piers during the Port Weller Study. See the discussion in Curry (2006) for more on the distinction between Willow and Alder Flycatchers.

The Alder Flycatcher breeds throughout southern Ontario and is an uncommon and somewhat local summer resident in Niagara. An easy location for viewing these birds is the Wainfleet Bog. A trail begins at the north end of Erie Peat Road in Wainfleet. About 0.5 km along this trail, a well-marked path branches to the west. It is in this area that the birds are frequently located. They can also be found in the vicinity of the intersection of Wilson Road and Garringer Road in Wainfleet. In both locations, Willow as well as Alder Flycatchers can be heard, a juxtaposition that offers an excellent opportunity to learn the difference between the two calls of these two very similar species.

A single bird, identified as Traill’s Flycatcher, was observed at Morgan’s Point near Burnaby on 24 August 1971 by Dan Salisbury. There are no other fall records.

There are no winter records of Alder Flycatcher for Niagara. This species winters from northwest Colombia south to Argentina (DeGraaf and Rappole 1995).

John E. Black
PART THREE: SPECIES ACCOUNTS

Willow Flycatcher
Harold Stiver

Least Flycatcher
Harold Stiver
**Willow Flycatcher* Empidonax traillii**

Spring and fall transient, uncommon summer resident

The earliest record of the Willow Flycatcher, formerly known as Traill’s Flycatcher, is of one calling bird on 10 May 2005 at Mud Lake in Port Colborne (KJR). On 16 May 1993, a calling Willow Flycatcher was identified on the Port Weller east pier and it remained there until 31 May. A second bird was heard calling from 17 May until 31 May. These were, presumably, territorial birds. The abundance of the Willow Flycatcher as a spring transient is difficult to determine. In the early spring, when the males are often not calling, it is very difficult to distinguish this species from the very similar Alder Flycatcher. A number of Alder or Willow Flycatchers were seen, but not distinguished, between 14 May and 31 May on the Port Weller piers during the Port Weller Study. See the discussion in Curry (2006) for more on the distinction between Willow and Alder Flycatchers.

The Willow Flycatcher, which breeds throughout southern Ontario, is an uncommon summer resident in Niagara. According to the Ontario Nest Records Scheme data, the earliest egg date for this species in Niagara is 22 June.

There is only one fall record, 7 September 1986, when a single bird was seen at the Grimsby sewage ponds (HNCNR).

There are no winter records of the Willow Flycatcher in Niagara. This species winters from southern Mexico to northern Columbia (DeGraaf and Rappole 1995).

*John E. Black*

**Least Flycatcher* Empidonax minimus**

Uncommon spring transient, uncommon summer resident, fall transient

The earliest record of the Least Flycatcher is of one calling bird on 30 April 1989, when a single bird was seen at Fort Erie (BOSNR). The earliest observation of this species during the Port Weller Study was on 8 May 1993, when three birds were seen. The last obvious migrants were three birds on 28 May 1993 and two birds on 28 May 1995. Single birds seen until 31 May on the Port Weller piers during the Port Weller Study could have remained during the summer.

The Least Flycatcher, which breeds throughout southern Ontario, is an uncommon summer resident in Niagara. From local birders there are four September records of single birds: three at Mud Lake in Port Colborne and one in Wainfleet Bog. There are two October records: a single bird was reported from Crescent Beach in Fort Erie on 9 October 1997 (BOSNR), and one bird was observed by Harold Lancaster at Morgan’s Point near Burnaby on 10 October 1966.

There are no winter records of this flycatcher in Niagara. This species winters from eastern and southern Mexico to Panama (DeGraaf and Rappole 1995). If one visits the Mayan ruin Coba in Mexico’s Yucatan Peninsula during winter, both Least and Yellow-bellied Flycatchers are common, defending territories along the walkway into the site in open, bushy habitat with scattered small trees (Eugene Morton pers. comm.).

Banding and Recovery Data: A Least Flycatcher, banded at Long Point on 17 August 1982, was encountered on 18 September 1982 in Mexico.

*John E. Black*
Eastern Phoebe *Sayornis phoebe*

Spring and fall transient, common summer resident, extremely rare winter straggler

The earliest date for Eastern Phoebe is 14 March 1982, when a single bird was seen at the Beamer Memorial Conservation Area in Grimsby (HNCNR). The numbers of Eastern Phoebes observed on the BOS April Count have risen noticeably since 1966. Spring transient abundance is uncertain. It is not evident which of the small numbers of birds seen outside known breeding areas in the spring are transient and which are arriving in Niagara to breed.

The Eastern Phoebe, which breeds throughout southern Ontario, is a common summer resident in Niagara. According to the Ontario Nest Records Scheme data, the earliest egg date for this species in Niagara is 21 May. The second Atlas figures would appear to indicate a substantial increase in the confirmed breeding population of the Eastern Phoebe in Niagara during the last 20 years. This is consistent with the overall figures for Ontario. M.A. McLaren (2007a) indicates a significant increase (44%) in the probability of observation of this species in the Carolinian region between atlases.

The latest October record is of a single bird seen on 26-28 October 1979 at Fort Erie (BOSNR). There are three November records of single birds: one on 2 November 1969 at Welland (Harold Lancaster), one on 13 November 1967 at Queenston (BOSNR) and one on 28 November 1967 at Rose Hill Road in Fort Erie (BOSNR).

There are two winter records of single birds in Niagara: one on 20 December 1992 from the St Catharines Christmas Bird Count and the other on 29 December 2001 from the Niagara Falls Christmas Bird Count (New York State). This species winters from the southeast United States to southern Mexico (DeGraaf and Rappole 1995).

*John E. Black*
Great-crested Flycatcher *Myiarchus crinitus*

Spring and fall transient, common summer resident

The earliest spring sighting of this species occurred on 27 April 1999, when a single bird was observed in Marcy's Woods near Point Abino (JEB). The latest date during the Port Weller Study was 21 May 1993, when one bird was seen on the Port Weller piers. Spring transient abundance is unclear. It is not evident which of the small numbers of birds seen outside known breeding areas in the spring are transient and which are arriving in Niagara to breed.

The Great-crested Flycatcher, which breeds throughout southern Ontario, is a common summer resident in Niagara. A Great-crested Flycatcher can be heard in almost any reasonably-sized deciduous woodlot in Niagara. They are the only cavity-nesting flycatchers found in eastern North America (Peck and James 1987). According to the Ontario Nest Records Scheme data, the earliest egg date for this species in Niagara is 16 June.

There is only one September record by local birders, that of a single bird seen by Harold Lancaster in Welland on 2 September 1977. This species was observed on only one of the 40 BOS October Counts, a single bird on 13 October 1968, which is also the latest recorded date for the species in Niagara.

There are no winter records of the Great-crested Flycatcher in Niagara. These flycatchers winter in central and southern Florida and from southeastern Mexico to northern Columbia and Venezuela (DeGraaf and Rappole 1995).

*John E. Black*
Western Kingbird *Tyrannus verticalis*

Extremely rare visitor

The Western Kingbird is widespread and common in western North America. It is easily found in the open country around farms, ranches, and other areas where a steady diet of insects is available. Over the last decade, its breeding range has been expanding eastward, contributing no doubt to the fact that this rarity is becoming a regular visitor to many areas of eastern North America. The first Niagara record of Western Kingbird is of a bird observed by Richard Brownstein on 16 September 1964 in Canborough (BOSNR).

This species is an extremely rare visitor to Niagara, with only two reported observations over the 41-year period 1966-2006. Rachel and Harold Axtell discovered a Western Kingbird in Wainfleet on 28 August 1972 (BOSNR), and David Freeland identified one in Beamsville on 24 August 1985 (BOSNR, Wormington 1987, Curry 2006).

The Western Kingbird breeds from southeastern British Columbia eastward to central Minnesota and southward to southern Texas and Mexico. It winters in southern Mexico and western Central America. Small numbers also winter in southern Florida (Gamble and Bergin 1996).

Kayo J. Roy

**Post-2006 Observation**

On 10 September 2007, Brian Ahara discovered a Western Kingbird at the tip of the Port Weller east pier in St. Catharines (BOSNR, Richards 2008). John Black, James Pawlicki, Kayo Roy and David Sked were among the few lucky birders who arrived in time to see this one-day visitor to Niagara from the American west. The excellent photographs taken by James Pawlicki enhanced the documentation of this bird.

Eastern Kingbird *Tyrannus tyrannus*

Spring and fall transient, common summer resident

The earliest spring date for this species is 29 April 1991, when a single bird was seen at the Glendale sewage ponds in Niagara-on-the-Lake (JEB). On 31 May Eastern Kingbirds were still present on the Port Weller piers during all years of the Port Weller Study. Spring transient abundance is uncertain. It is not evident which of the small numbers of birds seen outside known breeding areas in the spring are transient and which are arriving in Niagara to breed.

The Eastern Kingbird breeds throughout southern Ontario and is a common summer resident in Niagara. According to the Ontario Nest Records Scheme data, the earliest egg date for this species in Niagara is 10 June. Local birders provide only three September records: two birds on 8 September 1968 at St. Davids (Dan Salisbury), one bird on 14 September 1968 on Morgan’s Point near Burnaby (Dan Salisbury) and two birds on 4 September 1978 in Wainfleet (Harold Lancaster). The Eastern Kingbird was observed on only one of the 40 BOS October Counts, a single bird on 12 October 1997, the latest recorded fall date. While on a birding trip in Peru on 23 October 2005, the author traveled by motorized canoe along the Rio Madre de Dios. A highlight of the trip was the observation of flocks of hundreds of Eastern Kingbirds, which spend their winter months on this Amazonian river.

There are no winter records of Eastern Kingbird for Niagara. This species winters from Central America south to Bolivia (DeGraaf and Rappole 1995).

John E. Black
Eastern Kingbird
Raymond Barlow

Western Kingbird
Harold Stiver
Loggerhead Shrike _Lanius ludovicianus_
Occasional transient (before the last sighting in 1990; bred prior to 1966)

The Loggerhead Shrike is the only member of the shrike family endemic to North America. The related Northern Shrike occurs north of the Loggerhead's range but also in the Palearctic. The species is facing extirpation in Canada (Pruitt 2000) and is assessed as Endangered in Canada (Sara 2008, Schedule 1). The Loggerhead Shrike is also designated as an Endangered Species in the Province of Ontario’s Endangered Species Act of 2008 (Williams and Steiner 2008).

The first record of Loggerhead Shrike for Niagara was that of a nest with six eggs found in 1906 in Fort Erie (Beardslee and Mitchell 1965). That publication and Shepard (1970) detail the known observations prior to 1966.

The Loggerhead Shrike is an occasional transient in Niagara. The species was typically seen in open countryside from April to September, with some birds remaining into the winter months.

The Loggerhead Shrike breeds entirely in the United States, western Canada, southeastern Ontario and southern Quebec (Lefranc 1997). In Ontario, breeding occurs consistently only on and around the Napanee and Carden Plains (Chabot 2007). Northern populations are migratory, wintering in the southern United States and Mexico (Lefranc 1997).

### The following birds were observed in Niagara during the 1966 – 2006 time frame of this book.

<table>
<thead>
<tr>
<th>Year</th>
<th>Date</th>
<th>Location</th>
<th>Observer(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1966</td>
<td>17 April</td>
<td>Port Weller, St. Catharines</td>
<td>Daniel Salisbury</td>
</tr>
<tr>
<td></td>
<td>7 July</td>
<td>Port Colborne, Harold Axtell</td>
<td>BOSNR</td>
</tr>
<tr>
<td></td>
<td>14 - 26 August</td>
<td>one, Harold Axtell residence, Fort Erie</td>
<td>BOSNR</td>
</tr>
<tr>
<td>1967</td>
<td>26 March</td>
<td>one, Morgan’s Point near Burnaby</td>
<td>Harold Lancaster</td>
</tr>
<tr>
<td>1968</td>
<td>18 February</td>
<td>one, Harold Axtell residence, Fort Erie</td>
<td>BOSNR</td>
</tr>
<tr>
<td></td>
<td>28 March</td>
<td>one, Port Weller, St. Catharines</td>
<td>Daniel Salisbury</td>
</tr>
<tr>
<td></td>
<td>26 May</td>
<td>one, Niagara Falls</td>
<td>Harold Lancaster</td>
</tr>
<tr>
<td>1969</td>
<td>24 March</td>
<td>one, Lock 6, Welland Canal, St. Catharines</td>
<td>Daniel Salisbury</td>
</tr>
<tr>
<td></td>
<td>18 May</td>
<td>one, Fort Erie</td>
<td>Harold Mitchell and others</td>
</tr>
<tr>
<td></td>
<td>19 June</td>
<td>one, St. Ann’s</td>
<td>Harold Lancaster</td>
</tr>
<tr>
<td>1970</td>
<td>4 August</td>
<td>one, Long Beach, Wainfleet</td>
<td>Rachel and Harold Axtell, BOSNR</td>
</tr>
<tr>
<td></td>
<td>12 August</td>
<td>one, Ridgeway</td>
<td>Rachel and Harold Axtell, BOSNR</td>
</tr>
<tr>
<td>1975</td>
<td>5 May</td>
<td>one, Welland</td>
<td>Harold Lancaster</td>
</tr>
<tr>
<td>1978</td>
<td>2 April</td>
<td>one, Port Robinson</td>
<td>Harold Lancaster</td>
</tr>
<tr>
<td>1981</td>
<td>26 December</td>
<td>one, on the Peninsula Field Naturalists informal Christmas Bird Count</td>
<td></td>
</tr>
<tr>
<td>1985</td>
<td>31 August</td>
<td>one, Beamsville</td>
<td>Willie D’Anna and others, BOSNR</td>
</tr>
<tr>
<td>1988</td>
<td>11 September</td>
<td>one, Wainfleet</td>
<td>Michael Galas, William Watson and others, BOSNR</td>
</tr>
<tr>
<td>1990</td>
<td>2 July</td>
<td>one, Point Abino</td>
<td>Alec Humann, BOSNR</td>
</tr>
</tbody>
</table>
The breeding range has undergone considerable change; shrike distribution and numbers have steadily decreased in the northeast during the last 100 years. This decline has been attributed to changing agricultural practices leading to loss of suitable pasture habitat for breeding (Graber et al. 1973). Shrike nests were observed in Niagara in Lincoln County in 1937 and 1954 and in Welland County in 1906 and 1925 (Peck and James 1987, Ontario Nest Records Scheme). However, breeding shrikes have been virtually absent from the northeastern United States since the 1970s (Yosef 1996). A 2008 estimate suggests that there are currently fewer than 40 known breeding pairs across Canada (Ken De Smet, Wildlife Preservation Canada unpubl. data). No Loggerhead Shrikes have been seen in Niagara since 1990 (BOSNR). In Ontario, spring records in Niagara were most likely passage migrants. Winter records may represent the occasional wintering individual or unusually late migrant.

Daniel R. Kozlovic

**Northern Shrike** *Lanius excubitor*

Rare spring, fall and winter resident

The Northern Shrike is a rare but regular winter resident in Niagara; it is usually observed singly or in very small numbers from late October to late March, with the occasional bird lingering into April. Spring records include 10 sightings in March (BOSNR). The latest BOS April Count record for Niagara was on 14 April 1996. A late bird was seen at Grimsby on 14 April 1982 (Weir 1982:849). The species was first noted in late fall at Fort Erie on 20 October 1981; there are seven additional records for October (BOSNR). Individuals were noted throughout November (14 records, BOSNR) and December (22 records, BOSNR). Shrike invasions in Niagara occurred during the winters of 1995-1996 and 1999-2000, when 36 and 20 birds respectively were recorded on Niagara CBCs. The 1995-1996 data indicate a substantial peak in numbers, even when the data are corrected for observer effort. A similar peak in numbers occurred on Niagara CBCs in 1970-1971, when 11 birds were seen that winter. Observations of single birds were made regularly through January and February. Three birds were observed on 2 January 1970 at Fort Erie (BOSNR).

Nine Northern Shrike invasions were observed during the winters of 1934-1935 through to 1961-1962 (Beardslee and Mitchell 1965). The more recent invasions into Niagara were part of larger, widespread irruptions of the population (Petersen and Davis 1997, Hess 2000). Such irruptions may involve a large proportion of immature individuals that tend to disperse farther than adults (Cade and Atkinson 2002). North American populations of this shrike appear to be either stable or in slight decline (Cade and Atkinson 2002). Population trends are difficult to ascertain given the sparse and irregular distribution of the species and the large population fluctuations.

This Holarctic species breeds along the taiga belt of the northern boreal forests; in North America, its range extends from Alaska to the Labrador Peninsula (Lefranc 1997). In Ontario, the species breeds along the Hudson and James Bay lowlands, south to the Moose River (Sutherland 2007d). Most Northern Shrikes in North America are migratory, spending the winter months in southern Canada and the northern United States (Lefranc 1997). In Ontario, the species winters south from Lake of the Woods east to North Bay. The southern limit of the winter range in the United States may experience both cyclic and irregular invasions of the species (Cade and Atkinson 2002).

Daniel R. Kozlovic
White-eyed Vireo *Vireo griseus*

Occasional spring straggler, extremely rare summer resident, extremely rare fall transient

The White-eyed Vireo is an occasional spring straggler in Niagara. The earliest sightings occurred on 29-30 April 1979, when one bird was seen at Mud Lake in Port Colborne (JEB), and 29 April 1979, when a single bird was recorded at Erie Beach in Fort Erie (BOSNR). The latest date of a spring sighting is 18 May 1995, when a single bird was reported on the Port Weller west pier during the Port Weller Study. There are only six additional spring records from Niagara, one from 2004 and the others prior to 1995.

Niagara lies just beyond the currently known northern edge of the breeding range for White-eyed Vireo. There are no reports of confirmed breeding in Niagara in recent years. Nor are there cases of confirmed breeding in Atlas Region 15 (Hamilton), immediately to the west of Niagara, but there was a confirmed case of breeding in one square in Atlas Region 5 (Long Point) in 2001. The Natural Heritage Information Centre database contains four records: the first on 17 June 1982 (location unknown), the second on 17 and 28 June 1982 on the abandoned Welland Canal, the third on 16 June 1984 in Wainfleet Bog of a calling bird and the fourth on 1 July 1984 of a pair of birds at the same location. (These would seem to be the birds reported in the first Atlas.) The bog site was revisited in 1985 but no birds were seen, and again on 2 July 1990, when bird calls were heard, and on 4 July 1990, when no vireos were seen or heard. In the Wainfleet Bog, on a trail that begins about 1 km north of the north end of Biedermann Road, a bird was heard calling on 14, 21 and 28 June 1992 and again on 14 and 27 June 1993, but no calls were heard on 20 June 1994 (JEB). Sheppard (1970) noted that "a nest with one egg was found by Ottomar Reinecke at Sherkston, Fort Erie in 1890, the only confirmed nesting he [Sheppard] was aware of." There is also a historical record from Niagara Falls described in Beardslee and Mitchell (1965), which may be in error (James 2007a).

There is a single fall record of this species: On 21 September 1985 a single bird was observed at the Grimsby sewage ponds (Natural Heritage Information Centre).

There are no winter records of White-eyed Vireo for Niagara. This species winters from the southern United States south to Honduras (DeGraaf and Rappole 1995).

*John E. Black*

Bell’s Vireo *Vireo bellii*

Extremely rare visitor

Named by John James Audubon after his travelling companion John Graham Bell, the Bell’s Vireo, a bird of the central and southwestern United States, is an extremely rare visitor to Niagara. There has been a significant decline for many years in the Bell’s Vireo population, likely owing to habitat destruction and cowbird parasitism (Brown 1993).

There is only one known observation of this species for Niagara. On 18 October 1994, Rob Dobos identified a Bell’s Vireo on Kelson Road in the Niagara portion of
Fifty Point Conservation Area (Dobos 1996, Curry 2006). The Ontario Bird Records Committee (OBRC) has accepted only nine records of Bell's Vireo for all of Ontario (Crins 2007a), and this observation represents the only OBRC-accepted fall record for the province (Curry 2006).

The species is known to breed in North Dakota, Iowa, Indiana and south to southern California and Nevada, and west to Arkansas and Mexico. The Bell's Vireo winters in Mexico (Brown 1993).

Kayo J. Roy

Yellow-throated Vireo

\textit{Vireo flavifrons}

Rare spring and fall transient, rare and local summer resident

The earliest sighting for this species occurred on 5 May 1985 when a single bird was observed at Malcolmson Eco-Park in St. Catharines (JEB). Yellow-throated Vireos were found on 23 BOS May Counts, the latest count dates being 19 May in 1972, 1978, 1979 and 1989. Observations by local birders extend into early June, but it is not clear if these are breeding or transient birds.

The Yellow-throated Vireo, which breeds throughout southern Ontario, is a rare and local summer resident in Niagara. There are five mid-to late-June records of this species in non-atlas years. At least one of these, a single bird found on 16 June 1999 at Point Abino (McCracken et al. 1999), may have been nesting. Sheppard (1970) stated that this bird was not breeding in Niagara.

The earliest fall date is 24 August 1971 when a single bird was observed at Morgan’s Point near Burnaby by Dan Salisbury. There are six additional records from local birders in August and September. Only one October record exists for this species, that of a single bird reported on 13 October 1974 on the BOS October Count.

There are no winter records of Yellow-throated Vireo for Niagara. It winters from Mexico south to French Guiana (DeGraaf and Rappole 1995).

John E. Black
Blue-headed Vireo *Vireo solitarius*

Uncommon spring transient, extremely rare summer resident, fall transient

Formerly known as Solitary Vireo, the Blue-headed Vireo is an uncommon spring transient in Niagara. The earliest recorded date is that of a single bird on 19 April 2005 at the Beamer Memorial Conservation Area in Grimsby (KJR). The latest spring record for this species is an observation by Dan Salisbury on 30 May 1969 at Morgan's Point.

The Blue-headed Vireo breeds to the north of Lake Ontario and to the south of Lake Erie. Presently, Niagara seems to be unsuitable for these birds. Sheppard (1970) suggested that this species could possibly have been breeding in Niagara. There is one record, from the second Atlas, of confirmed breeding in a pine woodlot north of Morgan's Point. There is only one additional summer record, that of a single bird found on 11 June 1966 at Long Beach woods (BOSNR).

The earliest fall date is 8 August 1978 when a single bird was observed at Cedar Bay in Gasline (BOSNR). The latest October date of a sighting is 31 October 1982 when one bird was found at Queenston (BOSNR). There is a record for 16 November 1980 of one bird found at Niagara-on-the-Lake (BOSNR).

There are no winter records of Blue-headed Vireo for Niagara. This species winters from the Gulf States south to Central America (DeGraaf and Rappole 1995).

*John E. Black*

Warbling Vireo *Vireo gilvus*

Common spring transient, common summer resident, fall transient

The Warbling Vireo is a common spring transient in Niagara. The earliest spring sightings are of single birds on 28 April 1974 at Mud Lake in Port Colborne (Harold Lancaster) and 28 April 1986 on the Brock University escarpment trails in St. Catharines (JEB). Warbling Vireo was present on the Port Weller piers on almost all days during the Port Weller Study. It is difficult to determine a late date of migration since transients cannot easily be distinguished from summering birds.

The Warbling Vireo breeds throughout southern Ontario and is a common summer resident in Niagara. According to the Ontario Nest Records Scheme data, the earliest egg date for this species in Niagara is 23 May.

There are two late September records of single birds from local birders, both on 28 September: one in 1969 on Kraft Road, Fort Erie (Dan Salisbury) and the other in 1974 at Mud Lake (Harold Lancaster). The only October record is of a single bird observed on 10 October 1971 on the BOS October Count.

There are no November or winter records of Warbling Vireo for Niagara. This species winters from Mexico south into South America (DeGraaf and Rappole 1995).

*John E. Black*
Warbling Vireo
Raymond Barlow

Blue-headed Vireo
Brandon Holden
Philadelphia Vireo *Vireo philadelphicus*

Rare to uncommon spring transient, fall transient

The earliest recorded sighting of this species is of a single bird in Malcolmson Eco-Park in St. Catharines on 5 May 1985 (JEB). There are 38 records from local birders and from the BOS between May and early June. The latest date of a sighting was 3 June 1984 when a single bird was found at Fort Erie (BOSNR) and 3 June 1968 when two birds were seen at Port Weller by Dan Salisbury.

The Philadelphia Vireo breeds north of Lake Ontario. There are no Niagara summer records. Roger Tory Peterson (1963), commenting on the song, which resembles that of the Red-eyed Vireo, quoted the nature writer Bradford Torrey who wrote “It looks like one vireo and sings like another.”

The earliest fall date is 7 August 1994 when a single bird was observed by Robert Curry at Fort Erie (KJR). There are 25 records from local birders and the BOS between August and October. Most of these are in September. The latest fall record is of a single bird seen on 13 October 2002 during the BOS October Count.

There are no winter records of Philadelphia Vireo for Niagara. This species winters from Central America to extreme northwestern Columbia (DeGraaf and Rappole 1995).

*John E. Black*
Red-eyed Vireo *Vireo olivaceus*

Spring transient, common summer resident, fall transient

The earliest recorded spring date of a sighting for this species is 29 April 1990, when a single bird was seen in Malcolmson Eco-Park in St. Catharines (JEB). Small numbers (fewer than six) of Red-eyed Vireos were found on the Port Weller piers during the Port Weller Study from 17 May to 31 May. They probably breed on the piers. It is not clear how to assign a spring transient abundance to this species, as it is difficult to separate transient Red-eyed Vireos from the birds arriving to breed in the area.

The Red-eyed Vireo, which breeds throughout southern Ontario, is a common summer resident in Niagara. According to the Ontario Nest Records Scheme data, the earliest egg date for this species in Niagara is 2 July. A Red-eyed Vireo will almost certainly be heard in any reasonably-sized deciduous woodlot in Niagara. Estimates based on point count data from the second Atlas indicate that about nine million Red-eyed Vireos reside in Ontario in the summer months (James 2007b). This makes them one of the most abundant summer birds in the province.

The latest fall dates are 18 October 1970, when a single bird was found at Rose Hill Road in Fort Erie (BOSNR), and 11 November 1984, when a single bird was reported from Niagara-on-the-Lake (Weir 1985:49).

There are no winter records of Red-eyed Vireo for Niagara. This species winters in the northern three-quarters of South America (DeGraaf and Rappole 1995).

*John E. Black*
**Blue Jay**

*Cyanocitta cristata*

Spring and fall transient, very common permanent resident

The Blue Jay is a common permanent resident throughout southern Ontario. Nevertheless, small numbers of transient Blue Jays can be seen moving along the Lake Ontario shoreline in the spring (see the article in this book on the Port Weller Study). They are presumably migrating through Niagara. It is difficult to estimate the abundance of spring transients because they cannot be readily distinguished from birds arriving to breed in the area. According to the Ontario Nest Record Scheme data, the earliest egg date for this species in Niagara is 22 May.

A dead Blue Jay turned over to Niagara Public Health Department on 11 September 2001 was the first Niagara bird to test positive for the West Nile Virus (West Nile Virus Summary Report 2001-2004, 2005, 2006). Of the 78 Blue Jays collected for testing by the Niagara Region Public Health Department between 2002 and 2006, two were found to be positive (André Laflamme pers. comm.). By the end of 2005, there were 27 confirmed human cases of West Nile Virus in Niagara, but no deaths were attributed to the virus.

Fall migration of Blue Jays, while conspicuously stronger than spring migration in Hamilton (Curry 2006) is not at all noticeable here in Niagara. It is possible, as is the case with other fall migrants, that most of the birds, having passed to the west end of Lake Ontario, move south across the Niagara Peninsula rather than turning eastward. Blue Jays are very common on the Niagara Christmas Bird Counts.

**Banding and Recovery Data:** A Blue Jay banded at Long Point on 17 May 1973 was encountered on 27 April 1974 in Mississippi. One banded at Long Point on 13 May 1985 was encountered on 13 September 1985 in Tennessee. Another banded at Long Point on 13 May 2004 was encountered on 1 February 2005 in Ohio.

*John E. Black*

**Black-billed Magpie** *Pica hudsonia*

Escapees

The Black-billed Magpie is a large, noisy, aggressive conspicuous bird found in urban and rural areas of the western half of North America. This striking bird of the crow and jay family is a year-round resident across its range.

Beardslee and Mitchell (1965) identify early records in the BOS study area, and they suggest the possibility that some of these birds might be escapes from cages. A Black-billed Magpie found by Jack McNally was reported from Beamsville on 10 May 1953 (Curry 2006). Sheppard (1970) identifies two Niagara records for 1959 and 1960.
The wild status of Black-billed Magpie in southern Ontario is at best questionable. Since these colourful birds are often kept in captivity, observations of Black-billed Magpie in Niagara will, in this account, be treated as escapees.

During the 1966-2006 time frame of this book, two records of Black-billed Magpie were reported. On 6 July 1989, Kayo Roy and Alan J. Smith responded to a telephone call from the Reidiger residence at 5 Farrington Crescent, St. Catharines, where two Black-billed Magpies had been present for several weeks. On entering the backyard, Mrs. Reidiger called the birds by names she had given them, and both immediately flew to the side of the porch where they were fed. Clearly these two individuals were not wild birds. On 17 September 1989, Kevin McLaughlin discovered one at the Smithville sewage ponds (Curry 2006).

The Black-billed Magpie breeds from Alaska and western Canada south to California and the Great Plains. It winters in its breeding range (Trost 1999).

Kayo J. Roy

American Crow *Corvus brachyrhynchos*

Spring and fall transient, common summer and winter resident

The American Crow, a permanent resident throughout Southern Ontario, is a common bird in Niagara. There is some movement in Niagara of possible spring transient crows, but it is difficult to ascertain their abundance given the rather large number of permanent residents. On 18 March 1978, 70 birds were observed migrating along the Lake Ontario Shore (BOSNR).

According to the Ontario Nest Record Scheme data, the earliest egg date in Niagara for this species is 17 April. During the years 2002 to 2006 a total of 130 American Crows were found dead and turned over to the Niagara Region Public Health Department. They were tested for the presence of the West Nile Virus, and 29 tested positive (André Laflamme pers. comm.).

There is some evidence that the numbers of American Crows seen on the April, May and October BOS counts have declined since the appearance of West Nile in Niagara. (See the Hamilton and DeLeon article on October Counts in this book.) There is also anecdotal evidence, such as the comments of various atlassers and naturalists that crow numbers are down in Niagara during the summer months.

Very common on the Niagara Christmas Bird Counts, crows have been seen on all counts since 1966. The largest number observed was 11,050 on the St. Catharines CBC in 1994. Large count numbers were obtained by counting the birds in a roost area in St. Catharines. The count numbers plunged from 3,568 birds in 2001 to 697 birds in 2002 and then to 105 in 2003 and had not recovered by 2006. This large drop from 2001 to 2002 in crow numbers presumably reflects the toll of the West Nile Virus. However, it does not necessarily reflect the deaths of resident Niagara crows. The 3,568 crows, if distributed over the 25 squares studied in the second Atlas, would yield 143 birds per square. Atlassers might, at most, see a few tens of crows in an atlas square, which suggests that many of the overwintering crows in 2001 were from outside Niagara.

John E. Black
The Common Raven was one of the bird species originally described by Linnaeus in his 1758 work *Systema Naturae*. Boarman and Heinrich (1999) state that the Raven is the largest of the songbird species, as well as the largest all-black bird in the world. The Common Raven is one of the most widespread naturally occurring species in the world, as it is found across North America and Eurasia, southward into Central America and northern Africa. It is perhaps the smartest of all birds, and can survive in arctic, temperate, and desert environments.

The presence of Common Raven in Niagara today is totally the reverse of what it was in the days of Wilson and McIlwraith at the turn of the 19th century. Alexander Wilson, speaking of this species while visiting Niagara in the autumn of 1804 commented: “On the lakes, and particularly in the neighbourhood of Niagara Falls, the Raven was numerous, and it is a remarkable fact that where they so abound, the Common Crow seldom appears” (McIlwraith 1894). McIlwraith agrees with Wilson: “I had an opportunity of observing this myself in a journey along the shores of lakes Erie and Ontario. The Ravens were seen every day, but I did not see or hear a single Crow within several miles of the lakes” (McIlwraith 1894).

This large, all-black bird found throughout most of the northern hemisphere is today an extremely rare visitor to Niagara. On 15 January 1969, John Black observed an adult bird in flight over Queenston. On 28 March 1975, William Smith, Alfred Epp and Kevin McLaughlin identified a Common Raven in flight over Beamer Memorial Conservation Area, Grimsby. In 1975, three different individuals were reported from Beamer Memorial Conservation Area: 11 March (George Meyers), 14 April (Dave Copeland,
John Ryan), and 24-25 April (Dave Copeland, George Meyers). On 15 May 1994, John Black located a Common Raven in flight over the Niagara escarpment in St. Catharines. The Atlas of the Breeding Birds of Ontario, 2001-2005 identifies the range increase of the Common Raven during this second five-year census as being one of the most dramatic in the province (Cadman et al. 2007). Perhaps greater numbers of this species may well be recorded in Niagara in the coming years.

The Common Raven is resident throughout Alaska and Canada, including the High Arctic, south through the western United States into Central America. It can also be found in the northern United States and south to the Appalachians and the extreme northern portions of Georgia (Boarman and Heinrich 1999).

Kayo J. Roy

Horned Lark *Eremophila alpestris*

Spring and fall transient, common summer resident, uncommon winter resident

The Horned Lark is one of the top 20 common North American species in decline, as determined by the National Audubon Society (Audubon 2007). It is a permanent resident over much of the United States and breeds as far north as Hudson Bay (National Geographic 2006). Because birds are here in small numbers throughout the winter months it is difficult to ascertain the abundance of spring transients for this species.

The Horned Lark, which breeds throughout southern Ontario, is a common summer resident in Niagara. According to the Ontario Nest Record Scheme data, the earliest egg date for this species in Niagara is 7 April. According to Hussell (2007), there was a significant decrease between atlases (16%) in the probability of observing this species in the Carolinian region. Hussell comments, however, that confirmation of breeding for this species is difficult, so breeding likely occurred in many more squares than those in which it was confirmed in southern Ontario.

On 10 August 1991, 30 Horned Larks were observed in Wainfleet Township (BOSNR). These could have been returning migrants or Niagara birds gathering prior to migrating south.
The Horned Lark is an uncommon winter resident in Niagara, with numbers dropping in January and rising again in February. An interesting February record is that of Harold Lancaster, who observed a small mixed flock of Northern (E. a. praticola) and Prairie (E. a. alpestris) Horned Larks on 10 February 1978 on Church Road near Pelham. They were with a flock of Snow Buntings and a single Lapland Longspur.

Horned Larks winter in Niagara and south through much of the United States to Mexico (Brewer et al. 2000). It is not clear which of the overwintering birds are permanent residents and which are migrants that have come from further north, or west, to spend their winter in Niagara. However, most of the birds wintering in the Eastern United States are the “Northern Horned Lark”, alpestris (National Geographic 2006). Pittaway (1994) discusses in detail the subspecies of Horned Larks found in Ontario.

John E. Black

Purple Martin Progne subis
Spring and fall transient, very common summer resident

The earliest arrival dates for the Purple Martin are for single birds seen at Jaeger Rocks in Fort Erie on 26 March 1991 (BOSNR) and at the Beamer Memorial Conservation Area in Grimsby on 30 March 1977 (HNCNR). In the spring these birds are often seen in small numbers over bodies of water such as Mud Lake in Port Colborne, the Smithville sewage ponds and the Welland Canal at Port Weller. It is not clear how to estimate the abundance of spring transients because they cannot be readily distinguished from those birds arriving to breed in the area.

The Purple Martin, which breeds throughout southern Ontario, is a very common summer resident in Niagara. In fact, Niagara and southwestern Ontario have the greatest abundance of Purple Martins in Ontario (Cadman 2007a). According to the Ontario Nest Record Scheme data, the earliest egg date for this species in Niagara is 12 June.

On 23 September 1990, 16,000 Purple Martins, many presumably migrants, were counted along the Niagara River and later verified by Robert Andrle (Weir 1991:100). Purple Martins are known to roost in huge numbers in the summer and fall months. There is one such roost on the south side of Lake Erie in Erie, Pennsylvania, but no evidence of a roost in Niagara. The latest fall date is 22 October 1966, when a single bird was seen at Waverley Beach in Fort Erie (BOSNR).

There are no winter records of this species for Niagara. The Purple Martin winters throughout most of South America east of the Andes and as far south as central Argentina (Brewer et al. 2000).

John E. Black
Tree Swallow *Tachycineta bicolor*

Spring and fall transient, very common summer resident

The earliest arrival date for the Tree Swallow is 8 March 1995, when four birds were seen at Erie Beach in Fort Erie (Ridout 1995:245). In the spring these birds are often seen in small numbers over bodies of water such as Mud Lake in Port Colborne, the Smithville sewage ponds and the Welland Canal at Port Weller. It is not clear how to estimate the abundance of spring transients because they cannot be readily distinguished from those birds arriving to breed in the area. Tree Swallows have, in recent years, been arriving earlier in the spring at their breeding grounds. This trend is evident in the number of birds counted on the BOS April Counts. It may be the result of increasing global temperatures. (See Hussell (2003) for his discussion of this point.)

The Tree Swallow breeds throughout southern Ontario and is a very common summer resident in Niagara. According to the Ontario Nest Record Scheme data, the earliest egg date for this species in Niagara is 8 May.

The latest October date is 25 October 1972, when four birds were seen at Mohawk Point in Wainfleet (BOSNR). The latest November date is 14 November 1976, when three birds were noted at Niagara Falls (BOSNR). There are no winter records for Niagara. Tree Swallows winter from the southern United States south to Panama and the Greater Antilles (Brewer et al. 2000).

Banding and Recovery Data: A Tree Swallow banded at Long Point on 27 June 1978 was encountered in November 1983 in Louisiana. One banded at Long Point on 24 July 1980 was encountered on 23 May 1983 in South Carolina. Another banded at Long Point on 20 June 1994 was encountered in March 1996 in West Virginia.

John E. Black
Northern Rough-winged Swallow

*Stelgidopteryx serripennis*

Spring and fall transient, uncommon summer resident, extremely rare winter straggler

The Northern Rough-winged Swallow is often seen in small numbers along the Lake Ontario shoreline in the spring. The earliest recorded arrivals are single birds seen on the 9 April on BOS April Counts in 2000 and 2006. In the spring these birds are also seen in small numbers over bodies of water such as Mud Lake in Port Colborne, the Smithville sewage ponds and the Welland Canal at Port Weller. It is not clear how to estimate the abundance of spring transients because they cannot be readily distinguished from those birds arriving to breed in the area.

The Northern Rough-winged Swallow, which breeds throughout southern Ontario, is an uncommon summer resident in Niagara. This species does not dig its own burrow but instead uses a burrow previously excavated by a Belted Kingfisher or a Bank Swallow (Sandilands 2007g).

There are 11 BOS Noteworthy Records for November, all from Niagara Falls, dating from 6 November to 29 November. In recent years the last of the fall swallows in Niagara can often be seen flying over the water below the International Niagara Control Works structure in Chippawa. On 29 October 2006, 200 birds were seen above Niagara Falls (BOSNR).

This species is an extremely rare winter straggler in Niagara. There is only one winter record, that of a single bird seen on 8 December 2001 at Niagara Falls (BOSNR). Northern Rough-winged Swallows winter from the Gulf Coast and Mexico south to northern South America and the Greater Antilles (Brewer et al. 2000).

*John E. Black*
Bank Swallow *Riparia riparia*

Spring and fall transient, very common summer resident

The Bank Swallow is seen in numbers along the Lake Ontario shoreline in the spring. The earliest arrival date is 13 April 1971, when a single bird was reported at Erie Beach in Fort Erie (BOSNR). In the spring these birds are also seen in small numbers over bodies of water such as Mud Lake in Port Colborne, the Smithville sewage ponds and the Welland Canal at Port Weller. It is not clear how to estimate the abundance of spring transients because they cannot readily be distinguished from those birds arriving to breed in the area.

This species breeds throughout southern Ontario and is a very common summer resident in Niagara.

The latest fall dates for the Bank Swallow are 4 September 1966, when three birds were observed at Rose Hill Road in Fort Erie, 5 September 1966, when one bird was seen at Rose Hill Road (BOSNR), and 14 September 2002, when one bird was seen at the Grimsby sewage ponds (HNCNR).

There are no winter records for Niagara. Bank Swallows winter in north and central South America east of the Andes (Brewer et al. 2000).

*John E. Black*
Cliff Swallow
*Petrochelidon pyrrhona*ota

Spring and fall transient, uncommon summer resident

In early spring Cliff Swallows are seen in small numbers along the Lake Ontario shoreline and over open water at Mud Lake in Port Colborne, the Smithville sewage ponds and the Welland Canal at Port Weller. The earliest arrival date is 13 April 1980, when two birds were seen on the BOS April Count. It is not clear how to estimate the abundance of spring transients because they cannot be readily distinguished from those birds arriving to breed in the area.

The Cliff Swallow, which breeds throughout southern Ontario, is an uncommon summer resident in Niagara. In the first Atlas there was no reported breeding. A few Cliff Swallows nested on the east side of the old Toronto Hydro building above the falls in the years immediately after the first Atlas. It is possible that they were there during the first Atlas but not noted (JEB). It is clear from the second Atlas results, however, that there has been a large increase in the number of breeding Cliff Swallows in Niagara since the first Atlas. In the Carolinian region, there has also been a significant increase (60%) in the likelihood of observing this species between atlases (Cadman 2007b).

On 14 September 1996, 30 birds were observed at the Grimsby sewage ponds (HNCNR). The latest fall date is 2 October 1966, when a single bird was seen at Rose Hill Road in Fort Erie (BOSNR).

There are no winter records for Niagara. The Cliff Swallow winters in South America from Paraguay to southern Argentina (Brewer et al. 2000).

John E. Black

Cave Swallow *Petrochelidon fulva*

Extremely rare visitor

The graceful and swift Cave Swallow is a small songbird that since the mid-1980s has undergone a dramatic range expansion in Texas and has colonized southern Florida. Originally found in the vicinity of limestone caves and sinkholes in Texas, it built its nest inside cave entrances that it often shared with bats. In more recent years, the Cave Swallow has adapted to some new habitats, building their nests in man-made structures like culverts and the undersides of bridges (West 1995).

On 14 September 1996, 30 birds were observed at the Grimsby sewage ponds (HNCNR). The latest fall date is 2 October 1966, when a single bird was seen at Rose Hill Road in Fort Erie (BOSNR).

There are no winter records for Niagara. The Cliff Swallow winters in South America from Paraguay to southern Argentina (Brewer et al. 2000).

John E. Black
Swallows appeared in Ontario in unprecedented numbers in November of 1999. Between 90 and 125 individuals were reported from the north shore of Lake Erie (Roy 2000, Curry and McLaughlin 2000). A second but smaller invasion occurred in November 2002 (Crins 2003), and the species has been recorded with considerable regularity since 2002.

During the 1966-2006 time frame of this book, one undocumented record exists for Niagara. On 5 November 2005, John Lamey identified 17 Cave Swallows in two groups (11 and 6) flying into Ontario across the mouth of the Niagara River at Niagara-on-the-Lake. These birds were likely a part of the large flock of Cave Swallows that were observed flying west along the south shore of Lake Ontario at Hamlin Beach, New York, earlier in the day.

In North America, breeding is spottily distributed. Breeding occurs in southeast New Mexico and in west Texas through the Edwards Plateau to coastal Texas. Breeding is also known from southern Florida. Its winter range is poorly known. It is believed that the birds in Texas winter in Mexico, and the Florida birds in the Caribbean (West 1995).

Kayo J. Roy

Barn Swallow Hirundo rustica
Spring and fall transient, very common summer resident

Barn Swallows are observed in large numbers along the Lake Ontario shoreline in the spring. The earliest arrival date is 7 April 1974, when a single bird was spotted on the BOS April Count. In the spring these birds are also seen in small numbers over bodies of water such as Mud Lake in Port Colborne, the Smithville sewage ponds and the Welland Canal at Port Weller. It is not clear how to estimate the abundance of spring transients because they cannot be readily distinguished from those birds arriving to breed in the area.
PART THREE: SPECIES ACCOUNTS

The Barn Swallow, which breeds throughout southern Ontario, is a very common summer resident in Niagara. According to the Ontario Nest Record Scheme data, the earliest egg date for this species in Niagara is 6 June. The probability of observation of this species has declined by 35% in Ontario since the first Atlas, probably owing to a reduction in aerial insect abundance (Lepage 2007). As yet this decline has not occurred in the Carolinian region.

The latest October date is 26 October 1983, when a single bird was observed at Niagara Falls (BOSNR). The only November record is 1 November 1998, when one bird was reported from the Grimsby sewage ponds (HNCNR).

There are no winter records of this species in Niagara. The New World race of Barn Swallow (H. r. erythrogaster) winters from Panama and the West Indies throughout South America to Tierra del Fuego (Brewer et al. 2000).

John E. Black

First Atlas: 24 squares confirmed, 0 probable, 1 possible
Second Atlas: 24 squares confirmed, 1 probable, 0 possible
BOS April Count: Reported on 19 of 41 counts, maximum of 55 birds in 2004
BOS May Count: Reported on 40 of 41 counts, maximum of 4,440 birds in 2006
BOS October Count: Reported on 6 of 40 counts, maximum of 5 birds in 1976
Niagara Christmas Bird Counts: Not reported

Black-capped Chickadee Poecile atricapillus

Common permanent resident

The Black-capped Chickadee is a permanent resident over its range in the middle latitudes of North America (National Geographic 2006) and is a common permanent resident in Niagara. There are no BOS Noteworthy Records on this species.

According to Ontario Nest Record Scheme data, the earliest egg date for this species in Niagara is 13 May.

Black-capped Chickadees were seen on all Niagara Christmas Bird Counts. They are a common feeder bird in the winter months in Niagara. While the chickadee does not migrate, it does move south in some winters during periods of food shortages. Birds from these irruptions pass through central and southern Ontario about every three to five years and are primarily the young of the year (Cheskey 2007b). One of these irruption years may have been 1980, since the 1,298 chickadees seen on the Niagara Falls CBC was a substantially larger number than the next maximum number of 871 seen on the St. Catharines CBC of 1995.

John E. Black

First Atlas: 24 squares confirmed, 0 probable, 1 possible
Second Atlas: 21 squares confirmed, 4 probable, 0 possible
BOS April Count: Reported on 41 of 41 counts, maximum of 126 birds in 1983
BOS May Count: Reported on 40 of 41 counts, maximum of 69 birds in 2002
BOS October Count: Reported on 40 of 40 counts, maximum of 286 birds in 1968
Niagara Christmas Bird Counts: Reported on 41 of 41 counts, maximum of 1,298 birds on the 1980 Niagara Falls CBC

Black-capped Chickadee
Brandon Holden
Boreal Chickadee *Poecile hudsonica*

Extremely rare visitor

The Boreal Chickadee is a bird worthy of its name given it is found almost entirely in the boreal spruce-fir forests of Canada’s far north, and in small parts of the northern United States (Ficken et al. 1996). It inhabits a wide range across much of the north but irruptions south occur in some years likely due to shortages of food (Ficken et al. 1996). In the fall of 1951, a substantial irruption of Boreal Chickadees occurred into southern Ontario (Beardslee and Mitchell 1965, Curry 2006), and there was an unprecedented influx into the Niagara Peninsula (Sheppard 1970).

Beardslee and Mitchell (1965) and Sheppard (1970) describe in substantial detail observations of Boreal Chickadee in Niagara prior to 1966.

During the 1966-2006 time frame of this book, very few Boreal Chickadee records are known to exist for Niagara. In the winter of 1969-1970, three birds were reported from three different locations. On 1 November 1969, Robert Curry discovered one at Queenston (Sheppard 1970). It was last seen on 1 January 1970 by John Black. On 18 November 1969, Gustave Yaki and George Meyers identified a Boreal Chickadee in Niagara-on-the-Lake. This individual was not observed after 27 January 1970 (Sheppard 1970). On 30 November 1969, Daniel Salisbury discovered a Boreal Chickadee in the valley of 15 Mile Creek in St. Catharines. He returned and observed the bird there on 2 December 1969, 1 January 1970, and 7 February 1970 (with John Black and Dave Fidler). The last time Salisbury saw it was on 15 February 1970. On 13 November 1972, Joseph Kikta found a Boreal Chickadee at Fort Erie (BOSNR).

The Boreal Chickadee breeds from northern Alaska eastward to Labrador and Newfoundland and south to the northern edges of the United States. In winter it usually remains throughout its breeding range (Ficken et al. 1996).

*Kayo J. Roy*

Tufted Titmouse *Baeolophus bicolor*

Rare permanent resident

Niagara lies at the northern edge of the North American breeding range for the Tufted Titmouse. It is a rare permanent resident in Niagara. There is evidence to suggest that it is a more common resident in the southerly portions of Niagara (John Stevens pers. comm.).

Following the first Atlas, the Tufted Titmouse was identified as a Species at Risk in Austen et al. (1994). Clearly, however, the number of breeding titmice in Niagara has increased considerably since the first Atlas and this increase is not limited to the region. There has been a fourfold increase between atlases in the probability of observing this species in Ontario. The Niagara Peninsula is the core range for this species (Cheskey 2007c). There is also some evidence of increasing numbers in the October Counts. Tufted Titmice were seen on only eight of the first 20 years of the October Counts and on 15 of
of the second 20 years This is still not an easy bird to see in Niagara, but the most likely time to find it is at feeders in the winter. Numbers of this species on the Christmas Bird Counts show a steady increase over the years. For many years, beginning in about 1970, the place to see the Tufted Titmouse was at feeders on Shakespeare Avenue in Niagara-on-the-Lake. In the late 1990s the number of available feeders dropped, and the titmouse was more difficult to see there. Fortunately, since that time, some feeders on Thomas Street in Chippawa have provided birders with a reliable opportunity to see these birds in Niagara.

John E. Black

Red-breasted Nuthatch *Sitta canadensis*

Uncommon spring and fall transient, rare summer resident, uncommon winter resident

The Red-breasted Nuthatch is a permanent resident over all but a small part of its most northerly range in North America (*National Geographic* 2006). It does, however, undergo periodic irruptive migrations from its more northerly breeding grounds roughly every two years (Cheskey 2007d). It is an uncommon spring transient in Niagara with only a small number of birds remaining to breed here. Because birds are present throughout the year, no attempt at identifying early arrival dates or late spring dates for these transients is made in this account. As many as eight Red-breasted Nuthatches, presumably transients, were present on the Port Weller piers on most days from 1 May to 22 May during the Port Weller Study. The Red-breasted Nuthatch is a rare summer resident. There is evidence of an increase in resident nuthatches in Niagara in recent years as can be seen in the atlas figures above. There was a significant increase (81%) in the probability of observing this species between atlases in the Carolinian region (Cheskey 2007d).

The Red-breasted Nuthatch, an uncommon winter resident in Niagara, was seen on all but a few years of the Niagara Christmas Bird Counts. This species is roughly one quarter as abundant on the counts as the White-breasted Nuthatch.

John E. Black

White-breasted Nuthatch *Sitta carolinensis*

Uncommon spring and fall transient, uncommon summer resident, common winter resident

The White-breasted Nuthatch is a permanent resident over most of its range in North America (*National Geographic* 2006). It is, nevertheless, an uncommon spring transient in Niagara with a fraction of the birds observed remaining to breed in Niagara in the summer months. Because birds are here throughout the year, no attempt at identifying early spring arrival dates or late dates of transients is made in this account. There were sightings from the Port Weller piers from 2 May to 20 May during the Port Weller Study.

The White-breasted Nuthatch is an uncommon summer resident in Niagara. A common winter resident in Niagara, the White-breasted Nuthatch was seen on all but one year of the Niagara Christmas Bird Counts. It is roughly four times as abundant on the Christmas Bird Counts as the Red-breasted Nuthatch.

John E. Black
Brown Creeper *Certhia americana*

Uncommon spring transient, rare summer resident, fall transient, rare winter resident

The Brown Creeper is a permanent resident over all but the most northerly and southerly portions of its range in North America (National Geographic 2006). It is an uncommon spring transient in Niagara with only a small number of birds remaining to breed in Niagara. Because birds are here throughout the year, an early arrival date for these transients is difficult to determine. A single bird, possibly an arriving migrant, was observed at the Beamer Memorial Conservation Area in Grimsby on 14 March 1987 (HNCNR). There are no March BOS Noteworthy Records. Brown Creepers, presumably transients, were observed on the Port Weller piers on most days from 1 May to 22 May during the Port Weller Study.

The Brown Creeper is a rare summer resident in Niagara. According to the Ontario Nest Record Scheme data, the earliest egg date for this species in Niagara is 29 June.

This species was observed on all but one of the BOS October Counts. On 8 October 1990 Robert Curry and Verne Evans counted 40 transient Brown Creepers at the Fifty Point Conservation Area (HNCNR).

The Brown Creeper is a rare early winter resident in Niagara; however, by January it is difficult to find this species. Its unusual feeding pattern consists of a spiral search up the trunk of a tree followed by a short flight to the base of the next tree and then the sequence repeats.

*John E. Black*
Rock Wren *Salpinctes absoletus*

One historical record

The Rock Wren is a bird of the American southwest, where it can easily be found in canyons and dry rocky locations. Interestingly, it is not known to drink water, and it has a repertoire of over one hundred songs. The Rock Wren is known to be an occasional visitor to the east.

There is one historical record of this extremely rare visitor to Niagara. On 6 December 1964, Carl Mrozek, Daniel Salisbury, Richard Brownstein and Joanna Burger discovered a Rock Wren among the rocks lining the two piers that project out into Lake Ontario at the north end of the Welland Canal (Baillie 1964).

This first Rock Wren for Ontario was collected on 7 December 1964, and the specimen (skin) is at the Royal Ontario Museum, Toronto (ROM # 94722). Lester L. Short, Jr. examined the specimen at the United States National Museum and confirmed the bird to be of the nominate race (Mitchell and Andrlé 1970, Roy 2001).

The Rock Wren breeds in Canada from southern British Columbia east to southern Saskatchewan, and south throughout the western United States from western North Dakota to the Mexican border. It winters from Northern California east to Oklahoma and south throughout the southern portion of its breeding range (Lowther et al. 2000).

*Kayo J. Roy*

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Carolina Wren *Thryothorus ludovicianus*

Uncommon permanent resident

The Carolina Wren is an uncommon permanent resident in Niagara. On all but two days in May during the Port Weller Study, one to four birds were present. Male Carolina Wrens have repertoires of about 32 song types all year long, defending territories and mates on a permanent basis as do many tropical birds. Females do not sing, but often overlap their mate’s song with a loud chatter. Males also have a loud call note that sounds like “cheer” while females call “dit dit”, allowing the sex of individuals to be determined at any time of year (Eugene Morton pers. comm.).

Niagara lies at the northern limit of the breeding range of Carolina Wren. According to the Ontario Nest Records Scheme data, the earliest egg date for this species in Niagara is 28 April. The breeding bird atlas figures for Niagara indicate a substantial increase in the breeding population of Carolina Wrens during the last 20 years. This is consistent with the overall figures for Ontario. There was a significant increase (54%) in the probability of observing this species between atlases (P. Read 2007). A breeding pair of Carolina Wrens was first observed on the Port Weller east pier on 11 April 1993. The young birds left the nest on 16 May 1993 and were last observed with their parents on 28 May 1993 during the Port Weller Study.

Seen on many Niagara Christmas Bird Counts, the number of Carolina Wrens recorded here began to grow in the late 1980s. They have been found on the Niagara Falls CBC every year since 1986. This species is a permanent resident over its range, which extends from Ontario south to northern Mexico, the Yucatan and parts of Guatemala. Its range expands and contracts depending on the mildness or severity of the winter months (National Geographic 2006).

*John E. Black*
right: Carolina Wren
Peter Ferguson

below: House Wren
Kayo Roy
Bewick's Wren *Thryomanes bewickii*

Extremely rare visitor

The Bewick's Wren, widespread across much of the southern and western United States and irregularly found in the east, has experienced a severe decline within the eastern population of the species. This dramatic downward spiral has coincided with an increased range expansion of House Wren which, among other factors, is believed to be directly responsible for this downturn (Kennedy and White 1997).

The likelihood of this species occurring again in Niagara is at best slim.


There is only one known sighting of this extremely rare visitor to Niagara during the 1966-2006 time frame of this book. Alan Wormington discovered one at Morgan's Point, Burnaby on 26 April 1972 that was last seen on 8 May 1972.

Bewick's Wren breeds extensively along the Pacific coast from Southern British Columbia to Baja California, in the central southern United States from southern Wyoming to central Missouri and south to Arizona, eastern Texas and to Mexico. It winters in most of its western and central range along the Colorado River and in eastern Texas (Kennedy and White 1997).

Kayo J. Roy

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House Wren *Troglodytes aedon*

Spring and fall transient, common summer resident, extremely rare winter straggler

The earliest sighting for House Wren is 9 April 1971, when Harold Lancaster observed a single bird in Welland. Probably a common spring transient, it is difficult to assign a spring transient abundance to this species because it is not easy to separate possible transient House Wrens from the many birds arriving to breed in the area. During the five years of the Port Weller Study, a maximum of 16 House Wrens were reported on 10 May and 11 May, but by 31 May the numbers reported had declined to 10 individuals. However, by 31 May, House Wrens were nesting on the piers, and if they were incubating, would be uncounted by the observers.

The House Wren breeds throughout southern Ontario. According to the Ontario Nest Records Scheme data, the earliest egg date for this species in Niagara is 7 April. With the exception of the House Sparrow, the House Wren occupies a greater latitudinal range in the Americas than any other passerine (Brewer 2007).

The latest fall sighting is of a single bird on 22 October 1967 at Rose Hill Road in Fort Erie (BOSNR).

There is one winter record for Niagara: a bird seen by David Gascoine at Niagara Falls on 6 December 1992 (Ridout 1993:254). This species winters from the southern United States south to central Mexico (Brewer et al. 2000).

John E. Black
Winter Wren *Troglodytes troglodytes*

Uncommon spring transient, rare and local summer resident, fall transient, rare winter resident

The Winter Wren, an uncommon spring transient, is one of the earliest migrants to arrive in Niagara. The earliest dates in March are 2 March 1968, when Dan Salisbury saw a single bird at Queenston (see also BOSNR) and 12 March 1972, when Harold Lancaster saw a single bird at Mud Lake in Port Colborne. These could have been winter stragglers. There are an additional 35 records of Winter Wrens from local birders extending from 26 March to 7 May. Another five BOS Noteworthy Records originate in areas where these wrens are not breeding. These represent the earliest dates found each year, confirming that the Winter Wren arrives here in late March and early April. Non-resident birds were seen on the Port Weller piers from 1 May to 14 May during the Port Weller Study. Latest dates of what are probably transient birds are 21 May 1967, 1972, 1978 and 1995 on the BOS May Counts.

Niagara lies just at the northern edge of the area in which the Winter Wren is a permanent resident in North America. The species is a rare and local summer resident in Niagara. One of the squares with probable breeding in the second Atlas, and a good place to find these birds in the summer, was the Harold Mitchell Nature Reserve. This reserve lies just north of the Long Beach Conservation Area on Lake Erie on Side Road 30 in Wainfleet. At least two singing males were encountered there in 2005 (JEB). There are 12 records from 1 August to 31 October (BOSNR). There are five BOS Noteworthy Records and four records from local birders for November.

Winter Wren is an occasional to rare winter straggler in Niagara. There are five records from 1 December to 31 December (BOSNR) and two additional December records from local birders. There are 12 records from 1 January to 28 February (BOSNR) and five additional records from local birders for the same period. The Winter Wren is reported on many Niagara Christmas Bird Counts. Since 1985 it has been found on every Niagara Falls Christmas Bird Count, the maximum number being 16 birds in 1992 and 2005. Birders have found single Winter Wrens by the open water of small streams at Dufferin Island in Niagara Falls, St John’s Conservation Area near Fonthill and Ball’s Falls Conservation Area near Vineland, all in January (JEB). This species winters mainly in the southern United States (Brewer et al. 2000).

John E. Black
Sedge Wren *Cistothorus platensis*

Spring and fall transient, rare and local summer resident

Formerly known as Short-billed Marsh Wren, the Sedge Wren has appeared in only two BOS May Counts. These were single individuals seen on 19 May 1968 and 17 May 1975. No birds were reported on the Port Weller piers during the Port Weller Study. In the Niagara side of the Fifty Point Conservation Area, single individuals were observed on 17 May 1997 and 17 May 1998 (HNCNR). Spring transient abundance is uncertain. It is not evident which of the small numbers of birds found in the spring are transient and which are arriving in Niagara to breed.

The Sedge Wren breeds throughout southern Ontario and is a rare and local summer resident in Niagara. During the second Atlas a singing male was observed 11 July 2004 not far from Lowbanks in Dunville, just west of Niagara. A visit a week later revealed that the field had been plowed, and the bird was not rediscovered (JEB). On 23 June and 7 July 2002, a bird was seen above the escarpment near Beamsville, but not in subsequent years (JEB). In the summer of 2001, a bird was repeatedly sighted in Port Colborne (Jean and Blayne Farnan), and on 17 June and 24 June 2003 a bird was found not far from St. Davids (JEB, KJR). Two earlier summer dates exist: Dan Salisbury saw three birds in the Wainfleet Bog on 4 June 1969, and Harold Lancaster saw two birds in the Humberstone Marsh in Port Colborne on 6 June 1971. Given the locations and dates, these are most probably summer residents on territory.

There are no BOS Noteworthy Records or BOS October Count records for this species. A transient Sedge Wren was observed at Morgan's Point near Burnaby on 27 September 1969 (JEB, Dan Salisbury). There are no winter records for Niagara. This species breeds from southern Canada to Tierra del Fuego. High latitude populations are migratory and tropical latitude populations are sedentary (Stiles and Skutch 1989). The Sedge Wrens that breed in Niagara winter in the southeastern quarter and along the Atlantic Coast of the United States (National Geographic 2006).

*John E. Black*
Marsh Wren *Cistothorus palustris*

Spring and fall transient, uncommon and local summer resident

The earliest spring date for this species, formerly known as Long-billed Marsh Wren, is 15 April 1989, when a single bird was found at Mud Lake in Port Colborne (JEB). Marsh Wrens inhabited the Port Weller piers from 7 May to 31 May during the Port Weller Study, with no more than one individual seen on any one day of May during all five years of the study. Spring transient abundance is uncertain. It is not evident which of the small numbers of birds located in the spring outside known breeding areas are transient and which are arriving in Niagara to breed.

The Marsh Wren breeds throughout southern Ontario and is an uncommon and local summer resident in Niagara. According to the Ontario Nest Records Scheme data, the earliest egg date for this species in Niagara is 24 June. This is a species of cattail marshes, and males can make as many as 22 dummy nests in a season (Tozer 2007). Over the years Mud Lake has been a reliable location for seeing these birds in the summer months. The latest October record is of a single bird seen on 21 October 1967 at Erie Beach in Fort Erie (BOSNR). There is one November record, 24 November 1967, of a single individual on the upper Niagara River, seen by Robert Andrle and others (BOSNR).

There are no winter records of Marsh Wren for Niagara. This species winters from the southern United States south to northern Mexico (Brewer et al. 2000).

*John E. Black*
Golden-crowned Kinglet *Regulus satrapa*

Common spring transient, extremely rare summer resident, fall transient, uncommon winter resident

The Golden-crowned Kinglet is a common and early spring transient. Twelve birds were found at Fort Erie on 26 March 1988. There are 17 April records from local birders. On 3 April 1977, 33 birds were seen on a BOS April Count. The latest spring sighting is 21 May 2006, when a single bird was seen on the BOS May Count. (Note: there were eight May Counts conducted on 21 May over the 41 years of counts, but only the 2006 count reported a sighting of Golden-crowned Kinglet.) During the Port Weller Study, Golden-crowned Kinglets were present from 1 May to 13 May.

Niagara lies within the North American range in which the Golden-crowned Kinglet is a permanent resident. However, it is an extremely rare summer resident in Niagara. There were no records in the first Atlas. In the second Atlas, breeding was confirmed in Port Colborne, in a Norway spruce grove on the firelane beside Lake Erie between Pinecrest Road and Weaver Road. The kinglets were first observed on 12 June, then again on 20 June 2005. In July they were found feeding a cowbird on a branch with a young kinglet still on the nest (JEB, Jean and Blayne Farnan). Only three nests were reported during the entire second Atlas, so the observation of this nest was a very unusual one (M.A. McLaren 2007b). A singing male was present on 21 June 2006 in the same spruce grove. An abandoned gas pump on the roadside marks the spot. The spruce grove runs for 110 metres along the road and extends about 80 metres north of the road at its deepest point.

There are eight records of Golden-crowned Kinglet in September (BOSNR). The latest count date is 20 October, when 83 birds were reported on the BOS October Count. There are no October or November BOS Noteworthy Records. On 8 October 1990, 250 birds were observed on the Niagara side of the Fifty Point Conservation Area (HNCNR). Dan Salisbury saw 20 birds on Morgan’s Point near Burnaby on 11 November 1969.

The Golden-crowned Kinglet is an uncommon winter resident, but a few individuals can usually be found in some of the small strands of conifers that are scattered throughout Niagara. Since 1986, when Port Colborne joined the other Christmas Bird Counts in Niagara, there have been only three counts on which the Golden-crowned Kinglet was not observed. This species winters from southern Canada to Guatemala (Brewer et al. 2000).

*John E. Black*

Ruby-crowned Kinglet *Regulus calendula*

Common spring transient, fall transient, occasional winter straggler

The earliest reported dates for this common spring transient are of single birds seen at the Beamer Memorial Conservation Area in Grimsby on 29 March 1997 (HNCNR) and at Morgan’s Point near Burnaby by Harold Lancaster on 7 April 1968. While there are 38 additional April records from local birders, there are no other March records. Many birds were observed on the days between 1 May and 19 May over the five years of the Port Weller Study, but no more than one bird a day was observed over the five years after 19 May. The latest date of a spring sighting is 31 May 1996, when one bird was observed on the Port Weller west pier during the Port Weller Study.
The Ruby-crowned Kinglet breeds north of Lake Ontario. Its clutch size, up to 12 eggs, is the largest clutch of a small North American songbird (Crins 2007b). There is only one summer record: a nest observed by Mark Jennings at Windmill Point near Fort Erie on 11 June 1977 (Goodwin 1977:1134) and what were presumably birds associated with the same nest observed by Bob Andrle at Windmill Point on 5 and 10 July 1977 (BOSNR).

The earliest fall date during five years of the BOS October Counts is 8 October. The latest October Count date is 20 October 1985, when 47 birds were seen. There are three November records from local birders: Dan Salisbury reported two birds at R.W. Sheppard’s residence in Niagara Falls on 11 November 1967, one bird at the residence of Horace Troup in Louth on 18 November 1967 and one bird at Rose Hill Road in Fort Erie on 16 November 1969.

Observed on 16 Niagara Christmas Bird Counts, the first recorded Ruby-crowned Kinglet was found on the St. Catharines CBC of 1983. On 19 February 1983, a single bird was seen in Niagara-on-the-Lake (KJR, Dan Salisbury). The Ruby-crowned Kinglet winters from the southern third of the United States to Guatemala (Brewer et al. 2000).

Banding and Recovery Data: A Ruby-crowned Kinglet banded at Ruthven Park in Cayuga, Ontario, on 22 October 2001 was encountered on 26 December 2002 in Arkansas. A second, banded at Long Point on 9 October 1989, was encountered in the fall of 1989 in New Jersey. A third, banded at Long Point on 6 May 1985, was encountered on 4 January 1986 in North Carolina.

John E. Black
Blue-gray Gnatcatcher *Polioptila caerulea*

Spring and fall transient, uncommon summer resident, extremely rare winter straggler

The earliest arrival date for this species is 15 April 1994, when a single bird was found at Port Weller east pier (KJR). During the years of the Port Weller Study, gnatcatchers were reported in fairly large numbers from 1 May to 20 May, and thereafter only one or two birds were observed from 21 May to 31 May. Some or all of these later birds may have been breeding, as they are known to nest on the piers (JEB). Spring transient abundance is uncertain. It is not evident which of the small numbers of birds seen outside known breeding areas in the spring are transient and which are individuals arriving in Niagara to breed.

The Blue-gray Gnatcatcher, which breeds throughout southern Ontario, is an uncommon summer resident in Niagara.

Possible early arrival dates of migrants heading south in the fall are of single birds found on 8 August 1987 on the Niagara side of Fifty Point Conservation Area (HNCNR) and on 20 August 1966 at Morgan's Point near Burnaby by Dan Salisbury. Three birds were seen at Long Beach in Wainfleet on 20 August 2006 (BOSNR). The latest fall date is 15 October 1995, when a single bird was found on the BOS October Count.

There are two winter records for Niagara. Single birds were found by Gus Yaki at Dufferin Island in Niagara Falls on 1 December 1991 (Weir 1992:261) and by Richard Byron in Niagara Falls on 18 December 1994 (Ridout 1995:144). This species winters from the southern third of the United States south to Honduras (DeGraaf and Rappole 1995).

*John E. Black*
Northern Wheatear *Oenanthe oenanthe*

One historical record

The Northern Wheatear is a migratory, insectivorous species of open, stony habitat of Europe and Asia with an extremely large global range. First described by Linnaeus in his 1758 work *Systema Naturae* as *Motacilla oenanthe*, this small passerine was once classed as a member of the thrush family Turdidae but is now considered to be an Old World flycatcher Muscicapidae. Two races are found in North America: the Alaska and Northwest Canada subspecies *O. o. oenanthe*, and the Greenland and Northeast Canada subspecies *O. o. leucorhoa*. The Northern Wheatear may be the only breeding passerine of North America that migrates to wintering grounds in sub-Saharan Africa. Stragglers of this species have been found in 33 provinces and states of Canada and the United States. American breeding grounds have probably been occupied by Northern Wheatears since the last glacial period (Voous 1960).

Only one historical record is known for this extremely rare visitor to Niagara. Reprinted here is the detail from Beardslee and Mitchell (1965):

The occurrence of this species in our territory must be considered highly fortuitous. We are fortunate that when two of our most capable observers, Wright and Nathan, were driving about two miles west of Ridgeway, Ontario, on September 24, 1949, their attention was attracted to a small bird with a white rump which flew up with a group of sparrows from the roadside south of the Cherry Hill Golf Club. Careful study revealed all of the identifying field marks of a “Greenland Wheatear.” The two observers were Albert J. Wright and Bernard Nathan. Wright took photographs of the bird (present location unknown).

The Northern Wheatear breeds along the Arctic coast of Alaska, northern Yukon Territory, parts of northeast Arctic Canada and Greenland. It winters in tropical Africa (Kren and Zoerb 1997).

Kayo J. Roy

Eastern Bluebird

*Sialia sialis*

Spring and fall transient, uncommon summer resident, rare winter resident

The Eastern Bluebird is a permanent resident in Niagara. There are three March records from the BOS Noteworthy Records and seven March records from local birders. The earliest April recorded dates are 13 April 1988, when two birds were seen at Ridgeville (KJR); 15 April 1967, when four birds were found by Dan Salisbury at Virgil; and 15 April 1982, when a single bird was seen at the Beamer Memorial Conservation Area in Grimsby (JEB).
The Eastern Bluebird breeds in all areas of the province except the Hudson Bay lowlands and is an uncommon summer resident in Niagara. On 2 April 1989 a territorial pair was observed on Sawmill Road in Pelham (JEB). According to the Ontario Nest Records Scheme data, the earliest egg date for this species in Niagara is 16 April. The breeding bird atlas figures show a substantial increase in the breeding population of Eastern Bluebirds in Niagara over the last 20 years, a trend that is consistent with the overall figures for Ontario. There was approximately a fivefold increase in the probability of observation of this species between atlases in the Carolinian region (B. Read 2007). For more information on the dramatic recovery of this species in Niagara the reader is referred to the article by Clements and Read in this book.

The latest October sighting occurred on 28 October 1967, when a single bird was found at Thunder Bay in Fort Erie. There are eight records of the Eastern Bluebird in November (BOSNR).

Currently it is considered a rare winter resident in Niagara, although bluebirds have been reported on all but one of the St. Catharines CBCs since their inception in 1982. Note also that 1982 was the first year a bluebird was seen on any Niagara CBC. Bluebird winter numbers started to rise in the early 1990s. Records of bluebirds in January and February from local birders and the BOS do not begin until 1992. There is only one February record prior to 1992, that of a single bird found 16 February 1975 at Effingham in Pelham by Harold Lancaster. This species winters from the central regions of the United States (regularly north to Southern Ontario and Michigan) south to the Gulf Coast (Brewer et al. 2000).

John E. Black

Townsend's Solitaire
Myadestes townsendi
Extremely rare visitor

This unique, long-tailed gray thrush of the high western mountains is named after American ornithologist John Kirk Townsend. Of the 13 New World solitaires, the Townsend’s is the only one that occurs in North America (Bowen 1997). This species is very territorial even into the winter months, as they strongly defend their winter-feeding territories of berry-rich patches of juniper trees for survival purposes (Bowen 1997).

In Niagara, only one record of this extremely rare visitor is known to exist. On 6 November 1983, Richard Knapton discovered a Townsend’s Solitaire in the rolling countryside just north of Fonthill (James 1984, BOSNR). This void for Niagara is not indicative of this species’ dispersal east given that in recent years it has become a regular but sporadic annual visitor to Ontario. For example, neighbouring Hamilton has recorded nine observations of Townsend’s Solitaire in their study area over the years (Curry 2006).

The species breeds in the mountainous areas of Alaska to the Northwest Territories and from British Columbia south to California and from South Dakota to central Mexico. Wintering grounds are from southern Canada west to Nebraska, usually at lower elevations than their breeding grounds (Bowen 1997).

Kayo J. Roy
Veery *Catharus fuscescens*

Uncommon spring transient, uncommon summer resident, fall transient

The Veery is an uncommon spring transient in Niagara. The earliest spring record is for 28-29 April 1969 of a single bird seen at Port Weller by Dan Salisbury. Birds were present on the Port Weller piers from 8 May to 29 May, the latest spring date for this species during the Port Weller Study.

The Veery breeds throughout southern Ontario and is an uncommon summer resident in Niagara. According to the Ontario Nest Records Scheme data, the earliest egg date for this species in Niagara is 4 June. Figures from the breeding bird atlas indicate a small decrease in the breeding population of Veery in Niagara over the last 20 years, a trend which is consistent with the overall figures for Ontario. There was a significant decrease (27%) in the probability of observation of this species between atlases in the Carolinian region (Friesen 2007). Veery are abundant in the Wainfleet Bog, in particular at the north end of Erie Peat Road in Wainfleet.

The earliest date for a fall transient is 30 August 1966, when a single bird was found at Rose Hill Road in Fort Erie (BOSNR). The latest recorded date is 13 October 1974 on the BOS October Count.

There are no winter records of Veery for Niagara. This species winters from northern Columbia south to Brazil (Brewer et al. 2000).

*John E. Black*

Gray-cheeked Thrush *Catharus minimus*

Rare spring transient, fall transient

A rare spring transient, the Gray-cheeked Thrush is one of the last migrants to arrive in Niagara in the spring. The earliest date is 13 May 2000 for one bird in Point Abino Woods (KJR). The latest date is 3 June 1984 for a single bird at Rose Hill Road in Fort Erie (BOSNR). There are only four records of single birds from the Port Weller Study: 24 May 1993, 24 May 1996, 27 May 1995 and 31 May 1993.

*John E. Black*
The Gray-cheeked Thrush breeds on and north of James Bay in Ontario. There are no Niagara summer records.

The earliest fall arrival date is 4 September 1978, when single birds were seen at Cedar Bay in Gasline (BOSNR) and Wainfleet (Harold Lancaster). The latest fall date is 18-19 October 1969, when a single bird was found at Rose Hill Road (BOSNR).

There are no winter records of Gray-cheeked Thrush for Niagara. This species winters from northern Columbia south to Brazil and Peru (Brewer et al. 2000).

John E. Black

Swainson’s Thrush
*Catharus ustulatus*

Uncommon spring transient, fall transient

Formerly known as Olive-backed Thrush, the Swainson’s Thrush is an uncommon spring transient in Niagara. The earliest date is 22 April 1967, when a single bird was found at Mud Lake in Port Colborne (JEB). During the Port Weller Study very small numbers were present from 9 May to 29 May, the latest spring date for this species.

In the spring and fall of 1994 two acoustic microphones were operated near St. Davids, a small town 20 km southeast of Port Weller. Since many migrating birds call as they travel at night, the number of chips heard each night provide a measure of the number of migrating birds passing overhead each evening. Almost all chips in the study could be identified as those of thrushes or smaller passerines. The largest spring numbers passed overhead on the night of 25/26 May 1994, when 2,600 thrushes were heard. Of these, 2,240 or 86% were Swainson’s Thrush, 12% Veery, 2% Gray-cheeked Thrush and 3% Wood Thrush. The largest fall movement was heard on the night of 17/18 September 1994, when 7,085 thrushes were heard (Blanchard and Black 1994, 1995).

The Swainson’s Thrush, which breeds north of Lake Ontario, is not present in Niagara during the summer months. It is, however, one of the earliest migrants to return to Niagara and can arrive as early as July. There are five July records (BOSNR) of single birds on Rose Hill Road in Fort Erie: 18 July 1974, 25 July-31 August 1980, 29 July-11 August 1981, 29 July-31 August 1982 and 28 July-31 August 1984.

BOS April Count: Not reported
BOS May Count: Reported on 36 of 41 counts, maximum of 20 birds in 1996
BOS October Count: Reported on 27 of 40 counts, maximum of 45 birds in 1993
Niagara Christmas Bird Counts: Not reported
There are nine August records, excluding those mentioned above, from Rose Hill Road, two August records from Morgan’s Point near Burnaby (BOSNR) and three August records from local birders. For September there are two records from Rose Hill Road, one record from Niagara Falls (BOSNR) and fourteen records from local birders. For October there are three BOS Noteworthy Records and five records from local birders. The latest October date is 16 October 1983, when a single bird was seen on the BOS October Count. There is one November record of a single bird discovered on 15 November 1970 (BOSNR).

There are no winter records of Swainson’s Thrush for Niagara. This species winters from northern Mexico south to Argentina and Paraguay (Brewer et al. 2000).

Banding and Recovery Data: A Swainson’s Thrush banded at Long Point on 22 September 2000 was encountered on 24 November 2001 in Peru, and a second Swainson’s Thrush banded at Long Point on 27 September 2001 was encountered on 5 December 2001 in Peru. A Swainson’s Thrush banded at Long Point on 25 September 1995 was encountered on 28 April 1996 in Oklahoma.

John E. Black

Hermit Thrush
*Catharus guttatus*

Uncommon spring transient, fall transient, occasional winter straggler

The earliest arrival date for this uncommon spring transient is 30 March 2003, when two birds were seen on the Port Weller east pier (KJR). There are 34 April reports from local birders. The latest arrival dates are of single birds on the BOS May Counts of 21 May 1967, 1972 and 1978 (Note: on the remaining five BOS counts that took place on 21 May there were no Hermit Thrushes reported). Single birds were found during the Port Weller Study from 1 May to 15 May.

The Hermit Thrush breeds north of Lake Ontario. There are no Niagara summer records. The earliest date for a fall transient is 23 August 1966, when three birds were seen at Rose Hill Road in Fort Erie (BOSNR). The latest October date is 27 October 1968, when one bird was seen at Rose Hill Road (BOSNR). There is one November record, 9 November 1991, of a single bird at the Grimsby sewage ponds (HNCNR).

An occasional winter straggler, it is not found every year on the Christmas Bird Counts, but when seen, there are usually one or two birds. On the Niagara Falls Christmas Bird Count of 2003, 13 individuals were observed in New York State. The previous high was three birds on the Niagara Falls CBC of 1997. There are five January records from local birders, the latest date being 25 January 2004 at Port Colborne (JEB, KJR). This species winters from the southern United States as far south as Guatemala (Brewer et al. 2000).

John E. Black
Wood Thrush *Hylocichla mustelina*

Spring and fall transient, uncommon summer resident, extremely rare winter straggler

The earliest date for the spring arrival of this species is 12 April 1968, when Dan Salisbury observed one bird at the Harold Mitchell Nature Reserve in Wainfleet. This species was observed on the Port Weller piers from 4 May to 17 May during the Port Weller Study. Spring transient abundance is unclear because it is not evident which of the small numbers of birds seen outside known breeding areas in the spring are transient and which are arriving in Niagara to breed.

The Wood Thrush breeds throughout southern Ontario and is an uncommon and local summer resident in Niagara. According to the Ontario Nest Records Scheme data, the earliest egg date for this species in Niagara is 23 May.

The latest fall date for this species is of a single bird on 17 October 1966 at Rose Hill Road in Fort Erie (BOSNR).

There is one winter record for Niagara, that of a single bird observed at Port Weller by many observers from 27 to 30 December 1967 (Goodwin 1968:435) and 1, 2 and 4 January 1968 (Dan Salisbury). The Wood Thrush winters in southern Texas and south to Panama (Brewer et al. 2000).

*John E. Black*
American Robin *Turdus migratorius*

Spring and fall transient, very common summer resident, uncommon winter resident

This species is a very common summer resident in Niagara. Large flocks of robins are present in the winter months, but it is not clear how to separate these winter residents from arriving migrants so as to determine an early migrant arrival date or spring transient abundance. March records abound (BOSNR). While American Robins were present on the Port Weller piers they were not counted during the Port Weller Study.

The American Robin, which breeds throughout southern Ontario, is a very common summer resident in Niagara. Only Common Grackle, European Starling and Red-winged Blackbird are found more frequently in the Carolinian region of the atlas (Burke 2007). According to the Ontario Nest Records Scheme data, the earliest egg date for this species in Niagara is 14 April.

This species was observed on all BOS October Counts. There are numerous records for November (BOSNR). An uncommon winter resident (its numbers perhaps swelled by northern stragglers), there are many BOS Noteworthy Records from December to February. There is evidence (see the article on Christmas Bird Counts in this book) that numbers of wintering American Robins have been increasing over the years. The main wintering range of the American Robin is in the southern two-thirds of the United States south to Guatemala and the Bahamas (Brewer et al. 2000).

Banding and Recovery Data: American Robins banded at Long Point have been encountered in Alabama, Georgia, Ohio and Pennsylvania.

*John E. Black*

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**Post-2006 Observation**

On 21 February 2007, two robins arrived and remained to breed at a residence in south St. Catharines (JEB). While there were other robins present from time to time, they arrived in large flocks and feasted on fruit-bearing trees in the area.

*American Robin / Harold Stiver*

Varied Thrush *Ixoreus naevius*

Extremely rare visitor

The Varied Thrush is a striking, robin-sized bird of the Pacific Northwest that is often referred to as the grandest of western songbirds. Its ethereal whistle-like song heard throughout the forests of the west is sometimes referred to as a “kid with a whistle.” The first encounter with this species by John Burroughs, the eminent American writer, naturalist and essayist even resulted in appreciative verse. While on the Harriman Expedition to Alaska in 1899 he wrote:

> *O Varied Thrush! O Robin strange!*  
> *Behold my mute surprise.*  
> *Thy form and flight I have long known,*  
> *But not in this new disguise.*

Though it is still common in most of its range, there is some concern about recent declining trends in the population status of this beautiful western songbird.
The Varied Thrush is regularly known to wander widely across North America from its normal western range (George 2000). Only one record exists for Niagara of this extremely rare visitor. On 28 December 1997 while participating in the Niagara Falls Christmas Bird Count, Rob Dobos, Kevin McLaughlin and Kevin Hannah discovered a female Varied Thrush near the Sunnybrook Farms Winery in Niagara-on-the-Lake. While not seen every day, the bird was last reported on 6 January 1998 (not 2-3 January 1998 as in Ridout 1998:193, BOSNR).

The Varied Thrush breeds throughout Alaska, south through Yukon and British Columbia to central Idaho, and as far south as northern California. It winters along the Alaska and British Columbia coastline to northern Idaho, and as far south as Baja, California (George 2000).

Kayo J. Roy

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Post-2006 Observation

On 6 January 2009, Carole and William Chapman observed an unusual bird at the base of their residence feeders in Fenwick. This brightly coloured male Varied Thrush was an easy identification. It was seen by many birders and well photographed by Bill Watson and Frank and Sandra Horvath, and was not seen after 10 January 2009 (BOSNR, Mann 2009:253).
Gray Catbird *Dumetella carolinensis*

Spring and fall transient, common summer resident, occasional winter straggler

The earliest spring arrival date for this species is 14 April 1991, when a single bird was found at Mud Lake in Port Colborne (JEB). It was present on the Port Weller piers from 7 May to 31 May during the Port Weller Study. Spring transient abundance is uncertain because it is not evident which of the small numbers of birds seen outside known breeding areas in the spring are transient and which are arriving in Niagara to breed.

The Gray Catbird, which breeds throughout southern Ontario, is a common summer resident in Niagara. According to the Ontario Nest Records Scheme data, the earliest egg date for this species in Niagara is 15 May. The latest fall date is of a single bird on 26 October 1968 at Rose Hill Road in Fort Erie (BOSNR).

An occasional winter straggler, Gray Catbird has been found on eight St. Catharines CBCs, on one BOS CBC and on 11 Niagara Falls CBCs. There are two December records and five January records from local birders, the latest date being of a bird seen on 25 January 2004 on Wilson Road in the Wainfleet Bog (JEB, KJR). The winter range of this species extends from the southeastern United States to Panama and to the Greater Antilles, Bermuda and the islands in the Caribbean Sea (Brewer et al. 2000).

John E. Black

First Atlas: 23 squares confirmed, 2 probable, 0 possible
Second Atlas: 24 squares confirmed, 1 probable, 0 possible
BOS April Count: Not reported
BOS May Count: Reported on 40 of 41 counts, maximum of 151 birds in 1967
BOS October Count: Reported on 30 of 41 counts, maximum of 14 birds in 2005
Niagara Christmas Bird Counts: Reported on 16 of 41 counts, maximum of 2 birds 1996, 2001 and 2005

Banding and Recovery Data:
A Gray Catbird banded at Long Point on 8 September 1985 was encountered on 12 January 1986 in Guatemala. Another banded at Long Point on 24 September 1993 was encountered on 15 October 1993 in Alabama.
Northern Mockingbird *Mimus polyglottos*

Uncommon permanent resident

Niagara lies just inside the northern edge of the breeding range of Northern Mockingbird. However, this range is expanding north (Smith and Poon 2007). The Northern Mockingbird is an uncommon permanent resident in Niagara. The first record is of a bird seen at McNab in old Lincoln County on 12 May 1932 by James H. Fleming (Sheppard 1970). In the 1980s, numbers of Northern Mockingbird began to increase. (See the article in this book by Hamilton and DeLeon.)

According to the Ontario Nest Record Scheme data, the earliest egg date for this species in Niagara is 31 May. There is evidence to suggest that it is a more common resident in the northerly portions of Niagara (John Stevens pers. comm.).

The Northern Mockingbird is seen frequently on the Niagara Christmas Bird Counts; in fact, it was seen on all counts but those of 1966. Since 1990 there has been a steady increase in the number of Northern Mockingbirds seen on the CBC. There are 259 BOS Noteworthy Records ranging from January to December.

John E. Black

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Sage Thrasher *Oreoscoptes montanus*

Extremely rare visitor

The Sage Thrasher is one of the rarest birds in Canada and over the past 70 years has experienced an estimated 50% loss of habitat (Cannings 1995). This loss of habitat is primarily caused by agricultural and urban development, burning and clearing of sage, heavy grazing and use of pesticides (Blood 1995). Designated as Endangered in Canada (SARA 2008), the Sage Thrasher is the only species in the genus *Oreoscoptes*, which means “mimic of the mountains.” The species is known to the residents of the
Okanagan and Similkameen valleys as the “poet of the lonesome sagebrush plain.”

There are no recognized subspecies (Cannings 1998).

Remarkably, two of the 13 records accepted by the Ontario Bird Records Committee for Sage Thrasher have been recorded in Niagara. On 20 October 1966, Daniel Salisbury discovered the first at Port Robinson. The specimen (skin) is at the Buffalo Museum of Science, Buffalo, New York (BSNS # 5095) (Wormington 1986, BOSNR, James 1991).

Some 40 years later, on 24 February 2006, Brian Ahara identified a Sage Thrasher at the tip of the east pier of the Welland Canal in Port Weller, St. Catharines. This extremely rare visitor, and the first-ever winter record for Ontario, was seen by many birders and was last observed on 27 February 2006 (Crins 2007a, BOSNR).

The Sage Thrasher breeds from south-central British Columbia through central Idaho to south-central Montana and south through the Great Basin to the northern portions of Arizona, New Mexico, Texas and western Oklahoma (Reynolds et al. 1999). It winters from central California, southern Nevada, northern Arizona, central New Mexico and central Texas south to Baja California and central Mexico (Howell and Webb 1995).

Kayo J. Roy

Brown Thrasher *Toxostoma rufum*

Spring and fall transient, uncommon summer resident, occasional winter straggler

There are three March records of Brown Thrasher (BOSNR). Since it may be found in Niagara during all months of the year, it is not clear if these March sightings are of early migrants or winter stragglers. The earliest April arrival dates are 4 April 1999, when a single bird was seen at the Beamer Memorial Conservation Area in Grimsby (HNCNR), and 5 April 1998, when a single bird was seen on the BOS April Count. It is not clear how to estimate the abundance of spring transients because they cannot be readily distinguished from those birds arriving to breed in the area.

The Brown Thrasher, which breeds throughout southern Ontario, is an uncommon summer resident in Niagara. According to the Ontario Nest Record Scheme data, the earliest egg date in Niagara for this species is 6 May. In the Carolinian region there has been a significant decrease (32%) of this species between atlases (Curry 2006).

There are seven records of Brown Thrasher in the BOS Noteworthy Records for November. They range from 7 November to 25 November. It is an occasional winter straggler in Niagara. In the BOS Noteworthy Records, there are two records in December, nine records in January, and five records in February. A single bird was present at Rose Hill Road in Fort Erie from 9 November 1968 to 26 April 1969 (BOSNR). The Brown Thrasher is rare on the Niagara Christmas Bird Counts. There are three instances of single birds on the BOS CBC, two instances of single birds on the Niagara Falls CBC and one instance of a single bird on the St. Catharines CBC.

Brown Thrashers winter in the southern portion of their breeding range in the United States (Brewer et al. 2000).

Banding and Recovery Data: A Brown Thrasher banded at Long Point on 25 April 1966 was encountered on 8 March 1974 in Kentucky.

John E. Black
European Starling
*Sturnus vulgaris*

Very common permanent resident (introduced)

The European Starling currently breeds throughout southern Ontario and is a very common permanent resident in Niagara. Sheppard (1970) refers to the first recorded observation:

It was first reported in this part of Ontario from St. Catharines in the winter of 1919-1920 and from Fort Erie shortly afterward, but the author subsequently recorded a recollected observation of a group of four or five starlings which were seen to light in a tall tulip tree, close to the railway tracks near the centre of the city of Niagara Falls, sometime in the month of October 1914.

Breeding was confirmed in all squares in both atlases. According to the Ontario Nest Record Scheme data, the earliest egg date for this species in Niagara is 27 April.

In recent years, during the months from August to December, perhaps as many as 50,000 starlings have roosted on the Cytek Property in Niagara Falls. This property (formerly known as Cyanamid) extends 2.0 km north of the Welland River to Brown Road and west of Garner Road for 2.0 km to Townline Road. It consists of areas of open water and Phragmites (*Phragmites australis*). Two good places to watch the birds as they enter this roost are on Brown Road just west of the intersection of Brown and Garner Roads and about 0.5 km south of Brown Road on Garner Road.

On many evenings, from 1997 to 1999, the birds were observed to come into roost from the two locations mentioned above. The bulk of the activity was in the hour before sunset. Starlings staged north of the property on power lines, in trees and in the fields. The actual entry to the marsh could take as little as 30 minutes. While most of the birds observed were starlings, there were also good numbers of swallows, Common Grackles, Brown-headed Cowbirds, Red-winged Blackbirds and smaller numbers of Rusty Blackbirds (JEB). On 27 December 1998, between 1545 hours and 1700 hours EST, the author and his son, in the company of John Miles and his son who were observing for the Niagara Falls CBC that year, counted approximately 30,000 to 60,000 starlings as they entered the roost.

For several years efforts were made to determine where the starlings were roosting in January and February. It was not until 2008 that a roost was discovered with tens of thousands of starlings in St. Catharines in an apartment complex located northeast of the intersection of Carlton St. and Bunting Road. This roost has been occupied in the winter, according to the caretaker of the apartment complex, since at least 2003. The spectacular aerial displays of the starlings as they collected before roosting were amazing (JEB).
The European Starling is the most abundant bird on the Niagara Christmas Bird Counts and has been seen in huge numbers since 1966. One of the attractions in Niagara for the starlings is the icewine grapes that usually stay on the vines until some time in January. (See the articles by Somers and Ziraldo in this book.) Some birds leave Niagara in the winter and migrate south. The percentage of birds that do this is unknown.

Banding and Recovery Data: A Starling banded at Long Point on 11 August 1974 was encountered in December 1974 in Alabama.

John E. Black

American Pipit *Anthus rubescens*
Uncommon spring and fall transient, occasional winter straggler

Formerly known as Water Pipit, the American Pipit is an uncommon spring transient in Niagara. The earliest arrival date is 5 April 1992, when a single bird was seen at the Smithville sewage ponds (HNCNR). The American Pipit was not seen on the Port Weller piers during the five years of the Port Weller Study. The latest spring date is 8 May 1997, when a single bird was seen on the BOS May Count.

The American Pipit breeds from James Bay northwards. There are no summer records in Niagara. There are 12 BOS Noteworthy Records of this species for September. The earliest fall date is 7 September 1968, when one bird was seen at Yacht Harbor in Crystal Beach (BOSNR). There are six BOS Noteworthy Records for November. One of the better locations for finding this bird in the spring and fall is on the Port Weller east pier, where one or two individuals are often heard and then observed flying overhead.

Recently, American Pipits have become occasional winter stragglers as demonstrated by the following observations. There is only one December BOS Noteworthy Record,

BOS April Count: Reported on 8 of 41 counts, maximum of 40 birds in 1989
BOS May Count: Reported on 4 of 41 counts, maximum of 45 birds in 1982
BOS October Count: Reported on 32 of 40 counts, maximum of 286 birds in 1998
Niagara Christmas Bird Counts: Reported on 2 of 41 counts, maximum of 5 birds on the 1991 Port Colborne CBC

American Pipit

Harold Stiver
that of a bird at the Adam Beck overlook in Niagara Falls on 22 December 2005. On 18 January 2004, a bird was present on the old canal in Port Colborne, and on 28 January 2006 a calling bird flew over the Niagara Side of the Fifty Point Conservation Area in Grimsby (JEB). In 2000 two birds were seen on the Port Colborne CBC. In 2001 one bird was reported on the Niagara Falls CBC and five birds on the Port Colborne CBC. American Pipits that breed in Canada winter mainly in the United States and south to El Salvador (DeGraaf and Rappole 1995).

John E. Black

Bohemian Waxwing  *Bombycilla garrulus*

Occasional winter visitor

The Bohemian Waxwing with Holarctic distribution is a bird of the North American west. Some presume the bird originated in Bohemia, hence its name; however, others suggest it was so named because it wanders widely in large nomadic groups in winter. This gregarious, silky, smoothly-plumaged bird is monogamous and nonterritorial with no true song. In winter its irruptive, unpredictable travel patterns in large groups are based on following their food supply of wild fruit and berries. It is believed that the availability of food is more important to them than temperature or latitude, often resulting in their wandering in search of fruit as far east as Newfoundland and the Maritime provinces or as far south as California and Texas. The first record for Niagara of this occasional winter visitor is that of a large flock (exact number unknown) of birds observed by William L. Putman in Beamsville in the winter of 1924 (Sheppard 1970). This same publication identifies the known early records for Niagara. Beardslee and Mitchell (1965) recognize a number of early sightings in the Buffalo area along with the observation of four birds found on 31 December 1961 during the St. Catharines Christmas Bird Count.

During the 1966-2006 time frame of this book, there are 10 known records of Bohemian Waxwing in Niagara. On 19 November 1966, Roy Sheppard located a bird feeding with Cedar Waxwings in Niagara Falls (Sheppard 1970). On 26 December 1968, Harold Axtell found two birds at his residence in Fort Erie (BOSNR). On the same day, Robert Rybczynski located four birds at Queenston (BOSNR). On 1 January 1969, Daniel Salisbury and John Black identified seven Bohemian Waxwings at Queenston (BOSNR). On 24 November 1985, Kayo Roy and Gordon Bellerby discovered an adult bird at Niagara Falls. Five days later, on 29 November 1985, Maxine and Wavell Barber found this or another bird at Chippawa (BOSNR).
On 14 January 1989, Kayo Roy discovered an adult Bohemian Waxwing at Happy Rolph’s Bird Sanctuary in Port Weller. The bird was rediscovered later in the day, to be enjoyed by many birders including Alan J. Smith and Gordon Bellerby (BOSNR). On 2 December 1989, Willie D’Anna reported one at Niagara Falls (BOSNR). The next day Gordon Bellerby and Kayo Roy saw the same or another bird at Niagara Falls. On 22 December 1991, Nel Dekker identified a Bohemian Waxwing in her garden, adjacent to Happy Rolph’s, at Port Weller. It would be nearly 15 years before the next Bohemian Waxwing was reported in Niagara. On 21 May 2006, Willie D’Anna discovered a late lingering bird in Port Colborne (BOSNR).

The Bohemian Waxwing breeds in coniferous or mixed forests from Alaska and British Columbia eastward to Manitoba and Ontario. It winters widely throughout its breeding range or wherever its search for food takes it (Witmer 2002).

Kayo J. Roy

Cedar Waxwing *Bombycilla cedrorum*

Spring and fall transient, common summer resident, uncommon winter resident

Because the Cedar Waxwing is an uncommon winter straggler, there is no way of knowing if birds seen in March and April are arriving migrants or winter stragglers. A flock of 35 to 40 birds was seen at Port Weller on 5 March 1992, and a flock of 40 birds was seen at the Niagara-on-the-Lake sewage ponds on 27 March 1988 (KJR). The earliest count date is 3 April 1977, when a single bird was reported on the BOS April Count. The earliest date recorded during the Port Weller Study was 13 May. Waxwings were then present there until the end of May.

The Cedar Waxwing, which breeds throughout southern Ontario, is a common summer resident in Niagara. According to the Ontario Nest Record Scheme data, the earliest egg date for this species in Niagara is 18 June. With luck one can observe the elegant courtship feeding rituals of these birds in the summer months.

The latest October date is 27 October 1983, when a single bird was seen at Rose Hill Road in Fort Erie (BOSNR). There are no BOS Noteworthy Records for November. Cedar Waxwings are uncommon winter residents in Niagara. They were seen in all but a few years on the CBCs, but numbers are quite variable from year to year. The largest number recorded was 381 in 1994 on the Niagara Falls CBC; however, the previous year yielded only 22 birds on this count. There are no December records, six January records and one February record from the BOS Noteworthy Records. Cedar Waxwings winter from Ontario south through the United States to Panama and the Antilles (Brewer et al. 2000).

Banding and Recovery Data: A Cedar Waxwing banded at Long Point on 27 May 1976 was encountered on or about 28 February 1977 in Guatemala.

John E. Black

**Post-2006 Observation**

A modest irruption of Bohemian Waxwings occurred in Niagara in the late winter of 2007-2008. On 31 December-1 January, Marcie Jacklin, Tim Seburn and Richard Stockton reported one in Fort Erie. On 11 March 2008, Jean and Blayne Farnan discovered 40 birds feeding in their Fielden Avenue backyard crabapple tree in Port Colborne. Four days later, Brian Ahara, Manley Baarda, Kayo Roy and Scott Watson identified six Bohemian Waxwings with numerous Cedar Waxwings in two crabapple trees along Elgin Street in Port Colborne.

Cedar Waxwing

*Bombycilla cedrorum*

Spring and fall transient, common summer resident, uncommon winter resident

Because the Cedar Waxwing is an uncommon winter straggler, there is no way of knowing if birds seen in March and April are arriving migrants or winter stragglers. A flock of 35 to 40 birds was seen at Port Weller on 5 March 1992, and a flock of 40 birds was seen at the Niagara-on-the-Lake sewage ponds on 27 March 1988 (KJR). The earliest count date is 3 April 1977, when a single bird was reported on the BOS April Count. The earliest date recorded during the Port Weller Study was 13 May. Waxwings were then present there until the end of May.

The Cedar Waxwing, which breeds throughout southern Ontario, is a common summer resident in Niagara. According to the Ontario Nest Record Scheme data, the earliest egg date for this species in Niagara is 18 June. With luck one can observe the elegant courtship feeding rituals of these birds in the summer months.

The latest October date is 27 October 1983, when a single bird was seen at Rose Hill Road in Fort Erie (BOSNR). There are no BOS Noteworthy Records for November. Cedar Waxwings are uncommon winter residents in Niagara. They were seen in all but a few years on the CBCs, but numbers are quite variable from year to year. The largest number recorded was 381 in 1994 on the Niagara Falls CBC; however, the previous year yielded only 22 birds on this count. There are no December records, six January records and one February record from the BOS Noteworthy Records. Cedar Waxwings winter from Ontario south through the United States to Panama and the Antilles (Brewer et al. 2000).

Banding and Recovery Data: A Cedar Waxwing banded at Long Point on 27 May 1976 was encountered on or about 28 February 1977 in Guatemala.

John E. Black
Blue-winged Warbler *Vermivora pinus*

Uncommon spring transient, uncommon summer resident, fall transient

The earliest arrival date for the Blue-winged Warbler is 29 April 1990 at Waverley Beach, when a single bird was found (JEB). The May Count numbers of this species increased significantly between the decades 1966-1975 and 1997-2006. (See Hamilton and DeLeon in this book.) The latest recorded date of migration is 31 May 1996, when a single bird was observed on the Port Weller west pier (Port Weller Study). This warbler, the related Golden-winged Warbler, and the Blue-winged x Golden-winged hybrid warblers (Brewster’s and Lawrence’s) are an interesting group of very attractive birds. Note that there is only one Niagara record of Brewster’s Warbler — a single bird located in Malcolmson Eco-Park in St. Catharines on 13 May 1983 (JEB). There are no Niagara records of Lawrence’s Warbler. For a description of these hybrid warblers in Ontario see Vallender and Leckie (2007).

While the Blue-winged Warbler can be found breeding in southern Ontario, it is more common south of Lake Erie (Dunn and Garrett 1997). In Niagara it is an uncommon summer resident. The figures for Niagara in the two atlases would seem to indicate substantial increase in the breeding population of the Blue-winged Warbler here over the last 20 years. This increase is consistent with the overall figures for Ontario. From Vallender (2007) we learn that there was a significant increase (74%) in the probability of observation of this species between atlases. One of the best locations to see this warbler during the second Atlas was on Sherk Road in Niagara Falls; another good location was just north of Sherk Road on Willoughby Drive.

On 4 September 1968 a single bird was reported from Rose Hill Road in Fort Erie, a location where the Blue-winged Warbler does not normally breed (BOSNR). This observation is the latest fall record for this species.

There are no winter records of Blue-winged Warbler for Niagara. This species winters primarily in Mexico and northern Central America (Dunn and Garrett 1997).

*John E. Black*
Golden-winged Warbler

Vermivora chrysoptera

Rare spring transient, extremely rare summer resident, fall transient

The Golden-winged Warbler is designated as a species of special concern in Ontario (OMNR 2007) and as threatened in Canada (SARA 2008, Schedule 1). It is a rare spring transient in Niagara. Our earliest recorded arrival date is 4 May 2006, when a single bird was located in Malcolmson Eco-Park (KJR). The latest recorded date is 20 May 1967, when a single bird was found at Erie Beach in Fort Erie by Dan Salisbury. The May Count numbers of this species decreased significantly between the decades 1966-1975 and 1997-2006. (See Hamilton and DeLeon in this book.) This warbler, the related Blue-winged Warbler, and the Blue-winged x Golden-winged hybrid warblers (Brewster’s and Lawrence’s) are an interesting group of very attractive birds.

The Golden-winged Warbler, while it is found breeding in the southernmost parts of Ontario, is more common north of Lake Ontario. A possible breeding male was observed on 30 June 1968 by Dan Salisbury in St. John’s Conservation Area near Fonthill. In the second Atlas a single case of probable breeding was reported from Short Hills Provincial Park in Fonthill. A singing male was found on 10 June 2002 and again on 27 June 2002. The bird was not found in the park in subsequent years. Sheppard (1970) notes that the Golden-winged Warbler was reported nesting in the Fonthill area.

The earliest date of possible fall migration is 22 August 1970, when a single bird was observed at Rose Hill Road in Fort Erie (BOSNR). The latest recorded date is 27 September 1975, when a single bird was observed at Erie Beach in Fort Erie (BOSNR).

There are no winter records of Golden-winged Warbler for Niagara. This species winters from southern Mexico into South America (Dunn and Garrett 1997).

John E. Black
Tennessee Warbler

*Vermivora peregrina*

Common spring transient, fall transient

This warbler’s striking song, beginning with a “tizip-tizip-tizip”, is often heard before the bird is located. The earliest record of a spring arrival is that of a single bird found on 4 May 1968 at Erie Beach in Fort Erie (BOSNR). The latest record of a spring sighting is for a single bird found on 3 June 1984 at Fort Erie (BOSNR).

The Tennessee Warbler breeds almost entirely in the boreal forests of Canada (Crins 2007c). There are no summer records of this species in the Niagara Region.

The earliest fall report is that of a single bird observed at Rose Hill Road in Fort Erie on 17 August 1966 (BOSNR). The latest recorded date is of three birds observed at Rose Hill Road on 22 October 1968 (BOSNR). The October Count numbers of this species decreased significantly between the decades 1966-1975 and 1997-2006. (See Hamilton and DeLeon in this book.) There are two November records: one of a bird observed on 5 November 1967 at Rose Hill Road and the second of a bird seen on 11 November 1973 near the town of Fort Erie. A single bird was found on 17 November 1979 at Niagara Falls (Goodwin 1980:157).

There are no winter records of Tennessee Warbler for Niagara. This species winters from southern Mexico into South America (Dunn and Garrett 1997).

John E. Black

Orange-crowned Warbler

*Vermivora celata*

Rare spring transient, fall transient, extremely rare summer and winter straggler

Peterson (1980) says of this species that it is a “dingy warbler; without wing bars or other distinctive marks… Song a colorless trill becoming weaker toward the end.” This lack of striking field marks and the non-descript song may be two reasons that not many birds of this species are found here in the spring. Our earliest recorded spring date for this species is 2 May 2003, when a single bird was located in Malcolmson Eco-Park in St. Catharines (KJR). The latest recorded date is of a spring transient seen on the Port Weller west pier on 26 May 1995 (KJR).

The Orange-crowned Warbler breeds in Ontario north of Lake Superior. One summer record exists — that of a single bird observed on 26 June 1985 in St. Catharines (BOSNR).

The earliest recorded date of a fall transient is 5 September 1981, when a single bird was observed at Morgan’s Point near Burnaby (BOSNR). There are nine BOS Noteworthy Records of Orange-crowned Warbler in October. The latest recorded October date is 27 October 1981, when a single bird was observed in Fort Erie (BOSNR). There are two November records of single birds: 5 November 1966 at Rose Hill Road in Fort Erie (BOSNR) and 18 November 1969 at Rose Hill Road (BOSNR).
The Orange-crowned Warbler is an extremely rare winter straggler in Niagara with only three winter reports. A single bird was observed during the 1995 Port Colborne CBC on Steele Street in Port Colborne on 7 January 1996 (KJR) and again on 13-14 January 1996 (BOSNR). From a different source, we learn that this bird was in Port Colborne from 1 December 1995 to 31 March 1996 (Ridout 1996:167). A single bird was observed on the 1968 BOS CBC. A single bird, thought to be injured, was found in Niagara-on-the-Lake on 3 December 1983 (Weir 1984:313). The Orange-crowned Warbler winters from the southern United States through Mexico to Guatemala (Dunn and Garrett 1997).

John E. Black

Nashville Warbler *Vermivora ruficapilla*
Common spring transient, rare summer resident, fall transient

Our earliest arrival date is that of a single bird located on 26 April 1994 at the Smithville sewage ponds (HNCNR). From Dunn and Garrett (1997) we learn that spring migrant Nashville Warblers often feed high in the trees, while fall migrants feed closer to the ground. The latest recorded dates of transients are 27 May 1978, a single bird observed at Morgan's Point near Burnaby by Harold Lancaster, and 27 May 1994, two birds on the Port Weller west pier (Port Weller Study).

In southern Ontario we are at the extreme southern limit of the Nashville Warbler breeding range in Ontario, with large numbers of these warblers found breeding north of Hamilton. They are a rare and local summer resident in Niagara. In the second Atlas, probable breeding was reported from two squares (up to three singing birds were found every year in late June in the Wainfleet Bog), and a single bird was observed carrying what looked like nesting material in Niagara-on-the-Lake on 30 May 2005 but was not found subsequently. Birds in the Wainfleet Bog were found on the trail that begins at the north end of Erie Peat Road in Wainfleet. They were located a few hundred metres past a well-marked trail going to the west at 0.5 km. They were also found on both sides of the trail heading to the west. Finally they were found south of this location, where a poorly maintained trail and road exist just south of a large drainage ditch.

The earliest date of fall migration is 22 August 1974, when a single bird was observed at Rose Hill Road in Fort Erie (BOSNR), and 22 August 1990, when a single bird was observed at Morgan's Point (BOSNR), both areas where these birds are not known to breed. The latest recorded date in October is 15 October 1995, when two birds were observed on the BOS October Count. There is only one November record, that of a single bird found on 4 November 1984 at Fort Erie (BOSNR).

There is only one winter record of this species. From Curry (2006) we learn of a Nashville Warbler observed at Grimsby by Anita Meyers on 3 January 1980. This species winters from northeastern Mexico south into Central America (Dunn and Garrett 1997).

John E. Black
Northern Parula *Parula americana*

**Uncommon spring transient, extremely rare summer straggler, fall transient**

Our earliest arrival date is of a single bird at Grimsby on 27 March 1998 (Ridout 1998:326). The latest date of migration is 25 May 1993, when a bird was found on the Port Weller west pier (Port Weller Study).

The Northern Parula breeds in Ontario north of Lake Ontario. There is one report of possible breeding in the second Atlas; a single bird was heard calling and was observed on Navy Island near Chippawa on 4 July 2002. It was not seen or heard on visits to the Island on 25 June and 31 July 2002. There is a record of one bird on 16 June 1999 at Marcy’s Woods near Point Abino (McCracken et al. 1999). From Alsop (2002) we learn that “Northern Parula is declining on the Great Lakes and Atlantic Coast primarily due to loss of Usnea, a moss-like lichen, as a result of pollutants.” From P.L. McLaren (2007a) we find there is some uncertainty as to whether or not the population is declining in Ontario.

The earliest recorded date of fall migration is 9 September 1971, when a single bird was observed at Rose Hill Road in Fort Erie and another bird was observed at Pinecrest Point in Port Colborne (BOSNR). Latest fall dates are 12 October 1975 and 12 October 2003 on the BOS October Counts and 18 November 2006 at Queenston (BOSNR).

There are no winter records for the Northern Parula in Niagara. The species winters primarily in the West Indies. It is regular but uncommon in winter in southeastern Florida (Dunn and Garrett 1997).

*John E. Black*

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Yellow Warbler *Dendroica petechia*

**Spring and fall transient, common summer resident, extremely rare winter straggler**

Yellow Warblers are a common sight in Niagara in the spring. Just which of these many birds are transients is not at all clear as there is no simple method for distinguishing transients from the large number of birds arriving to breed in the area. Moreover, no late date of migration is available owing to the difficulty of recognizing these transients. Our earliest arrival date is that of a single bird seen at Cook’s Mills on Lyons Creek near Welland by Harold Lancaster on 23 April 1966.

The Yellow Warbler, our most common summer resident warbler, breeds throughout southern Ontario. The nest of this warbler is very easy to find. According to the Ontario Nest Records Scheme data, the earliest egg date for this species in the Niagara Region is 21 May. Beardslee and Mitchell (1965) report an interesting occurrence whereby a male Prothonotary Warbler took over the duties of a male Yellow Warbler on Nye Road about 4 km west of Ridgeway. (See the Prothonotary species account for further details.)
The presence of many resident Yellow Warblers makes it difficult to estimate a fall date for the arrival of transients. These birds are among the first warblers to leave Niagara in the fall. There are no BOSNR records of this warbler in October. A single Yellow Warbler was present at Queenston on 19 November 1989 (Ridout 1996:48). A single Yellow Warbler was reported 19-24 November 1995 in the Niagara Falls area (BOSNR). It was still present on 3 December 1995 (Ridout 1996:167).

The Yellow Warbler is an extremely rare winter straggler in Niagara. A single individual was discovered on the St. Catharines Christmas Bird Count on 14 December 2003. It was found on the Port Weller west pier by Rob Dobos and Kevin McLaughlin. The Yellow Warbler winters from Mexico south to northern South America (Dunn and Garrett 1997).

Banding and Recovery Data: A Yellow Warbler banded at Long Point on 4 August 1985 was encountered on 20 August 1985 in Georgia. Another banded at Long Point on 12 May 1994 was encountered on 27 August 1999 in Louisiana.

John E. Black

Chestnut-sided Warbler *Dendroica pensylvanica*

Common spring transient, uncommon summer resident, fall transient

The earliest record of a spring arrival is of a single bird seen on 1 May 1970 at Malcolmson Eco-Park in St. Catharines (JEB). Between 0800 and 0900 hours on 24 May 1993, counters walking the 800 metres from the Coast Guard station to the end of the west pier were amazed to see 27 Chestnut-sided Warblers (Port Weller Study). The latest date of a spring transient sighting is 29 May 1995, when a single individual was found on the Port Weller west pier (Port Weller Study).

More abundant to our north, the Chestnut-sided Warbler is an uncommon summer resident in Niagara. The atlas figures indicate a substantial increase in the breeding
Magnolia Warbler *Dendroica magnolia*

**Common spring transient, fall transient**

This warbler is a common spring transient in Niagara. Our earliest recorded arrival date is of a single bird seen on 29 April 2004 at Malcolmson Eco-Park in St. Catharines (KJR). On a memorable 24 May 1993, counters walking the 800 metres from the Coast Guard station to the end of the west pier were amazed to see 45 Magnolia Warblers (Port Weller Study). The latest recorded count date in the fall is 13 October 1968, when a single bird was observed on the BOS October Count. On 16 October 1994, a single bird was observed at Erie Beach in Fort Erie (Ridout 1995:43).

There are no winter records for Niagara. The species winters from southern Mexico to eastern Panama (Dunn and Garrett 1997).

Banding and Recovery Data: A Magnolia Warbler banded at Long Point on 27 August 1989 was encountered on 10 September 1990 in Cuba.

*John E. Black*

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population of the Chestnut-sided Warbler in Niagara in the last 20 years. One of the best places to hear, and perhaps see, this species during the second Atlas was at the beginning of the trail that leads into the Wainfleet Bog from the north end of Erie Peat Road in Wainfleet.

The earliest fall report of a possible transient is that of a single bird observed at Rose Hill Road in Fort Erie between 16 August and 23 August 1968 (BOSNR). The latest recorded count date in the fall is 13 October 1968, when a single bird was observed on the BOS October Count. On 16 October 1994, a single bird was observed at Erie Beach in Fort Erie (Ridout 1995:43).

There are no winter records for Niagara. The species winters from southern Mexico to eastern Panama (Dunn and Garrett 1997).

Banding and Recovery Data: A Chestnut-sided Warbler banded at Long Point on 27 August 1989 was encountered on 10 September 1990 in Cuba.

*John E. Black*
Magnolia Warbler
Brandon Holden
Cape May Warbler *Dendroica tigrina*

Rare spring transient, fall transient

These warblers are normally a rare spring transient in Niagara. The earliest recorded arrival is of a single bird found on 30 April 2004 on the Port Weller east pier (JEB). They have been observed on only four of the 10 most recent BOS May Counts. On a memorable 24 May 1993, counters walking the 800 metres from the Coast Guard station to the end of the west pier were amazed to see 21 Cape May Warblers (Port Weller Study). The latest date of migration is 28 May 1994, when a single bird was seen on the Port Weller west pier (Port Weller Study). This is one warbler which clearly has declined in numbers in the Niagara Region since Sheppard (1970) wrote his description of Niagara frontier birds. He described the Cape May as a common migrant.

The Cape May Warbler breeds in Ontario north of Lake Ontario. There is no evidence from either atlas of this species breeding in Niagara. The only summer record is of a single bird found on 26 June 1985 in St. Catharines (BOSNR).

The earliest recorded date of fall migration is 21 August 1966, when one bird was observed at Windmill Point in Fort Erie (BOSNR). The latest recorded fall date in October is 13 October 1968, when a single bird was observed on the BOS October Count. The October Count numbers of this species decreased significantly between the decades 1966-1975 and 1997-2006. (See Hamilton and DeLeon in this book.) In fact, no Cape May Warblers have been reported from an October Count since 1976. There are no November records for this species.

There are no winter records of Cape May Warbler for Niagara. This species winters primarily in the Bahamas and Greater Antilles (Dunn and Garrett 1997).

Banding and Recovery Data: A Cape May Warbler banded at Long Point on 26 August 1976 was encountered on 23 November 1976 in Jamaica. Another banded at Long Point on 24 August 1977 was encountered on 4 September 1977 in West Virginia.

John E. Black

Black-throated Blue Warbler

*Dendroica caerulescens*

Common spring transient, extremely rare summer straggler, fall transient

The Black-throated Blue Warbler is a common spring transient in Niagara. Our earliest recorded arrival dates are those of single birds found on 30 April 1972 in Malcolmson Eco-Park in St. Catharines (JEB), 30 April 1989 at Morgan’s Point near Burnaby (BOSNR) and 30 April 2000 in Marcy’s Woods near Point Abino (KJR). The latest recorded date of migration is 5 June 1997, when single birds were observed at both Windmill Point and Erie Beach in Fort Erie (BOSNR).

The Black-throated Blue Warbler breeds north of Lake Ontario. There are no confirmed cases of breeding in Niagara. In the second Atlas, possible breeding was reported from Marcy’s Woods on 15 June 2001 and probable breeding from the Beamsville area, where a single bird was observed on 16 June and again on 24 June but not after that date. There are two other summer records of single birds: 14 June 1977 in Marcy’s Woods (BOSNR) and 29 June 1986 in Welland (BOSNR).
The earliest fall report is that of a single bird on 18 August 1971 located on Morgan’s Point near Burnaby (BOSNR). The latest October date is of a single individual observed by Dan Salisbury on 16 October 1966 at Morgan’s Point. There is one November record of a single bird seen on 25 November 1990 in Niagara Falls (BOSNR).

There are no winter records of Black-throated Blue Warblers for Niagara. The species winters primarily in the Bahamas and Greater Antilles (Dunn and Garrett 1997).

John E. Black

Yellow-rumped Warbler

*Dendroica coronata*

Very common spring and fall transient, rare winter straggler

Formerly known as the Myrtle Warbler, this species was lumped with the Audubon’s Warbler in 1973, and both were renamed Yellow-rumped Warbler. It is our most abundant spring transient warbler. One of the best locations from which to view this warbler in large numbers in the spring is in the willows along the western shore of Mud Lake in Port Colborne. There are three March records of single birds: 10 March 2000 at Niagara Falls (BOSNR), 11 March 1998 at the Thomas Street Feeder in Chippawa (KJR) and 31 March 1998 at Erie Beach in Fort Erie (BOSNR). It is not clear if these are birds that spent the winter in Niagara or are very early migrants. The earliest April record is 5 April 1998, when a single individual was found on the BOS April Count. The April count numbers of this species increased significantly between the decades 1966-1975 and 1997-2006. (See Hamilton and DeLeon in this book.) On 31 May 1996, one bird was located on the Port Weller east pier, and two were located on the west pier (Port Weller Study), the latest recorded date of observation of this species in the spring. Note that there are no Niagara records of “Audubon’s Warbler.”

The Yellow-rumped Warbler breeds throughout Ontario with the exception of most of the Carolinian region. In the second Atlas there are a number of records of possible and probable breeding of the Yellow-rumped Warbler in Hamilton, but instances of confirmed breeding are found only further north. There are no summer records of this species in the Niagara Region.

The Yellow-rumped Warbler is a very common fall transient. The earliest recorded date of fall migration is 15 August 1982, when a single bird was observed at Rose Hill Road in Fort Erie (BOSNR). The latest recorded date in October is 23 October 1993, when a single bird was observed in Wainfleet Township (BOSNR). There are 13 BOSNR records for November.

Our most frequently found warbler in early winter, it is, nevertheless, a rare winter straggler in Niagara. There are 11 BOS Noteworthy Records of these warblers from 1 December to 31 December. There are also many records of Yellow-rumped Warblers on the Niagara Christmas Bird Counts. In fact, beginning in 1989, these warblers have been found on one or more of the four Niagara Region Christmas Bird Counts on all
but three years. There are a number of local birder observations of Yellow-rumped Warbler on 1 January. Interestingly, there are no records from 2 January until 10 March for this species. This dearth of records may result from a lack of effort on the part of birders in mid-winter, but it may also indicate that the species is very rarely present through the winter. This species winters from the Great Lakes through Mexico to Central America (Dunn and Garrett 1997).

Banding and Recovery Data: A Yellow-rumped Warbler banded at Long Point on 15 October 2000 was encountered on 19 October 2000 in New Jersey. A second banded at Long Point on 7 October 2000 was encountered on 6 February 2002 in Florida. A third banded at Long Point on 6 October 2003 was encountered on 6 February 2004 in North Carolina and a fourth banded at Long Point on 27 October 2004 was encountered in January 2005 in Maine.

John E. Black

Black-throated Gray Warbler

*Dendroica nigrescens*

Extremely rare winter visitor

The Black-throated Gray Warbler is a small western songbird found in the open coniferous and mixed forests of the American west and southern British Columbia. While generally not considered long-distance migrants, birds of this species have been irregularly reported from many eastern states and provinces (Dunn and Garrett 1997).

While there are three accepted OBRC records from neighbouring Hamilton (Curry 2006), there is only one known documented observation in Niagara for this extremely rare visitor. On 13 November 1980, Harold Axtell, Robert Andrle, Paul Conklin and Arthur Schaffner studied an adult male in Niagara-on-the-Lake that remained until at least 23 November 1980 (Wormington and Curry 1990).

The Black-throated Gray Warbler breeding grounds extend from Southern British Columbia, southern Idaho and Wyoming, south to northern Mexico. It winters in western Mexico (Guzy and Lowther 1997).

Kayo J. Roy

Black-throated Green Warbler

*Dendroica virens*

Common spring transient, extremely rare summer straggler, fall transient

The Black-throated Green Warbler is a common spring transient in Niagara. Our earliest recorded arrival date is of a single bird seen on 21 April 2000 at Malcolmson Eco-Park in St. Catharines (KJR). The latest recorded date of migration is 29 May 1993, when a single bird was observed at Niagara Falls (BOSNR).

The Black-throated Green Warbler breeds in Ontario to our west in the Long Point area and to our north, beginning in Hamilton. There are, however, no confirmed records of breeding in Niagara. In the second Atlas, possible breeding was reported on 4 June
2001 and 4 June 2004 from Marcy’s Woods near Point Abino and on 26 June 2003 from the Welland area. One non-atlas sighting was noted, that of a single singing male on 15-16 June 1999 in Marcy’s Woods (McCracken et al. 1999).

The earliest date of fall migration is 19 August 1999, when a single bird was observed at Fort Erie (BOSNR). The latest recorded date in October is 16 October 1966, when a single bird was observed at Morgan’s Point near Burnaby by Dan Salisbury. There is only one November record, that of a single bird on 2 November 1966 at Rose Hill Road in Fort Erie (BOSNR).

There are no winter records of Black-throated Green Warbler for Niagara. This species, which winters from northeastern Mexico to central Panama, is also found regularly in winter in southern Florida (Dunn and Garrett 1997).

John E. Black

Blackburnian Warbler *Dendroica fusca*

Uncommon spring transient, extremely rare summer straggler, fall transient

The Blackburnian Warbler is one of the most striking of all our spring warblers. It is an uncommon spring transient in Niagara, and it is always an occasion when the first bird of the year is located. Our earliest recorded arrival is of a single bird seen on 27 April 1969 at Fort Erie (BOSNR). The latest recorded date of spring migration is of a single bird on 28 May 1995 on the Port Weller west pier (Port Weller Study). May Count numbers of this species decreased significantly between the decades 1966-1975 and 1997-2006. (See Hamilton and DeLeon in this book.)

The Blackburnian Warbler breeds in Ontario to our west in the Long Point area and to our north in Hamilton.

First Atlas: 0 squares confirmed, 0 probable, 1 possible
Second Atlas: 0 squares confirmed, 0 probable, 2 possible
BOS April Count: Not reported
BOS May Count: Reported on 37 of 41 counts, maximum of 39 birds in 1971
BOS October Count: Reported on 19 of 40 counts, maximum of 7 birds in 1971
Niagara Christmas Bird Counts: Not reported

Brandon Holden
The earliest recorded date of fall migration is 9 August 1986, when a single bird was observed at Morgan’s Point near Burnaby (BOSNR). This species was observed on two of the 40 BOS October counts, the largest number of birds reported being two on each of the 1967 and 1970 counts. The latest recorded fall date is 11 October 1970, when two birds were observed on the BOS October Counts.

There are no winter records for Niagara. The species winters mainly in the Andes of South America (Dunn and Garrett 1997).

John E. Black

Yellow-throated Warbler *Dendroica dominica*

Extremely rare spring, fall and winter visitor

Formerly known as the Sycamore Warbler, the Yellow-throated Warbler is an extremely rare spring visitor in Niagara. Andrew Smith found a single male on 15 May 1996 at the Vineland Research Station (KJR). Sheppard (1970) cites one spring record before 1966, a single bird on 20 May 1943 in Niagara Falls.

The northernmost breeding birds of this species, those belonging to the race *albilora*, breed to the south of the Great Lakes (Dunn and Garrett 1997). There are no summer records for Niagara.

There is one fall record, a single bird found at Niagara Falls by Sarah and Chauncy Wood, on 1 November 1988 (Weir 1989:98).

In Niagara the only winter record — 12-19 December 1982 — is of a bird discovered by Hugh Currie, who saw the bird by the International Niagara Control Works structure in Chippawa (BOSNR). Currie flagged down a car to get to a telephone to report the bird and to his surprise found the driver was Harold Axtell, a very prominent local ornithologist. The race *albilora* of this species winters from eastern Mexico south through Nicaragua (Dunn and Garrett 1997).

John E. Black

Pine Warbler *Dendroica pinus*

Uncommon spring transient, fall transient, occasional winter straggler

The Pine Warbler is a rare to uncommon spring transient in Niagara. Our earliest recorded spring date is that of a single bird reported from 13-14 March 1985 at Niagara-on-the-Lake (Weir 1985:295). Our next earliest recorded arrival date is that of a single bird observed on 15 April 1982 at the Beamer Memorial Conservation Area in Grimsby (JEB). The latest date of migration is 21 May 1967, when a single individual was seen on the BOS May Count.

In Ontario the Pine Warbler breeds mainly north of Lake Ontario, although some breeding birds are found to our west in the Long Point area and to our north in Hamilton. One Pine Warbler was observed by Maggie Smiley on 9 June 2005 at Niagara Shores Conservation Area in Niagara-on-the-Lake during the second Atlas but was not found on a subsequent visit on 16 June. Niagara Shores does have some large pines that might be suitable for the breeding of Pine Warblers. From Crins (2007d) we learn that there was a significant increase (over 100%) in the probability of observation of this
species in the Carolinian region between atlases. A lack of any substantial pine forest habitat may be the reason for the absence of this species breeding in Region 11.

The earliest recorded date of fall migration is 17 September 1991, when a single bird was observed at Niagara Falls (BOSNR). The latest recorded date in October is 11 October in 1987 and 1998, when single birds were observed on the BOS October Counts. There is one November record: 11 November 1966, when a single bird was observed at Rose Hill Road in Fort Erie (BOSNR).

In Niagara it is an occasional winter straggler. There are nine December records, all but two of single birds: 12 December 1988 at Niagara Falls (BOSNR); 18-31 December 1991 at Niagara Falls (BOSNR); Christmas Counts of 1983 (three birds); 1985; 1994; 1999; 2000 (two birds); 2002 and 2006. There are five January records of single Pine Warblers: 1 January 1984 at Fort Erie (JEB); 1 January 1986 in a Woodlot on Beaverdams Road in Thorold (Found on the St. Catharines Christmas Count 22 December 1985, this bird was still present on 1 February (JEB).); 5 January 2002 at the International Niagara Control Works structure in Chippawa (KJR); 25 January 2004 at Morgan’s Point near Burnaby (JEB and KJR); and 22 January 2006 at Dufferin Island, Niagara Falls (JEB). This last mentioned bird was first observed by Richard Rosher on about 15 January (Willie D’Anna pers. comm.) and stayed around until at least 20 February (BOSNR) at a small feeder beside the parking area where people feed ducks in the winter. It is quite possible that there are many winter occurrences of this species which are not reported, given that this species may stay in one woodlot or at one feeder for many months of the winter. The hardy Pine Warbler winters mainly in the southern half of the United States (Dunn and Garrett 1997).

John E. Black

Prairie Warbler

*Dendroica discolor*

Occasional spring transient, extremely rare summer straggler

The Prairie Warbler was designated a species of Special Concern by the Committee on the Status of Species at Risk in Canada and by the Ontario Ministry of Natural Resources in 1985 but was downlisted to Not At Risk in 1999. “There has been no substantial change in the distribution of the Prairie Warbler in Ontario since the first atlas” (Sutherland and Harris 2007). In Niagara, this species is an occasional spring transient, for which there are eight spring records. Our earliest recorded arrival date is of a single bird found on 1-2 May 1993 on the Port Weller west pier (Port Weller Study). Single birds were observed on the 1972, 1977 and 1997 May Counts. A single bird was found by Mary Ellen Hebb on or about 7 May 1984 and rediscovered on 14 May 1984 at Malcolmson Eco-Park in St. Catharines on a Baillie Birdathon (JEB). Single birds were seen on 15-18 May 1997 on the Port Weller west pier (Port Weller Study) and on 26 May 1967 at Erie Beach in Fort Erie (BOSNR).
Rare and local in Ontario in the summer, most Prairie Warblers breed to the south of Lake Erie (Dunn and Garrett 1997). There is one summer record from Niagara, a bird reported as probable on the second Atlas.

This singing bird was first observed in Wainfleet Bog on 6 June 2001 and was last observed there on 15 June 2001. It was not found on 21 June 2001 (JEB).

There are no fall records, but with a small population nesting to the north in Ontario it is probable that prairie Warblers occur occasionally in the autumn in Niagara.

There are no winter records for Niagara. This species winters mainly in the West Indies, but it is also numerous in the winter months in southern Florida (Dunn and Garrett 1997).

John E. Black

Palm Warbler  
*Dendroica palmarum*

Common spring transient, fall transient, extremely rare winter straggler

Dunn and Garrett (1997) comments that this species pumps its tail more than any other warbler. One of the best locations from which to view large numbers of these birds in the spring is along the western shore of Mud Lake. It is a common spring transient in Niagara. Our earliest recorded arrival date is of a single bird found by Brian Ahara on 9 April 2000 on Garner Road, Niagara Falls (KJR). The latest recorded date of migration is 27 May 1994, when a single bird was seen on the Port Weller west pier (Port Weller Study).

The Palm Warbler breeds in Ontario north of Lake Superior. There are no summer records from Niagara.

The earliest recorded date of fall migration is 2 September 1989, when a single bird was observed at Fort Erie (BOSNR). The latest recorded date is 26 October 1969, when a single bird was observed at Rose Hill Road in Fort Erie (BOSNR). There are no November records.

The Palm Warbler is an extremely rare winter straggler in Niagara, there being only two winter records. On 1 January 1997 a single bird was observed at Fort Erie (BOSNR, Ridout 1997:746). A single bird was found by Betsy Potter and Vicki Rothman on 18 December 2005 on the BOS Christmas Bird Count. It was in the bushes beside the parking lot immediately south of the International Niagara Control Works structure in Chippawa. It was seen again on 19 December 2005. This species winters mainly in the southeastern United States (coastal North Carolina) and the Caribbean region (Dunn and Garrett 1997).

John E. Black
Bay-breasted Warbler *Dendroica castanea*
Uncommon spring transient, fall transient

Between 0800 and 0900 hours on 24 May 1993, counters walking the 800 metres from the Coast Guard station to the end of the west pier were amazed to see 36 Bay-breasted Warblers (Port Weller Study). They are normally an uncommon spring transient. Our earliest recorded arrival date for this warbler is of a single bird found on 1 May 1970 at Malcolmson Eco-Park in St. Catharines (JEB). The latest recorded date of migration is 5 June 1977, when a single bird was observed at Thunder Bay (BOSNR).

In Ontario the Bay-breasted Warbler breeds to the north of Lake Ontario. There is only one summer record in Niagara — a single bird observed in Welland on 29 June 1986 (BOSNR).

The earliest recorded date of fall migration is 17 August 1984, when an individual was located at Windmill Point in Fort Erie (BOSNR). On 31 August 1997, Stuart Mackenzie observed approximately 300 Bay-breasted Warblers along Fifty Creek and throughout the Fifty Point Conservation Area (HNCNR). The latest recorded date for these birds in the fall is 13 October, when single birds were found on both the 1974 and 1996 BOS October Counts.

There are no winter records for Niagara. This species winters from Costa Rica to northern South America (Dunn and Garrett 1997).

*John E. Black*

Blackpoll Warbler *Dendroica striata*
Uncommon spring transient, fall transient

An uncommon spring transient in Niagara, the Blackpoll Warbler is often the last spring transient warbler heard in my yard in south St. Catharines in the first week of June (JEB). The earliest recorded arrival date is that of a single bird found on 8 May 2000 at Point Abino woods in Fort Erie (JEB, KJR). The latest recorded date of migration is 5 June 1997, when single birds were seen at both Windmill Point and Erie Beach in Fort Erie (BOSNR).

Blackpoll Warblers breed in Ontario from the latitude of the southern end of James Bay northward. According to Sutherland (2007e) “this species has the most northerly distribution of any warbler in the province.” There were no records of breeding reported in the two atlases. There were, however, a few records of stragglers. In 2003 atlassers reported a single bird in Niagara Falls that was first heard on 9 June and again on 16 June but was not heard on 17 June. On 13 June 2003, atlassers found a single bird in Marcy’s Woods near Point Abino. These stragglers were probably late migrants. Singing birds are still passing through Virginia in late May (John Rappole pers. comm.). On 19 July 1970, a single Blackpoll was found on Windmill Point Road in Fort Erie (BOSNR).

The earliest date of fall migration is 21 August 1978, when a single bird was observed at Cedar Bay near Gasline (BOSNR). The latest recorded date in the fall is 14 October 2001, when one bird was observed on the BOS October Count.

*BOS April Count: Not reported*
*BOS May Count: Reported on 33 of 41 counts, maximum of 36 birds in 1972*
*BOS October Count: Reported on 8 of 40 counts, maximum of 3 birds in 1971*
*Niagara Christmas Bird Counts: Not reported*
There are no winter records for Niagara. This species winters almost exclusively in South America. To get there, Blackpoll Warblers fly out over the Atlantic from eastern Canada to their wintering grounds, a journey of as many as 4,200 kilometres over water. Wintering Blackpoll Warblers have been recorded as far as 40 degrees south in Argentina and Chile, a fact which makes them the southernmost wintering migrant North American warbler (Dunn and Garrett 1997).

John E. Black

Cerulean Warbler *Dendroica cerulea*

Rare spring transient, rare and local summer resident

The Cerulean Warbler is designated a species of special concern in Ontario (OMNR 2007) and Canada (SARA 2008, Schedule 1). It is a rare spring transient in Niagara. Our earliest arrival date is that of a single bird discovered on 1 May 1994 at Port Weller (Port Weller Study). An unusual record is of three birds found together on 11 May 1991 by Louis Haviland, also found by Alan J. Smith, in a tree at the north end of the Port Weller east pier (KJR). The latest spring sighting is 15-20 May 1997, when a single bird was observed on Port Weller east pier (Port Weller Study). There is a later record for 31 May 1999 in Marcy’s Woods near Point Abino (McCacken et al. 1999). This bird may not have been a spring migrant. The tall canopy dominated by red oak at Marcy’s Woods is ideal habitat for this species. This bird may have been a wandering prospecting male (Donald Sutherland pers. comm.).

First Atlas: 0 squares confirmed, 1 probable, 3 possible
Second Atlas: 0 squares confirmed, 0 probable, 2 possible
BOS April Count: Not reported
BOS May Count: Reported on 17 of 41 counts, maximum of 5 birds in 1971
BOS October Count: Not reported
Niagara Christmas Bird Counts: Not reported
Strongholds for the Cerulean Warbler in Ontario, in order of decreasing abundance, are the Frontenac Axis, the Midland Peninsula, Skunk’s Misery and the Norfolk Sand Plain (Donald Sutherland pers. comm.). It was a rare and local breeding bird here in the mid-1960s. In the last 24 years there has been only one confirmed breeding record. In the first Atlas, possible breeding was reported from three squares and probable breeding from one square (Navy Island). In the second Atlas, two singing birds were found, both reported to the atlas as possibly breeding. One bird on 25 June 2005 just west of the Niagara Region on Lake Erie first called in response to a tape recording but did not respond to the tape a week later. A second bird was heard on 3 July and 7 July 2002 on Abino Hills Road in Point Abino but was not heard subsequently. One or two singing males, presumed breeding, were present in Marcy’s Woods from 1967 to 1979 but were not heard in 1985 (JEB). From Natural History Information Centre data we learn of one bird whose breeding calls were heard on Navy Island on 10 June 1990 by Bob Curry. We also learn of breeding birds in the Caistor-Canborough Slough Forest in 1983 (nest with young), 1985 (1 singing male) and 1986 (8 singing males). Bob Curry comments:

On 5 June 1983 I counted eight singing male Cerulean Warblers at the swamp woods south west of Winslow. As you know the Niagara-Haldimand line bisects this slough forest running in a nw-se line. Some of these singing males were on either side of the line. Glenda Slessor and I visited this site on 9 May 2001 when there was but one singing territorial male Cerulean. We did not visit the site again until two days in 2005: 1 June and 23 June. No Ceruleans on either date. The habitat has changed very little, but, sadly, the Ceruleans are gone. These birds were so close to the line that I think you should include them in Niagara Birds. When there were eight males I believe at least some of the territories were in fact in Niagara. In 2001 the single singing male was near the road right on the county/region line.

There are no fall or winter records of Cerulean Warbler for Niagara. The species winters almost exclusively in northern South America (Dunn and Garrett 1997).

John E. Black

Black-and-white Warbler

*Mniotilta varia*

Uncommon spring transient, fall transient

The Black-and-white Warbler is an uncommon spring transient in Niagara. Our earliest arrival date is that of a single bird observed on 26 April 1989 in north St. Catharines (KJR). The latest recorded date of migration is 31 May 1995, when three birds were found on the Port Weller piers (Port Weller Study).

The Black-and-white Warbler breeds in Ontario to our west in the Long Point area and to our north starting in Hamilton. There are no records in the first Atlas of this species in Niagara. In the second Atlas there are two squares in which possible breeding was reported. A single bird was found 14 June 2001 in the Welland area and single birds were observed in Marcy’s Woods near Point Abino on 15 June 2001 and 10 June 2002. There are three additional summer records in Niagara. Single birds were observed in Marcy’s Woods on 14 June 2001 (BOSNR; note this could be the same bird
reported there the next day) and 16 June 1999 (McCracken et al. 1999). On 22 June 1999, Rob Eberly observed a bird building a nest at Point Abino. According to Ontario Nest Records Scheme data, this nest was eventually abandoned.

The earliest date of fall migration is 9 August 1986, when an individual was observed at Morgan's Point near Burnaby (BOSNR). The latest recorded date in the fall is 13 October 1974, when a single bird was observed on the BOS October Count.

There are no winter records for Niagara. This species winters mainly in the Bahamas and Greater Antilles and from Mexico to South America and is also fairly common in winter in peninsular Florida (Dunn and Garrett 1997).

Banding and Recovery Data: A Black-and-white Warbler banded at Long Point on 5 May 1986 was encountered on 24 October 1989 in Belize.

John E. Black
American Redstart
*Setophaga ruticilla*

Common spring transient, uncommon summer resident, fall transient, extremely rare winter straggler

Between 0800 and 0900 hours on 24 May 1993, counters walking the 800 metres from the Coast Guard station to the end of the west pier observed 30 American Redstarts (Port Weller Study). Although they are a common spring transient, these numbers are exceptionally high. Our earliest arrival date is that of single birds found on 4 May 2000 at Point Abino (JEB, KJR) and 4 May 2004 at Malcolmson Eco-Park in St. Catharines (JEB). The May Count numbers of this species decreased significantly between the decades 1966-1975 and 1997-2006. (See Hamilton and DeLeon in this book.) The latest recorded date of migration is 31 May 1996, when three birds were seen on the Port Weller piers (Port Weller Study).

The American Redstart breeds throughout southern Ontario but is an uncommon summer resident in Niagara. The possible and probable numbers from both atlases may be misleading as the American Redstart is one of the few passerines of which the males do not reach full breeding plumage until their second breeding season. First year males may sing and defend territories, but not all will attract a mate (P.L. McLaren 2007b).

Owing to the presence of summer resident birds, it is difficult to estimate a date of fall migrant arrival. There is only one November record, a single individual on 23 November 1983 in Niagara Falls (BOSNR).

There is one winter record for Niagara: a single bird at Niagara Falls on 18 December 1994 (Ridout 1995:144). The species winters from northwestern Mexico south to South America and is also found in Trinidad, Bermuda, the West Indies and southern Florida in the winter months (Dunn and Garrett 1997).

Banding and Recovery Data: An American Redstart banded at Ruthven Park in Cayuga, Ontario, on 20 May 1997 was encountered on 23 October 1997 in North Carolina.

*John E. Black*

Prothonotary Warbler *Protonotaria citrea*

Occasional spring transient, extremely rare summer straggler and fall transient

Prothonotary Warbler is designated an endangered species in Ontario (OMNR 2007) and Canada (SARA 2008, Schedule 1). It is an occasional spring transient in Niagara. There are no spring count records for this species. From Sheppard (1970) we learn that only three Prothonotary Warblers were observed in the spring in the Niagara Region prior to 1966. Since 1966 there have been six spring records of single individuals: May 1982 Port Colborne (Weir 1982: 848), 2 May 2003 at Mud Lake in Port Colborne (KJR), 6 May 1993 at Port Weller west pier (Port Weller Study), 15 May 2005 at Mud Lake (Blayne and Jean Farnan), 23 May 1971 at Mud Lake (Harold Lancaster) and 26 May 1967 at Point Abino (BOSNR).
There are a few records of breeding Prothonotary Warblers to our west, but the northern edge of their main breeding area lies well south of the Great Lakes (Dunn and Garrett 1997). Summer records include single birds on 11 June 1977 at Windmill Point in Fort Erie (BOSNR) and 13 June 1979 at Abino Hills in Point Abino (BOSNR). On 21 June 1986, a singing male of this species was observed in a willow-Buttonbush slough on Point Abino (Natural Heritage Information Centre data). Beardslee and Mitchell (1965) report an interesting occurrence of a male Prothonotary Warbler taking over the duties of a male Yellow Warbler on Nye Road about 4 km west of Ridgeway:

“On June 24, 1956 a nest was found with two young who were being fed by the male Prothonotary and by a female Yellow Warbler. No nest was found in 1957 but on June 14, 1958 a nest with four young was found and on June 14, 1959 a nest with four eggs was located. In both cases a Yellow Warbler brooded the young [and the Prothonotary was present]. No interspecific nesting was proved, since all the young were believed to be Yellow Warbler. In fact, in our opinion, the Prothonotary took over the duties of the male Yellow Warbler after the eggs were laid.”

There is only one fall record, 27 August 1978, of a single bird on Reeb Road, Wainfleet found by Harold Lancaster.

There are no winter records for Prothonotary Warbler for Niagara. The species winters mainly from southern Mexico south to South America (Dunn and Garrett 1997).

John E. Black

Worm-eating Warbler *Helmitheros vermivorum*

Occasional spring transient

In Niagara the Worm-eating Warbler is an occasional spring transient “overshoot” (Heagy and Sutherland 2007). This bird is often heard before it is seen since it forages at low levels in fairly dense woodland. Its song is a rapid trill, similar to that of the Chipping Sparrow but perhaps a little faster and heard in locations where a Chipping Sparrow would not be expected. There are seven spring records, all of single birds: 19 May 1989 St. Catharines (Weir 1989:474), 1 May 1994 Port Weller east pier (BOSNR and Port Weller Study), 4 May 2003 Port Weller east pier (JEB), 5 May 2002 Malcolmson Eco-Park in St. Catharines found by Katherine Stoltz (BOSNR), 6 May 2000 Marcy’s Woods near Point Abino (JEB), 21 May 2006 BOS May Count and 30-31 May 2004 at Morgan’s Point near Burnaby (Blayne Farnan). Sheppard (1970) cites only two April records and one May record for this species prior to 1966.

There are a few records of Worm-eating Warblers breeding to our west, but the northern edge of their main breeding areas lies well south of the Great Lakes (Dunn and Garrett 1997). There are no summer records for Niagara.

There are no fall or winter records for Niagara. The species winters mainly from Mexico south to Panama and in the West Indies (Dunn and Garrett 1997).

John E. Black
Ovenbird *Seiurus aurocapilla*

Uncommon spring transient, uncommon summer resident, fall transient

The Ovenbird is an uncommon spring transient in Niagara. Our earliest arrival date is that of a single bird located on 1 May 1996 on the Port Weller east pier (KJR). The latest recorded date of migration is 31 May 1996, when a single bird was reported from the Port Weller east pier (Port Weller Study).

The Ovenbird is a fairly common breeding bird in Southern Ontario. In Niagara it is an uncommon summer resident. One of the best places to hear, and perhaps see, Ovenbirds during the second Atlas survey period was on the trail into the Wainfleet...
Bog that begins at the north end of Erie Peat Road in Wainfleet. Kroodsma (2005) describes a flight song of the Ovenbird heard in the middle of the night. These flight songs can also be heard during the day (Michael Cadman pers. comm.). Although there were a number of woodlots where Ovenbirds were calling, there were no confirmed records of nesting in the second Atlas, perhaps because the nest of this ground-nesting species is very difficult to find even though its approximate location is relatively easy to determine.

The earliest date of a possible fall migrant is 6 September 1968, when Dan Salisbury observed a single bird at Port Weller. The latest date of observation is 11 October, and there are three records of birds on that date. In 1966 a single bird was found at Rose Hill Road in Fort Erie (BOSNR); in 1970 two birds were seen on the BOS October Count, and in 1987 a single bird was found on the BOS October Count.

There are no winter records for Niagara. The species winters mainly in Mexico, Central America and the Caribbean Region (Dunn and Garrett 1997).

Banding and Recovery Data: An Ovenbird banded at Long Point on 30 August 1978 was encountered on 26 September 1984 in Tennessee.

John E. Black

Northern Waterthrush *Seiurus noveboracensis*

Uncommon spring transient, occasional summer resident, fall transient

The Northern Waterthrush is an uncommon spring transient in Niagara, usually associated with small streams or wet areas. Its habit of bobbing helps separate it from most other warblers for identification purposes, but not from the similar, and much rarer, Louisiana Waterthrush, which also bobs. Our earliest recorded arrival date is of a single bird seen on 26 April 1974 in Malcolmson Eco-Park in St. Catharines (JEB). The latest recorded date of migration is 25 May 1993, when a single bird was found on the Port Weller west pier (Port Weller Study).

The Northern Waterthrush breeds in Ontario to our west in the Long Point area and to our north, beginning in Hamilton. In the second Atlas possible breeding was reported in two squares. A single bird was observed on 9 June 2003 in Willoughby Marsh in Niagara Falls, but was not found on a visit to the site on 16 June 2003. A single bird was located in the Humberstone Marsh which is located in Port Colborne on 9 June 2003. One other summer record is of a single bird located on 16 June 1999 at Marcy’s Woods near Point Abino by McCracken and others (1999). According to Sheppard (1970), “...this ground warbler is probably, to some extent, a summer resident.”

The earliest date of fall migration is 16 August 1991, when a single bird was observed at Port Colborne (BOSNR). The latest recorded date is 19 September 1987, when a single bird was observed at Ridgeway (BOSNR).

There are no winter records of Northern Waterthrush for Niagara. This species winters mainly from Mexico to South America and in the West Indies. It is uncommon but regular in southern Florida in the winter (Dunn and Garrett 1997).

John E. Black
Louisiana Waterthrush

*Seiurus motacilla*

Occasional spring transient, extremely rare summer resident or straggler, extremely rare fall transient

This considerably less common of the two waterthrush species, the Louisiana Waterthrush, is designated a species of special concern in Ontario (OMNR 2007) and Canada (SARA 2008, Schedule 1). An occasional spring transient in Niagara, the Louisiana Waterthrush arrives on its breeding grounds in late April (Wood 2004), a fact which may account for the paucity of sightings. From Natural Heritage Information Centre data we find a record for Swayze Falls in Pelham 5 May 1982 and a record from 30 Mile Creek in Beamsville April 1984 and May 1985. We also find reference to a Beamer’s Falls site, just below the Beamer Memorial Conservation Area in Grimsby, where nesting birds were found in 1956-1960, and single calling birds were found on 20 April 1974 and 28 April 1990. Another early arrival date is that of a single bird seen on 1 May 1966 at Mud Lake in Port Colborne (Harold Lancaster). Other records of single birds reported by Lancaster are as follows: 4 May 1975 at Mud Lake, 11 May 1975 on Reeb Road, Wainfleet, 23 May 1971 at Mud Lake and 28 May 1972 on Reeb Road in Wainfleet. There are two Port Weller Study sightings: 24 May 1993 on the Port Weller west pier and 15 May 1994 on the Port Weller east pier.

In Ontario the Louisiana Waterthrush breeds to our west on the Norfolk Sand Plain but also at scattered locations along the Niagara Escarpment, the Oak Ridges Moraine and the Frontenac Axis region in southeastern Ontario (Donald Sutherland pers. comm.). It is also found to our south on the Lake Erie shore of New York State (Dunn and Garrett 1997). It is an extremely rare summer resident in Niagara, and there has been no confirmed breeding of this species since 1960. There were two observations of Louisiana Waterthrush in the first Atlas, a possible breeding record on the headwaters of 12 Mile Creek in Decew Gorge in Thorold (Wood 2004) and a probable record at the 30 Mile Creek site west of Beamsville. There were no records of Louisiana Waterthrush in the second Atlas. Note that atlassers visited the 30 Mile Creek site on 4 May 2004, 6 June 2005 and 25 May 2005 and no Louisiana Waterthrushes were heard or seen (JEB). Cheskey (2003) reported no Louisiana Waterthrushes from the headwaters of 12 Mile Creek in June of 2003. Sheppard (1970) comments “…this ground warbler is believed to nest in the district.”

There is one fall record of a single bird observed on 20 August 1985 at Fort Erie (BOSNR). There are no winter records of Louisiana Waterthrush for Niagara. This species winters mainly from Mexico south to Panama. It is also found in the Bahamas and Greater Antilles (Dunn and Garrett 1997).

John E. Black
Kentucky Warbler

*Oporornis formosus*

Extremely rare spring, summer and fall visitor

The Kentucky Warbler is a secretive ground-foraging bird, possibly one reason why it is rarely found in Niagara. There are four spring records: 8-10 May 1983 a single bird at Mud Lake in Port Colborne (BOSNR, JEB), 8 May 2000 a single bird on the BOS May Count, 15 May 1976 two birds on the BOS May Count and on 17 May 1977 a single bird at Erie Beach in Fort Erie (BOSNR). Sheppard (1970) cites two Niagara spring records for this species prior to 1966.

The Kentucky Warbler is not known to breed in Ontario, but is found breeding to the south of Lake Erie (Dunn and Garrett 1997). On 2-3 June 1993, Jarmo Jalava and Sean Blaney performed a breeding bird survey in the Fonthill Kame (Fonthill Sandy Valleys – SJF7). A single Kentucky warbler was observed and described as a possible breeding bird. The site was revisited on 12 June 1993 (Ridout 1993:1106) and a singing male was again encountered, but on a 25 June visit by Jalava, Richard Knapton and Marcia Jacklin the bird was not rediscovered (Riley et al. 1996).

There is one fall record of a single bird found by Harold Lancaster on 4 September 1978 at Mud Lake in Port Colborne.

There are no winter records of Kentucky Warbler for Niagara. The species winters mainly from Mexico south to Honduras (Dunn and Garrett 1997).

*John E. Black*

Connecticut Warbler

*Oporornis agilis*

Occasional spring transient, fall transient

With a total of 11 spring records, the Connecticut Warbler is an occasional spring migrant in Niagara. This bird is frequently heard before it is seen because it often forages on the ground in dense vegetation. Our earliest recorded arrival date is of a single bird observed on 12 May 1999 on Port Weller east pier (KJR). The latest recorded date of migration is 3 June 1966, when a bird was reported from Rose Hill Road in Fort Erie (BOSNR).

The Connecticut Warbler breeds in Ontario north of Lake Superior. There are no summer records of this species in Niagara.

The earliest date of fall migration is 7 August 1986, when a single bird was observed at the Grimsby sewage ponds (HNCNR). There are only three other fall records of single birds: 4 September 1978 Reeb Road in Wainfleet by Harold Lancaster; 24 September 1970 Rose Hill Road (BOSNR); 10 October 1971 on the BOS October Count. There are no November records.

There are no winter records of Connecticut Warbler for Niagara. The winter range of this species is the most poorly understood of all warblers. There are no documented records of wintering birds north of South America (Dunn and Garrett 1997).

*John E. Black*
Mourning Warbler *Oporornis philadelphia*

Uncommon spring transient, uncommon summer resident, fall transient

The Mourning Warbler is a ground-feeding and somewhat secretive species. It is difficult to see in migration but relatively easy to find in summer, when its distinctive song, a “cheery-cheery-cheery-chory-chory”, can be heard. Our earliest arrival date is that of a single bird found on 14 May 1991 on the Port Weller east pier (KJR). The latest spring date is 31 May 1996, when a single individual was located on Port Weller east pier (Port Weller Study).

The Mourning Warbler, more abundant to our north, is an uncommon summer resident in Niagara. One of the best places to hear, and perhaps see, Mourning Warbler during the second Atlas survey period was at the head of the trail into the Wainfleet Bog at the north end of Erie Peat Road in Wainfleet. It has also been found on side trails that run to the east and west of this trail about 0.5 km north of the end of Erie Peat Road.

The earliest recorded date of possible migration is 20 August 1990, when a single bird was found in Fort Erie (BOSNR). The latest fall date is 13 October 1974, when a single bird was seen on the BOS October Count.

There are no winter records of Mourning Warbler for Niagara. The species winters from southern Nicaragua to South America (Dunn and Garrett 1997).

*John E. Black*

Common Yellowthroat *Geothlypis trichas*

Common spring transient, common summer resident, fall transient, extremely rare winter straggler

The Common Yellowthroat is a common spring transient in Niagara. This is borne out by results from the Port Weller Study which show many birds were reported although only a few individuals are known to breed on the piers. Our earliest arrival date is that of a single bird found at Mud Lake in Port Colborne by Harold Lancaster on 18 March 1966. There is only one April record, a single bird seen on 29 April 1990 at Waverley Beach in Fort Erie (JEB). It is difficult to estimate a late date for spring migration as it is not clear how to distinguish transient Common Yellowthroats from birds that have arrived to breed in the Niagara Region.

The Common Yellowthroat, which breeds throughout southern Ontario, is a common summer resident in the Niagara Region. The nest is difficult to find, and as of 2006 only two records for this species had been submitted to the Ontario Nest Record Scheme. According to their data, the earliest egg date for this species in the Niagara Region is 23 May.

The presence of many resident birds makes it difficult to estimate a date of transient arrival in the fall. The latest recorded date in the fall is 20 October 1974, when a single bird was observed at Clinton (now Lincoln) Township (BOSNR).

For this extremely rare winter straggler, there is only one winter record. A bird was found in Malcolmson Eco-Park in St. Catharines by Barb Charlton, Rob Dobos, Kevin McLaughlin and Paul Rose during the St. Catharines Christmas Bird Count of 18 December 1994. This species winters south from the Carolinas through Central America and in most of the West Indies (Dunn and Garrett 1997).

*John E. Black*
Banding and Recovery Data: A Common Yellowthroat banded at Long Point on 23 September 1968 was encountered on 1 October 1968 in Pennsylvania. A second banded at Long Point on 31 May 1973 was encountered in the fall of 1974 in Florida. A third banded at Long Point on 24 September 1995 was encountered on 1 May 1998 in Tennessee.
Hooded Warbler Wilsonia citrina

Rare and local summer resident, extremely rare fall transient

The Hooded Warbler is designated as a threatened species in Ontario (OMNR 2007) and Canada (SARA 2008, Schedule 1). Prior to 1993, the first year that birds were found nesting in Niagara, there were only four spring records from independent birders and eight records from the BOS May Counts for this species. Our earliest arrival date is that of a single bird found on 29 April 1984 on the escarpment near Brock University in St. Catharines (JEB). There were two sightings of Hooded Warbler on the Port Weller Study. Sheppard (1970) cites only two spring records for this species prior to 1970.

Though most common in the Carolinian zone, the Hooded Warbler breeds north of Niagara in Durham, Hamilton, Halton, Northumberland, Peel, Peterborough, Simcoe, Waterloo and York counties. It is a rare and local summer resident here. In the first Atlas, possible breeding was reported from only one square. In the second Atlas, possible breeding was reported from four squares, probable breeding from two squares and confirmed breeding from seven squares. These figures indicate a substantial increase in the breeding population of Hooded Warblers in Niagara. From D.S. Badzinski (2007c) we learn that a 400% increase in the number of Hooded Warbler nests reported in Ontario occurred between the first and second atlases and that Niagara had 33 of the 300 nests found during the second Atlas.

The earliest evidence of confirmed Hooded Warbler breeding in Niagara was obtained on 2-3 June 1993, when Jarmo Jalava and Sean Blaney performed a breeding bird survey in the Fonthill Kame (Fonthill Sandy Valleys – SJF7). As part of the same survey, a visit to the North Pelham Valley (NPV11) by Jalava on 2 June led to the identification of Hooded Warbler as a probable breeding bird (Riley et al. 1996). Six male birds were present on 20 June 1993, three of which were paired (Ridout 1993: 1106). Two pairs later fledged young. Mary Gartshore and Peter Carson entered the Fonthill Kame from McSherry Street in Fonthill and saw three males, two females and two to four fledged young (about 25 days old) on 10 July 1993 (Mary Gartshore pers. comm.). From Natural Heritage Information Centre data, we learn of a pair found on Navy Island near Chippawa on 23 May 1985 but not seen there on 6 June 1985. (This presumably is the possible record reported from Navy Island in the first Atlas.) We also learn of the Richard Knapton and Blayne Farnan observation of two nests in Marcy’s Wood in Fort Erie in 1998 and four males (two nests) in the Fonthill Kame in 1998. See also the description of the observation by Rob Eberly and Jon McCracken of three singing male Hooded Warblers in Marcy’s Woods near Point Abino on 16 May 1999 (McCracken et al. 1999). Cheskey (2003) reported that 33 pairs of Hooded Warbler were found in the Twelve Mile Creek Headwaters Important Bird Area located in Pelham. The best location for seeing this warbler during the years of the second Atlas was at the south end of Holloway Bay Road near Point Abino. Birds were found on the Marcy’s Woods trail, on the Holloway Bay Road itself and on the roads leading off Holloway Bay Road to the west.

There is only one fall record, 29 August 1996, of a single bird at Niagara Falls (BOSNR). There are no winter records from Niagara for this species. The Hooded Warbler winters mainly from eastern Mexico south to the Caribbean region of Honduras and Nicaragua (Dunn and Garrett 1997).

John E. Black
Wilson’s Warbler *Wilsonia pusilla*
Uncommon spring transient, fall transient

The species is an uncommon spring transient in Niagara. Our earliest recorded arrival date of a Wilson’s Warbler is of a single bird seen on 8 May 1979 at Crescent Beach in Fort Erie (BOSNR). The latest recorded date of a spring migrant is of a single individual on 31 May 1993 on the Port Weller west pier (Port Weller Study).

Wilson’s Warbler breeds in Ontario north of Lake Huron. There are no summer records from Niagara. The earliest recorded date of fall migration is 19 August 1979, when a single bird was observed at Morgan’s Point near Burnaby (BOSNR). The latest recorded fall date is 13 October 1969, when a single bird was observed at Rose Hill Road in Fort Erie (BOSNR). There are no winter records of Wilson’s Warbler for Niagara. The species winters mainly from northern Mexico to Panama (Dunn and Garrett 1997).

John E. Black

Canada Warbler *Wilsonia canadensis*
Uncommon spring transient, occasional summer resident, fall transient

The Canada Warbler is an uncommon spring transient in Niagara. Our earliest recorded arrival date is that of a single bird seen on 30 April 1984 on the escarpment near Brock University in St. Catharines (JEB). May Count numbers of this species decreased significantly between the decades 1966-1975 and 1997-2006. (See Hamilton and DeLeon in this book.) The latest recorded spring migration date is 28 May 1994 on the Port Weller west pier (Port Weller Study).

The Canada Warbler breeds in Ontario to our west in the Long Point area. In the second Atlas, probable breeding was reported from the Wainfleet Bog, where a bird was observed on 6 June and 13 June 2001 but not on 21 June, and from the Port Colborne area where a bird was observed on 8 June and 15 June 2004 but not later in June. For five years in the summer months, as many as two pairs of Canada Warblers were present in the Wainfleet Bog, about 1 km north of the end of Biederman Road.

They were first heard 14 June 1992, and one was observed carrying food on 28 June of that year. Two Canada Warblers were heard on 16 June 1996, and none was heard on the last visit to the site on 8 June 1997 (John Black pers. comm.). From Sheppard (1970) we learn that Putnam (1952) found Canada Warbler to be regular in the breeding season in the ravines at Jordan and Grimsby, with singing males present in June.

The earliest recorded date of fall migration is 12 August 1967, when a single bird was observed at Morgan’s Point near Burnaby (BOSNR). The latest recorded date in October is 14 October 1984, when a single bird was observed on the BOS October Count. There are two November records of single birds: 11 November 1967 at R.W. Sheppard’s home in Niagara Falls (Dan Salisbury) and 25 November 1990 in Niagara Falls (BOSNR).

There are no winter records of Canada Warbler for Niagara. This species winters primarily in northern South America (Dunn and Garrett 1997).

John E. Black
Yellow-breasted Chat *Icteria virens*

Occasional spring transient, rare and local summer resident, extremely rare winter straggler

The Yellow-breasted Chat is designated as a species of special concern in Ontario (OMNR 2007), and in Canada the eastern population (*I.v. virens*) is similarly designated (SARA 2008, Schedule 1). It is an occasional spring transient or straggler in Niagara. We have a total of nine spring records of single birds found between 1966 and 2006. The earliest record is for 3 May 1970 at Morgan’s Point near Burnaby by Harold Lancaster. Other dates and locations are as follows: 28 May 1972, 19 May 1974 and 19 May 1975 — all on Reeb Road, Wainfleet by Harold Lancaster; 11 May 1993 on Port Weller east pier (Port Weller Study); 5 June 1994 in Wainfleet (KJR), 23-24 May 1998 on Port Weller east pier at the edge of the north wood (JEB); 28 May-3 June 2003 in Stevensville by George Melvin (JEB); and 31 May 2006, Erie Peat Road in Wainfleet (JEB). Sightings in late May and early June are in locations where it is possible the bird could breed, but they may simply be of stragglers.

We are at the northern limit of the breeding grounds for the Yellow-breasted Chat (Dunn and Garrett 1997). According to Donald Sutherland: “This species is notoriously ephemeral in its occupancy of sites, particularly those at or near the extreme northern periphery of its range. There are a number of examples of apparently anomalous nesting events at sites for which there was no history of the species. It occupies early successional vegetation and, in Ontario, particularly shrub thickets bordering wetlands, e.g., Wainfleet Bog” (Donald Sutherland pers. comm.).

The earliest egg date for this species in the Niagara Region is 16 June, according to Ontario Nest Records Scheme data. During the first Atlas on 16 June 1984, a nest with eggs was discovered in the Wainfleet Bog. On a visit to the bog one week later, the nest had been depredated (JEB). A chat was observed for a number of days off Wilson Road near Garringer Road in Wainfleet in early June 1985 (JEB). In the second Atlas a single bird was seen on 11 June 2005 in a field off Highway 406 near Fourth Street Louth in St. Catharines. It was not found on subsequent visits to the area (JEB). From the Natural Heritage Information Centre data we find six additional summer sites of possible, probable or confirmed breeding birds: two sites in 1983 (one unlisted and one at Grassy Brook, Welland); one new site in 1988 in the Caistor-Canborough Slough Forest (this site may be just outside the Niagara Region); two new sites in Wainfleet in 1990 and one new site in Wainfleet in 1991.

There are no fall records for this species.

For this extremely rare winter straggler, there is only one record, that of a single bird that stayed from 8 December 1994 to 10 January 1995 in the yard of Frank Banfield on Yates Street in St. Catharines. This species winters mainly from Mexico south to Panama (Dunn and Garrett 1997).

*John E. Black*
Summer Tanager *Piranga rubra*

Extremely rare visitor

The Summer Tanager is an insectivorous bird of the dry oaks and mixed forests of the southern United States. While it feeds on a wide range of insects, it is well known that a major part of the diet is made up of bees and wasps. There is very little information on the survivorship and life span of Summer Tanager; the longest recorded lifespan is five years (Robinson 1996).

Beardslee and Mitchell (1965) describe a few Buffalo area sightings of Summer Tanager but not any for Niagara. Roy Sheppard describes seeing one, the first record for Niagara, at the far end of his garden in Niagara Falls on 7 September 1960 (Sheppard 1970).

The Summer Tanager is an extremely rare visitor to Niagara with only four known records between 1966 and 2006. The first is that of two Summer Tanagers observed by Raymond Lowes on 2 May 1970 at Beamsville (Curry 2006).

On 10–11 May 1983, John Black discovered an adult male at Malcolmson Park in St. Catharines. Miriam Klepfer and Robert Andrle and others noted another Summer Tanager on 19–20 May 1984 at Erie Beach in Fort Erie (BOSNR). Gary Novosel, Willie D’Anna, Kayo Roy and William Watson studied an adult male at Mud Lake, Port Colborne on 6 May 1991 (BOSNR). It is interesting that all four of these observations occurred within a span of only 19 days during May of each year.

The breeding range for Summer Tanager is the southern United States and northern Mexico north to southern Iowa and New Jersey. It winters from southern Mexico south to northern South America (Robinson 1996).

Kayo J. Roy
Scarlet Tanager *Piranga olivacea*

Spring and fall transient, uncommon summer resident

The male Scarlet Tanager, with its bright scarlet body and black tail and wings, is the only Ontario bird with this striking color combination. It is most likely to be found in the upper canopy of the forest. The earliest arrival date in Niagara is 3 May 1970, when four birds were seen by Harold Lancaster at Mud Lake in Port Colborne. By early May, Scarlet Tanagers have arrived to breed in Niagara and they have been seen on 38 of 41 BOS May Counts. It is not clear how to estimate the abundance of spring transients because they cannot be readily distinguished from those birds arriving to breed in the area.

The Scarlet Tanager breeds throughout southern Ontario and is an uncommon summer resident in Niagara. This “robin with a sore throat” (a robin-like song but hoarse) prefers deciduous forest with large trees. Fireman’s Park in Niagara Falls was a reliable location at which to see this species during the years of the second Atlas.

The latest fall date is 16 October 1983, when a single bird was seen on the BOS October Count. Interestingly, there were no observations of Scarlet Tanager on the October Count after the year 1983.

There are no winter records of this species for Niagara. The Scarlet Tanager winters in South America from Columbia to Bolivia (Brewer et al. 2000).

*John E. Black*

Western Tanager *Piranga ludoviciana*

Extremely rare visitor

The male Western Tanager is a brightly coloured, very distinctive, widespread bird of the western North American coniferous forests. Interestingly, the red pigmentation on the face of the male is called rhodoxanthin, which is very rare in birds (Hudon 1999). The bird does not manufacture this red colouration; instead, it must be acquired by diet (Hudon 1999).

The first recorded observation of Western Tanager for Niagara is that of a bird found at Herbert O’Reilly’s feeder in Tintern on 18 December 1957. This bird was last seen on 13 February 1958 (Beardslee and Mitchell 1965, Curry 2006) when it likely succumbed to the extremely harsh winter weather that occurred that week.

The Western Tanager is an extremely rare visitor to Niagara with only three further occurrences during the 1966–2006 time frame of this book. Maria and Lorne Featherston discovered a male on 15 May 1989 at Fort Erie (Wormington and Curry 1990). Margaret Cunningham identified a female Western Tanager at her backyard
feeder in Wainfleet on 5–8 December 1992 (not 3–7 December as in Ridout 1993: 255 and not Port Colborne as in Bain (1994) and Henshaw and Kerr (1993)). On 7 May 2000, Edmund Stevens and others observed a male in alternate plumage at Point Abino, Ridgeway (Roy 2001).

The breeding grounds for Western Tanager are widespread in the west. They breed from southern Northwest Territory and southeastern Alaska, south through the western United States and east to western Manitoba, to the Black Hills of South Dakota, and to western Texas. It winters from central Mexico through to Costa Rica. Some individuals have been known to overwinter in California (Hudon 1999).

Kayo J. Roy
Green-tailed Towhee *Pipilo chlorurus*

One historical record

The Green-tailed Towhee is a shy bird of the scrublands of the Rocky Mountains of western North America. While it is the smallest of all North American towhees, it is one of the larger members of the sparrow-bunting family Emberizidae. The Green-tailed is the only entirely migratory member of all North American towhees, arriving on breeding grounds in June and leaving for wintering grounds by August.

One historical record of Green-tailed Towhee exists for Niagara. In late March 1954 (exact date unknown), Gertrude Selby identified a Green-tailed Towhee at John Young's residence feeder in Welland. The bird was last seen on 18 April 1954 (Beardslee and Mitchell 1965, Sheppard 1970, Wormington 1987, James 1991). Harold Axtell, Bernard Nathan and Arthur Schaffner were among the many area birders lucky enough to see and confirm the identification of this first record of Green-tailed Towhee for Ontario and Niagara.

The Green-tailed Towhee breeds in western North America from Oregon and central Montana south to southern California, central Arizona, New Mexico and western Texas. It winters in the southern parts of Texas, New Mexico and Arizona and through Baja California into Mexico (Byers et al. 1995).

Kayo J. Roy
Spotted Towhee *Pipilo maculatus*

Extremely rare visitor

The Spotted Towhee is a distinctive, large New World bird of the sparrow-bunting family Emberizidae, which is often heard before it is seen. While once considered a separate species, then briefly lumped as a subspecies with the eastern Rufous-sided Towhee, an AOU split in 1995 once again returned full species status to this western race of Rufous-sided Towhee. A bird of the open woods, it generally rummages for food among dead leaves in woodlot undergrowth and its brushy edges.

With only three known occurrences during the 1966–2006 time frame of this book, the Spotted Towhee is an extremely rare visitor to Niagara. The first is that of a bird observed on 27 November 1968 at Roy Sheppard’s residence in Niagara Falls. The bird made numerous visits to the garden over the next four and one-half months, and excellent colour photographs taken by Paul Benham clearly revealed the bird to be an immature female. It was last seen on 12 April 1969 (Sheppard 1970).

On 4 December 1976, Harold Axtell identified a basic female of the *montanus* subspecies at his Fort Erie residence that remained to 12 December 1976 (Dobos 1999). Daniel Salisbury discovered Niagara’s third Spotted Towhee, a male, on 17 December 1978 also at the home of Roy Sheppard in Niagara Falls. This bird was last observed on 21 December 1978.

The Spotted Towhee breeds in southern Canada from British Columbia east to Saskatchewan, then south to western Texas, Mexico and Guatemala. It winters from southern British Columbia, southern Idaho and western Colorado south and east to Kansas and Texas (Greenlaw 1996)

*Kayo J. Roy*

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**Post-2006 Observation**

John and Mary McNeil invited Blayne Farnan to visit their Port Colborne residence to identify a bird at their feeders that appeared to be different. Observing the bird, Blayne instantly told the homeowners that their avian guest was an adult male Spotted Towhee. The bird first appeared on 17 January 2009 and remained to be enjoyed by many observers until 21 February 2009 (BOSNR). This Spotted Towhee, appearing 31 years after the last visit to Niagara by a Spotted Towhee, was at times difficult to see; however, the photograph by James Pawlicki leaves no doubt as to the identity of this welcome winter visitor from the American west.

*Spotted Towhee*  
*Jukka Jantunen*
Eastern Towhee *Pipilo erythrophthalmus*

Spring and fall transient, uncommon summer resident, occasional winter straggler

At one time the Eastern Towhee was lumped with the Spotted Towhee (a western North American species) and the two were known as Rufous-sided Towhee. In 1995 this species was again split, with those breeding east of the Great Plains named the Eastern Towhee. There are nine Niagara March records of Eastern Towhee (BOSNR). Since it is found in all months of the year, it is not clear if these March records are of early migrants or winter stragglers. The earliest April arrival date is 3 April 1977, when a single bird was seen during the BOS April Count. Birds were found from 1 May to 16 May on the Port Weller piers during the Port Weller Study. It is not clear how to estimate the abundance of spring transients because they cannot be readily distinguished from those birds arriving to breed in the area.

The Eastern Towhee breeds throughout southern Ontario and is an uncommon summer resident in Niagara. The number of atlas squares with confirmed breeding has dropped substantially in Niagara, with a decline in the probability of observation between atlases in the Carolinian region of 16% (Timpf 2007). According to the Ontario Nest Record Scheme data, the earliest egg date for this species in Niagara is 9 June. One of the few easy locations to locate these birds in recent years has been in the Wainfleet Bog, 0.5 km from the start of the trail into the bog beginning at the north end of Erie Peat Road in Wainfleet.

There are seven Niagara BOS Noteworthy Records of this species for November. They range from 1 November to 29 November.

Eastern Towhee is an occasional winter straggler in Niagara. There are BOS Noteworthy Records of seven birds in December, nine birds in January and five birds in February. The Eastern Towhee is a rare bird on the Niagara CBCs. There are nine instances of single birds on the BOS CBC, nine records on the Niagara Falls CBC, three records on the Port Colborne CBC and two records on the St. Catharines CBC. The Eastern Towhee winters mainly from the Mid-Atlantic States south to Florida and the Gulf Coast (Brewer et al. 2000).

*John E. Black*

American Tree Sparrow *Spizella arborea*

Spring and fall transient, common winter resident

American Tree Sparrows are often seen in loose and mixed flocks on arable land and pasture, along forest edges, hedgerows and at feeding trays from October to May. Prior to 1966 individuals were noted in the Niagara Frontier area from 20 September to 15 May (Beardslee and Mitchell 1965). On the BOS May Count, single birds were sighted on only two occasions: 16 May 1971 and 18 May 1986, the latter date being the latest spring record. Birds were sighted on 11 of 41 BOS October Counts, with early records for 8 October in 1972, 1989 and 2000. One hundred birds were noted in Jordan on 30 October 1966 (BOSNR), the largest number observed that month.

During the winter months, the American Tree Sparrow is a common resident in Niagara. This hardy species was the second most common emberizid encountered on Niagara CBCs, which yielded an average of five birds per party hour. Influxes of American Tree Sparrows in the region have occurred periodically. Particularly large
increases in numbers occurred during the winters of 1968-1969 and 1969-1970, when 12 birds per party hour were observed. A familiar feeder species, about three to seven birds are seen per feeding station in Niagara (Project FeederWatch).

By mid-September, American Tree Sparrows start to leave their breeding grounds in the far north to winter in southern Canada, including central and southern Ontario, and throughout much of the United States east of the Rockies (Naugler 1993, Rising 1996). Since 1966, CBC data have shown that the numbers of American Tree Sparrows visiting Niagara have been relatively stable. In contrast, the North American population has shown a gradual decline from three to two birds per party hour during the last 30 years. A factor contributing to this decline may involve increased development and clearing of habitat on the wintering grounds (Naugler 1993). Project FeederWatch data indicate that the numbers of birds attending feeding stations in North America have been relatively stable. In some years, the species may be uncommon locally owing to heavy snow cover and a resulting lack of available forage (Beardslee and Mitchell 1965).

Banding and Recovery Data: An American Tree Sparrow banded at Long Point on 20 March 1970 was encountered in January 1972 in Ohio. One banded at Long Point on 7 November 1974 was encountered on 12 March 1975 in Ohio, and another banded at Long Point on 30 October 1998 was encountered on 17 March 2001 in Michigan.

Daniel R. Kozlovic
Chipping Sparrow *Spizella passerina*

Spring and fall transient, common summer resident, occasional winter straggler

There is one March record of Chipping Sparrow for Niagara (BOSNR). Since this species is found in almost all winter months in Niagara, this bird may have been a winter straggler rather than a spring migrant. The earliest unambiguous migrant arrival date is 8 April 1999, when a single bird was seen at the Beamer Memorial Conservation Area in Grimsby (KJR). By May, Chipping Sparrows have definitely arrived to breed and they have been seen on all BOS May Counts. It is not clear how to estimate the abundance of spring transients because they cannot be readily distinguished from those birds arriving to breed in the area.

The Chipping Sparrow breeds throughout southern Ontario and is a common summer resident in Niagara. According to the Ontario Nest Record Scheme data, the earliest egg date for this species in Niagara is 22 May. From data obtained in the second Atlas it would seem that the Chipping Sparrow, with an estimated population of 12 million birds, is one of the most abundant birds in Ontario in the summer (Cadman 2007c).

On 8 October 1990, 80 Chipping Sparrows were found among a large grounding of transient sparrows at Fifty Point Conservation Area (HNCNR). There are seven BOS Noteworthy Records for November, ranging from 1 November to 27 November.

The Chipping Sparrow is an occasional winter straggler in Niagara. There are reports from the BOS Noteworthy Records of one bird in December and two birds in February. One bird was seen in Niagara-on-the-Lake on 28 December 1986 (Weir 1987: 278). A single bird was seen in Niagara on 1 January 1975 (JEB and others). A single bird with missing tail feathers was observed at feeders on Erie Peat Road in Wainfleet on 22 January and again on 26 January 1997 (JEB, KJR). The Chipping Sparrow is a rare Niagara CBC bird. There are four records from the Niagara Falls CBC, one from the Port Colborne CBC and six from the St. Catharines CBC. The Chipping Sparrow winters in the southern United States and south to Central America (Brewer et al. 2000).

Banding and Recovery Data: A Chipping Sparrow banded at Long Point on 2 June 1967 was encountered on 3 January 1969 in Louisiana.

*John E. Black*
Clay-colored Sparrow *Spizella pallida*

Extremely rare visitor

The Clay-colored Sparrow is a bird of the bushy grasslands and northern prairies of interior United States and Canada. A common and widespread bird, the Clay-colored Sparrow is perhaps the most numerous passerine of low shrub communities, especially in the southern parts of the Canadian Prairie provinces. The plowing of the Prairies considerably reduced the habitat for this species, but the clearing of eastern forests extended its range northeastward to the eastern Great Lakes region (Knapton 1994).

There is no mention of Clay-colored Sparrow for Niagara in Beardslee and Mitchell (1965).

During the 41-year period of this book, 1966-2006, there are only five known records of this extremely rare visitor to Niagara. On 10 July 1968, William L. Putman observed the first Clay-colored Sparrow for Niagara at the Horticultural Experiment Station in Vineland (Sheppard 1970). Sheppard comments, "Mr. Putman's Vineland record would appear to be unique for Canada's Niagara Frontier territory."

On 1 May 1970, Daniel Salisbury identified a Clay-colored Sparrow at Mud Lake near Port Colborne. On 29 December 1970, Daniel Salisbury located another at the Honsberger farm in Jordan. Salisbury took Paul Benham and John Black to the location on 1 January 1971, where they had an opportunity to study this bird at length. On 16 May 1971 during the BOS May Count, Harold Mitchell located a Clay-colored Sparrow at Fort Erie.

Twenty-three years later, on 8 May 1994 during the Port Weller Study, John Black and Mary Ellen Hebb discovered a Clay-colored Sparrow in a grassy area just north of the Canadian Coast Guard Station on the Port Weller west pier, St. Catharines. The BOSNR does not show any records of this species for Niagara.

The Clay-colored Sparrow breeds in the interior of North America from eastern British Columbia through central and southern Manitoba to the eastern Great Lakes. It winters in southern Texas and south through Mexico (Knapton 1994).

Kayo J. Roy

**Post-2006 Observation**

On 5 June 2007, while looking for Henslow's Sparrows, John Black and Daniel Salisbury discovered a territorial Clay-colored Sparrow singing from the top of several small trees and bushes along a grassy section of land adjacent to the Welland Canal at the west end of Young Road, Welland, Ontario. Kayo Roy photographed the bird on 7 June 2007, and it was seen on numerous subsequent visits to the area. It is not known if this singing male ever found a partner, but the bird was last observed, still on territory, on 2 July 2007. Photo: Kayo Roy
Field Sparrow *Spizella pusilla*

Spring and fall transient, uncommon summer resident, occasional winter straggler

The Field Sparrow is one of the top 20 common North American species in decline, as determined by the National Audubon Society (Audubon 2007). There are two March BOS Noteworthy Records of this species. A single bird was seen at Rose Hill Road in Fort Erie on 18-21 March 1973 and three birds were seen at Port Colborne on 8 March 1980. Harold Lancaster located a single bird at Morgan’s Point near Burnaby on 27 March 1966. Since Field Sparrows are found in Niagara in all months, it is not clear if these March sightings are of early migrants or of winter stragglers. The earliest April date is 7 April 1968, when a single bird was seen on the BOS April Count. Small numbers of Field Sparrows were seen on the Port Weller piers on most days from 1 May to 23 May during the Port Weller Study. It is not clear how to estimate the abundance of spring transients because they cannot be readily distinguished from those birds arriving to breed in the area.

The Field Sparrow breeds throughout southern Ontario and is an uncommon summer resident in Niagara. According to the Ontario Nest Record Scheme data, the earliest egg date in Niagara for this species is 25 May. The decline in squares with confirmed breeding in Niagara may be a reflection of the 17% decrease in probability of observation of this species between atlases in the Carolinian region (M.A. McLaren 2007c).

The latest October record is of two birds observed on 20 October 1985 during the BOS October Count. There are no BOS Noteworthy Records for September or October.
There are eight BOS Noteworthy Records for November ranging from 1 November to 30 November. Field Sparrows are occasional winter stragglers in Niagara. There are BOS Noteworthy Records of two birds in December, three birds in January and two birds in February.

Field Sparrows winter from Kansas east to Massachusetts, and south to Florida and northeastern Mexico (Brewer et al. 2000).

Banding and Recovery Data: A Field Sparrow banded at Ruthven Park in Cayuga, Ontario, on 13 October 2000 was encountered on 14 February 2001 in Arkansas.

**Vesper Sparrow**

*Poecetes gramineus*

Spring and fall transient, uncommon summer resident, extremely rare winter straggler

There is only one March BOS Noteworthy Record for the Vesper Sparrow — a single bird seen on 31 March 1967 at Rose Hill Road in Fort Erie. This is also the earliest spring arrival date. The Vesper Sparrow is a rare bird on the Port Weller piers in the spring; only two records appear in the Port Weller Study. It is not clear how to estimate the abundance of spring transients because they cannot be readily distinguished from those birds arriving to breed in the area.

The Vesper Sparrow breeds throughout southern Ontario and is an uncommon summer resident in Niagara. It is most easily found by listening for its lyrical song in suitable open habitat before sunset, and it prefers recently fallow fields with a hedgerow of small trees. According to the Ontario Nest Record Scheme data, the earliest egg date for this species in Niagara is 18 May. The probability of observing this species in the Carolinian region between the two atlases declined by 16% (Rising 2007a). Prior to 1966 this species was abundant in Niagara. Sheppard (1970) describes it as “A common summer resident of the rural roadsides and pastures… most abundant in some parts of the area, particularly along the dirt roads and byways of the Welland County sector.” Much of the decline in numbers in Niagara in recent years can be attributed to a loss of suitable habitat to urbanization and vineyards.

The latest October sighting is of one bird observed on 21 October 1973 at Fort Erie on the BOS October Count (BOSNR). There are two November records — a single bird seen on 7–11 November 1966 at Rose Hill Road (BOSNR) and a single bird observed on 21 November 1969 near Grassie by Harold Lancaster.

It is an extremely rare winter straggler in Niagara, as borne out by a complete lack of BOS Noteworthy Records for the winter months. This sparrow is a rare find on Christmas Bird Counts. There are only two records: one bird in 1969 and another in 1993, both on the BOS CBC. The Vesper Sparrow winters in the southern United States and northern Mexico (Brewer et al. 2000).

John E. Black
Lark Sparrow *Chondestes grammacus*

Extremely rare visitor

The Lark Sparrow is a large attractive bird of farmlands, grasslands, pastures and road-sides of the Great Plains, central Texas and the American west (Beadle and Rising 2003). A gregarious bird, its bold facial pattern of chestnut, white and black distinguishes it from all other sparrows (Beadle and Rising 2003). The Lark Sparrow nested at one time in the east but since the 1930s has declined steadily as a result of reforestation and urbanization (Martin and Parrish 2000).

Primarily a ground-foraging omnivorous bird, it is extremely pugnacious during the breeding season (Lambeth 1998). This eye-catching species feeds mainly on seeds and insects and is a short to medium distance migrant (Martin and Parrish 2000). The Lark Sparrow is, however, clearly known to occasionally wander eastward. The Ontario Bird Records Committee has accepted 82 records of this species in the province up to the end of 2008 (Richards 2009).

The Lark Sparrow is an extremely rare visitor to Niagara. The first record for the region is that of a bird found by Richard Drobits on 11 May 1956 at Morgan’s Point near Burnaby (Beardslee and Mitchell 1965, Sheppard 1970).

During the 1966-2006 time frame of this book, there were no observations of Lark Sparrow reported from Niagara.

The Lark Sparrow breeds from south central Canada southward to northern Mexico, westward to the California coast, and eastward to the Mississippi River and western Indiana. It winters primarily in California and from Texas south through Mexico. Scattered individuals may be found throughout the United States and along the eastern coast (Martin and Parrish 2000).

Kayo J. Roy
Lark Bunting
*Calamospiza melanocorys*

Extremely rare visitor

Lark Buntings are unusual among sparrows in that they have a high degree of sexual dimorphism. The male completely moults from a distinctive bright breeding plumage to a dull drab winter plumage. Only one record exists in Niagara for this common grassland species of the western plains.

On 13 October 1990 while birding around the Grimsby sewage ponds, Alfred Epp, Kevin McLaughlin and George Naylor came upon a large, stocky drab-looking sparrow along a gravel pathway. McLaughlin immediately identified the bird as a female Lark Bunting. To the enjoyment of many birders this bird remained until 14 October 1990 (Curry 1991, 2006).

Lark Buntings breed in the southern portion of Canada’s Prairie provinces of Alberta and Saskatchewan and in the Great Plains, south to northern Texas and northwestern New Mexico. The species winters from the south Great Plains to central Mexico (Shane 2000).

Kayo J. Roy

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Savannah Sparrow
*Passerculus sandwichensis*

Spring and fall transient, very common summer resident, occasional winter straggler

The earliest arrival date is 23 March 1972, when a single Savannah Sparrow was seen at Rose Hill Road in Fort Erie (BOSNR). There were Port Weller sightings from 1 May to 16 May during the Port Weller Study. It is not clear how to estimate the abundance of spring transients because they cannot be readily distinguished from those birds arriving to breed in the area.

The Savannah Sparrow breeds throughout southern Ontario and is an uncommon summer resident in Niagara. According to the Ontario Nest Record Scheme data, the earliest egg date for this species in Niagara is 24 May.

A loose fall flock of 75 transient Savannah Sparrows was observed at the Grimsby sewage ponds on 17 August 1993 (HNCNR). There are two November records of single individuals: one bird on 3 November 1991 at the Smithville sewage ponds (HNCNR) and another on 6 November 1966 at Rose Hill Road (BOSNR).

An occasional winter straggler in Niagara, the Savannah Sparrow was seen on one year on the BOS CBC, two years on the Niagara Falls CBC and two years on the St. Catharines CBC. On 24 January 1985, a single bird was seen at the feeder on Erie Peat Road in Wainfleet (JEB). This species winters in the southern half of the United States and south to Honduras. It is also found in the Bahamas, Cuba and on Grand Cayman and Swann Islands (Brewer et al. 2000).

John E. Black
Grasshopper Sparrow *Ammodramus savannarum*
Occasional spring transient, common and local summer resident, fall transient

The Grasshopper Sparrow is one of the top 20 common North American species in decline, as determined by the National Audubon Society (Audubon 2007). This species is almost never seen outside its known breeding grounds in Niagara in the spring. The earliest arrival date is 26 April 1999, when a single bird was seen at the Smithville sewage ponds (HNCNR). There were no Port Weller sightings during the five years of the Port Weller Study.

The Grasshopper Sparrow breeds throughout southern Ontario and is an uncommon summer resident in Niagara, which is near the northern limit of its breeding range. The 48% decline between atlases in the probability of observation of this species in the Carolinian region (Earley 2007) did not occur in Niagara. According to Ontario Nest Record Scheme data, the earliest egg date for this species in Niagara is 27 May. They are most abundant in the fallow fields located south of Welland and to the east of the Welland Canal. These fields were created when the canal was diverted past Welland.

There is only one fall record for Niagara: Harold Lancaster observed two birds on Effingham Street, Welland, on 13 September 1970.

There are no winter records of this species for Niagara. Grasshopper Sparrows that breed in North America winter from the southern United States to Costa Rica (DeGraaf and Rappole 1995).

*John E. Black*
Henslow’s Sparrow *Ammodramus henslowii*

Extremely rare visitor

The Henslow’s Sparrow is a bird of open habitats that contain tall, dense grass and herbaceous vegetation with few or no woody shrubs and trees (Austen et al. 1994). It was named by John James Audubon in honour of his botanist friend John S. Henslow (Herkert et al. 2002). The species is Endangered provincially (OMNR 2007) and federally (COSEWIC 2000, Environment Canada 2006). During the past 40 years, the Henslow’s Sparrow has undergone a dramatic decline in both numbers and range in Ontario (Austen et al. 1994). During the first Atlas, the provincial population was estimated at a maximum of 50 pairs (Cadman et al. 1987). No known breeding pairs were reported in Ontario during the second Atlas (Cadman et al. 2007).

There were no Henslow’s Sparrow records for Niagara in Beardslee and Mitchell (1965).

The Harold Lancaster Colbeck Drive residence in Welland played host to as many as five birds from 4 May to 25 May 1964 (Sheppard 1970). On 30 June 1965, Harold Lancaster located another Henslow’s Sparrow also in Welland. During the 1966-2006 time frame of this book, six additional records of Henslow’s Sparrow are known for Niagara. Welland was once again the location for a bird Harold Lancaster discovered on 22 May 1966. Three days later on 25 May 1966, Daniel Salisbury studied one in the Wainfleet Bog in Wainfleet. On 28 May 1967, Harold Lancaster observed another in Welland. On 7 and 21 July 1968, Harold Lancaster identified a Henslow’s Sparrow in the Cement Plant Road pond area in Wainfleet.

Twenty years later, from 29 May to 5 June 1988, William Lamond and others observed a Henslow’s Sparrow in Caistorville (Curry 2006). On 7 June 2002, Brendan Klick reported one from Port Colborne (BOSNR) that was not located in subsequent days.

The Henslow’s Sparrow breeds in the northeastern and east-central United States. It also winters in the United States bordering the Gulf of Mexico and in the southeastern states along the Atlantic Coast (Herkert et al. 2002).

Kayo J. Roy
Fox Sparrow *Passerella iliaca*

Rare spring and fall transient, occasional winter straggler

The Fox Sparrow is a rare spring transient in Niagara. Nine March sightings and three April sightings appear in the BOS Noteworthy Records. The earliest arrival dates are for single birds seen on 17 March 1971 at Rose Hill Road in Fort Erie and 17 March 1988 at Niagara-on-the-Lake (BOSNR).

Fox Sparrows breed well north of the Great Lakes; there are no summer records for Niagara.

The earliest fall date of arrival in Niagara is 1 October 1966, when one bird was seen at Rose Hill Road (BOSNR). The latest October Count date is 20 October 1985, when five individuals were seen during the BOS October Count. There are 10 BOS Noteworthy Records for October and 12 for November. On 6 November 1966, 20 individuals were observed by Harold Axtell at Fort Erie (Goodwin 1967:29).

The Fox Sparrow is an occasional winter straggler in Niagara: one bird overwintered at Rose Hill Road from 9 January 1972 to 13 March 1972 (BOSNR). There are three Niagara Falls CBC records and two St. Catharines CBC records, all of single birds. Numbers are noticeably smaller than those encountered in nearby Hamilton in the winter. Fox Sparrows winter in the southern parts of eastern Canada and the Maritimes (rarely) and south to Georgia and Texas (Brewer et al. 2000).

*John E. Black*
Song Sparrow *Melospiza melodia*

Spring and fall transient, very common summer resident, uncommon winter resident/straggler

There are five Niagara March records for Song Sparrow in the BOS Noteworthy Records. Because the Song Sparrow is an uncommon winter straggler, there is no way of knowing if these records are of arriving migrants or stragglers. A definite arrival date of breeding birds is 2 April 1995, when many Song Sparrows were observed on territory on the Port Weller east pier (JEB). It is not clear how to estimate the abundance of spring transients because they cannot be readily distinguished from those birds arriving to breed in the area.

The Song Sparrow breeds throughout Ontario and is a very common summer resident in Niagara. Point count data from the second Atlas indicate that this species, with a population estimated at three million birds, is abundant in Ontario in the summer (Rising 2007b). According to the Ontario Nest Record Scheme data, the earliest egg date for this species in Niagara is 6 May.

The Song Sparrow is an uncommon species in Niagara in the winter, but it is not clear which of these birds are residents that are wintering here and which are migrants from farther north wintering in Niagara. Twelve December records, twenty January records and seventeen February records appear in the BOS Noteworthy Records. Song Sparrows winter from southern Ontario south through most of the United States to central Mexico (Brewer et al. 2000).

*John E. Black*
Lincoln’s Sparrow *Melospiza lincolnii*

Rare spring and fall transient, extremely rare and local summer resident

The Lincoln’s Sparrow is a rare spring transient in Niagara. The earliest arrival date is 25 April 1971, when a single bird was seen at Malcolmson Eco-Park in St. Catharines (JEB). Port Weller pier sightings are recorded from 9 May to 16 May during the Port Weller Study. The latest spring date is 24 May 1969, when a single bird was seen at Morgan’s Point near Burnaby (BOSNR).

Lincoln’s Sparrow, for the most part, breeds north of Niagara and is an extremely rare and local summer resident in the region. According to the Ontario Nest Record Scheme data, the earliest egg date for this species in Niagara is 14 May. In both atlases, breeding in the Wainfleet Bog was confirmed. Before 1966 this species bred regularly in the interior of the Wainfleet Bog. In recent years however, the invasive European Birch has covered the entire open area of the bog where the sparrows bred. In the second Atlas, a nest was found just outside the bog at the south end of Townline Road in Wainfleet (JEB).

The earliest fall date of arrival in Niagara is 8 September 1968, when two birds were seen at Rose Hill Road in Fort Erie (BOSNR). This date is about three weeks later than that for the earliest migrants seen in Hamilton and Toronto (Glenn Coady pers. comm.). The latest fall date is 27 October 1977, when one Lincoln’s Sparrow was seen at Niagara Falls (BOSNR).

There are no winter records for Niagara. This lack of records is in striking contrast to the situation in Toronto, Hamilton and London (Glenn Coady pers. comm.). Lincoln’s Sparrows winter from the southern United States south to Costa Rica (Brewer et al. 2000).

*John E. Black*

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Swamp Sparrow *Melospiza georgiana*

Spring and fall transient, uncommon summer resident, rare winter straggler

Two March entries for Swamp Sparrow appear in the BOS Noteworthy Records. In addition, Harold Lancaster saw a single bird in the Wainfleet area on 18 March 1975. These March sightings could be of arriving migrants but they could also be of birds that survived the rigours of a Niagara winter. The earliest April arrival date is of a single bird seen on 4 April 1993 during the BOS April Count. It is not clear how to estimate the abundance of spring transients because they cannot be readily distinguished from those birds arriving to breed in the area.

The Swamp Sparrow breeds throughout southern Ontario. Atlas point count data suggest that the Swamp Sparrow, with an estimated population of two million birds, is an abundant bird in Ontario (Rising 2007c). It is, however, an uncommon summer resident in Niagara owing to a lack of suitable marsh habitat. One of the few remaining places in Niagara at which to observe the Swamp Sparrow is on the western edge of Mud Lake in Port Colborne.
There are two BOS Noteworthy Records of single Swamp Sparrows in November: Rose Hill Road in Fort Erie on 6 November 1966 and the upper Niagara River on 24 November 1967.

The Swamp Sparrow is a rare winter straggler in Niagara. In the BOS Noteworthy Records there are eight December records, four January records and eight February records. Swamp Sparrows were seen in 11 years during the BOS CBC, 20 years during the Niagara Falls CBC, five years during the Port Colborne CBC and 14 years during the St. Catharines CBC. The largest number seen on a count was 10 individuals (nine in Ontario and one in New York State) on the 1999 Niagara Falls CBC. The Swamp Sparrow winters from southern Ontario to the Gulf Coast and northeastern Mexico (DeGraaf and Rappole 1995).

Banding and Recovery Data: A Swamp Sparrow banded at Long Point on 9 October 1989 was encountered on 20 October 1991 in West Virginia.

John E. Black

White-throated Sparrow
Zonotrichia albicollis

The White-throated Sparrow is a very common spring and fall transient, occasional summer straggler, uncommon winter resident.

There are two March records in the BOS Noteworthy Records. Because the White-throated Sparrow is an uncommon winter straggler in Niagara, however, it is not clear if these March sightings are of arriving migrants or of birds that have overwintered in Niagara. The earliest April arrival dates are 4 April 1971 and 1993, when six and two birds respectively were seen on the BOS April Count. The latest date of a spring transient sighting is 30 May 1977, when one bird was observed at Rose Hill Road in Fort Erie (BOSNR). During the Port Weller Study, birds were seen on all dates from 1 May to 23 May. A single bird was seen on 28 May. In Ontario the White-throated Sparrow breeds from Lake Ontario north. In 1965 a single

White-throated Sparrow
Brandon Holden

First Atlas: 7 squares confirmed, 6 probable, 2 possible
Second Atlas: 4 squares confirmed, 12 probable, 3 possible
BOS April Count: Reported on 17 of 41 counts, maximum of 9 birds in 1969 and 1991
BOS May Count: Reported on 34 of 41 counts, maximum of 38 birds in 1966
BOS October Count: Reported on 23 of 40 counts, maximum of 59 birds in 1970
Niagara Christmas Bird Counts: Reported on 24 of 41 counts, maximum of 10 birds on the 1999 Niagara Falls CBC
bird visited Rose Hill Road from 30 June to 7 August (BOSNR). There has been only one summer record for this species since 1966. The species was listed as probably breeding on Navy Island in the Niagara River in the first Atlas.

The earliest fall arrival date is 3 August 1973, when a single bird was seen at Rose Hill Road in Fort Erie (BOSNR). There are 11 BOS Noteworthy Records for November.

White-throated Sparrows are uncommon winter residents in Niagara. The BOS Noteworthy Records contain twenty-five December records, twenty-three January records and twenty-one February records. White-throated Sparrows winter from southern Ontario south to Florida, Texas and northern Mexico (Brewer et al. 2000).

Banding and Recovery Data: White-throated Sparrows banded at Long Point have been encountered in Alabama, California, Florida, Georgia, Kentucky, Ohio, South Carolina, Tennessee, Texas and West Virginia.

John E. Black

**Harris’s Sparrow** *Zonotrichia querula*

Extremely rare visitor

The Harris’s Sparrow, named by John James Audubon after amateur ornithologist Edward Harris (Rising 1996a), is an extremely rare visitor to Niagara. This handsome bird, the largest sparrow in North America, is the only bird species that is an endemic breeder in Canada (Norment and Shackleton 1993).

There are no Harris’s Sparrow records for Niagara prior to 1966 in Beardslee and Mitchell (1965) or in Sheppard (1970).

During the 1966–2006 time frame of this book, there are five records for Harris’s Sparrow in Niagara. For a species that rarely strays far from their normal mid-western range, they apparently stay a long time when they do wander. The first record for Niagara is that of a single bird found on 9 January 1972 by Harold Axtell at his residence in Fort Erie. This bird was last seen on 9 April 1972 (BOSNR). Robert Sommerville located a Harris’s Sparrow at Fort Erie on 8 November 1973 that remained until an unknown date in April 1974 (BOSNR). Harold Axtell, John Black and Harold Lancaster studied an immature male Harris’s Sparrow in Welland that lingered there until 30 April 1975 (BOSNR).

Twenty-one years later, on 8 December 1996, John Lamey identified a Harris’s Sparrow along Morgan’s Point Road in Burnaby. While it is difficult to be certain, this individual may be the same adult bird he observed five months later on 10 May 1977 at a feeder behind 11310 Lakefield Crescent, Burnaby, a mere 300-400 metres east of his earlier sighting.

On 1 December 2000, Kayo Roy and Alan J. Smith discovered the fifth Harris’s Sparrow along Church Road in Niagara-on-the-Lake, a winter adult male that had last been observed on 18 February 2001 (BOSNR, m. obs.). This bird spent the entire ten weeks in a ditch area with some running water, where dense shrubbery was augmented by considerable vegetation and numerous small trees.

The Harris’s Sparrow breeds throughout the very northern portions of the central Canadian provinces and winters in the central United States from South Dakota to southern Texas and from eastern Colorado to western Missouri (Norment and Shackleton 1993).

Kayo J. Roy
White-crowned Sparrow *Zonotrichia leucophrys*

Common spring and fall transient, uncommon winter resident

The White-crowned Sparrow is a common spring transient in Niagara. There are five March records in the BOS Noteworthy Records. Because the White-crowned Sparrow is an uncommon winter straggler in Niagara, however, it is not clear if these are arriving migrants or birds that have overwintered in Niagara. The earliest April arrival dates are 4 April 1971 and 1993, when one and eight birds respectively were seen during the BOS April Count. The latest date for a spring transient is 27 May 1979, when one bird was seen at Erie Beach in Fort Erie (BOSNR). During the Port Weller Study, birds were seen on most dates from 1 May to 24 May. On 6 April 1968 and on 21 May 1969, individuals of the northwestern gambelli race of this sparrow were observed in Fort Erie (Goodwin 1968a:523, 1969b:586).

The White-crowned Sparrow breeds from James Bay north. There are no summer records of this species for Niagara.

The earliest fall date for this species is 19 September 1979, when a single bird was seen at Rose Hill Road in Fort Erie (BOSNR). Nine sightings are reported in BOS Noteworthy Records for November.

The White-crowned Sparrow is an uncommon winter resident in Niagara. There are observations on almost all years of the Niagara Christmas Bird Counts. There are 14 December records, twenty-six January records and ten February records from the BOS Noteworthy Records. White-crowned Sparrows winter from southern Ontario south into the United States and northern Mexico. Conspicuously rare in the Eastern United States, they are more common in the west (Brewer et al. 2000).

**Banding and Recovery Data:** A White-crowned Sparrow banded at Long Point on 12 October 1969 was encountered on 5 March 1970 in Texas, and another banded at Long Point on 7 May 1987 was encountered in March 1989 in Texas.

*John E. Black*
Dark-eyed Junco *Junco hyemalis*

Common spring and fall transient, common winter resident

The Dark-eyed Junco is a common transient and winter resident in Niagara. It frequents woodland edges, hedgerows, open fields and feeding stations from September to May. Individuals of the western Oregon (oregans) race occasionally visit the region. There is one photographic record of an Oregon Junco at a feeder at 26 Ziraldo Road in St. Catharines on 18 March 1988 (KJR). There are two late BOS May Count records: one bird on 21 May 1972 and two birds on 21 May 2006. The latest observation is of a single bird in Welland on 27 May 1978 (Harold Lancaster). No birds were noted in Niagara in the summer (BOSNR). The earliest fall record was 3 September 1966, when one bird was seen at Morgan’s Point near Burnaby (BOSNR). At Rose Hill Road in Fort Erie, 70 individuals were noted on 12 November 1989 (BOSNR).

Seen annually on Niagara CBCs, the Dark-eyed Junco was the most common winter emberizid. On the 2005 St. Catharines CBC, 1,675 individuals were spotted, the largest number on any count in Niagara. Single birds of the Oregon race appeared on the Niagara Falls CBC in 1969, 1973, 1994 and 1999. Single Oregon Juncos were observed on the Port Colborne CBC in 1993 and 2003. Three Oregon Juncos were observed from 8 to 13 December 1995 at Niagara-on-the-Lake (Ridout 1996:167). On 9 March 1969, a bird of the race cismontanus was observed at Harold Axtell’s feeder on Rose Hill Road in Fort Erie (Harold Lancaster). The Dark-eyed Junco is a familiar sight at feeding stations, which regularly attract between seven and fifteen individuals per household (Project FeederWatch).

Prior to 1966, Dark-eyed Juncos were common in Niagara from 29 March to 4 May and from 26 September to 10 November (Beardslee and Mitchell 1965). Spring migration starts about 1 March and peaks mid-March to early April (Nolan et al. 2002). Earliest fall migrants can arrive in mid-August, although birds of northern populations typically arrive in September and October (Nolan et al. 2002).
Juncos seen during winter in Niagara are either resident or migrating individuals. Continental winter abundance of the Dark-eyed Junco declined about 1.3% per year from 1969 to 1990 (Nolan et al. 2002); however, junco numbers have shown an increase in Niagara. In 2006, CBCs in Niagara reported about seven birds per party hour compared to about two birds per party hour across North America. An average of five birds were seen attending feeding stations in the Great Lakes Region (Project FeederWatch).

This familiar member of the sparrow family breeds throughout the mixed and boreal forests of Canada and the United States (Rising 1996). In Ontario, the species breeds throughout the northern and central regions (Rising 2007d). Most populations are migratory, wintering in southern Canada, the United States and northern Mexico (Rising 1996, Nolan et al. 2002).

Banding and Recovery Data: Dark-eyed Juncos banded at Long Point were encountered in Indiana, North Carolina, Ohio, Pennsylvania, Virginia, and West Virginia.

Daniel R. Kozlovic

Lapland Longspur *Calcarius lapponicus*

Rare spring, fall and winter visitor

Usually seen in mixed species flocks in agricultural fields and pastures from October to March, the Lapland Longspur is a rare but regular visitor to Niagara. Spring records include one bird observed on 5 March 1978 and 150-200 individuals on 22 April 1996 (BOSNR). The latest spring date is 2 May 1999, when two birds were seen at the Smithville sewage ponds. The earliest fall record is of one bird on 24 September 1991 at the Grimsby sewage ponds (HNCNR). The species was noted on four occasions in January. These included an observation of 39 birds at Rockway in Lincoln on 16 January 1970. There were three sightings in February (BOSNR).

Niagara lies in the northern margin of the winter range and, as a result, winter records of this species are typically low. Birds seen in Niagara from December to February are likely overwintering individuals rather than transients, and late April migrants provide the observer an opportunity to see males with their striking pied head pattern, characteristic of the alternate (breeding) plumage.

This circumpolar sparrow breeds above the taiga belt; in North America its range extends from the Aleutians to the Labrador Peninsula (Rising 1996). By mid-August, North American populations of Lapland Longspurs begin to leave their breeding grounds to winter in southern Canada and the United States (Hussell and Montgomerie 2002). Winter densities of the species are greatest in the Midwestern United States (Root 1988).

Daniel R. Kozlovic
Snow Bunting  
*Plectrophenax nivalis*

Uncommon spring, fall and winter visitor

Usually found in fairly large flocks in pastures and fields and along shorelines, the Snow Bunting is an uncommon but regular spring, fall and winter visitor in Niagara from late October to March. The latest recorded spring date is 15 March 1992, when 18 birds were seen at Crystal Beach near Fort Erie (BOSNR). The earliest recorded fall dates are 20 October 1974, when two birds were seen at Port Dalhousie in St. Catharines (BOSNR), and 20 October 1989, when four birds were seen at the Grimsby sewage ponds (HNCNR). Snow Buntings were seen throughout November (18 records); 1,500 birds were noted at Niagara-on-the-Lake on 16 November 1986 (BOSNR). An estimated 3,000 birds were seen in flight along the Lake Ontario shore on 9 November 1994 (see Summerskill’s article in this book).

Snow Buntings, about 500 per hour during daylight, arrived at Niagara-on-the-Lake on 13-20 November 1987 as if they had just crossed Lake Ontario. The migrants then crossed the Niagara River and flew west along the south shore of Lake Ontario (Weir 1988:70).

A thousand birds were observed in Niagara-on-the-Lake on 13 February 1994 (Ridout 1994:205). The Snow Bunting is a rare feeder bird in Niagara. Fewer than five appeared at feeding stations in February of 1990 and 1996 and March of 2000 (Project FeederWatch).

Beardslee and Mitchell (1965), referring to the entire Niagara Frontier Region, noted the species to be most common in February through March. Maximum flock sizes of 2,000-5,000 birds were typical, although one flock exceeded 10,000 birds. Birds ceased to be common by mid-March, but some lingered as late as 16 April. Based on CBC data, numbers of wintering Snow Buntings in North America appear to be relatively stable; between 0.5 and 2 birds are usually observed per party hour. Although peak numbers of Snow Buntings on Niagara CBCs appear to be unique to Niagara, it is difficult to interpret these increases, given the nomadic nature of these birds and the relatively small percentage of CBCs that record the species in North America (Root 1988).

This large bunting breeds throughout the high Arctic. In the Nearctic, Snow Buntings winter in Alaska, across southern Canada and the northern United States; they winter in southern and central Ontario, south of Thunder Bay (Rising 1996).

Daniel R. Kozlovic
Northern Cardinal *Cardinalis cardinalis*

Common permanent resident

The Northern Cardinal, first described by Linnaeus in 1758 work *Systema Naturae*, is found in woodlands, shrublands, swamps and, more commonly residential areas throughout its range. Once prized as a pet, its sale as a cage bird has been banned since the Migratory Bird Treaty Act was enacted in 1918. The Common name of the Northern Cardinal, as well as the scientific name, refers to the cardinals of the Roman Catholic Church (Holloway 2003). The term “Northern” in the common name refers to its range, as it is the only cardinal found in the Northern Hemisphere (Holloway 2003).

Since the early 1800s, the Northern Cardinal has taken advantage of moderate temperatures, human habitation and provisioning at bird feeders to expand its range northward (Halkin and Linville 1999).

The Northern Cardinal is a permanent resident throughout southern Ontario and a common permanent resident in Niagara. This was not always the case. Sheppard, writing of this species in 1960, commented: “Twenty years ago the Cardinal was a rare bird in the Niagara Frontier area, now it is a common resident of our parks and gardens, which it seems to favour over the more rural sectors where it is decidedly less prevalent.”

The first nest of the Northern Cardinal in Ontario was found in 1901 at Point Pelee, and the species is still continuing its northward expansion (M.A. McLaren 2007d). According to the Ontario Nest Record Scheme data, the earliest egg date for this species in Niagara is 21 April.

A common bird on the Niagara Christmas Bird Counts, the Northern Cardinal has been seen on all counts since 1966. This is a bird commonly found in the winter at feeders in Niagara. At Rose Hill Road in Fort Erie on 31 January 1973, 81 cardinals were present at the feeders (JEB).

The species is found throughout eastern and central North America from southern Canada into parts of Mexico and South America.

*John E. Black*
Rose-breasted Grosbeak
*Pheucticus ludovicianus*

Spring and fall transient, common summer resident, extremely rare winter straggler

The male Rose-breasted Grosbeak is one of the most colourful birds to arrive in Niagara in the spring. It can often be seen at the forest edge. The earliest arrival date is 16 April 1969, when a single bird was seen at Rose Hill Road in Fort Erie (BOSNR). It is not clear how to estimate the abundance of spring transients because they cannot be readily distinguished from those birds arriving to breed in the area.

Rose-breasted Grosbeak
*Harold Stiver*
The Rose-breasted Grosbeak, which breeds throughout southern Ontario, is a common summer resident in Niagara. According to the Ontario Nest Record Scheme data, the earliest egg date for this species in Niagara is 17 June. One can expect to encounter this species in any reasonably sized woodlot in the area.

This species was observed on only six of the 40 BOS October Counts. The latest fall sighting is 20 October 1985, when a single bird was found on the October BOS Count.

The Rose-breasted Grosbeak is an extremely rare straggler in Niagara with only three winter records. A single bird was observed on the 1985 BOS CBC, and another single bird was present at Wainfleet Township on 7 December 1997 (BOSNR). An overwintering bird was seen at Rose Hill Road from 24 January 1981 to 27 March 1981 (BOSNR). Rose-breasted Grosbeaks winter from central Mexico south to Ecuador, Columbia and Venezuela (Brewer et al. 2000).

Banding and Recovery Data: A Rose-breasted Grosbeak banded at Long Point on 7 September 1978 was encountered on about 1 February 1980 in El Salvador. One banded at Long Point on 18 May 1966 was encountered on 11 November 1970 in Columbia and another banded at Long Point on 26 September 1970 was encountered on about 10 April 1976 in Guatemala.

John E. Black

Indigo Bunting

_Passerina cyanea_

Spring and fall transient, common summer resident

In breeding plumage, the male Indigo Bunting, is the only small North American finch to appear blue all over. It is frequently seen sitting on wires or in trees on the roadside. The earliest arrival date is 4 May 1969, when a single bird was seen at Erie Beach in Fort Erie (BOSNR). Single Indigo Buntings were seen from 11 May to 31 May on the Port Weller piers during the Port Weller Study. It is not clear how to estimate the abundance of spring transients because they cannot be readily distinguished from those birds arriving to breed in the area.

The Indigo Bunting, which breeds throughout southern Ontario, is a common summer resident in Niagara. According to the Ontario Nest Record Scheme data, the earliest egg date for this species in Niagara is 21 June. A single bird was observed on 11 October 1970, the only BOS October Count record for this species. The latest fall date is 12 October 1966, when a single bird was seen at Rose Hill Road in Fort Erie (BOSNR).

There are no winter records of this species for Niagara. Indigo Buntings winter mainly from central Mexico south to Panama and northwestern Columbia (Brewer et al. 2000).

Banding and Recovery Data: An Indigo Bunting banded at Rock Point near Dunville on 4 October 2002 was encountered on 15 May 2003 in Pennsylvania.

John E. Black
Painted Bunting *Passerina ciris*

Extremely rare visitor

The brilliantly-coloured and visually striking male Painted Bunting is often called the most beautiful bird in North America. Originally described by Linnaeus in his 1758 work *Systema Naturae*, the species is currently listed as a Species of Concern on the Partners in Flight WatchList.

According to data gathered for the North American Breeding Bird Survey, the Painted Bunting breeding populations declined significantly across its range during the 1966-2006 time frame of this book. Causes for this population decline are not known, but the cage bird trade, habitat loss and Brown-headed Cowbird parasitism are believed to be factors.

The presence of Painted Bunting in Niagara is confined to a single observation. On 13 May 1996, Ainsley Barley looked out of his St. Catharines residence kitchen window after supper to see a flash of colour feeding below his side yard bird feeder. He called his wife Dorothy asking her to bring the camera, and several photographs were taken of this definitive alternate male bird (Dobos 1997, BOSNR). Despite an extensive search of the area the next day, the bird was not relocated.

Painted Bunting breeds in two different regions. The western population breeds from southern Missouri and Kansas to the Gulf Coast and northern Mexico. It winters in Mexico south to Panama. The eastern population breeds along the Atlantic coast from central North Carolina to north-central Florida. It winters on the Florida peninsula, the Florida Keys and the Bahamas (Lowther et al. 1999).

Kayo J. Roy

Dickcissel *Spiza americana*

Occasional visitor

Primarily a bird of the prairie grasslands and farmlands of the Great Plains, the Dickcissel, named for its song, is a wanderer that is frequently found far from its normal range. This species is characterized by periods of absence or extreme scarcity, often appearing in one area only to be totally absent the following year (Austen et al. 1994).

In contrast to its usual irregular southern Ontario occurrence, the Dickcissel was noted five times at the Harold Axtell residence in Fort Erie from 1961 to 1965. Four of these observations were documented by Beardslee and Mitchell (1965), and the fifth was discovered by Harold Axtell and Daniel Salisbury on 17 October 1965 (BOSNR).

The Dickcissel is an occasional visitor to Niagara, and during the 1966-2006 time frame of this book, it was found on only nine occasions. Like a huge magnet, the secluded Axtell property in Fort Erie continued to attract Dickcissel. Four of these nine observations were reported from the Axtell property. Single birds were noted there on 11-12 October 1966 and October to December 1967, an immature on 11-24 November 1969, and a male on 3-7 January 1970 (BOSNR, Harold Lancaster).

In 1988, when habitat suitability in the Midwest was affected by severe drought, an irruption of Dickcissel into Ontario and Michigan occurred with over 30 nests reported in southern Ontario alone (Austen et al. 1994). Port Colborne was one of those reported sites. On 23-30 June 1988, a male and female, along with three additional males, were observed on Minor Road with nesting confirmed at this site (Peck 1990). On 6 April 1988, Margaret and Robert Millman found an immature Dickcissel at their residence feeder in St. Catharines. On 21 December 1997, during the St. Catharines Christmas Bird Count, Richard Knapton discovered a Dickcissel south of the Queen Elizabeth Way in west St. Catharines. Amazingly, of these fourteen known sightings of Dickcissel in Niagara, all but five have been observed at the somewhat secluded Axtell residential property in Fort Erie.

Dickcissel breeds in the southern Great Plains from eastern North Dakota to Michigan and Indiana, and south to Texas and Louisiana. Irregular breeding has occurred east as far as New Jersey and west to New Mexico and Saskatchewan. It winters in Central America and Northern South America (Temple 2002).

Kayo J. Roy
Bobolink *Dolichonyx oryzivorus*

Spring and fall transient, uncommon summer resident

The earliest arrival date for Bobolink is 28 April 1969, when a single bird was reported from Rose Hill Road in Fort Erie (BOSNR). One or two Bobolinks were seen on the Port Weller piers from 13 May to 19 May during the Port Weller Study. It is not clear how to estimate the abundance of spring transients because they cannot be readily distinguished from those birds arriving to breed in the area.

The Bobolink, which breeds throughout southern Ontario, is an uncommon, but somewhat local, summer resident in Niagara. According to the Ontario Nest Record Scheme data, the earliest egg date for this species in Niagara is 31 May. During the five years of the second Atlas, Bobolinks were most abundant in the fallow fields west of Fort Erie. The second Atlas indicates that there has been a sharp decline in the annual index of abundance for this species during the years of the second Atlas, with the index only one quarter of what it was during the period of the first Atlas (Gahbauer 2007c).

According to the second Atlas, Bobolinks begin to assemble for their migration south in July. The earliest date for such an assembly is 24 August 1990, when 40 birds were observed at Crescent Beach, Fort Erie (BOSNR). The latest dates in October are 20 October 1985, when 15 birds were seen on the BOS October Count, and 20 October 1986, when one bird was seen at the Smithville sewage ponds (HNCNR). There is one November record, that of a single bird seen on 7 November 1967 at Rose Hill Road (BOSNR).

There are no winter records of this species for Niagara. The Bobolink winters in southern South America, mostly east of the Andes (Brewer et al. 2000).

*John E. Black*

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**First Atlas:** 18 squares confirmed, 4 probable, 1 possible  
**Second Atlas:** 11 squares confirmed, 12 probable, 1 possible  
**BOS April Count:** Not reported  
**BOS May Count:** Reported on 41 of 41 counts, maximum of 187 birds in 1983  
**BOS October Count:** Reported on 3 of 40 counts, maximum of 15 birds in 1985  
**Niagara Christmas Bird Counts:** Not reported
Red-winged Blackbird *Agelaius phoeniceus*

Spring and fall transient, very common summer resident, uncommon winter resident

The Red-winged Blackbird is a permanent resident over much of North America south of Niagara, breeding as far north as James Bay (*National Geographic* 2006). There are three March records of fewer than 10 birds from the BOS Noteworthy Records. Because the Red-winged Blackbird is an uncommon winter straggler, it is difficult to distinguish the first arriving migrants from birds that have overwintered in Niagara. On 3 March 1968, Harold Lancaster observed 100 birds near Pelham. Lancaster also observed over 10,000 birds at Mud Lake in Port Colborne just after sundown on 18 March 1968, and 5,000 birds there just after sundown on 18 March 1969. It is not clear how to estimate the abundance of spring transients because they cannot be readily distinguished from those birds arriving to breed in the area.

The Red-winged Blackbird is a very common summer resident in Niagara, and breeding was confirmed in all 25 squares in both atlases. According to the Ontario Nest Record Scheme data, the earliest egg date for this species in Niagara is 3 May. The total number of Red-winged Blackbirds in North America is estimated to be 193 million (Zimmerling 2007a).

Red-winged Blackbirds roost in the Cytek property in Niagara Falls during the autumn. See the species account on the European Starling in this book for more details about this large roost. This species is uncommon in Niagara in the winter. It is unclear which Niagara wintering birds are residents and which are migrants that have come from farther north. Wintering blackbirds have been seen on all years since 1978 on the Niagara CBCs. The largest number recorded was 130 in 1999 on the Port Colborne CBC. That year also yielded a record high for the Niagara Falls CBC, when 123 birds were seen. There are 10 December records, twenty January records and seventeen February records from the BOS Noteworthy Records.

Northern populations of the Red-winged Blackbird winter in southern Ontario and as far south as Mexico (Brewer et al. 2000).

Banding and recovery data: Red-winged Blackbirds banded at Long Point have been encountered in Alabama, Georgia, Ohio, Pennsylvania and South Carolina.

*John E. Black*

First Atlas: 25 squares confirmed, 0 probable, 0 possible
Second Atlas: 25 squares confirmed, 0 probable, 0 possible
BOS April Count: Reported on 41 of 41 counts, maximum of 14,786 birds in 1975
BOS May Count: Reported on 41 of 41 counts, maximum of 3,965 birds in 1966
BOS October Count: Reported on 39 of 40 counts, maximum of 11,961 birds in 1967
Niagara Christmas Bird Counts: Reported on 32 of 41 counts, maximum of 130 birds on the 1999 Port Colborne CBC

Red-winged Blackbird

*Peter Ferguson*
Eastern Meadowlark *Sturnella magna*

Spring and fall transient, uncommon summer resident, occasional winter straggler

The Eastern Meadowlark is one of the top 20 common North American species in decline, as determined by the National Audubon Society (*Audubon* 2007). It is a permanent resident over much of North America to the south of Niagara and also breeds north of the Great Lakes (*National Geographic* 2006). There are two March records from the BOS Noteworthy Records. Because the Eastern Meadowlark is a rare winter straggler, it is not clear if these birds seen in the spring are arriving migrants or birds that have overwintered in Niagara. The earliest arrival date is 3 April 1977, when 24 birds — far more than could be expected to have overwintered here — were seen on the BOS April Count. During the Port Weller Study, individuals were seen on only four dates: 3 May, 5 May, 18 May and 24 May. It is not clear how to estimate the abundance of spring transients because they cannot be readily distinguished from those birds arriving to breed in the area.

The Eastern Meadowlark, which breeds throughout southern Ontario, is an uncommon summer resident in Niagara. In the early 1960s this species was a common summer resident here, but by 1970 its numbers had declined substantially. Breeding Bird Survey data show a near significant 1.5% annual decline in Eastern Meadowlark populations in Ontario since 1968 but no change since 1981 (Leckie 2007b). According to the Ontario Nest Record Scheme data, the earliest egg date for this species in Niagara is 6 May.

The latest October date is 20 October 1985, when two birds were seen on the BOS October Count. There are four BOS Noteworthy Records for November.

The meadowlark is an occasional winter straggler in Niagara. It is not clear if these stragglers are Eastern or Western Meadowlarks because identification is very difficult in the winter. Nor is it clear which of these wintering birds are residents that are overwintering and which are migrants that have come from other locations to spend the winter in Niagara. There are a total of 15 records from the four areas reporting CBCs in Niagara. There are eight December records, seven January records and six February records from the BOS Noteworthy Records. Eastern Meadowlarks winter from southern Ontario south to Mexico (*Brewer et al.* 2000).

*John E. Black*
Western Meadowlark *Sturnella neglecta*

Extremely rare visitor

The Western Meadowlark is not a member of the lark family but of the New World blackbird family Icteridae. When John James Audubon noticed there were significant differences between meadowlarks in the east and west, he gave the western bird its Latin name *neglecta* because it was overlooked for such a long time (Davis and Lanyon 2008). Nonetheless, until the early 20th century, this species was believed to be just another Eastern Meadowlark. The Western Meadowlark is a bird of the open grasslands, prairies, pastures and fields across most of western and central North America. This beautiful, brightly coloured bird is well known for its exceptional flute-like, melodious, warbled song. Abundant and widely distributed in its range, the Western Meadowlark, while known to wander to the eastern provinces and American states, is today being observed there in considerably reduced numbers (Davis and Lanyon 2008).

The first observation of Western Meadowlark for Niagara is that of a bird found between 17 May and 30 May 1953 by Harold Mitchell, Rachel and Harold Axtell, Bernard Nathan and others at Rathfon Point near Port Colborne (Beardslee and Mitchell 1965). This same publication identifies numerous records of Western Meadowlark for Niagara prior to 1966. There are as well the following six early additional observations: 30 April 1954 (Queenston), 17 and 27 April 1955 (Thorold), 26 April 1957 (St. Catharines), 24 April, 1 and 8 May 1959 (St. Catharines), 1 and 9 May, 20 June 1961 (St. Catharines), and 25 April and 3 May 1962 (St. Catharines), all reported by Harold Lancaster, a careful and competent Niagara birder.

The decline of Western Meadowlark in Niagara becomes quite apparent given that only five observations are known for the next 11 years (1966-1976), and only two in the 30 years thereafter (1977-2006). The species has clearly become an extremely rare visitor to Niagara.


On 17 November 1986, George Meyers observed a Western Meadowlark in his backyard in Grimsby (Curry 2006), and on 13 June 1989, Willie D’Anna and others studied a Western Meadowlark in Wainfleet that was last seen on 15 June 1989 when observed by Michael Galas and Richard Collins (BOSNR).

The Western Meadowlark breeds from central British Columbia to northern Michigan and northwest Ohio, south to Missouri, central Texas and northern Mexico. It winters from southern British Columbia and the Central Plains to Mexico and Baja California (Davis and Lanyon 2008).

Kayo J. Roy
Yellow-headed Blackbird

*Xanthocephalus xanthocephalus*

Extremely rare visitor

The attractive Yellow-headed Blackbird with its brilliant golden-yellow head is a bird of cattail marshes and wetlands chiefly west of the Great Lakes. The male’s song has been likened to the sound of the opening of a rusty gate. Under no circumstances could one call its song beautiful, but it is distinctive (Jaramillo and Burke 1999). The Greek word *xanthos* means “yellow” and *cephalus* means “head”. Consequently, the genus and species name *Xanthocephalus xanthocephalus* means literally “yellow head, yellow head”. While widespread and common throughout its range, the Yellow-headed Blackbird is known to wander with some regularity to the east and is found nearly every winter somewhere along the east coast of North America.

The first Niagara record is of a group of 15 birds, including one fully plumaged male, observed every day for a week or more by Norman Mitchinson in the latter part of October 1955 (exact dates unknown) at Stamford Centre near Niagara Falls (Sheppard 1970). On 6 May 1956, Harold Axtell, Bernard Nathan and others discovered an immature Yellow-headed Blackbird at Morgan’s Point near Burnaby (Beardslee and Mitchell 1965, Sheppard 1970).

During the 1966-2006 time frame of this book, there are only three records of Yellow-headed Blackbird for Niagara. On 23 March 1969, George Meyers observed nine birds in flight over Grimsby Beach (Curry 2006). Twenty-four years later, on 23 October 1993, Margaret Cunningham located a Yellow-headed Blackbird at her home in Wainfleet (BOSNR). On 2 May 2003, Tara Allen went out to fill her frontyard bird feeders and noticed a large black bird with an all yellow head busy feeding below one of the feeders. She quickly identified it as an adult male Yellow-headed Blackbird. This well-photographed bird remained to feed at her residence on Highway 20 near Bismark until 4 May 2003.

The Yellow-headed Blackbird breeds from central British Columbia east to the western Ontario border and northern Illinois, south to central California and central New Mexico. A small population is scattered further east along the Great Lakes and into Ohio. It winters from southern Arizona and western Texas south to southern Mexico, with small numbers wintering in California (Twedt and Crawford 1995).

Kayo J. Roy
Rusty Blackbird *Euphagus carolinus*

Uncommon spring and fall transient, rare winter resident

The Rusty Blackbird is designated by the Committee on the Status of Endangered Wildlife in Canada as Threatened in Canada (SARA 2008). It is an uncommon spring transient in Niagara. There are eight March records from the BOS Noteworthy Records. Because the Rusty Blackbird is an uncommon winter straggler, it is not clear if birds seen are arriving migrants or birds that have overwintered in Niagara. The earliest arrival date is 3 April 1995, when many birds were seen at the Cytek property in Niagara Falls, where, at most, only a few birds overwintered (JEB). The Rusty Blackbird was not observed on the Port Weller piers during the five years of the Port Weller Study. The latest date is 21 May in both 1995 and 2006, when five birds and one bird respectively were seen on the BOS May Counts.

The Rusty Blackbird breeds north of the Great Lakes to Hudson Bay. There are no summer records for Niagara.

There are 11 BOS Noteworthy Records for September. The earliest fall date is 11 September 1990, when 20 birds were seen at Niagara-on-the-Lake (BOSNR). There are seven BOS Noteworthy Records for November. Rusty Blackbirds roost on the Cytek property in Niagara Falls in the autumn and early winter months. See the European Starling species account in this section of the book for more details about this large roost site.

BOS April Count: Reported on 32 of 41 counts, maximum of 180 birds in 1991

BOS May Count: Reported on 6 of 41 counts, maximum of 5 birds in 1995

BOS October Count: Reported on 35 of 40 counts, maximum of 640 birds in 1967

Niagara Christmas Bird Counts: Reported on 13 of 41 counts, maximum of 19 on the 1998 Port Colborne CBC
A rare winter resident in Niagara, this species is seen infrequently on Niagara Christmas Bird Counts. With only a total of 16 records. Rusty Blackbirds are most numerous in the Port Colborne area in the winter months. For many years, a feeder at the north end of Erie Peat Road in Wainfleet was a reliable location at which to observe these blackbirds in January. There are 10 December, 14 January and 10 February records from BOS Noteworthy Records for this species. Rusty Blackbirds winter in the United States south of New England (Brewer et al. 2000).

John E. Black

Brewer’s Blackbird Euphagus cyanocephalus

Named after American ornithologist and naturalist Thomas M. Brewer, the Brewer’s Blackbird is a bird of western North America, where it fills an ecological niche in the west to that filled by the Common Grackle in the east (Jaramillo and Burke 1999). It is commonly found in fields, grasslands, pastures and even in urban areas. Over the last century, the distribution of this western species has seen a significant eastward expansion to the Great Lakes region, taking advantage of suitable habitat created by the felling of forests (Jaramillo and Burke 1999). Competition with the Common Grackle, which also utilizes suburban habitats, may be a factor limiting further expansion of Brewer’s Blackbird into the lower regions of southern Ontario.
There are no recorded Brewer's Blackbird observations in Beardslee and Mitchell (1965) or Sheppard (1970).

While there are 20 accepted records of Brewer's Blackbird in neighbouring Hamilton (Curry 2006), only six are known of this rare visitor's presence in Niagara. On 17-18 November 1971, Harold Axtell discovered Niagara's first Brewer's Blackbird at his residence in Fort Erie (BOSNR). On 1 January 1979, while driving along Weaver Road in Fort Erie, Harold Lancaster, Blayne Farnan and Gary Novosel located one in a farmyard along with numerous House Sparrows. Robert Curry identified a female Brewer’s Blackbird on 19 September 1993 at the Avondale sewage ponds in Niagara-on-the-Lake (BOSNR). Norm Murr reported two birds at Chippawa on 31 January 1999 (BOSNR). On 23 January 2000, Kayo Roy and William Watson studied an adult male Brewer’s Blackbird associating with Brown-headed Cowbirds at an Erie Peat Road residence feeder in Wainfleet (BOSNR). Brandon Holden and others observed this species on 26 April 2006 at the Beamer Memorial Conservation Area in Grimsby (Curry 2006).

The Brewer’s Blackbird breeds from southwest Canada east to northwest Ontario, and along the north shores of Lake Superior and Lake Huron, in the west south to Mexico, and south from Illinois through the Midwest to Texas. It winters from southern British Columbia south to Mexico and east along the southern United States to western Florida (Martin 2002).

Kayo J. Roy

Common Grackle
*Quiscalus quiscula*
Spring and fall transient, very common summer resident, uncommon winter resident

Surprisingly, the Common Grackle is one of the top 20 common North American species in decline, as determined by the National Audubon Society (Audubon 2007). Some of this decline may reflect the spread of dew worms (European earthworms) and the resulting changes in the composition of forest floors. It is a permanent resident over much of North America to the south of Niagara and breeds as far north as James Bay (National Geographic 2006).

There are three March records from BOS Noteworthy Records of fewer than 15 birds. Because the Common Grackle is an uncommon winter straggler, it is not clear if these are March sightings of arriving migrants or of birds that have overwintered in Niagara.
The earliest certain arrival date is 2 April 1974, when Harold Lancaster saw 2,000 birds at Mud Lake in Port Colborne. The abundance of spring transients is unclear because they cannot be readily distinguished from those birds arriving to breed in the area.

The Common Grackle, which breeds throughout southern Ontario, is still a very common summer resident in Niagara. According to the Ontario Nest Record Scheme data, the earliest egg date for this species in Niagara is 20 April. In the Carolinian region, only the European Starling and the Red-winged Blackbird have higher densities than the Common Grackle (Zimmerling 2007b).

Common Grackles roost on the Cytek property in Niagara Falls in the autumn. See the species account for European Starling for more details on this large roost site.

In their article in this book, Hamilton and DeLeon note that, on the 11 October 1998 count, Lynne Landon, David Cooper and Jim Wojewodzki witnessed a “river,” not a “stream” of mixed blackbirds, predominantly grackles, flying south directly overhead near Decew Falls, south of Brock University. It started between 9:00 and 10:00 a.m. and lasted about 30 minutes. When flocks dropped down to feed, the observers took turns with one person checking for the comparative percentage of grackles, redwings and cowbirds on the ground while the other two estimated the numbers going overhead. They did this independently of each other and then compared notes after the “river” had passed. Lynne said that when the last bird had gone they just stood there in awe of what they had seen, which, when they got their heads together, turned out to be an estimated 90,000 Common Grackles! This is by far the largest number of a single species recorded in BOS count history, going back to 1935.

This species is uncommon in Niagara in the winter months. It is not clear which of the few wintering birds are summer residents that are staying on and which are migrants that have come from farther north to spend the winter in Niagara. Common Grackles are seen on many, but not all years on the Niagara CBCs. The largest number recorded was 200 in 1986 on the St. Catharines Count. This was an anomalously high number since numbers on all other counts did not exceed 20. There are ten December records, eight January records and five February records in the BOS Noteworthy Records.

The Common Grackle winters from southern Ontario south to the Gulf Coast and southern Florida (Brewer et al. 2000).

Banding and Recovery Data: Common Grackles banded at Long Point have been encountered in Alabama, Arkansas, Georgia, Indiana, Kentucky, Ohio and Tennessee.

John E. Black

**Brown-headed Cowbird Molothrus ater**

Spring and fall transient, very common summer resident, uncommon winter resident

The Brown-headed Cowbird is a permanent resident over much of North America to the south of Niagara, and it breeds almost as far north as James Bay (National Geographic 2006). There are four March records from BOS Noteworthy Records, each of fewer than 20 birds. Because the Brown-headed Cowbird is an uncommon winter straggler here, it is not clear if these early arrivals are migrants or birds that overwintered. The earliest
count arrival date is 3 April 1977, when 67 birds, far more than would normally have overwintered here, were seen on the BOS April Count. It is not clear how to estimate the abundance of spring transients because they cannot be readily distinguished from those birds arriving to breed in the area.

The Brown-headed Cowbird breeds throughout southern Ontario and is a very common summer resident in Niagara. It lays its eggs in the nests of other species of birds. In fact, it is not unusual for a birder to see a pair of cowbirds watching other birds so as to find the location of their nest where the female cowbird can then deposit her egg.

This species is an uncommon winter resident in Niagara. It is not clear which of the wintering birds are summer residents that are staying on and which are migrants that have come from farther north to spend the winter in Niagara. The species is seen on many, but not all years on Niagara CBCs. There are fifteen December records, twenty-four January records and sixteen February records from the BOS Noteworthy Records.

The Brown-headed Cowbird winters in southern Ontario and the United States (Brewer et al. 2000).

Banding and Recovery Data: Brown-headed Cowbirds banded at Long Point have been encountered in Florida, Georgia, Louisiana, Mississippi and Tennessee.

John E. Black

Brown-headed Cowbird
Harold Stiver

First Atlas: 25 squares confirmed, 0 probable, 0 possible
Second Atlas: 22 squares confirmed, 2 probable, 1 possible
BOS April Count: Reported on 41 of 41 counts, maximum of 1,252 birds 1969
BOS May Count: Reported on 41 of 41 counts, maximum of 702 birds 1977
BOS October Count: Reported on 40 of 41 counts, maximum of 4,317 birds 1995
Niagara Christmas Bird Counts: Reported on 32 of 41 counts, maximum of 650 on the 1998 Niagara Falls CBC
Orchard Oriole *Icterus spurious*

Spring and fall transient, uncommon to rare summer resident

The Orchard Oriole, a Nearctic-Neotropical migrant, is the smallest oriole in North America (Scharf and Kren 1996). It leaves its wintering grounds in March or April and, after spending only a short time on its breeding grounds, returns sometimes to wintering grounds as early as mid-July. The Orchard Oriole is known to nest late, raising only a single brood to accommodate this migratory schedule (Scharf and Kren 1996).

The Latin name *spurious* meaning 'illegitimate' refers to the original misidentification of the male as a female Baltimore Oriole. The Orchard Oriole feeds on insects, fruits, nectar and pollen from flowers (Scharf and Kren). The longest known life span of Orchard Oriole is 9 years, 7 months (Klimkiewicz and Futcher 1989).

The earliest arrival date for the Orchard Oriole in Niagara is 30 April 2004, when a single bird was seen at the Grimsby sewage ponds (HNCNR). There were only two observations of this species on the Port Weller piers during the Port Weller Study. The abundance of spring transients is unclear because they cannot be readily distinguished from those birds arriving to breed in the area.

The Orchard Oriole breeds throughout southern Ontario, although Niagara lies at the northern edge of its breeding range. It was identified as a Species at Risk in Austen et al. (1994) but appears to be making a “come back” and is no longer listed at risk. In Niagara, the number of squares in which the species was listed as probable increased substantially between the atlases. In Ontario, the probability of observation tripled between the atlases (Woodliffe 2007b).

The latest fall date is 25 August 1966, when a single bird was observed at Erie Beach in Fort Erie (BOSNR).

There are no winter records for Niagara. Orchard Orioles winter from southern Mexico to Columbia and Venezuela (DeGraaf and Rappole 1995).

John E. Black
Baltimore Oriole *Icterus galbula*

Common spring transient and summer resident, fall transient, extremely rare winter straggler

With its bright orange and black plumage, the Baltimore Oriole is one of the more visually stunning birds in Niagara. In the mid-1980s, this species was lumped with its western counterpart the Bullock’s Oriole and both were known as Northern Oriole. In the mid-1990s, based on DNA evidence, the American Ornithologists Union Checklist Committee reversed this decision, returning the name of the western population to Bullock’s Oriole and the name of the eastern population to Baltimore Oriole. It is a common spring transient in Niagara. The earliest arrival date is 30 April 1990, when a single bird was seen on the Brock University trails (JEB). Baltimore Orioles, including a few breeding pairs, were seen in good numbers on the Port Weller piers from 7 May to 31 May, during the Port Weller Study.

The Baltimore Oriole, which breeds throughout southern Ontario, is a common summer resident in Niagara, and breeding was confirmed in all 25 squares in both atlases. According to the Ontario Nest Record Scheme data, the earliest egg date for this species in Niagara is 10 June.
There are four Baltimore Oriole BOS Noteworthy Records for September, ranging from 2 September to 16 September. Harold Lancaster observed single birds on 11 September 1966 at Mud Lake in Port Colborne and on 14 September 1975 at Morgan's Point near Burnaby. There is an October date prior to 1966 that is notable: a single bird was seen from 31 October 1964 to 1 November 1964 at Rose Hill Road in Fort Erie (BOSNR). There are two winter records: a single bird was seen on 25 December 1992 during the Port Colborne CBC and again in Port Colborne on 3 January 1993 (Ridout 1993:255), and a single bird visited a feeder in Vineland from 2 December 1988 to 12 January 1989 (Weir 1989:311). Baltimore Orioles winter mainly from central Mexico south to Venezuela and Columbia, but also in the West Indies, and uncommonly in Florida and the Atlantic coast north to Virginia (Brewer et al. 2000).

John E. Black

Pine Grosbeak *Pinicola enucleator*

Occasional spring, fall and winter visitor

The Pine Grosbeak is an occasional spring, fall and winter visitor to Niagara; it is usually seen in small numbers with other finches from November through January. The earliest fall date is 29 October 1978 at Erie Beach in Fort Erie (BOSNR). There are thirteen January records (BOSNR). There are very few records after 1986. On 4 November 1993, a male was found at Port Weller by Mary Ellen Hebb, and on 16 December 2001, eight birds were found on Foss Road, Pelham, by Marcie Jacklin (KJR). The second largest number of Pine Grosbeaks reported was sixteen birds at Dufferin Island in Niagara Falls on 22 December 1968 (Harold Lancaster). The latest winter dates are 22 January 1966 (BOSNR) and February 2005 (Project FeederWatch). There are no BOS Noteworthy Records for February or March.

Prior to 1966, this species was considered rare and irregular, but influxes with usually three, but sometimes four, five and six-year cycles, were noted when birds were considered common (Beardslee and Mitchell 1965). Such influxes were noted in 1968, 1972, 1985, 1987, 1993 and 2001, when 20 or more birds were recorded on CBCs in Niagara. Based on CBC data, numbers of Pine Grosbeaks in North America have increased since the early 1990s from about two to four birds per 10 party hours. However, this increase is not evident at feeding trays in the Great Lakes Region, where, typically, between five and ten birds have been seen since 1988 (Project FeederWatch). Trends based on wintering birds are difficult to ascertain, given the erratic migratory nature of the species.

This cardueline finch breeds throughout the subarctic and subalpine conifer, birch, and alder forests of North America and Eurasia (Clement et al. 1993, Adkisson 1999). In Ontario, breeding occurs north of Georgian Bay (Peck and Coady 2007). Largely resident on the breeding range, the species is an erratic migrant to regions south. During periods of food shortage, Pine Grosbeak populations of central and eastern North America may migrate as far south as Nebraska and east to New England (Clement et al. 1993). During such irruptions, individuals are known to invade Niagara.

Daniel R. Kozlovic
**Purple Finch* *Carpodacus purpureus***

RARE SPRING TRANSIENT, OCCASIONAL SUMMER RESIDENT, RARE WINTER VISITOR

The Purple Finch occurs regularly in Niagara; it may be seen in small numbers throughout the year. Possible early dates of the passage of spring transients are 4 April in 1971 and 1993 (BOS April Count) and 12 April 1997 in Fonthill (KJR). Harold Lancaster recorded possible transients at Morgan's Point near Burnaby and at Mud Lake in Port Colborne in May during the period 1970 to 1975. Winter records include three in December (1968-1978), eight in January (1966-1986), and none in February; on 28 January 1979, fifteen birds were sighted at Long Beach in Fort Erie (BOSNR). In the winter months an average of three to seven birds may attend feeding trays in Niagara; in some years more than 15 birds have been seen at feeders at one time (Project FeederWatch).

Purple Finches found in Niagara may be permanent residents or migratory individuals. The species was considered a common breeder in the Cattaraugus of western New York State during the 19th century (Beardslee and Mitchell 1965). In Niagara, there have been no confirmed breeding records since 1972 (Ontario Nest Records Scheme). Breeding Bird Survey data show a 50% decline in the eastern population (Wootton 1996). Since the mid-1980s, numbers of purple finches on CBCs in the east have decreased from about four to two birds per 10 party hours. This decline appears to be the result of interspecific competition with the House Finch, which has recently colonized the east (Wootton 1987, Shedd 1990). Future trends in numbers of purple finches may be dictated by changes in the population of the eastern House Finch.

Breeding in deciduous, mixed and coniferous forests across Canada, the Purple Finch occurs year-round in southeastern Canada and the northeastern United States (Wootton 1996). This finch breeds throughout Ontario, except in the extreme north and south (Leckie and Cadman 2007a). A partial migrant, birds winter in the southern United States.

*Daniel R. Kozlovic*

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**House Finch* *Carpodacus mexicanus***

COMMON PERMANENT RESIDENT

The House Finch is a newly established species in Niagara; since 1976, it has become a common permanent resident throughout the region. The House Finch was first noted in Niagara on 8 April 1976 at Rose Hill Road, Fort Erie (BOSNR) and has been recorded annually in Niagara since 1983 (BOS April Count). Harold Lancaster visited one of the first nests in Niagara-on-the-Lake on 23 July 1978. He writes in his notes:

We were given a step ladder in order to view the nest, which was constructed behind a rose trellis protruding above one of the windows of the Dean home. The female finch returned first and within a few minutes was joined by its mate. We observed the latter for several minutes as it came and went from the area while its mate remained on the nest.

First noted on the Niagara Falls CBC in 1978, the species has been recorded every winter since that year. Feeding trays in Niagara may attract 12 to 25 or more individuals at a time from November through March (Project FeederWatch).

An exponential increase in numbers is evident on Niagara CBCs until 1994, after which the population decreased to about half its peak size. Population crashes are not atypical following a period of rapid growth. Individuals at high density encounter factors...
that limit population size. These may include pathogens. House finch mortality may be associated with a novel strain of the bacterium *Mycoplasma gallisepticum*, which causes severe conjunctivitis and eventual blindness. In Niagara, the prevalence of mycoplasmal conjunctivitis was first recorded in 1995 and peaked in 1998, when infected birds were observed 25-50% of the time during surveys (House Finch Disease Survey 1994-2002, Cornell Lab of Ornithology). Notably, numbers of House Finches have decreased in areas where there is a high incidence of this parasitic bacterium (Dhondt et al. 1998). Given this relationship, the population may be expected to stabilize once pathogen and host attain equilibrium.

Native to western North America, the House Finch was introduced into Hawaii and eastern North America. The species now breeds in Hawaii and throughout Canada, Mexico and the United States, except for portions of the Great Plains, Mexico, southwestern and southeastern Canada (Hill 1993). In Ontario, breeding occurs primarily south of the Canadian Shield and sporadically north to Lake-of-the-Woods (Leckie 2007c). Breeding was first confirmed in the province on 20 June 1978 at Niagara-on-the-Lake (James 1978). Given the close association of the species with human settlement and its superior competitive ability, the subsequent spread of birds was swift (Kozlovic 1987, 1994; Cooper et al. 2007).

Banding and Recovery Data: A House Finch banded at Long Point on 11 May 1980 was encountered on 8 March 1981 in West Virginia. One banded at Long Point on 19 April 1990 was encountered on 4 February 1995 in Ohio.

Daniel R. Kozlovic
Red Crossbill

*Loxia curvirostra*

Occasional visitor (last seen 1980)

The Red Crossbill, an occasional winter visitor to Niagara, also occurs sporadically in small numbers throughout the year. Spring records include two birds noted at Long Beach in Fort Erie on 16 March 1968, one bird seen at the Adam Beck Generating Station in Niagara Falls on 18 March 1978, 27 individuals observed at Rose Hill Road, Fort Erie, on 28 April 1968 (BOSNR) and two birds observed at Port Weller on 3 May 1969 by Dan Salisbury. Salisbury also observed Red Crossbills in 1970: three birds at Lock 2 of the Welland Canal on 1 June, and 35 birds and 25 birds at Port Weller on 2 and 20 June, respectively. Three summer sightings were made at Rose Hill Road: one bird on 3 June 1973, six birds on 11 July 1969 and one bird on 28 August 1966 (BOSNR). There is no evidence of breeding in Niagara (Simard 2007, Peck and James 1987). In fall, one bird was noted at St. Davids on 31 October 1977 (BOSNR). Ten records for November included high counts of 23 and 40 birds at Long Beach on 11 November 1966 and 19 November 1967, respectively (BOSNR). Additional winter records include four records for February in 1970: two birds at Port Colborne on the 2 February, one bird at Fort Erie on 14 February and three birds at Rose Hill Road on both 15 and 16 February (BOSNR). The last recorded date for this species in Niagara is 16 November 1980, when two birds were seen at Niagara-on-the Lake (BOSNR). Although seen at feeding trays elsewhere in the Great Lakes Region, Red Crossbills have not been observed attending feeders in Niagara (Project FeederWatch).

Extreme dates noted for the Red Crossbill prior to 1966 were 23 September and 28 July, with birds most commonly observed between 8 November and 25 May (Beardslee and Mitchell 1965). The occurrence of the species in Niagara is extremely erratic and appears to be triggered by an increased population and absent or diminished conifer seed resources in the range (Clement et al. 1993). As a result, major flights of birds may occur, most noticeably in late winter or early spring (Beardslee and Mitchell 1965, Adkisson 1996). Such flights appear to have taken place in Niagara in April of 1968 and November of 1966, 1967 and 1969, when 20 or more birds were seen at a time. These influxes were part of larger flights observed in the eastern range. Typically, less than one bird is recorded per 10 party hours on CBCs in the east. Small numbers in Niagara may also be attributed to lack of suitable forage; the region lies in the Carolinian zone, which is characteristically free of conifers.

This unusual finch occurs year-round throughout the coniferous taiga, mixed and montane forests of Eurasia, Canada and the United States. Migrants are known to wander great distances and breed considerably farther south (Adkisson 1996). Breeding occurs throughout Ontario except in the extreme southwest (Simard 2007).

Daniel R. Kozlovic
White-winged Crossbill *Loxia leucoptera*

Occasional spring, fall and winter visitor

Occasional in Niagara, the White-winged Crossbill may be seen in small numbers from October through March. Spring records include sightings of single birds on 19 March 1972 at Rose Hill Road in Fort Erie (BOSNR), 9 April 1972 (BOS April Count) and 13 April 1966 at Decew Falls in Thorold by Dan Salisbury. There is no evidence of breeding in Niagara (Peck and James 1987, Coady 2007b). Nonetheless, there are two summer observations by Dan Salisbury of birds along the Welland Canal: one bird at Lock 2 on 2 June 1970 and two birds at Lock 3 on 10 July 1969. There are no records for the BOS October Counts; however, 14 birds were noted by Tom Crooks and David Don at Port Weller on 28 October 2001 (BOSNR). Eight BOS Noteworthy Records for November included a high count of 70 birds sighted by Robert Curry and others at Niagara Falls on 21 November 1981. Additional winter records include a single bird seen on 22 January 1964 at Port Weller and a pair seen at Niagara-on-the-Lake on 26 January 1998 (BOSNR). There are four BOS Noteworthy Records throughout February, with a high count of nine birds on 20 February 1978 at Erie Beach in Fort Erie. A single bird was seen at Welland on 25 February 1978 by Harold Lancaster. One to three birds were noted at some feeding stations in Niagara in March 1989 and January 2002.
Extreme dates noted for the White-winged Crossbill prior to 1966 were 25 August and 30 May, with birds most commonly observed between 8 November and 27 April (Beardslee and Mitchell 1965). Occurrence of the species in Niagara is very irregular; during most winters the species is not reported at all. Occasionally, major flights may be witnessed, as during the winters of 1950-1951, 1955-1956, and 1960-1961, when several flocks were encountered (Beardslee and Mitchell 1965). Apparently, such incursions took place in Niagara during the autumn of 1981 and 2001; however, these influxes were not witnessed throughout the range in the east. Typically, less than one bird is recorded per 10 party hours on CBCs in the east; three to four birds per 10 party hours would suggest an incursion.

The distribution and habits of the White-winged Crossbill are similar to that of its congener, the Red Crossbill (Clement et al. 1993); however, White-winged Crossbills range no farther south than the central United States (Benkman 1992). Breeding occurs throughout Ontario except in the extreme southwest (Coady 2007b).

Daniel R. Kozlowic

Common Redpoll *Carduelis flammea*

Rare spring, fall and winter visitor

The Common Redpoll is rare but regularly seen in Niagara. It occurs from October through March in small to large pure and mixed flocks, which may include American Goldfinches, Pine Siskins and American Tree Sparrows. Spring sightings were made daily during March 1982 when 20-80 individuals were noted at Rose Hill Road in Fort Erie (BOSNR). The latest and only spring record included 90 individuals observed on 18 May 1969 (BOS May Count). There are no summer records (BOSNR). Although no birds were noted on the BOS October Count, early fall records at Port Weller included three birds on 27 October 1968 and one bird on 28 October 2001 (BOSNR).
There are twelve records for November, high counts being 40 and 46 birds at Port Weller in St. Catharines on 23 November 1968 and 4 November 2001, respectively (BOSNR). Very large numbers of birds were observed on Niagara CBCs in 1993: 228 on the BOS CBC, 399 on the Niagara Falls CBC and 520 on the Port Colborne CBC. Common Redpolls were noted daily during January and February, with high counts of 150 birds at Port Weller on 1 January 1969 and 200 birds at Black Creek, Stevensville, on 2 February 1972 (BOSNR). Small numbers of redpolls (five or fewer) may attend some feeding stations in Niagara. In 1994, 1998 and 2004, the mean group size at feeders reached 10-25 individuals (Project Feeder Watch).

Extreme dates noted for the Common Redpoll prior to 1966 were 19 October and 2 May, with the majority of observations made between 12 November and 9 April (Beardslee and Mitchell 1965). Typical of northern-breeding finches, Common Redpolls are irregular in their occurrence. Irruptive cycles correspond with food availability in the breeding and wintering range (Knox and Lowther 2000). Birds may be numerous in some years, with flock size exceeding 1,000 individuals, and absent in others (Beardslee and Mitchell 1965). With few exceptions, southerly winter irruptions in the east have occurred on even-numbered years. This pattern was also evident in Niagara, with greater numbers of birds visiting feeding stations and increased sightings (one to three birds per party hour) on CBCs.

This Holarctic finch breeds throughout open coniferous forests and tundra scrub. In North America it ranges from Alaska to Newfoundland, south to the central United States (Clement et al. 1993, Knox and Lowther 2000). In Ontario, Common Redpolls breed along the Hudson and James Bay Lowlands south to Moosonee (Leckie and Pittaway 2007a), and they winter throughout the remainder of the province (Knox and Lowther 2000).

Daniel R. Kozlovic

Hoary Redpoll *Carduelis hornemanni*

Occasional winter visitor

The Hoary Redpoll is very rare in Niagara; birds are usually seen singly within flocks of Common Redpolls from November through February. The earliest fall record is of a single bird at Port Weller in St. Catharines on 23 November 1968 (BOSNR). A single bird was also seen at that location on 2-13 December 1968 (BOSNR). One bird was seen on the Niagara Falls Christmas Bird Count on 27 December 1993 on Kalar Road, Niagara Falls, by John Miles. There are two observations for January 1994: one bird on 2 January at Niagara Falls and two birds on 18 January in Wainfleet Township (BOSNR). The latest February records are from Dan Salisbury of two birds and one bird reported at Port Weller on 24 and 25 February 1969, respectively (BOSNR). Kayo Roy photographed a bird at his feeder in St. Catharines on 13 January 1994 and observed it again on 9 February 1994. He also identified a bird at his feeder in Fonthill 5 March 2004 and again 14 March 2004. On 3 March 1969, a Hoary Redpoll was seen in the company of twenty Common Redpolls off Highway 8 at Fifteen Valley by Dan Salisbury. Small numbers of Hoary Redpolls (less than three) were observed at some feeders in December 1995, January-March 1996 and March 2003; this number increased to three to seven birds during March 1998 and February 2007 (Project FeederWatch).

BOS April Count: Not reported
BOS May Count: Not reported
BOS October Count: Not reported
Niagara Christmas Bird Counts: Reported on 1 of 41 counts, maximum of 1 bird on the 1993 Niagara Falls CBC
Extreme dates noted for the Hoary Redpoll prior to 1966 were 22 December and 2 April, with most records from January to March (Beardslee and Mitchell 1965). In most cases, Hoary Redpolls are observed in flocks of Common Redpolls and thus are more likely to be seen during years of population irruption of the latter species in the south. Based on banding and CBCs in Saskatoon, Saskatchewan, Hoary Redpolls comprise about 1.3% of the redpoll population (Knox and Lowther 2000).

This small, bright finch breeds throughout the High Arctic regions of the world and ranges in North America from Alaska to the Labrador Peninsula (Clement et al. 1993). The Hoary Redpoll is rare in Ontario and documented in only a few isolated places in the breeding range, which lies along the coast of Hudson Bay (Leckie and Pittaway 2007b). Breeding was only confirmed in 2004 in the extreme north of the province, along the Manitoba border (Peck and Peck 2006).

Daniel R. Kozlovic

Pine Siskin Carduelis pinus

Uncommon spring, fall and winter visitor

The Pine Siskin occurs regularly in Niagara. It is usually seen in small numbers, occasionally in large flocks, in the company of other finch species, from September through May. Breeding was confirmed in only one atlas square on 9 May 1984 at Port Weller. The latest spring record is for 20 May 1990, when 50 birds were observed on the BOS May Count. The earliest fall record is from Niagara-on-the-Lake on 14 September 1990, when three birds were seen (BOSNR). Fall observations include six records for September (BOSNR). At Queenston on 12 October 1987, 200 birds were noted (BOSNR). The species was seen throughout November and December, with 150 birds reported at Queenston on 2 November 1969 (BOSNR). Additional winter sightings include 15 records throughout January and February (BOSNR). Small numbers of Pine Siskins (five to ten) were observed visiting some feeding stations in Niagara during January-March 2003, and March 2004 and 2006 (Project FeederWatch).
The winter of 2008-2009 was a banner year for Pine Siskin in Niagara. A massive irruption of these northern birds to the region was nothing short of spectacular. The birds moved south, likely due to a poor food supply of cone crops in the coniferous woods of the boreal forests. Reports of large numbers of Pine Siskin in Niagara began in late November 2008. On the balcony floor and on the niger seed feeder at 13 Kinsman Court in Fonthill on 9 December 2008, more than 100 feeding Pine Siskins were counted. Every day a minimum of 50-60 siskins was observed, with more than 150 individuals counted on 27 January 2009. This influx of Pine Siskins continued well into May 2009, when smaller numbers visited the feeders. Included in this mass of Pine Siskins over the months was a minimum of nine green morph Pine Siskins. These individuals revealed the greenish hue to the upper parts and had more yellow in their wings and tail. While no nests were located, several pairs of Pine Siskins nested in the backyard pine trees. A number of young birds that retained a considerable amount of fluffy white downy feathering were photographed on 12 May 2009 on the wooden balcony railing.

Prior to 1966, Pine Siskin was described as irregular but fairly common and most numerous between 17 October and 8 December, with extreme dates of occurrence as late as 17 May. Breeding occurred March-August, but birds appeared erratically, if at all, during the summer months (Beardslee and Mitchell 1965). Similarly, numbers of siskins may fluctuate greatly from year to year, with no apparent regularity. Generally, CBCs in the east reported two to ten Pine Siskins per 10 party hours. Participants on CBCs in Niagara may expect to see about one Pine Siskin per 10 party hours; however, during peak years this number may increase to about 20 birds per 10 party hours, as witnessed in 1981 and 1986 (CBC data). There appears to be no significant population trend for the species, except for Pacific Coast populations, which have shown a slight annual decline of about 6% (Dawson 1997).

The characteristic wheezy song of the Pine Siskin may be heard throughout the conifer and mixed wood forests of North America (Clement et al. 1993). The species breeds throughout Ontario except in the extreme southwest. The most southerly confirmed record of breeding is along the Lake Erie shore near Long Point (Pittaway 2007).

Banding and Recovery Data: A Pine Siskin banded at Rock Point near Dunville on 6 November 2004 was encountered on 26 January 2005 in Illinois.

Daniel R. Kozlovic

Post-2006 Observation

The winter of 2008-2009 was a banner year for Pine Siskin in Niagara. A massive irruption of these northern birds to the region was nothing short of spectacular. The birds moved south, likely due to a poor food supply of cone crops in the coniferous woods of the boreal forests. Reports of large numbers of Pine Siskin in Niagara began in late November 2008. On the balcony floor and on the niger seed feeder at 13 Kinsman Court in Fonthill on 9 December 2008, more than 100 feeding Pine Siskins were counted. Every day a minimum of 50-60 siskins was observed, with more than 150 individuals counted on 27 January 2009. This influx of Pine Siskins continued well into May 2009, when smaller numbers visited the feeders. Included in this mass of Pine Siskins over the months was a minimum of nine green morph Pine Siskins. These individuals revealed the greenish hue to the upper parts and had more yellow in their wings and tail. While no nests were located, several pairs of Pine Siskins nested in the backyard pine trees. A number of young birds that retained a considerable amount of fluffy white downy feathering were photographed on 12 May 2009 on the wooden balcony railing.
American Goldfinch *Carduelis tristis*

Common summer resident, uncommon winter resident

The American Goldfinch, the most abundant finch species in both Ontario and Niagara, may be seen here in weedy fields, orchards and gardens throughout the year. The species was observed throughout March at Rose Hill Road, Fort Erie, in 1971 and 1972 (BOSNR). The probability of encountering this common summer resident in the Carolinian region during the second Atlas was greater than 95% (Leckie and Cadman 2007b). A flight of 660 goldfinches took place along the shore of Lake Ontario on 7 November 1994 (see the article by Paul Summerskill in this book). On 8 January 1967, 200 American Goldfinches were reported at Chippawa. The species was seen throughout February 1971 on Rose Hill Road (BOSNR). It is a common visitor to gardens in Niagara. Feeders attract average group sizes of five to twelve birds and occasionally more than 25 individuals (Project FeederWatch).

Prior to 1966, American Goldfinch was described as common during the period 5 May to 10 November and uncommon to sometimes fairly common in winter (Beardslee and Mitchell 1965). CBC participants in Niagara generally encountered 10-25 birds per 10 party hours; in 1978 about 65 birds per 10 party hours were recorded. The presence of feeding trays has been suggested as a possible factor in determining the winter distribution and abundance of this species (Root 1988). Analysis of CBC data indicates no significant change in population size of wintering birds in Ontario; however, the Breeding Bird Surveys suggest a decline in eastern populations (Middleton 1993). This trend may reflect changes in land use and resulting decrease of preferred old field and shrubby habitats in eastern North America. In Ontario, American Goldfinches are most abundant in the Lake Simcoe-Rideau region and less so in areas of intensive agriculture, such as the Carolinian region (Leckie and Cadman 2007b).

This brightly coloured finch may be found throughout the temperate regions of North America; in Ontario, American Goldfinches breed throughout the south as far north as the Moose River and Lake-of-the Woods (Middleton 1993, Leckie and Cadman 2007b).

Banding and Recovery Data: An American Goldfinch banded at Rock Point near Dunville on 30 August 2002 was encountered on 28 January 2003 in Texas. Other banded birds have been encountered in Michigan, New York, North Carolina, Ohio, Pennsylvania, South Carolina and Tennessee.

_Daniel R. Kozlovic_

Evening Grosbeak *Coccothraustes verspertinus*

Occasional spring, fall and winter visitor

This large finch is occasionally observed in Niagara; when seen it is in small numbers, sometimes at feeders, from October to May. Spring records include 45 individuals seen throughout March in 1972 at Rose Hill Road in Fort Erie (BOSNR). The latest spring date is of one bird at Morgan’s Point near Burnaby on 25 May 1969 (BOSNR). There are no summer records. The earliest fall date is 16 October 1983, when 15 birds were reported from the BOS October Count. The species was noted throughout November (11 records, 1966-1999), with a high count of 45 birds at Fort Erie on 23 November 1977 (BOSNR). Feeding trays in Niagara attracted small numbers of grosbeaks (five or less) during the winters of 1993, 1994, 2005 and 2006 (Project FeederWatch). On the 1985 Niagara Falls CBC, a notable number of birds were counted in Niagara.
During the winter of 1889-1890, some 20 specimens were collected at Sherkston in Fort Erie (Beardslee and Mitchell 1965). Apparently, this range expansion resulted from the extensive planting of box elder trees and recurring outbreaks of spruce budworm in the east, both of which provided suitable forage and allowed for the establishment of breeding grosbeak populations (Gillihan and Byers 2001). Indeed, areas of Ontario with significant budworm outbreaks also supported the highest breeding densities of grosbeaks (Hoar 2007). Depending on food abundance, the species may be relatively common in some years and rare or absent in others. Beardslee and Mitchell (1965) noted winter influxes of the species in roughly two-year cycles from 1945-1962. Since 1992, however, CBCs in the east have revealed a gradual decrease in numbers of wintering grosbeaks. In the last ten years a total of only nine birds have been seen on the Niagara CBCs. Continental breeding populations show a significant decline for the period 1980–1999 (Sauer et al. 2000).

The Evening Grosbeak is found year-round in mixed forest regions across Canada, the northeastern and western United States and central Mexico (Gillihan and Byers 2001). In Ontario, the species breeds on the Canadian Shield north to Pickle Lake and Moosonee (Hoar 2007). The range of the Evening Grosbeak has undergone considerable expansion; once restricted to the west, the grosbeak population gradually spread and by the turn of the 20th century had invaded the east (Gillihan and Byers 2001).

Daniel R. Kozlovic

House Sparrow *Passer domesticus*

Very common permanent resident (introduced)

The House Sparrow, formerly known as English Sparrow, was first intentionally introduced into North America in the fall of 1850 in Brooklyn, New York to control insects. It has become one of the most widespread wild birds in the Americas as it follows humans beings all over the New World and throughout the planet (Lowther and Cink 2006).

The English and scientific names of the House Sparrow have the same meaning. The Latin word *passer*, like the English word “sparrow” was a term for small active birds coming from a root word referring to speed. The Latin word *domesticus* means “of the house” like the common name, a reference to the long association between the sparrow and human beings (Lewis and Kingery 1918; Partridge 1983; Summers-Smith 1988).
Reaching Ontario in 1870, the House Sparrow is rarely found far from human habitation. The exact date of this small, granivorous and insectivorous songbird’s arrival in Niagara is not known. Sheppard (1960) comments on the House Sparrow’s presence in the region in the 1950s, 100 years after its Brooklyn release: “An abundant resident, the so-called English Sparrow is one of the commonest and most omnipresent birds in the district.”

The House Sparrow is a permanent resident throughout southern Ontario and is a very common permanent resident in Niagara. The establishment of House Sparrows in the Buffalo area probably followed the introduction of this species into Rochester between 1867 and 1869. The first nest record in the BOS study area was at Lockport on 16 May 1878 (Beardslee and Mitchell 1965). The earliest record in Niagara is of 50 individuals seen on an unofficial Christmas Bird Count in Vineland on 24 December 1926, reported by George Dickson, William Hurlburt and E.F. Palmer (Marcie Jacklin pers. comm.).

In both breeding bird atlases, the House Sparrow was confirmed breeding in all 25 squares. According to the Ontario Nest Record Scheme data, the earliest egg date for this species in Niagara is 6 May.

An abundant bird on the Niagara Christmas Bird Counts, the House Sparrow is commonly found in Niagara throughout the winter.

John E. Black
PART THREE: SPECIES ACCOUNTS

LITERATURE CITED

FOR SPECIES ACCOUNTS


Canadian Wildlife Service see CWS.


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PART FOUR
Hotspots and Day Trips in Niagara
Photographer and Illustrator Information
Biographies of Contributors
Index to Species Accounts
OFO Code of Ethics
Hotspots & Day Trips in Niagara

Katherine J. Stoltz and Drew J. Campbell
THE REGIONAL MUNICIPALITY OF NIAGARA offers a wealth of birding opportunities throughout the year. Habitats range from Carolinian forest to southern acid peat bog and from two Great Lakes and the Niagara River to area sewage ponds. For waterfowl, gulls and shorebirds, Lakes Ontario and Erie can be very productive. The Niagara River in the winter months is legendary for thousands of gulls of many species. Inland, the numerous conservation areas, municipal parks, natural ponds and lakes, and man-made water facilities such as landfill sites, water treatment plants and sewage ponds can be rewarding for birding enthusiasts. The Short Hills Provincial Park and the Wainfleet Bog are also highly productive during the spring and fall migration periods.

This article is divided into five sections with subsections as shown below. At the beginning of each section we indicate the various trips we usually make when we bird the area and how long it takes us to cover each section. For further information on hotspots, the reader is encouraged to consult the following websites: Niagara Peninsula Conservation Authority, Ontario Trails Council, Ontario Ministry of Natural Resources (Natural Heritage Information Centre), Metro Toronto Zoo and Brock University Department of Tourism and the Environment.

The Lake Ontario Shoreline
- From Fifty Point Conservation Area to the Port Weller Piers and Malcolmson Eco-Park
- From the Port Weller Piers and Malcolmson Eco-Park to Niagara-on-the-Lake

The Niagara River
- From Niagara-on-the-Lake to the Queenston Boat Launch and the Adam Beck Overlook
- From Queenston Boat Launch and the Adam Beck Overlook to Niagara Falls and the International Niagara Control Works in Chippawa
- From Chippawa to Fort Erie

The northern portion of the Niagara Region
- Beamer Memorial Conservation Area
- Grasslands
- Wetlands and Sewage Ponds
- Woodlands

The Lake Erie Shoreline
- From Fort Erie to Ridgeway
- From Ridgeway to Port Colborne
- From Port Colborne to Long Beach

The southern portion of the Niagara Region
- Erie Beach and Morgan’s Point Conservation Area
- Humberstone Marsh Conservation Area
- Mud Lake Conservation Area
- Stevensville Conservation Park
- Wainfleet Bog Conservation Area
- Wainfleet Wetlands Conservation Area
- Willoughby Marsh Conservation Area

Illustration / Rick Manners
40 of Best Birding Hotspots in the Niagara Region

1 Fifty Point Conservation Area
2 Grimsby Sewage Ponds
3 Beamer Memorial Conservation Area
4 Victoria Street, Vineland
5 Port Dalhousie Piers
6 Malcolmson Eco-Park
7 Port Weller West Pier
8 Port Weller East Pier
9 Niagara Shores CA
10 Queen's Royal Park
11 Queenston Boat Launch
12 Sir Adam Beck Overlook
13 Whirlpool Aerocar
14 Niagara River Gorge
15 Old Toronto Hydro Building (Engineerium)
16 International Control Structure
17 Upper River
18 Fort Erie Boat Launch
19 Jaeger Rocks
20 Waverley Beach
21 Windmill Point
22 Point Abino
23 Marcy's Woods
24 Pinecrest Point
25 Mud Lake
26 Gravelly Bay
27 Wainfleet Bog
28 Harborview Road Overlook
29 Morgan's Point
30 Long Beach Conservation Area
31 Harold Mitchell Nature Reserve
32 Welland Ridge Trail
33 Woodend Conservation Area
34 Short Hills Provincial Park
35 Short Hills Provincial Park
36 St. John's Conservation Area
37 Fonthill Kame
38 Willoughby Marsh
39 Humberstone Marsh
40 Welland Canal Grasslands
The Lake Ontario Shoreline

Katherine J. Stoltz

This stretch of the Lake Ontario shoreline is the Niagara portion of the Lake Ontario Mid-winter Waterfowl Inventory.

Large numbers of ducks, geese and swans can be seen at almost any spot along the shoreline, although Fifty Point Conservation Area, Vineland, the Port Weller piers and the mouth of the Niagara River at Niagara-on-the-Lake are the premier spots. In the spring the shoreline is also productive for loons and grebes and in the fall all three jaeger species are possible. Allow perhaps one half day for the trip from Fifty Point Conservation Area to Vineland and Port Weller in St. Catharines. The shoreline east of Port Weller to Niagara-on-the-Lake is not usually very productive and minimal time should be allotted to bird this portion of the shoreline. In the spring the Port Weller area, with its two piers and Malcolmson Eco-Park, is one of our premier areas for migrant passerines. One can easily spend a half-day or more at these locations.
From Fifty Point Conservation Area to the Port Weller Piers and Malcolmson Eco-Park

Fifty Point Conservation Area
A small creek running approximately through the middle of Fifty Point Conservation Area marks the boundary between the Municipal Regions of Niagara and Hamilton. To reach this conservation area, take the Fifty Point exit from the Queen Elizabeth Way (QEW) and proceed north to the North Service Road. Turn right and almost immediately a short cut-off road, Lockport Road, to the left takes you to Baseline Road, which turns into Winston Road. Continue right approximately two hundred metres to the park entrance on your left (1761142E 4785798N). (Fee $8 at the time of writing.) From the fee booth, turn left. The road will circle to the right. At the fork in the road turn right again. Once across the small boundary creek, turn left into the waterfront parking lot. On your right you will see the beach area, and up the hill is the picnic area. Walk toward the picnic tables and from this highest shoreline point scan the lake for waterfowl, gulls and other birds. The Fifty Point area is arguably the best place in Niagara to find Parasitic and Pomarine Jaegers, and on occasion Long-tailed Jaegers, from late August to early November providing weather conditions are harsh with strong northwest winds. This site is the most reliable location for Northern Gannet, a bird that seems to be almost annual from late October to early December.

Rarities here have included an American Oystercatcher which was photographed on the beach on 2 November 1985. Sabine's Gull and Black-legged Kittiwake are seen here with some regularity. A female Common Eider was observed in June 1995. A Western Grebe remained at this location for nine days and a Pacific Loon for six days, both in November 2004. A Bell's Vireo was identified here on 18 October 1984.

Kelson Avenue, the next access road to Lake Ontario, is a further 0.6 km east along Winston Road, where you will turn left. This road runs parallel to the east end of the conservation area. Park at the end of the road and walk to the lakeshore. From this location you can observe many of the birds on the lake. Immediately to your right you will see the Department of National Defense Rifle Range that is out of bounds to birders.

Grimsby Sewage Ponds
(formerly known as the Winona Sewage Ponds)
Return to Winston Road and turn left. Travel 0.5 km to the Grimsby sewage ponds on your left (17612401E 4785504N). Parking here is restricted to the west side of Winston Road or the small parking area of the two Regional Niagara Works Department buildings. The ponds can be accessed from behind these two buildings or by walking north along a dirt road to the east (612535E 4785456N). Access to the north pond is now restricted by a fence. Be sure to respect any no trespassing signs.

Rarities seen here include a Yellow-billed Loon observed in Lake Ontario off these sewage ponds on 7 May 1966. One year later on 4 May 1967 another was identified in the lake off nearby Oakes Road. An American Oystercatcher was located on the edge of the ponds on 2 November 1985, a female Lark Bunting was discovered here on 13-14 October 1990, two Glossy Ibis in September 2002, and a male Eurasian Wigeon in July 2000. Continue east along Winston Road 1.3 km from the Grimsby sewage ponds to Place Polonaise at Hunter Road (613555E 4785175N). An adult Laughing Gull was located loafing on the grass at this private club on 3 May 1989.
Lakeshore at the Grimsby Marina

The next point of interest is a small parking area near the Grimsby Marina. To reach this location, continue east on Winston Road and drive past Casablanca Boulevard where Winston Road becomes the North Service Road. Continue east and bear left. Then turn right on Olive Street (3.3 km) and where it intersects Elizabeth Street (0.8 km) turn left and travel to a point where Elizabeth Street ends and intersects Lakeside Drive (0.5 km). At this point continue straight ahead and drive down a small grade to the free parking area (1761757E 4784482N). There is open water here even in the winter. Brant, Wood Duck and Green-winged Teal have been found here. On 24 August 2008, an immature Yellow-crowned Night-Heron was photographed at this location.

Shoreline between Beamsville and Vineland

Return along Elizabeth Street to Olive Street and turn left. At the end of Olive Street, make a right turn onto Ontario Street (Grimsby), cross over the QEW, and turn left to access the QEW Niagara bound. Take the Beamsville Ontario Street exit ramp, and turn left (north), then right onto the North Service Road. Driving east between Beamsville and Vineland, several roads provide access to Lakeshore Road along the Lake Ontario shoreline including Tufford Road North, Merritt Road North, Maple Grove Road North (where 56 King Eider were documented one winter), Cherry Avenue North and Martin Road North. These roads to the lake should be birded for potential rafts of waterfowl, gulls or other birds. Be mindful of private property and all no trespassing signs. Continue east on the North Service Road a short distance to Victoria Avenue (Regional Road 24), Vineland.

Lake Shoreline at Vineland

Once on Victoria Avenue (Regional Road 24 (630430E 4783002N)), drive north toward the lake to Verity Lane at the end of the road (630105E 4783762N). Park along this laneway and scan the lake as this location affords a wide view of the lake to scope for waterfowl, loons, grebes and other birds. Rarities here have included Northern Gannet, King Eider, Parasitic and Pomarine Jaegers and Purple Sandpiper. The Agriculture Canada property at 4902 Victoria Avenue may be worth birding in the spring. A Yellow-throated Warbler, a rare bird for the Niagara Region, was sighted in the trees at the north end of the property on 15 May 1996. In the nearby Jordan Harbour, a historical record exists of Purple Gallinule found there on 11 September 1937. Two American White Pelicans were observed there on 17 November 1991 with at least one bird remaining to 13 January 1992.

Best Western Beacon Harbourside Inn

Continue 2.2 km east on the North Service Road to the next destination, the Best Western Beacon Harbourside Inn property on the lake where there is free parking (17632768E 4782384N). In winter scan both ends of the rock breakwall for Snowy Owl. King Eider, Harlequin Duck and Purple Sandpiper.

Charles Daley Park

Continue eastbound on the North Service Road 3.9 km to Charles Daley Park where there is free parking (17636205E 47822357N). Here you will find a small pond and a panoramic view of Lake Ontario.

Courtleigh Road Overlook

Return to the North Service Road, proceed 0.7 km to Gregory Road, and turn left. Make a right turn onto Lakeshore Road West, which becomes Main Street in Port Dalhousie. Proceed 2.4 km on Lakeshore Road West and turn left onto Courtleigh Road. Follow Courtleigh Road to its junction with Mary Street and park along the road. From here, there is an excellent view of Lake Ontario.
12 Mile Creek along Martindale Road, St. Catharines
Return to Lakeshore Road West and make a right turn at Martindale Road. Proceed 2.4 km south and park in the Huntington Square Mall parking lot at Erion Road, St. Catharines (17640371E 4781379N). Walk across Martindale Road and take the footpath down to 12 Mile Creek, which continues 1 km south as far as Welland Vale Road. Retrace your journey along Martindale Road to the bridge over the QEW.

Green Ribbon Trail and Marsh
Continue 0.9 km on Martindale Road to the Green Ribbon Trail. This trail is a memorial to Kristen French, a young murder victim from St. Catharines. Opposite Courtland Street, park in the small marked lot on your left (17639610E 4782792N). This site offers a footbridge over Richardson’s Creek, and a small marsh where Mute Swan and Wood Duck nest. A Snowy Egret was observed here on 16 May 2004, and an adult Little Blue Heron was identified here on 13-16 May 2007.

Henley Rowing Club
Return to Main Street from Martindale Road and turn right. The next point of interest is the Henley Rowing Club. Turn right at 0.6 km onto Henley Island Drive to access Martindale Island. At the small bridge, turn left to the Henley Rowing Club Shell House where there is free parking (17640405E 4783703N). A Ross’s Goose spent the better part of a week here in January 1988. In warmer weather, rowing activities may limit birding opportunities.

Port Dalhousie West and East Piers
Return to Main Street, turn right and travel 1.5 km to the four-way stop in Port Dalhousie. Turn right, then left at the next set of lights to enter the Port Dalhousie restaurant and Lakeside Park beach parking area (17640988E 4784876N). A male Harlequin Duck was spotted in the rough waters at the small dam in the harbour here on 7 January 1996. A walk out to the end of the west pier to scope the lake could be rewarding; however, the footing may be treacherous in winter.

To reach the east side of the harbour, return to Main Street and turn left. Main Street becomes Lakeport Road. As you drive up the slight grade, you will pass Martindale Pond on your right. At the next lights at Ontario Street (St. Catharines), turn left onto Lakeshore Road. Take the first left onto Lighthouse Road, which leads down to the Dalhousie Yacht Club where there is free parking (17641114E 4785272N). Scan the boat slips and breakwall, and walk out the east pier past the lighthouse to scan for birdlife out in the lake. In winter the winds might make for icy footing along this pier.

Previous sightings include Snowy Owl and Snow Bunting in winter, and Forster’s Tern in the spring.

Municipal Beach
Return to Lakeshore Road and turn left to reach our next destination. Municipal Beach is a favourite haunt for windsurfers and birders. After 3.5 km, turn left at the lights at Arthur Street, drive to the end and then turn right onto Beachaven Drive, and left onto Bogart Street. The beach and parking area are on your left (17644332E 4787315N). An extremely rare Dovekie, in very poor condition, was found here on the beach on 23 October 1988. The water treatment plant east of the beach is noted for the appearance of a winter adult Ross’s Gull on 26 February 1995. A California Gull was found here on 19 December 1999 mingling with many other gulls.
From the Port Weller Piers and Malcolmson Eco-Park to Niagara-on-the-Lake

Return to Lakeshore Road and turn left. At 0.7 km and immediately before the bridge at Lock 1, turn left onto Welland Canals Parkway (formerly Government Road).

Alternate Directions to Port Weller and Malcolmson Eco-Park: Take the QEW Niagara bound to St. Catharines. Exit at Niagara Street and travel north to Lakeshore Road. Turn right and continue 0.2 km eastbound to the Welland Canal, and immediately before the bridge at Lock 1, turn left onto Welland Canals Parkway (formerly Government Road).

Port Weller West Pier and Malcolmson Eco-Park

Drive 1.1 km down Welland Canals Parkway and park at the north end of the Eco-Park on your left, then scan the canal for any birdlife (17644806E 4787318N). To visit the Eco-Park proceed on foot through the north entrance and take the various footpaths. Named in honour of Mary Malcolmson, Malcolmson Eco-Park is a small urban oasis of Carolinian woodland and tall grass prairie. Established in 1993 and tended by a dedicated
group of volunteers, it provides a prime rest stop for hungry warblers and other migrants. Extensive fencing has been erected along the Welland Canal that now restricts access to previously open areas. The north end of this part of the west pier houses the restricted area of the Canadian Coast Guard and is off-limits to birders. Prothonotary, Worm-eating, Connecticut and Prairie Warblers have been among the 32 species of warbler observed here and in Malcolmson Eco-Park over the years.

This area of the Welland Canal has been a hotbed for rarities, including two Mew Gulls (an adult on 24 October 1967 and a first winter on 28 - 30 November 1967), Rock Wren on 6 - 7 December 1964, Ancient Murrelet on 13 November 1994, Tricolored Heron from 27 May to 2 June 2001, three Black-headed Gulls, Eared Grebe and Tufted Duck. However, the area is perhaps best known for the sightings of three different Ross's Gulls over an eleven-month period between 18 December 1994 and 28 November 1995.

**Port Weller East Pier and Jones Beach**

Return to Lakeshore Road, cross over the Welland Canal (Lock 1) and turn left at 0.6 km onto Seaway Haulage Road which intersects Broadway as it leads into the old town of Port Weller. For Jones Beach, proceed to the end of Broadway. There is a small free parking lot on the left (17645162E 4787587N). This small beach area is a great place to observe swans, waterfowl and gulls. A Sabine's Gull was discovered here on 24 September 1987. Willet, Whimbrel and numerous shorebirds favour this beach.

For Port Weller East Pier, return back to Seaway Haulage Road (0.6 km) and turn right. Proceed to its termination at a metal fence and gate (17644996E 4787713N). Be sure to park along the side of the road so as to not obstruct any Seaway Authority vehicles from access through the gate. During migration, this treed finger of land jutting out into Lake Ontario is a migrant trap. King Eider, Parasitic and Pomarine Jaegers and Northern Gannet are seen with some regularity. Many warblers including Kentucky, Connecticut and Hooded Warbler have been recorded here. A walk of 1.3 km takes you to the end of the pier. A bicycle trail has recently been added.

Rarities observed here over the years include Yellow Rail on 3 May 1995, Great Cormorant on 23 November 2002, Sage Thrasher 24-27 February 2006, Western Kingbird on 10 September 2007 and Northern Hawk-Owl on 1 December 2007. Nearby, Happy Rolph's Bird Sanctuary may occasionally play host to interesting birds. To visit Happy Rolph's, return to Lakeshore Road and turn left. Travel 0.4 km east to Read Road and turn left. Proceed to the free parking lot at the corner of Read Road and Northrup Crescent (17645972E 4787269N).
Niagara Shores Park

Return to Lakeshore Road and turn left. If you continue along Lakeshore Road you will eventually reach Niagara-on-the-Lake. Access to Lake Ontario is possible at a number of locations en route, but these are usually not very productive. At 8.8 km and just after a cemetery, you will see a small dirt road on your left that takes you up to Niagara Shores Park. Take this dirt road to a small parking lot. From here you have a good view of the lake and a walk in the adjoining woods, where the small marsh and pond can be productive. Return to Lakeshore Road. If you wish to visit the Niagara-on-the-Lake sewage treatment plant lagoons, travel east 0.9 km and turn left at the gated entrance (17654014E 4790629N). If these gates are open, drive into the facility and identify yourself to the staff before birding the lagoons. Return to Lakeshore Road. Travel east 0.9 km to Shakespeare Avenue in Niagara-on-the-Lake and turn left. Birds of interest here include Red-bellied Woodpecker and Tufted Titmouse. Continue toward the lake and turn right. From here you can follow the lakeshore where there are several pull-offs to look for waterfowl. It is 3.2 km from the sewage treatment plant to the intersection of Queen Street and Mississauga Street, the trip end.

Marine Highway

The Welland Canal, located in the Niagara Region, is an integral portion of the St. Lawrence Seaway. The seaway was inaugurated by Queen Elizabeth II and President Dwight Eisenhower in 1959. It extends from Montreal to Lake Erie and allows ocean-going vessels to travel from the Atlantic Ocean into the Great Lakes. In Niagara, we are familiar with the eight lift locks in the Welland Canal. The canal runs 42 km from Port Weller to Port Colborne and it takes ships an average of 11 hours to navigate the canal’s length.

All North American major highways are recognized with an appropriate logo. We are all well aware of the signs that identify the Trans-Canada Highway, Ontario’s Queen Elizabeth Way, and Highway 401. In the United States, all of the interstate highway signs are well known to motorists. In 2005, the St. Lawrence Seaway Management Corporation launched a marketing campaign to introduce an original logo to brand the Great Lakes St. Lawrence Seaway System as HWY H2O. The brand has developed into a marketing alliance of transportation stakeholders, actively promoting the benefits of marine transportation throughout the waterway. This incredibly ingenious logo (shown above) can now be found at various points along the marine highway and is visible on signs along the entire length of the Welland Canal.

Kelly DiPardo and Kayo J. Roy
The Niagara River

Katherine J. Stoltz

Niagara Falls may be most famous as the honeymoon capital of the world, but it is also renowned for the congregation of gulls on the Niagara River from late October to early February.

The river forms a 56-km border between upstate New York and Ontario and connects Lake Ontario to Lake Erie. Despite the chilly winter air, the Niagara River and the falls area remain largely ice-free. The gulls feast on small fish such as alewives, gizzard shad, shiners and smelt, as well as larger fish that have been chopped up by the turbines at the power plants.

Up to 2006, a total of 19 gull species have been documented along the Niagara River corridor. On one exceptional day in December 1989, 14 different gull species were tallied. On average, birders should expect to see 8-10 gull species during a day trip in the winter months. The four common and abundant gull species to be found are Bonaparte’s, Ring-billed, Herring and Great Black-backed. Present in small numbers are Little, Thayer’s, Iceland, Lesser Black-backed and Glaucous Gulls. California Gull has become an almost annual visitor. Black-legged Kittiwake, Sabine’s, Black-headed and Franklin’s Gulls are irregular early winter visitors. Extreme rarities include Ivory...
Gull, Ross's Gull, Laughing Gull, Mew Gull and Slaty-backed Gull. In addition to gulls, the upper Niagara River often teems with diving ducks and the occasional grebe or loon.

The starting point at the mouth of the river and inland a few kilometres is excellent for waterfowl. However, the drive to the Queenston boat launch is not very productive. The Queenston boat launch area (17670669E 4753378N) and the following portion of the tour are the premier gull areas starting in late fall and running into the early winter. As you drive this section you can search for unusual waterfowl. One can easily spend a day searching for gulls from Queenston to Niagara Falls and the International Niagara Control Works structure at Chippawa. The area from the control structure to Fort Erie allows good views of the river and many loons, grebes and ducks can be seen. However, it is not until you reach the Fort Erie area that the river becomes truly productive. Along the Lake Erie shoreline to Jaeger Rocks look for various duck species on the river among the many gulls in the area north and south of the Peace Bridge.

**From Niagara-on-the-Lake to the Queenston Boat Launch and the Adam Beck Overlook**

**Niagara-on-the-Lake**

The starting point in Niagara-on-the-Lake is the intersection of Mississauga Street and Queen Street. The first point of interest is Queen's Royal Park. From the intersection, travel 0.6 km east on Queen Street. Turn left on Regent Street. The parking lot for Queen's Royal Park will be straight ahead (17656650E 4791262N). There are washroom facilities, which are closed in winter.

From this elevated location one can scope the lake and the mouth of the Niagara River. Many hundreds of Long-tailed Duck are present in the winter months. Rarities here include an immature Mew Gull recorded here on 28 January 1968. Two Razorbills have been observed here, both one-day wonders, one on 27 November 1982 and the second on 2 January 1985. A third Razorbill was located in the same area on 27 November 2006. This bird remained for 50 days and was last seen on 7 January 2007. Other rarities documented here include two Great Cormorants, one on 23 November 2002 and the second on 8 December 2005, numerous Northern Gannets and a male breeding plumaged King Eider that overwintered at the mouth of the Niagara River in 1986-1987.

The Niagara-on-the-Lake marina at the mouth of the Niagara River is very rewarding. From the park, immediately turn left on Front Street, and then make another quick left on King Street. Work your way along the roads to the marina, about 0.6 km. In the marina, look for occasional wintering loons, Pied-billed Grebe, Canvasback, Redhead or Ruddy Duck. Take Neville Street by the marina to Ricardo Street and turn left. Travel 0.1 km to the south side of the marina. Turn left into a small parking lot. From here you can scan the river and the south side of the marina for ducks and other birds. Return to Ricardo Street. Travel 1.6 km to a small parking lot on your left located just before you reach the Niagara Parkway. This parking lot allows access to Paradise Grove, a large stand of oak trees that may house Tufted Titmouse, Red Bellied Woodpecker and Red Headed Woodpecker (17657488E 4789512N).

Once back on the Niagara Parkway, after turning left, it is only a short drive south to Queenston. Access to the river between Niagara-on-the-Lake and Queenston is somewhat limited and there are not many productive locations. However, at McFarland Point (657592E 4789801N), a Western Grebe was recorded on 27 November 1999.
From the Queenston Boat Launch and the Adam Beck Overlook to Niagara Falls and the International Niagara Control Works in Chippawa

At 8.4 km, turn left off the Parkway onto Queenston Street and then left again at Dumfries Street. Directly ahead is a rough road that winds to a small parking area by the boat launch. Alternate directions to reach the Queenston boat launch or the Adam Beck overlook: Take the QEW to Glendale Avenue exit number 38B. Travel north on Glendale to York Road. Turn right and continue eastbound 9.0 km to the Niagara Parkway. For the Queenston boat launch, turn left on the Niagara Parkway and drive three blocks to Dumfries Street. Turn right and follow the directions above. For the Adam Beck overlook, turn right on the Niagara Parkway and drive up the escarpment to the traffic circle. Follow the Parkway signs around this circle and continue south toward Niagara Falls 1.8 km to the overlook on your left.

The Queenston Boat Launch

This is an excellent water-level vantage point from which to view gulls. Bonaparte’s Gulls predominate, but on occasion, you may see Little Gull, Sabine’s Gull or Black-Headed Gull. Bald Eagles have been sighted in the area. From the upper parking lot you can walk along the side of the river to the south toward the Queenston–Lewiston Bridge and scan the gulls.

Rarities observed here include Northern Gannet, Laughing Gull (seen 24 January 1993), several Black-headed Gulls and Sabine’s Gull. This is the most reliable location for Little Gulls, primarily from mid-February to mid-April. On 19-20 November 1995, a Ross’s Gull was recorded here.
Sir Adam Beck Overlook

Return to the intersection of the Niagara Parkway and Dumfries Street and turn left on the Parkway. At 1.3 km, you will reach a traffic circle. Continue halfway around this circle and turn right heading south toward Niagara Falls. You will drive past the Floral Clock and the Sir Adam Beck Power tours building. Proceed 1.8 km past the circle to the Adam Beck Overlook (17658997E 4778646N). There is limited free parking at this site. The Adam Beck overlook is one of the prime locations to observe gulls during the winter months. Numbering in the thousands, they loaf, drift, wheel and feed in the icy waters of the Niagara River. From an elevated position at this overlook, “white-winged” gulls, such as Thayer’s, Iceland and Glaucous, can be readily observed among the more common Bonaparte’s, Ring-billed, Herring and Great Black-backed Gulls. Lesser Black-backed Gulls as well are often found in this area.

Rarities observed here include Northern Gannet, two Mew Gulls (17 November 1996 and 13, 16, and 18 December 2003) and Ross’s Gull (19-20 November 1995). It is significant to note that each year from 1992-2006 at least one California Gull has been recorded at this location.

Niagara Falls

Continuing along the Parkway, this route will take you past the Botanical Gardens and Butterfly Conservatory, Whirlpool Golf Course, Whirlpool Aero Car and White Water Walk before reaching Table Rock Center at the Canadian Horseshoe Falls in Niagara Falls. At 5 km past the Adam Beck overlook, a stop at the Whirlpool Aero Car parking lot is worthwhile if only for the spectacular view. Scan the river below for gulls, ducks, loons and other birds. A Ross’s Gull was found here on 24-25 November 1995. Black-legged Kittiwakes and Franklin’s Gull have been observed here.

A further drive of 3.3 km past the Aero Car and shortly before the Rainbow Bridge, there is an excellent overlook where Franklin’s Gull have been sighted in the past (17657190E 4772837N). As you continue along the Niagara Parkway, you will find it extremely difficult to park right at the falls area. It is worthwhile to continue on a further 2.7 km to the Niagara Parks Commission greenhouse on your right. The greenhouse affords ample parking (fee) and restroom facilities. Walk back to the overlook into the Niagara River Gorge and the Horseshoe Falls opposite the Queen Victoria Restaurant (17656485E 4771895N). Scan for grebes, loons, assorted waterfowl and gulls. Rarities seen here include two Ivory Gulls, one on 29-30 December 1973 and the other on 22 December 1980, Ross’s Gull on 1 December 2002, Pacific Loon on 11 November 1995, Black-legged Kittiwakes and Sabine’s Gull.
Old Toronto Hydro Building and Gate House
Returning along the river toward the greenhouse, stop at the large building, sometimes called the “Engineerium”, where you can search for gulls and other birds of interest from both the north and south ends of the building. In August 1916, a sand barge was engaged in dredging operations in the American side of the Niagara River above the Horseshoe Falls. With two deckhands aboard, the barge struck a sandbar and instantly snapped its tow line to a tug-boat. The powerless barge drifted towards the brink of the Horseshoe Falls and grounded on a rock shoal 767 metres upriver from the crest of the falls. The two deckhands were rescued, and the barge remains there to this day.

Rarities observed here include two Slaty-backed Gulls, one from 24 November to 29 December 1992 and the second from 2 to 13 December 2006, Harlequin Duck, Eurasian Wigeon, Red-Necked Phalarope and Red Phalarope. The rocky ledges in the rapids often have Purple Sandpipers. A further short walk south to the back of the old Gate House Building is an excellent place to scope the thousands of gulls that congregate on the river during the winter months of November through January. Incredibly, two Tricolored Herons were recorded here along the Niagara River shoreline from 6 August through 3 September 2006.

Dufferin Island Wildlife Management Area
Continue another 0.7 km to reach the entrance to Dufferin Island Wildlife Management Area on your right. There is ample free parking and washroom facilities, but theft has been an issue, so keep valuables out of sight and locked in your trunk. From the parking area you can walk over to the river and search for waterfowl and Purple Sandpipers or stroll through Dufferin Island Wildlife Management Area, which is a 16-hectare woodland park. The small pond usually contains puddle ducks and geese, but in the winter months Wood Duck, Northern Pintail and Harlequin Duck have been recorded.

From Chippawa and the International Niagara Control Works Structure to Fort Erie
If you continue 0.3 km along the Parkway, there is a small parking area beside the road just before you reach the International Niagara Control Works structure. Here a series of gates stretching out across the river allows the engineers of the Ontario Power Generation Corporation to adjust the volume of water flowing over the falls. Readers should know that on weekends the engineers increase considerably the volume of water that flows over the falls. This reduces the number of visible rock formations.

Alternate directions to Chippawa and the control structure: From the QEW take McLeod Road toward the Niagara River (east) which becomes Marineland Parkway and then Portage Road. Turn left on Upper Rapids Road and drive to the Niagara Parkway. Turn left on the Parkway and park almost immediately north of the control structure.

International Niagara Control Works Structure in Chippawa
The concrete breakwall in front of the overlook is only visible when water levels are low, but when exposed, hundreds of gulls congregate on it and they can be easily observed through binoculars or, preferably, telescopes. This area can be productive for Lesser Black-backed, Little, Iceland and Glaucous Gulls. This is also a good area for diving ducks, such as both scap species, Canvasback, Redhead and Ring-necked Duck.

Out in the river there is a long narrow shale ledge where gulls and geese loaf. King Eider and Brant have been spotted on this ledge with some regularity. Purple Sandpipers
have been observed on adjacent exposed rocks. Rarities include Black-legged Kittiwake, Mew Gull, California Gull and Slaty-backed Gull.

Continue along the Parkway to the village of Chippawa. At 1.5 km, turn left on Portage Road and cross the bridge over the Welland River (in summer Cliff Swallows nest under this bridge). Then turn left on Main Street to return to the Niagara Parkway for the drive to Fort Erie. In Chippawa, there is an interesting record for Common Eider. On 18 December 1969, a first winter eider was observed near the Welland River Bridge. It was perhaps injured in some way, because the bird remained for nearly two years, until at least 10 January 1971. At the time there was considerable discussion about which species it was and only when the bird molted was it confirmed to be a Common Eider. During this lengthy period, birders were thrilled with the opportunity to observe at close range the bird molt from basic to alternate plumage. A Ross's Goose was also noted here 8-15 December 2007.

From the junction of Main Street and the Niagara Parkway, proceed 2 km to Navy Island on your left, which is of historical interest dating back to the War of 1812. You may park at the boat launch (17660912E 4768632N). In the past, Bald Eagles nested here on the far side of the island and are presently making a comeback. Grebes are regularly seen in the waters at the north end of Navy Island.

As you continue along the Parkway you will pass Black Creek in 6 km, Baker's Creek in another 1.6 km (where there is a pull-off on your left (17664848E 4758760N), Miller's Creek Marina in 1 km and Frenchman's Creek at a further 4 km. While interesting waterfowl can be seen at any point along the full length of the Parkway, the creeks and marinas provide some of the best spots to look for them. A female Smew, originally reported from the Buffalo New York harbour on 17 January 1960, was last seen there on 22 January 1960. Legendary Toronto birder James L. Baille refound the bird on 21 February 1960 along the Ontario side of the Niagara River near Miller's Creek. The bird remained in the vicinity until 30 March 1960.

Fort Erie

Continuing on to Fort Erie, the Niagara Parkway becomes Niagara Boulevard and then Lakeshore Road as you pass through the old town. Good spots for waterfowl and other birds include a parking lot just north of the railway bridge at Bridgenburg Station 1.8 km after Frenchman's Creek, the parking lot in 4 km (17670552E 4753803N) where you should check the stone pier to your left, and another lot 0.2 km further (17670627E 4753590N). Rarities found here include Laughing Gull, Arctic Tern, and a very late and rare-for-Niagara, American Avocet on 16 December 2008.

Fort Erie Boat Launch

At 2 km from the last parking lot, you will reach the Fort Erie boat launch immediately north of the Nicholls Marina. There is a small parking lot here that has been one of the best spots on the river to look for waterfowl and gulls (17670669E 4753378N). A Ross's Gull was sighted here on 12 November 1995. Incredibly, this same individual returned to the same location six weeks later on 1 January 1996. Other rarities observed here include Black-legged Kittiwake, Sabine’s, Laughing and Franklin's Gulls.

Just before you reach the Peace Bridge in 0.4 km (17670684E 4752900N), there is a small parking lot on your left. From this lot look toward the Peace Bridge and scan the river and the grassy area around and below the bridge for gulls. Brant, Little, Franklin’s and Black-headed Gulls have been observed here.

The Lake Erie shoreline continues on page 670.
Beamer Memorial Conservation Area is an excellent place to spend a half or full day, starting in the last half of March and running until mid-May.

For those interested in grassland birds there is a half-day trip outlined in the Grasshopper Sparrow trip. In the late summer and early fall we often visit the ponds and lagoons listed in the Wetlands Section in search of shorebirds. Many of these locations are on private property and you should contact the appropriate authorities or Niagara natural history clubs to inquire about access. While there are a number of woodlands listed we find the Malcolmson-Eco Park and the Port Weller east pier to be the premier places to search for passerine migrants.
Beamer Memorial Conservation Area

The Niagara Peninsula Hawk Watch runs annually from 1 March to 15 May at the Beamer Memorial Conservation Area in Grimsby.

Directions: Exit the QEW at Ontario Street (Christie Street) south which becomes Mountain Street in Grimsby. Continue up to the top of the escarpment to Ridge Road West and turn right. Drive 1.6 km to Quarry Road and turn right. The entrance to the conservation area is well signed on your right and washrooms are available. There is a large steel tower from which to scan the skies for raptors. The Lookout Trail may be productive for passerine migrants, when hawks are scarce. Limited parking is available at the entrance but many birders drive into the hawkwatch area and park around the periphery of the observation area.

An alternative location for hawk watching is the Grimsby Air Park. To reach the air park, return to Mountain Road and turn right. Proceed 4.1 km to Mud Street. Turn right onto Mud Street and proceed 2.2 km, where you will see the air park on your right (17613586E 4778761N).

Grasslands

Although grasslands are an ever dwindling habitat due in part to the considerable growth and expansion of grape vineyards, there are a few remaining pockets where field birds may be found. Hopefully the pressure to convert these remaining properties to agriculture can be resisted.

Grasshopper Sparrow Trip

In the Allanburg/Port Robinson region along the Welland Canal, there are several large tracts of fallow grassland, where species such as Upland Sandpiper and Grasshopper Sparrow may be reliably found. There is always a possibility of rarities such as Henslow’s Sparrow or Clay-colored Sparrow.

Directions: From Allanburg on Highway 20 just east of the canal, follow Allanport Road south to Chippawa Creek Road. Travel 1.0 km east on Chippawa Creek Road to Moyer Road and turn right. Proceed 1.0 km to Biggar Road and make a right turn. Park along the road across from Chippawa Creek (17645967E 4765730N). This area was formed when the St. Lawrence Seaway was originally dredged. You can walk into the grassland as far as East Main Street in Welland.

To reach an alternate site, continue along Moyer Road another 3.1 km to East Main Street and turn right. Drive 2 km to Highway 140 South and turn left. After driving 4 km, park on your right to access this field (1764618E 4757694N).

Return to Highway 140, drive north 0.5 km to Netherby Road and turn left. Proceed 0.6 km to Rusholme Road and turn left. At the end of the road, turn right on Townline Tunnel Road. Drive a total of 3.0 km along Townline Tunnel Road to Canal Bank Street and turn left. Travel 1.7 km to Forks Road East and turn left. Park at the end of the road (17643742E 4756452N). Alternatively, this site can be reached from Highway 58 South, taking the Forks Road East exit and proceeding eastbound to the end of the road, where you will see a large grassland.
Glenridge Quarry Naturalization Site
Near Brock University, an old quarry has been revamped into a green space. The Glenridge Quarry Naturalization Site contains a footpath which passes through grassland to a small pond. This area is new and has not been extensively birded.

Directions: Take the QEW to 406 south and exit at St. Davids Road and bear right. Proceed 0.5 km and the site is located on your right (17643218E 4775570N). There is ample parking available.

Niagara District Airport
At the Niagara District Airport, birds such as Snowy Owl, Short-Eared Owl and Snow Buntings are winter visitors.

Directions: From the QEW, take the Glendale Avenue north exit and turn left at the lights onto York Road. Proceed 0.5 km to Airport Road and turn right. Continue 2.8 km to the airport and park near the gazebo (17648654E 4783467N).

Wetlands and Sewage Ponds
Niagara boasts many ponds as well as man-made bodies of water, such as sewage ponds and reservoirs where ducks, geese and shorebirds may be found. We urge everyone to be respectful of no trespassing signs throughout the Niagara Region.

Adam Beck Hydro Reservoir
The Adam Beck Hydro Reservoir is a 300-hectare body of water owned by Hydro One. Discretion should be exercised when entering, as the reservoir is private property and may be posted.

Directions: From the QEW exit at Mountain Street north and follow Mountain Street until it ends at Portage Road. Turn left on Portage to Stanley Avenue and turn left on Stanley. Proceed for 0.3 km and park. The best place to access the reservoir is from behind 2058 Stanley Avenue. Walk up the gravel hill to the rim of the reservoir where, depending on the time of year and water levels, gulls, ducks, geese and shorebirds can be scoped (17656073E 4777939N).

Allanburg Pond
Directions: From the QEW, take Highway 406 south to Highway 20 and then head east 2.2 km. Turn left onto Holland Road just before reaching the canal and drive 0.4 km. Bear right before the bridge and park at the barrier (17645426E 4771312N). There is a marshy lake on your right, in which Least Bittern and rails can be found. You can walk in along the gravel path for some distance.

Avondale Sewage Ponds (now known as Parmalat Sewage Ponds)
There are four settling ponds at the former Avondale Dairy facility, now owned by Parmalat. Birding access has traditionally been tolerated; however, permission to enter should be obtained. Depending on water levels, these ponds may be productive for waterfowl and shorebirds. Hudsonian Godwit, Buff-breasted Sandpiper and Curlew Sandpiper are among the 29 shorebird species that have been found here. A Snowy Egret was sighted here on 4 May 1997. The fields surrounding the property may yield Bobolink in the spring and Upland Sandpiper in the fall. Rare anywhere in Niagara, two Cattle Egret were seen near the dairy cattle barns on 29-31 May 2000. The ponds are located north of the QEW and east of the St. Lawrence Seaway.

Directions: From the QEW, exit at Glendale Avenue north. Turn left on York Street and proceed for 2.3 km until you turn right (north) at Highway 55 (Niagara Stone Road).
Proceed toward Niagara-on-the-Lake. After crossing under the skyway, travel a few hundred metres to Stewart Road and turn left. After 1.6 km, there is a gravel lane on your right (17647270E 4782937N). Drive up to the chain barrier and park well to the side of the lane. Do not drive past the chain barrier. Walk up the pathway to view the ponds. You may wish to visit the dairy bar, which serves excellent ice cream and houses restroom facilities.

**Concession 5 Road and Line 8 Road Pond**

There is a small pond near St. Davids, which for many years was very productive for ducks, herons and shorebirds in the spring and autumn. Sadly, in 2005, the pond was converted to a quarry. Since that time with no birds being observed and no trespassing signs posted everywhere, this location is no longer birded (17652500E 4781500N).

**Cyttek Canada Incorporated**

Cyttek Canada Inc. is a chemical plant, formerly known as Cyanamid Canada Company. The property consists of an extensive phragmites marsh, which serves as a roost for thousands of Niagara's four blackbird species and starlings. Sandhill Crane have also been sighted at this marsh. Although there is no public access to this property, you can park along Brown Road and scan for birds in flight.

**Directions:** Take Townline Road south of Highway 20 and proceed 2.4 km to Brown Road. Turn left on Brown Road and drive 1.5 km (1750087E 4768935N). From here to Garner Road (0.4 km), and right on Garner Road (0.3 km) are good places to watch large numbers of starlings and other birds come in to roost (1750468E 476894N). Continue 1.7 km to Chippawa Creek Road. Turn left on Chippawa Creek Road and drive 0.9 km to a road to the left. This is a good place to watch and listen for snipe and woodcock at dusk in early spring (1751324E 4767658N).

**Glendale Lift Bridge Welland Canal-Lock 4**

The canal is drained in the winter and may attract gulls. One year, 30-40 White-Winged Gulls were spotted here.

**Directions:** From the QEW, take the Glendale Avenue south exit. Follow Glendale Avenue west and make a left turn onto Welland Canals Parkway and park along the south side of the road between the bridge and Lock 4 (17647959E 4777836N).

**Grimsby Sewage Ponds**

See *The Lake Ontario Shoreline* section.

**Lake Gibson and Hydro Channels**

**Directions:** From the QEW, take Highway 406 south to St. Davids Road and bear right. Proceed west to Merrittville Highway and turn left. Continue to Decew Road and turn right. After a short distance, you will cross a small bridge. Immediately after that is Decew House, which is of historical interest. Laura Secord and her cow made the trek to this house to warn the British soldiers of an impending attack by the Americans during the War of 1812. There is a walking trail. Continue on Decew Road to a gated gravel path a further 0.6 km and park at the gate (17641774E 477437N). You can walk in to access Lake Gibson and walk around it in either direction. If you proceed another 0.5 km on Decew Road, you will reach the Morningstar Mill. Seasonal blacksmith demonstrations take place at the mill. Return to Merrittville Highway on Decew Road. Cross the highway and continue 1.5 km to Mel Swart-Lake Gibson Conservation Area. There is a parking lot on your right. There are trails and a boardwalk. This area is relatively new and has not been explored in detail by birders (17644416E 477419N).
Continue 0.3 km on Decew Road to Beaverdams Road. There are a number of open water areas here that are a part of Lake Gibson. If you turn right on Beaverdams Road and continue for 0.5 km you have a woodlot on your left, which one winter had a Three-toed Woodpecker. In winter, you may find Great Blue Herons and Hooded Mergansers here. In recent years, Mute Swans have been nesting in this portion of Lake Gibson, and an immature, unbanded or wing-tagged Trumpeter Swan was present for 13 days in April 2008.

**Mewburn Road Ponds**

Directions: Take the QEW to the Mountain Road exit. Travel east a short distance to Mewburn Road and turn left. There is a former garbage dump on Mewburn Road (17652428E 4777737N), where a Slaty-Backed Gull was recorded in 1992. Continue 1.6 km on Mewburn Road and park on the roadside just before crossing a railway overpass. On your left, there is a trail to access three sewage ponds (17651792E 4778495N). This area may be posted; please respect all no trespassing signs.

**Port Robinson Sewage Ponds**

Eared Grebe has been documented in these sewage ponds.

Directions: From the QEW, take Highway 406 south to Highway 20 and cross the Welland Canal. After crossing, turn right onto Allanport Road. Proceed to Chippawa Creek Road and turn left. Continue 0.6 km and you will find the lagoons on your right. The lagoons are gated and birders should exercise their own discretion when entering this property (17647323E 4766913N).

**St. Davids Sewage Ponds (formerly Canadian Canners Sewage Ponds and Kraft Foods Sewage Ponds)**

These cannery ponds were until just recently an excellent place to observe shorebirds and ducks. Regrettably the cannery was shut down in 2008, and the ponds are now an area of metre high weeds and brush (17653631E 4781790N). In years gone by these ponds were perhaps the best locations in Niagara to observe waterfowl and, in particular, shorebirds. On 25 July 1976, an extremely rare Spotted Redshank was studied here; it is Niagara’s only record. On 19-20 July 2005, the first recorded American Avocet in over 40 years was located at this site.

**Smithville Sewage Ponds**

*Note: Access to these ponds requires permission.*

In the town of Smithville, there are three sewage ponds, which may host a variety of ducks, geese and shorebirds in the spring and fall. Access to these sewage lagoons is in question, as there is a new subdivision under construction adjacent to the ponds. Previous good sightings include a very rare rufous morph female Eurasian Wigeon, Niagara’s only record of Black-necked Stilt, Little Blue Heron, Glossy Ibis, Ruff (three different individuals) and Wilson’s Phalarope.

The lagoons are located just off Highway 20 near the town of Smithville. From the QEW, take Ontario Street (Christie Street) at Grimsby south to Highway 20. Turn left on Highway 20 to Smithville. From the town centre, proceed east on Highway 20 for 1.2 km to Townline Road and turn right. Take the first road left, Alma Drive, to the end, and park (17619195E 4771462N).
Vanderliek Farm Pond
The Vanderliek farm property once housed a large pond, which provided habitat for puddle and diving ducks, geese and, depending on water levels, shorebirds. Located in the town of Bismark, this pond was bulldozed in 2009 (17621931E 4767490N).

Wetland Ridge Trail (formerly the Foster Wheeler or Glendale Sewage Ponds)
The Wetland Ridge Trail, which officially opened in November 2004, is a 7-hectare property consisting of two 3-hectare ponds, and a looped path which will eventually join the Bruce Trail. One of the ponds is a former race track. Wood Duck nest here and Pied-billed Grebe, Virginia Rail, Sora, Common Moorhen and Least Bittern have been sighted here. In August of 1985, a Willet spent two days at the ponds.

Directions: From the QEW, exit Glendale Avenue south to Taylor Road and turn left. At the entrance to Niagara College Glendale Campus, make a left turn. Proceed past the greenhouses, and park (17649321E 4779426N). The trail entrance is well signed.
Woodlots

There are several small woodlots in the Niagara Region where passerines and other forest species may be sought. Please respect all no trespassing signs.

Cave Springs Conservation Area

Portions of the Bruce Trail snake along the Niagara Escarpment. There is a section of the Bruce Trail near Beamsville known as Cave Springs Conservation Area. While the conservation area itself can only be accessed by appointment, the Bruce Trail above the conservation area may produce Hooded Warbler or Red-headed Woodpecker. Further information regarding the Bruce Trail can be obtained from The Guide to the Bruce Trail.

Directions: From the QEW, take Victoria Avenue south (Regional Road 24) to the centre of Vineland. Turn right on King Street (Regional Road 81). Travel 5.4 km to Quarry Road and turn left. Proceed 2.1 km to the top of the escarpment, where you will see a small gravel parking lot and Bruce Trail signs (hard to find) on your right (17625324E 4777827N). The best birding is on the east side of Cave Springs Road.

Fireman’s Park

Fireman’s Park is a 73-hectare property named for the Stamford Centre Volunteer Firemen’s Association. Located in north Niagara Falls, Firemen’s Park consists of deciduous forest, valleys, a swamp and small ponds. There are several walking trails. This area is popular with picnickers and dog walkers. Hooded Warbler and Ovenbird are known to nest in this park.

Directions: From the QEW, take Mountain Road east to Dorchester Road and turn left. After crossing the railway tracks, make an immediate left turn into the upper parking lot (17653346E 4778476N). Do not leave valuables in your vehicle as thefts have occurred at this park.

Fonthill Kame

Fonthill Kame is a plot of Carolinian forest in the town of Fonthill, south of St. Catharines. This forest may be productive for Blue-winged Warbler, Chestnut-sided Warbler, Hooded Warbler, Mourning Warbler, Yellow-throated Vireo and Indigo Bunting.

Directions: Take the QEW to Victoria Avenue, Regional Road 24, and travel 16.4 km south through Vineland to Highway 20 and turn left. At the lights in Fonthill (8 km), make a left turn onto Pelham Street. At 1.4 km the road becomes Hollow Road and winds north a further 1.1 km to McSherry Lane and turn right. Proceed to the end of the lane; the trail is straight ahead (17640566E 4769422N).

Alternatively, return to Highway 20 and turn left. Proceed to Station Street and turn left. Park at the end of the street and walk in (17640009E 4768097N).

Heartland Forest

Directions: Take Kalar Road south off Highway 20 to Brown Road. Turn left, then immediately right on the continuation of Kalar Road South. The entrance to Heartland Forest is a few hundred metres on your right (17652149E N4768618N). This area has not been extensively birded. There is a 1.5 km wheelchair-accessible trail. Further information may be obtained from the website www.heartlandforest.org.

Lathrop Nature Reserve

Lathrop Nature Reserve is a recently acquired Nature Conservancy property in Fonthill, which has not been extensively birded. Carolinian species such as Hooded Warbler are common.
Directions: From the intersection of Highway 20 and Pelham Street in Fonthill, travel 0.5 km north to Hurricane Road. Park on either Pelham Street or Hurricane Road. The entrance to the woods is on the west side of Pelham Street (17639622E 4767684N).

**Malcolmson Eco-Park/Port Weller East Pier**

See *The Lake Ontario Shoreline* section.

**St. John's Conservation Area**

If you are interested in Carolinian species such as Hooded Warbler or Red-headed Woodpecker, you may wish to visit St. John's Conservation Area, a 28-hectare park near Fonthill in South Niagara. St. John's is home to more than 400 species of vascular plants, 80 mushroom species and typical Carolinian trees such as Sassafras, Tulip Tree, Shag Bark Hickory and Butternut. It also boasts Niagara's only cold water creek. There is a wheelchair-accessible path and boardwalk surrounding a pond stocked with Rainbow Trout.

Directions: Take the QEW to Victoria Avenue, Regional Road 24, and travel 16.4 km south through Vineland to Highway 20 and turn left. At the lights in Fonthill, (8 kms) make a left turn onto Pelham Street. At 1.4 km the road becomes Hollow Road and winds north a further 1.8 km to a three way intersection. At this point, continue straight ahead onto Barron Road (ignore roads to the left and right), the conservation area parking lot is 0.2 km further. Free parking (17639642E 4769640N).

**Short Hills Provincial Park**

In the south end of St. Catharines lies Short Hills Provincial Park. This 735-hectare park has shared trails for bikers, hikers and horseback riders, hiking only trails, and the Paleozoic path which is a wheelchair accessible trail. The Friends of Short Hills Park publish a trail guide and bird list. Visit their website at www.friendsofshorthillspark.ca for further information. Habitat includes mixed hardwood/coniferous forest, streams, waterfalls and reclaimed farmland. This park provides breeding habitat for the Red-Shouldered Hawk.

Directions: Take the QEW to Highway 406 south and travel 3.3 km to the 4th Avenue Exit. Turn right and proceed 0.4 km to Louth Street and turn left. Drive 2.9 km to the intersection with Pelham Road and continue on. Travel 3.5 km to the parking lot on your left (17639368E 4774277N). To access the Roland Road entrance, continue 0.6 km on Pelham Road to Effingham Street and turn left. Proceed 2.8 km to Roland Road and turn left. The parking lot is another 0.5 km (17637930E 4772223N). This entrance leads to Swayze Falls where Louisiana Waterthrush have been reported in the past.

**Woodend Conservation Area**

Woodend Conservation Area is a small woodland through which passes a section of the Bruce Trail. It can also be accessed easily from the Wetland Ridge Trail. There are multiple well-signed trails. The most productive birding site is the feeder near the house at the end of the road. Tufted Titmouse is a regular visitor.

Directions: From the QEW, take the Glendale Avenue south exit. Turn left at the lights onto Taylor Road. Drive up the hill to the gravel road entrance to the Woodend Conservation Area. Proceed to the upper parking lot (17650023E 4779157N).
The Lake Erie shoreline is very productive for shorebirds. They are drawn to the sandy beaches and the bare rocky outcroppings, particularly when they are covered with algae.

The rocky areas that border much of the northeastern shoreline date back 350 million years to the Devonian Age. If you look closely, you can see coral and shell fossils embedded in the rocks of what was once an ancient sea. Each of the shorebird stops is also a good place to look for passerines. The summer cottages and permanent houses that line the shore are surrounded by many trees and shrubs. In spring, migrating birds make their first landfall along the shore. In fall, migrants assemble on the shore before taking off to cross the lake. You should also watch for geese, ducks, grebes, cormorants and gulls as you look over the lake.

Look for shorebirds in May and from July to October. Dates of peak concentrations are the last two weeks in May and all of August and September. Some of the birds to expect in spring and fall are Black-bellied Plover, Semipalmated Plover, Killdeer, Greater and Lesser...
Yellowlegs, Spotted Sandpiper, Ruddy Turnstone, Red Knot, Sanderling, Semipalmated Sandpiper, Least Sandpiper, Pectoral Sandpiper, Dunlin and Short-billed Dowitcher. In spring, the third week in May is the time to look for Whimbrel; in fall, expect to see American Golden-Plover, White-rumped Sandpiper and Baird’s Sandpiper.

From Fort Erie to Ridgeway

This trip covers approximately 45 km and takes at least 2 1/2 hours.

Jaeger Rocks

This trip begins at the junction of Lakeshore Road and Central Avenue in Fort Erie and continues to the west. From the QEW Fort Erie bound, exit at Central Avenue south and work your way south to Lakeshore Road. From the Peace Bridge, take the Niagara Parkway west to Lakeshore Road. Drive west on Lakeshore Road and at the junction with Dominion Road, in front of old Fort Erie, bear to the left on Lakeshore Road, which leads to Jaeger Rocks (Erie Bay) on your left. Park on the right side of the street (17669318E 4750515N) before you reach the view-obstructing houses on your left. Scan the shoreline and look west to the rocks on the point. A number of interesting rarities have been observed along the shoreline from Fort Erie to Jaeger Rocks. These include Yellow-billed Loon on 11 May 1957, Least Tern on 26 June 1958, Northern Gannet on 17 November 1995, Tufted Duck from 17 to 27 January 1999 and Hudsonian Godwit from 6 to 7 September 1998.

Waverly Beach

From Jaeger Rocks, continue along Lakeshore Road to the end and turn right on Bardol Avenue, which leads to Dominion Road. Here you turn left and drive 0.6 km to Helena Street. Turn left on Helena Street and proceed to the small public parking lot at Waverley Beach. Shorebirds can often be found on the beach to the east and west of the parking lot (17668235E 4749970N).
Rarities discovered here over the years are Brown Pelican on 25 September 1971, Curlew Sandpiper from 18 to 20 July 1971 and Arctic Tern on 17 August 1990. The shore here provides an excellent location from which to search for rare avian visitors. Between 8 and 14 September 1996, Black-capped Petrel, Wilson’s Storm Petrel, Long-tailed, Parasitic and Pomarine Jaegers, Laughing Gull and Sooty Tern were spotted here, all probably blown in by the remnants of Hurricane Fran.

**Kraft Road**
To continue your trip, return to Dominion Road, turn left (west) and proceed 0.8 km to Kraft Road. Turn left and park at the end of Kraft Road. Walk down to the beach (17667402E 4749754N). Red-headed Woodpeckers nest here.

**Bertie Bay**
Take Kraft Road back toward Dominion Road, but turn left almost immediately on Edgemere Lane, an area that attracts many passerines during the fall migration. Follow this road for 0.9 km and then turn left (south) on Crescent Park Road, which takes you to Crescent Beach. Rarities found here include Piping Plover on 23 July 1988 and on 23 August 1990 and Slender-billed Curlew in the fall of 1925.

**Rosehill Road (formerly known as Rose Hill Road)**
Return to Dominion Road; turn left (west) and go to Rosehill Road (0.8 km). Turn left again and proceed to the end of the road and park (17664984E 4749590N). Walk around the left side of the fenced-in Niagara Region water intake building and then south to the beach. Go east or west on the beach to look for birds. Harold Axtell, a well-known local ornithologist now deceased, lived on Rebecca Street just off Rosehill Road. For many years birders visited his house and feeder. Among the many important sightings from this location, two stand out—a rare Spotted Towhee from 4 to 12 December 1976 and the first House Finch for Niagara on 8 April 1976.
**Stonemill Road**
Return to Dominion Road, turn left and continue to Stonemill Road (1.6 km). There turn left again to the lake. Go a few metres past Thunder Bay Road on your right and park at the end of Stonemill Road (1763386E 474899N). Walk out and explore the beach to the east and west.

**Windmill Point Road**
Take Thunder Bay Road to the left (west) until you reach Windmill Point Road (0.8 km). Turn left to the lake, park and explore the beach (17662617E 4748201N). The rocky beach to the east can be rewarding. A little farther along a short walk takes you to a point of land and a sand beach beyond, which is often excellent for shorebirds. Rarities observed here include Wandering Tattler from 11 to 15 July 1960 and from 8 to 13 June 1977 and American Oystercatcher from 2 to 21 July 1960.

**North Shore Drive**
The next stop to the west of Windmill Point is the shoreline at the southeast corner of Ridgeway Shores Golf Course. Continue west on Thunder Bay Road, and when you reach Maple Leaf Avenue South (2.6 km), turn left, drive to the end of the avenue and park in the subdivision called Maple Leaf Park (17659991E 4748479N). Take the community path to the shore to avoid walking through someone’s yard.

**Crystal Beach and Ridgeway**
If time permits, it is worth going a few more kilometres to Crystal Beach. Return to Thunder Bay Road and turn left (west). Continue for 0.9 km to Ridge Road south. Turn left on Ridge Road south toward the village of Crystal Beach. Follow Ridge Road south, which becomes Crystal Beach Drive, and leads to Ridgeway Road, where you turn left. Ridgeway Road runs to the lake and ends at Terrace Lane (a one-way street). There you will find Crystal Beach Waterfront Park (17658617E 4747070N). This is always a good place to look for gulls, ducks and, with the aid of a scope, shorebirds along the beach, although it is usually crowded with people during the summer months. It is also a very likely spot, in the third to fourth week of May, for finding Whimbrel. From the park, follow Terrace Lane back to Crystal Beach Drive, where you turn left and continue to Ridgeway Road. Turning right (north) will then take you through Ridgeway to Highway 3.

To access the next section of the Lake Erie shoreline trip from Ridgeway to Port Colborne, follow Ridgeway Road to Highway 3. Note that Ridgeway Road becomes Gorham Road before it intersects Highway 3.

**From Ridgeway to Port Colborne**
This trip covers approximately 30 km and takes at least 1 1/2 hours.

**Point Abino**
The starting point is the intersection of Highway 3 and Gorham Road in Ridgeway. Travel west to Point Abino Road, where you turn left (south) to the lake. As you travel south, Point Abino Road changes its name to Point Abino Road South at Michener Road. Continue to Point Abino. The shoreline at Point Abino is open on the lake side of the road, and when the water level in the lake is low, shorebirds are visible. In winter waterfowl are also attracted to this area. There is a small parking lot and a boat launch on the left (17655719E 4746491N). From here you can scan the lake. A Yellow-billed Loon was observed from this location from 2 to 7 January 1997. A Gyrfalcon was observed here from 3 to 4 January 1997. Driving a little
farther along brings you to the entrance of the private and gated community of Point Abino (1765592E 4745468 N). Permission to walk beyond the gate to the Point Abino lighthouse is sometimes granted. Whimbrel have been seen along the shoreline in May, and a Western Tanager was observed not far from the lighthouse on 7 May 2000.

**Holloway Bay Road and Marcy’s Woods**

Return to the junction of Point Abino Road and Highway 3. Turn left (west) on Highway 3, which then curves to the south and passes Mathews Road. The next road is Holloway Bay Road, where you turn left to the lake and park at the end of the road (17653895E 4747161N). Fire Lane #29, which may be marked as Marcy Lane with a sign warning you to keep out, leads to Marcy’s Woods. Permission is needed to enter. If you are at Point Abino, you do not have to return to Highway 3. Instead, drive to Michener Road, turn left (west), cross Mathews Road and then turn left again to the lake at Holloway Bay Road (1.6 km).

**Pleasant Beach Road**

From Holloway Bay, drive out to Michener Road and turn left (west). This will lead to Pleasant Beach Road, where you turn left to the lake and park (17653210E 4747498N). This is a popular beach area that can be very crowded in July and August, but it provides a good vantage point for scoping the lake and shoreline.

**Empire Road**

From Pleasant Beach, drive out to Beach Road. Turn left (west) and left again at Empire Road (17652326E 4748280N), which leads to Sherkston Shores Park and Sherkston Beach. The park charges an entrance fee. If spending a day at the beach during shorebird migration, you should scan the miles of open shore and rocky outcroppings for shorebirds, which will be seen in areas unfrequented by bathers. Watch for gulls, terns and migrating passerines. You can also see good examples of barrier sand dunes.

**Pinecrest Point Road**

The next stop after Empire Road is Pinecrest Point Road. Return to Highway 3 and turn left (west). You will pass Wyldewood Road, Silver Bay Road and Cedar Bay Road. These three roads provide access to Lake Erie, but the shoreline here has far fewer shorebirds than it does at the end of Pinecrest Point Road. Continue on Highway 3 west of Cedar Bay Road to the Village of Gasline. You will notice a lower speed limit here as the highway curves slightly to the right (north) and continues to Port Colborne and the Welland Canal. You, however, will take a cutoff to the left called Killaly Street. Drive a very short distance to Pinecrest Point Road and turn left. Travel to the end of this road for access to the lake at Whiteman’s Point (17648291E 4747951N). Working the shoreline here, especially to the east, is very productive for shorebirds.

**Lorraine Road**

Return to Killaly Street and travel west from Pinecrest Point Road to Lorraine Road, passing Miller Road and Weaver Road. (Miller Road is rough clay, so you may not want to drive on it. If it is wet, you definitely will not want to take it to the lake.) Turn left (south) on Lorraine Road, which ends at Lorraine Bay (17645831E 4748135N). After scanning the beach from this location, return to Killaly Street and travel west to Welland Street, which runs along the Welland Canal.
East Side of the Welland Canal - Welland Street

Highway 3 and Killaly Street both reach Welland Street at the Welland Canal in Port Colborne. Highway 3, or Main Street East, carries on across the canal at the Main Street Bridge. It passes through the north end of Port Colborne and continues west. From its junction with Highway 3 in Gasline, Killaly Street runs west to where it ends at Welland Street. An observation area for watching ships (rather than birds) entering and leaving this Port Colborne lock of the Welland Canal makes an interesting stop. There is a second bridge (Bridge 21) a little farther south. If the Main Street bridge is up, avoid a long delay by going south on Welland Street and crossing the canal at Bridge 21.

Nickel Beach

Before crossing over to the west side of the canal, however, you may wish to visit Nickel Beach. Go south along Welland Street toward Bridge 21, and just before you get to the bridge, turn left (south) on Welland Street which continues to parallel the canal. When you get to the end of Welland Street, bear left on Lake Road and continue to the entrance to Nickel Beach, which is administered by the City of Port Colborne (17643675E 4748623N). In the winter, the area between the beach entrance and the mouth of the canal is worth scrutinizing for birds such as Snowy Owl, Purple Sandpiper and Snow Bunting.

To access the section of shoreline from Port Colborne to Long Beach, return to Welland Street and cross the canal on Bridge 21 to the left. Travel west a short distance to the intersection of Clarence Street and King Street, which is the starting point for the Lake Erie shoreline trip from Port Colborne to the Long Beach Conservation Area.

From Port Colborne to the Long Beach Conservation Area

King Street

The starting point of this trip is the intersection of Welland Street and King Street in Port Colborne just west of the canal. As you travel south on King Street you will cross Sugarloaf Street. Continue south toward the grain elevators. You will be cautioned about entering the grain elevator property by “No Entry” signs (17642756E 4748419N). These should be respected. In recent years Peregrine Falcons have nested on the grain elevators, and there is a good chance of seeing them throughout the year. While you are here, look in the harbour to the west for gulls, ducks, geese, grebes and cormorants.

Elm Street

Return to Sugarloaf Street. Travelling west from King Street you will pass Catherine Street and then you will see Elm Street on your right. (This street leads to Mud Lake, one of the sites birders usually visit during passerine migration. The details for the Mud Lake Conservation Area can be found in the Southern Niagara Region section.) On your left is the entrance to H.H. Knoll Lakeview Park, where you turn left (south) toward the lake.

Elm Street - H.H. Knoll Lakeview Park and the Waterfront

Directly across from the south end of Elm Street is the entrance to H.H. Knoll Lakeview Park. Turn left off Sugarloaf Street and drive south toward the lake (17642404E 4748739N). A short distance down the road, you will see Marina Road to your left. If you follow this road, you arrive at the east side of the harbour and just to the left (east) is the area that you accessed from King Street. Marion Marina can be seen to the right and Sugarloaf Harbour, to the south. The seawall that protects Sugarloaf Harbour and the marina runs in a crescent from southeast to northwest. You should scan this wall for shorebirds in the spring and fall, and in the winter, for Snowy Owls. Beyond the marina
seawall is a much larger and longer seawall that protects the mouth of the Welland Canal and the whole harbour, which is called Gravelly Bay on both the east and west sides of the canal. There is a shorter seawall on the east side of the mouth of the canal. Look for Purple Sandpipers along the seawalls. You can also see cormorants, gulls, ducks and geese here, so scope this area and the bay thoroughly. Make sure you look at all the birds in the marina area. Brant has been seen on several occasions. The restaurant at the marina is open during boating season.

Return north on Marina Road to where you split off near the entrance to the park. Turn left here and go south down the west side of the marina. There is a large parking area here at the southwest end of the park (17642184E 4798733N). Looking west from behind the hospital, you can view the harbour. Look all along the rocky shore for shorebirds and out in the harbour for gulls, ducks, geese and swans. Tundra Swan is found here in spring and fall in good numbers. Make sure you look at all the gulls and geese sitting in the parking lot, for we have found Brant sitting on the ground in this area. Sugarloaf Point is visible to the west. Rarities found in the Gravelly Bay/Sugarloaf Point area include a Piping Plover from 9 to 18 October 2002, a Willet from 16 to 19 May 1967, two American Oystercatchers on 9 September 1996 and a Wandering Tattler on 1 August 1948.

**Tennessee Avenue**

Return to Sugarloaf Street and continue west to Steele Street. At this corner an Orange-crowned Warbler overwintered in 1995-1996. Go an additional 0.1 km west and turn left on Tennessee Avenue. Approximately 15 metres down the street look in the first tall tree on the left for Eastern Screech-Owl sunning in the warm daylight hours. Eastern Screech-Owls are also commonly found on the streets opposite the hospital and in H.H. Knoll Park. Continue west to where Tennessee Avenue runs into Rosemount Avenue and turn south to the bay. (One side trip for screech-owls would have you turn right and go north on Rosemount. The second street, going north, is Ash Street, where you turn left. Cross Scholfield Avenue and enter Sunset Park (17641003E 4749164N). Scan the cavities in the tall trees for owls.)

**Lakeshore Road West and Gravelly Bay**

Rosemount Avenue runs due south to Gravelly Bay, where it bears to the right (west) and becomes Lakeshore Road West. This stretch of road can be very busy, and parking may be difficult. The best approach is to park at the west end of Tennessee Avenue or along Rosemount Avenue before it becomes Lakeshore Road, and from there walk down to the bay. As you come out of the bend onto Lakeshore Road, the bay is to the left (south), and the first opportunity to stop is a small parking area on the left. There you will find a restaurant (open year-round) and the Surfside Marina (17641190E 4748575N). If it is off-season, you can park here; otherwise, make a short stop to scope, taking care not to impede traffic.

**Cement Road (also known as Cement Plant Road)**

After leaving the bay area and continuing west along Lakeshore Road West, you will pass Bayview Lane, Gaspare Drive and Rose Avenue. One kilometre farther will take you to Cement Road on your right. Go north on Cement Road, taking note of the bluebird boxes on your left, and in about 50 metres you will cross a small drainage canal. Look along both sides of this canal for kingfishers, herons and egrets. To the east, this channel leads to the weir that empties into Gravelly Bay at Surfside Marina, and to the west Reeb Road and a nature trail. The bush along both sides of the road attracts many passerines. Continue to drive north, and you will see to the left a small parking area on the bank of
Cement Plant Road pond (17640429E 4748954N). This is an excellent spot from which to scan the pond. Yellowlegs are always a possibility in the shallow water. If the mud is exposed, smaller species of shorebird may be found. Watch for ducks, geese, grebes and coots. The south shore of the pond may harbour Black-crowned Night-Heron and Great Blue Heron as well as Great Egret. Swamp Sparrow, singing Marsh Wrens and Common Yellowthroat are found in the swampy area around the pond. A Little Blue Heron was observed on 16 July 1968; Tricolored Herons from 23 to 24 May 1971 and from 11 to 18 May 1977; and a Yellow-crowned Night Heron from 10 to 13 August 2002. The field directly to the east and across the road from the pond attracts Savannah Sparrows and Eastern Meadowlarks. Continue through an S-turn and a small woodlot. A short distance after the turn on the left is an old rail bed called the Gordon Harry Conservation Trail, which leads to the Wainfleet Wetlands. The trail runs parallel to both Lakeshore Road West and Highway 3 and gives access to woods, fields and swamp habitats in Niagara west of Port Colborne. Between the trail and Highway 3 to the north is an open field where you should look for meadowlarks and sparrows.

Reeb Road
Travelling west from Cement Road on Lakeshore Road West, you reach Reeb Road in about 0.4 km (17640034E 4748352N). Park, making sure you are clear of traffic on Lakeshore Road. Reeb Road goes only a short distance north to some concrete barriers that are there to keep motorized vehicles off the road. The road takes you through a rich variety of habitats in a short time.

Quarry (Quarrie) Road
Travelling west again on Lakeshore Road, look for your next stop, Quarry Road, about 1.7 km past Reeb Road. Turn right (north) and you will see a cottage area on the right and a bushy area on the left, where you can scan for birds. In about 0.2 km, the road crosses a small bridge (17638411E 4748978N) with quarries on both sides. The water is deep at the south end of the quarries, but some shoreline is visible at the north end. Bush lines both sides of the road and usually contains Song Sparrows, Gray Catbirds and Yellow Warblers as well as whatever migrants are moving through. Drive about three quarters of the way north between the quarries. Stop where you can see the north shore of each quarry and scan the shoreline for shorebirds, gulls, terns, geese and ducks. The east quarry has an easy path (17638408E 4749373N) down to the floor. The west quarry, however, has no path, only an abrupt drop of about 20 metres to the floor. Caution is required. Unfortunately, more birds can usually be seen in the west quarry than in the east quarry. Be sure you look to your right and well into the corner for the shorebirds that can be found there. Look as well on the islands out in the water. Osprey, Bald Eagle and other raptors have been seen here. If you want to look more closely at the west quarry, drive north to the end of the quarry. On your left you will find the continuation of the Gordon Harry Conservation Trail and a parking lot (17638367E 4749557N). Park and walk into the quarry or follow the trail. The rock in this quarry, once part of an ancient sea, is Devonian, which would make it at least three hundred and fifty million years old. It is a rewarding place to look for fossils as well as birds. From the parking lot you can see Highway 3 to your north. Pause to examine the bush area on your right (east), which always contains birds. Some of the houses on the left (west) have bird feeders worth checking.

Golf Course Road
Return to Lakeshore Road and travel west; stop at the parking areas on your left at 0.1 km and 0.3 km, and walk to the shore to look for shorebirds.
An American Oystercatcher was observed just to the east of this location on 9 September 1996. Continue west on Lakeshore Road, which intersects Rathfon Road at the stone wall surrounding the old Rathfon Inn. Here turn right (north) on Rathfon Road, and after 50 metres turn left (west) onto the continuation of Lakeshore Road. Continue for 1.6 km to where Lakeshore Road intersects Golf Course Road. If you turn right (north), Highway 3 is about 1.6 km away. Watch the tall trees to your left for Red-headed Woodpecker, and check the fields to your right for raptors, sparrows and meadowlarks. Otherwise, turn left (south) at the junction of Lakeshore Road and Golf Course Road and drive 0.2 km to a sweeping curve and the continuation of Lakeshore Road to the west. At the curve, turn left off Lakeshore Road onto Harborview Road.

**Harbourview Road**

This road is at the south end of Golf Course Road and its junction with Lakeshore Road. As you begin driving south on Harbourview Road, stop and look east down the shore to see if there are any shorebirds on the beach. Also look just east of the junction to where algae builds up and attracts shorebirds. Just 30 metres from the junction is a drive that leads down to the shore and is used for launching boats. You can walk on very slippery rocks to the shore from this point. Drive about 50 metres more and look for a crescent pull-off on your left that can hold a few cars (1763967E 4747675N). Park and scan the shore. This is an excellent location for gulls and shorebirds; a Franklin’s Gull was observed here on 19 May 2001 and a Willet on 19 August 2001. You can walk down to the shore from this vantage point, but the jumbled rocks make for a treacherous descent. If the lake level is low, there will be a good stretch of shore open for birds. Walk south to the point and west around it to look for birds not visible from Harbourview Road.

**Morgan’s Point Road**

From the junction of Golf Course, Harbourview and Lakeshore Roads, continue west on Lakeshore for 0.6 km to the junction of Moore Road on your right (north) and Morgan’s Point Road on your left (south). Turn south on Morgan’s Point Road, and in less than 0.8 km you will find the entrance to Wainfleet Community Memorial Park. A right turn here will take you into the park, which is approximately 0.5 km square. A road loops through the park, and there are picnic tables and parking places. Continue to drive south toward the lake, where there is a small parking area on your right (17635190E 4746165N). The road bends slightly to the left, and you can park a car at its end as well. Red Knot, Whimbrel and many other shorebird species have been observed from this vantage point. Rarities observed here include Eared Grebe on 26 April 2002, Western Grebe on 23 April 1972, Curlew Sandpiper on 21 August 1965, Ruff from 30 July to 4 August 1966, Bewick’s Wren on 28 April 1957, Harris’s Sparrow from 8 December 1996 to 10 May 1997 and Yellow-headed Blackbird on 15 May 1956. Scan for gulls, terns, ducks and geese before disturbing them by walking to the shore. Walk southwest out to the point to scan the shoreline to the west for at least 1.5 km. (This rocky shore can be slippery when wet.) In the spring and fall, enter the park here to search for passerine migrants.

**Belleview Road and Burnaby Road**

Return to Lakeshore Road and travel left (west) from Morgan’s Point Road. After 0.8 km Lakeshore Road intersects Belleview Beach Road to your left (south) and Burnaby Road to the right (north). Turn south on Belleview Beach Road and drive 0.6 km to the end, where you will find a small beach community (17634371E 4746900N). To see shorebirds, take the path to the beach and you will find the bay that was visible from Morgan’s Point.
Side Road 18
From the corner of Belleview Beach Road and Lakeshore Road, go west 1.2 km. You will pass Summerland Avenue then Dreamland Avenue, both on your right before you arrive at Side Road 18, which is also on your right (north). If you look toward the lake at this point, you can see the remnants of a road leading to the shore. It is difficult to park on Lakeshore Road, so to be safe, turn right and park on Side Road 18 (17633488E 4747536N). Walk across Lakeshore Road, through the bushes and down to the shore.

Augustine Road and Station Road
From Side Road 18 continue west on Lakeshore Road. There are cottages on the lake side just before it curves to the south giving you an open view of the lake and Grabell Point. This is a good shorebird stop because wave action blows algae into the bay. You may be repelled by the smell, but the shorebirds will not. This narrow piece of road is not a suitable or safe place to stop your car because drivers from the east are blind to what is in the road until they have entered the curve. Once you are through the curve, the road straightens out, and you can see the four-way stop, with Augustine Road on the south of Lakeshore Road and Station Road on the north (17632651E 4747266N). Park here and walk back to the bay.

Side Road 26
Less than 1.2 km west of Station and Augustine Roads, Lakeshore Road takes you to the junction of Augustine and Brawn Roads, where Augustine Road rejoins Lakeshore Road after passing through the community of Long Beach.

Travelling west along Lakeshore Road takes you to the next stop 1.4 km from the junction of Brawn and Augustine Roads (17630304E 4747974N). Look left (south) for a road that leads to the shore. The shoreline here gives a good vista east to Long Beach and west to the Long Beach Conservation Area.

Minor Road 28
Proceed another 1.0 km past the junction of Lakeshore Road and Side Road 26, and you will come to Minor Road 28 (17629306E 4748103N). There is no access to the lake here, but this is a good place to look for land birds. Watch the farms for blackbirds in migration and in the winter months. The Gordon Harry Conservation Trail crosses Minor Road from east to west before you reach Concession Road 1 to the north. You can walk along the trail less than a kilometre to the west to the Harold Mitchell Nature Preserve, which is on the northern border of the Long Beach Conservation Area.

Old Lakeshore Road
As you travel west 0.2 km along Lakeshore Road from Minor Road, you come to Old Lakeshore Road on your left, which borders the east side of the Long Beach Conservation Area. Turn left onto Old Lakeshore, which bears immediately west, and you will be able to see a fence about 50 metres away at the end of the road. There is a path here leading to the beach where you can see the point to the southwest. Scan the shore to the east and then walk the shoreline to the point. Go around the point and continue west until the open rock gives way to a sand beach. From here you can see a long distance. You need to look closely for shorebirds because of the unevenness of the rocky shoreline. Look for Purple Sandpiper and Dunlin late in the season. If you look to the south, you can see Mohawk Island a fair distance away, but if it is calm you will be able to see cormorants, gulls and terns there. There is a barrier of bushes and trees to the north of the shore that can shelter migrant passerines. Osprey, Bald Eagle, American
Kestrel, Merlin, Peregrine Falcon, Red-tailed Hawk and accipiters have been seen in the mature trees along the shore here. There is very little room to park on this road, but you can park back at Minor Road or along Lakeshore Road if the shoulder allows.

**Long Beach Conservation Area**

Drive 0.3 km west along Lakeshore Road West from Old Lakeshore Road, and you will find the entrance to Long Beach Conservation Area (17628800E 4748045N). There is a charge for day use and for camping. A Wilson’s Storm-Petrel was located here on 14 August 1955. The collection gate is on your left (south) of Lakeshore Road, and if you look north there is an extension of the park with a wooded area that becomes the Harold Mitchell Nature Preserve. Look for migrants along the fringe of the woods and north into the mature trees of the woodlot.

**Side Road 30**

Another 0.2 km takes you to the western border of the park and Side Road 30 (17628500E 4748016N). Turn right (north) and park on the side of the road, but watch for “No Parking” signs. Walk back to Lakeshore Road, and you will find a road between houses leading to the beach. There is usually an active feeder at the house on the right (west) and a good heavy vegetation cover on the left; watch for migrants along this fringe. At the beach, you can scan for birds all the way back to the point or walk to the point if access is easier from this location. The fringe of trees and bush along the north side of the beach may hold migrants. Any of the stops along the shore should afford good views of the Monarch Butterfly migration in the fall.

Drive north on Side Road 30. A ditch along the west side of the Long Beach Conservation Area always shelters birds. The open fields to your west can produce Vesper and Savannah Sparrow. As you drive north 1.0 km from Lakeshore Road, look for a small sign in the woods on your right indicating the entrance to the Harold Mitchell Nature Preserve. This is a good place to enter the preserve, for within 12 metres you will find yourself in a stand of mature trees. Because the fringes of this wet wood can be very difficult to walk through, boots are recommended. Look for Great Horned and Eastern Screech-Owls in the mature trees and for Long-eared, Short-eared and Northern Saw-whet Owls at the fringes in the fall and winter. Ruffed Grouse is a possibility around the heavy fringe of the woods and Downy, Hairy and, rarely, Red-headed Woodpeckers can be found. This is a protective wood for migrants in both spring and fall. A short distance north is the Gordon Harry Conservation Trail (17628439E 4749212N), which can be used to access the northern end of the nature preserve. Another 0.4 km north (where there are open fields) will take you to Concession Road #1, and a right turn will take you one kilometre east to Highway 3. In fall and winter, watch these open fields for Horned Lark, Snow Bunting and Lapland Longspur.

The boundary of the Niagara Region lies 1.5 km of Side Road 30. If you continue 6 km past the region boundary on Lakeshore Road, you will reach Rock Point Provincial Park, an excellent location to view shorebirds.

Out in Mohawk Bay, 1.5 km to the southeast of the park, is Mohawk Island on which many cormorants, gulls and terns are breeding.

*Alan Wormington*
The Southern Niagara Region

Drew J. Campbell

These commonly frequented hotspots in the southern portion of Niagara offer the birder a good likelihood of seeing migrants in the spring and fall and breeding birds in the summer.
SOME OF THE HOTSPOTS REQUIRE SPECIAL PREPARATION BEFORE ENTRY. They are often very wet and boots may be needed. Many have wood ticks. Wainfleet Bog also has the deer ticks which carry Lyme disease. It is important to take the proper precautions against these insects by tucking pant cuffs into the tops of socks or boots, by using the appropriate insect repellent, by wearing light clothing and by checking all clothing and exposed skin after leaving these areas.

**Erie Beach and Morgan’s Point Conservation Area**

These two hotspots are not difficult to find and are easy to walk in an hour or two. They are excellent locations for observing waterbirds, shorebirds and passerines during migration. Erie Beach Park was once an old amusement park that existed from 1885 to 1930, when it was driven out of business by competition from Crystal Beach Amusement Park. Before the Peace Bridge was built, Erie Beach Park was one of the ferry stops for boats coming from Buffalo. As you walk through mature woods and along the shore, you can see remnants of the pier and the amusement park. Morgan’s Point Conservation Area, with its rocky shore, sand dunes, mature trees and easy walking is also a rewarding place to look for migrants. The trees and shrubs close to the Lake Erie shoreline are particularly good for migrant passerines in the spring and fall.

Directions to Erie Beach Park and Morgan’s Point are included above in The Lake Erie Shoreline section.

**Humberstone Marsh Conservation Area, Port Colborne**

This 82-hectare conservation area, located in the City of Port Colborne east of the city centre, is also referred to as ‘Humberstone Muck Basin Swamp Forest’. Considered to be a significant wetland complex by the Province of Ontario, it consists of multiple, wetland patches (99.3% swamp and 0.7% marsh), closed and open swamp forest with mature trees in the south (maple, oak, birch, spice bush), old fields, meadows and a white pine and spruce plantation in the southwest corner of the conservation area.

This peat and muck-filled basin is part of the Haldimand Clay Plain, which is contained by the Onondaga Escarpment to the south that separates the plain from Lake Erie. The muck is the black organic acidic material that has built up and remained on underlying clay because of poor drainage. You can examine the Onondaga Escarpment at a road cut on Highway 58 about 3 kilometres north of the junction of Highway 58 and Highway 3 in Port Colborne.

The complete Humberstone Wetland is much bigger than the Humberstone Marsh Conservation Area and serves as a headwater for Black Creek, which flows east to the Niagara River. Look for Field and Song Sparrow in fields and scrub, Eastern Screech-Owl, Great Horned Owl, Veery, Wood Thrush, Ovenbird and Scarlet Tanager in the forest, and in the winter season Northern Saw-whet Owl, Long-eared Owl and Great Horned Owl in the white pine and spruce plantation. Short-eared Owls have been seen in the fields along Wilhelm Road, which is one concession east of Neff Road. Some of the birds observed during the second Ontario Breeding Bird Atlas were Northern Bobwhite (the only Niagara record, perhaps not a wild bird), Tufted Titmouse, Blue-winged Warbler and American Redstart.

Directions: Parking and access to the Conservation Area is on Neff Road between Concession Road 2 and Lever Road in the City of Port Colborne. Neff Road can be reached from Highway 3 near Sherkston which is west of Fort Erie and east of Port Colborne. At the junction of Neff Road and Highway 3, turn north and drive 2 km to Concession Road 2. Continue about 1 km north on Neff Road to the southern edge of
the marsh, where you will find a marked trail. Another 0.2 km takes you to an excellent location (17651600E 4753700N) at which to listen and look for birds. There is also a trail to the right along a creek. Concession Road 3, a dirt road a short distance farther north, is worth walking to the west. The wooded habitat continues for about 1 km north on Neff Road. At this point look for some open ponds.

**Mud Lake Conservation Area, Port Colborne**

Mud Lake Conservation Area consists of approximately 60 hectares of wetland and 54 hectares of field and woodland. The narrow tree line that borders the north, south and west sides of the lake stands on a dike, where an upper path on the dike provides a very good view of warblers, thrushes and other birds during migration. From the path, where the shoreline of the lake is visible, waterthrushes are always a possibility. A ditch at the south end of the conservation area drains the Wainfleet Bog, moving water east to the Welland Canal. A lower path leads south from the parking lot and turns east, where it parallels this ditch and provides an attractive habitat for birds.

The starting point for this hotspot is the small parking lot on the west side of Mud Lake on Elm Street. With the road at your back, and looking to the right (southeast), you will see the entrance to the lower path that leads to the bypassed Welland Canal. To your front (northeast) you will see a walkway up a hill leading to the upper path on the dike. You can start to look for birds in the trees and bushes that border three sides of the parking lot. From the parking lot, take the lower path and look for birds along it.
Wood ticks are often present here. Watch for warblers, sparrows and thrushes that will show up on the open path in front of you. If you walk about 60 metres along the trail, you will reach a short trail to the left that leads to the upper path on the dike, and at about 120 metres, there is a second short trail that leads to the upper path. The lower path can be wet, so boots may be needed as you go farther to the east. It is about a 2-km walk from the Elm Street parking lot to the service road for the bypassed Welland Canal.

For a shorter hike and to access the east side of the lake, take the second trail leading north up to the dike surrounding Mud Lake. Once you get to the upper path walk a short distance to the right (east), and you will come to a more open area where you can find Field Sparrow and Song Sparrow. Looking north, you will see a swampy habitat, with bulrushes, that begins right in front of you and runs down the whole east side of the lake. Virginia Rail, Sora, Common Moorhen, American Coot, Marsh Wren, Swamp Sparrow and possibly American and Least Bittern can be found here. Watch for ducks, geese, herons, night-herons, swallows over the water, gulls and terns (Common Tern, Caspian Tern and, rarely, Black Tern). To return to the parking lot, walk west and then north along the upper path. If you wish to explore more of the lake, continue along the upper path. This will take you to the east side of the lake and you can continue to walk completely around the lake from here. If for some reason the water in the lake is low, exposed mud flats at the north end attract shorebirds. The walk down the west side of the lake will take at least 30 minutes. On spring evenings, the upper path north of the parking lot is an excellent place to listen for Virginia Rail, Sora, Least Bittern, and American Bittern. At dusk, listen and watch for American Woodcock and Wilson's Snipe.

Directions: The conservation area parking lot access is on the east side of Regional Road 80 (Elm Street) in the City of Port Colborne. From Highway 3 or Main Street West in Port Colborne, travel 3.3 km north on Elm Street to the parking lot on your right (17642407E 4754449 N).

Stevensville Conservation Park (Fort Erie Conservation Club)

Located on this 49-hectare site are a Carolinian forest, the meandering Black Creek, a wetland, a fishing pond and an open picnic area. Hike the trails, where you will be sure to see many different species of birds and wildlife. This is an excellent place to look for Long-eared Owls, Northern Saw-whet Owls and migrants.

Directions: Exit the QEW at Exit 16, Sodom Road. Travel south along Sodom Road (which becomes Stevensville Road in Snyder) to Main Street in Stevensville. Turn right (west) on Main Street and drive directly to the conservation area. The parking lot at 1.5 km gives access to the trails (17657209E 4756339N).

Wainfleet Bog Conservation Area

Please note these special precautions before entering the bog. There is always a danger of fire. Once started, a peat fire can smoulder and burn below the surface for months. Under no circumstances should you light a fire in the bog. It is very easy to get lost in this bog because of a lack of distinctive landmarks. Coloured tape to mark your starting points, a compass and/or a GPS hand-held unit can be used to lead you back to your entrance point. Some GPS units have topography maps to help you navigate off-road areas like the bog. Note that, if you are not on one of the trails, it is almost impossible to walk out of the bog though the brambles and deep drainage ditches.

This bog is a remnant of the last glacial retreat from Niagara approximately 10,000-12,000 years ago. As glaciers retreated, the melt water created a lake that was contained
by the Onondaga Escarpment which prevented runoff into Lake Erie. It is thought that the bog covered an area from Port Colborne west to the Grand River. The current bog vegetation has been carbon dated to 4,500-4,700 years ago. Over the last few hundred years, human intervention in the form of drainage, housing and peat extraction has caused the bog area to shrink to its present size. The current bog area is approximately 1,460 hectares. A group including the Niagara Peninsula Conservation Authority, the Ontario Ministry of Natural Resources and the Nature Conservancy of Canada has purchased approximately 800 hectares of this area. There is a current effort to stop the drainage of the bog and rehydrate the area. Along with this activity, non-native European Birch trees are being removed, and bog species such as Leatherleaf, Labrador Tea, Sheep Laurel and Blueberry are being reintroduced. These activities will help to preserve animal species such as the Eastern Massasauga Rattlesnake. For further information, consult Anne Yagi and Kim Frohlich’s “An interim report on Wainfleet Bog restoration: challenges and future direction” (1999) in B. Johnson and M. Wright (eds.), Second International Symposium and Workshop on the Conservation of the Eastern Massasauga Rattlesnake, Sistrurus catenatus catenatus: population and habitat management issues in urban, bog, prairie and forested ecosystems, 2-3 October, 1998, Toronto

Wainfleet Bog from the southwest. The intersection of Wilson Road and Highway 3 at the bottom centre of the photograph marks the southwest corner of the bog. The bend in Wilson Road at Garringer Road can be seen in the upper left. The rectangular areas where peat was mined are visible in the central portions of the bog.

David Walker

Directions: No roads lead into the interior of the bog. Five roads border it, but you must walk to get into the bog. The starting point is the junction of Highway 3 and Highway 58, or West Side Road, in Port Colborne.

To access the southeastern corner of the bog, travel west on Highway 3 about 1.5 kilometres from the junction of Highway 3 and Highway 58. After the S-curve, look for Minor Road on your right. Turn right (north) on Minor Road. Start looking for birds immediately. Depending on what crops are being cultivated, the fields can be overgrown with weeds. In the years leading up to 2009, the ethanol craze drove farmers to plant corn that wiped out weedy fields in many areas of Niagara. On the first kilometre of Minor Road, look for Grasshopper, Savannah, Field and Song Sparrow as well as Eastern Meadowlark in weed covered fields. In open cultivated fields you can look for Killdeer, Horned Lark and Vesper Sparrow. You will see hedgerows, low bushes and single trees as you drive north. Scan the tall trees for Red-tailed Hawk, American Kestrel, Blue Jay, Brown Thrasher and Northern Mockingbird. The bush is likely to hide Gray Catbird, Yellow Warbler and Song Sparrow. In 1988, a drought year in the North American west, a nesting Dickcissel pair was found, on 23-30 June, in a metre-high bush next to the ditch along the west side of the road. When you have driven one kilometre, you will enter a woodland area where you may find Downy, Hairy and Red-bellied Woodpecker, Warbling Vireo and Red-eyed Vireo. These woods are good for Eastern Screech-Owl and Great Horned Owl. After the second kilometre, you reach a T-intersection at Barrick Road. Now take Barrick Road for one kilometre west (left) to a spot where bush begins on the right side (north) side. Park here (17640333E 4752246N). This section of the bog is owned by the F.A.Y. (initials of the original owners) Farms. Permission to enter the bog at this location should be obtained at the office. Follow the dirt road on the east side of the bush north for about 2 kilometres. Watch and listen for Yellow-billed and Black-billed Cuckoo and Mourning Warbler along this bush line. If you follow the dirt road northeast, you will come to some interesting ponds. Alternatively, walk north as far as you can in the area most obviously disturbed by peat mining. Then turn west to find yourself in some of the least disturbed bog vegetation. A poorly marked trail here takes you north into the bog. Many years ago this trail led to an open area free of trees where Lincoln’s Sparrow nested, but the open area, and the Lincoln Sparrow, vanished with the introduction of European Birch.

For access to the south side of the bog, continue west on Highway 3; the first road on your right is Young’s Road, which dead ends less than a kilometre north of the highway. Continue west to the newly constructed Erie Peat Road, which was recently moved 0.5 km east to allow the original road to be quarried. Because of the construction, drive about 1 km north turn, due west for 0.5 km and then go right (north) another kilometre to the end of the road where you will find a parking lot (639100E 4752200N). Walk north into the bog. After about 0.43 km, there is a trail to the left that leads, after
1.1 km, to an open area cleared of European Birch and to some ponds. To the left of the trail there is a drainage ditch and tracks on which trams were used to remove the peat from the bog. In the late spring and summer, look for birds such as Alder Flycatcher, Veery, Nashville Warbler, Chestnut-sided Warbler, Mourning Warbler, Ovenbird, Yellow-Breasted Chat and Rufous-sided Towhee.

For access to the west side of the bog, continue west on Highway 3. The next road to the west is Kwik Mix Road, which at one time was Erie Peat Road. Look for swallows (Tree, Northern, Rough-winged, possibly Bank and Barn Swallow) in the quarry here. Continuing for about three kilometres west, you will pass the quarry and then Biederman Road and Grabiel Road (bog entrance is possible at the ends of these roads but may require permission) before arriving at Wilson Road, which constitutes the western border of the bog. Just before you get to Wilson Road, look for Neff Road on your left. The two large ponds here can harbour waterfowl and the feeders at the houses along the west side of the road are always active in the fall and winter. Turn right and go north on Wilson Road. Even if you do not go into the bog, this is an excellent road for birding. In both spring and fall you will want to look for migrant passerines all along the edge of the road. Whip-poor-wills can be heard throughout the bog, but on Wilson Road you can actually see them in your headlights, their glowing red eyes evident from a distance. The Buffalo Ornithological Society runs an annual spring trip here to see these birds. The dates are posted in their events calendar. If you look north, you can see where Wilson Road bends slightly west then straightens to go north again. This is a good place to stop and look for birds. Garringer Road joins Wilson Road from the west at this point and leads to mostly cultivated fields and possibly to Short-eared Owl in the winter season. You can park anywhere on the side of Wilson Road at this point and walk the edge of the bush. Look for Yellow-billed and Black-billed Cuckoo, Least, Willow and Alder Flycatcher, Wood Thrush, Veery, Gray Catbird, House Wren, Ovenbird, Common Yellowthroat, occasionally Yellow-breasted Chat and, on spring evenings, displaying American Woodcock and Wilson’s Snipe. About 70 metres south of Garringer Road is the western entrance to the bog. Snowmobile activity in the winter makes the path obvious. Walk about 0.5 km east to get to the open bog area. This path can be very wet; you may need boots to walk it.

For access to the north side of the bog, continue north on Wilson Road. You will pass through about a kilometre of bush and then break out into open, cultivated fields before getting to Feeder Road East which runs along the old feeder canal. Turn right and drive northeast to the junction of Forkes Road, where a left turn takes you west to Dunville, and a right turn takes you east to Highway 58. Travelling northeast to Highway 58, you will pass on your right (south) Morog Road, Young’s Road and finally Townline Road. All of these roads lead south to the bog but dead end, so you have to walk across open fields then through bush before you get into the bog area. Look for Tundra Swan in wet areas during early spring migration and for Northern Harrier, Short-eared Owl, Northern Shrike, Snow Bunting and Lapland Longspur in the winter.

**Wainfleet Wetlands Conservation Area**

These wetlands are located on Quarry Road to the south of Highway 3 and the Wainfleet Bog. The 182-hectare conservation area was purchased in 1978 by the Niagara Peninsula Conservation Authority to protect a wetland that has developed in a former quarry that now attracts a large variety of shorebirds. This quarry also provides a view of the underlying bedrock of the area and exposes a wealth of Devonian fossils from hundreds of millions of years ago. You will find fossils such as corals, crinoid
stems and shells from an ancient sea floor. The fossils can be explored by walking southwest into the quarry from the parking lot, the same path you will follow to get closer to shorebirds. You can also walk 60 metres south on Quarry Road and look down into both the west and east quarries. From the parking lot you can see the Gordon Harry Conservation Trail which is worth walking for birds. Two kilometres east of Quarry Road is Cement Plant Road. Walking in along the Gordon Harry Conservation Trail to the west of Cement Plant Road provides access to another part of the Wainfleet Wetland.

Directions: From the intersection of Highway 3 and Highway 58 in Port Colborne, drive west on Highway 3 for approximately 3.6 kilometres and turn left (south) on Quarry (Quarrie) Road. In less than one kilometre, you will come to a small parking lot on your right (west) (17638367E 4749557N) and you will see an old rail bed trail at the same place, which is now the Gordon Harry Conservation Trail.

Willoughby Marsh Conservation Area, Niagara Falls

This 232-hectare conservation area preserves a provincially significant wetland made up of swamp and marsh communities. It is located within an overall wetland area of 593 hectares which provides the source water for Black Creek, Ushers Creek and Tee Creek. The conservation area is made up of swamp forests, meadows, scrublands, Maple-Oak-Hickory forests, swamp, slough ponds and fields. Because of this mix, there is a good variety of bird species to be found in the conservation area. Some of the species to look for are Green Heron, Upland Sandpiper, Black-billed Cuckoo, Eastern Kingbird, Scarlet Tanager, Eastern Towhee, Indigo Bunting, Rose-breasted Grosbeak as well as many more species that are residents. At least one pair of Sandhill Cranes nested here during the second Ontario Breeding Bird Atlas.

Directions: For access to the centre of the Conservation Area, take the QEW to the Sodom Road exit. Then travel a short distance south on Sodom Road to Sauer Road on the right. Take Sauer Road approximately 2.3 km to the junction of King Road. For the Sauer Road access to the marsh, continue 0.9 km west from this junction to just inside the wooded area of the marsh (17655386E 4761399N). You can follow trails into the marsh on both sides of the road.

For access to the north side of the conservation area, continue 1.2 km west and Sauer Road leads into open fields and then to Willodell Road. Turn right (north) on Willodell Road and drive 1.2 km to Gonder Road (17654933E 4762603N). Turn right (east) and drive 0.8 km and you are at the northern border of the conservation area where you can park your car on the road and walk south into Willoughby Marsh wherever you find a trail. The north side of the road is private land.

For access to the southeast corner of the conservation area, return to the junction of Sauer Road and King Road and turn south on King Road. Drive 1.6 km to Baker Road and turn right (west) on Baker Road. Baker ends at a dirt road called Lapp Road after 0.2 km.

For access to the southwest corner of the marsh, take Baker Road east to Sodom Road (2.1 km), Sodom Road south to Netherby Road (1.2 km) and Netherby Road (3.9 km) west to Shaubel Road. Turn right on Shaubel and drive 0.4 km north to Willow Road, where you turn left (west). Drive 0.2 km west on Willow Road and follow it right around a ninety degree bend that ends at a clay road (17654311E 4758958N) that you can see leads north into the marsh. It is best to walk into the marsh from this point since there is a good chance that you will get stuck if you attempt to drive this road.
Biographies of Contributors

Maggie A. Smiley

Tricolored Herons
Sam Barone
KENNETH F. ABRAHAM
An ornithologist (PhD Queen’s University) and a birder since his early teens, he has led many bird outings and published numerous articles on birds and their habitats. He was regional coordinator for both the first and second Ontario Breeding Bird Atlases. He is well known for his expertise in waterbirds and is presently a Waterfowl and Wetlands Research Scientist for the Ontario Ministry of Natural Resources at Trent University in Peterborough. In 2006 the Ontario Field Ornithologists presented him with its Distinguished Ornithologist Award.

DAVID T. BROWN
When not birding along the Niagara River, one of his favourite locations, he can be found at Brock University in St. Catharines, where he is a professor in the Department of Tourism and Environment. A graduate of McGill University (PhD Renewable Resources/Wildlife), he has carried out collaborative research on several avian species including Osprey and Atlantic Puffin. He is co-author and editor of two studies related to birding and has been actively involved in conservation issues in Niagara for over 20 years.

MICHAEL D. CADMAN
A birder since boyhood, he is the Senior Songbird Biologist (MSc in Ecology, University of Toronto) with the Canadian Wildlife Service. He is widely known for coordinating both the first and second Ontario Breeding Bird Atlases. He has served on the board and the National Science Advisory Council of Bird Studies Canada and on the council of the Society of Canadian Ornithologists. He coordinates the Ontario Forest Bird Monitoring Program, runs a Breeding Bird Survey route and sits on the steering committee for the Marsh Monitoring Program. He designed and coordinated the Ontario Rare Breeding Bird Program and was chair of the Eastern Loggerhead Shrike Recovery Team from 1992 to 1999. In 2007 the Ontario Field Ornithologists presented him with its Distinguished Ornithologist Award.

DREW J. CAMPBELL
As part of a birthing family, he developed an early interest in birds. He has taken multiple trips across the United States and Canada, accumulating in the process an impressive list of North American birds. While working in the automotive industry, he completed his BSc at Brock University, focusing on biology, geology and environmental geography. In 1997 he moved from the Canadian side of the Niagara River to the Buffalo area. He has led many bird outings for the region’s nature clubs, has compiled the Port Colborne Christmas Bird Count since 1991, has participated in both the first and second Ontario Breeding Bird Atlases, and he presently sits on the Buffalo Ornithological Society Council. He has taught courses in birding in the continuing education program at Brock University and for many area nature clubs. In 2004 he received the R.W. Sheppard Award from the Niagara Falls Nature Club. Morgan’s Point is his favourite Niagara birding site.

ALLEN T. CHARTIER
A freelance environmental educator, he has been birding for over 40 years in Michigan, Ontario and around the world. He has led many field trips for local Audubon chapters and has guided private birding tours to the United States and Central and South America. He has been a hawk counter at the Holiday Beach Migration Observatory for over 30 years and a passerine bander there for over seven years. He has taught birding courses at Wayne State University and Henry Ford Community College in Michigan and given many presentations based on his expertise in banding, particularly hummingbirds. He is the co-editor of A Birders Guide to Michigan. In 2003 he received the Maurice Broun Award for “deep personal commitment and outstanding service to advance raptor migration, study, and conservation” from the Hawk Migration Association of North America. His favourite birding spot in Niagara is the Niagara Falls area.

BRAD L. CLEMENTS
A resident of Niagara since 1971, he has been birding here since 1975. A member of the Ontario Eastern Bluebird Society and a number of other local, provincial, and national nature organizations, he worked on both the first and second Ontario Breeding Bird Atlases. This atlas involvement included trips to northern Ontario as well as participation in several squares in Niagara. His ornithological training includes courses on bird identification at the Buffalo Museum of Science and a course on bird biology at the Cornell Lab of Ornithology. An outing leader for area nature clubs, he has also taken part in several inventories, surveys and studies of various bird species. Since 1986 he has compiled the Niagara nest records data for the
Royal Ontario Museum’s Ontario Nest Records Scheme. In recognition of his many contributions, the Niagara Falls Nature Club presented him with the R.W. Sheppard Award in 2008. Now retired as CEO of the Welland Area Family YMCA, he is presently employed in performing forest restoration and bird surveys with a local forestry consultant. He can often be found at his favourite Niagara birding location — Mud Lake in Port Colborne.

**ROBERT CURRY**

A retired high school teacher, he has been birding for over 50 years. He has served as president of the Hamilton Naturalists’ Club (HNC) and chair of the Long Point Bird Observatory. A founding member of the Ontario Bird Records Committee, he was a voting member for 15 years and chair of the committee for 9 of those years. His birding interests have taken him around the world. He has been a tour leader for the HNC, the Ontario Federation of Naturalists, and Wings (a birding tour company based in the United States). He was a regional coordinator for the first Ontario Breeding Bird Atlas, sat on the species review committee for both atlases and surveyed numerous squares. He taught a birding course at Mohawk College in Hamilton for over ten years, and in 2006 his book *Birds of Hamilton and Surrounding Areas* was published. Many of his articles have appeared in journals such as *Ontario Birds* (the official OFO publication) and the *Wood Duck*, the HNC newsletter. In 2003 he received the Ontario Field Ornithologists’ Distinguished Ornithologist Award and in 2007 the Federation of Ontario Naturalists’ W.E. Saunders Natural History Award. At any season you may find him in his favourite Niagara birding location — the shoreline of Lake Erie.

**JANET M. DAMUDE**

A long-time resident of Niagara, she has served as both treasurer and president (2002-2003) of the Niagara Falls Nature Club. Her winter birding has included participating over many years in all three Niagara area Christmas Bird Counts. A true birder, she never leaves home without her binoculars. Her favourite Niagara birding spot is Woodend Conservation Area in the spring.

**ROBERT L. DELEON**

A resident of the Buffalo area since 1983 and a birder for approximately 20 years, he is currently treasurer of the Buffalo Ornithological Society (BOS) and chair of its grant program. He has been a Christmas Bird Count participant for many years and has taken part in the second New York State Breeding Bird Atlas project and the annual New York waterfowl survey. For ten years he has participated in the BOS seasonal counts, and he is the compiler of the May count. He has made presentations on the results of those counts to the New York State Ornithological Association and the BOS; his articles on the counts appear in *The Prothonotary*, a publication of the BOS. His favourite birding area is the Niagara River from the Peace Bridge in Fort Erie to Niagara Falls.

**MICHAEL HAMILTON**

An architect by profession, he began birding at the age of thirteen and has continued to do so throughout the Maritime Provinces, the United States, Kenya, Costa Rica, the Galapagos Islands, Ecuador, Trinidad & Tobago, and Puerto Rico. He is a member of the Buffalo Ornithological Society (BOS), which he has served as both treasurer and president (1998-2001). His other birding activities include leading trips for the BOS, participating in area Christmas Bird Counts, and taking on the responsibility of covering several blocks in the second New York State Breeding Bird Atlas. He has spent a great deal of time and energy over the years as organizer, compiler and participant in the April and October BOS counts. He also organized and conducted a survey of Bonaparte’s Gulls found along the Niagara River. Several of his activities are directed at preserving species and habitat. He is a member of the Times Beach Oversight Committee, the aim of which is to develop the area as a nature preserve with public access. He organized a bird survey for the Buffalo Niagara Riverkeeper Remedial Action Plan in order to determine how to de-list the Buffalo River as an Area of Concern. His favourite birding spot in Niagara is Morgan’s Point near Burnaby.
MARY ELLEN HEBB
After moving to Niagara in 1975, she became, in her words, “a fervent birder.” Locally she held several offices, including that of president of the Peninsula Field Naturalists (1986-1988). She was also a founding member of the Niagara Peninsula Hawkwatch and a board member of the Ontario Heritage Foundation and Long Point Bird Observatory. She was compiler of the St. Catharines Christmas Bird Count (1987 to 1995) and an outing leader and Baillie Birdathon participant for many years. She was active in both Ontario Breeding Bird Atlases, but she is best known as the coordinator of the project for the hacking and release of Peregrine Falcons in Niagara (1986–1987). For her efforts she received the W.E. Saunders Natural History Award from the Federation of Ontario Naturalists in 1989 and the Niagara Region Environmental Award in 1995. Her birding interests have taken her to several continents, and she now lives in Toronto. Her favourite birding area in Niagara is the Port Weller east pier.

MARCIE L. JACKLIN
An avid birder and an active member of all three Niagara area nature clubs as well as the Buffalo Ornithological Society (BOS), she was a member of the Twelve Mile Creek Headwaters Important Bird Area Steering Committee (2003–2005). A Science Liaison Librarian at Brock University in St. Catharines, she brings her research and organizational skills to bear on her many birding activities. A past president of the Peninsula Field Naturalists (1994-1995) and treasurer of the Bert Miller Nature Club, she currently sits on the Buffalo Ornithological Society Council. She has led many bird outings, has compiled the St. Catharines Christmas Bird Count since 1996, has carried out considerable field research on birds and is the American Birding Association sub-regional editor (Niagara) for Audubon Field Notes. Her other ornithological activities include teaching classes on birding for the continuing education program at Brock University, contributing two articles to OFO News and Ontario Birds and writing a report for the Nature Conservancy of Canada — Breeding Birds of the Laythrop Nature Reserve in Fonthill (July 2006). Her favourite birding spot in Niagara is Marcy’s Woods near Crystal Beach.

RICHARD W. KNPATON
Now living in Edmonton, he resided in Niagara during the 1980s and 1990s. Formerly a university biology professor (PhD Ornithology, University of Manitoba), he is currently an eco-tour company owner and tour guide. He has published over 70 articles on bird behaviour, ecology, biology, and on the distribution and status of birds in various locations. While in Niagara, he was very much involved in the local bird clubs and their activities. He was president of the Peninsula Field Naturalists (1986) and the compiler, with Marcie Jacklin, of the St. Catharines Christmas Bird Count (1996 – 1997). He also participated in the following projects: Niagara Christmas Bird Counts, BOS seasonal counts, Forest Bird and Marsh Monitoring Surveys, Breeding Bird Surveys and the Niagara Peninsula Hawkwatch. He served on the editorial committee of the first Ontario Breeding Bird Atlas and covered many squares for that undertaking. For five years he sat as a voting member on the OntarioBird Records Committee. As a tour guide he has birded around the globe, and he resists naming a favourite Niagara birding spot. He mentions the following possibilities: Short Hills Provincial Park, Point Abino, Port Dalhousie, Port Weller and Niagara Falls.
The Niagara Region has attracted him since his birding days as a teenager. He is now a professor in the School of Liberal Arts and Sciences at George Brown College in Toronto. He earned his PhD in Zoology at the University of Toronto and taught courses on evolution and ornithology in the Department of Zoology. He also taught courses in birding and nature photography for the School of Continuing Studies at the University of Toronto. He has participated in the Port Colborne Christmas Bird Count and the first Ontario Breeding Bird Atlas, for which he also wrote the species account of the House Finch. As a researcher, he has written a number of ornithological papers. In 1996 he received the Francis F. Roberts research paper award from the Cooper Ornithological Society. His favourite Niagara birding areas are along the Niagara River and on the shores of both Lake Ontario and Lake Erie.

HARRY G. LUMSDEN
A highly respected authority on waterfowl and gallinaceous birds, he is well known for his publications dealing with the birds in northern Ontario and more recently for his research on Trumpeter Swans. Active for almost 60 years in the study of birds, he was for many years a biologist and research scientist with the Ontario Ministry of Natural Resources. In 2004, in recognition of his outstanding contributions to conservation and wildlife management, he was appointed a Member of the Order of Canada. In 2008 the Ontario Field Ornithologists presented him with its Distinguished Ornithologist Award.

KAY MCKEEVER
A long-time resident of Niagara, in September 1986 she was named the Honorary President of the Niagara Falls Nature Club. She has held leadership positions in the Raptor Research Foundation and the National Wildlife Rehabilitators’ Association. She is best known as the founder in 1965 of the Owl Foundation in Vineland. With her husband Larry, she built the only centre in North America to breed owls from permanently damaged parents. She was awarded the Order of Canada for her work in rehabilitating injured owls and has written three books on the subject. In addition to her work with owls, she has initiated the conversion of 7.3 hectares of farmland beside the foundation to a Northern Carolinian forest. Over 2,000 trees of 68 varieties have been planted.

JOHN MIDDLETON
He is an ecologist (PhD Biology-ecology, Carleton University, Ottawa) in the Department of Tourism and Environment at Brock University. A resident of Niagara since 1985, his work and birding interests have taken him far afield. He has been a Visiting Associate Professor in Bangkok, Thailand, and he is currently a Visiting Associate Professor in Rosario, Argentina. He has lectured at the University of Dar Es Salaam in Tanzania. His local birding interests include participation in Project FeederWatch.

MICHAEL M. MORGANTE
His fascination with birds began early — at the age of four. A resident of the Buffalo area since 1970, he is, by profession, an environmental consultant (MSc Civil Engineering, State University of New York, Buffalo) specializing in civil engineering and an avian studies manager with Ecology and Environment, Inc. He is currently vice-president and statistician of the Buffalo Ornithological Society (BOS), a member of the New York State Ornithological Association and regional editor for The Kingbird, its quarterly publication. He has led numerous bird outings for local nature organizations and has been a Christmas Bird Count participant since age seven, usually taking part in more than one count each year. He has written several articles for the BOS monthly newsletter, The Prothonotary. His favourite birding area in Niagara is the Niagara River.

RALPH D. MORRIS
A population ecologist (PhD in Population Ecology, University of Saskatchewan), he has lived in Niagara since 1970. A retired professor in the Department of Biological Sciences at Brock University, he has conducted behavioural and ecological research on colonial waterbirds at temperate (Lakes Erie, Ontario and Huron), marine (Prince Edward Island), and tropical...
(Tobago, Puerto Rico) sites. He is a member of a number of professional avian organizations. He was the editor of Waterbirds from 1989 to 1993 and a board member of the Colonial Waterbird Society. He received the R.W. Sheppard Award in 2001 from the Niagara Falls Nature Club.

MARK K. PECK
A birder since boyhood, he is now Ornithology Technician in the Department of Natural History at the Royal Ontario Museum (ROM). A member of many nature organizations, he has taught a course on birds for the ROM and is presently Program Director for the Toronto Ornithological Club. Since 2000 he has been the ROM liaison for Ontario Birds and the Ontario Bird Records Committee (OBRC) and for the past three years has been a voting member of the OBRC. He has been heavily involved in shorebird research in South America, the United States and the Canadian Arctic. A participant in both Ontario Breeding Bird Atlases, he served on the Significant Species Committee and reviewed and authored species accounts for the second Atlas. He is the coordinator of the Ontario Nest Records Scheme at the ROM and his numerous articles appear in both peer-reviewed journals and popular publications. In Niagara his favourite birding area is the Niagara River from Fort Erie to Niagara Falls.

EARL N. PLATO
A retired educator and avid birder, he is the founding president (1995-1997) of the Bert Miller Nature Club, for which he has led many outings. He has participated in both the Project FeederWatch at Stevensville Conservation Area and the Niagara Peninsula Hawkwatch. His favourite birding spot in Niagara is Marcy's Woods near Crystal Beach.

BRIAN D. RATCLIFF
Now a resident of Thunder Bay, he lived in Niagara from 1980 to 1993. By profession he is a biological consultant. While in Niagara, he was a member and president of the Peninsula Field Naturalists (1993) and a board member of the Niagara Peninsula Hawkwatch. He is currently a member of Raptor Research, Ontario Nature and the Thunder Bay Field Naturalists. He maintains a registry of all the Peregrine Falcon nest sites, current and historical, and a database with information on all the young falcons that have been hacked and banded in Ontario since 1977. Since 2002, he has been writing the birding column “In Flight” for the Thunder Bay Chronicle Journal. A long-standing participant in Christmas Bird Counts, he was the compiler of the Port Colborne Christmas Bird Count in 1987. He participated in both Ontario Breeding Bird Atlases, the Lake Ontario Mid-winter Waterfowl Inventory and the Niagara Peninsula Hawkwatch. He has led birding trips on both a volunteer and professional basis, and he worked for a number of years at the Owl Foundation as both a volunteer and an employee. His favourite birding spot in Niagara is the Jordan Estuary.

BILL READ
A high school teacher, wildlife biologist and bookseller, he is also an active birder. He is a past president of the Ontario Bird Banding Association and the founder and first president of the Ontario Eastern Bluebird Society. He has been involved in Christmas Bird Counts for many years, has banded raptors at Hawk Cliff and has participated in both Ontario Breeding Bird Atlases. He has taught courses on birds at Mohawk College and has written many articles on his area of expertise, the Eastern Bluebird. He received the W.E. Saunders Natural History Award in 1993 from the Federation of Ontario Naturalists.

JAMES D. RISING
A biologist (PhD in Zoology, University of Kansas), he is the author of A Guide to the Identification and Natural History of the Sparrows of the United States and Canada and co-author of Sparrows of the United States and Canada: The Photographic Guide.
He is known for his research on the taxonomy and identification of North American birds, and he is the only Canadian on the American Ornithologists’ Union Committee of Classification and Nomenclature. In 2004 the Ontario Field Ornithologists presented him with its Distinguished Ornithologist Award.

**TIMOTHY A. SEBURN**

He began his involvement in natural history with plants, butterflies, reptiles and amphibians and only later took up birding. He is a member of the Niagara Falls Nature Club, the Peninsula Field Naturalists and Friends of Fort Erie’s Creeks. He is a director of the Bert Miller Nature Club and a director of the newly formed Niagara Land Trust. His favorite birding spot is at the foot of Kraft Road on the Lake Erie shoreline in Fort Erie.

**MAGGIE A. SMILEY**

Now retired from two careers (first as a labour economist for the provincial government and then as an operator of a bed and breakfast in Niagara-on-the-Lake), she was president of the Peninsula Field Naturalists from 1997 to 2000. She has participated in numerous Christmas Bird Counts, Project Feeder Watch, the Lake Ontario Mid-winter Waterfowl Inventory, Buffalo Ornithological Society seasonal counts and the second Ontario Breeding Bird Atlas. An avid traveler, she has observed birds on all seven continents. She has led bird outings and given talks about her travels to several area organizations. A resident of Niagara for 15 years, she names Niagara Shores Park, near Niagara-on-the-Lake as her favourite birding spot.

**CHRISTOPHER M. SOMERS**

A biologist (PhD in Biology, McMaster University, Hamilton), he is now an Assistant Professor at the University of Regina and Canada Research Chair in Genes and the Environment. A resident of Niagara in the late 1990s, he considers himself to be a recreational birder. He has, however, taken a field course on overwintering neotropical migrants (Yucatan, Mexico) and currently conducts research on colonial species such as gulls, terns, cormorants and pelicans. His articles have appeared in *Molecular Ecology Resources, Waterbirds, The Wilson Journal of Ornithology, Conservation Genetics, the Journal of Great Lakes Research, the Journal of Applied Ecology* and the *Open Ornithology Journal.*

**JOHN R. STEVENS**

A retired environmental consultant, he has been birding in Ontario for over 30 years. He has been a hawk watcher for approximately 15 years and has served as treasurer and president of the Niagara Peninsula Hawkwatch. As an indication of his broad interest in natural history, he is also a member of the North American Native Plant Society and the Field Botanists of Ontario. He was a participant in both the second Ontario Breeding Bird Atlas and the Maritimes Breeding Bird Atlas. His favourite birding spot is the Beamer Memorial Conservation Area.

**RICHARD A. STOCKTON**

He is a neuroscientist by profession and a life-long naturalist by avocation. An observer of birds since childhood, he is a member of the Bert Miller Nature Club and has engaged in more formalized birding since the early 1980s. He has participated in numerous area Christmas Bird Counts, and he was an atlaser in the second Ontario Breeding Bird Atlas.

**KATHERINE J. STOLTZ**

In her non-birding life, she is a neurologist. An enthusiastic birder for the past 15 years, she is a member of the Peninsula Field Naturalists, Bird Studies Canada (life member) and the American Birding Association. She has participated in many Niagara area Christmas Bird Counts, Project FeederWatch, Buffalo Ornithological Society seasonal counts, and the annual Lake Ontario Mid-winter Waterfowl Inventory. She was an atlaser in the second Ontario Breeding Bird Atlas. Her passion for birds has taken her to several Central and South American countries. Her favourite birding spot is Malcolmson Eco-Park in St. Catharines.

**PAUL W. SUMMERSKILL**

He has been a birder since the age of five, when he was given a copy of Roger Tory Peterson’s *A Field Guide to the Birds.* With this began a lifetime study of birds and their habitats. He has served on conservation committees and participated in nature studies and wildlife rehabilitation. He has served on the boards of the Peninsula Field Naturalists and the Niagara Peninsula Hawkwatch. He is a long-time volunteer and director at the Owl Foundation in Vineland, and the author of “A New Forecasting Tool for Raptor Migration: BLIP MAP” (www.ideasbypaul.ca). His favourite birding spot is in a canoe on the Welland River.
**KATELYN S. VAUGHAN**

She studied Communications and Environmental Studies at Brock University and Environment and Resource Management at the University of Waterloo. Her research interest is the human-environmental interface. Her current research interests focus on collaborative environmental governance and source water protection. Her research has been conducted primarily in the Niagara Peninsula.

**D.V. ’CHIP’ WESELOH**

He is a wildlife biologist with the Canadian Wildlife Service (PhD in Bird Ecology, University of Calgary). His research has included monitoring contaminants in Great Lakes Herring Gulls (including one colony site in the Niagara River), monitoring colonial waterbird populations in the Great Lakes (including sites in the Niagara River, at Port Colborne and on Mohawk Island) and capturing and radio tagging Bonaparte's Gulls in the Niagara River. He is one of Canada’s authorities on wildlife in the Great Lakes basin. He has served as president of the Ontario Field Ornithologists and co-editor of their publication *Ontario Birds*. He has participated in both Ontario Breeding Bird Atlases as a birder and a colonial waterbird consultant. He has led numerous bird outings, taken part in Christmas Bird Counts for nearly 40 years and published many articles on birds. Although he does not live in Niagara, he does have a favourite birding location here — the Niagara River.

**ANNE R. YAGI**

A resident of Fonthill, she is a management biologist for the Ontario Ministry of Natural Resources. While calling herself only a novice birder, she is an expert in fisheries, herpetology, wildlife biology and ecology, especially of the Niagara-Haldimand-Hamilton area. She has participated in team efforts to recover Peregrine Falcon, Spotted Turtle, Eastern Massasauga Rattlesnake and Black Rat Snake. She is current chair of the Fowler’s Toad Recovery team and co-chair of the Ontario Dusky Salamander Recovery Team. Her extensive work on Peregrine Falcon nest site management and Bald Eagle nest site monitoring is well known, and she was involved in the original release of Wild Turkey in Short Hills Provincial Park. Her favourite birding area is the Niagara River.

**GUSTAVE J. YAKI**

A life-long birder, Gus was born in Saskatchewan and lived in Niagara from 1964 to 1983. He is the former owner of Nature Travel Service and has led trips and birded on all seven continents. He was the founder and first president (1966-1967 and 1973) of the Niagara Falls Nature Club. He was a member of the Niagara Bruce Trail Club and also served as president of that organization. For the Buffalo Ornithological Society (BOS), he organized their 1970 meeting of the American Ornithologists’ Union. He has participated in Christmas Bird Counts (CBC) since the 1940s. In 1967 he established the Niagara Falls CBC and was its compiler until 1973. He was a participant in the first Ontario Breeding Bird Atlas, the Niagara Peninsula Hawkwatch, the BOS seasonal counts and many breeding bird surveys. He and Harold Lancaster taught a course on birding at Niagara College in the late 1960s and early 1970s. He is featured in the book *Looking for the Wild* by Canadian author Lyn Hancock. His favourite birding area is the river in Niagara Falls.

**DONALD J.P. ZIRALDO**

A recipient of the Order of Canada, he is the co-founder of Inniskillin Wines and chair of the Vineland Research and Innovation Centre. He is the author of *Anatomy of a Winery: The Art of Wine at Inniskillin* and co-author of *Icewine: extreme winemaking*. He has lived in Niagara since 1948. While not a birder, he fully understands the attraction of his grapes, especially his Vidal icewine grapes, for Niagara birds.

---

Hooded Mergansers

*Barry Cherriere*
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The outstanding visual impact of this book is the result of the contributions of some extremely talented bird artists and some of the best bird photographers in North America.

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Niagara Peninsula Conservation Authority Maps
Produced by the Niagara Peninsula Conservation Authority, 2009.
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As the number of birders increases, we must all make every effort to act in a positive and responsible way. We must also convey a responsible image to non-birders who may be affected by our activities. Most people appreciate birds but this appreciation can be quickly destroyed by the irresponsible actions of a handful of birders.

In the past a code of ethics was not considered necessary, but times have changed and as more and more pressure is put on our environment it is essential to do whatever we can to lead by example. Each of us must show consideration to other birders, landowners, habitat, birds and other wildlife at all times. We are ambassadors of birding and our actions today will reflect the respect we receive in the future.

The welfare of the birds must come first
Whatever your interest, from scientific study to listing, always consider the impact of your activity on the bird. Respect bird protection laws. We are all responsible to ensure we abide by them at all times.

Habitat protection
Habitat is vital for the existence of birds and we must ensure that our activities cause minimum damage to our environment. Use trails to avoid trampling vegetation.

Keep disturbance to a minimum
Although some birds can tolerate human activity, this varies from species to species and from season to season. Use common sense and extreme caution.
around nests. Migrants may be tired and hungry and should not be kept from resting or feeding. When photographing birds, study their reaction and if they become agitated, back off. Avoid the use of flash photography on owls. Tape recordings and similar methods of attracting birds may cause stress for territorial birds. They should be used sparingly and avoided in heavily birded areas. Do not deliberately flush birds. Patience is often rewarded.

**Rare breeding birds**

If you discover a rare breeding bird, do not feel under any obligation to report your find to other birders. Record the details of your discovery. You may wish to file the nest with the Ontario Nest Records Scheme at the Royal Ontario Museum. Avoid visiting known sites of rare breeding birds unless they can be viewed from a distance without disturbance.

**Rare birds**

Rare migrants or vagrants are the species most sought after by birders. If you discover a rarity, consider the circumstances carefully before releasing the information. You must take responsibility for the decision to release the find. You should consider whether an influx of birders will disturb the bird, people or other species in the area; whether habitat will be damaged; and where people will park. Inform the landowner of the find, explain what may happen and obtain permission to tell other birders. Ask the landowner for a list of dos and don'ts, for example, where birders may stand to get a good view and what restrictions there may be on time of day. Also ask which areas are off limit. If you decide to release the news, give precise directions and instructions. If possible include a phone number. At all times make as little noise as possible. Remember, most non-birders will be surprised by the number of visitors who wish to see a rare bird.

**Respect the rights of landowners and occupiers of land**

Before entering an area, be aware of the rules about access such as by-laws of Conservation Authorities, National and Provincial Parks, and Regional Authorities. Many landowners and authorities allow birders access to areas normally off limits. Always act in a responsible way and if you are asked to leave, do so immediately. Do not block gateways or cause damage to fences, and leave gates as you find them. Do not obstruct people who may be working in these areas.

**Have proper consideration for other birders**

When telephoning for information, do so at reasonable hours of the day. Try not to disrupt other birders’ activities or scare the birds they are watching. Many other people enjoy the outdoors; do not interfere with their activities. Be polite to other birders and helpful to beginners. If you see people obviously disturbing birds or significantly damaging habitat, explain to them the effect of their actions but be courteous; they may not be aware of the effect they are having.

**Increase our knowledge about birds**

Keep notes of your sightings and send them to area compilers. Send rare bird reports to the Secretary, Ontario Bird Records Committee.

**Birding in other countries, provinces or regions**

Find out if there is a local code of ethics or any special rules that should be respected.

---

**Ontario Field Ornithologists**

Box 455 Station R Toronto ON M4G 4E1

OFO Website: www.ofo.ca

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This unique volume presents a wealth of new information, most of it previously unpublished, on the occurrence and abundance of wild bird species in the Niagara Region of Ontario. Over 500 stunning photographs and illustrations accompany the text.

Niagara Birds is not a field guide for bird identification. Excellent books of that type exist already. Instead, it consists of some 25 articles and 368 species accounts contributed by professional ornithologists and highly experienced amateur birders. With topics ranging from the interaction of birds and grape growers to the effect of West Nile Virus on owls, the articles will appeal to a broad spectrum of readers. The species accounts, detailing both common and extremely rare birds of Niagara, will attract the general reader and specialist alike. The book concludes with useful descriptions of Niagara’s birding “hotspots” and precise directions on how to reach them.

John E. Black

John is an avid bird watcher who arrived in the Niagara Region in 1966 to teach Physics at Brock University. In 1993 he began research on the migration of birds on weather radar and on the nocturnal calls of migrating birds. Results of these studies have been published in Birders Journal and The Auk: One of his present ambitions is to see all the families of birds in the world. He has served as councillor and webmaster for the Association of Field Ornithologists, Regional Coordinator for Niagara for the second Ontario Breeding Bird Atlas, member of the board of the Peninsula Field Naturalists, and he is currently president of the Ontario Field Ornithologists.

Kayo J. Roy

After moving from Toronto to Niagara in 1976, Kayo became seriously interested in birds through his hobby of photography. While his business as a retirement and pension consultant occupied most of his time, he managed to pursue this newfound passion for birds until it quickly began to consume all of his spare time. A former executive member of the Federation of Ontario Naturalists (now Ontario Nature), a past president of the Niagara Falls Nature Club, compiler of the Niagara Falls ON/NY Christmas Bird Count for the past 25 years, he served the birding community further as secretary of the Ontario Bird Records Committee.
Niagara Birds

Corrigenda

There will not be a second printing of Niagara Birds. Here for inclusion in your copy of the book is a list of some errors and changes that have been brought to our attention. Nomenclature used is that of the AOU Check-list, 7th Edition, with updates to 2008.

Page 11, line 25 ‘Natural Heritage Centre’ should have read ‘Natural Heritage Information Centre, OMNR’.

Page 47, line 5 ‘None of these species is found anywhere else in Canada’ should have read ‘These species are not found together anywhere else in Canada’.

Pages 138 and 220 the alpha code for Herring Gull should have read HRGU, not HEGU.

Page 221 Lark Sparrow: 1-1970, in third column, this sighting would have been deleted.

Page 266 for Fulvous Whistling-Duck, the scientific name should have read Dendrocygna bicolor.

Page 281 for American Wigeon, the scientific name should have read Anas americana.

Page 292 for King Eider, the scientific name should have read Somateria spectabilis.

Page 302 for Hooded Merganser, the scientific name should have read Lophodytes cucullatus.

Page 307 for Chukar, the scientific name should have read Alectoris chukar.

Page 308 for Ring-necked Pheasant, line 7, ‘Ontario Ministry of Natural Resources (OMNR)’ should have read ‘Ontario Department of Lands and Forests’.

Page 312 for Northern Bobwhite, the scientific name should have read Colinus virginianus.

Page 334 for Little Blue Heron, third paragraph, line 6, James Heslop should have read James Heslop.

Page 345 for Bald Eagle, the scientific name should have read Haliaeetus leucocephalus.

Page 374 for Semipalmated Plover, second sentence, second paragraph should have read: The earliest spring arrival date for Semipalmated Plover in Niagara is 9 April 1998, when two birds were observed at the Avondale sewage ponds by Alan J. Smith (Ontario Shorebird Survey).

Willet
Brandon Holden
for Spotted Sandpiper, second sentence, fourth paragraph should have read: The earliest spring arrival date for Spotted Sandpiper in Niagara is 12 April 1981, when a single bird was observed at the Smithville sewage ponds (HNCNR).

for Willet, the photo of a Hudsonian Godwit in flight would have been replaced with Brandon Holden’s photograph of a Willet in flight, shown on the left.

for Eskimo Curlew, in the second paragraph, the first sentence states that there are no documented records of this species for Ontario (Austen et al 1994), while in the second sentence, Curry 2006 identifies a specimen collected in Hamilton in 1883. This contradiction would have been corrected.

for Red-necked Phalarope, on line 11, the year 1966 should have read 1996

for Red Phalarope, on line 20, the year 2006 should have read 1996

for Bonaparte’s Gull, the scientific name should have read Chroicocephalus philadelphia

for Mew Gull, in the Post 2006 caption, last line, the scientific name should have read Larus canus

for Sooty Tern, the scientific name should have read Onychoprion fuscatus

for Least Tern, the scientific name should have read Sterna antillarum and in the third paragraph, line 3, the year 1953 should have read 1993

for Black Tern, the scientific name should have read Chlidonias niger

for Ancient Murrelet, on line 7, (Pittaway 1994) should have read (Pittaway 1995)

for Boreal Owl, the scientific name should have read Aegolius funereus, and on line 20, Irene Lucas should have read Timothy Almas

for Rufous Hummingbird, on line 4, the year 2005 should have read 2004

for Loggerhead Shrike, on line 8, ‘across Canada’ should have read ‘for the eastern population of Canada’.

the species names under the artwork would have been reversed. The top drawing should have been identified as a Yellow-throated Vireo and the bottom drawing as a Bell’s Vireo.

for Cave Swallow, on line 8, ‘early winter’ should have read ‘late fall’

for Rock Wren, the scientific name should have read Salpinctes obsoletus

for Prairie Warbler, on line 2, ‘Committee on the Status of Species at Risk in Canada’ should have read ‘Committee on the Status of Endangered Wildlife in Canada’

for Connecticut Warbler, on line 2, Niagara should have read Niagara

for Spotted Towhee, in the Post 2006 caption, first line, John and Mary McNeil should have read Jim and Mary McNeil

for Orchard Oriole, the scientific name should have read Icterus spurius and on line 8 (Scharf and and Kren) should have read (Scharf and Kren 1996)

third to last sentence: Mel Swart-Lake Gibson Conservation Area should have read Mel Swart-Lake Gibson Conservation Park.

for Yellow-bellied Sapsucker, at the bottom of the third column, the page number 470 should have read 478