

Breeding Bird Surveys on Pelee Island

Results from 2008 point count surveys, a status report on Species at Risk, and recommendations for future conservation efforts



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for

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Breeding Bird Surveys on Pelee Island in 2008
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The Pelee Island Bird Observatory (PIBO) was established in 2003. PIBO's mandate includes: a commitment to long-term migration monitoring research on Pelee Island; long-term studies of the breeding bird communities on Pelee, including endangered, threatened and species of concern; serving as an educational centre for the public, school groups and the local community; and promoting the importance of Pelee Island's unique natural heritage.



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Executive Summary

Pelee Island is home to a significant and varied group of breeding birds that nest within the narrow confines of southwestern Ontario's Carolinian Zone. The island – an oasis of green in the lower Great Lakes region – provides nesting habitat for more than one hundred species. In addition to many familiar Carolinian birds with limited ranges in Canada, at least ten Species at Risk (SAR) have nested on Pelee including the endangered King Rail (*Rallus elegans*), Piping Plover (*Charadrius melodus*) and Acadian Flycatcher (*Empidonax vireescens*).

Many species of concern currently occupy territories – Least Bittern (*Ixobrychus exilis*), Bald Eagle (*Haliaeetus leucocephalus*) and 'eastern' Yellow-breasted Chat (*Icteria virens*), among others. The island's small chat colony represents upwards of one-third of the provincial population (Cadman *et al.* 1987). Pelee Island is classified as a globally Important Bird Area (IBA) by the Canadian partners of Birdlife International – Bird Studies Canada and Nature Canada.

In recognition of the island's unique nesting bird communities, the Pelee Island Bird Observatory (PIBO), in cooperation with the Nature Conservancy of Canada (NCC), initiated a wide range of long-term field studies on the island in 2006. In keeping with PIBO's mandate, the goal of the project was to generate data on the current status of the breeding communities on Pelee with an emphasis on Species at Risk, and to establish permanent survey points for ongoing research. Comprehensive field surveys were conducted again in 2008 following the study protocol of the Atlas of the Breeding Birds of Ontario (Cadman *et al.* 2007), in addition to a number of other monitoring efforts. The fieldwork this summer was coordinated in partnership with NCC and the Pelee Island Town Council as part of an ongoing cooperative stewardship project made possible with financial support from the Ontario Ministry of Natural Resource's Species At Risk Fund.

Numerous monitoring activities were carried out in 2008 including 1) 212 surveys were conducted at 106 point count sites situated throughout a broad range of habitats 2) data was compiled during unofficial visits to the sites 3) results were recorded from field surveys designed to detect the presence or absence of Species At Risk 4) a marsh bird monitoring survey was completed 5) additional data on breeding birds and Species At Risk was collected during PIBO's migration monitoring study. In all, four full-time staff and volunteers contributed more than 225 hours to the 2008 effort and surveyed approximately 600 hectares.

During this time, PIBO staff documented eighty species on Pelee Island that are designated in this report as *at least* possible breeders. Four Species at Risk were recorded – Least Bittern, Bald Eagle, Acadian Flycatcher and Yellow-breasted Chat – as well three provincial priority species. Fifteen priority species for Essex County were also noted along with two species listed by Partners in Flight as "highly vulnerable throughout the species range irrespective of regional status".

In addition to reporting on the results of the 2008 field studies, the information in this report is intended to serve as a general guideline for future studies concerning the status and conservation of Pelee Island's breeding birds. With this goal in mind, Section Four of the document brings together breeding bird data from a range of sources in an up-to-date summary of Pelee's nesting bird communities, with an emphasis on endangered, threatened and species of concern. This information is compiled from 1) PIBO's 2008 surveys 2) PIBO surveys conducted from 2003-2007 3) data from the Atlas of the Breeding Birds of Ontario 4) previous research carried out by the Ontario Ministry of Natural Resources, the Nature Conservancy of Canada, Ohio State University 5) reports from individual observers.

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INTRODUCTION

The Pelee Island Bird Observatory (PIBO) conducted breeding bird surveys at fifteen locations on Pelee Island, Essex County, Ontario in June 2008. The fieldwork was carried out on property under the stewardship of the Nature Conservancy of Canada, the Ontario Ministry of Natural Resources, and the Pelee Island Winery. The studies were commissioned by NCC in order to investigate the current status of the breeding bird communities at a number of newly-acquired properties on Pelee and to follow-up on studies undertaken in 2006.

In addition to this primary work, PIBO staff also conducted extensive field surveys in an effort to detect the presence or absence of a number of Species at Risk that breed, or have been known to breed, on Pelee Island. This research was coordinated in partnership with NCC and the Pelee Island Town Council as part of an ongoing cooperative stewardship project made possible with financial support from the Ontario Ministry of Natural Resource's Species At Risk Fund.

Data on nesting evidence, species abundance, distribution, and diversity, was collected this summer from 106 point-count sites situated throughout a broad range of distinct habitats on Pelee following the study protocol of the Atlas of the Breeding Birds of Ontario (Cadman *et al.* 2007). Additionally, PIBO staff conducted a marsh bird survey at Lighthouse Point Provincial Nature Reserve, undertook transect surveys designed to detect the presence of Species at Risk, and documented observations of nesting evidence at the study sites (and elsewhere on Pelee) detected outside of the official 5-minute point count surveys.

This report is presented in five sections. Section One provides a brief introduction to Pelee Island followed by site descriptions of the fifteen properties surveyed in 2008. Section Two outlines the survey methods used during the study. Section Three summarizes the results of the data collected from the official 5-minute point-count surveys under the following headings A) breeding evidence B) abundance C) diversity D) distribution. The data is listed in twenty tables that include both the combined totals for all properties as well as specific information about species abundance, diversity and distribution at each site.

Section Four of the report presents information about Species at Risk on Pelee Island. The section includes details about the current and historic breeding status of twelve Species at Risk that nest, or have been known to nest on the island. The data is compiled from a variety of sources including PIBO surveys on Pelee from 2003-2008, data from the Atlas of the Breeding Birds of Ontario, previous research carried-out by the Ontario Ministry of Natural Resources, the Nature Conservancy of Canada, and Ohio State University, and reports from individual observers. Section Five concludes the report with a brief discussion about stewardship options and projects that will benefit the significant breeding bird communities found at all of the study sites, including several Species at Risk.

The report includes the following appendices A) an annotated list of the breeding birds documented on Pelee Island by PIBO in 2008 and previous years B) aerial photographs of each site showing point count locations C) UTM coordinates for 106 point-count sites.

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SECTION ONE

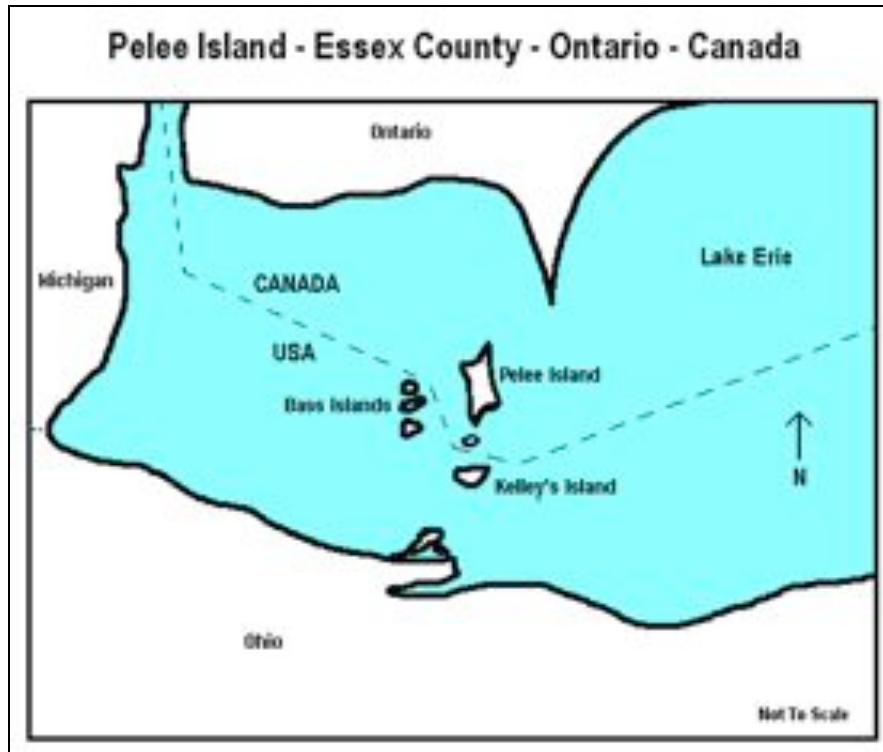
Location

Pelee Island

Situated in the western third of Lake Erie, Pelee Island, Essex County, Ontario (Lat 41.8 N – Long 82.62 W) is recognized as an Important Bird Area (IBA) by the Canadian partners of Birdlife International – Bird Studies Canada and the Canadian Nature Federation. IBA's are described as truly outstanding sites of significance for birds both nationally and internationally. The island is nationally significant for its unique breeding bird communities and globally important as a stopover site for migratory birds.

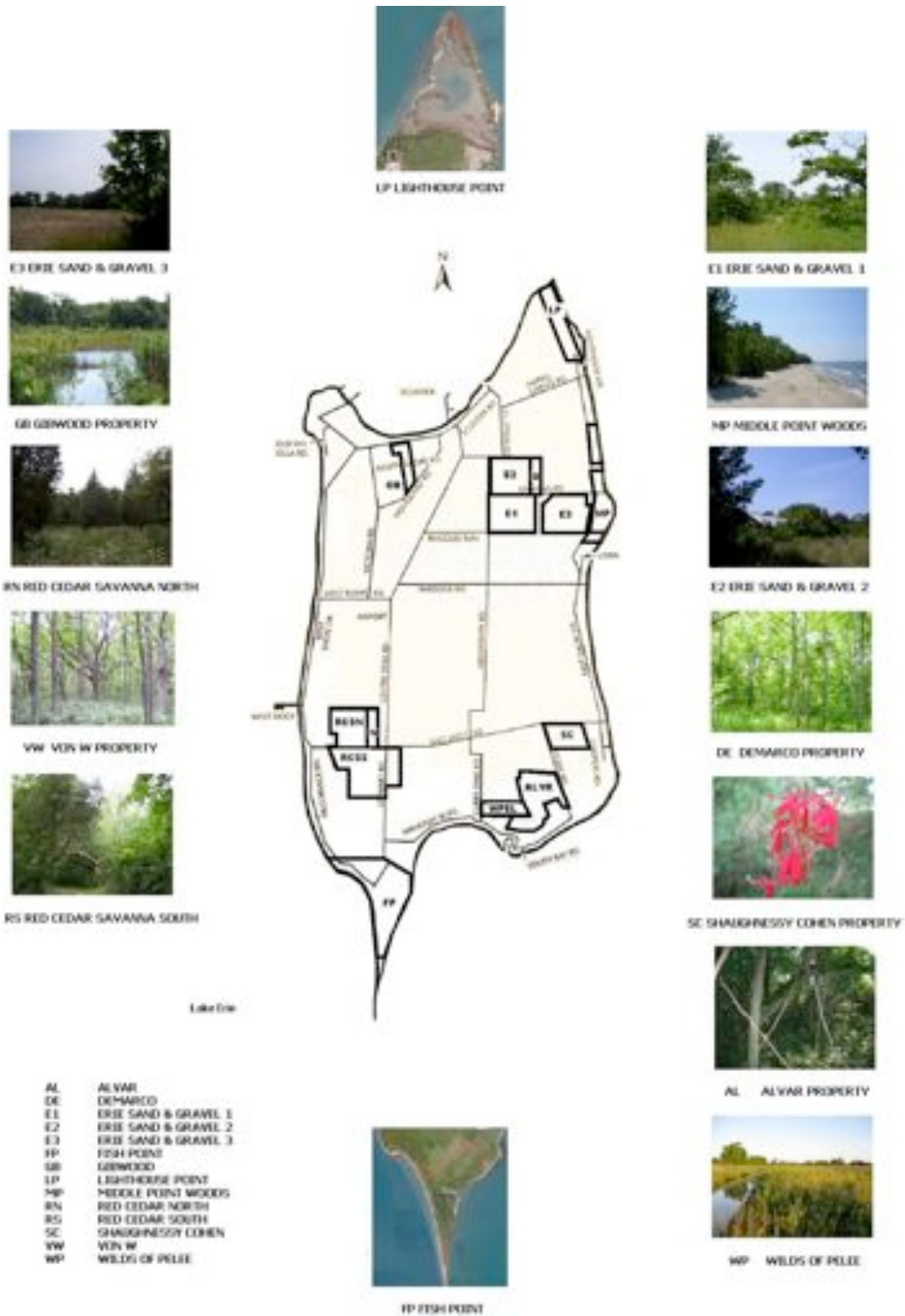
Pelee Island shares similar traits with the adjacent mainland in southwestern Ontario and northern Ohio, yet the island's natural setting and cultural influences are unique. In this respect, Pelee is a well-defined ecological community bounded by the waters of Lake Erie. In addition to this geographic isolation, the island's position on the northern fringe of the Eastern Deciduous Forest region, or Carolinian Zone, is an important distinguishing feature. Furthermore – although Pelee shares flora and fauna associated with neighbouring states to the south, the moderating influence of Lake Erie creates a growing season on the island equivalent to West Virginia, which results in a mix of plant communities that exist nowhere else in Canada or in any of the adjacent states (IBA Site Summary).

Map 1 – Pelee Island



**Breeding Bird Surveys on Pelee Island in 2008
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Map 2 – Pelee Island Study Sites



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Site Descriptions

Point count sites were established and surveys were conducted on Pelee Island in 2008 on a total of fifteen properties under the stewardship of the Nature Conservancy of Canada, the Ontario Ministry of Natural Resources and the Pelee Island Winery. The various sites are defined by official property boundaries rather than by similarities or differences in habitat. With the exception of the Gibwood and Fish Point plots, the majority of sites are clustered around four locations on the island – Lighthouse Point (2 plots), Brown’s Road (5 plots), Stone Road (3 plots) and East-west Road (3 plots). One of the sites at Lighthouse Point consists of point counts established for breeding landbirds and the second site (at the same general location) is for monitoring marsh birds (MBMP).

Although some uniformity exists within each plot, the study sites are generally a mix of distinct habitats ranging from soya bean fields to mature forest. As aerial photographs in Appendix B indicate, almost every location consists of a patchwork of different ecozones resulting from a mix of natural succession and historic land-use practices. Table 1 presents general information about each site including the location, the size in hectares, the number of point-counts, and the number of species considered *at least* ‘possible’ breeders at the site. The remainder of Section One provides a brief description of each property and a summary of breeding bird activity at each location.

Table 1 – Site names, location, area, point-count sites and species recorded

Code	Site Name	Location	Area (ha)	Points	Species	Ownership
AL	ALVAR	Stone Rd.	57	10	26	Nature Conservancy of Canada
DE	DEMARCO	Brown's Rd.	16	4	18	Nature Conservancy of Canada
E1	ERIE SAND & GRAVEL 1	Brown's Rd.	63	9	38	Nature Conservancy of Canada
E2	ERIE SAND & GRAVEL 2	Brown's Rd.	63	7	32	Nature Conservancy of Canada
E3	ERIE SAND & GRAVEL 3	Brown's Rd.	47	6	20	Nature Conservancy of Canada
FP	FISH POINT	McCormick Rd.	115	11	29	Ministry of Natural Resources
GB	GIBWOOD	North Shore Rd.	15	5	24	Nature Conservancy of Canada
LP	LIGHTHOUSE POINT	Lighthouse Dr.	45	3	13	Ministry of Natural Resources
MP	MIDDLE POINT	East Shore Rd.	29	7	27	Nature Conservancy of Canada
RN	RED CEDAR NORTH	East-West Rd.	43	11	34	Nature Conservancy of Canada
RS	RED CEDAR SOUTH	East-West Rd.	55	13	39	Pelee Island Winery
SC	SHAUGHNESSY COHEN	Stone Rd.	23	5	21	Nature Conservancy of Canada
VW	VON W	East-West Rd.	12	2	16	Nature Conservancy of Canada
WP	WILDS OF PELEE	Curry Rd.	23	4	31	Nature Conservancy of Canada
MBMP	LAKE HENRY	Lighthouse Dr.	n/a	8	24	Ministry of Natural Resources
TOTAL	15 SITES		606	106	55	

AL ALVAR PROPERTY

Nature Conservancy of Canada

Hectares: 57

This NCC property is situated on the west side of Stone Road and is part of the Stone Road Alvar complex (a vegetation community of global significance) located in the southeast section of the island. Alvars are described as areas where shallow soil over limestone bedrock create favourable conditions for a unique open type of vegetation (Catling *et al.* 1975). The Alvar property is

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composed of distinct vegetation communities that include dry and mesic forest, savanna, abandoned pasture and scrub. Initially logged for Red Cedar (*Juniperus virginiana*), the area has also been altered significantly by other historic land-use practices (Kamstra *et al.* 1995).



Breeding bird species: 26

Point-count sites: 10

Top 5 breeding birds: Red-winged Blackbird, Common Grackle, Yellow Warbler, Brown-headed Cowbird, American Robin.

Species at Risk: Acadian Flycatcher

DE DEMARCO PROPERTY

Nature Conservancy of Canada

Hectares: 16

The Demarco property is located on the north side of Brown's Road in the northeast section of the island and makes up one of five study sites in the Brown's Road area. The plot lies directly to the east and adjoins plot E2 and directly north of E3. The property consists primarily of moist, mature deciduous forest, although a large portion of the southern section includes an area of reclaimed pasture and part of the northeast sections includes a small pine plantation.



Breeding bird species: 18

Point-count sites: 4

Top 5 breeding birds: Red-winged Blackbird, Yellow Warbler, Baltimore Oriole, Northern Cardinal, Common Grackle

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E1 ERIE SAND & GRAVEL 1

Nature Conservancy of Canada

Hectares: 63

The Erie Sand & Gravel 1 site is one of three large NCC properties situated on the north and south side of Brown's Road. This plot is located on the south side just below site E2 and DE and slightly west of E3. The property consists of a mixture of mature deciduous woods to the west, open, shrubby savanna in the central portion and some grassland to the northeast. Two small soya bean fields are located on the site at the northwest and southeast corners.



Breeding bird species: 38

Point-count sites: 9

Top 5 breeding birds: Red-winged Blackbird, Yellow Warbler, Common Grackle, Mourning Dove, Northern Cardinal

Species at Risk: Yellow-breasted Chat

E2 ERIE SAND & GRAVEL 2

Nature Conservancy of Canada

Hectares: 63

This NCC property is located on the north side of Brown's Road directly north of E1 and to the west of DE. Although more than 50% of the site consists of soya bean field, a mature woodlot and open savanna make up the majority of the southeast section of the plot.



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Breeding bird species: 32

Point-count sites: 7

Top 5 breeding birds: Red-winged Blackbird, Common Grackle, American Robin, Horned Lark, Yellow-billed Cuckoo.

E3 ERIE SAND & GRAVEL 3

Nature Conservancy of Canada

Hectares: 47

The Erie Sand & Gravel 3 site is a large property consisting almost entirely (85%) of soya bean fields with the exception of a small treed area with some savanna in the northwest corner of the plot.



Breeding bird species: 20

Point-count sites: 6

Top 5 breeding birds: Red-winged Blackbird, Common Grackle, Brown-headed Cowbird, Killdeer, Mourning Dove.

FP FISH POINT PROVINCIAL NATURE RESERVE

Ontario Ministry of Natural Resources

Hectares: 115

Situated at the south end of Pelee, Fish Point forms the distinctive southern tip of the island. The Fish Point Provincial Nature Reserve extends from the end of the point to an area approximately two kilometres north of the tip. The vegetation communities at Fish Point are composed of a diverse number of distinct habitats including wet and dry deciduous forest, wetlands, dunes and open beach.

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Breeding bird species: 29

Point-count sites: 11

Top 5 breeding birds: Red-winged Blackbird, Common Grackle, American Robin, Yellow Warbler, Baltimore Oriole.

GB GIBWOOD PROPERTY

Nature Conservancy of Canada

Hectares: 15

The Gibwood property is made up of approximately 50% mature broad-leaf forest in the north section of the plot and a mixture of open grassland and a small wetland area in the central and south section of the site. A small pond was established on the property in 2002 and various wetland and native prairie restoration projects were carried out the following year.



Breeding bird species: 24

Point-count sites: 5

Top 5 breeding birds: Red-winged Blackbird, American Robin, Common Grackle, Purple Martin, Tree Swallow.

2004 Study: Red-winged Blackbird, Common Grackle, American Robin, Yellow Warbler, Tree Swallow.

LP LIGHTHOUSE POINT PROVINCIAL NATURE RESERVE

Ontario Ministry of Natural Resources

Hectares: 90

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Lighthouse Point is located at the north end of Pelee and includes the distinctive northeastern tip of the island and the wetland area on the west side of the point – Lake Henry. Although a significant portion of Lighthouse Point Provincial Nature Reserve extends south of the point and wetland area, only the north half of the reserve (approximately 45 hectares) was surveyed in 2008. Information about the marsh bird survey conducted at Lake Henry, Lighthouse Point, can be found at the end of this section.



Breeding bird species: 13

Point-count sites: 3

Top 5 breeding birds: Red-winged Blackbird, Tree Swallow, Common Grackle, Barn Swallow, Mallard.

MP MIDDLE POINT WOODS

Nature Conservancy of Canada

Hectares: 29

Middle Point is located along the east shore of the island and consists of a narrow section of mature woodland located at the intersection of East Shore Road and Brown's Road. The site is made up of a variety of dry and wet forest associations ranging from mature Hackberry and Red Ash to Cottonwoods and Silver Maple swamp (Kamstra *et al.* 1995). The property is bordered by Lake Erie to the east and agricultural land on the west side.



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Breeding bird species: 27

Point-count sites: 7

Top 5 breeding birds: Red-winged Blackbird, Common Grackle, American Robin, Tree Swallow, Indigo Bunting.

RN RED CEDAR NORTH

Nature Conservancy of Canada

Hectares: 43

This NCC property is situated on the north side of East-west Road and consists of mature broad-leaf forest, soya bean fields and reclaimed agricultural land. Almost sixty percent of the site is comprised of forest including the entire southern portion and northeast corner. A distinct variety of Carolinian species are found interspersed with Red Cedar.

Three formerly active fields in the northwest section of the property have returned to pasture at various stages in the last ten years, and the north central area (and a section on the east side) was still under cultivation in 2008.



Breeding bird species: 34

Point-count sites: 11

Top 5 breeding birds: Indigo Bunting, Brown-headed Cowbird, Cedar Waxwing, American Robin, Northern Cardinal.

2006 study: Indigo Bunting, Baltimore Oriole, Common Grackle, American Robin, Red-eyed Vireo.

RS RED CEDAR SOUTH

Pelee Island Winery

Hectares: 55

This property is owned by the Pelee Island Winery and located on the south side of East-west Road, directly south of the Red Cedar North site. Although the two survey sites have been divided for practical reasons, they represent one contiguous area divided by East-west Road.

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More than sixty percent of the property is comprised of broad-leaf forest similar in composition to the RN site, but with more pronounced areas of Red Cedar savanna habitat. The southwest section of the site has been actively managed in recent years in an effort to restore the savanna. The forested sections and savanna extend from the western boundary throughout most of the interior of the property. Soya bean fields make-up the eastern section.



Breeding bird species: 39

Point-count sites: 13

Top 5 breeding birds: Common Grackle, Indigo Bunting, Red-winged Blackbird, American Robin, Northern Cardinal.

2006 study: Indigo Bunting, American Robin, Common Grackle, House Wren, Northern Cardinal.

SC SHAUGHNESSY COHEN PROPERTY

Nature Conservancy of Canada

Hectares: 23

This NCC property dedicated to the late Shaughnessy Cohen is located at the north end of Stone Road on the east side. The property is located within the boundary of the Stone Road alvar complex in the southeast part of Pelee Island and lies approximately 200 metres northeast of the other two survey sites described in this report. The conservation area is composed of mature deciduous forest in the northwest and southeast sections, open alvar savanna to the southwest and a recently abandoned field in the northeast corner.



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Breeding bird species: 21

Point-count sites: 5

Top 5 breeding birds: Red-winged Blackbird, Brown-headed Cowbird, Common Grackle, American Robin, House Wren.

VW VON W. PROPERTY

Nature Conservancy of Canada

Hectares: 12

This narrow property is located east of the Red Cedar North study site on East-west Road. The plot is smaller but shares many features with the adjacent RN property including mature broad-leaf forest at the north and south ends of the site intersected in the middle by a soya bean field.



Breeding bird species: 16

Point-count sites: 2

Top 5 breeding birds: Indigo Bunting, Northern Cardinal, Brown-headed Cowbird, (11 others with one sighting).

WP WILDS OF PELEE PROPERTY

Nature Conservancy of Canada

Hectares: 23

The Wilds of Pelee borders on the west side of the Alvar study site and the two parcels form a contiguous whole. The eastern section of mature deciduous forest shares many characteristics with the wooded areas on the adjacent Alvar property. The remainder of the study area consists of abandoned fields that have undergone significant restoration in recent years as part of a prairie-reclamation project. Two recently excavated drainage dykes run the length of the abandoned fields on the north and south sides.

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Breeding bird species: 31

Point-count sites: 4

Top 5 breeding birds: Common Grackle, American Robin, Indigo Bunting, Red-winged Blackbird, Tree Swallow.

Species at Risk: Acadian Flycatcher

MBMP MARSH BIRD MONITORING PLOT – LIGHTHOUSE POINT

Ontario Ministry of Natural Resources

Hectares: n/a

Lake Henry was formed in the early 1970's when a combination of high water and severe storms broke the dike near the southwest corner of the existing lagoon (Kamstra et al. 1995). The lake is sheltered on the east side by Lighthouse Point. Although much of the site is overgrown with *phragmite spp.*, some cattail marsh and other semi-aquatic plant life can be found on the northwest shoreline.

Breeding bird species: 24

Point-count sites: 8

Species at Risk: Least Bittern

Lake Henry – Lighthouse Point



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SECTION TWO

Methodology

Point count surveys

Permanent point count sites were established at 106 locations on Pelee Island during the spring of 2006 and 2008. The monitoring sites are centered around conservation properties under the stewardship of the Nature Conservancy of Canada, the Ontario Ministry of Natural Resources and the Pelee Island Winery. Each point was surveyed in 2008 following the study protocol of the Atlas of the Breeding Birds of Ontario (Cadman *et al.* 2007). The sites were surveyed for five minutes in early-June and again at the end of the month. Points were established at least 300 metres apart.

The tables in this report contain information related to the two 5-minute point count surveys conducted at each site including the tables with combined data for all study plots on abundance, diversity and species distribution, as well as details from each individual study plot. Although data from eight marsh monitoring point count sites are included in the tables, all other bird sightings and nesting evidence obtained from SAR transect surveys, incidental observations outside the 5-minute survey periods, and migration monitoring, are excluded from the data presented in Section Three.

Species at Risk transect surveys

PIBO staff conducted walking surveys at the study sites in an effort to detect the presence or absence of Species at Risk. Participants visited different locations at dawn and dusk and played a tape of the songs and calls of seven Species at Risk including Least Bittern, King Rail, Acadian Flycatcher, Prothonotary Warbler, Hooded Warbler, Louisiana Waterthrush and Yellow-breasted Chat. The species tapes were played in suitable habitat at frequent intervals for up to two hours on selected days over a two week period.

Marsh bird monitoring survey

A marsh bird survey was carried out at Lighthouse Point Provincial Nature Reserve following the protocol of the Marsh Bird Monitoring Program (MBMP). Given the similarity of the marsh survey protocol and the Atlas of the Breeding Birds of Ontario survey approach, data from the marsh point counts sites has been included in the official totals in this report.

Additional observations

Species recorded in 2008 at the fifteen study sites but outside of the 5-minute surveys were noted by staff during the initial set-up at each plot and on both survey days in early and late June. These records are included in Appendix A.

Migration monitoring counts

Incidental records of breeding evidence obtained by PIBO staff in 2008 at Fish Point in early-June and August as part of the observatory's migration monitoring program.

Field Hours

Four staff and volunteers contributed approximately 225 field hours to the various monitoring projects this year from May 25th to July 5th. A total of 125 hours was devoted to setting up and

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surveying the point count sites, 35 hours on the transect surveys to detect Species at Risk, and approximately 65 hours of additional observations were conducted at the fifteen study sites and other locations on the island. These totals do not include more than one hundred hours of field observations carried out at Fish Point Provincial Nature Reserve in early-June and August as part of PIBO's migration monitoring program.

SECTION THREE

Results

The following tables provide a summary of the data collected from 212 point-count surveys conducted in 2008 at 106 sites on fifteen properties. Tables 2-6 present data on breeding evidence, abundance, diversity and distribution of species recorded at all 106 sites. Tables 7-21 provide details from the fifteen individual study plots.

Breeding Evidence

Table 2 presents the highest level of breeding evidence for all species recorded during two 5-minute surveys. Breeding evidence codes used during the field studies in 2008 are provided in Figure 1.

Table 2 – Breeding evidence for 55 species recorded at 106 point count sites in 2008

Wild Turkey	CONF	House Wren	PROB
Chimney Swift	CONF	Cedar Waxwing	PROB
Downy Woodpecker	CONF	Horned Lark	PROB
Purple Martin	CONF	Gray Catbird	PROB
Tree Swallow	CONF	Brown Thrasher	PROB
Barn Swallow	CONF	Common Yellowthroat	PROB
Carolina Wren	CONF	<i>Yellow-breasted Chat</i>	PROB
American Robin	CONF	Northern Cardinal	PROB
European Starling	CONF	Indigo Bunting	PROB
Yellow Warbler	CONF	Eastern Towhee	PROB
Baltimore Oriole	CONF	Field Sparrow	PROB
Ring-necked Pheasant	PROB	Chipping Sparrow	PROB
Red-tailed Hawk	PROB	Song Sparrow	PROB
Spotted Sandpiper	PROB	Common Grackle	PROB
Killdeer	PROB	Red-winged Blackbird	PROB
Mourning Dove	PROB	Brown-headed Cowbird	PROB
Yellow-billed Cuckoo	PROB	Orchard Oriole	PROB
Black-billed Cuckoo	PROB	American Goldfinch	PROB
Red-bellied Woodpecker	PROB	Wood Duck	POSS
Northern Flicker	PROB	Mallard	POSS
Eastern Wood-Pewee	PROB	Cooper's Hawk	POSS
Eastern Kingbird	PROB	Ruby-throated Hummingbird	POSS
Great Crested Flycatcher	PROB	<i>Acadian Flycatcher</i>	POSS
Warbling Vireo	PROB	Eastern Phoebe	POSS
Red-eyed Vireo	PROB	Blue-gray Gnatcatcher	POSS
Blue Jay	PROB	Wood Thrush	POSS
American Crow	PROB	House Finch	POSS
Black-capped Chickadee	PROB		

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In addition to the fifty-five species documented during the point count surveys, another seventeen species were recorded at the study sites during the surveys that were not tallied in the official counts, and eight other species were noted at other locations on Pelee Island. Therefore, a total of 72 species observed at the study sites and 80 species recorded on Pelee Island from May 25th to July 5th, are listed in this report as *at least* possible breeders. Additional notes for each species are included in Appendix A.

Table 3 – Additional species recorded on Pelee Island from May 25th – July 5th, 2008

Additional Observations	Status
Species recorded at 15 survey sites	
Double-crested Cormorant	POSS
Great Blue Heron	POSS
Great Egret	POSS
Canada Goose	PROB
American Woodcock	PROB
Turkey Vulture	POSS
Little Gull	POSS
Herring Gull	POSS
Ring-billed Gull	POSS
Black Tern	POSS
Eastern Screech-Owl	PROB
Willow Flycatcher	POSS
White-eyed Vireo	PROB
Marsh Wren	POSS
American Redstart	PROB
Scarlet Tanager	POSS
Rose-breasted Grosbeak	PROB
Additional species recorded on Pelee Island	
Belted Kingfisher	PROB
Bald Eagle	PROB
Caspian Tern	POSS
Bank Swallow	CONF
Northern Rough-winged Swallow	PROB
Eastern Meadowlark	PROB
Western Meadowlark	POSS
House Sparrow	CONF

Figure 1 – Breeding evidence codes

CODE	CATEGORY	DESCRIPTION
X	OBS	Species observed in its breeding season (no breeding evidence)
H	POSS	Observed in breeding season in suitable nesting habitat
S	POSS	Singing males or breeding calls heard in suitable nesting habitat in

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		breeding season
P	PROB	Pair observed in suitable nesting habitat in breeding season
T	PROB	Permanent territory presumed through registration of territorial song or the occurrence of an adult bird at the same place in suitable breeding habitat on at least two days, one week or more apart
D	PROB	Courtship or display
V	PROB	Visiting probable nest site
A	PROB	Agitated behaviour or anxiety calls by an adult
B	PROB	Brood patch or cloacal protuberance
N	PROB	Nest building or hole excavation
DD	CONF	Distraction display or injury feigning
NU	CONF	Used nest or eggshells
FY	CONF	Recently fledged young
AE	CONF	Adult leaving or entering nest site
FS	CONF	Adult carrying fecal sac
CF	CONF	Adult carrying food for young
NE	CONF	Nest containing eggs
NY	CONF	Nest with young seen or heard

Abundance

Fifty-five species were documented during 212 five-minute surveys (17.5 hours) at 106 point count sites. The accompanying table presents abundance totals based on the number of point count sites where the species was recorded *at least* once during the survey period. The totals are expressed as a percentage. The top five most abundant species from all the study sites surveyed in 2008 are Common Grackle (85%), Red-winged Blackbird (83), American Robin (66), Brown-headed Cowbird (56), Northern Cardinal (55).

Table 4 – Percentage of point count sites where species was recorded *at least* once during two 5-minute point counts

Species	%	Species	%
Common Grackle	85	Field Sparrow	9
Red-winged Blackbird	83	Wild Turkey	8
American Robin	66	Killdeer	8
Brown-headed Cowbird	56	Great Crested Flycatcher	8
Northern Cardinal	55	Gray Catbird	8
Yellow Warbler	52	Northern Flicker	7
Indigo Bunting	52	American Crow	7
Baltimore Oriole	50	Orchard Oriole	7
Cedar Waxwing	44	Warbling Vireo	5
Tree Swallow	36	Brown Thrasher	5
Mourning Dove	34	Eastern Towhee	4
Yellow-billed Cuckoo	31	Chimney Swift	3
Downy Woodpecker	29	Chipping Sparrow	3
Purple Martin	27	Song Sparrow	3
Red-eyed Vireo	26	Mallard	2
House Wren	26	Red-tailed Hawk	2
European Starling	25	Spotted Sandpiper	2
American Goldfinch	21	Ruby-throated Hummingbird	2
Blue Jay	19	Acadian Flycatcher	2

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Eastern Wood-Pewee	18	Eastern Phoebe	2
Black-capped Chickadee	16	Wood Thrush	2
Black-billed Cuckoo	14	Common Yellowthroat	2
Ring-necked Pheasant	13	Yellow-breasted Chat	2
Eastern Kingbird	13	Wood Duck	1
Carolina Wren	13	Cooper's Hawk	1
Barn Swallow	11	Blue-gray Gnatcatcher	1
Horned Lark	10	House Finch	1
Red-bellied Woodpecker	9	Total species	55

Diversity

While bearing in mind that each study plot varies considerably in size, the accompanying table ranks the fifteen sites according to the number of species considered to be *at least* possible breeders recorded at each location. Both the marsh survey and the landbird survey at Lighthouse Point are combined in this table.

Table 5 – Species diversity at fifteen study sites

CODE	STUDY SITE	HECTARES	POINTS	SPECIES
RS	RED CEDAR SOUTH	55	13	39
E1	ERIE SAND & GRAVEL 1	63	9	38
RN	RED CEDAR NORTH	43	11	34
E2	ERIE SAND & GRAVEL 2	63	7	32
WP	WILDS OF PELEE	23	4	31
FP	FISH POINT	115	11	29
MP	MIDDLE POINT	29	7	27
AL	ALVAR	57	10	26
LP	LIGHTHOUSE POINT	45	11	26
GB	GIBWOOD	15	5	24
SC	SHAUGHNESSY COHEN	23	5	21
E3	ERIE SAND & GRAVEL 3	47	6	20
DE	DEMARCO	16	4	18
VW	VON W	12	2	16
TOTAL	15 SITES	606	106	55

Distribution

Based on the number of properties where a species was recorded at least once, the Northern Cardinal and Common Grackle were the two most widely distributed species documented during the 2008 study, followed closely by a number of other common nesting birds (Table 6). Data from the marsh bird survey at Lighthouse Point is not included in these totals.

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Table 6 – Properties where species was recorded at least once during two 5-minute point counts

SPECIES	AL	DE	E1	E2	E3	FP	GB	LP	MP	RN	RS	SC	VW	WP	TOTAL
Northern Cardinal	*	*	*	*	*	*	*	*	*	*	*	*	*	*	14
Common Grackle	*	*	*	*	*	*	*	*	*	*	*	*	*	*	14
American Robin	*	*	*	*	*	*	*	*	*	*	*	*	*	*	13
European Starling	*	*	*	*	*	*	*	*	*	*	*	*	*	*	13
Cedar Waxwing	*	*	*	*	*	*	*	*	*	*	*	*	*	*	13
Indigo Bunting	*	*	*	*	*	*	*	*	*	*	*	*	*	*	13
Red-winged Blackbird	*	*	*	*	*	*	*	*	*	*	*	*	*	*	13
Brown-headed Cowbird	*	*	*	*	*	*	*	*	*	*	*	*	*	*	13
Baltimore Oriole	*	*	*	*	*	*	*	*	*	*	*	*	*	*	13
Mourning Dove	*	*	*	*	*	*	*	*	*	*	*	*	*	*	12
Yellow-billed Cuckoo	*	*	*	*	*	*	*	*	*	*	*	*	*	*	12
Downy Woodpecker	*	*	*	*	*	*	*	*	*	*	*	*	*	*	12
Tree Swallow	*	*	*	*	*	*	*	*	*	*	*	*	*	*	12
House Wren	*	*	*	*	*	*	*	*	*	*	*	*	*	*	12
Yellow Warbler	*	*	*	*	*	*	*	*	*	*	*	*	*	*	12
American Goldfinch	*	*	*	*	*	*	*	*	*	*	*	*	*	*	11
Eastern Wood-Pewee	*	*	*	*	*	*	*	*	*	*	*	*	*	*	10
Red-eyed Vireo	*	*	*	*	*	*	*	*	*	*	*	*	*	*	10
Blue Jay	*	*	*	*	*	*	*	*	*	*	*	*	*	*	10
Purple Martin	*	*	*	*	*	*	*	*	*	*	*	*	*	*	10
Eastern Kingbird	*	*	*	*	*	*	*	*	*	*	*	*	*	*	9
Barn Swallow	*	*	*	*	*	*	*	*	*	*	*	*	*	*	9
Black-capped Chickadee	*	*	*	*	*	*	*	*	*	*	*	*	*	*	9
Carolina Wren	*	*	*	*	*	*	*	*	*	*	*	*	*	*	8
Ring-necked Pheasant	*	*	*	*	*	*	*	*	*	*	*	*	*	*	8
Great Crested Flycatcher	*	*	*	*	*	*	*	*	*	*	*	*	*	*	7
Black-billed Cuckoo	*	*	*	*	*	*	*	*	*	*	*	*	*	*	6
American Crow	*	*	*	*	*	*	*	*	*	*	*	*	*	*	6
Field Sparrow	*	*	*	*	*	*	*	*	*	*	*	*	*	*	6
Orchard Oriole	*	*	*	*	*	*	*	*	*	*	*	*	*	*	6
Red-bellied Woodpecker	*	*	*	*	*	*	*	*	*	*	*	*	*	*	5
Northern Flicker	*	*	*	*	*	*	*	*	*	*	*	*	*	*	5
Warbling Vireo	*	*	*	*	*	*	*	*	*	*	*	*	*	*	5
Gray Catbird	*	*	*	*	*	*	*	*	*	*	*	*	*	*	5
Wild Turkey	*	*	*	*	*	*	*	*	*	*	*	*	*	*	4
Chimney Swift	*	*	*	*	*	*	*	*	*	*	*	*	*	*	3
Horned Lark	*	*	*	*	*	*	*	*	*	*	*	*	*	*	3
Brown Thrasher	*	*	*	*	*	*	*	*	*	*	*	*	*	*	3
Chipping Sparrow	*	*	*	*	*	*	*	*	*	*	*	*	*	*	3
Killdeer	*	*	*	*	*	*	*	*	*	*	*	*	*	*	3
Ruby-throated Hummingbird	*	*	*	*	*	*	*	*	*	*	*	*	*	*	2
Acadian Flycatcher	*	*	*	*	*	*	*	*	*	*	*	*	*	*	2
Eastern Phoebe	*	*	*	*	*	*	*	*	*	*	*	*	*	*	2
Wood Thrush	*	*	*	*	*	*	*	*	*	*	*	*	*	*	2
Eastern Towhee	*	*	*	*	*	*	*	*	*	*	*	*	*	*	2
Song Sparrow	*	*	*	*	*	*	*	*	*	*	*	*	*	*	2
Red-tailed Hawk	*	*	*	*	*	*	*	*	*	*	*	*	*	*	2
Spotted Sandpiper	*	*	*	*	*	*	*	*	*	*	*	*	*	*	2
Blue-gray Gnatcatcher	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1
Common Yellowthroat	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1
Yellow-breasted Chat	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1
House Finch	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1
Mallard	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1
Wood Duck	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1
Cooper's Hawk	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1

Tables 7-21 present the totals from two 5-minute point count surveys conducted in 2008 at each study site. The number of point count sites at each property varies from two to 13. Species are listed in order of abundance. F indicates the species was recorded on the first visit to the point count site in early-June and S that it was documented on the second visit in late-June.

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Table 7 – ALVAR PROPERTY

Point #	1	2	3	4	5	6	7	8	9	10	TOT
Red-winged Blackbird	F	FS	FS	FS	FS	F	FS	FS	FS	FS	
Common Grackle	FS	FS	FS	F		FS	FS	FS	FS	FS	
Yellow Warbler	S	FS	FS	FS	FS	S	FS		FS	FS	
Brown-headed Cowbird	FS	S	FS		FS		F	FS	F	F	
American Robin	FS	S		F		F		S	S	FS	
Cedar Waxwing		S	FS	F	F	FS			F	S	
Purple Martin				F	S	S	S	S	S		
Northern Cardinal			F		S	S		S	S		
Blue Jay			F		S				FS	F	
Indigo Bunting						S		F	FS	S	
American Goldfinch					F	FS	F	F			
Downy Woodpecker					S		F	S		S	
Baltimore Oriole	F			F				F	F		
Red-eyed Vireo								FS	F	S	
Black-capped Chickadee							S		FS	S	
Mourning Dove			S	F	F						
Black-billed Cuckoo				F	S				F		
House Wren								FS		FS	
Yellow-billed Cuckoo			S		FS						
Eastern Wood-Pewee	F							FS			
Carolina Wren							FS	F			
Ring-necked Pheasant		F							S		
Gray Catbird				F					F		
Acadian Flycatcher							F				
Tree Swallow			S								
European Starling							F				
Field Sparrow				F							
Species - 1st visit	6	4	7	11	6	5	9	10	12	7	26
Species - 2nd visit	4	6	8	2	10	7	6	10	10	10	22
Total species	7	7	10	11	12	9	11	14	16	12	27

Table 8 – DEMARCO PROPERTY

Point #	1	2	3	4	TOT
Red-winged Blackbird	FS	F	FS	FS	
Yellow Warbler	S	F	FS	FS	
Baltimore Oriole	F	F	F	F	
Northern Cardinal		FS	S	S	
Common Grackle	S	F		FS	
Brown-headed Cowbird		F	S	S	
American Robin	FS	FS			
Yellow-billed Cuckoo	F	FS			
Eastern Wood-Pewee	F	FS			

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Common Yellowthroat	F		F		
Indigo Bunting			FS		
Ring-necked Pheasant			F		
Mourning Dove	F				
Red-bellied		S			
Woodpecker					
Downy Woodpecker		S			
Eastern Kingbird	F				
Red-eyed Vireo		S			
House Wren		S			
European Starling		F			
Cedar Waxwing	F				
Field Sparrow				F	
Orchard Oriole	S				
American Goldfinch				F	
Species - 1st visit	9	10	8	4	18
Species - 2nd visit	5	8	5	5	14
Total species	12	14	10	6	23

Table 9 – ERIE SAND & GRAVEL 1

Point #	1	2	3	4	5	6	7	8	9	TOT
Red-winged Blackbird	FS	FS	FS	FS	FS	FS	F	F	FS	
Yellow Warbler	FS	FS	FS	F	FS			FS	F	
Common Grackle	F	FS	FS		FS	FS	FS		S	
Mourning Dove	S		S	FS	FS		FS	F	FS	
Northern Cardinal	S	S	S	FS	FS			F	F	
Brown-headed Cowbird			S	FS	FS		F	FS	FS	
American Robin	S				F	FS	FS	S	S	
Indigo Bunting	S	FS		F				F	F	
Baltimore Oriole		F			S	FS	F		F	
Ring-necked Pheasant					FS			F	FS	
Yellow-billed Cuckoo		F		F					FS	
Tree Swallow	S				S	S				
Black-capped Chickadee			S					F	S	
Cedar Waxwing		S			F				F	
Eastern Towhee		F		F					S	
American Crow		FS		S						
Field Sparrow								S	FS	
American Goldfinch		F							FS	
Black-billed Cuckoo				F					F	
Gray Catbird					F		F			
Brown Thrasher		F							S	
European Starling		F						S		
Yellow-breasted Chat				S					S	
Downy Woodpecker						FS				
Carolina Wren									FS	

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Red-tailed Hawk		S								
Chimney Swift								S		
Red-bellied Woodpecker					F					
Eastern Wood-Pewee						F				
Eastern Phoebe								S		
Great Crested Flycatcher				S						
Eastern Kingbird		S								
Warbling Vireo							S			
Red-eyed Vireo							S			
Horned Lark			F							
Barn Swallow	S									
House Wren			F							
Orchard Oriole									S	
Species - 1st visit	3	13	3	9	11	6	7	8	13	32
Species - 2nd visit	8	9	7	7	9	8	5	7	14	27
Total species	9	18	7	12	13	9	9	13	20	38

Table 10 – ERIE SAND & GRAVEL 2

Point #	1	2	3	4	5	6	7	TOT
Red-winged Blackbird	FS	FS	FS	FS	S	FS	S	
Common Grackle	F	F	FS	S	FS	FS	FS	
American Robin	S	S	FS		F	FS	F	
Horned Lark	FS	FS	F			FS	FS	
Yellow-billed Cuckoo				F	FS	S		
Cedar Waxwing			F	FS	F	F		
Brown-headed Cowbird		S	F	F	FS			
Ring-necked Pheasant			F	FS	FS			
Mourning Dove			S	FS	FS			
Wild Turkey	F				F	FS		
Baltimore Oriole			S	F	FS			
Killdeer			S			F	F	
Red-eyed Vireo			F		F	S		
Tree Swallow		S	F		F			
Yellow Warbler				F	F	F		
Northern Cardinal				F	F	F		
Indigo Bunting			F		FS			
Black-billed Cuckoo					F	F		
Northern Flicker				F	F			
Eastern Kingbird			F			F		
Blue Jay		S				F		
European Starling			F				F	
Wood Duck						F		
Chimney Swift			S					
Downy Woodpecker					F			
Purple Martin	F							
Barn Swallow			F					

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Black-capped Chickadee						F		
House Wren			S					
Gray Catbird					F			
Field Sparrow					F			
Orchard Oriole						F		
Species - 1st visit	5	3	13	10	20	14	5	30
Species - 2nd visit	3	6	8	6	8	7	3	18
Total species	6	7	18	12	21	16	6	32

Table 11 – ERIE SAND & GRAVEL 3

Point #	1	2	3	4	5	6	TOT
Red-winged Blackbird	FS	FS	FS	FS	FS	FS	
Common Grackle	S	FS	FS	S	S	S	
Brown-headed Cowbird		FS		FS	F		
Killdeer			F	F	S		
Mourning Dove		S	S		S		
Horned Lark		F	F			S	
Yellow Warbler	FS			S			
Wild Turkey	S					S	
Tree Swallow	S	S					
Cedar Waxwing				S	F		
Indigo Bunting					S	S	
American Goldfinch	F				S		
Northern Cardinal	FS						
Red-tailed Hawk		F					
Ring-necked Pheasant		S					
Yellow-billed Cuckoo	S						
Purple Martin		S					
Barn Swallow					S		
European Starling			S				
Chipping Sparrow		S					
Species - 1st visit	4	5	4	3	3	1	10
Species - 2nd visit	7	8	4	5	7	5	19
Total species	8	10	6	6	9	5	20

Table 12 – FISH POINT PROVINCIAL NATURE RESERVE

Point #	1	2	3	4	5	6	7	8	9	10	11	TOT
Red-winged Blackbird	FS	FS	FS	FS	FS	FS	FS	FS	FS	FS	FS	FS
Common Grackle	F	F	S	FS	F	F	F	F	S	S	FS	
American Robin			S		F	FS	FS	FS	FS	FS	FS	FS
Yellow Warbler	F	F	FS	F				FS	FS	FS	S	

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Baltimore Oriole	F	F		FS	F	FS						
Yellow-billed Cuckoo		S				F		F		F	F	
House Wren	S			F	FS			F				
Brown-headed Cowbird				S								
Northern Cardinal		S	FS			S						
Indigo Bunting		F		S	FS							
Eastern Wood-Pewee				F		FS						
Red-eyed Vireo				S		FS						
European Starling		FS				S						
Red-bellied Woodpecker				F				S				
Tree Swallow						F					F	
Black-capped Chickadee				F				S				
Gray Catbird			S								F	
Orchard Oriole		S				S						
Cedar Waxwing			S	S								
American Goldfinch								F			F	
Mourning Dove											S	
Downy Woodpecker				S								
Northern Flicker						F						
Great Crested Flycatcher				F								
Eastern Kingbird		F										
Warbling Vireo						S						
Blue Jay	F											
American Crow								F				
Carolina Wren		S										
Species - 1st visit	5	7	3	9	6	9	4	6	4	4	7	22
Species - 2nd visit	2	6	7	8	3	9	2	5	4	4	5	22
Total species	6	11	7	14	6	13	4	8	5	5	9	29

Table 13 – GIBWOOD PROPERTY

Point #	1	2	3	4	5	TOT
Red-winged Blackbird	F	FS	FS	FS	FS	
American Robin	FS	FS	F	F	FS	
Common Grackle	FS	F	FS	FS	F	
Purple Martin	FS	F	FS	S		
Tree Swallow	F	S	FS		S	
Brown-headed Cowbird	FS	F	F	F		
Northern Cardinal	F	F	F	F		
Indigo Bunting			FS	FS	FS	
Blue Jay	F	F			FS	
Baltimore Oriole		FS	F		F	
Yellow-billed Cuckoo	F	F			S	
American Goldfinch		F			FS	
European Starling			F	S		
Cedar Waxwing	F		F			

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Ring-necked Pheasant		S				
Spotted Sandpiper					F	
Mourning Dove	S					
Great Crested Flycatcher					F	
Warbling Vireo	F					
Red-eyed Vireo	F					
Barn Swallow	S					
Black-capped Chickadee				F		
House Wren		F				
Yellow Warbler					F	
Species - 1st visit	12	11	12	9	7	21
Species - 2nd visit	6	5	5	5	7	15
Total species	14	13	12	11	9	24

Table 14 – LIGHTHOUSE POINT PROVINCIAL NATURE RESERVE

Point #	1	2	3	TOT
Red-winged Blackbird	FS	FS	FS	
Tree Swallow	F	FS	FS	
Common Grackle	S	F	FS	
Barn Swallow		FS	F	
Mallard		S	S	
Downy Woodpecker	S	S		
European Starling	F		S	
Mourning Dove			S	
Eastern Kingbird		S		
Blue Jay	F			
Cedar Waxwing			F	
Northern Cardinal	F			
Baltimore Oriole		F		
Species - 1st visit	5	5	5	9
Species - 2nd visit	3	6	7	9
Total species	7	8	8	13

Table 15 – MIDDLE POINT WOODS

Point #	1	2	3	4	5	6	7	TOT
Red-winged Blackbird	F	F	FS	FS	FS	FS	FS	
Common Grackle	FS	S	FS		FS	FS	FS	
American Robin	FS	FS	FS		F	S	S	
Tree Swallow	S	FS	F		S	F	S	
Indigo Bunting	F	F		S	FS			
Eastern Kingbird	S	S	F		S			

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Purple Martin	S	S	S					S
European Starling			S	F	F	F		
Yellow Warbler	F		F	F	F			
Northern Cardinal	S	F		S	F			
Baltimore Oriole	F	F			F		F	
Mourning Dove	FS	S					F	
House Wren	S	S		S				
Black-billed Cuckoo		F	F					
Yellow-billed Cuckoo	F			F				
Red-eyed Vireo	F							S
Carolina Wren				S			S	
Cedar Waxwing	F		F					
Brown-headed Cowbird				F	S			
American Goldfinch		F		S				
Eastern Wood-Pewee	FS							
Downy Woodpecker								S
Great Crested Flycatcher					S			
Warbling Vireo	F							
Blue Jay				S				
Barn Swallow	S							
Black-capped Chickadee								S
Species - 1st visit	12	8	8	5	8	5	3	19
Species - 2nd visit	10	7	5	8	7	6	6	21
Total species	18	13	10	12	11	9	7	27

Table 16 – RED CEDAR NORTH

Point #	1	2	3	4	5	6	7	8	9	10	11	TOT
Indigo Bunting	FS	FS	FS	S	F	FS	FS	FS	S	F		
Brown-headed Cowbird	S	FS	FS	FS	F		FS	S	F	S		
Cedar Waxwing	S	FS	FS	FS	S	F	F	F		S		
American Robin		S	S	FS		FS	F		FS	F	FS	
Northern Cardinal		S	FS			FS	F		S	S	S	
Red-eyed Vireo	F	F	S	FS			S		S		F	
Baltimore Oriole		F			F	F		F	F	F	FS	
House Wren		S		FS		F		FS	FS		FS	
Common Grackle		FS	FS					S	S	FS	F	
Red-bellied Woodpecker					FS	F			F		S	
Black-billed Cuckoo				F				S	S	F		
Eastern Wood-Pewee				F		F	F		S			
Tree Swallow	F		F		S				S			
Red-winged Blackbird					FS	F				FS		
Downy Woodpecker	F	FS									S	
European Starling	F							S	FS			
Yellow-billed Cuckoo		F			S					S		
Purple Martin			S	S	S							
Great Crested Flycatcher			FS						S			

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Brown Thrasher							S					FS	
Yellow Warbler						F						FS	
Song Sparrow							FS					F	
American Goldfinch						S							FS
Northern Flicker										F			S
Black-capped Chickadee									F		S		
Field Sparrow							FS						
Mourning Dove							S						
Ruby-throated Hummingbird													F
Eastern Phoebe							F						
Eastern Kingbird					S								
Blue Jay													S
American Crow					S								
Carolina Wren		F											
House Finch									S				
Species - 1st visit	6	8	7	7	6	12	6	5	7	9	7	27	
Species - 2nd visit	3	8	9	9	7	7	3	7	11	9	9	31	
Total species	8	11	10	11	11	14	7	10	15	14	12	34	

Table 17 – RED CEDAR SOUTH

Point #	1	2	3	4	5	6	7	8	9	10	11	12	13	TOT
Common Grackle	F	FS	S	F		FS	FS	FS	F	FS	FS	S	F	
Indigo Bunting	FS	FS	FS	S	F	S	F	FS		FS	S	S	S	
Red-winged Blackbird			FS	FS	FS	FS	FS	FS		FS	FS		F	
American Robin		F	F		FS	F	FS	FS		FS	S		F	
Northern Cardinal	F	FS		FS	F	F			S		F	FS	F	
Mourning Dove		S			F	F	FS	F		S	FS		F	
Downy Woodpecker	F				S	F	F	F	F	F	F			
Yellow Warbler		F	S		FS	F		F		FS	F			
Baltimore Oriole		FS					S	F	FS	S	F	F		
Brown-headed Cowbird		FS	F					F		S	F		FS	
Red-eyed Vireo	S	F		F								FS	S	
Tree Swallow		F		FS				F	S					
Cedar Waxwing							S			FS	S		F	
Yellow-billed Cuckoo				F	S				F			S		
Blue Jay		S						S	S			F		
Eastern Wood-Pewee	FS							S			F			
Carolina Wren		S					F					FS		
Purple Martin		F	S										S	
European Starling			F				F				S			
Wild Turkey			S										FS	
Killdeer			FS							F				
Barn Swallow											S		S	
Black-capped Chickadee		S										F		
American Goldfinch											F	S		
Brown Thrasher			FS											

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Warbling Vireo															FS		
Cooper's Hawk																	F
Spotted Sandpiper																	F
Chimney Swift															F		
Ruby-throated Hummingbird															F		
Red-bellied Woodpecker																	S
Northern Flicker																	S
Wood Thrush															S		
House Wren																	S
Great Crested Flycatcher															F		
American Crow															S		
Eastern Towhee																	S
Chipping Sparrow																	F
Orchard Oriole																	S
Species - 1st visit	6	11	8	6	7	7	8	10	4	8	11	7	9	31			
Species - 2nd visit	4	9	9	5	5	3	7	7	4	9	10	8	6	33			
Total species	8	15	12	8	9	8	11	13	7	11	18	12	13	39			

Table 18 – SHAUGHNESSY COHEN PROPERTY

Point #	1	2	3	4	5	TOT
Red-winged Blackbird	F	FS	FS	FS	FS	
Brown-headed Cowbird	FS	FS	FS	F	S	
Common Grackle	F	FS	F		FS	
American Robin		FS	F		FS	
House Wren	FS	F			F	
Downy Woodpecker		S	S		S	
Cedar Waxwing			S	F	F	
Northern Cardinal	F		F		F	
Baltimore Oriole	F			F	F	
Yellow-billed Cuckoo				S	F	
Purple Martin		S			S	
Black-capped Chickadee	S		S			
Carolina Wren	F				F	
Yellow Warbler		F		F		
Eastern Wood-Pewee	F					
Great Crested Flycatcher				S		
Red-eyed Vireo	F					
Tree Swallow			F			
Barn Swallow		S				
Gray Catbird					F	
Indigo Bunting	S					
Species - 1st visit	9	6	6	5	10	15
Species - 2nd visit	4	7	5	3	6	13
Total species	11	9	9	7	13	21

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Table 19 – VON W. PROPERTY

Point #	1	2	TOT
Indigo Bunting	FS	FS	
Northern Cardinal	FS		
Brown-headed Cowbird		FS	
Ring-necked Pheasant		S	
Downy Woodpecker		S	
Eastern Wood-Pewee	S		
Blue Jay		S	
American Crow		F	
Purple Martin	F		
House Wren		S	
American Robin		S	
Wood Thrush		S	
European Starling		F	
Common Grackle		S	
Baltimore Oriole		S	
American Goldfinch		F	
Species - 1st visit	3	5	7
Species - 2nd visit	3	10	12
Total species	4	13	16

Table 20 – WILDS OF PELEE PROPERTY

Point #	1	2	3	4	TOT
Common Grackle	FS	F	FS	FS	
American Robin	S	F	FS	S	
Indigo Bunting		FS	FS	FS	
Red-winged Blackbird		FS	FS	FS	
Tree Swallow		FS	F	S	
Cedar Waxwing		FS	F	F	
Yellow Warbler		F	F	FS	
Field Sparrow		FS	S	S	
Downy Woodpecker	F	S	S		
Northern Cardinal	F		S	S	
Brown-headed Cowbird	F	F		F	
Baltimore Oriole	F	F	S		
Purple Martin	FS	FS			
House Wren	FS	FS			
Eastern Wood-Pewee	FS				
Carolina Wren	FS				
Chipping Sparrow				FS	
Ring-necked Pheasant	S				
Wild Turkey		S			
Mourning Dove	S				

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Black-billed Cuckoo				S		
Yellow-billed Cuckoo					F	
Northern Flicker			F			
Acadian Flycatcher	F					
Eastern Kingbird					F	
Blue Jay			F			
Barn Swallow						S
Blue-gray Gnatcatcher	F					
European Starling					S	
Song Sparrow					F	
American Goldfinch			S			
Species - 1st visit	11	14	8	9	24	
Species - 2nd visit	8	10	10	10	23	
Total species	14	17	14	14	31	

Table 21 – MARSH BIRD SURVEY – LAKE HENRY – LIGHTHOUSE POINT

Point #	A	B	C	D	E	F	G	H	TOT
Red-winged Blackbird	FS	FS	FS	FS	FS	FS	FS	FS	
Barn Swallow	FS	FS	FS	FS	FS	S	FS	FS	
Tree Swallow		F	FS	FS	FS	F	F	FS	
Great Blue Heron	F	FS	F		F	S	FS	F	
Common Grackle			S	FS	FS	FS	F	FS	
European Starling		F		S	S	F	F	F	
Double-crested Cormorant	FS		FS	S	FS			S	
Northern Cardinal		F			FS	S	FS	F	
Ring-billed Gull			F	F	F	F		F	
Purple Martin			F		F	F		FS	
Yellow Warbler				F	FS	S			
Wood Duck						F	F	F	
Killdeer			S	S			S		
Herring Gull			F	F			F		
Mute Swan	S		S						
Eastern Kingbird				F				S	
Bank Swallow			F	F					
Cedar Waxwing					S	S			
Mallard				S					
Yellow-billed Cuckoo						S			
Great Horned Owl						S			
Black-capped Chickadee	F								
Baltimore Oriole			F						
American Goldfinch					F				
Species - 1st visit	5	6	10	9	11	7	9	10	18
Species - 2nd visit	4	3	7	8	9	9	5	7	17
Total species	6	6	13	13	13	14	10	12	24

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SECTION FOUR

Species at Risk

WETLANDS

Pelee was once home to a significant number of marsh and wetland birds. A wide range of species occurred on the island including many that now nest in small numbers or not at all. Virginia Rails, Blue-winged Teals, Common Moorhens, Black Terns and Least Bitterns – all these and many others would have populated the undisturbed swamps and marshes. Even in 1910 – after the original marshlands had been drained starting in the 1880’s – the wetland areas at Fish Point and Lighthouse Point were still teeming with birdlife according to Lynds Jones’ “Study of the Avifauna of Lake Erie Islands”. His account of the Virginia Rail is one of many similar descriptions of species no longer found on the island: “Nests belonging to this and the next species [Sora] were numerous... birds were seen feeding or were heard calling on every visit to the swamp. This little thirty acre swamp seemed to be a nesting Mecca for these birds.”

The small wetland at Fish Point now has little to offer the majority of marsh birds. Very few individuals nest at Fox Pond and many common species such as Marsh Wren, Swamp Sparrow and Common Yellowthroat are notably absent. A combination of natural and human influences account for these changes. By comparison, the wetland complex at Lighthouse Point, at the north end of the island, has remained somewhat more hospitable for marsh birds due in part to its larger size, although many familiar nesting species are also difficult to find. Wetland restoration projects on Pelee would potentially benefit a number of Species at Risk in Canada including:

Least Bittern (*Ixobrychus exilis*)

Threatened

Recent surveys at Lighthouse Point indicate that one, and possibly two, Least Bitterns nested in the cattail marsh in 2007 and 2008. This species, listed as threatened in Ontario, showed a 44% decrease in the probability of observation in the Carolinian region between the first and second atlas periods of the Atlas of the Breeding Birds of Ontario study (Cadman *et al.* 2007). Long-term habitat loss has clearly affected populations of the Least Bittern both on Pelee Island and elsewhere throughout its range. While there are no early reports from the north end of the island, in 1910 Jones said of the bittern that “there were three at the Fishing Point swamp [Fish Point] all summer”. By the late 1980’s, the species was thought to be extirpated at Fish Point (Kamstra *et al.* 1995).

King Rail (*Rallus elegans*)

Endangered

Probably once a common nesting bird, the King Rail is now extirpated on Pelee Island and likely has been for some time. Jones reports that “individuals could be seen feeding along the margins of the marsh [at Fish Point] at any time of day if one approached cautiously” (Jones 1912). No mention is subsequently made of the species during the atlas periods in the early 1980’s and 2001-05, and there are no PIBO records for the King Rail from 2003-2008. While the rail has experienced long-term declines through-out its range, the largest concentration of birds in Ontario is found in the Lake St. Clair region to the north of Pelee Island.

Prothonotary Warbler (*Protonotaria citrea*)

Endangered

This cavity nesting species is found in southern Ontario at the northern range of its breeding territory. There are no confirmed nesting records for the Prothonotary on the island and yet, while they maintain a precarious existence in the province and have experienced declines throughout their entire range, their continued presence at places like Rondeau, Holiday Beach,

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and Long Point, suggest that Prothonotarys could be attracted to suitable habitat on Pelee in the future. Nest boxes erected at Fish Point and Lighthouse Point in 2003 have not yielded results, although singing males have been recorded at these locations (Dean Ware – pers. comm.).

FORESTS

Pelee Island has retained a relatively high percentage of forest cover compared to the adjacent mainland in Essex County. The majority of mature woodland, however, is limited in size and generally consists of fragmented lots not exceeding 50-100 hectares. This accounts for the low number of 'forest-interior' species reported on Pelee during PIBO's 2006 and 2008 field studies. In spite of this, the wooded areas on the island do provide nesting habitat for a good variety of breeding birds associated with the Carolinian zone in southwestern Ontario including Red-bellied Woodpecker, Carolina Wren and Orchard Oriole, among others. While uncommon, forest-interior species such as Wood Thrush, Scarlet Tanager and Rose-breasted Grosbeak have been observed in recent years in suitable habitat during the breeding season.

Bald Eagle (*Haliaeetus leucocephalus*) (southern Ontario population) Endangered

While listed as endangered in southern Ontario, the Bald Eagle has made a strong recovery in the lower Great Lakes region, with breeding evidence reported from 125 survey squares in the most recent atlas period compared to fifteen squares during the first atlas (Cadman *et al.* 2007). Two eagle nests were documented on Pelee by Lynds Jones in 1910, which is the same number of active nests on the island at the present time.

Acadian Flycatcher (*Empidonax virescens*) Endangered

Although the majority of individuals are likely migrants, this species has been recorded with some regularity on Pelee by PIBO staff and volunteers from 2003-2008. Singing males were recorded at two locations during the summer of 2008. Possibly the same bird was heard at Fish Point and at the Stone Road alvar complex early in June and then again in suitable nesting habitat on the alvar in late-June. The Acadian Flycatcher is listed in this report as a 'possible' breeder at the alvar property in 2008. Twenty years earlier, in 1988, two Acadian territories were noted at the same alvar property and the species was documented as a confirmed/probable breeder (Kamstra *et al.* 1995).

Red-headed Woodpecker (*Melanerpes erythrocephalus*) Threatened/Concern

The Red-headed Woodpecker has undergone long-term declines in the last century throughout its entire range and this pattern appears to hold true in Ontario and on Pelee Island. It was noted in 1910 that this species was "represented by few individuals which were clearly nesting" on Pelee at Fish Point (Jones 1912). Jones conducted the majority of his fieldwork at Fish Point and so the species may have nested at other locations on the island as well. Further evidence of the earlier abundance of the Red-headed Woodpecker in Ontario is provided by John B. Semple of Sandusky, Ohio, when he recounts the passage of forty-eight Red-heads in two hours during a fall flight across Sandusky Bay, directly south of Pelee Island, on September 16th, 1920 (Bent 1992).

In Ontario, the probability of observing a Red-headed Woodpecker decreased provincially by 64% between the first and the second atlas period (Cadman *et al.* 2007). On Pelee the Red-head has been recorded in small numbers during spring and fall migration, but there is no nesting evidence on the island from 2003-2008. As recently as the first atlas period in Ontario in 1981, and in follow-up studies by the Ontario Ministry of Natural Resources (OMNR) in 1988, the Red-

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headed Woodpecker was listed as a confirmed/probable breeder at three locations on Pelee Island – Lighthouse Point, Middle Point and Fish Point.

Hooded Warbler (*Wilsonia citrina*)

Threatened

Although this warbler prefers to nest in large deciduous forests tracts, there is suitable breeding habitat for this Carolinian species despite the relatively small size of mature woodlots on the island. There is no breeding evidence for the Hooded Warbler on Pelee from PIBO surveys conducted between 2003-2008 and the species was not recorded during two atlas periods or during surveys conducted by OMNR in 1988.

Louisiana Waterthrush (*Seiurus motacilla*)

Concern

The Louisiana Waterthrush was “evidently breeding in the vicinity of the swamp” at Fish Point in 1910 (Jones 1912). Although singing males have been recorded in recent years by PIBO staff in early spring at the Fish Point site, there has been no breeding evidence on the island since the 1910 account.

ALVAR & GRASSLANDS

Loggerhead Shrike (*Lanius ludovicianus migrans*)

Endangered

The Loggerhead Shrike is another species noted on Pelee early in the last century that has not been recorded as even a ‘possible’ breeder since 1910. Although there are no PIBO sight records for the endangered shrike from 2003-2008, and the species was not recorded during either of the atlas periods, Pelee Island lies within the historic nesting range of the Loggerhead and suitable nesting habitat exists at the Stone Road alvar site.

Henslow’s Sparrow (*Ammodramus henslowii*)

Endangered

Although a pair of Henslow’s Sparrows maintained a territory on Pelee Island in the 1990’s (Dean Ware – pers. comm.), there is no substantiated breeding evidence for this species and no sight records on the island from 2003-2008. This sparrow experienced a sharp decline in the probability of observation (86%) between the two atlas periods. Interestingly, three of four Henslow’s Sparrow reports from the Carolinian region during the second atlas were in native tallgrass prairie remnants or restorations (Cadman *et al.* 2007).

Yellow-breasted Chat (*Icteria virens*)

Concern

According to the Breeding Bird Survey (BBS), the Yellow-breasted Chat has experienced long-term population declines throughout its entire eastern North American breeding range. While the chat has never been common in Ontario, results from the Atlas of the Breeding Birds of Ontario suggest that this species experienced significant declines in southern Ontario from the early-1980’s to 2001-2005 (Cadman *et al.* 2007).

Pelee is one of the few locations in Ontario where the chat has managed to sustain a stable population. Recent estimates suggest that up to 40% of all nesting Yellow-breasted Chats in the province are found on the island and at nearby Point Pelee National Park (Cadman *et al.* 2007). Although PIBO was unable to contribute data to the second breeding bird atlas, subsequent surveys in 2006 and 2008 have confirmed the presence of at least five chat territories at three locations on Pelee – Stone Road alvar, Brown’s Road and East-west Road.

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OTHER

Piping Plover (*Charadrius melodus*)

Endangered

The Piping Plover is endangered throughout its entire range and almost extirpated in Ontario. Current estimates suggest a global population of less than 7000 individuals, with approximately 100 pairs breeding in the Great Lakes region. (Birdlife International Species Factsheet 2008). The Piping Plover is known to have nested at Fish Point and possibly other locations on Pelee, although the species has been an elusive sighting on the island from 2003-2008. One individual was observed at Fish Point on April 24th, 2004 but was not seen again on subsequent days. A pair of nesting plovers at Wasaga Beach in 2005, after a thirty year absence, indicates that historic nesting sites like Fish Point can be reoccupied.

SECTION FIVE – STEWARDSHIP PLANNING

Pelee is comprised of a diverse range of different habitats due, in large part, to past and present land-use practices that have altered the landscape significantly, resulting in an equally varied composition of breeding birds. From the historic record we know that the island's avifauna today hardly resembles the past. Prior to the late-19th century, mature cedar forests, undisturbed alvar, and a vast marsh once dominated the island interior. Beginning in the 1880's, the swamps were drained and replaced with agricultural land. A varied patchwork remains that offers suitable nesting conditions for a broad range of species. At the same time, a number of measures, both large and small, would enhance these spaces considerably for a number of Species at Risk.

There are a wide range of conservation initiatives and restoration projects that would benefit Species at Risk on Pelee Island and breeding birds generally:

WETLANDS

- Establish new wetland areas
- Improve preexisting areas through planting of native aquatic plants and removal of invasive species including introduced *phragmites*, carp, etc.
- Erect additional nest boxes for endangered Prothonotary Warbler in cooperation with the Prothonotary Warbler Recovery Team
- Set-up nest boxes and platforms for other marsh birds including Canada Goose, Wood Duck and Tree Swallow

FORESTS

- Undertake tree planting projects designed to link up existing woodlots
- Improve preexisting forests through selective cutting and planting and the removal of exotic species such as Garlic Mustard
- Erect nest boxes for threatened Red-headed Woodpecker and other woodland birds including Eastern Screech-Owl, Red-bellied and Downy Woodpecker, Northern Flicker and Great Crested Flycatcher

ALVAR, SHRUB & GRASSLAND

- Continue alvar restoration projects through selective removal of vegetation and controlled burns

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- Undertake planting projects designed to establish or restore native savanna and prairie habitat
- Erect nest boxes for cavity nesting species including Eastern Bluebird and Tree Swallow

OTHER

- Control access of off road vehicles on beaches at Lighthouse Point and Fish Point and other sensitive locations on the island

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LITERATURE CITED

Bent, Arthur Cleveland. 1992. Life Histories of North American Woodpeckers. Indiana University Press. Bloomington and Indianapolis.

Birdlife International Species Factsheet 2008: www.birdlife.org/datazone/species/index.html

Cadman, M.D., D.A. Sutherland, G.G. Beck, D. LePage, and A.R. Couturier (Eds.). 2007. Atlas of the Breeding Birds of Ontario, 2001-2005. Bird Studies Canada, Environment Canada, Ontario Field Ornithologists, Ontario Ministry of Natural Resources, and Ontario Nature. Toronto.

Cadman, Michael D., Paul F. J. Eagles, Fredrick M. Helleiner (Eds.) 1987. Atlas of the Breeding Birds of Ontario. Federation of Ontario Naturalists and the Long Point Bird Observatory. University of Waterloo Press.

Catling, J.M., J.E. Cruise, K.L. McIntosh and S.M. McKay. 1975. Alvar Vegetation in Southern Ontario. Ontario Field Biologist 29 (2): 1-25.

COSEWIC. 2007. COSEWIC Assessment Results. Committee on the Status of Endangered Wildlife in Canada.

Couturier, A. 1999. Conservation Priorities for the Birds of Southern Ontario. Unpublished Bird Studies Canada report, 17 pp (plus appendices).

Freemark, K. and B. Collins. 1992. Landscape Ecology of Birds Breeding in Temperate Forest Fragments. In Ecology and Conservation of Neotropical Migrant Landbirds (Eds. John M. Hagen III and David W. Johnston). Smithsonian Institution Press.

Godfrey, W. Earl. 1966. The Birds of Canada. NMC Bulletin #203, National Museum of Canada, Ottawa.

Important Bird Area Site Summary – Pelee Island Natural Areas: www.bsc-eoc.org/iba/site.jsp?sideID=ON013

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Jones, Lynds. 1912. A Study of the Avifauna of the Lake Erie Islands. The Wilson Bulletin, Vol. 78, 6-18.

Kamstra, J., M.J. Oldham and P.A. Woodliffe. 1995. A Life Science Inventory and Evaluation of Six Natural Areas in the Erie Islands, Essex County, Ontario. Alymer District (Chatham Area), Ontario Ministry of Natural Resources. 140 pp (plus appendices).

LePage, Denis. 2002. Preliminary Breeding Bird Inventories of Long Point Region Conservation Authority Forest Tracts in 2002. Bird Studies Canada report, 22 pp (plus appendices).

Peck, George K., Ross D. James. 1983. Breeding Birds of Ontario – Nidology and Distribution, Volume 1: Nonpasserines. Royal Ontario Museum. Toronto.

Theberge, John B. (Ed.) 1989. Legacy – The Natural History of Ontario. McClelland & Stewart Inc. Toronto.

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APPENDIX A – Annotated list of breeding birds

This list includes 86 species documented by PIBO staff on Pelee Island in suitable nesting habitat during the summer months of 2006 and 2008. In addition to results from numerous point count surveys, the list includes information about nesting activity from all locations on the island.

SPECIES

Double-crested Cormorant

Individuals observed in 2008 at Lake Henry, Lighthouse Point.

Great Blue Heron

Flyovers. Individuals observed in 2008 at Lake Henry, Lighthouse Point.

Great Egret

One fly-over in 2006.

Turkey Vulture

Fly-overs in 2006 & 2008. No nesting evidence.

Canada Goose

Pair at AL (2006), individual at GB (2008).

Mallard

Male and female at RN plot in 2006.

Wood Duck

Male observed at E2 in 2008. Fledged young reported at Fish Point in previous years.

Bald Eagle

One fly-over at RS in an area with suitable nesting habitat in 2006. Sub-adult observed in 2008.

Cooper's Hawk

Adult seen and heard on two visits at RS in 2006 – agitated behaviour. Observed again at same site in 2008.

Red-tailed Hawk

A pair flying over AL and single birds at RN and RS in 2006. Adult observed at E1 and E3 in 2008.

Wild Turkey

A pair at RN and two nests with sitting female and young at WP in 2006. Recorded at 4 of 15 plots in 2008.

Ring-necked Pheasant

Observed at all four properties with recently-fledged young at AL in 2006. Common in 2008.

Killdeer

Observed at E2, E3 and RS in 2008.

Spotted Sandpiper

A pair of birds at WP in 2006. GB and RS records in 2008.

American Woodcock

Post-breeding individuals recorded at AL and other sites in 2006 and 2008. A breeding survey in late-April/May would likely confirm the presence of this early nester.

Little Gull

Reported at Fish Point in June 2008.

Ring-billed Gull

Flyovers and birds recorded at Lighthouse Point and Fish Point in 2008.

Herring Gull

Flyovers and birds reported at Lighthouse Point and Fish Point in 2008.

Caspian Tern

Flyover.

Black Tern

Individual observed in June 2008.

Least Bittern

At least one pair reported at Lake Henry, Lighthouse Point, in June 2007 & 2008.

Mourning Dove

Individuals seen and heard frequently in 2008 at 12 of 15 survey properties.

Yellow-billed Cuckoo

Recorded at all four properties in 2006 (AL, RN, RS, WP) – most abundant on AL. Adult observed entering and leaving nest at AL in 2006. Noted at 12 of 15 plots and at 31% of 106 point-count sites in 2008

Black-billed Cuckoo

Recorded at all four properties in 2006 – most abundant on AL. Documented at 14% of point count sites in 2008.

Great Horned Owl

A pair at RS in 2006. An individual observed during marsh survey at Lighthouse Point in 2008.

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Eastern Screech-Owl

While this early nester was not recorded during the study period, suitable breeding habitat exists at many of the study sites.

Chimney Swift

Flyovers at AL and WP in 2006. Noted at E1, E2 and RS in 2008.

Ruby-throated Hummingbird

A male at RN on June 8th, 2006. Females recorded at RN and RS in 2008. A male and female made regular visits to the PIBO staff cottage on Stone Road during the summer of 2008.

Belted Kingfisher

Observed regularly during the summer at Dick's Marina at South Shore Road in 2008.

Red-bellied Woodpecker

Recorded at all four sites in 2006. Most abundant at RN. Observed at 5 of 15 plots in 2008.

Downy Woodpecker

Recorded at all four sites in 2006 and at 12 of 15 plots and 29% of point count sites in 2008.

Northern Flicker

A pair at RS in 2006 and individuals at 5 of 15 plots in 2008. This species was documented just five times during 78 official 5-minute counts at all properties in 2006 and at only 7% of the point count sites in 2008.

Eastern Wood-Pewee

Common at most plots, recorded at 10 of 15 plots and 18% of point count sites in 2008.

Acadian Flycatcher

A singing male documented at AL and FP in early June 2008 and again at AL on June 27th.

Alder Flycatcher

Singing male at AL on May 30th, 2006. Probable migrant.

Willow Flycatcher

Singing male at RN on June 24th and at WP on June 3rd (possible migrant), 2006. Singing male at WP in early-June 2008 at same location as 2006.

Least Flycatcher

Possible migrant at RN on June 5th, 2006.

Eastern Phoebe

A singing male at E1 and RN in 2008.

Great Crested Flycatcher

Recorded at all four sites in 2006 and at 7 of 15 plots in 2008.

Eastern Kingbird

Just one individual heard at WP in 2006. Noted at 9 of 15 plots and at 13% of point count sites in 2008.

White-eyed Vireo

Two birds – a singing male and probable female – recorded on territory at RS in early-June 2008.

Warbling Vireo

Recorded at 5 of 15 plots in 2008.

Red-eyed Vireo

Well represented at 10 of 15 plots in 2008. Recorded at 35% of 39 point count sites in 2006 and at 26% of 106 sites in 2008.

Blue Jay

Recorded at all four sites in small numbers in 2006 and at 10 of 15 plots and 19% of point count sites in 2008.

American Crow

Recorded at all four sites in 2006 including a pair at RS, and at 6 of 15 plots in 2008.

Horned Lark

Individual at WP in 2006 and singing males at E1, E2, and E3 in 2008.

Purple Martin

Recorded at all four properties in 2006. Nesting houses at WP were active. Noted at 10 of 15 plots in 2008. No evidence of nesting in natural cavities.

Tree Swallow

Recorded at all properties in 2006 and 12 of 15 plots in 2008. Approximately twenty man-made nesting boxes were active at WP. Evidence of breeding in natural cavities at all sites.

Northern Rough-winged Swallow

An individual carrying nesting material on McCormick Road in June 2008.

Bank Swallow

A small colony of birds documented at the quarry at the north end of the island along Harrison-Garno Rd.

Barn Swallow

Individuals seen and heard at RS and WP in 2006 and at 9 of 15 plots in 2008.

Black-capped Chickadee

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Recorded in small numbers at RN, RS and AL in 2006 and at 9 of 15 plots and 16% of point count sites in 2008.

White-breasted Nuthatch

A female observed in potentially suitable nesting habitat at RN in 2006.

Carolina Wren

One or two territorial males recorded at all four properties in 2006 and fairly common at 8 of 15 plots in 2008.

House Wren

Common at all four plots in 2006 and at 12 of 15 plots in 2008.

Marsh Wren

Individual heard singing at Lighthouse Point in June 2008.

Blue-gray Gnatcatcher

A singing male heard in suitable habitat at AL in late-June 2006 and at near-by WP plot in 2008.

Eastern Bluebird

A single individual at RN in late-June 2006.

Wood Thrush

A singing male in suitable habitat at AL on June 9th, 2006 and singing birds at RS and VW in 2008.

American Robin

Very common at all study plots – the third most abundant species recorded in 2006 and 2008.

Gray Catbird

Singing males at RN and RS in 2006 and at 5 of 15 plots in 2008.

Brown Thrasher

Recorded at RN and RS in 2006 and at RN, RS and E1 in 2008.

European Starling

Entirely absent from RS, AL and WP and only one or two pairs at RN in 2006. Observed at 13 of 15 plots and at 25% of point count sites in 2008.

Cedar Waxwing

Reported at almost all sites in 2008 in small numbers.

Yellow Warbler

Recorded at almost all sites in 2006 and 2008 and at 52% of point count sites in 2008. The fifth most abundant species recorded in 2006 and sixth most numerous in 2008.

Black-throated Green Warbler

A singing male on June 8th in potentially suitable habitat at WP in 2006.

American Redstart

A singing male documented at Fish Point in 2006 and 2008.

Ovenbird

A singing male on June 9th in potentially suitable nesting habitat at AL in 2006.

Common Yellowthroat

Singing males recorded at RN and RS in 2006 and at DE property in 2008.

Yellow-breasted Chat

A singing male seen and heard in suitable nesting habitat on June 8th 2006 at RS. Three or four singing males at E1 and E2 plots in 2008. A singing male at Ontario Nature property on Stone Road in 2008.

Eastern Towhee

Singing males reported at E1 and RS in 2008.

Chipping Sparrow

Recorded in small numbers at RN, RS and WP in 2006 and at 3 of 15 plots in 2008.

Field Sparrow

A pair at WP and a singing male at RN in 2006. Located at 6 of 15 plots and 9% of point count sites in 2008.

Song Sparrow

At least two territorial males at WP and singing males at RN and RS in 2006. Reported at only 2 of 15 plots in 2008 and 3% of point count sites. An uncommon nester on Pelee Island.

Northern Cardinal

Very common at all properties in 2006 and 2008 – the seventh most abundant species recorded in 2006 and fifth most numerous in 2008.

Rose-breasted Grosbeak

A singing male in suitable nesting habitat at RN on June 24th, 2006 and a singing male at Fish Point on numerous dates in June 2008.

Scarlet Tanager

A singing male at SC in suitable nesting habitat in 2008.

Indigo Bunting

Abundant at all four sites in 2006 and at 13 of 15 plots in 2008.

Red-winged Blackbird

Very common at all properties in 2006. Noted at 13 of 15 plots and 83% of all point count sites in 2008.

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Eastern Meadowlark

Singing males reported along roadsides at two or three locations on the island in 2008.

Western Meadowlark

A singing male documented at corner of Mahoney and Stewart Roads on at least four mornings in mid-June 2008.

Common Grackle

The second most abundant species recorded in 2006 and most numerous species tallied in 2008.

Brown-headed Cowbird

The sixth most abundant species recorded in 2006 and fourth most in 2008. Recorded at 56% of 106 point count sites in 2008.

Orchard Oriole

Singing males recorded at RN and RS in 2006 and at 6 of 15 sites in 2008.

Baltimore Oriole

Common at all four sites in 2006 and at 13 of 15 sites in 2008.

House Finch

A pair in suitable nesting habitat at AL in June 2006.

American Goldfinch

Common at all four sites in 2006. Documented at 11 of 15 plots in 2008.

House Sparrow

A pair observed at RS in suitable nesting habitat in 2006.

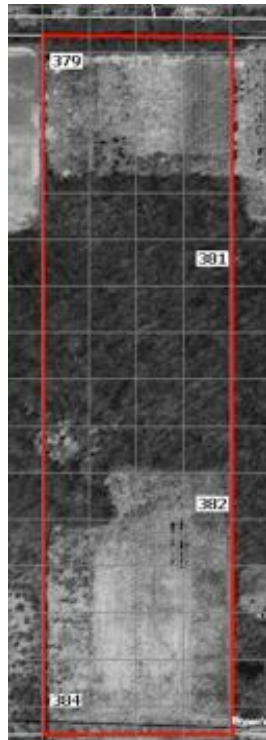
Breeding Bird Surveys on Pelee Island in 2008
Pelee Island Bird Observatory

APPENDIX B – Aerial photographs and point count locations

Alvar & Wilds of Pelee (NCC)

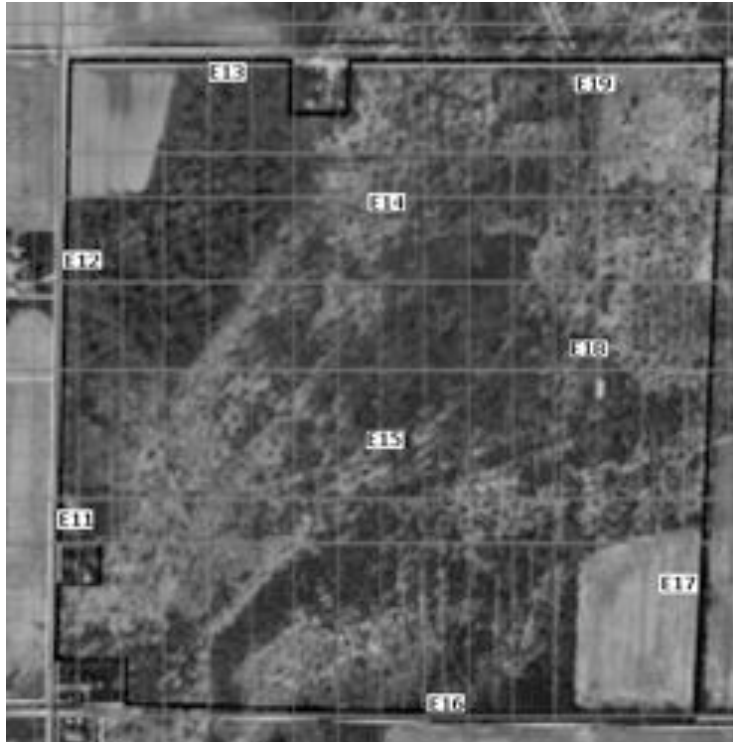


Demarco Property (NCC)

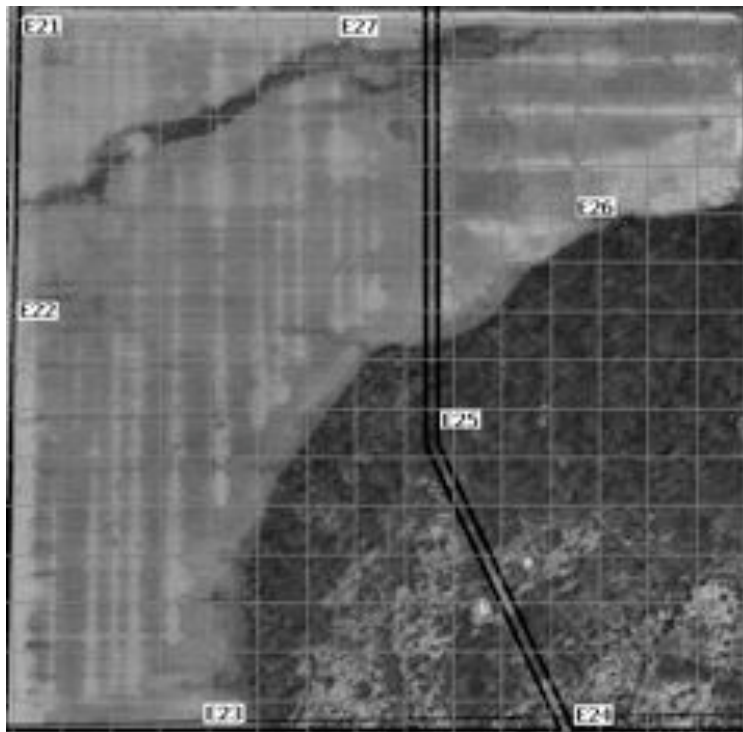


Breeding Bird Surveys on Pelee Island in 2008
Pelee Island Bird Observatory

Erie Sand & Gravel 1 (NCC)

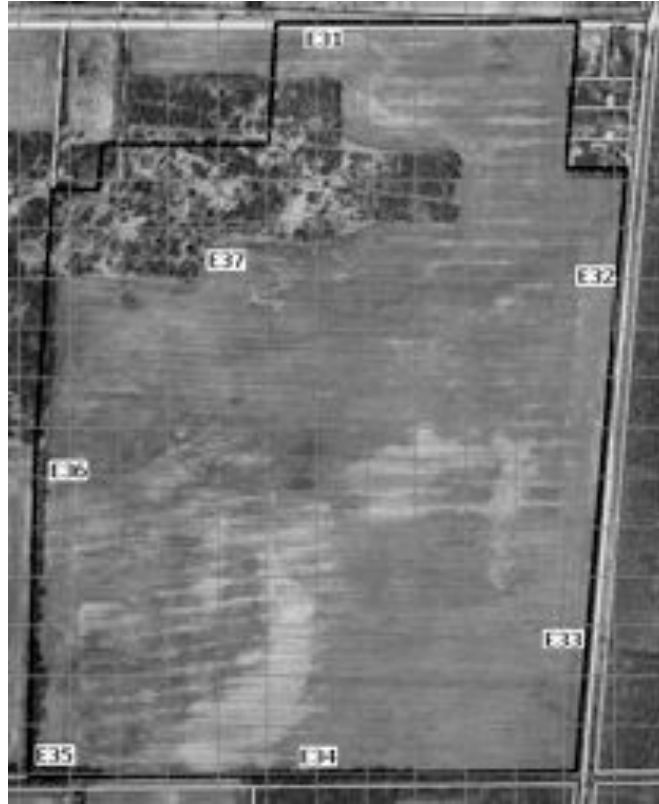


Erie Sand & Gravel 2 (NCC)



**Breeding Bird Surveys on Pelee Island in 2008
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Erie Sand & Gravel 3 (NCC)



Fish Point Provincial Nature Reserve (Ontario Parks)



Breeding Bird Surveys on Pelee Island in 2008
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Gibwood Property (NCC)

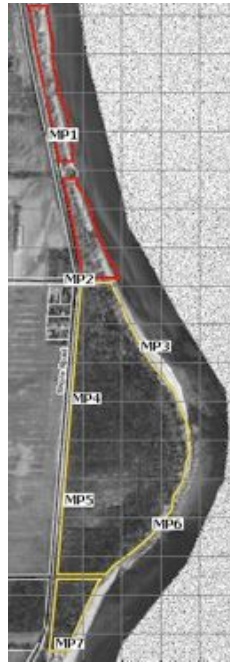


Lighthouse Point Nature Reserve (Ontario Parks)



**Breeding Bird Surveys on Pelee Island in 2008
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Middle Point Woods (NCC)

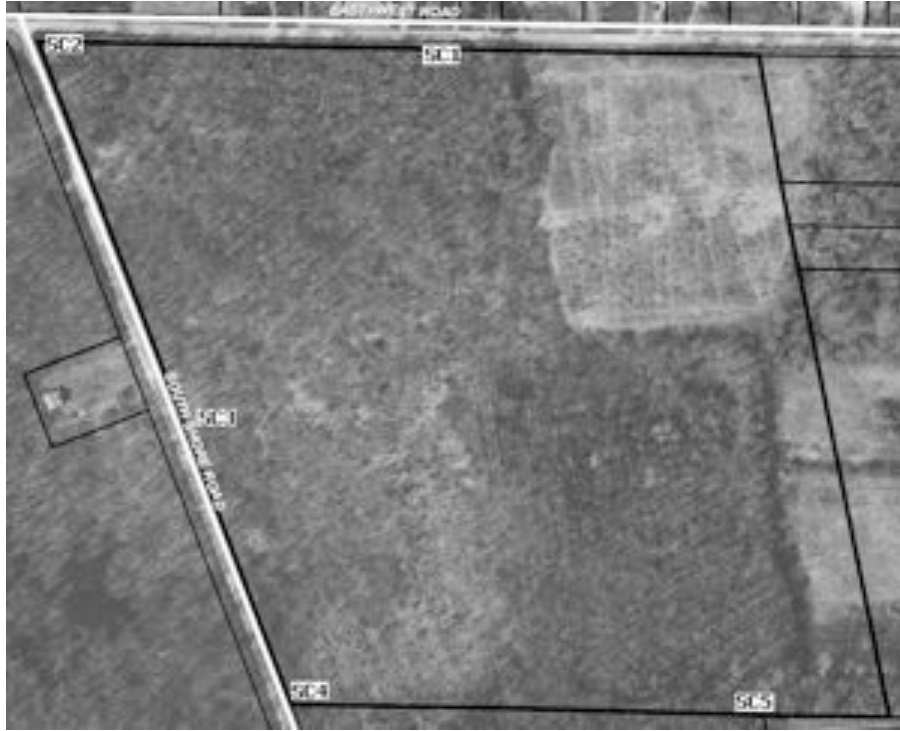


Red Cedar North (NCC) & Red Cedar South (Pelee Island Winery)

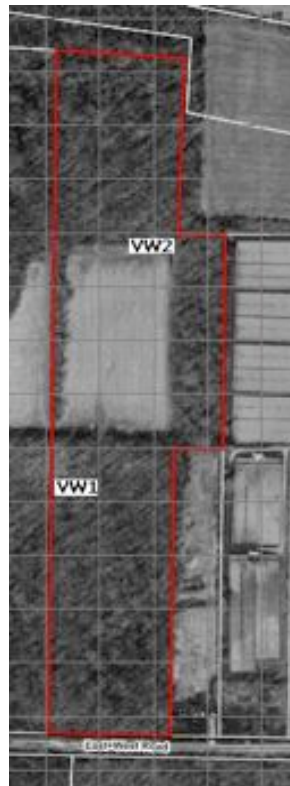


Breeding Bird Surveys on Pelee Island in 2008
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Shaughnessy Cohen Property (NCC)

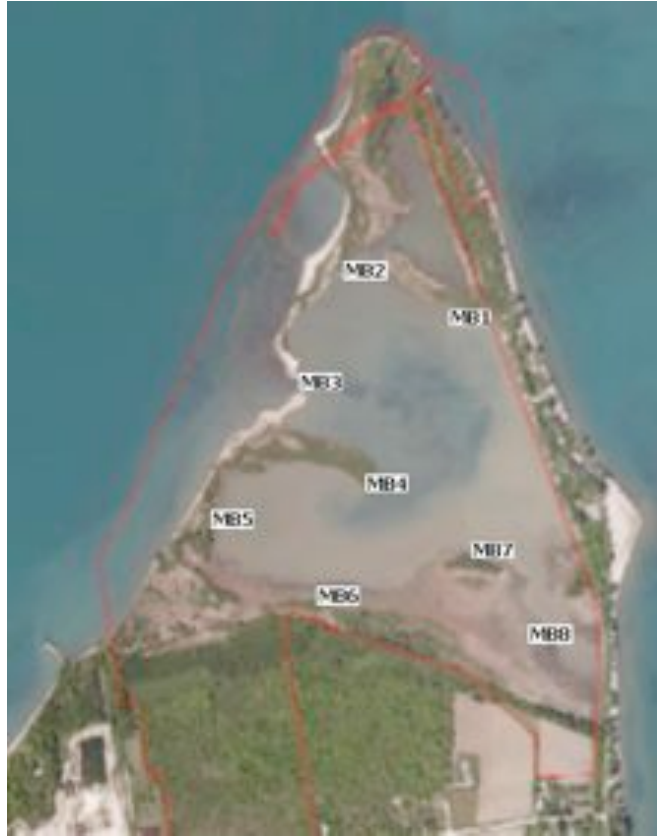


Von W. Property (NCC)



Breeding Bird Surveys on Pelee Island in 2008
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Marsh Bird Monitoring Plot – Lake Henry – Lighthouse Point (Ontario Parks)



**Breeding Bird Surveys on Pelee Island in 2008
Pelee Island Bird Observatory**

APPENDIX C – UTM coordinates

UTM coordinates for 106 point count sites – UTM 17 NAD 83

Property	Code	Point count #	Easting	Northing
Alvar	AL	1	364610	4623254
		2	364504	4623535
		3	364284	4623658
		4	363969	4623713
		5	363827	4623535
		6	364141	4623579
		7	363947	4623343
		8	364092	4623092
		9	363834	4622889
		10	363573	4622837
Demarco Property	DE	1	363881	4629853
		2	364052	4629624
		3	364050	4629325
		4	363811	4629139
Erie Sand & Gravel 1	E1	1	363072	4628560
		2	363077	4628868
		3	363245	4629102
		4	363459	4628933
		5	363475	4628624
		6	363563	4628340
		7	363817	4628505
		8	363689	4628788
		9	363704	4629084
Erie Sand & Gravel 2	E2	1	363101	4629862
		2	363095	4629561
		3	363345	4629110
		4	363644	4629102
		5	363531	4629380
		6	363680	4629634
		7	363475	4629859
Erie Sand & Gravel 3	E3	1	364265	4629096
		2	364559	4628854
		3	364536	4628553
		4	364318	4628354
		5	364019	4628359
		6	363977	4628659
		7	364166	4628889
Fish Point	FP	1	360916	4620805
		2	361001	4621091
		3	360923	4621385
		4	360703	4621592
		5	360508	4621815
		6	360281	4622014
		7	360047	4622197

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		8	360737	4621945
		9	360919	4621802
		10	361156	4621986
		11	361149	4622236
Gibwood Property	GB	1	361116	4629879
		2	361110	4629730
		3	361210	4629391
		4	361073	4629433
		5	361073	4629126
Lighthouse Point	LP	1	363891	4632419
		2	364045	4632169
		3	364085	4631894
Middle Point Woods	MP	1	364537	4629498
		2	364665	4629128
		3	364794	4628865
		4	364559	4628854
		5	364536	4628553
		6	364790	4628497
		7	364540	4628158
Red Cedar North	RN	1	360387	4624043
		2	360763	4624027
		3	360580	4624144
		4	360251	4624198
		5	360164	4624411
		6	360437	4624303
		7	360738	4624299
		8	360261	4624609
		9	360575	4624592
		10	360693	4624709
		11	360804	4624443
Red Cedar South	RS	1	360297	4624036
		2	360763	4624027
		3	361057	4624033
		4	261066	4623828
		5	361044	4623421
		6	360826	4623641
		7	360746	4623434
		8	360559	4623434
		9	360755	4623733
		10	360549	4623665
		11	360559	4623905
		12	36375	4623887
		13	360166	4623844
Shaughnessy Cohen	SC	1	364393	4624616
		2	364094	4624617
		3	364194	4624331
		4	364267	4624131
		5	364602	4624138
Von W. Property	VW	1	360819	4624174

Breeding Bird Surveys on Pelee Island in 2008
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		2	360916	4624485
Wilds of Pelee	WP	1	363053	4623129
		2	363354	4623112
		3	363653	4623111
		4	363896	4623082
Marsh Bird Survey Lake Henry Lighthouse Point	MB	1	364049	4631876
		2	363966	4632113
		3	363774	4631953
		4	363672	4631645
		5	363527	4631444
		6	363762	4631336
		7	363999	4631398
		8	364229	4631294