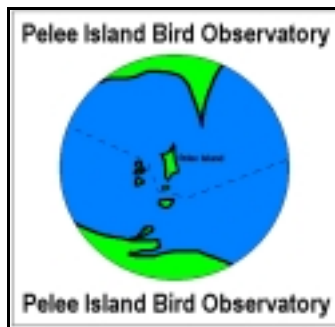


Migration Monitoring on Pelee Island in 2004

**A Summary of the Spring and Fall Migrations at
Fish Point Provincial Nature Reserve –
Other Developments at the Pelee Island Bird Observatory in 2004 –
Plans for 2005**



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Prepared for:

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The Pelee Island Bird Observatory was established in 2003. PIBO's mandate includes 1) a commitment to long-term migration monitoring research on Pelee Island 2) long-term studies of the breeding bird communities on Pelee, including endangered, threatened and species of special concern 3) serving as an educational centre for the public, school groups and the local community 4) promoting the importance of Pelee Island's unique natural heritage.

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The Pelee Island Heritage Centre was incorporated in 1988. The Centre was created to research, interpret and preserve Pelee Island's human and natural history. Each year the Centre and Museum facility hosts between six and eight thousand visitors. Programs at the Centre have included the publication of seven books about local human and natural history, the completion of three videos, and the promotion of eco-tourism through cooperative work with the Federation of Ontario Naturalists, the Nature Conservancy of Canada and Ontario Parks.

Pelee Island - Essex County - Ontario - Canada



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EXECUTIVE SUMMARY

The Pelee Island Bird Observatory (PIBO) – in partnership with the Pelee Island Heritage Centre – completed its second year of avian migration monitoring research on Pelee Island, Ontario, Canada in 2004. The primary goal of this long-term study is to collect data on migratory birds as part of an international effort to monitor songbird population trends. Pelee Island is a significant stopover site for many species of interest for monitoring and PIBO's field station at Fish Point, at the south tip of the island, is an ideal location to conduct the research.

While all birds encountered during the fieldwork are documented, the project is primarily concerned with small landbird populations. This report summarizes the results of the Spring and Fall field seasons, provides an account of other news and developments at the Pelee Island Bird Observatory in 2004, and concludes with a brief update of PIBO's plans in 2005.

PIBO enjoyed another successful and productive year of migration studies on Pelee Island in 2004, devoting more than 1700 person-hours of fieldwork to the project and collecting accurate migration counts for many species in a consistent, standardized manner. Migration monitoring coverage was conducted from April 13th to May 31st in the Spring and from August 6th to November 9th in the Fall. Visual observations of migrants were documented at Fish Point Provincial Nature Reserve – Ontario Parks – on 139 mornings, including 93 days of constant-effort mist netting. In all, PIBO staff documented 193 species in the official 'count' area and 3451 birds of eighty-seven species were captured during the banding phase of the project.

Section One of the report provides a brief description of the study and a review of the goals of migration monitoring research, followed by a brief overview of the study protocol and site description. Section Two summarizes the Spring and Fall migration seasons, with highlights of the ebb and flow of this year's activity at Fish Point, including a brief summary of the data collected during the field season. The section closes with a report on changes to the study protocol in 2004 and recommendations for 2005.

Section Three presents information about other PIBO projects in 2004, including a number of breeding bird surveys conducted on the island this summer in collaboration with the Nature Conservancy of Canada and other interested parties. Other news in this section includes a review of staff and volunteer contributions to the project, as well as highlights of the ongoing development and success of PIBO's educational and community outreach projects. Section Four details PIBO's plans in 2005.

The Pelee Island Bird Observatory has received critical assistance and key financial support from many generous organizations and individuals. The report concludes with an acknowledgment of those who helped to make the 2004 migration study a success.

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SECTION ONE

Study Objectives

Migration monitoring research is an effective method for monitoring changes in bird populations through the counting and capture of migrants. The data collected at migration stations is used to detect population trends of small landbirds that migrate to and from their breeding and wintering grounds each year (Dunn & Hussell 1995). Many songbirds summer in remote northern regions and winter in equally isolated areas, which makes it difficult to survey these species using other monitoring methods.

The Canadian Migration Monitoring Network (CMMN) is the national body that oversees migration studies in Canada. The network is made up of more than twenty permanent sites established across the county that generate daily migration counts for a wide range of species. These monitoring stations are committed to collecting data that contributes to our understanding of the changes taking place in populations of migratory birds, as well as to document migration at the station itself, and many other bird-related studies.

Study Description

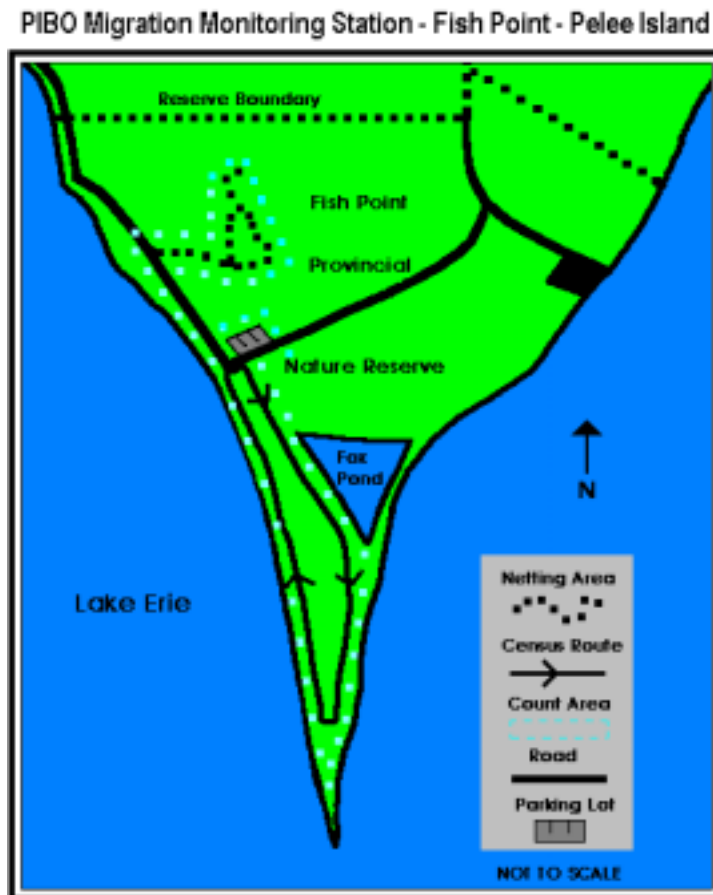
The 2004 migration monitoring study was the second year of operations at Fish Point. Fieldwork was conducted on forty-five days in the Spring (April 13th-May 31st) and ninety-four days in the Fall (August 6th-November 9th). During this time, PIBO staff counted and recorded the number of migrants seen, heard or captured at Fish Point (within a specified 'count' area) on a daily basis. Data was collected through a combination of visual observations and standardized mist netting and bird banding. Migrants were captured and banded on thirty mornings in the Spring and sixty-three in the Fall.

Study Location

Pelee Island, Essex County, Ontario is the most southerly-inhabited landmass in Canada. Situated in the western third of Lake Erie (UTM: 17 361000 4621000) the island is approximately fifteen kilometres long, five kilometers wide, and lies between Leamington, Ontario on the north shore and Sandusky, Ohio to the south. The island is designated as an Important Bird Area (IBA) by the Canadian partners of Birdlife International – the Canadian Nature Federation (CNF) and Bird Studies Canada (BSC). IBA's are described as "truly outstanding sites of significance nationally or internationally and sites that are exceptionally important for birds."

The migration monitoring study is conducted at Fish Point Provincial Nature Reserve – Ontario Parks/Ministry of Natural Resources (115 hectares). The point forms the distinctive southern tip of Pelee Island. The main part of Fish Point is a sand spit made up of low stabilized dune ridges covered in woodland. Common Hackberry is dominant in most vegetation associations (Kamstra, Oldham & Woodliffe 1995). The official count area and census route for the study extends from the tip of the point to approximately two

hundred metres north of the nature reserve parking lot (approximately 1.2 kilometres). The area is surveyed each morning during the daily walking census along a route approximately two kilometres in length. The route covers a broad range of distinct habitats including deciduous woodlands, wetlands, dunes and open beach.



The mist-netting operation is conducted north of the parking lot in an area dominated by mature Hackberry forest to the west and an area of abandoned pasture (app. 25 years) to the east. Ten mist nets are established along the edge of the former field, which now consists of dense Rough-leaved Dogwood with an average height of four metres. Other tree species in the area include Black and Sugar Maple, American Basswood, White Mulberry and Red Ash (Kamstra, Oldham & Woodliffe 1995). The netting area is bordered by a paved road and the lakeshore on the west side, a wet forest association of Red Ash-Silver Maple to the north, similar Hackberry forest to the south and the dogwoods to the east.



SECTION TWO

Spring Migration Summary

Migration monitoring coverage got underway this Spring on April 13th under cloudy skies and cool temperatures, with moderate winds from the northeast. A variety of songbirds were documented in the area in small numbers including Golden-crowned Kinglet, Yellow-rumped Warbler, Hermit Thrush and Fox Sparrow. Waterfowl were active, with ten species observed including 150 Red-breasted Merganser and 36 Common Goldeneye. Forty-seven species were recorded on the day.

After a few days of brisk northeast winds and accompanying cool temperatures, the wind shifted to the southeast on the 17th, which prompted a number of new Spring arrivals, including a singing Northern Parula on census and a male Pine Warbler. Chipping Sparrows increased in number with a Daily Total (DT) of 45 birds recorded on the day, along with six other sparrow species. Warm temperatures prevailed, and the first week of coverage came to a close with an unseasonable dawn reading of 17° C on the 19th. While bird numbers remained generally low, new arrivals on the 19th included Barn and Northern Roughed-winged Swallows, and a male Prothonotary Warbler observed on census – a bird that remained in the area for two weeks.

Due to a staff shortage this Spring, as well as changes made to a number of net locations, the mist-netting operation started on April 20th instead of the intended start date of April 1st. An otherwise quiet first morning of banding produced a male Blue-winged Warbler in the nets, along with small numbers of Ruby-crowned Kinglet and Hermit Thrush, among others. The third week of April remained inactive, with only small numbers of landbirds recorded in the area from April 20th – 26th. The station's seven-day banding total – 90 birds captured during 362 net-hours of operation – attests to the lack of migration activity at Fish Point during this time. Despite this, a variety of new arrivals continued to appear including very early records for Magnolia Warbler (22nd) and Yellow-breasted Chat (23rd). The highlight of the week was a Piping Plover observed at the Tip on the afternoon of the 24th. The bird – a probable male and unbanded – was not observed again on subsequent days.

Cool conditions and strong north winds returned to the area on the 26th along with the first steady rains of the Spring. A significant shift occurred on the 28th, however, when very cool dawn temperatures (1° C) gave way to the first steady south winds recorded since the 23rd, and the mercury rose to 19° C by noon. There was a noticeable increase in activity on the 29th, with eight new Spring arrivals including a very early Yellow-bellied Flycatcher and firsts for Least Flycatcher, Eastern Kingbird and Orange-crowned Warbler. Eight warbler species were recorded, with sixty species documented on the day. Fifty-nine species were observed the next day including the first Ruby-throated Hummingbird, Great Crested Flycatcher and Rose-breasted Grosbeaks of the Spring.

The first of May was active, with increased numbers of Blue Jays (50 DT) and Yellow-rumped Warblers (29 DT) recorded on census, as well as a host of new arrivals including Red-eyed Vireo, Veery, Bay-breasted and Black-and-white Warblers, and at least five Red-headed Woodpeckers. Steady rain set in on the evening of the 1st and continued throughout the following day, but this didn't deter the season's largest fallout of birds to-date, with 81 species recorded on May 2nd, including good numbers of White-throated Sparrows (88 DT) and Yellow-rumped Warblers (50 DT). Eleven warbler species were observed, with Spring firsts for Golden-winged, Black-throated Blue and Cape May Warbler, along with the first Chimney Swifts, Swainson's Thrush, Scarlet and Summer Tanagers of the season.

Fish Point remained active through the remainder of the week, with steady numbers of birds filtering through on a daily basis. Blue-gray Gnatcatchers were abundant, with 20 individuals recorded on the 3rd. New arrivals at this time included White-eyed Vireo, Tennessee and Chestnut-sided Warbler (3rd), Kentucky Warbler (5th), and Lincoln's Sparrow (6th). The 6th was very busy, with large numbers of Nashville (135 DT) and Yellow Warblers (40 DT) recorded in the area, along with significant totals for Yellow-rumped, Black-throated Green and Palm Warbler. Fourteen warbler species were observed including Blue-winged, Orange-crowned, Prothonotary and Worm-eating Warbler.

Against the backdrop of thunderstorms and strong northeast winds, May 7th proved to be one of the busiest mornings for birds this Spring. Yellow-rumped Warblers (150 DT) and White-throated Sparrows (110 DT) were most abundant, but many other species were

observed in good numbers, particularly Gray Catbird, with 30 individuals recorded. Twenty-two warbler species were documented including three Blue-winged Warblers, Prairie, Prothonotary, Connecticut Warbler and Yellow-breasted Chat. A season high eighty-six species were observed in the area during the standard six-hour count period.

Rain persisted on the island until the 12th, yet warmer temperatures and south winds encouraged a steady stream of migrants through the area throughout the second week of May. May 10th was especially active, with eighty-four species documented in the count area, including good numbers of White-throated Sparrow (55 DT), Nashville Warbler (27 DT), Rose-breasted Grosbeak (19 DT), and Least Flycatcher (13 DT). Twenty-one warbler species were observed on the day. New arrivals at this time were Traill's Flycatcher (8th), Mourning Warbler (11th), the station's first Louisiana Waterthrush (11th) and Black-billed Cuckoo (12th). Small numbers of shorebirds began appearing at the Tip as well, with the Spring's first Ruddy Turnstones and Black-bellied Plovers observed on the 13th.

Coverage at the station was interrupted on May 14th and 15th so staff could participate in Pelee Island's annual Spring Song Festival, which includes a Baillie Birdathon fundraiser and organized Big Day on the island. Monitoring resumed on the 16th with another good push of migrants such as Tennessee, Blackpoll and Magnolia Warbler, Least Flycatcher, and the first Yellow-billed Cuckoos of the Spring. Thunderstorms and hail greeted staff on the 17th along with similar bird diversity as the preceding days, including lots of Red-eyed Vireos. A Northern Mockingbird was observed at the Tip on census.

A generally quiet morning on the 18th was punctuated by a Black-necked Stilt observed flying over Fox Pond during census. The bird was not seen in the area again, though it is of interest that two days later the first of a pair of nesting Black-necked Stilts were observed in Haldimand/Norfolk County to the northeast of Pelee Island. While the remainder of the third week in May was generally active, species diversity began to taper off by the 22nd, although vireos and flycatchers were still numerous, including a Yellow-throated Vireo observed at the Tip (21st). Warblers were less in evidence, with the exception of Canada and Wilson's Warbler, both of which continued to filter through the area.

Coverage during the final week of May was sporadic due to staff shortages and other factors, including a number of scheduled banding demonstrations. Monitoring continued to the end of the month, however, with small numbers of flycatchers, vireos and warblers recorded at the Point on a daily basis. Shorebirds were quite active at the Tip, with small groups of Black-bellied Plover, Ruddy Turnstone, and 13 Whimbrels observed on the 24th. Spring migration coverage concluded on May 31st.

A number of interesting sightings were documented at Fish Point this Spring. PIBO staff observed the following species in the count area during the official coverage period. Unusual species observed in the area by visitors and sightings by staff or other observers outside of the official count area (i.e. elsewhere on Pelee Island) are not included in this summary.

Migration Monitoring on Pelee Island in 2004
Pelee Island Bird Observatory (PIBO)

Sandhill Crane – four birds on May 6
 Piping Plover – probable male, unbanded, on April 24
 Black-necked Stilt – single bird on May 18
 White-eyed Vireo – single bird on May 3, two birds on May 13
 Yellow-throated Vireo – single bird on May 21
 Northern Mockingbird – single bird on May 17
 Golden-winged Warbler – single bird on May 2 and May 10
 Prairie Warbler – single bird on May 7
 Worm-eating Warbler – banded on May 6
 Prothonotary Warbler – male first observed April 19, remained in area two weeks
 Louisiana Waterthrush – single bird on May 11
 Kentucky Warbler – single bird May 5
 Connecticut Warbler – single bird May 7
 Yellow-breasted Chat – early arrival, April 23
 Summer Tanager – single male on May 2

Table 1. Spring Coverage Totals.

Description	Total
Coverage Period	Apr 13 – May 31
Days of Coverage	45
Netting Period	Apr 20 – May 28
Netting Days	30
Birds Captured	602
Net Hours	1078
Birds/Net Hour	.56
Species Captured	63
Retraps	43
Species Retraped	16
Species Documented	179

Table 2. Top Five Species Captured at Fish Point – Spring.

Species	Total
Red-winged Blackbird	60
White-throated Sparrow	57
Yellow-rumped Warbler	45
Yellow Warbler	40
Ruby-crowned Kinglet	34

Fall Migration Summary

Migration coverage resumed at Fish Point on August 6th and ran until November 10th for a total of ninety-four days of field coverage. In all, 170 species were documented in the area and 2849 birds were banded of seventy-eight species. Fish Point was very active for birds this Fall, with large numbers of migrants moving through the study site on a regular basis from late August to November.

It was quiet for birds during the second week of August, however. Many local species were still on territory with few active migrants about, with the exception of some early wanderers including Yellow Warbler, with 27 observed on Aug 6th, 34 Sanderlings (9th), and three Rose-breasted Grosbeak and 122 Purple Martins (10th). The following day produced a pair of Ruddy Turnstones at the Tip along with the first Least Flycatcher, Tennessee and Canada Warblers of the Fall. A small number of flycatchers were recorded on the 14th including an Olive-sided, 3 Yellow-bellied, 4 Least and 2 Traill's, as well as the Fall's first Northern Waterthrush.

Bird numbers increased in the third week of August, with five warbler species recorded on the 16th including the first Black-and-white Warblers and Ovenbirds of the Fall. Heavy thunderstorms moved through the area on the 18th, accompanied by warm temperatures and stiff south winds, which made for a few quiet days until the 21st. The first Chestnut-sided and Wilson's Warblers of the Fall were observed on the 19th, as well as firsts for Red-breasted Nuthatch, American Redstart and Bobolink (21st). A cold front moved through on the 21st, prompting a small number but good variety of birds into the area the following day. Sixty-four species were documented on the 22nd including ten warbler species. New Fall species at this time were an early Winter Wren, Veery, Blue-winged and Nashville Warblers. Eight warbler species were banded in small numbers on the 23rd.

There was a lull in activity from the 23rd to the 28th. Strong south winds and warm dawn temperatures (23° C) put a stop to the activity of the previous few days. The wind shifted to the northeast on the 29th, however, and the woods at Fish Point were teeming with songbirds the next day, including thirteen warbler and six flycatcher species. Sixty-seven species were recorded at the station on the 30th, with good numbers of Magnolia Warbler (17 DT) and American Redstart (13 DT) documented. The final day of the month was also busy, with Veerys (20 DT) and Magnolia Warblers (20 DT) making a strong showing.

After another active morning on September 1st the wind shifted back to the south until the 6th, with warm temperatures and humid conditions dominating throughout the week. Few migrants were about, although new arrivals continued to appear including Philadelphia Vireo and Blackpoll Warbler (1st), Palm and Bay-breasted Warbler (3rd), and the station's first Sharp-shinned Hawk (5th). Another cold front moved through on the 7th and staff were greeted with steady rain and moderate northwest winds that persisted through the day and into the morning of the 8th. The result was a dramatic increase in migrant numbers, with Magnolia Warblers and Swainson's Thrush leading the way, followed

closely by American Redstarts. Fifteen warbler species were recorded along with the first Gray-cheeked Thrush and Lincoln’s Sparrows of the Fall.

The morning of September 9th proved to be the busiest of the Fall to-date, with large numbers of warblers encountered in the area along with a good variety of other species. Magnolia Warbler (54 DT) and American Redstart (23 DT) were most active, but there were lots of flycatchers as well, including 12 Yellow-bellied Flycatcher. In all, 130 birds of seventeen species were banded on the day. September 9th was the first of many very active mornings throughout September and October. While just one measure of the level of activity, the monthly banding totals and capture rate at the station were very high, with 1310 birds banded in September (capture rate – 1.29 birds/net hour) and 1185 banded in October (1.94 birds/net hour). Additionally, the busiest banding days this Fall took place with less than half the available mist-nets in operation due to the volume of birds.

Table 3. Fall Coverage Totals.

Description	Total
Coverage Period	Aug 6 – Nov 9
Days of Coverage	94
Netting Period	Aug 18 – Nov 1
Netting Days	63
Birds Captured	2849
Net Hours	2191
Birds/Net Hour	1.3
Species Captured	78
Retraps	54
Species Retraped	15
Species Documented	170

Another active morning on the 10th included some hawk movements, with five raptor species recorded, along with good numbers of Swainson’s Thrush and other landbirds, including fifteen warbler species. Once again the wind shifted to the south and warm conditions remained in effect until the evening of the 16th. Migration activity was light at this time but new arrivals continued to filter through including Red-headed Woodpecker (10th) and Ruby-crowned Kinglet (13th).

Very strong northeast winds greeted the monitoring crew on the 17th along with another big push of migrants. Nineteen warbler species were documented, with large numbers of Blackpoll (50 DT) and Palm Warbler (26 DT) appearing for the first time this Fall. New species included a single Red Knot at the Tip, Northern Parula, Yellow-rumped and Pine Warbler, Scarlet Tanager and White-throated Sparrow. The next day was equally busy, with 128 birds banded of twenty-two species, including twelve banded Philadelphia Vireos. The weather continued to play a predictable role when light south winds returned to the area on the 20th and remained constant to the 25th, which effectively brought migrant activity to a near standstill. The only notable bird news at this time was the arrival of the first Brown Creeper on the 20th, a banded male Connecticut Warbler the same day, 5000 Double-crested Cormorants and 480 Great Black-backed Gulls (22nd) and a single American Golden Plover (24th).

The last week of September was one of the busiest periods of the Fall in terms of both the diversity and abundance of migrants recorded on the Point. The 26th was particularly active, with large numbers of Magnolia Warbler (67 DT) and Gray-cheeked Thrush (26 DT) as well as many others, including sixteen warbler species. Totals for the day included 138 birds banded of twenty-two species and 65 species recorded in the count area. Many new arrivals were documented at the station from the 26th to 30th including Yellow-bellied Sapsucker, Golden-crowned Kinglet, Orange-crowned Warbler, Rusty Blackbird and Purple Finch. Blue Jay numbers increased at this time, with 315 birds reported on the 28th. The 29th was also busy, with a season-high 72 species observed during the official count period and 147 birds banded of twenty-seven species. The majority of banded birds were White-throated Sparrow, Ruby-crowned Kinglet, Magnolia Warbler and Gray-cheeked Thrush.

After some days of moderate activity from October 1st – 4th, another big fallout occurred on the 5th. Large numbers of kinglets, warblers and sparrows were documented and 169 birds of twenty-eight species were banded – Yellow-rumped Warbler, Hermit Thrush and Ruby-crowned Kinglet were most numerous. Of fourteen warbler species recorded, Black-throated Blue Warblers were active (22 DT), including twelve banded. Fifteen warbler species were observed the next day, with a season-high for Orange-crowned Warbler, with five banded, followed by a single banded Connecticut Warbler (7th).

The second week of October was busy, with lots of kinglets of both species encountered on a daily basis as well as other typical late-Fall migrants – Blue Jay, Winter Wren, Hermit Thrush and Yellow-rumped Warbler. North winds and cool temperatures on the 10th brought on large numbers of birds, including nine sparrow species and the first Fox Sparrows of the Fall. Kinglets continued to appear in good numbers, with 95 Ruby-crowned Kinglets counted on the 12th (51 banded). Five hundred birds were banded at the station from October 7th – 13th with fewer than five mist-nets in operation on most days due to the number of birds in the netting area. A Northern Saw-whet Owl, banded on the 12th, was PIBO's first record for this species at the station.

Periods of heavy rain and near-gale force winds from the west put a halt to things by the 15th, with fewer than twenty species encountered on census that day under very wet conditions and strong winds from the southwest. Once again, however, a cold front moved through and brought the coolest dawn temperature of the Fall to-date (4° C) on the 17th, along with another hoard of kinglets! Golden-crowned Kinglets were most in evidence, with 161 birds counted on the 18th and 105 on the 20th, but Ruby-crowned Kinglets were also abundant, with 80 and 85 recorded on the same days, respectively.

The final week of October was a continuation of the preceding week, with kinglets and other late-Fall migrants active most days along with a few lingering warblers, including a late Magnolia banded on the 23rd. Diurnal migration activity increased at this time, with large numbers of blackbirds flying overhead in the morning along with increased numbers of American Robins and American Pipits, among others. American Crows made a dramatic showing on the 27th when 560 birds filtered down the point and drifted across the lake towards Kelley's Island. Other activity included a small passage of hawks on the

28th, with three dark-phase Rough-legged Hawks observed on the day, and a group of five Tundra Swans recorded on the last day of the month.

November 1st was another big day for Golden-crowned Kinglets, with 57 birds banded, as well as for blackbirds, with very large groups observed flying overhead throughout the morning. Red-winged Blackbirds (7100 DT) slightly outnumbered Common Grackles (5900 DT). Red-breasted Mergansers reached a Fall maximum on the 3rd, with 2650 birds recorded on the morning census. Very strong west winds on the 5th coincided with a big influx of Song Sparrows (21 DT) and the Fall's first American Tree Sparrows. Fox Pond remained active for sparrows the following day, and four very late Tree Swallows were observed feeding over the pond at dawn. The final days of Fall coverage at the station were typical for the time of year, with good numbers of Red-breasted Merganser, Bufflehead, and Common Goldeneye encountered on the lake and a variety of songbirds still filtering through the woods on their journey south.

Table 4. Top Five Species Captured at Fish Point – Fall.

Species	Total
Swainson's Thrush	311
Golden-crowned Kinglet	307
Magnolia Warbler	305
Ruby-crowned Kinglet	291
American Redstart	133

Changes To The Study Protocol in 2004

Few changes were made to PIBO's migration monitoring field protocol in 2004. The study methods adopted in 2003 – the inaugural year of the project – were carried out in a similar manner this year and there was a high degree of continuity in the methods used to collect data. The official count area remained the same, as did the start-time, duration and route of the daily census. The number of staff at the station was fairly consist, although PIBO did experience a staff shortage in the Spring, and the coverage periods were comparable from year to year.

The only exception was the relocation of four of ten mist-nets used during the 2003 study. Based on the results of 2003, and with a better understanding of the site, the nets were moved at the start of this season in order to optimize the banding operation. The new set-up vastly improved both the efficiency of the operation as well as the average capture rate of birds. The locations of the ten mist nets used in 2004 are now fixed and will not be altered in the future.

Recommendations for 2005

With two years now of data collected at the Fish Point study site, the Pelee Island Bird Observatory is confidant that the present monitoring methods are well suited to the site and will require few, if any major changes in the future. Again, with one exception. PIBO

recommends that a third full-time staff member should be hired for the Spring and Fall migration seasons and that three staff should be considered the minimum number required to operate the station effectively. This individual will conduct the daily walking census and the majority of visual observations of migrants at the station, which will enable two staff to conduct the mist-netting operation without interruption.

Table 5. Top Ten Species Captured in 2004.

Species	Total
Magnolia Warbler	337
Ruby-crowned Kinglet	325
Swainson's Thrush	314
Golden-crowned Kinglet	312
'Myrtle' Warbler	156
Hermit Thrush	143
American Redstart	141
White-throated Sparrow	137
Black-thr. Blue Warbler	104
Gray-cheeked Thrush	100

Table 6. Summary of 2004 Banding Totals.

Family	Banded	Species	%
Flycatchers	107	6	3
Vireos	134	5	4
Wrens	70	4	2
Kinglets	637	2	18
Thrushes	656	6	18
Warblers	1279	28	37
Sparrows	231	10	7
Blackbirds	89	5	3
Other	299	21	8

Migration Monitoring on Pelee Island in 2004
Pelee Island Bird Observatory (PIBO)

Table 7. Birds Captured at Fish Point in 2004.

Species	Total	Species	Total
Sharp-shinned Hawk	8	Nashville Warbler	57
Black-billed Cuckoo	2	Yellow Warbler	45
Yellow-billed Cuckoo	1	Chestnut-sided Warbler	45
Northern Saw-whet Owl	1	Magnolia Warbler	337
Ruby-thr. Hummingbird	4	Cape May Warbler	5
Downy Woodpecker	12	Black-thr. Blue Warbler	104
Yellow-bell. Sapsucker	1	Blackburnian Warbler	5
“Yellow-shafted” Flicker	1	“Myrtle” Warbler	156
Eastern Wood-Pewee	3	Black-thr.Green Warbler	14
Yellow-bell. Flycatcher	58	‘Western’ Palm Warbler	14
“Traill’s” Flycatcher	23	Bay-breasted Warbler	10
Least Flycatcher	18	Blackpoll Warbler	55
Eastern Phoebe	3	Worm-eating Warbler	1
Eastern Kingbird	2	Black & white Warbler	38
Red-eyed Vireo	71	American Redstart	141
Warbling Vireo	3	Ovenbird	82
Philadelphia Vireo	31	Northern Waterthrush	35
White-eyed Vireo	1	Connecticut Warbler	2
Blue-headed Vireo	28	Mourning Warbler	8
Blue Jay	8	Common Yellowthroat	35
Black-capped Chickadee	16	Wilson’s Warbler	33
Red-breasted Nuthatch	2	Canada Warbler	24
Brown Creeper	30	Yellow-breasted Chat	3
Carolina Wren	5	Northern Cardinal	9
House Wren	16	Rose-breasted Grosbeak	13
Winter Wren	48	Indigo Bunting	4
Marsh Wren	1	Eastern Towhee	1
Golden-crowned Kinglet	312	Chipping Sparrow	1
Ruby-crowned Kinglet	325	Field Sparrow	3
Blue-gray Gnatcatcher	3	White-throated Sparrow	137
American Robin	11	E. White-cr. Sparrow	6
Wood Thrush	18	Fox Sparrow	3
Veery	67	Song Sparrow	5
Swainson’s Thrush	314	Lincoln’s Sparrow	10
Gray-cheeked Thrush	100	Swamp Sparrow	31
Hermit Thrush	143	“Slate-coloured” Junco	34
Gray Catbird	43	Brown-headed Cowbird	1
Brown Thrasher	2	Red-winged Blackbird	60
Cedar Waxwing	2	Common Grackle	18
Northern Parula	2	“Baltimore” Oriole	9
Orange-crowned Warbler	17	Orchard Oriole	1
Tennessee Warbler	16	Purple Finch	1
Blue-winged Warbler	9	American Goldfinch	10
Golden-winged Warbler	1	Total	3451
		Species & Forms	87

Table 8. Combined Spring and Fall Coverage Totals

Description	2004	2003
Coverage Period	Apr 13-May 31 Aug 6-Nov 10	Apr 7-Jun 4 Aug 5-Nov 14
Days of Coverage	139	151
Netting Period	Apr 20-May 28 Aug 18-Nov 1	Apr 24-Jun 4 Aug 5-Nov 4
Netting Days	93	105
Birds Captured	3451	3291
Species Captured	87	86
Net Hours	3269	4530
Birds/Net Hour	1.06	.73
Retraps	97	159
Species Retraped	22	26
Species Documented	193	192

SECTION THREE

Additional Projects

While migration research was PIBO's main focus in 2004, the Observatory advanced its mandate to study the breeding birds of Pelee Island through involvement with a study commissioned by the Nature Conservancy of Canada (NCC). PIBO staff conducted a nesting bird survey during the summer months on property under the stewardship of the NCC. The fieldwork in 2004 represents the first year of a long-term project that will examine a range of subjects concerning the breeding biology of Carolinian nesting birds.

PIBO conducted a preliminary census in 2004 at Meadowlark Farms, Pelee Island's recently established organic farm project, and plans are in place to initiate a long-term study at this location. The Observatory is seeking permission from Ontario Parks – Ministry of Natural Resources, and other property owners, to conduct similar studies at additional sites in 2005.

Staff also collected data at various point-count sites on the island for submission to the Ontario Breeding Bird Atlas project.

Staff and Volunteers

Two staff operated the migration station on a daily basis in 2004 from April 13th to June 1st in the Spring and August 6th to November 10th in the Fall. The field supervisor – a paid position – was employed in the field on 135 days. The field supervisor was responsible for the daily field research, particularly the mist-netting/bird-banding component of the operation, and was required on-site at all times when birds were being captured.

Interns and volunteers contributed 113 days to the project, including two experienced banders who volunteered two weeks in the Spring and stayed at a local B&B. The field assistant (intern) was responsible for conducting the daily census and additional visual

observations, as well as assisting the banding operation. An additional assistant was paid for seven days. In all, 255 person-days of fieldwork were devoted to the study in 2004.

Volunteers helped the project in many other ways including assistance with administrative duties, supplying equipment and other materials to the project, help with fundraising efforts, and many other tasks both large and small.

Education and Community Outreach

PIBO's educational programs grew substantially in 2004. In all, more than 140 students visited the site in May for bird banding demonstrations, along with a number of other groups, including members of the Ohio Nature Conservancy. Visitors had the opportunity to observe a variety of songbirds in-the-hand during the banding demonstrations and learned about the biology of birds and some of the physical attributes that enable them to accomplish their lengthy journeys.

A keen group of kids from Pelee Island Public School were back again for a visit this year as well. The students learned about songbird migration and about the importance of their community, and places like Pelee Island, as a vital stopover location for birds during their annual migrations. The field station at Fish Point was open to the public every day and visitors were encouraged to stop-by the mist-netting/bird banding area during all hours of operation. Staff also fielded questions from park visitors during informal encounters while conducting the daily walking census.

PIBO staff participated in Pelee Island's annual Spring Song Festival in early May. Events included a Baillie Birdathon fundraiser and an organized Big Day bird race, with teams from as far away as Cuba competing for the prestigious Botham Cup! The Observatory also became involved with the Pelee Island Stewardship Committee in 2004. The committee was formed to address a wide range of conservation issues on the island and to establish a forum where the concerns and recommendations of the community can be heard. Lastly, PIBO became a member of the Tourist Operators of Pelee Island association and will work with this group to encourage visitors to the island. PIBO initiatives will include articles for birding magazines and other promotional material that highlight the exceptional birding opportunities on Pelee Island.

PIBO will continue to develop a wide range of programs with the Pelee Island Heritage Centre designed to encourage community participation in local and international bird conservation initiatives, provide educational programs for children and adults, attract visitors to Pelee Island, and promote the importance of the island's natural heritage.

Funding and Budget

Generous funding support for the 2004 migration monitoring study was provided by a number of organizations and individuals (see Acknowledgments). This support covered all operation costs associated with the project in 2004 with the exception of volunteer contributions. Some unanticipated costs were encountered in 2004, yet overall expenses did not exceed the projected operating budget for the work.

SECTION FOUR

Other News and Developments

PIBO is pleased to report its acquisition in 2004 of a one-acre property on Pelee Island. The land is ideally suited for a permanent field station and office for the organization and is located on property adjacent to the Fish Point Provincial Nature Reserve, less than five-minutes from PIBO's research station in the park proper. This wonderful development will help to ensure the success of PIBO's long-term goals on the island and will pave the way for a host of exciting new developments in the near future.

Another interesting news update concerns last year's foreign recovery of a Ruby-crowned Kinglet at the migration station. Foreign recoveries are birds captured at a banding station that have been banded previously at another location. This individual, a young female captured at Fish Point on May 3rd, 2003, was originally banded at the Patuxent Wildlife Research Centre in Laurel, Maryland on October 7th, 2002. A second foreign recovery at the station was encountered in May 2004 – a Common Grackle – but details for this bird are not available at the present time.

Future Plans

The Pelee Island Bird Observatory and Pelee Island Heritage Centre are gearing up for another productive year of research on Pelee Island in 2005. The migration monitoring study at Fish Point will enter its third year of operation in early April, and plans are in place for a number of comprehensive breeding bird studies that will get underway in May. Funding for the Spring has been secured and PIBO's staff situation is in good order, with last year's Fall intern returning for the entire Spring and Fall field seasons.

Other developments in 2005 will include PIBO's formal admission as a member of the Canadian Migration Monitoring Network (CMMN). Two years of data have now been collected at the Fish Point study site (a requirement of the CMMN before it considers a station for inclusion in the network), and PIBO is confident the monitoring operation will meet the necessary standards for acceptance.

The Pelee Island Heritage Centre received generous funding support this year that will be put towards the creation of an interactive display about PIBO at the Heritage Centre Museum. The display will highlight the research objectives of the Pelee Island Bird Observatory and present information about birds and bird conservation through photographs and other informative material.

PIBO will pursue many additional goals in 2005. Foremost will be the ongoing development and implementation of new field studies and research initiatives on the island. PIBO's community outreach and educational programs will grow in 2005 as well, along with other plans including a membership drive and PIBO newsletter, the preparation of a three-year development plan for the Observatory, improving and updating PIBO's website (www.peleeisland.org or www.pibo.ca), along with many other exciting projects.

ACKNOWLEDGEMENTS

The success of this year's migration monitoring study and the positive new developments at PIBO in 2004 were made possible due to the unflagging enthusiasm and generous support of many organizations and individuals. The Pelee Island Bird Observatory and Pelee Island Heritage Centre would like to thank the following for this critically important help.

- ❖ Margaret Atwood and Graeme Gibson, the Elder, for their valuable support of the project.
- ❖ The K.M. Hunter Charitable Foundation for its generous financial assistance.
- ❖ The McLean Foundation for its outstanding financial support.
- ❖ The Nature Conservancy of Canada for covering the costs of the Breeding Bird Census work conducted on the island this summer.
- ❖ T.D. Friends of the Environment Fund for its valuable financial support in 2004.
- ❖ Participants in the 2004 Baillie Birdathon fundraiser.
- ❖ Keith Regan for his generous help with staff accommodations.
- ❖ Louise Laurin and Bev McBride at the Bird Banding Office.
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- ❖ Peter Coo, Dawn Miles and Dean Ware for their help in the field.
- ❖ Jean-Guy Moya for his help with the PIBO website.
- ❖ Ontario Parks/Ministry of Natural Resources for granting permission to conduct the study at Fish Point Provincial Nature Reserve.
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APPENDICES

Appendix One – Species Documented at Fish Point in 2004

Appendix Two – 2004 Spring Daily Totals

Appendix Three – 2004 Fall Daily Totals

Appendix Four – Birds Banded at Fish Point in 2003/2004

Appendix Five – Breeding Bird Census – Pelee Island - 2004

Migration Monitoring on Pelee Island in 2004
Pelee Island Bird Observatory (PIBO)

APPENDIX ONE – SPECIES DOCUMENTED AT FISH POINT IN 2004

Common Loon	Mourning Dove	Tennessee Warbler
Horned Grebe	Rock Dove	Blue-winged Warbler
Double-crested Cormorant	Yellow-billed Cuckoo	Golden-winged Warbler
Great Blue Heron	Black-billed Cuckoo	Nashville Warbler
Great Egret	Great Horned Owl	Yellow Warbler
Green Heron	Eastern Screech-Owl	Chestnut-sided Warbler
Tundra Swan	Northern Saw-whet Owl	Magnolia Warbler
Canada Goose	Whip-poor-will	Cape May Warbler
Wood Duck	Common Nighthawk	Black-throated Blue Warbler
Mallard	Chimney Swift	Blackburnian Warbler
American Widgeon	Ruby-throated Hummingbird	Yellow-rumped Warbler
Northern Shoveler	Belted Kingfisher	Black-thr. Green Warbler
Blue-winged Teal	Red-headed Woodpecker	Prairie Warbler
Green-winged Teal	Red-bellied Woodpecker	Palm Warbler
Greater Scaup	Downy Woodpecker	Pine Warbler
Lesser Scaup	Yellow-bellied Sapsucker	Bay-breasted Warbler
Common Goldeneye	Northern Flicker	Blackpoll Warbler
Bufflehead	Olive-sided Flycatcher	Worm-eating Warbler
Hooded Merganser	Eastern Wood-Pewee	Prothonotary Warbler
Common Merganser	Yellow-bellied Flycatcher	Black-and-white Warbler
Red-breasted Merganser	Willow Flycatcher	American Redstart
Turkey Vulture	Alder Flycatcher	Ovenbird
Northern Harrier	Least Flycatcher	Northern Waterthrush
Sharp-shinned Hawk	Eastern Phoebe	Louisiana Waterthrush
Cooper's Hawk	Great Crested Flycatcher	Kentucky Warbler
Northern Goshawk	Eastern Kingbird	Connecticut Warbler
Broad-winged Hawk	Red-eyed Vireo	Mourning Warbler
Red-tailed Hawk	Warbling Vireo	Common Yellowthroat
Rough-legged Hawk	Philadelphia Vireo	Wilson's Warbler
Bald Eagle	White-eyed Vireo	Canada Warbler
Osprey	Yellow-throated Vireo	Hooded Warbler
Merlin	Blue-headed Vireo	Yellow-breasted Chat
American Kestrel	Blue Jay	Summer Tanager
Peregrine Falcon	American Crow	Scarlet Tanager
Ring-necked Pheasant	Horned Lark	Northern Cardinal
Wild Turkey	Purple Martin	Rose-breasted Grosbeak
Virginia Rail	N. Rough-winged Swallow	Indigo Bunting
Sora	Bank Swallow	Eastern Towhee
Sandhill Crane	Tree Swallow	American Tree Sparrow
Black-bellied Plover	Barn Swallow	Field Sparrow
American Golden-Plover	Black-capped Chickadee	Chipping Sparrow
Piping Plover	Red-breasted Nuthatch	Savannah Sparrow
Killdeer	Brown Creeper	Vesper Sparrow
Black-necked Stilt	Carolina Wren	White-throated Sparrow
Greater Yellowlegs	House Wren	E. White-crowned Sparrow
Lesser Yellowlegs	Winter Wren	Fox Sparrow
Solitary Sandpiper	Marsh Wren	Song Sparrow
Spotted Sandpiper	Golden-crowned Kinglet	Lincoln's Sparrow
Whimbrel	Ruby-crowned Kinglet	Swamp Sparrow
Ruddy Turnstone	Blue-gray Gnatcatcher	Northern Junco
Red Knot	Eastern Bluebird	Eastern Meadowlark
Sanderling	American Robin	Bobolink
Dunlin	Wood Thrush	Brown-headed Cowbird
Semipalmated Sandpiper	Veery	Red-winged Blackbird
Least Sandpiper	Swainson's Thrush	Rusty Blackbird
Short-billed Dowitcher	Gray-cheeked Thrush	Common Grackle
American Woodcock	Hermit Thrush	Northern Oriole
Common Snipe	Grey Catbird	Orchard Oriole
Bonaparte's Gull	Northern Mockingbird	Purple Finch
Ring-billed Gull	Brown Thrasher	House Finch
Herring Gull	European Starling	Pine Siskin
Great Black-backed Gull	American Pipit	American Goldfinch
Caspian Tern	Cedar Waxwing	House Sparrow
Common Tern	Northern Parula	
Forster's Tern	Orange-crowned Warbler	193 species

Migration Monitoring on Pelee Island in 2004
Pelee Island Bird Observatory (PIBO)

APPENDIX TWO – 2004 SPRING DAILY TOTALS

Date	B	R	NH	BNH	CEN	DT	7 Day		
APR	13				38	47	B	0	
	14				36	44	R	0	
	15				35	41	NH	0	
	16				38	42	BNH	0	
	17				39	44	CEN	42	
	18				42	47	DT	47	
	19				39	43			
MAY	20	7	1	55	0.13	35	40	B	90
	21	10	3	60	0.17	37	49	R	8
	22	24	2	60	0.40	41	51	NH	362
	23	10		60	0.17	33	47	BNH	0.25
	24	11		60	0.18	40	52	CEN	41
	25	13		7	1.86	40	52	DT	54
	26	15	2	60	0.25	39	54		
	27	24	1	48	0.50	35	44	B	134
	28	23	2	60	0.38	43	48	R	6
	29	18		60	0.30	41	60	NH	313
	30	9		40	0.23	40	59	BNH	0.43
	1	11		60	0.18	54	62	CEN	67
	2					40	81	DT	81
	3	49	3	45	1.09	67	80		
4	7		36	0.19	50	64	B	209	
5	11	2	54	0.21	55	74	R	5	
6	21	1	50	0.42	52	68	NH	240	
7	64		20	3.20	67	85	BNH	0.87	
8	24		28	0.86	52	70	CEN	73	
9	33	2	26	1.27	57	74	DT	85	
10	49		26	1.88	73	84			
11	38	4	21	1.81	72	80	B	85	
12	10		6	1.67	67	73	R	9	
13	11	1	25	0.44	70	80	NH	78	
14	4		4	1.00			BNH	1.09	
15							CEN	72	
16	22	4	22	1.00	61	76	DT	80	
17					62	65			
18	10	2	7	1.43	61	66	B	84	
19					65	65	R	13	
20	41	6	34	1.21	50	50	NH	64	
21					63	63	BNH	1.31	
22					53	53	CEN	65	
23					46	46	DT	66	
24	33	5	23	1.43	47	55			
25					46	46	B	0	
26					40	40	R	0	
27					44	44	NH	0	
28							BNH	0	
29					38	38	CEN	46	
30							DT	46	
31					41	41			

B BANDED Number of new birds banded
R RETRAP Number of recaptures of birds already banded
NH NET HOURS Hours of operation of ten mist nets (i.e. 10 nets for 6 hours - 60 net hours)
BNH BIRD/NET HOUR Average number of birds captured per net hour
CEN CENSUS Species recorded during 90 minute walking census
DT DT Species documented in the official count area during six hour census period

Migration Monitoring on Pelee Island in 2004
Pelee Island Bird Observatory (PIBO)

APPENDIX THREE – 2004 FALL DAILY TOTALS

Date	B	R	NH	BNH	CEN	DT	7 Day
AUG							
5							B 0
6	0	0	0	0.00	36	40	R 0
7	0	0	0	0.00	39	42	NH 0
8	0	0	0	0.00	35	35	BNH 0
9	0	0	0	0.00	38	38	CEN 39
10	0	0	0	0.00	39	41	DT 42
11	0	0	0	0.00	32	32	
12	0	0	0	0.00	44	46	B 0
13	0	0	0	0.00	42	41	R 0
14	0	0	0	0.00	41	46	NH 0
15	0	0	0	0.00	44	44	BNH 0
16	0	0	0	0.00	51	53	CEN 51
17	0	0	0	0.00	35	38	DT 53
18	10	1	59	0.17	36	44	
19	20	2	53	0.34	39	53	B 136
20	2	0	10	0.21	37	39	R 6
21	33	2	55	0.56	47	56	NH 332
22	29	0	58	0.48	51	64	BNH 0.4
23	28	0	52	0.54	49	56	CEN 49
24							DT 64
25	14	1	45	0.31	47	53	
26	6	0	40	0.15	34	42	B 198
27	4	0	40	0.11	40	51	R 0
28	0	0	5	0.00	32	37	NH 213
29	12	0	14	0.86	49	58	BNH 0.9
30	45	0	14	3.14	56	67	CEN 44
31	73	0	50	1.42	40	58	DT 55
SEP							
1	58	0	50	1.14	50	67	
2	44	1	58	0.74	31	52	B 144
3	10	0	27	0.33	44	50	R 2
4	13	1	18	0.72	44	52	NH 155
5	13	0	12	0.92	29	36	BNH 0.9
6	0	0	0	0.00	16	18	CEN 44
7	5	0	14	0.36	27	31	DT 55
8	59	0	26	2.27	35	55	
9	130	1	28	4.18	38	51	B 350
10	81	1	29	2.76	49	58	R 3
11	21	0	24	0.88	37	45	NH 262
12	25	0	55	0.45	36	45	BNH 1.3
13	41	1	58	0.71	39	47	CEN 49
14	50	0	60	0.82	35	45	DT 58
15	2	0	8	0.25	15	24	
16	7	0	32	0.22	22	26	B 316
17	62	0	30	2.07	41	52	R 14
18	128	0	33	3.73	36	53	NH 264
19	57	1	46	1.24	33	48	BNH 1.2
20	41	11	58	0.69	28	47	CEN 41
21	10	1	35	0.29	36	42	DT 53
22	11	1	30	0.37	30	36	
23	30	1	34	0.82	44	59	B 427
24	11	1	50	0.22	32	42	R 4
25	39	2	21	1.33	43	50	NH 267
26	138	0	52	2.31	50	65	BNH 1.6

Date	B	R	NH	BNH	CEN	DT	7 Day
AUG							
27	44	0	39	1.13	57	61	CEN 57
28	19	0	37	0.51	28	43	DT 72
29	146	0	34	4.21	57	72	
30	16	1	19	0.84	51	56	B 424
OCT							
1	88	5	39	2.23	34	51	R 12
2	0	0	0	0.00	14	24	NH 264
3	66	1	52	1.21	42	58	BNH 1.61
4	20	2	50	0.41	21	36	CEN 51
5	169	1	48	3.48	44	57	DT 58
6	65	2	56	1.16	41	57	
7	43	0	60	0.72	41	52	B 497
8	46	1	53	0.87	25	41	R 5
9	0	0	0	0.00	37	38	NH 234
10	139	1	48	2.89	40	54	BNH 2.12
11	119	2	36	3.31	43	56	CEN 43
12	128	1	27	4.74	33	56	DT 56
13	22	0	10	2.20	40	46	
14	10	2	5	2.00	23	29	B 94
15	0	0	0	0.00	13	13	R 2
16	0	0	0	0.00	23	25	NH 24
17	0	0	0	0.00	30	32	BNH 3.92
18	82	0	17	4.82	39	51	CEN 39
19	2	0	2	1.00	37	46	DT 51
20	0	0	0	0.00	28	35	
21	17		4	4.25	32	34	B 186
22							R 1
23	24	0	9	2.67	35	41	NH 134
24	37	1	21	1.76	28	40	BNH 1.86
25	50	0	44	1.13	45	54	CEN 45
26	55	3	47	1.17	32	42	DT 54
27	3	0	9	0.33	43	44	
28	0	0	0	0.00	43	47	B 78
29							R 2
30							NH 42
31	0	0	0	0.00	32	32	BNH 1.86
NOV							
1	78	2	42	1.86	32	50	CEN 43
2	0	0	0	0.00	21	21	DT 50
3	0	0	0	0.00	34	36	
4	0	0	0	0.00	34	34	B 0
5	0	0	0	0.00	49	51	R 0
6	0	0	0	0.00	30	30	NH 0
7	0	0	0	0.00	25	26	BNH 0
8	0	0	0	0.00	24	30	CEN 49
9							DT 51
10							

AUG

276

6

495

0.56

56

67

SEP

1310

24

1017

1.29

57

72

OCT

1185

19

637

1.94

45

58

NOV

78

2

42

1.86

49

51

TOTAL

2849

54

2191

1.30

57

72

Migration Monitoring on Pelee Island in 2004
Pelee Island Bird Observatory (PIBO)

APPENDIX FOUR – BIRDS BANDED AT FISH POINT IN 2003 AND 2004

Species	TOT	SP03	SP04	FA03	FA04	Species	TOT	SP03	SP04	FA03	FA04
Sharp-shinned Hawk	20			<u>12</u>	8	Yellow Warbler	115	<u>60</u>	40	10	5
Yellow-billed Cuckoo	4	1	1	<u>2</u>		Chestnut-sided Warbler	90	14	4	31	<u>41</u>
Black-billed Cuckoo	4	1	1	1	1	Magnolia Warbler	683	112	32	223	<u>305</u>
Northern Saw-whet Owl	1				1	Cape May Warbler	11		1	<u>6</u>	4
Eastern Screech Owl	1			1		Black-throated Blue Warbler	164	8	2	52	<u>102</u>
Ruby-throated Hummingbird	35	<u>26</u>	2	5	2	Blackburnian Warbler	14	<u>7</u>		2	5
Downy Woodpecker	24	2	3	<u>12</u>	9	Yellow-rumped Warbler	287	9	45	<u>122</u>	111
Yellow-bellied Sapsucker	1				1	Black-thr. Green Warbler	24	7	1	3	<u>13</u>
Northern Flicker	3			<u>2</u>	1	Palm Warbler	16	1	<u>9</u>	1	5
Eastern Wood-Pewee	10	<u>6</u>		1	3	Bay-breasted Warbler	16	3	2	3	<u>8</u>
Yellow-bellied Flycatcher	97	15	1	24	<u>57</u>	Blackpoll Warbler	77	5	3	17	<u>52</u>
"Traill's" Flycatcher	61	19	3	19	<u>20</u>	Worm-eating warbler	1		1		
Least Flycatcher	69	<u>35</u>	9	16	9	Black-and-white Warbler	77	8	5	31	<u>33</u>
Eastern Phoebe	3				3	American Redstart	300	41	8	118	<u>133</u>
Great Crested Flycatcher	1			1		Ovenbird	155	25	13	48	<u>69</u>
Eastern Kingbird	2		1		1	Northern Waterthrush	78	23	11	20	<u>24</u>
Red-eyed Vireo	119	6	2	42	<u>69</u>	Connecticut Warbler	5	1		2	2
Warbling Vireo	7	2		2	<u>3</u>	Mourning Warbler	24	7	2	<u>9</u>	6
Philadelphia Vireo	46	5	1	10	<u>30</u>	Common Yellowthroat	78	<u>22</u>	20	21	15
White-eyed Vireo	2	1	1			Wilson's Warbler	61	13	14	15	<u>19</u>
Blue-headed Vireo	45	5	1	12	<u>27</u>	Canada Warbler	68	<u>30</u>	6	14	18
Blue Jay	21	5		8	8	Yellow-breasted Chat	4	1	<u>3</u>		
Black-capped Chickadee	37	10	2	11	<u>14</u>	Summer Tanager	1	1			
Red-breasted Nuthatch	3			1	2	Scarlet Tanager	3	<u>2</u>		1	
White-breasted Nuthatch	1			1		Northern Cardinal	31	<u>14</u>	7	8	2
Brown Creeper	43			13	<u>30</u>	Rose-breasted Grosbeak	18	1	<u>9</u>	4	4
Carolina Wren	18	1		<u>12</u>	5	Indigo Bunting	24	9	2	<u>11</u>	2
House Wren	38	6	5	<u>16</u>	11	Eastern Towhee	2		1	1	
Winter Wren	62		3	14	<u>45</u>	Field Sparrow	3		<u>2</u>		1
Marsh Wren	2	1			1	Chipping Sparrow	4	<u>3</u>			1
Golden-crowned Kinglet	463			151	<u>312</u>	White-throated Sparrow	255	67	57	51	<u>80</u>
Ruby-crowned Kinglet	459	50	34	84	<u>291</u>	White-crowned Sparrow	12	2	2	4	4
Blue-gray Gnatcatcher	4		1	1	<u>2</u>	Fox Sparrow	4			2	<u>3</u>
American Robin	17	5	<u>6</u>	1	5	Song Sparrow	17			<u>12</u>	5
Wood Thrush	30	1	7	11	11	Lincoln's Sparrow	28	<u>10</u>	4	8	6
Veery	146	20	4	59	<u>63</u>	Swamp Sparrow	48	7	<u>24</u>	10	7
Swainson's Thrush	626	35	3	277	<u>311</u>	Dark-eyed Junco	58			24	<u>34</u>
Grey-cheeked Thrush	156	8	1	48	<u>99</u>	Brown-headed Cowbird	6	5	1		
Hermit Thrush	284	13	11	128	<u>132</u>	Red-winged Blackbird	94	31	<u>60</u>	3	
Grey Catbird	108	30	25	<u>34</u>	18	Common Grackle	42	<u>19</u>	11	5	7
Brown Thrasher	4			2	2	Baltimore Oriole	24	<u>15</u>	7		2
Cedar Waxwing	4			2	2	Orchard Oriole	6	<u>5</u>	1		
Northern Parula	4			2	2	Purple Finch	2			1	1
Orange-crowned Warbler	27	3	2	7	<u>15</u>	American Goldfinch	24	6	2	8	8
Tennessee Warbler	101	5	8	<u>80</u>	8	Total	6483	940	602	2092	2849
Blue-winged Warbler	13	2	<u>5</u>	2	4	Species	93	67	63	77	78
Golden-winged Warbler	2	1	1			Net Hours	7799	1305	1078	3225	2191
Nashville Warbler	147	26	16	<u>64</u>	41	Birds/Net Hour	0.82	0.86	0.56	0.67	1.30

SP03 – Spring 2003, SP04 – Spring 2004, FA03 – Fall 2003, FA04 – Fall 2004

APPENDIX FIVE – 2004 BREEDING BIRD CENSUS

Breeding Bird Census Pelee Island – 2004

A Report by the Pelee Island Bird Observatory
and Pelee Island Heritage Centre for the
Nature Conservancy of Canada

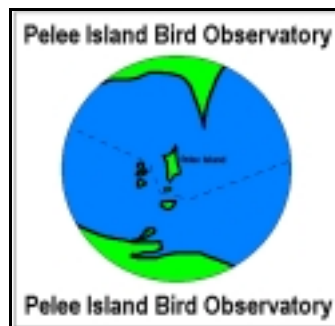
Graeme C. Gibson

Pelee Island Bird Observatory (PIBO)

www.peleeisland.org

www.pibo.ca

General Delivery – Pelee Island
Ontario – Canada – N0R 1M0



December 2004

Breeding Bird Census – Pelee Island – 2004

A Report by the Pelee Island Bird Observatory and
the Pelee Island Heritage Centre for the
Nature Conservancy of Canada

Synopsis: The Pelee Island Bird Observatory (PIBO) and Pelee Island Heritage Centre (PIHC) conducted a breeding bird survey in 2004 on property under the stewardship of the Nature Conservancy of Canada. The goal of the study was to document the diversity and abundance of breeding birds holding territories in a variety of habitats ranging from mature deciduous forest to an early wetland formation. Additional objectives included 1) identifying species in the area designated as nationally or provincially endangered, threatened, or of concern 2) collecting preliminary data for further studies designed to monitor changes in breeding bird diversity and abundance in response to habitat succession.

Study Location: 118 North Shore Road, Pelee Island, Ontario, Canada N0R 1M0

UTM: 17 361000 4621000

Habitat description: Three general habitats including 1) mature broad-leaf forest with younger mixed oak associations in the northeast section of the census area 2) recently reclaimed pasture and a new pond (2002) in the south central area 3) an actively farmed soybean field in the southwest section. The census area is rectangular in shape and approximately 20 hectares (1000m x 200m).

Census period: 4 June to 3 July, 2004.

Number of visits: Six (4, 6, 9, 12, 24 June; 3 July).

Field hours: Eighteen

Objectives: 1) Identify bird species holding territories in the census area 2) Estimate the number of territories for each species 3) Generate baseline data for further studies designed to monitor changes in breeding bird populations as a result of habitat succession.

Method: The study area was surveyed on six mornings during the census period. A single observer walked the entire count area and plotted all bird activity on a grid map of the site. The activity from each visit was transposed onto individual species maps and then territories were estimated based on the following:

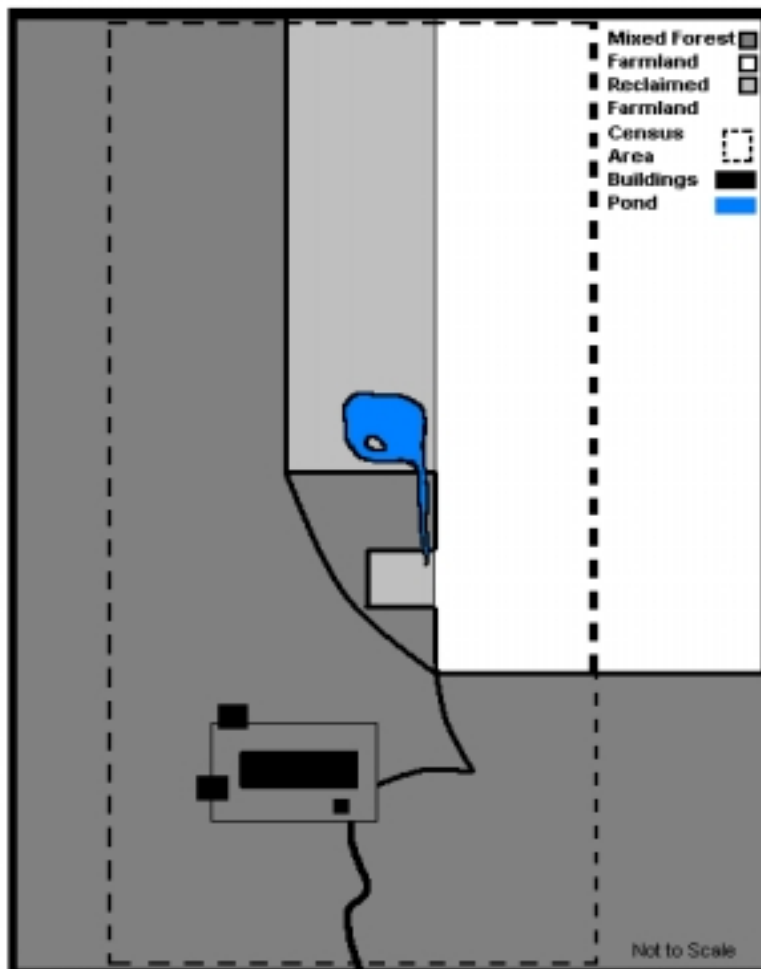
Confirmed and probable territories were designated based on a) singing males seen or heard in the same location on more than two visits to the site b) adults carrying nesting

material, food, fecal sacs c) mating displays, copulation d) nests and recently fledged young.

Possible territories were designated based on a) birds encountered in suitable breeding habitat and demonstrating some breeding behaviour on fewer than three visits or b) early nesting species known to breed in the area but not documented during the study period.

Visitors were birds encountered in the area (including fly-overs) that showed no evidence of breeding.

Breeding Bird Census Plot 118 North Shore Road – Pelee Island – Ontario



Migration Monitoring on Pelee Island in 2004
Pelee Island Bird Observatory (PIBO)

Results: Breeding status, estimated territories and visiting birds documented during the census period:

Species	Territories		
Confirmed/Probable		Possible	
Red-winged Blackbird	19	American Woodcock	
Common Grackle	9	Eastern Screech-Owl	
American Robin	6	Ruby-throated Hummingbird	
Yellow Warbler	6	Red-eyed Vireo	
Tree Swallow	4	Warbling Vireo	
European Starling	4	Gray Catbird	
Northern Cardinal	4	Brown Thrasher	
American Goldfinch	4	Eastern Meadowlark	
Indigo Bunting	3		
Brown-headed Cowbird	3	Visitors	
Mourning Dove	2		
Downy Woodpecker	2	Double-crested Cormorant	
Northern Flicker	2	Least Bittern	
Horned Lark	2	Great Blue Heron	
Black-capped Chickadee	2	Turkey Vulture	
Carolina Wren	2	Mallard	
House Wren	2	Sharp-shinned Hawk	
Cedar Waxwing	2	Cooper's Hawk	
Northern Oriole	2	Ring-billed Gull	
Ring-necked Pheasant	1	Herring Gull	
Killdeer	1	Chimney Swift	
Spotted Sandpiper	1	Purple Martin	
Black-billed Cuckoo	1	Barn Swallow	
Yellow-billed Cuckoo	1	House Finch	
Red-bellied Woodpecker	1	House Sparrow	
Eastern Wood-Pewee	1		
Great Crested Flycatcher	1		
Eastern Kingbird	1		
Blue Jay	1		
American Crow	1		
Song Sparrow	1		
Territories	92		
Species	31	Total Species	53

Remarks: The breeding study was conducted following the general protocol of the Breeding Bird Census (BBC). The BBC is well suited for long term studies designed to monitor changes in breeding bird diversity and abundance. When combined with comprehensive vegetation analysis, the BBC also provides valuable information about the impact of habitat change on breeding bird populations.

Recommendations: The Pelee Island Bird Observatory and Pelee Island Heritage Center recommend that a permanent Breeding Bird Census project be established at the Pelee Island study site. A long-term study will generate important data about the influence of habitat succession on breeding bird diversity and abundance, advance our knowledge of the breeding biology of many distinct Carolinian bird species, further our understanding of the biology of island nesting birds, and many additional important research objectives.

Acknowledgements

Thanks to Margaret Atwood and Graeme Gibson, the Elder, for permission to conduct the study at 118 North Shore Road.

Pelee Island Bird Observatory (PIBO)

General Delivery, Pelee Island, Ontario, Canada N0R 1M0

519-724-2829 Toll free: 1-866-582-3336

Email: pibo@peleeisland.org

Founding Board: Jim Ashman, Margaret Atwood, Graeme Gibson, the Elder, Irena Knezevic, Ron Tiessen, Rob Tymstra.

The Pelee Island Bird Observatory was established in 2003. The mandate of PIBO includes 1) a commitment to long-term migration monitoring research on Pelee Island 2) long-term studies of the breeding bird communities on Pelee, including endangered, threatened and species of special concern 3) serving as an educational centre for the public, school groups and the local community, and 4) promoting the importance of Pelee Island's unique natural heritage.

Pelee Island Heritage Centre (PIHC)

1073 West Shore Road

Pelee Island, Ontario, Canada N0R 1M0

519-724-2291

Email: pimuseum@mnsi.net

The Pelee Island Heritage Centre was incorporated in 1988. The Centre was created to research, interpret and preserve Pelee Island's human and natural history. Each year the Centre and Museum facility hosts between six and eight thousand visitors. Programs at the Centre have included the publication of seven books about local human and natural history, the completion of three videos, and the promotion of eco-tourism through cooperative work with the Federation of Ontario Naturalists, the Nature Conservancy of Canada and Ontario Parks.