

Migration Monitoring on Pelee Island in 2005

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



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for

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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 special 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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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.



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EXECUTIVE SUMMARY

The Pelee Island Bird Observatory (PIBO) – in partnership with the Pelee Island Heritage Centre – completed its third year of avian migration monitoring research on Pelee Island, Ontario, Canada in 2005. 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 Provincial Nature Reserve – Ontario Parks/Ontario Ministry of Natural Resources – at the south tip of the island, is an ideal location to conduct the research.

While all birds encountered during the course of 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 2005, and concludes with a brief update of PIBO's plans in 2006.

Five staff devoted more than 1600 person-hours of fieldwork to the migration project and collected accurate counts for many species in a consistent, standardized manner. Coverage was conducted from April 5th to June 6th and from August 2nd to November 14th. Migration counts were documented at Fish Point on 163 mornings, including 144 days of constant-effort mist netting. In all, PIBO staff documented 199 species in the official 'count' area and 5490 birds of ninety-one species were captured during the banding phase of the project.

Section One of the report provides a description of the project and a review of the goals of migration monitoring research, followed by a brief overview of the study protocol and description of the study site. A summary of the 2005 Spring and Fall migrations at Fish Point and a synopsis of the fieldwork and data collection phase of the study are detailed in Section Two. General trends and migration highlights are presented, along with a summary of the 2005 data including species documented during the study, bird banding totals, recapture totals, and other details. The section concludes with a note about changes to the study protocol in 2005.

Section Three includes an update of PIBO's educational programs, information about additional research studies carried out in 2005, and a review of staff and volunteer participation at the field station. Section Four of the report highlights a number of other positive developments at the observatory in 2005, including details about PIBO's new website, an update of our organisational structure, PIBO's plans to acquire charitable status, and many other exciting initiatives.

The Pelee Island Bird Observatory has received critical assistance and key financial support from many generous organisations and individuals. The report concludes with an acknowledgment of those who helped make 2005 a success.

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SECTION ONE – MIGRATION MONITORING

OBJECTIVES

Migration monitoring research is an effective method for tracking 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.

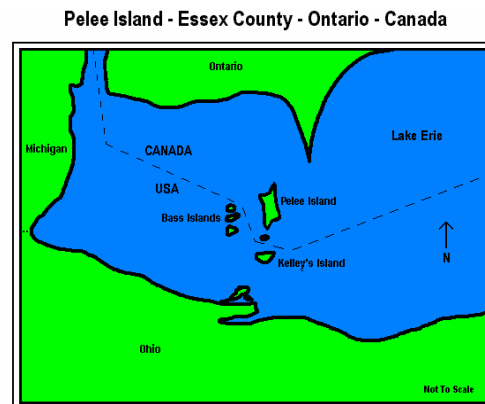
The Canadian Migration Monitoring Network (CMMN) is the national body that oversees migration studies in Canada. The network is made up of more than twenty permanent sites established across the country that generate daily migration counts for a wide range of species. Monitoring stations are committed 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.

DESCRIPTION

PIBO completed its third year of Spring and Fall field operations at Fish Point in 2005. Work was conducted on sixty-one days in the Spring (April 5th – June 6th) and one-hundred-and-two consecutive days in the Fall (August 4th - November 14th). During this time, staff counted and recorded the number of migrants seen, heard and 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 fifty-five mornings in the Spring and eighty-nine in the Fall.

LOCATION

Pelee Island, Essex County, Ontario is the most southerly-inhabited land mass in Canada. Situated in the western third of Lake Erie (Lat - Long: 41° 45’00” N – 82° 41’00” W), the island is approximately fifteen kilometres in length, five kilometers wide, and lies between Leamington, Ontario on Erie’s 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.”



Map 1 – Pelee Island

PIBO’s 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 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 – 2005 MIGRATION SUMMARY

SPRING MIGRATION

PIBO's third spring of migration coverage got underway this year on April 5th. Two full-time staff operated the field station on sixty-one days from April 5th to June 6th, including fifty-five mornings of constant-effort mist netting. In all, 171 species were documented in the official count area and 1151 birds of seventy-two species were captured.

The weather was unseasonably mild during the first few days of coverage, with temperatures rising to 25° C on the afternoon of April 6th. Migration activity at this time included eleven

waterfowl species observed on the 5th, along with small numbers of landbirds counted on census and in the netting area, including seven sparrow species. A total of 41 species was documented in the count area on the 6th, including the following migrants – **Eastern Phoebe**, **Tree Swallow**, **Brown Creeper**, **Winter Wren**, and **Rusty Blackbird**, among others.

Cool dawn temperatures (3° C) returned to the area on the 7th and steady rain fell throughout the morning. Migrants remained fairly active, with 46 species recorded on the 7th and 50 on the 8th, including the first **Yellow-bellied Sapsucker** of the Spring. The weather remained clear and cool during the second week of April, with steady NE winds dominating and daily high temperatures remaining below 12° C. While the netting area was generally quiet, a number of **Golden-crowned Kinglets**, **Hermit Thrushes**, **Song Sparrows**, and a **Brown Thrasher** were captured on the 10th. Firsts for the Spring included a **Blue-Gray Gnatcatcher** on the 12th and **Lesser Yellowlegs** on the 14th.

An influx of five swallow species on April 15th was followed by south winds the next morning – the first at the station in more than a week. New arrivals the next day included **Northern Goshawk**, **Glaucous Gull** and **Northern Waterthrush**. The station's first **Yellow-rumped Warblers** and a **White-eyed Vireo** were encountered in the nets on the 18th. Northerly winds returned on the 20th and remained from the NE/ N/NW for six days, which made for a quiet time during the remainder of the third week in April. Even so, small numbers of migrants continued to filter through on their way north, along with new arrivals including **Blue-headed Vireo** and **Yellow Warbler** (19th), **American Coot** (20th), and **Nashville Warbler** (22nd).



Migration activity during the final week of April continued to be light, with no major fall-outs encountered at the station. Sub-zero temperatures and snow showers on the 24th, with accompanying gale-force winds from the northwest, put a further damper on things, and rain and strong winds affected coverage until April 28th. Just twenty-three species were recorded on the 24th and species diversity remained low until the 28th. The wind shifted back to the south and bird numbers picked up on the 29th, however, with fifty species documented including these firsts for the year – **Spotted Sandpiper**, **Marsh Wren**, **Black-throated Green** and **Black-and-white Warbler**.

Migrant numbers at Fish Point were down in April 2005 compared to April 2003 and 2004. Just six warbler species were recorded in April 2005, for instance, compared to eleven species in 2004. Additionally, the highest daily species count in April 2004 was 60 on April 29th, while the highest species total recorded in April 2005 was 50 species, also on April 29th. The netting area was quiet as well – 127 birds were captured during 633 net hours (.20 birds/net hour) of operation compared to 175 birds in 570 net hours (.31 birds/net hour) in 2004.

The first days of field coverage in May yielded similar results to the preceding week and relatively few migrants were encountered at the station until the 5th, although new arrivals included **Osprey** (1st), **Red-headed Woodpecker** (1st), **Solitary Sandpiper** (2nd), **Northern Parula** (2nd) and **Ruby-throated Hummingbird** (4th). A season-high 27 **Ruby-crowned Kinglets** were recorded on May 2nd. South winds returned to the point on the 4th and migration activity increased the next day. There were good numbers of songbirds in the area from the 5th – 7th, including 33 **Yellow-rumped Warblers** on the 6th, among seven other warbler species. In all,

seventeen new arrivals were recorded in three days including firsts for **Least Flycatcher, Gray Catbird, Wood Thrush, Orange-crowned** and **Mourning Warbler**.

Light south winds continued to influence the area for the next three days (the longest period of sustained south winds this Spring), which prompted a significant fall-out on May 9th. While just twelve warbler species were recorded on the day compared to twenty-two species on the same date in 2004, a good number and diversity of songbirds were present. Seventy-one species were documented including 40 **White-throated Sparrows**, 17 **Blue Jays**, 13 **Yellow Warblers** and 9 **Least Flycatchers**. Seven new arrivals were noted such as **Red-eyed Vireo, Scarlet Tanager** and **Canada Warbler**, and a **Worm-eating Warbler** was captured and banded.



Steady rain on the 10th was followed by the two most active days of migration activity this Spring. A host of new arrivals were documented on May 11th and a season-high 78 species were recorded during the six-hour count period. The netting area was active – 75 birds of twenty-five species were captured, including an adult male **Prothonotary Warbler**. **Yellow Warblers** (10 Captured/22 Counted), **Yellow-rumped Warblers** (0/16), **Gray Catbirds** (7/13), and **Least Flycatchers** (2/8) were observed in good numbers, along with sixteen warbler species and firsts for **Yellow-billed Cuckoo, Philadelphia Vireo** and **Swainson's Thrush**.



May 12th was the busiest morning of banding this Spring – 102 birds of twenty-six species were captured during four hours of operation, including an impressive 46 **Nashville Warblers**. Flycatchers, swallows and grosbeaks were also active. Migrants continued to move through the area in good numbers from the 13th - 15th. Eighteen warbler species were documented on the 15th, including a **Yellow-breasted Chat**, along with the following new arrivals – **Yellow-throated Vireo, Gray-cheeked Thrush, Summer Tanager** and **Orchard Oriole**.

While the third week of May was consistently active – more than 320 birds were banded – there were no major fall-outs until the 22nd, when many migrants were encountered including **Magnolia Warbler** (23/32), **Least Flycatcher** (7/24), **Yellow Warbler** (11/20), **American Redstart** (10/16) and **Lincoln's Sparrow** (6/6). Staff were also kept busy on the 24th when 59 species were documented and 72 birds of twenty-three species were captured. Flycatchers were active, with fifty birds of this family counted, including **Traill's** (9/14), **Least** (5/14), **Yellow-bellied** (5/6) and **Eastern Wood-Pewee** (0/3). **American Redstarts** (10/19), **Magnolia Warblers** (8/15) and **Chestnut-sided Warblers** (8/12) were numerous on the 24th as well.

The final week of May saw a tapering off of activity, although a steady stream of flycatchers and vireos made up for the dwindling warbler numbers. A **Connecticut Warbler** and **Northern Mockingbird** on May 26th were both new for the Spring, and eleven warbler and six flycatcher species contributed to a total of fifty-seven species on the day. While diversity remained high, the

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abundance of migrants continued to decline towards the end of the month and the station remained fairly quiet into early June, with the exception of June 1st, when sixty-one species were tallied. Seven shorebird species were recorded on the 1st including 14 **Ruddy Turnstones**, 9 **Sanderlings** and a **Whimbrel**. PIBO's Spring coverage came to a close on June 6th with just twenty-eight species counted on the day, mostly local breeding birds, with the exception of a singing **Acadian Flycatcher** that was captured later that morning.

Table 1 – Spring Coverage Totals.

Description	2005	2004	2003
Coverage Period	Apr 5 – Jun 6	Apr 13 – May 31	Apr 7 – Jun 4
Days of Coverage	61	45	59
Netting Period	Apr 6 – Jun 5	Apr 20 – May 28	Apr 24 – Jun 4
Netting Days	55	30	33
Birds Banded	1151	602	1116
Net Hours	2223	1078	1305
Birds/Net Hour	.52	.56	.86
Species Banded	72	63	67
Recaptures	147	43	76
Species Recaptured	23	16	16
Species Documented	171	179	180

Table 2 – Top Ten Species Banded – Spring

Species	2005	2004	2003	Total
Magnolia Warbler	92	32	112	236
Yellow Warbler	85	40	60	185
Red-winged Blackbird	75	60	31	166
Ruby-crowned Kinglet	74	34	50	158
Nashville Warbler	73	16	26	115
White-throated Sparrow	62	57	67	186
American Redstart	48	8	41	97
Least Flycatcher	46	9	35	90
Common Yellowthroat	37	20	22	79
Swainson's Thrush	34	3	35	72
Total	626	279	479	1384

FALL MIGRATION

Migration monitoring resumed at Fish Point on August 4th and continued to November 14th for a total of 102 days of consecutive Fall coverage. The first week of August was typically quiet and few migrants were recorded in the area, with the exception of small groups of **Purple Martins** and a variety of shorebirds including **Ruddy Turnstones** and **Sanderlings**. Record-breaking temperatures in southern Ontario this summer continued into August – the dawn temperature at Fish Point remained above 20° C until August 16th – which clearly influenced migration activity.

Swallows continued to filter through and a number of first arrivals for the Fall began appearing in the second week of coverage including **Northern Waterthrush** (8th), **Trail's Flycatcher** (9th), **Canada Warbler** and **Yellow-bellied Flycatcher** (10th). The banding operation got underway on the 9th but the netting area was quiet until mid-month, with just thirty-nine birds captured from the 9th – 15th. Shorebirds were observed at the tip in small numbers, including a **Willet** recorded on the 14th.



An increase in activity on August 15th included the following new arrivals – **Least Flycatcher**, **Tennessee Warbler**, **Ovenbird**, and an early **Hermit Thrush**, along with a variety of other birds recorded in small numbers. Fifty-three species were counted on the day including six flycatcher and six warbler species. Two **Baird's Sandpipers** were also reported. The next morning was active – sixty species were documented and thirty-five birds of thirteen species were banded. An impressive fifteen warbler species were tallied including Fall-firsts for **Nashville**, **Chestnut-sided**, **Magnolia**, **Blackpoll** and **Bay-breasted Warbler**. Migration activity continued to be brisk on the 17th but then tapered off from the 18th – 21st, although a number of interesting arrivals at this time included **Golden-winged Warbler** (19th), **Olive-sided Flycatcher** (20th), **Yellow-breasted Chat** (20th) and a **Buff-breasted Sandpiper** on the 21st.

North winds on August 22nd and cooler dawn temperatures (16° C) ushered in the busiest migration activity recorded in August since PIBO began operations at Fish Point in 2003. The 22nd was active, with sixty-four species documented on the day and fifty-six birds of nineteen

species captured, but the floodgates opened on the 23rd when seventy-one species were tallied and 139 birds of twenty-six species were banded during the six-hour netting period. **Magnolia Warblers** were abundant (33/39), along with **Blackburnian** (20/27) and **Black-and-white Warblers** (15/19), **Yellow-bellied Flycatchers** (11/13) and **Red-eyed Vireos** (7/11). Eighteen warbler species were recorded on the 23rd and 103 warblers were captured of fourteen species. Another fall-out on the 24th was equally impressive when 159 birds were captured, including 102 warblers of twelve species – **Magnolia Warblers** (45/56) remained dominant, along with good numbers of **American Redstarts** (15/24), **Yellow-bellied** (16/24) and **Least Flycatchers** (9/18). Thrushes increased in number as well, with **Veery** (6/10) and **Swainson's Thrush** (6/10) making a good showing, and 110 swallows of five species were recorded on the daily census. **Yellow-bellied Flycatchers** peaked on the 25th with nineteen individuals banded, and **Magnolia Warblers** (17/22) and **Least Flycatchers** (4/10) remained active. In all, 452 birds were banded from the 22nd – 25th including 286 warblers and 81 flycatchers. New arrivals during this period included **Philadelphia Vireo**, **Veery**, **Gray Catbird**, **Blue-winged Warbler** and **Rose-breasted Grosbeak**.

Migration activity tapered off after the 25th and Fish Point was fairly quiet during the final week of August. Southeast winds and very warm, humid weather contributed to this lull – just 126 birds were banded from the 26th – 31st, no new arrivals were reported, and diversity at the station dipped to forty-five species on the 27th.

Steady rain on the 31st ushered in a good influx of birds on the morning of September 1st – seventy-one species were documented and eighty birds were banded of twenty species. Vireos outnumbered flycatchers for the first time this Fall – 12 flycatchers were observed on the day versus thirty-one vireos. **Magnolia Warblers** (18/29) and **American Redstarts** (9/19) continued to dominate, although seventeen other warbler species were recorded and eleven species were captured. The first notable hawk migration of the Fall was evident on the 1st, with ten raptors of four species reported, including firsts for **Northern Harrier** (0/6), **Red-tailed Hawk** (0/1), and **American Kestrel** (0/2).

The first week of September remained active and PIBO staff were kept busy from the 2nd – 7th. An average of 59 species was recorded each day and 287 birds were captured for an average of 48 birds/day. **Swainson's Thrushes** appeared in large numbers on the 3rd (28/43) and remained very active – September 4th (40/60), 5th (22/33), and 6th (20/30) for a total of 110 birds banded and 166 counted in four days. A host of new arrivals were documented including **Palm Warbler** (2nd), **Gray-cheeked Thrush** (3rd), **Lincoln's Sparrow** (3rd), **Connecticut Warbler** (5th) and **White-throated Sparrow** (6th). A **Red Knot** was observed at the tip on the 4th and a **Lesser Black-backed Gull** and **Connecticut Warbler** were documented on the 7th.

September 8th was surprisingly quiet, with just forty-two species recorded and fifteen birds captured during five hours of field coverage. This lull was followed by another significant fall-out the next day, however, when seventeen warbler species were tallied along with another influx of **Swainson's Thrushes** (22/33). Sixty-eight species were documented on the 9th and 76 birds of nineteen species were captured, including a male **Brewster's Warbler**. Although migration activity on the 10th was similar to the preceding day, bird numbers tapered off during the remainder of the second week in September – a **Blue-headed Vireo** on September 10th (first Fall record) and a **Whimbrel** (13th) were the most notable bird sightings during this time.

After five days of south winds and warm temperatures from the 10th – 14th, the wind shifted to the northeast and PIBO staff encountered another good push of migrants on September 15th. **Swainson's Thrushes** (40/51) were abundant, along with moderate numbers of **Palm** (0/15),

Yellow-rumped (0/14) and **Blackpoll Warblers** (4/11). Thirty-two raptors of four species were counted on the day including twenty-two **Sharp-shinned Hawks** and six **American Kestrels** – a flock of 52 **Sanderlings** was also noteworthy. A number of early Fall arrivals on the 15th included **Winter Wren**, **Ruby-crowned Kinglet** and **Northern Junco**. Heavy rain on the 16th precipitated another large wave of migrants from the 17th – 19th, with sixty species documented on the 18th, including fourteen warbler and five thrush species. **Swainson's** (33/48) and **Gray-cheeked Thrushes** (17/19) were very active, along with good numbers of **Northern Flickers** (0/15) and



Red-breasted Nuthatches (0/12). The first **Whip-poor-will** of the Fall was heard singing on the morning of the 18th. Activity tapered off towards the end of the third week of September and warm dawn temperatures (23° C) and southwest winds brought migration to a near standstill on the 21st and 22nd. A **Townsend's Solitaire** observed by PIBO staff outside the Fish Point count area on the 21st was an unusual September sighting for southern Ontario and represents a first-record for Pelee Island.

The lull in activity came to an end when thunderstorms on the evening of the 22nd and strong northeast winds the following morning produced a substantial fall-out on the 23rd. Large numbers of **Blue Jays** (0/202), **Yellow-rumped Warblers** (22/74) and **Gray-cheeked Thrushes** (24/37) were recorded, along with Fall-firsts for **Northern Goshawk**, **Brown Creeper**, **Golden-crowned Kinglet** and **Scarlet Tanager**. September 24th was very active as well – 125 birds of twenty-five species were

captured including **Magnolia Warbler** (14/21), **Nashville Warbler** (9/18) and **Philadelphia Vireo** (4/5). The final week of September remained active and a notable increase in numbers of late-fall migrants was evident, including 380 **Blue Jays** (25th), 15 **Winter Wrens** (26th), 35 **Golden-crowned** and 20 **Ruby-crowned Kinglets** (30th). Although thirteen warbler species were counted on the 27th, the diversity of warblers in the area was much reduced at this time, with just ones-and-twos of a number of late birds encountered including **Northern Waterthrush** (27th), **Ovenbird** (29th) and **Blackburnian Warbler** (30th).

The first week of October 2005 proved to be the least active seven-day period at the station in October since the migration project commenced in 2003. Southerly winds dominated and dawn temperatures remained between 16 and 20° C, which made for a very quiet time. The banding totals for the week were down significantly compared to 2004 totals for the same period – 172 birds were captured at the station in 340 net-hours of operation (.51 birds/net hour) compared to 408 birds captured in 245 net-hours (1.67 birds/net hour) in 2004. Diversity was also down, with an average of forty-one species recorded at the station each day from the 1st – 6th in 2005 compared to fifty-two species in 2004. A large passage of **Blue Jays** (0/700) on October 1st and two new arrivals – **Red-headed Woodpecker** and **White-breasted Nuthatch** – was the only bird news of note during the period.

After the prolonged southerlies of the previous week the wind finally shifted to the north on the evening of the 6th. It rained during the night and the dawn temperature dipped to 12° C, which made for a dramatic increase in activity the following day. Sixty-four species were documented on the 7th and 122 birds were captured of a season-high twenty-six species. Large numbers of October migrants such as **Yellow-rumped Warbler** (38/100) and **Golden-crowned Kinglet** (26/72) were accompanied by a wave of stragglers from September, including fourteen warbler

species. A late **Mourning Warbler** and **Connecticut Warbler** were of particular note. While rain affected coverage on the 8th, it didn't dampen the dramatic number of songbirds that continued to stream through the count area, including **Golden-crowned** (6/155) and **Ruby-crowned Kinglets** (2/98), **Yellow-rumped Warblers** (0/153), and **Hermit Thrushes** (0/63). Ten warbler and seven sparrow species were documented on the 8th, including the first **Orange-crowned Warbler** of the Fall.

Even these events didn't prepare PIBO staff for the enormous fall-out of songbirds encountered at Fish Point on October 9th. Sixty species were recorded on the day and 169 birds were captured during eighteen net-hours of operation for a catch rate of 9.39 birds/net hour. Record daily totals for the station were recorded for **Blue Jay** (0/795) and **Ruby-crowned Kinglet** (75/325), and many other species were observed in large numbers including **Golden-crowned Kinglet** (18/170), **Yellow-rumped Warbler** (27/92), **Northern Junco** (0/55), **Hermit Thrush** (13/48) and **Winter Wren** (3/29). While the 9th was likely the most active morning of Fall migration encountered by PIBO staff at the field station in three years of coverage, the area remained very busy throughout the second week of October, with large numbers of kinglets, **Winter Wrens**, **Hermit Thrushes**, **Yellow-rumped Warblers** and **White-throated Sparrows** recorded on a daily basis. All told, more than 800 birds were captured from October 7th – 14th including 269 **Golden-crowned** and 239 **Ruby-crowned Kinglets**. Sparrows were recorded in larger numbers as well, with 11 **Swamp** and 6 **Song Sparrows** counted on the 13th and seven species documented on the 14th. New arrivals for the Fall continued to appear including **Northern Saw-whet Owl** and **Rusty Blackbird** (9th), **American Wigeon** (10th), **Red-breasted Merganser** (11th) and **Rough-legged Hawk** (14th).

Although kinglets tapered off after the 15th the station remained active, with large numbers of thrushes, sparrows and **Yellow-rumped Warblers** recorded daily from the 15th – 18th. **Hermit Thrushes** (28/45), **Yellow-rumped Warblers** (35/73) and **White-throated Sparrows** (12/72) were particularly active on the 17th. Other highlights at this time included 235 **Tree Swallows** (16th), 9 **Purple Finch** (17th) and the first **Horned Grebes** and **Buffleheads** of the Fall (17th). Strong northeast winds and cool temperatures on the 22nd produced another wave of **Golden-crowned Kinglets** (103/246) and a host of other late-Fall migrants including **American Crows** (0/540), **Blue-headed Vireos** (4/5) and **Red-winged Blackbirds** (0/950). PIBO staff captured an impressive 6 **Northern Saw-whet Owls** using a tape lure on the evening of the 22nd during fifteen net-hours of operation. A record-late **Magnolia Warbler** was captured on the 23rd.

The final week of October was very active from the 26th – 29th, particularly October 26th, when 256 birds were captured during forty-six net-hours of operation for a catch rate of 5.57 birds/net-hour. **Golden-crowned Kinglets** (168/279) dominated on the day along with significant numbers of **Ruby-crowned Kinglets** (26/49), **Winter Wrens** (7/24), **Blue-headed Vireos** (7/8) and **Eastern Towhees** (0/5). Other notable sightings included a late **Red-eyed Vireo** and the Fall's first **Snow Buntings** on the 27th, as well as an increase in activity on the lake, including 10 **Common Loons**, 12 **Horned Grebes** and 7 **Tundra Swans** (25th). A dramatic decline in activity was evident during the final days of October coverage – just fourteen birds were captured on October 30th and 31st, and diversity on the 31st was reduced to twenty-seven species recorded on the day.

The first week of coverage in November showed a continued decline in the diversity and number of species that had dominated at the station in October. Kinglets were reduced to 37 **Golden-crowns** and one **Ruby-crowned** on November 1st, and thrushes and warblers were almost entirely absent. At the same time, PIBO staff were kept busy documenting an impressive increase in activity on the lake, along with an equally dramatic increase of diurnal migrants documented

flying over the station. Almost 20,000 blackbirds were recorded moving south on the 2nd, including 8900 **Red-winged Blackbirds** and 7200 **Common Grackles**. **American Robins** (0/132), **Cedar Waxwings** (0/85) and **American Pipits** (0/53) were also documented in good numbers. After a few days of unseasonably warm conditions from the 3rd – 6th, another large influx was recorded on the 7th including **Double-crested Cormorants** (3000), **Red-breasted Mergansers** (392), **Snow Buntings** (29) and the Fall's first **Lapland Longspurs** (2). A season-high daily total was tallied the next day for **Double-crested Cormorants** (7800) and **Red-breasted Mergansers** (3840), and **American Pipits** (378) peaked on November 9th.

Migration activity remained fairly steady at Fish Point throughout the final week of Fall coverage. Waterfowl continued to build in numbers on the lake and a good variety of sparrows were recorded including **Song, Swamp, Fox, and American Tree Sparrows**. Coverage came to a close on November 14th.

Table 3 – Fall Coverage Totals

Description	2005	2004	2003
Coverage Period	Aug 4 – Nov 14	Aug 6 – Nov 9	Aug 5 – Nov 4
Days of Coverage	102	94	92
Netting Period	Aug 9 – Nov 11	Aug 18 – Nov 1	Aug 5 – Nov 4
Netting Days	89	63	72
Birds Banded	4325	2849	2175
Net Hours	4182	2191	3225
Birds/Net Hour	1.03	1.3	.67
Species Banded	82	78	77
Recaptures	112	54	83
Species Recaptured	25	15	16
Species Documented	180	170	150

Table 4 – Top Ten Species Banded – Fall

Species	2005	2004	2003	Total
Golden-crowned Kinglet	749	312	151	1212
Swainson's Thrush	508	311	277	1096
Ruby-crowned Kinglet	411	291	84	786
Magnolia Warbler	318	305	223	846
"Myrtle" Warbler	265	111	122	498
Hermit Thrush	246	132	128	506
Gray-cheeked Thrush	217	99	48	364
American Redstart	114	133	118	365
Yellow-bellied Flycatcher	114	57	24	195
White-throated Sparrow	84	80	51	215
Total	3026	1831	1226	6083

Migration Monitoring on Pelee Island in 2005
Pelee Island Bird Observatory (PIBO)

Table 5 – Birds Banded at Fish Point in 2005¹

Species	Sprin g	Fall	Total	Species	Sprin g	Fall	Total
Sharp-shinned Hawk		11	11	Cape May Warbler	3	3	6
Black-billed Cuckoo		1	1	Black-throated Blue Warbler	12	55	67
Northern Saw-whet Owl		12	12	Blackburnian Warbler		31	31
Eastern Screech Owl		1	1	Myrtle Warbler	5	265	270
Ruby-throated Hummingbird	13	2	15	Black-thr. Green Warbler	4	3	7
Downy Woodpecker	3	6	9	"Western" Palm Warbler	3	2	5
Yellow-bellied Sapsucker		2	2	Bay-breasted Warbler	3	16	19
"Yellow-shafted" Flicker	1	1	2	Blackpoll Warbler		41	41
Eastern Wood-Pewee		3	3	Worm-eating Warbler	1		1
Yellow-bellied Flycatcher	20	114	134	Prothonotary Warbler	1		1
Acadian Flycatcher	1		1	Black-and-white Warbler	8	63	71
"Traill's" Flycatcher	28	29	57	American Redstart	48	114	162
Least Flycatcher	46	27	73	Ovenbird	25	83	108
Eastern Phoebe	1	4	5	Northern Waterthrush	5	33	38
Great Crested Flycatcher		4	4	Connecticut Warbler	1	2	3
Red-eyed Vireo	8	105	113	Mourning Warbler	11	11	22
Warbling Vireo		6	6	Common Yellowthroat	37	20	57
Philadelphia Vireo	3	32	35	Wilson's Warbler	5	28	33
White-eyed Vireo	1		1	Canada Warbler	30	30	60
Blue-headed Vireo	3	33	36	Yellow-breasted Chat	1		1
Blue Jay	5	45	50	Summer Tanager	1		1
Black-capped Chickadee	7	22	29	Scarlet Tanager	2	1	3
Red-breasted Nuthatch		5	5	Northern Cardinal	6	4	10
Brown Creeper	3	26	29	Rose-breasted Grosbeak	8	4	12
Carolina Wren		7	7	Indigo Bunting	14	5	19
House Wren	17	29	46	Eastern Towhee	2	1	3
Winter Wren	2	78	80	American Tree Sparrow		3	3
Golden-crowned Kinglet	17	749	766	Field Sparrow	1	2	3
Ruby-crowned Kinglet	74	411	485	Chipping Sparrow	1	1	2
American Robin	5	1	6	White-throated Sparrow	62	84	146
Wood Thrush	8	10	18	E. White-crowned Sparrow	4	3	7
Veery	20	63	83	Fox Sparrow	1	13	14
Swainson's Thrush	34	508	542	Song Sparrow	2	8	10
Gray-cheeked Thrush	5	217	222	Lincoln's Sparrow	13	7	20
Hermit Thrush	23	246	269	Swamp Sparrow	22	5	27
Gray Catbird	31	17	48	"Slate-coloured" Junco	7	84	91
Brown Thrasher	1	2	3	Brown-headed Cowbird	8	1	9
Cedar Waxwing		1	1	Red-winged Blackbird	75		75
Northern Parula	1		1	Common Grackle	23		23
Orange-crowned Warbler	3	1	4	"Baltimore" Oriole	13	10	23
Tennessee Warbler	5	18	23	Orchard Oriole		1	1
Blue-winged Warbler	2	1	3	Purple Finch		1	1
Golden-winged Warbler		1	1	American Goldfinch	16	25	41
"Brewster's" Warbler		1	1	Total	1151	4325	5490
Nashville Warbler	73	54	127	Species & Forms	73	82	91
Yellow Warbler	85	3	88	Net Hours	2223	4182	6393
Chestnut-sided Warbler	27	48	75	Birds/Net Hour	0.52	1.03	0.85

Migration Monitoring on Pelee Island in 2005
Pelee Island Bird Observatory (PIBO)

Magnolia Warbler 92 318 410 ¹ Includes 142
birds captured
but not banded

Table 6 – Combined Spring & Fall Coverage Totals

Description	2005	2004	2003
Coverage Period	Apr 5 – Jun 6 Aug 2 – Nov 14	Apr 13-May 31 Aug 6-Nov 10	Apr 7-Jun 4 Aug 5-Nov 14
Coverage Days	163	139	151
Netting Period	Apr 6 – Jun 5 Aug 9 – Nov 11	Apr 20-May 28 Aug 18-Nov 1	Apr 24-Jun 4 Aug 5-Nov 4
Netting Days	144	93	105
Birds Captured	5490	3451	3291
Species Captured	91	87	86
Net Hours	6393	3269	4530
Birds/Net Hour	.85	1.06	.73
Recaptures	259	97	159
Species Recaptured	35	22	26
Species Documented	199	193	192

RECAPTURES

Two-hundred-and-fifty-nine recaptures were documented at the station in 2005 (i.e. birds re-trapped after their initial banding), which represents approximately five percent of the 5749 birds captured in 2005 (banded and recaptured). Eighty-three individuals were recaptured on 147 occasions this Spring and eighty-nine individuals were recaptured 112 times in the Fall. While the majority of recaptures were of birds banded by PIBO earlier in 2005, there were fourteen individuals recaptured this year that were originally banded at Fish Point in 2003, sixteen banded at the station in 2004, and three foreign recoveries, or birds banded at another location (Tables 8 & 9).

Table 7 – 2005 Recaptures

Species	Spring	Fall	Total
Yellow-bellied Sapsucker		1	1
Downy Woodpecker	2	2	4
Philadelphia Vireo		1	1
Red-eyed Vireo		3	3
Black-capped Chickadee	13	36	49
Carolina Wren		1	1
House Wren	1	1	2
Winter Wren		1	1
Golden-crowned Kinglet		14	14
Ruby-crowned Kinglet	7	5	12
Veery	2	3	5
Gray-cheeked Thrush		11	11
Swainson's Thrush	1	3	4
Hermit Thrush	1	13	14
American Robin	2		2
Gray Catbird		1	1
Yellow Warbler	80		80

Migration Monitoring on Pelee Island in 2005
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Chestnut-sided Warbler	1		1
Magnolia Warbler	3	1	4
Black-thr. Blue Warbler		1	1
“Myrtle” Warbler		1	1
Black-and-white Warbler		1	1
American Redstart	7	1	8
Ovenbird	1	3	4
Common Yellowthroat	2		2
Wilson’s Warbler	1		1
Canada Warbler	1	1	2
Lincoln’s Sparrow	1		1
White-throated Sparrow		1	1
Northern Cardinal	1	4	5
Indigo Bunting	1	2	3
Red-winged Blackbird	10		10
Brown-headed Cowbird	2		2
“Baltimore” Oriole	7		7
American Goldfinch	1		1
Total	147	112	259
Species	23	25	35

Table 8 – Recaptures in 2005 of Birds Banded at Fish Point in 2003 & 2004

Species	Banded	Recaptured 2004	Recaptured 2005
Downy Woodpecker	Aug 10/03		May 03/05
Black-capped Chickadee	Apr 25/03	Apr 20/04	May 05/05
Black-capped Chickadee	Aug 23/03		May 16/05
Black-capped Chickadee	Oct 06/03		Apr 15/05
Yellow Warbler	May 11/03	May 16/04	May 17/05
Yellow Warbler	May 13/03	May 11/04	May 12/05
Yellow Warbler	May 14/03	May 16/04	May 12/05
Yellow Warbler	May 16/03		May 16/05
Yellow Warbler	May 18/03	May 16/04	May 08/05
Yellow Warbler	May 21/03		May 25/05
Yellow Warbler	May 22/03		May 27/05
Yellow Warbler	May 22/03		May 20/05
Yellow Warbler	Aug 07/03		May 06/05
Red-winged Blackbird	Apr 25/03		Apr 10/05
Black-capped Chickadee	Aug 31/04		Apr 15/05
Yellow Warbler	May 06/04		May 07/05
Yellow Warbler	May 07/04		May 10/05
Yellow Warbler	May 07/04		May 11/05
Yellow Warbler	May 11/04		May 07/05
Yellow Warbler	May 24/04		May 13/05
Yellow Warbler	May 24/04		May 15/05
Yellow Warbler	May 28/04		May 12/05
American Redstart	May 20/04		May 15/05
American Redstart	May 20/04		May 22/05
Red-winged Blackbird	Apr 29/04		May 1/05
Red-winged Blackbird	May 13/04		May 25/05
Red-winged Blackbird	Apr 22/04		Apr 15/05
Red-winged Blackbird	May 01/04		May 27/05
Red-winged Blackbird	May 16/04		Jun 01/05

Red-winged Blackbird	May 20/04	May 20/05
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Table 9 – Foreign Recoveries at Fish Point in 2005

Species	Banded	Location	Recaptured	Location
Yellow Warbler	May 11/05	Sandusky, OH	May 21/05	Fish Point
Yellow Warbler	May14/05	Sandusky, OH	May 24/05	Fish Point
Brown-headed Cowbird	n/a	Sandusky, OH	Apr 14/05	Fish Point

CHANGES TO STUDY PROTOCOL IN 2005

- The migration station operated a majority of the time with three full-time staff in 2005 compared to two staff in 2003 and 2004.
- The bird banding shelter was moved to a new location in late May. The new location is closer to the mist-net lanes, not as prone to spring flooding, and provides better viewing for counting migrants.
- A viewing area was cleared in October near Net# 2 in the dogwoods to provide a location for visual observations of migrants flying over the count area.
- The code for scoring fat reserves of captured birds was changed in April from the old system (0,T,1,2,3) to the new standard MAPS system (0-7).

SECTION THREE – ADDITIONAL PROJECTS IN 2005

RESEARCH STUDIES

While the migration monitoring program remained PIBO's primary focus in 2005, the observatory initiated a number of additional studies this year that will be expanded in the future.

Tick Distribution Study

PIBO staff examined hundreds of migrant songbirds this Spring for ticks as part of a national study monitoring changes in the distribution of tick populations. Migrant birds transport a variety of tick species great distances during migration and play a significant role in the transmission cycle of insect-borne diseases. Eight live ticks were removed from birds and delivered to the project coordinator for identification and further study, and PIBO will continue sampling in 2006.

Northern Saw-whet Owl Monitoring

The observatory initiated a Northern Saw-whet Owl monitoring pilot-study in 2005. A tape lure was set-up in the mist-netting area and five nets were erected one-half hour after sunset on three nights in October. Although the monitoring effort was limited, an impressive ten saw-whets were captured during thirty-four net hours of operation (.30 birds/net hour) – one on October 12th, six on the 22nd, and three on the 27th. Two additional saw-whets were captured in October during the regular morning coverage period.

The observatory will expand its owl monitoring coverage in 2006 and establish a separate mist-net array and tape set-up in habitat more suitable for catching owls than the system used in 2005. Data collected in 2006 and future years will contribute to our understanding of local owl

migration through the Pelee Island Archipelago and provide information for national studies concerned with monitoring saw-whet populations.

Breeding Birds

PIBO conducted informal breeding bird surveys on Pelee Island in June and submitted the results of the fieldwork to the Ontario Breeding Bird Atlas project. While the surveys this year were limited in scope, a variety of habitats were sampled on multiple visits and all breeding bird activity was documented. PIBO will hire two full-time staff to carry-out more extensive nesting studies on the island in 2006.

Data Entry

The observatory has collected a significant amount of data in just three years of operation at Fish Point, including information obtained from more than four-hundred-and-fifty days of field coverage at the station, as well as twelve-thousand bird banding records. Due to the tireless effort of volunteers and staff in 2005, virtually all of PIBO's historic and current banding records were proofed and entered on computer for submission to the Bird Banding Office, Environment Canada, and more than sixty percent of the station's Daily Log Sheets have now been entered.

EDUCATION

PIBO hosted a number of organised visits to the field station in May 2005 including high school students from the Toronto region and a group from Grosse Point, Michigan. Visitors had the opportunity to see a variety of songbirds in the hand and to learn about birds and bird migration. PIBO staff stress the importance of migration stopover sites like Pelee Island for migratory birds during their lengthy journeys, along with other topics concerning the conservation of birds and their habitats.



There was a considerable increase this year in the number of informal visits to the field station – more than eighty people dropped by the bird banding lab in May, with some groups returning on consecutive days. Most of the visitors were birdwatchers who learned about PIBO’s migration program through word-of-mouth or while visiting the Pelee Island Heritage Centre museum.

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.

STAFF & VOLUNTEERS

Three full-time staff operated the migration station this Fall for the first time compared to two participants in the Spring and in 2003 and 2004, with very positive results. The consistency of PIBO’s field monitoring improved dramatically – staff recorded migration counts on 102 consecutive days and operated mist-nets on 89 of a potential 102 days (including seventy-six consecutive days). The majority of lost netting days were weather-related. Many other benefits were realized, from clearing up the backlog of data entry from previous years to permitting staff to take days off periodically. In all, five interns/volunteers and one paid staff member conducted 378 person-days of fieldwork (1668 field hours) in 2006.

Table 10 – Field Effort

Staff/Interns/Volunteers	Field Days	Field Hours
Graeme Gibson	131	566
Julia Marko	116	524
Christopher Dunn	88	389
Rosalind Ford	35	173
Rob Tymstra	5	8
Keith Dunn	3	8
Total	378	1668

SECTION FOUR – PIBO UPDATE

ADMINISTRATION

PIBO’s organisational structure grew in leaps and bounds in 2005. A number of important advances were made that served to strengthen PIBO’s administrative base including the formal signing of PIBO By-laws in June 2005, the formation of a Board of Directors, the submission of applications for non-profit and charitable status, the hiring of a part-time office manager and part-time fundraiser, and many other positive developments. In this respect, the observatory continued to strengthen its foundation in 2005 and adopted many systems that will benefit the organisation in the future.

Although PIBO will continue to conduct the migration monitoring program and many other projects in close partnership with the Pelee Island Heritage Centre, the two organisations will sever financial ties when PIBO acquires charitable status in 2006. The Heritage Center has played an instrumental role in PIBO’s early development and in the success of the migration monitoring project, and will continue to administer PIBO’s finances to a large extent, and issue tax receipts on PIBO’s behalf during this transition period.

PIBO WEBSITE

With the help of generous donations from PIBO supporters – combined with the elegant design work of Steven Yeates & Associates – the observatory launched PIBO’s official website (www.pibo.ca) in October 2005. As well as providing visitors with information about the observatory, the website explores an unusual range of subjects about birds that will interest both serious birders and general enthusiasts alike. In this respect, the site presents detailed information about the birds of Pelee Island and about PIBO’s migration monitoring studies at Fish Point, but also features birds as they appear and, indeed, loom largely at times, through the lens of human experience.

In keeping with this theme, PIBO’s website launch coincided with the exciting new release of “The Bedside Book of Birds – An Avian Miscellany” by Graeme Gibson, the Elder. At least half of the royalties from this beautifully illustrated book – described as an extraordinary tribute to the venerable relationship between humans and birds – have been generously donated to the Pelee Island Bird Observatory. Information about “The Bedside Book of Birds” can be found on the PIBO website.

SPRINGSONG FESTIVAL

PIBO staff joined in the festivities during Pelee Island’s third annual SpringSong Festival in early May. Events included a Big Day Race and Baillie Birdathon, where teams vied to record the most bird species on Pelee Island in twenty-four hours while raising money for local and national conservation projects. The day was a big success thanks to the generous support of many Birdathon sponsors, the SpringSong organizers, and the enthusiastic troupe of bird-spotters that took to the field in their quest for the Botham Cup.

While the bird race this year included both ‘green’ teams (i.e. no fossil-fuel vehicles) and ‘non-green’ teams, the festival organisers plan to eliminate all motor vehicles in 2006 with the exception of public transportation. This entirely ‘green’ event will make the Pelee Island Big Day Bird Race the first of its kind in North America.

FUTURE PLANS

The bird observatory and the Pelee Island Heritage Centre are looking forward to another productive year of migration studies on Pelee Island in 2006. Preparations are currently underway for the Spring coverage season, from hiring staff and applying for permits to securing accommodations on the island for the seven-month field season. The quality of PIBO’s coverage gained tremendously last Fall with the addition of a third full-time staff member, and so three staff will be hired in 2006 to ensure this standard of coverage is maintained. Another new development this year includes a weekly migration summary that will be posted on PIBO’s website to keep visitors to the site up-to-date about migration trends and highlights at Fish Point.

In addition to the migration program, PIBO will pursue a number of other projects in 2006 including 1) hiring staff to conduct extensive breeding bird surveys on the island in June 2) organizing field trips to the migration station for bird banding demonstrations 3) continuing tick studies and saw-whet owl monitoring and 4) launching a campaign to raise funds to build permanent facilities on PIBO’s recently-acquired property, among many other exciting initiatives.

ACKNOWLEDGEMENTS

The success of the Pelee Island Bird Observatory and the positive new developments at the organisation in 2005 have been made possible due to the unflagging enthusiasm and generous support of many organisations and individuals. The Pelee Island Bird Observatory and Pelee Island Heritage Center would like to thank the following for this critically important help:

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APPENDICES

APPENDIX ONE – SPECIES DOCUMENTED AT FISH POINT BY PIBO STAFF 2005

APPENDIX TWO – SPRING DAILY TOTALS 2005

APPENDIX THREE – FALL DAILY TOTALS 2005

APPENDIX FOUR – BIRDS BANDED AT FISH POINT 2003 – 2005

APPENDIX FIVE – TOP TEN SPECIES BANDED 2003 – 2005

APPENDIX SIX – SPRING MONTHLY TOTALS 2003 - 2005

APPENDIX SEVEN – FALL MONTHLY TOTALS 2003 - 2005

APPENDIX ONE – SPECIES DOCUMENTED AT FISH POINT BY PIBO STAFF – 2005

Common Loon	Buff-breasted Sandpiper	House Wren	Chipping Sparrow
Pied-billed Grebe	American Woodcock	Winter Wren	Savannah Sparrow
Horned Grebe	Bonaparte's Gull	Marsh Wren	White-throated Sparrow
Double-crested Cormorant	Ring-billed Gull	Golden-crowned Kinglet	Harris's Sparrow
Great Blue Heron	Herring Gull	Ruby-crowned Kinglet	E. White-crowned Sparrow
Great Egret	Lesser Black-backed Gull	Blue-gray Gnatcatcher	Fox Sparrow
Green Heron	Glaucous Gull	Eastern Bluebird	Song Sparrow
Tundra Swan	Great Black-backed Gull	Townsend's Solitaire	Lincoln's Sparrow
Canada Goose	Caspian Tern	American Robin	Swamp Sparrow
Wood Duck	Common Tern	Wood Thrush	Northern Junco
American Black Duck	Forster's Tern	Veery	Lapland Longspur
Mallard	Black Tern	Swainson's Thrush	Snow Bunting
American Wigeon	Mourning Dove	Gray-cheeked Thrush	Eastern Meadowlark
Northern Shoveler	Yellow-billed Cuckoo	Hermit Thrush	Bobolink
Blue-winged Teal	Black-billed Cuckoo	Gray Catbird	Brown-headed Cowbird
Green-winged Teal	Great Horned Owl	Northern Mockingbird	Red-winged Blackbird
Ring-necked Duck	Eastern Screech-Owl	Brown Thrasher	Rusty Blackbird
Greater Scaup	Northern Saw-whet Owl	European Starling	Common Grackle
Lesser Scaup	Whip-poor-will	American Pipit	Northern Oriole
Common Goldeneye	Common Nighthawk	Cedar Waxwing	Orchard Oriole
Black Scoter	Chimney Swift	Northern Parula	Purple Finch
Bufflehead	Ruby-throated Hummingbird	Orange-crowned Warbler	House Finch
Hooded Merganser	Belted Kingfisher	Tennessee Warbler	Pine Siskin
Common Merganser	Red-headed Woodpecker	"Brewsters" Warbler	American Goldfinch
Red-breasted Merganser	Red-bellied Woodpecker	Blue-winged Warbler	House Sparrow
Ruddy Duck	Downy Woodpecker	Golden-winged Warbler	201 species
Turkey Vulture	Hairy Woodpecker	Nashville Warbler	
Northern Harrier	Yellow-bellied Sapsucker	Yellow Warbler	Bold – new PIBO record
Sharp-shinned Hawk	Northern Flicker	Chestnut-sided Warbler	
Cooper's Hawk	Olive-sided Flycatcher	Magnolia Warbler	<u>Underline</u> – reported
Northern Goshawk	Eastern Wood-Pewee	Cape May Warbler	outside official count
Red-tailed Hawk	Yellow-bellied Flycatcher	Black-throated Blue Warbler	area.
Rough-legged Hawk	Acadian Flycatcher	Blackburnian Warbler	
Bald Eagle	Alder Flycatcher	Yellow-rumped Warbler	
Osprey	Willow Flycatcher	Black-throated Green Warbler	
Merlin	Least Flycatcher	Palm Warbler	
American Kestrel	Eastern Phoebe	Pine Warbler	
Peregrine Falcon	Great Crested Flycatcher	Bay-breasted Warbler	
Ring-necked Pheasant	Eastern Kingbird	Blackpoll Warbler	
Wild Turkey	Red-eyed Vireo	Black-and-white Warbler	
Virginia Rail	Warbling Vireo	American Redstart	
Sora	Philadelphia Vireo	Prothonotary Warbler	
American Coot	White-eyed Vireo	Worm-eating Warbler	
Black-bellied Plover	Yellow-throated Vireo	Ovenbird	
Semipalmated Plover	Blue-headed Vireo	Northern Waterthrush	
Killdeer	Blue Jay	Connecticut Warbler	
Greater Yellowlegs	American Crow	Mourning Warbler	
Lesser Yellowlegs	Horned Lark	Common Yellowthroat	
Solitary Sandpiper	Purple Martin	Wilson's Warbler	
Willet	N. Rough-winged Swallow	Canada Warbler	
Spotted Sandpiper	Bank Swallow	Yellow-breasted Chat	
Whimbrel	Cliff Swallow	Summer Tanager	
Ruddy Turnstone	Tree Swallow	Scarlet Tanager	
Red Knot	Barn Swallow	Northern Cardinal	
Sanderling	Black-capped Chickadee	Rose-breasted Grosbeak	
Semipalmated Sandpiper	Red-breasted Nuthatch	Indigo Bunting	
Least Sandpiper	White-breasted Nuthatch	Eastern Towhee	
Baird's Sandpiper	Brown Creeper	American Tree Sparrow	
Dunlin	Carolina Wren	Field Sparrow	

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APPENDIX TWO – 2005 SPRING DAILY TOTALS

Date	B	R	NH	BNH	CEN	DT	7Day	
APR	5	0	0	0	0.00	36	40	
	6	4	0	43	0.09	36	41	B 27
	7	1	0	10	0.10	41	46	R 2
	8	3	1	30	0.10	44	50	NH 164
	9	0	0	12	0.00	32	36	BNH 0.16
	10	17	1	55	0.31	40	47	CEN 44
	11	2	0	7	0.29	33	35	DT 50
	12	0	0	7	0.00	38	38	
	13	1	0	15	0.07	35	42	B 65
	14	22	2	60	0.37	35	43	R 8
	15	8	4	60	0.13	40	47	NH 358
	16	13	1	60	0.22	28	46	BNH 0.18
	17	8	1	43	0.19	35	39	CEN 40
	18	4	0	60	0.07	30	46	DT 48
	19	9	0	60	0.15	37	48	
	20	2	1	15	0.13	16	28	B 13
	21	2	0	21	0.10	27	33	R 2
	22	9	1	22	0.41	30	30	NH 58
	23	0	0	0	0.00	0	0	BNH 0.22
24	0	0	0	0.00	23	23	CEN 30	
25	0	0	0	0.00	0	0	DT 33	
26	0	0	0	0.00	27	27		
27	0	0	8	0.00	28	30	B 75	
28	0	0	7	0.00	21	22	R 14	
29	12	1	38	0.32	38	50	NH 233	
30	0	0	0	0.00	33	33	BNH 0.32	
MAY	1	16	3	60	0.27	27	42	CEN 38
	2	26	4	60	0.43	37	47	DT 50
	3	21	6	60	0.35	33	43	
	4	8	0	51	0.16	28	43	B 160
	5	29	1	50	0.58	33	52	R 11
	6	30	2	60	0.50	32	53	NH 370
Date	B	R	NH	BNH	CEN	DT	7 Day	
JUN	7	26	2	60	0.43	40	58	BNH 0.43
	8	11	5	60	0.18	29	53	CEN 47
	9	50	0	60	0.83	47	71	DT 71
	10	6	1	29	0.21	42	63	
	11	75	3	60	1.25	57	78	B 332
	12	102	5	39	2.62	43	67	R 37
	13	14	4	41	0.34	44	57	NH 316
	14	9	4	14	0.64	52	62	BNH 1.05
	15	51	6	45	1.13	44	59	CEN 57
	16	40	11	57	0.70	50	66	DT 78
	17	41	4	60	0.68	45	61	
	18	28	3	31	0.90	36	53	B 281
	19	46	6	56	0.82	47	59	R 31
	20	26	7	60	0.43	38	52	NH 316
	21	26	3	52	0.50	36	58	BNH 0.89
	22	83	5	57	1.46	40	59	CEN 47
	23	0	0	0	0.00	37	39	DT 59
	24	72	7	60	1.20	35	59	
	25	33	8	49	0.67	48	63	B 164
	26	14	1	24	0.58	45	57	R 35
	27	31	12	60	0.52	28	52	NH 313
	28	11	1	29	0.38	35	48	BNH 0.52
	29	33	7	56	0.59	40	52	CEN 48
	30	29	4	60	0.48	28	54	DT 63
	31	13	2	35	0.37	34	56	
	1	19	4	54	0.35	51	61	B 34
	2	7	3	31	0.23	33	39	R 8
	3	1	0	10	0.10	35	39	NH 157
	4	4	0	35	0.11	33	40	BNH 0.22
	5	3	1	27	0.11	34	44	CEN 51
	6	0	0	0	0.00	26	28	DT 61

B BANDED Number of new birds banded + new birds captured but not 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 DAILY TOTAL Species documented in the official count area during six-hour count period

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APPENDIX THREE – 2005 FALL DAILY TOTALS

Date	B	R	NH	BNH	CEN	DT	7 Day	
AUG	2	0	0	0	0	38	38	CEN 38
	3	0	0	0	0	0	0	DT 38
	4	0	0	0	0	29	30	
	5	0	0	0	0	28	32	B 16
	6	0	0	0	0	29	30	R 2
	7	0	0	0	0	27	29	NH 133
	8	0	0	0	0	36	39	BNH 0.12
	9	5	1	41	0.12	31	40	CEN 37
	10	5	0	42	0.12	32	39	DT 44
	11	6	1	50	0.12	37	44	
	12	3	0	35	0.09	29	35	B 94
	13	1	0	15	0.07	33	40	R 0
	14	5	0	47	0.11	28	42	NH 334
	15	14	0	60	0.23	39	53	BNH 0.28
	16	35	0	60	0.58	48	60	CEN 48
	17	28	0	57	0.49	41	57	DT 60
	18	8	0	60	0.12	31	38	
	19	7	0	60	0.12	30	41	B 519
	20	25	1	35	0.71	40	54	R 3
	21	35	1	60	0.58	38	54	NH 382
	22	56	0	60	0.93	36	63	BNH 1.36
	23	139	0	60	2.32	43	71	CEN 47
	24	159	0	47	3.38	47	71	DT 71
	25	98	1	60	1.63	38	60	
	26	27	2	43	0.64	42	53	B 207
	27	6	1	30	0.20	35	45	R 10
	28	31	3	60	0.52	33	51	NH 325
	29	38	1	60	0.63	37	54	BNH 0.64
	30	15	0	60	0.25	39	59	CEN 51
	31	9	0	21	0.43	33	48	DT 71
SEP	1	81	3	52	1.56	51	71	
	2	49	0	60	0.82	39	56	B 302
	3	48	4	57	0.84	40	62	R 6
	4	78	0	60	1.30	40	60	NH 385
	5	43	0	60	0.72	50	60	BNH 0.78
	6	49	1	60	0.82	43	58	CEN 50
	7	20	0	38	0.53	38	60	DT 62
	8	15	1	50	0.30	26	42	
	9	76	0	60	1.27	40	68	B 297
	10	78	1	60	1.30	41	59	R 6
	11	36	0	60	0.60	32	55	NH 329
	12	11	0	25	0.44	27	40	BNH 0.90
	13	9	2	37	0.24	26	36	CEN 41
	14	11	2	38	0.29	25	32	DT 68
	15	76	1	49	1.55	40	51	
	16	42	0	22	1.91	26	43	B 282
	17	76	0	48	1.58	29	47	R 5
	18	74	1	60	1.23	43	60	NH 350
	19	36	1	60	0.60	22	41	BNH 0.80
	20	23	0	50	0.46	31	39	CEN 43
	21	25	1	60	0.42	26	48	DT 60
	22	6	2	50	0.12	21	39	
	23	102	1	55	1.85	41	52	B 427
	24	125	2	52	2.40	40	51	R 8
	25	71	2	60	1.18	29	49	NH 327
	26	6	1	12	0.50	28	43	BNH 1.31
	27	78	0	60	1.30	45	61	CEN 45
	28	32	1	60	0.53	29	42	DT 61
	29	13	1	28	0.46	17	29	
	30	52	1	60	0.87	43	60	B 224
OCT	1	23	3	60	0.38	29	41	R 18
	2	36	3	55	0.65	30	44	NH 400
	3	23	4	58	0.40	21	39	BNH 0.56
	4	48	5	60	0.80	31	40	CEN 43
	5	13	1	47	0.28	36	43	DT 60
	6	29	1	60	0.48	25	37	
	7	122	0	59	2.07	43	64	B 787
	8	15	0	6	2.50	50	56	R 9
	9	169	1	18	9.39	44	60	NH 227
	10	147	1	25	5.88	33	49	BNH 3.47
	11	76	2	30	2.53	33	46	CEN 50
	12	105	0	29	3.62	32	41	DT 64
	13	153	5	60	2.55	40	53	
	14	63	1	45	1.40	41	57	B 406
	15	35	0	60	0.58	36	49	R 7
	16	101	1	58	1.74	38	46	NH 325
	17	98	1	60	1.63	42	51	BNH 1.25
	18	25	3	45	0.56	29	40	CEN 42
	19	20	1	45	0.44	27	37	DT 57
	20	64	0	12	5.33	40	48	
	21	4	0	6	0.67	32	38	B 488
	22	152	2	57	2.67	43	52	R 14
	23	46	2	52	0.88	42	52	NH 219
	24	0	0	0	0.00	35	35	BNH 2.23
	25	0	0	0	0.00	37	37	CEN 43
	26	256	6	46	5.57	33	47	DT 58
	27	30	4	58	0.52	39	58	
	28	49	4	60	0.82	44	50	B 180
	29	91	4	60	1.52	32	45	R 11
	30	9	1	40	0.23	33	38	NH 239
	31	5	0	28	0.19	21	27	BNH 0.75
NOV	1	0	0	0	0.00	29	34	CEN 44
	2	26	2	51	0.51	37	51	DT 51
	3	0	0	0	0.00	26	26	
	4	0	0	0	0.00	40	40	B 77
	5	30	4	60	0.50	29	38	R 10
	6	0	0	0	0.00	22	22	NH 157
	7	6	3	32	0.19	34	53	BNH 0.49
	8	40	3	50	0.80	32	47	CEN 40
	9	0	0	0	0.00	30	30	DT 53
	10	1	0	15	0.07	27	40	
	11	19	1	37	0.51	35	49	B 19
	12	0	0	13	0.00	38	38	R 1
	13	0	0	0	0.00	30	33	NH 50
	14	0	0	0	0.00	38	43	BNH 0.51
	15	0	0	0	0.00	0	0	CEN 38
								DT 49

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APPENDIX FOUR – BIRDS BANDED AT FISH POINT 2003 – 2005

Species	TOT	SP03	SP04	SP05	FA03	FA04	FA05
Sharp-shinned Hawk	31				<u>12</u>	8	11
Yellow-billed Cuckoo	4	1	1		<u>2</u>		
Black-billed Cuckoo	5	1	1		1	1	1
Northern Saw-whet Owl	13					1	<u>12</u>
Eastern Screech Owl	2				1		1
Ruby-throated Hummingbird	50	<u>26</u>	2	13	5	2	2
Downy Woodpecker	35	2	3	3	<u>12</u>	9	6
Yellow-bellied Sapsucker	3					1	<u>2</u>
"Yellow-shafted" Flicker	5			1	<u>2</u>	1	1
Eastern Wood-Pewee	13	<u>6</u>			1	3	3
Yellow-bellied Flycatcher	231	15	1	20	24	57	<u>114</u>
Acadian Flycatcher	1			<u>1</u>			
"Trail's" Flycatcher	118	19	3	28	19	20	<u>29</u>
Least Flycatcher	142	35	9	<u>46</u>	16	9	27
Eastern Phoebe	8			1		3	<u>4</u>
Great Crested Flycatcher	5				1		<u>4</u>
Eastern Kingbird	2		1			1	
Red-eyed Vireo	232	6	2	8	42	69	<u>105</u>
Warbling Vireo	13	2			2	3	<u>6</u>
Philadelphia Vireo	81	5	1	3	10	30	<u>32</u>
White-eyed Vireo	3	1	1	1			
Blue-headed Vireo	81	5	1	3	12	27	<u>33</u>
Blue Jay	71	5		5	8	8	<u>45</u>
Black-capped Chickadee	66	10	2	7	11	14	<u>22</u>
Red-breasted Nuthatch	8				1	2	<u>5</u>
White-breasted Nuthatch	1				1		
Brown Creeper	72			3	13	<u>30</u>	26
Carolina Wren	25	1			<u>12</u>	5	7
House Wren	84	6	5	17	16	11	<u>29</u>
Winter Wren	142		3	2	14	45	<u>78</u>
Marsh Wren	2	1					1
Golden-crowned Kinglet	1229			17	151	312	<u>749</u>
Ruby-crowned Kinglet	944	50	34	74	84	291	<u>411</u>
Blue-grey Gnatcatcher	4		1		1	<u>2</u>	
American Robin	23	5	<u>6</u>	5	1	5	1
Wood Thrush	48	1	7	8	11	11	10
Veery	229	20	4	20	59	63	63
Swainson's Thrush	1168	35	3	34	277	311	<u>508</u>
Grey-cheeked Thrush	378	8	1	5	48	99	217
Hermit Thrush	553	13	11	23	128	132	<u>246</u>
Grey Catbird	155	30	25	31	<u>34</u>	18	17
Brown Thrasher	7			1	2	2	2
Cedar Waxwing	5				2	2	1
Northern Parula	5			1	2	2	
Orange-crowned Warbler	31	3	2	3	7	<u>15</u>	1
Tennessee Warbler	124	5	8	5	<u>80</u>	8	18
Blue-winged Warbler	16	2	<u>5</u>	2	2	4	1
Golden-winged Warbler	3	1	1				1
"Brewster's" Warbler	1						<u>1</u>
Nashville Warbler	274	26	16	<u>73</u>	64	41	54
Yellow Warbler	203	60	40	<u>85</u>	10	5	3
Chestnut-sided Warbler	165	14	4	27	31	41	48
Magnolia Warbler	1082	112	32	92	223	305	<u>318</u>
Cape May Warbler	17		1	3	6	4	3
Black-throated Blue Warbler	231	8	2	12	52	<u>102</u>	55
Blackburnian Warbler	45	7			2	5	31
Myrtle Warbler	557	9	45	5	122	111	<u>265</u>
Black-thr. Green Warbler	31	7	1	4	3	<u>13</u>	3

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APPENDIX FOUR (continued)

Species	TOT	SP03	SP04	SP05	FA03	FA04	FA05
"Western" Palm Warbler	21	1	9	3	1	5	2
Bay-breasted Warbler	35	3	2	3	3	8	16
Blackpoll Warbler	118	5	3		17	52	41
Worm-eating Warbler	2		1	1			
Prothonotary Warbler	1			1			
Black-and-white Warbler	148	8	5	8	31	33	63
American Redstart	462	41	8	48	118	133	114
Ovenbird	263	25	13	25	48	69	83
Northern Waterthrush	116	23	11	5	20	24	33
Connecticut Warbler	8	1		1	2	2	2
Mourning Warbler	46	7	2	11	9	6	11
Common Yellowthroat	135	22	20	37	21	15	20
Wilson's Warbler	94	13	14	5	15	19	28
Canada Warbler	128	30	6	30	14	18	30
Yellow-breasted Chat	5	1	3	1			
Summer Tanager	2	1		1			
Scarlet Tanager	6	2		2	1		1
Northern Cardinal	41	14	7	6	8	2	4
Rose-breasted Grosbeak	30	1	9	8	4	4	4
Indigo Bunting	43	9	2	14	11	2	5
Eastern Towhee	5		1	2	1		1
American Tree Sparrow	1						3
Field Sparrow	6		2	1		1	2
Chipping Sparrow	6	3		1		1	1
White-throated Sparrow	401	67	57	62	51	80	84
E. White-crowned Sparrow	19	2	2	4	4	4	3
Fox Sparrow	19			1	2	3	13
Song Sparrow	27			2	12	5	8
Lincoln's Sparrow	48	10	4	13	8	6	7
Swamp Sparrow	75	7	24	22	10	7	5
"Slate-coloured" Junco	149			7	24	34	84
Brown-headed Cowbird	15	5	1	8			1
Red-winged Blackbird	169	31	60	75	3		
Common Grackle	65	19	11	23	5	7	
"Baltimore" Oriole	47	15	7	13		2	10
Orchard Oriole	7	5	1				1
Purple Finch	3				1	1	1
American Goldfinch	65	6	2	16	8	8	25
Total	11973	940	602	1152	2092	2849	4338
Species & Forms	96	67	63	73	77	78	82
Net Hours	14192	1305	1078	2223	3225	2191	4170
Birds/Net Hour	0.84	0.86	0.56	0.52	0.67	1.30	1.03

Family	2005 Banded	Species	2004 Banded	Species	2003 Banded	Species	Total Banded	Species
Flycatchers	277	7	107	6	136	4	526	8
Vireos	191	5	134	5	85	5	410	5
Wrens	133	3	70	4	50	4	253	4
Kinglets	1251	2	637	2	285	2	2173	2
Thrushes	1140	6	656	6	606	6	2402	6
Warblers	1736	30	1279	28	1337	27	4352	30
Sparrows	326	11	231	10	201	9	758	11
Blackbirds	131	5	89	5	83	5	303	5
Other	305	22	299	21	249	23	853	25

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APPENDIX FIVE – TOP TEN SPECIES BANDED 2003 – 2005

Species	2003	2004	2005	Total
Golden-crowned Kinglet	151	312	766	1229
Swainson's Thrush	312	314	542	1168
Magnolia Warbler	335	337	410	1082
Ruby-crowned Kinglet	134	325	485	944
"Myrtle" Warbler	131	156	270	557
Hermit Thrush	141	143	269	553
American Redstart	159	141	162	462
White-throated Sparrow	118	137	146	401
Gray-cheeked Thrush	56	100	222	378
Nashville Warbler	90	57	127	274

APPENDIX SIX – SPRING MONTHLY TOTALS 2003 - 2005

Date	2003	2004	2005	Total
<u>April</u>				
Banded	84	164	117	365
Recaptured	0	11	13	24
Net Hours	344	570	633	1547
Birds/Net Hour	.24	.29	.18	.24
Census ¹	42	43	44	44
Daily Total ¹	53	60	50	60
<u>May</u>				
Banded	833	438	1000	2271
Recaptured	68	30	127	225
Net Hours	920	487	1495	2902
Birds/Net Hour	.91	.90	.67	.78
Census	56	73	57	73
Daily Total	76	85	78	85
<u>June</u>				
Banded	25	0	34	59
Recaptured	7	0	8	15
Net Hours	40	0	157	197
Birds/Net Hour	.63	0	.22	.32
Census	33	0	51	51
Daily Total	47	0	61	61

¹ indicates highest daily census total and daily total recorded for the month

Migration Monitoring on Pelee Island in 2005
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APPENDIX SEVEN – FALL MONTHLY TOTALS 2003 – 2005

Date	2003	2004	2005	Total
<u>August</u>				
Banded	495	276	755	1526
Recaptured	16	6	12	34
Net Hours	1048	495	1122	2665
Birds/Net Hour	.46	.56	.66	.57
Census	48	56	48	56
Daily Total	66	67	71	71
<u>September</u>				
Banded	778	1310	1441	3529
Recaptured	24	24	29	77
Net Hours	1121	1017	1503	3641
Birds/Net Hour	.68	1.29	.96	.97
Census	45	57	51	57
Daily Total	62	72	71	72
<u>October</u>				
Banded	769	1185	2007	3961
Recaptured	39	19	56	114
Net Hours	965	637	1299	2901
Birds/Net Hour	.78	1.94	1.55	1.37
Census	42	45	50	50
Daily Total	54	58	64	64
<u>November</u>				
Banded	40	78	122	240
Recaptured	4	2	13	19
Net Hours	91	42	258	391
Birds/Net Hour	.41	1.86	.51	.61
Census	45	49	40	49
Daily Total	52	51	53	53