

Pelee Island Bird Observatory

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Cover photo: Swainson's Warbler by Hannah Mittelstaedt

Pelee Island Bird Observatory 2022

The Pelee Island Bird Observatory was established in 2003 and incorporated as a non-profit charitable organization in 2005. PIBO's mandate includes a commitment to long-term avian migration monitoring research on Pelee Island; long-term studies of the Island's breeding bird communities, including national and provincial species at risk; 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 and position at the junction of two major continental flyways.

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Assistant Field Banders (Spring/summer): Alessandra Wilcox

Evan Sinclair

Volunteer Census Conductors: John Ambrose

Rob Tymstra

Field Volunteers:

Hannah MittelstaedtPeter CooJohn HettingaSimon BaudreaultDawn MilesHannah HettingaMark DucheneMichelle MastellottoGraeme Gibson.

Outreach/Education Staff

Youth Activators: Davina Sanjqly

Lakshmi Tharuvai

Summer Student: Dante Bresolin

University of Windsor Summer Intern: Andrea Hervia

Executive Summary

2022 Field Season

PIBO began the Spring field season by welcoming new staff and volunteers, and most importantly the return of migrating birds, both familiar and new species. By the end of April, we had five young staff staying at the Staff Cottage; the morning commute to the banding station was filled with lively chat and reports of their bird sightings from the previous day. We hired two assistant banders—one in April to help with early migration monitoring; the other from May to June, during the peak of migration and into the breeding season. A temporary census conductor and five volunteers supported our work during the busiest period. We successfully completed the spring migration monitoring by the end of July, which included the Purple Martin Annual Colony Survey, the Marsh Monitoring Program, the Ontario Breeding Bird Atlas, and Species at Risk monitoring.

The catch-rate this spring (0.54 birds/net-hour) confirmed that, compared to the quiet spring of 2021, an average number of migrants came through our area in 2022, including several southern species, such as a Swainson's warbler and nine White-eyed vireos—a new record for PIBO. The effort and passion dedicated to monitoring breeding birds this year resulted in an increase in breeding evidence on the island from 39 to 51 species.

The fall season was more challenging. In contrast to the volunteers and seasonal staff that helped in the spring, the PIBO field supervisor conducted both the fall census and netting with only occasional support from a temporary census conductor and a short-term volunteer. The fall catch-rate (1.02 birds/net-hour) showed a good volume of migrants passing through the area, even with fewer net-hours. The relatively high volume of captures for the entire season probably reflected the breeding success among species such as the Spruce budworm, providing ample food for warblers.

By the end of the 2022 season, we had banded 2,568 migratory birds representing 79 species, 125 Purple martin nestlings, and 38 owls. A total of 13 staff and volunteers devoted more than 1,500 hours on eight research projects. The observations of many keen birders—including standard and non-standard observation—contributed to our final total list of 210 species during PIBO's 20th season.

Along with our hard-core field surveys, we also participated in the 24-hour bird race—the Botham Cup—and our online fundraising event in May. For the Christmas Bird Count, we provided bird walks for Pelee Buzz and PIBO supporters. We welcomed more than 100

visitors to the banding station, including groups from Quest Tours, and hosted several Owling Nights through the fall.

Thanks to all the hired staff, long- and short-term volunteers, to the visitors who willingly pitched in, and to PIBO's Island friends who sent us visitors, fixed the banding station, cut vegetation along the net-lane, and helped host our owling events. We could not have completed the 2022 season without their support.

We also appreciate all the landowners who allowed us to conduct surveys on their properties over the past 20 years. Since we set up our banding station at Fish Point Provincial Nature Reserve in 2003, we have collected more than 50,000 banding data points and 300 species records. We are thankful to Ontario Parks and to the land owned by Nature Conservancy of Canada, Essex Region Conservation Authority, and Ontario Nature for providing us with valuable opportunities to observe and study the many breeding species and Species at Risk on Pelee Island. We hope our studies will benefit the landowners and all the wildlife on Pelee Island.

2022 Education & Outreach

2022 was a busy year in PIBO education and outreach, with the launch of three new programs-Youth Community Activators, Lights-out Windsor & Bird-Window Collision Prevention, and the Graeme Gibson Prismaticos Project—as well as hosting 18 events, including monthly bird walks through Windsor parks. Davina Sanjgly and Lakshmi Tharuvai, our BIPOC youth activators, organized five events to bring birding to their communities, a program that expanded into the Changemakers Birding Club. PIBO summer student, Dante Bresolin, promoted Bird-Window Collision Prevention to local small businesses, assisted by the PIBO University of Windsor summer intern, Andrea Hevia, who also upgraded PIBO's Instagram account with tidbits from the history of women in ornithology. PIBO celebrated Earth Day and World Migratory Bird Day in a very public way and developed Backpacks for Birding, stocked with binoculars, birding lists and bird guides, that were distributed to area schools and lending libraries. in midsummer, PIBO's hard work promotion birds and conservation paid off when Nature Canada declared the city of Windsor Canada's 16th Bird Friendly City. And in its first international outreach, PIBO established a pilot project—the Graeme Gibson Prismaticos Project—that will collect previously loved binoculars from northern birders for distribution to schools and conservationists in central Mexico, the wintering grounds for many shared species that migrate across Pelee Island.

SECTION I — RESEARCH

by Sumiko Onishi, Alessandra Wilcox & Evan Sinclair

SONGBIRD MIGRATION MONITORING

Migration monitoring is undertaken to track songbird population trends—one of the major research projects established by Long Point Bird Observatory, the oldest bird observatory in the western hemisphere. For 20 years, PIBO has contributed migration monitoring data to the Canadian Migration Monitoring Network, one of 30 field stations across the country. The goal is to collect long-term, constant, standardized data by counting and capturing birds during the migration season. Many songbirds use the area along Lake Erie as stop-over sites between their breeding grounds in the Boreal Forest and their wintering grounds in Central and South America. During each spring and fall migration season, PIBO conducts a visual count (census) as well as constant mist-netting (banding) at Fish Point Provincial Nature reserve (Ontario Parks, Ontario Ministry of Natural Resources) and collects thousands of records for migratory songbirds. The Island's unique location at the convergence of two major eastern North America flyways allows us to study a wide variety of species.

PIBO's 20th year of migration monitoring at Fish Point was conducted from April 1 to June 10, 2022, and from August 1 to November 10, for a total of 170 coverage days. All 170 mornings were covered by the census, which consisted of standardized 90-minute visual observations at Fish Point. Mist-netting was conducted on 113 mornings. A total of 180 species—170 in spring and 168 in fall—were recorded during the standard count period, and 2,683 birds were captured, including that were 2,606 banded, during more than 600 field hours. The banding data collected over the past 20 years represents up to 58,299 individuals and 113 species.

Spring Migration Summary

April 1 to 15 by Alessandra Wilcox

With frequent rain and winds, new migrants are constantly filtering through the Island; most are fueling up to continue their epic journey farther north, while some are settling down and filling the forest with song. Our first **Purple martin** scout was seen on April 12, and by April 14 several pairs were already seeking shelter and investigating the nest boxes. The census over the past two weeks has generally been windy and cold, the average temperature hovering around 1-2°C with winds at around 20 km/h. Thankfully the rain held off in the mornings. For the first week, leagues of **Golden-crowned kinglets** filtered through the forest. On the April 6 census, 58 were seen foraging along the west beach of Fish Point. **Great egrets** have also been stealing the spotlight at the pond. On the morning of the 15th, we had reported 22 egrets at the pond, and this number only seems to be growing.

Various duck species also made memorable appearances during census; at the beginning of the month, a great diversity of duck species were foraging at the pond, including **gadwall**, **Hooded merganser**, **Ruddy duck**, **American wigeon**, **Blue-winged** and **Green-winged teal** and mallard. A pair of **Trumpeter swans** have also claimed the pond as their home base, they were seen consistently at the pond in the morning and evenings enjoying the short bursts of the sun during the cloudy weather. Out in the open water, **Common goldeneyes**, **Red-breasted mergansers**, and **Horned grebes** took advantage of the stirred-up nutrients around the tip; on a calm morning on April 12, 193 **Common goldeneyes** were observed resting and hunting just off the beaches at Fish Point.

On April 12 we set out to raise the nets around the banding station. As we trekked through the swamp we were surrounded by a chorus of **Rusty blackbirds**, **Red-winged blackbirds**, and **Common grackles**. The first couple of days of banding since April 14 have been rather slow; the temperature has rarely been above 5°C and the threat of rain and strong winds cut our first day of banding short. On the first day, two hours of netting yielded a single young female **Red-winged blackbird**. The second day was more fruitful, with a resident **Black-capped chickadee** and two **American robins**, six migrant **Rusty blackbirds** and one **Brown creeper**.

Although the netting area was relatively quiet, migration was booming across the Island. Some birds returned earlier than usual: a male **Indigo bunting** was seen on April 7 which was nearly a month before they usually become abundant. A **Spotted sandpiper** was also seen along the roads before the census on April 10, and three **Vesper sparrows** were seen foraging in the fields on April 11.

Around April 12, the herbs and undergrowth at Fish Point popped up nearly overnight; with a few more good days of sun and overnight rain the lush forests will return, and even more migrants will follow.



Rusty blackbird. Photo by Alessandra Wilcox

April 16 to 30 by Alessandra Wilcox

On April 16, a beautiful **Yellow-throated warbler** made its way to Lighthouse Point (non-standard observation). This species typically breeds throughout the southern and mid-eastern states. However, since the 1940s, isolated breeding populations have been documented as far north as New York and Michigan.

As the month continued and the undergrowth across the island flourished, **Ruby-crowned kinglets** began to take the Island by storm as they joined the **Golden-crowned kinglets** and **Yellow-rumped warblers** in their foraging adventures. The week of the 17th brought heavy rain, intense storms, and cold weather; however, just before the rains, **Yellow-rumped warblers** began to flood the Island.

We had seen an occasional **Hermit thrush** around the netting area throughout mid to late April; however, on the morning of April 22, thralls of **Hermit thrush** were seen foraging around the banding station throughout the day.

On April 23, hundreds of new migrants began touching down on the island. The favorable overnight south winds and warm temperatures must stimulate many species to fly north. In the following days, strong north winds bound many to Fish Point and pushed some back across the lake. During the peak period in April, hundreds of individuals of 12 warbler species were seen along the west beach of Fish Point; a beautiful male **Cerulean warbler** was spotted feeding on the ground, along with other warblers (non-standard observation). Other early arrival species seen on April 23 were **Blackburnian**, **Tennessee**, and **Bay-breasted warblers**. This Bay-breasted observation is the earliest ever recorded for this species in the Point Pelee area, and the second earliest in the province.

The netting area and census were never quiet from then on; a constant stream of new migrants filled the Island with new song and action. On April 25, nine willets and one unbanded (and endangered) Piping plover were spotted at the tip. That same day, a Summer tanager was observed around the banding station, and another was reported near the pond. Both were frequently seen around the same area throughout the week. Scarlet tanagers, Baltimore orioles, Rose-breasted grosbeaks, Ovenbirds, Wood thrush, and Northern waterthrush were also observed across the island, filling the forests with song. One of the notable observations over the weeks was the abundance of White-eyed vireos, which are rare breeders in Ontario, being found almost exclusively in southern Ontario along Lake Erie. Since the first White-eyed vireo was banded on the 25th, numerous individuals were seen daily and consistently at multiple locations. Along with those, a male Hooded warbler was also captured and banded on the 26th.



White-eyed vireo by Alessandra Wilcox

May 1 to 15 by Evan Sinclair

On May 1 there was an early morning storm that likely caused birds migrating over the lake to stop on the nearest piece of land. This made for a very active census at Fish Point. We observed three species that were the first of the season: Yellow-throated vireo, Indigo bunting, and Blue-winged warbler. Three species were particularly abundant: 58 Ruby-Crowned kinglets, 135 White-throated sparrows, and 90 Yellow-rumped warblers. In addition to the Great Blue herons and Great egrets seen daily at the Pond, we also observed a Green heron and a Black-crowned night-heron.

On May 2, we banded our first **Veery** of the season and detected a total of six thrush species during the day, including **Hermit**, **Swainson's**, **Wood thrush**, **American robin**, and my personal favourite, **Eastern bluebird**. We enjoyed hearing Rusty blackbirds singing around the netting area, knowing that soon they would depart to their breeding grounds in the boreal forest. As a non-standard observation there was a **Sedge wren** occupying the brush pile beside the PIBO cottage for a couple days. We enjoyed watching it and listening to its chattering song.



With rain on May 3 we did not do much banding, but we still counted as many birds as we could. There was a reverse migration* of 165 warblers (mostly Yellow-rumped) during the census at the tip of Fish Point, and we observed a first-of-the-season **Bay-breasted warbler**. After the rain stopped in the late afternoon, I took a walk at Fish Point and was thrilled to see a **Laughing gull** resting at the tip with **Common terns, Ring-billed gulls,** and **Bonaparte's gulls.**

May 4 and 5 were relatively quiet, with few birds banded. A **Yellow-breasted chat** was singing near the banding station. Flocks of **Blue jays** increased in size daily, as they made their short-distance migrations. We did not open nets on May 6 and opened them only briefly on May 7 due to rain and wind. After that, we started to see larger numbers of birds. Thirty-five **Yellow-rumped warblers** and 24 **Ruby-crowned kinglets** were observed on census. We also heard a **Pine siskin** flying over and saw two **Hooded warblers**.

^{*} a phenomenon in bird migration where a bird flies in the opposite direction of what is typical of its species during the spring or autumn migration

There was an increase in **Yellow warbler** numbers on May 8 and we recaptured two that were banded in May of 2018 and 2019, which means these Yellow warblers were at least 5 and 6 years old. With warming temperatures during late morning, we spotted a **Garter snake** and **Mourning Cloak butterfly**. The **Spring Beaut**y was just beginning to flower, mingling with the yellow and purple violets.

A good migration occurred overnight and on May 9, and the weather was clear and calm during monitoring. Yellow warblers and **Indigo buntings** were reverse-migrating despite the pleasant weather. Despite many Yellow warblers reverse migrating, we observed the largest number of this species so far this season (45). **Rose-Breasted grosbeaks** and **Indigo buntings** were also more abundant than on previous days.

Active migration continued into May 10 and many new species for the season were observed. These include **Eastern wood-pewee**, "Trail's" flycatcher, American redstart, Wilson's warbler, and Orchard oriole. Another reverse migration occurred with hundreds of warblers, orioles, and tanagers returning south. We banded 120 birds, which was by far our busiest day. Magnolia and Chestnut-sided warblers were the most abundant birds banded, along with a wonderful diversity of other songbirds. A huge flock of 110 Blue jays was observed flying high over the lake. To finish off an amazing day of birds, **Eastern whip-poorwills** were heard singing in the evening (non-standard observation).

With good weather conditions for migration, we anticipated busy days all week. On May 11 there were lower numbers of birds, but the species diversity still remained relatively high. We banded just under half as many as the day before, with Magnolia warblers still being the most frequently banded bird. We also banded six **Northern waterthrush**, which is the most we have banded this season. Ten **Red-Headed woodpeckers** were reverse migrating from the tip of Fish Point. A **Prothonotary warbler** continued to sing from the Silver Maple swamp.



On May 12, species diversity remained relatively high. We banded 54 birds, including seven Swainson's thrush and 10 Magnolia warblers. Fifteen species of warblers were detected throughout monitoring. May 13 was a special day with a special bird visitor. The very first bird we extracted from the nets was a Swainson's warbler! This southern species had never been recorded before at PIBO. It was immediately apparent that its bill was huge for a warbler. What could make this day more fun? Banding an Acadian flycatcher. We are always happy to detect the presence of Species at Risk. Bay-breasted warblers were definitely the most abundant warbler species this day and we banded 26. This was our second busiest day, with 93 birds banded.

On May 14 and 15 we were anticipating busy nets again, but they were quiet with only 50 birds banded over the two days. Apparently, southern birds are attracted to our nets: we caught a **Kentucky warbler**. The season's second **Cerulean warbler** was seen on census, as well as 11 **Black-Bellied plovers** flying by the tip of Fish Point.

From May 1 to 15 we banded 455 birds, 326 of those between May 10 and 13. A total of 153 species have been observed to date. During this past week we have been treated with amazing weather and bird migration. Vegetative growth has exploded, and the forests are lush and green. A wonderful plum tree is flowering beside the banding station and the **Tennessee warblers** are busy eating the insects pollinating the white flowers.

May 16 to 30 by Evan Sinclair

The second half of May started with rain, limiting us to only two and half hours of banding on the 16th. We banded two **Swainson's thrush**, a Veery, an **American redstart**, and an **Ovenbird**. Although we didn't band many birds, we counted 75 species throughout the morning, including a Pine siskin flying over. We were surprised and excited to hear a **Louisiana waterthrush** singing near the netting area. This endangered species does not breed locally and is typically an early migrant, most birds having arrived at breeding sites weeks ago.

Sixteen American redstarts and 22 Yellow warblers were detected on May 17, making them the most abundant warbler species this day. **American White pelicans** were making daily appearances at the tip of Fish Point. We hadn't banded many sparrows recently, so we were happy to band two **Lincoln's sparrows**.



More rain on May 18 forced us to close the nets early. While I was walking along the west beach during census, an unusual sound broke the silence. It was a **Cackling goose** flying overhead, and I was able to observe its short, stubby bill. Unlike Canada geese, these birds breed only in the Arctic and most would already have been much farther north by then.

The next two days were quiet, compared to peak migration the week before. On May 19 we observed a **Blue-winged warbler** and **Eastern towhee**, birds we had not seen many of lately. On May 20 we observed the lowest species diversity on census since May 8, but did manage to see a first-of-the-season **Marsh wren**. We also banded two **Canada warblers** and two **Mourning warblers**.

With only two warbler species observed on census on May 21, it was clear that times were changing. May 22 brought a new first-of-the-season species: **Semipalmated sandpiper**. These tiny shorebirds are often seen foraging at the tip of Fish Point as they rest and fuel up before continuing to their Arctic breeding grounds. **Grey-cheeked thrush**, and Blackpoll and Tennessee warblers—all northern breeders—were still moving through in low numbers.

On May 23 we had our nets open for the full six hours of monitoring and only banded four birds. Banding continued to be very slow on May 24 and 25 with only 13 birds banded. Fortunately, our daily census allowed us to monitor a greater diversity of birds and we spotted some interesting species. **Dunlin, Caspian tern,** and **osprey** were all new birds for the season. It was very exciting to see a flock of 20 **Whimbrels** flying north over the lake on May 26. Over in the netting area we banded two Canada warblers and a Mourning warbler.

With temperatures increasing, insects were abundant and the muddy trails through the netting area became difficult to navigate. During these times we were particularly grateful when rewarded with birds after hiking to the far nets with an additional five pounds (minimum) of mud stuck to our boots. Canada Warblers, Common yellowthroats, a Tennessee and a Magnolia warbler were the highlights for May 27 and 28.



Only one bird was banded on May 30 and only three on May 31. On these days we observed Green herons and dozens of American White pelicans. An **Acadian flycatcher** - a probable local breeder on the island - was heard singing near the netting area. The very last bird we banded for the season was a handsome male **American goldfinch**. During the latter half of May, we banded 134 birds for a total of 809 birds this season.

Seasonal Diversity

During the first half of April, an average of 39 species were observed, with the lowest diversity (34) detected on April 1 and the highest (43) on April 6 and 12. Average species diversity during the second half of April was 41, with a considerable increase occurring on April 24 and 25, when 48 and 56 species were observed respectively. Average species diversity increased to 51 during the first half of May, with the lowest diversity (38) detected on May 7 and the highest (64) on May 10. Peak species diversity occurred from May 10 to 17, when the average species diversity was 60. Following this, there was a steady decrease in diversity, and only 31 species were observed on June 7 (lowest of the season).



Figure 1. The fluctuation of species diversity observed on census during spring migration monitoring at Fish Point Nature Reserve. The 90-minute census was conducted one hour after sunrise every day from April 1 to June 10.

Fall Migration Summary

August 1 to 15 by Sumiko Onishi

On August 1, two **Northern waterthrushes** were observed as the first migrant warblers on the season's first census. A total of forty-five species was recorded, including two adult **Green herons** and a juvenile **Black-crowned night-heron** at the Pond. I assumed they were the same birds we'd been trying to find breeding evidence for during summer. Two other local breeding birds, a **Red-headed woodpecker** and **an Eastern wood-pewee** were also seen feeding their young. On August 2, several young **Yellow-billed cuckoos** were seen with an adult, and a **Prothonotary warbler** was seen nearby the viewing deck.



From August 3 to 4, the Pond was the busiest place for observing many species. Several **Solitary sandpipers** were seen there, along with **Spotted sandpipers**. On the 4th, **Northern rough-winged swallows** were also observed at the Pond.

After a long period of dry weather, intense thunderstorms during the nights of August 4 and 5 gave a good amount of moisture to the insects, animals, and plants. On the morning of the 5th, many birds sat in the tree branches under the blue sky to dry their feathers. A **House wren** feeding its second brood near the trail was kept busy, and the nestling was peeking out from the cavity nest. At the tip of Fish Point, three **Common terns** and six **Caspian terns** were observed, three of them in juvenile plumage. A total of 48 species was recorded.

From August 6 to 7, a relatively active migration was observed. The season's first **Black-and-white warblers** were recorded. At the tip, quite a few **Yellow warblers** and swallows flew over, and two **Chimney swifts** were spotted among them. Some **Monarch butterflies** were observed as well, flying over the water.

After a severe thunderstorm and rain at night, many flight calls of **Yellow warblers** passed in the dark grey sky on the morning of August 9. **Baltimore orioles** were seen along the census route, and a **Blackburnian** and a **Tennessee warbler** were the fall season's first.

August 10 and 11 provided good conditions for the beginning of fall migration. Many **Blue-gray gnatcatchers** passing through the area were observed along with some **Yellow-bellied** and **Least flycatchers**. A couple of **Cape May warblers** were observed as the season's first. At the Pond, I had a chance to see three juvenile **Little Blue herons**, PIBO's first record of that species.

On August 12, migration was continuously active with swallows, woodpeckers, and nuthatches. There were quite a few **Red-bellied** and **Downy woodpeckers, Black-capped chickadees** and **Red-breasted nuthatches** in the census area. In the canopy, warblers were hopping around with their high-pitched calling. A **Wilson's warbler** was spotted as the season's first. **American White pelicans** increased over the last couple of days: about 300 were seen around the Tip.

August 13 to 14 was quieter, although the temperature was similar. A small group of warblers were spotted on the 13th. Quite a few **Blackburnian**, **Cape May** and **Bay-breasted warblers** were around, and the season's first **Mourning** and **Yellow-rumped warbler** were recorded. On August 14, 10 **Bald eagles** were counted on the census.

August 16 to 31 by Sumiko Onishi

We started banding and census operations during the latter half of August. I recalled how busy we were last season. Checking the nets while wading through the deep mud made us sweat profusely, and the swarms of mosquitoes made it difficult to extract birds from the nets. This season was completely different. The ground was dry, there were fewer mosquitoes, and the canopy and the understorey appeared thicker than last season, including many overgrown poison ivies.

On August 15, hundreds of warblers were observed high up in the canopy. **Blackburnian** were the majority, and quite a few **Cape May, Bay-breasted,** and **Black-and-whites** were also observed. Along with them, three **Canada warblers**, new for the season, were recorded during the census and two others were banded. Another season-first banding was a **Hermit thrush**, which usually shows up late in the season with other thrush species. Altogether, 13 warbler species were recorded since the beginning of this fall season.

The volume of warblers was continuously high from August 16 to 20, but they remained mostly in the canopy. A total of 55 species were recorded during the standard count period, and eight birds were banded during 28.1 net-hours on the 16th. The season's first **Swainson's thrush** and **Black-throated Green warbler** were banded and showed heavy molt with growing flight feathers, which we don't often see. On the 17th, some **Magnolia** and **Chestnut-sided warblers** were observed, and 15 birds (25.3 net-hours) were banded, including a Wilson's warbler. On the 18th, a **Pine warbler** and a **Black-throated Blue warbler** were observed as new for the season, and 16 birds were banded (41.3 net-hours).

On August 19, the winds shifted to the south and the temperature warmed up for the afternoon, but it dropped quite a bit in the evening and early morning of the next day. On that day's census, a **Marbled godwit** was seen at the tip of Fish Point, and 10 birds were banded (for the full 45 net-hours). On August 20, many **Purple martins** and **Barn swallows** were migrating, but the netting area was quiet.

After the first big group of warblers showed up on August 15, we recorded a variety of warbler species each morning during that week. On August 21, there was a thunderstorm with heavy rain that started before dawn, and continued sporadically all day. A flock of warblers was seen at the Tip, but pouring rain with lightning started, and the census finished early. On August 22, I saw many **Eastern kingbirds** on my way to Fish Point and during the census. **Magnolia, American redstarts, Black-and-white warblers** and **Ovenbirds** were numerous during the last few days of the week.

The netting area grew busy during the morning of the 23rd. I banded 68 birds of 19 species, including 12 warbler species, and quite a few **Eastern wood-pewees** and **Red-eyed vireos** were around. On August 24, we banded 33 birds of 14 species, including 27 warblers of 10

different species, four thrushes, and others (full 45 net-hours). At 8 am, quite a few thrushes started calling around the banding lab.

On August 25-26, there were many **Green herons** at the Pond, where their sharp, piercing calls echoed. Six were recorded on the 25th. Each day a couple of **Prothonotary warblers** were observed, and several **Red-headed woodpeckers** made noisy sounds while chasing each other at the Pond. On the 26th, the netting area was quiet, but there were hundreds of warblers moving along the east shoreline around the tip. Also, a hundred **Purple martins** and **Barn swallows** flew around at the Tip. Groups of **Common grackles** and **European starlings** were coming through the area as well.



On August 27,\ a total of 66 species, including 12 warbler species, were recorded during the standard count period, and 19 birds were banded after the census (34.5 net-hours). On August 28, another large swallow migration was observed: hundreds of Purple martins, some Barn and Northern Rough-winged swallows (non-standard observation) were seen flying to the south, a couple of Chimney swifts among with them. The flock of warblers that had been observed for the last few days must have left overnight, since fewer warblers were seen during the census. **Red knots** and **Ruddy turnstones** (non-standard observation) were observed on the shore, and an osprey and a **Peregrine falcon** (non-standard observation) were seen.



On August 29, another group of birds arrived in rainy weather. **American redstarts** were numerous, and more **Black-throated blue** and **Nashville warblers** were seen. Thirteen warblers, including Yellow and Yellow-rumped, were recorded.

On August 30, **Blue-winged teals** were seen along with about fifty **Wood ducks** at the Pond. The most remarkable sighting for the morning was thousands of **Double-crested cormorants** and more than three hundred **American White pelicans** on the south shore. The white pelicans and dark cormorants moving around in the grey stormy sky was a nice view at the tip.

On August 31, 55 birds of 20 species were banded. Some nets were temporarily closed due to many warblers in the nets and a flock of **Common grackles** started jumping in the nets in addition. Later in the morning, warblers began coming down, and 14 **American redstarts** were banded along with 11 other warbler species. The number of warblers and the volume of each species was remarkable for the period. In the netting area, early morning calls of warblers, thrushes, and nuthatches were slowly building up day by day toward the end of the month.

September 1 to 15 by Sumiko Onishi

Numerous **Swainson's thrushes** must have shown up during the night of September 1. A total of 84 birds were banded, including 28 thrushes and 50 warblers (21.6 net-hours, 3.9 bird/net-hours). Eighteen birds (mostly thrushes) were banded during the hour before the census, and 66 birds were banded after the census. A total of 67 species were recorded during the standard count period, including 17 warbler species. On the census, many **Blackpoll** and **Tennessee warblers** were observed along the west shore.

From September 2 to 3, many species moved continuously through the area. A total of 49 birds of 17 species (25.3 net-hours) were banded, including 22 Swainson's and a **Connecticut warbler** on September 2. American redstarts, Red-eyed vireos and Eastern wood-pewees were numerous. On September 3, 45 birds of 17 species (12.8 net-hours) were banded. The nets, reopened after the census, had to be closed again, due to capturing too many birds within an hour. A good variety of warblers were seen for both the census and netting - 17 warbler species during the morning. At dusk, about twenty **Common nighthawks** flew around in the sky (non-standard observation).



From September 4 to 5, the on-again, off-again rain continued. A swarm of mosquitoes showed up and many snails were seen on the ground. A total of 50 bird species were recorded during the census on the 4th. Numerous **Swainson's thrushes** and warblers were seen in the netting area. On the 5th, the nets were open after the census, and 25 birds were banded (18.6 net-hours). The weather improved on the 6th: hundreds of warblers were at the Pond, as well as many **Cape May** and **Yellow-rumped warblers**. Some of the nets were open after the census; however, they were closed temporally after an hour due to heavy bird volume. A total of 69 birds were banded (17.25 net-hours), including 24 Magnolia warblers.



September 7 and 8 saw a good northeast wind, and quite a few **Monarch butterflies** and **dragonflies** were observed. Many thrushes called in the netting area at dawn. A big flock of about 300 **Common grackles** were recorded on the census. Numerous **Red-eyed, Warbling, Philadelphia**, and some **Blue-headed vireos** were seen. The 8th was a bit quieter in the morning, although 18 warbler species were recorded during the count period, and numerous **Blackpoll** and a few **Black-throated Green warblers** were around. We banded 45 birds of 14 species (24.6 net-hours) on the 7th and 24 birds of 10 species (11.25 net-hours) on the 8th.

September 9 to 12 was quiet, with an average of 10 birds banded each morning before and after the census. A **Golden-winged warbler** was spotted during the census on the 10th, although fewer warblers were observed overall. Some **Yellow warblers** were still coming through, and a season-first **Ruby-crowned kinglet** was seen near the nets on the 11th. When **Sharp-shinned hawks** and **Merlins** started hanging around the area, songbirds became harder to find. On my way to Fish Point on the 12th, 35 **American White pelicans** flew high up in the grey sky and, slowly forming a V, flew off.

On September 14, I heard numerous flight calls of thrushes in the dawn sky. Some of them were captured in the early morning net-round, but many must have passed through. Hundreds of **Western Palm warblers** were seen on the 14th and 15th, along with many **Blackpoll warblers**. On September 15, lots of **White-throated sparrows** arrived, and some **Lincoln's sparrows** were seen. Although the netting area was quiet, 100 warblers were seen in the vegetation along the west beach, and 18 warbler species were recorded during the count period.

^{*}Net-hours are calculated based on the number hours the nets were open and the number of nets and sizes.

September 16 to 30 by Sumiko Onishi

The temperature was up and down during this period. After a week of warm weather, the next was cooler. Temperatures warmed during the afternoons, then dropped quite a bit during the night. The weather stimulated the trees to turn colour, and many migrants came through the area along with Monarch butterflies.

From September 16 to 19, few birds were observed. Several **Sharp-shinned** hawks and **Merlins** were seen on the census route, where many songbirds hid in the shrubs near the water. A good variety of species—a total of 67, including 15 warbler species, **Blue-gray gnatcatchers** and **Ruby-crowned kinglets**—was recorded on the 16th. On the 17th, lots of **Northern parulas** were seen, and a flock of **Blue jays** started showing up.

On September 20, I heard the rhythmical song of **Whip-poor-will** in the dawn forest as I was opening the nets. On the census, 70 **Monarch butterflies** flew high up in the blue sky, and many **Yellow-shafted flickers** were seen along the road on the way home (non-standard observation).

The weather changed on September 22, the first day of fall, to coincide with the equinox. It was a rapid change from 25C on the day before, to a morning low of 15C, with a strong northwest wind. Twice we heard tall trees blown down by the wind while we were out. During the census, a season-first **American pipit** was recorded at the Tip, although not many other birds were observed.



On September 24, the wind shifted to the south, although the temperature stayed cool. It was quiet for the census and in the netting area, except for some **Golden-crowned kinglets**, but we did record some season-first species: **Yellow-bellied sapsuckers**, **Rusty blackbirds**, and **Darkeyed juncos**. Rain started in the evening and stayed on and off during the census on the morning of September 25. More than 500 Blue jays flew high in the sky at the Pond. The netting was quiet on both the 24th and 25th - a total of 10 birds were banded (28.9 net-hours) on the 24th and 9 birds were banded (20.6 net-hours) on the 25th.

On September 26, a hurricane hit the East Coast of Canada and brought intense winds to our area; the census and netting were cancelled for safety reasons. Since our census route and the banding lab were surrounded by mature forest, falling trees damaged our banding lab and blocked the trail to our nets.

The weather improved on September 27, but only a few species were seen for the next few days. Several hundred Blue jays continued to fly overhead. Many **Gray-cheeked thrushes** were around in the netting area, but fewer warblers except for **Northern parulas** and **Black-throated Blue warblers**. On the 28th, 12 birds of 8 species were banded. Many **Monarch butterflies** in the blue sky: we counted about 100 during the census.

From September 29 to 30, a strong northeast wind brought more Winter wrens, Brown creepers, Red-breasted nuthatches, numerous kinglets and White-throated sparrows. Some House wrens and Ruby-throated hummingbirds were observed as well. At the nets, a total of 35 birds of 14 species were banded (30 net-hours), including two Yellow-bellied flycatchers on the 29th and a total of 41 birds of 14 species were banded (26.3 net-hours), including 12 White-throated sparrows.

October 1 to 14 by Sumiko Onishi

The wind blew northeast during these two weeks. Beautiful fall colours began to extend from the maples, oaks and sumacs to the Virginia creepers along the shoreline. On October 1, numerous **Winter wrens, Brown creepers, Red-breasted nuthatches,** and **kinglets** were seen in the netting area. For the first couple of hours, the area was lively, with an agitated group of Blue jays and at least three **Sharp-shinned hawks** in the nearby woods. A total of 65 birds of 17 species were banded (42.8 net-hours), including 22 kinglets and 7 Brown creepers.



On October 2, the chilly wind remained strong, but morning temperatures were milder when the sun came up. On the census, hundreds of kinglets called, and numerous birds moved along the trail. Many were White-throated sparrows, Dark-eyed juncos, Yellow-rumped warblers, Brown creepers, and Winter wrens. A Least flycatcher was spotted, although it was getting late for those Empidonax species. The nets were reopened after the census, and soon dozens of kinglets started showing up. Some nets had to be closed because of the wind and the numbers of birds. A total of 42 birds of 13 species were banded (15.9 net-hours). A Purple finch and a Bobolink were observed as new for the season.

October 3 and 4 was good weather for the migrants. There were numerous **Hermit thrushes**, **White-throated sparrows**, **kinglets**, **Brown creepers**, and **Winter wrens** in the netting area. On the 3rd, 55 birds of 13 species were banded (37.5 net-hours), including 24 kinglets and 10 thrushes. On the 4th, we banded 66 birds of 15 species (35.6 net-hours), including 32 kinglets, 15 thrushes, and 7 Brown creepers. Quite a few **American robins** and **Eastern bluebirds** were also observed during the last few days.

On October 5, the census was quieter than the day before, but numerous birds hung around in the netting area. A total of 97 birds of 17 species were banded (33.4 net-hours), including 61 kinglets and 11 Brown creepers. Between the busy net-rounds, a bunch of birds started chorusing around a tree near the banding lab. After it happened three times, I looked at the tree closely and spotted a season-first **Northern Saw-whet owl** quietly sitting in a tree. On October 6, 29 birds of 7 species were banded (30 net-hours), including 20 kinglets.

After that, the census route became much quieter and the netting area too, although groups of **American robins** started showing up. The nets were operated before and after the census, and we banded a total of 29 birds of 7 species (30 net-hours). The Pond was tranquil, with only a few Common grackles and Rusty blackbirds. There were small groups of Red-winged blackbirds for the last few days, but hardly any during the census.

October 15 to 31 by Sumiko Onishi

A west wind built up for the last few days of the season, and the west shore was rough. The sound of howling wind kept up all day on October 15. Quite a few **Sharp-shinned hawks** were recorded during the census, but the netting operation was cancelled due to the intense wind. On the morning of October 16, raptors started crossing the lake, and 24 **Sharp-shinned hawks**, 3 **Cooper's hawks**, 4 **Northern harriers**, 2 **Red-tailed hawks**, and an **American kestrel** were recorded along the west shore. Also, a big flock of blackbirds—Red-winged blackbirds, Common grackles, and European starlings—began to show up.

From October 17 to 19, the weather was truly nasty, with 40 km/hour west winds gusting to more than 60, with intermittent cold rain and sleet. The nets were operated when weather permitted, but only a few birds were banded during this period. On the 17^{th,} a few groups of **Tree swallows** flew along the east shore, a late group that seems to show up this time every year. On the 18th census, a season first **Common loon** flew over and **Orange-crowned, Pine,** and **Nashville** warblers were seen, along with kinglets and numerous sparrows. Flocks of **White-crowned, Song** and **Chipping sparrows** and quite a few Eastern towhees were around (non-standard observation). On the 19th census, three **American kestrels** perching on a dead tree at the Tip, and two more flew out over the lake.

From October 20 to 23 the weather plunged almost to snowfall temperatures (on the 20th), then rose to early summer temperatures (on the 23rd). Many tiny flying insects, some Monarch butterflies, snakes, and toads were seen when it was warm. On the 22nd, hundreds of Redwinged and Rusty blackbirds, and Common grackles moved through the area, and 9 Northern harriers, five of them adult males, were recorded along the west shore. On October 23, active migration was observed under a gentle south wind. In the blue sky, a layer of migratory birds—thousands of blackbirds, many robins, and Blue jays, groups of American pipits, Horned larks,

Purple finches, American goldfinches, and nuthatches—flew across the lake. It was a joy to hear such a medley of calls from so many different species as they headed south.

October 24 saw similar conditions to the day before. In the early morning lots of birds flew over, and a few Purple finches sang in the netting area. Along with numerous robins, quite a few groups of Eastern bluebirds and Killdeers passed over, along with thousands of blackbirds. Red-breasted nuthatches were abundant—I counted 20 on the census—and Hermit thrushes, Winter wrens, White-throated sparrows and Dark-eyed juncos moved through the netting area. Only 6 thrushes were banded, along with a couple of kinglets.

On October 25, eight **Trumpeter swans** were recorded on the census. Many kinglets, White-throated sparrows and Dark-eyed juncos hung around the netting area. All the nets were opened at first, but some were closed when they started catching masses of falling leaves whenever the wind blew. Only a few birds were banded. There was light rain on October 26, with mild temperatures (15C) during the census. We observed many kinglets. As non-standard observation, a big flock of **Eastern meadowlarks**, about 40 birds, was seen on a recently harvested farmer's field.



The warmer temperature suddenly ended on the morning of October 27. For two days, we saw numerous birds, including hundreds of juncos, and the netting was busy. Thousands of **American crows** flew overhead, and a total of 115 birds (35.6 net-hours) of 12 species were banded, including a **Fox sparrow**, a late-season **American redstart**, and 56 **Golden-crowned kinglets** on the 27th. On the 28th, we opened only six of the ten nets, because of how stressful it had been extracting kinglets from nets filled with falling leaves. However, within an hour the nets started filling with kinglets again, and all the nets were closed temporally. Still, a total of 117 birds (19.1 net-hours) of 11 species were banded that day, including 86 Golden-crowned kinglets and 11 Dark-eyed juncos. As a non-standard observation, 5 **Evening grosbeaks** came to our feeder.

Waterfowl started showing up after October 29. Some **Horned grebes** and **Red-breasted mergansers** were seen. October 30 and 31 saw thousands of blackbirds during the census, as well as lots of robins, bluebirds, and juncos. A **Northern Rough-legged hawk** (dark morph) flew over the water on the 30th and 100 Horned grebes and a group of scaup species were recorded on the 31st.

The season's first owling started on the 29th and we welcomed visitors for the first three nights. The weather was warmer than normal for owling, and six new **Northern Saw-whet owls** were banded on those nights.



Northern Saw-whet owl, by Sumiko Onishi

November 1 to 10 by Sumiko Onishi

November usually brings freezing temperatures, but it was 17C on the morning of the 1st, which was spring-like and misty after some rain during night. A few kinglets, creepers and nuthatches were around, and quite a few birds flew by overhead. Three **Ruddy ducks** were observed along with other waterfowl on the east shore.

On November 2, the Pond filled with thousands of noisy blackbirds stopping by. Once they took off, they formed an endless line. On the west beach, the season's first **American Tree sparrows** and **a Clay-colored sparrow** were recorded.

From November 3 to 4 the weather remained warm with temperatures around 15C and fog in the mornings. A Monarch butterfly flew over the lake on the 3rd. Thousands of blackbirds were continued to show up on the west shore on the 4th.

On November 6, we recorded our season's first **Bufflehead**, but not many birds were seen from November 5 to 7. On November 8, the wind came from the northeast and brought 100 **Golden-crowned kinglets** and thousands of blackbirds. A few **Killdeers** moved through the area. The highlight was a **Golden eagle** circling above my head at the Pond.

The wind shifted to the south on the morning of the 9th. The frequent, strong winds, warm temperature, and low precipitation throughout the season resulted in a significantly low level of water at the Pond. The bottom was exposed and even some green grass started growing in the muddy area. Along with a large flock of **European starlings**, about a hundred **Rusty blackbirds** were feeding on the mud.

On November 10, the season's last census was recorded: we counted a total of 22 species. Instead of walking in biting cold winds as I normally do in November, I was happy to relax without rushing back to the banding station, and to enjoy the mild weather. It was a busy fall for me, looking after both the census and the netting by myself, but it was a very fulfilling season, with 1,730 birds banded and recorded belonging to 158 species.

2022 Summary (Spring and Fall) by Sumiko Onishi

There was quite a difference between our 2022 Spring and Fall field seasons. In the spring, we had six staff members and three volunteers, while in the fall there was just one staff member and a few volunteers. Maintaining a healthy balance between field observations—our standard 90-minute morning census—and up to six hours of netting and banding during the rest of the day, was a challenge for one person.

Migration Monitoring Coverage

The nets were opened a half-hour before sunrise, closed during the morning census, and reopened during the six hours standard monitoring period. The start time for the census was shifted about half an hour earlier or later, or occasionally shortened from 90 minutes to 75 minutes, depending on the situation with the banding. Although the census covered most of the species observed in the course of the day, additional species were often observed during the banding operation, and these were sometimes difficult to record when the banding became hectic. Full, six-hour coverage at the banding station was only possible when an occasional volunteer was available.

TABLE 1 - Migration Monitoring Coverage Summary 2007-2022										
	Census Coverage			Netti	Netting Coverage			# Spec.	# Spec.	
Year	Spring	Fall	Days	Spring	Fall	Days*	Captured	Banded	Observe d	
2022	Apr1-Jun10	Aug1-Nov10	170	Apr14-May31	Aug12-Oct31	114	2645	79	210	
2021	Apr1-Jun10	Aug5-Nov10	168	Apr12-May31	Aug15-Non10	114	3009	75	180	
2020	Apr1-Jun10	Aug1-Nov10	168	N/A	N/A	N/A	N/A	N/A		
2019	Apr1-Jun8	Aug5-Nov10	166	Apr15-Jun1	Aug16-Oct20	115	2462	84	185	
2018	Apr1-Jun10	Aug1-Nov10	173	Apr20-May31	Aug17-Nov8	110	2820	79	190	
2017	Apr1-Jun11	Aug1-Nov15	179	Apr21-May31	Aug17-Nov10	118	3266	80	185	
2016	Apr1-Jun10	Aug1-Nov15	178	Apr15-Jun2	Aug17-Nov4	113	2479	77	193	
2015	Apr2-May29	Aug1-Nov15	165	Apr20-Jun3	Aug15-Nov8	111	2483	76	194	
2014	Apr1-Jun10	Aug1-Nov15	178	Apr18-Jun5	Aug15-Nov8	133	2448	75	197	
2013	Apr1-Jun6	Aug1-Nov15	170	Apr15-Jun5	Aug15-Nov8	120	2485	82	200	
2012	Apr4-Jun10	Aug1-Nov15	174	Apr13-Jun15	Aug13-Nov8	125	3714	81	201	
2011	Apr4-Jun8	Aug1-Nov15	173	Apr12-May31	Aug11-Nov15	119	2408	78	203	
2010	Apr2-Jun10	Aug1-Nov15	177	Apr2-May28	Aug4- Nov10	132	3482	85	193	
2009	Apr1-Jun10	Aug1-Nov15	178	Apr2-May24	Aug5-Nov11	134	3222	88	198	
2008	Apr3-Jun14	Aug1-Nov15	180	Apr5-Jun10	Aug3-Nov11	147	3505	82	194	
2007	Apr1-Jun15	Aug1-Nov15	183	Apr2-Jun1	Aug1-Nov15	139	2672	84	205	

Notes: Only census was conducted for 2020 due to a staff shortage under the COVID-19 restriction Netting Days*: the number of days the nets were opened

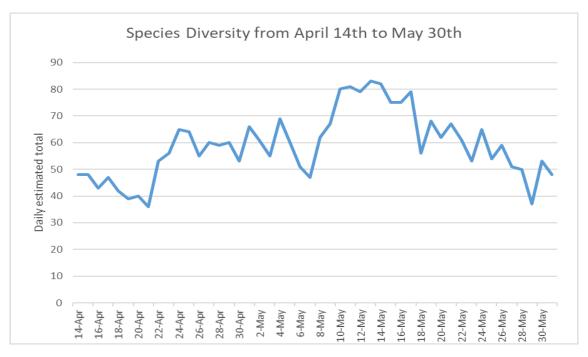
Given that the fall net-hours were somewhat limited, the relatively high catch-rate is explained by the high volume of migrating birds that coincided with the availability of extra staff. The following table (Table 2) shows the comparison of the catch-rate (the number of banded plus captured birds / net-hour) with the number we banded and the net-hours for each spring and fall from 2006 to 2021. As reflected by the catch-rate, there was a good volume of migrants passing through the area during the entire 2022 season. This might indicate the breeding success of some species in the previous season, such as the Bay-breasted warbler, as indicated in our 2021 fall catch-rate.

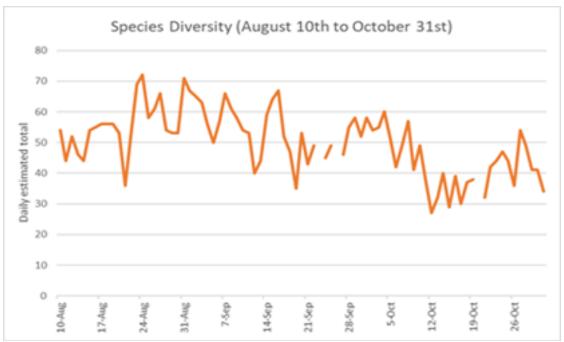
TABLE 2 - Comparison of Catch-rate during Migration Monitoring at Fish Point										
Year	Catch-rate		# Banded(Captured)		Net-hour		Total Catch- rate	Total Net-hour	Days nets open	
	Spring	Fall	Spring	Fall	Spring Fall					
2022	0.54	1.02	838(45)	1730(32)	1646	1721	0.80	3322	113	
2021	0.26	1.29	394(35)	2523(57)	1667	2003	0.82	3670	114	
2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
2019	0.73	0.57	803(57)	1558(44)	1176	2829	0.61	4005	115	
2018	0.62	0.73	798(60)	1913(49)	1275	2686	0.71	3961	110	
2017	0.45	0.91	560(34)	2635(37)	1327	2921	0.77	4248	118	
2016	0.51	0.66	735(42)	1671(31)	1533	2598	0.60	4131	113	
2015	0.47	0.75	391(33)	2022(37)	907	2745	0.68	3652	111	
2014	0.52	0.55	736(34)	1633(45)	1469	3028	0.54	4497	133	
2013	0.40	0.69	495(36)	1935(19)	1321	2838	0.60	4159	120	
2012	0.58	1.01	838(25)	2702(149)	1484	2816	0.86	4300	125	
2011	0.69	0.72	730(37)	1582(59)	1106	2269	0.71	3375	115	
2010	0.50	0.97	672(43)	2683(84)	1442	2841	0.81	4283	132	
2009	0.44	0.84	739(N/A)	2424(N/A)	1645	2888	0.71	4533	134	
2008	0.44	0.88	794(50)	2711(50)	1927	3149	0.71	5075	147	
2007	0.47	0.59	604(39)	1937(39)	1376	3325	0.56	4701	140	
2006	0.72	1.33	985(N/A)	3269(N/A)	1350	2446	1.12	3797	118	

Since 2013 (including 2013) our net-hours were calculated as 'Net-hour x 0.75' because our nets are 9mnet which is smaller size than CMMN standard (10m) nets. The net-hours on this table was corrected from the previous record. The highlighted catch-rate with red colour was calculated from the number of banded without the number of captured.

Species Diversity

The highest species diversity was seen around May 9 to May 17 in the spring. In the fall, highest species diversity fluctuated between August 23, 24, 27, 31, and September 1, 7, 16. Table 2 (above) shows the change in daily estimated totals, with the number of species recorded during the standard count period, including the census count.





A noticeable feature of the spring migration was that we recorded many southern species, such as Swainson's, Kentucky, Yellow-throated, and Louisiana warblers. We banded seven White-eyed Vireos. I noticed some small things in the fall migration, such as the fact that we captured quite a few warblers showing active molt, including growing flight feathers, in the second half of August. We also saw relatively fewer raptors on census than in previous seasons. For example, the number of Sharp-shinned hawks we counted in October on the census was 123, compared to 208 in Fall 2021. It will be interesting to see the final results when all data collected by CMMN is available.

Species	Total	Species	Total
Golden-crowned Kinglet	328	Wood Thrush	10141
Swainson's Thrush	227	Black-throated Green Warbler	1(
Magnolia Warbler	210	Mourning Warbler	10
Yellow-rumped Warbler	141	Brown-headed Cowbird	10
Ruby-crowned Kinglet	130	Rusty Blackbird	10
American Redstart	114	White-eyed Vireo	9
Hermit Thrush	92	Carolina Wren	
White-throated Sparrow	85	"Trail's" Flycatcher	8
Ovenbird	80	Northern Parula	7
Black-throated Blue Warbler	70	Western Palm Warbler	
Brown Creeper	67	Common Grackle	7
Bay-breasted Warbler	64	Wilson's Warbler	
Black-and-white Warbler	58	Red-breasted Nuthatch	5
Veery	56	Rose-breasted Grosbeak	5
Yellow Warbler	54	Philadelphia Vireo	
Gray-cheeked Thrush	53	Black-capped Chickadee	
Red-winged Blackbird	46	American Robin	
Chestnut-sided Warbler	45	American Goldfinch	
Red-eyed Vireo	43	Sharp-shinned Hawk	3
House Wren	42	Yellow-shafted Flicker	3
Nashville Warbler	39	Red-bellied Woodpecker	2
Yellow-bellied Flycatcher	37	Eastern Wood-Pewee	2
Blue-headed Vireo	36	Tree Swallow	2
Northern Waterthrush	36	Cedar Waxwing	
Common Yellowthroat	35	Orange-crowned Warbler	2
Tennessee Warbler	33	Blue-winged Warbler	
Gray Catbird	29	Connecticut Warbler	2
Ruby-throated Hummingbird	25	Hooded Warbler	
Canada Warbler	22	Indigo Bunting	2
Blackburnian Warbler	20	White-crowned Sparrow	
Dark-eyed Junco	20	Black-billed Cuckoo	<u>-</u> 1
Downy Woodpecker	18	Acadian Flycatcher	
Northern Cardinal	18	Warbling Vireo	1
Blackpoll Warbler	16	White-breasted Nuthatch	
Winter Wren	15	Blue-gray Gnatcatcher	1
Least Flycatcher	14	Brown Thrasher	1
Swamp Sparrow	13	Swainson's Warbler	1
Blue Jay	12	Kentucky Warbler	
Cape May Warbler	12	Scarlet Tanager	1
Baltimore Oriole	12	Fox Sparrow	1
Lincoln's Sparrow	11	Song Sparrow	1
		82 species	2644

Foreign Encounter (Recapture) Record

"Foreign encounter" is defined as a bird banded at the PIBO station then subsequently recaptured in another location, or as a bird banded elsewhere that was recaptured at our station. In 2022, we received three notifications of foreign encounters (see our Northern Sawwhet Owl Monitoring Report) from the Bird Banding Office (Table 5). One of the cases was that of an American redstart banded at PIBO and recaptured in South Carolina. This bird fledged in the summer and traveled 1,000 kms in a month to reach South Carolina, which is halfway to its winter range in Cuba. We hope protecting the natural forest on our island and on the birds' migratory flyway will help these young birds to survive their first migration.

TABLE 5	TABLE 5 - Encounter (recapture) Record reported in 2022									
Band#	Species		Original Banding Location	Banding Date	Recaptured Date	Recapturing Lacation				
2950-62139	American Redstart	HY	Pelee Island	Sep-22-2022	Oct-18-2022	South Carolina				
1713-30498	Sharp-shinned Hawk	HY male	Pelee Island	Sep-28-2021	May-6-2022	Braddock Bay Bird Observatory - Manitou Beach, Monroe County, NY, USA				
2731-92312	Brown-headed Cowbird	Adult male	Middle Bass Island	Jul-10-2019	Apr-25-2022	PIBO - Pelee Island				





American Redstart photo by Sumiko Onishi

Interesting and Unusual Species Record

Piping plover April 25, observed along the beach at Fish Point.

*Yellow-breasted chat April 25, singing bird was heard during census at Fish Point. Two

other individuals observed during standard observations April 28

and May 4.

*Prothonotary warbler May 11 to August 18, several individuals were observed

throughout migration and during the breeding season; most frequently seen at Fish Point, but other observations recorded at

Fox Pond and Lighthouse Point.

Swainson's warbler May 13, a new species for PIBO.

Acadian flycatcher May 13, banded one and another was heard singing during

standard observations.

Louisiana waterthrush

observations.

May 16, heard singing and seen briefly during standard

Dickcissel June 28, singing male was observed at NCC's FDNR SE Field.

Little Blue heron August 10, A new species for PIBO. Three young birds were

observed on the census at Fish Point.

Red knot August 28, one observed at the tip on the census.

Marbled godwit August 19, one observed at the tip on the census.

Golden eagle November 8, on the census.

^{*}See the Species at Risk section for more details.



Black-crowned Night-heron with Little Blue heron (left) Swainson's warbler (right). Photos by Sumiko Onishi & Evan Sinclair

Field Effort by Sumiko Onishi

After two years of scaling down our routines due to COVID-19 regulations, our field effort in 2022 was active with substantial research projects. Our routine research projects—Migration Monitoring, Marsh Monitoring Program, Species at Risk Observation, Purple Martin Colony Annual Survey, and Owling—were completed successfully and the results were encouraging. In addition to our 2021 effort for the first season of the Ontario Breeding Bird Atlas, Evan Sinclair, our spring assistant, and I spent almost the entire summer looking for breeding evidence for various species to update the breeding status on the Island. Another spring assistant, Alessandra Wilcox, and Rob Tymstra, a part-time census conductor, and five other volunteers were significant help in covering the census, the netting operation, and the observations during April and May. Unfortunately, we had no luck attracting an assistant bander for the fall. As a result, the field supervisor had to conduct both census and netting operations for the most of that period. Under such challenging circumstances, we very much appreciate the work of volunteers— scheduled and unscheduled—at the banding station and for the owling.

TABLE 9 - Field-hour During 2022										
Participant	Total Hours	MM	MMP	PUMA	SAR	Atlas	Owling	Other*		
Sumiko Onishi	804.6	660.8	11.4	12	15.2	52	53.2	18.5		
Rob Tymstra	30	30								
Alessandra Wilcox	82.2	82.2								
Evan Sinclair	317.9	183.5	11.4	9.5	8.4	105.1		2.5		
Hannah Mittelstaeds	67.5	67.5								
Simon Baudreault	82.2	82.2								
Mark Duchene	50.5	50.5								
Peter Coo & Dawn Miles	23	23								
M.Mastellotto	16.3	16.3								
J & H Hettinga	11						11			
Graeme Gibson	4.5			3.5				1		

^{*}Setting the nets up and taking the nets down, trimming vegetation along the net-lane, providing bird walk for visitors, Christmad Bird Count were counted as other

Abbreviation	Field Research	Organization
MM	Migration Monitoling	Canadian Migration Monitoring Network
MMP	Marsh Monitoring Program	Birds Canada
PUMA	Purple Martin Colony Annual Survey	Nature Canada
SAR	Species at Risk Observation	PIBO
Atlas	Ontario Breeding Bird Atlas	Partnership - Birds Canada, Ontario Field Ornithologists, Ontario Nature and two other
Owling	Owling	PIBO's non-standard netting
Other	Other such as clearning nest boxes	PIBO

Northern Saw-whet Owl Monitoring

by Sumiko Onishi

Since 2004, the observatory has banded 400 Northern Saw-whet owls and captured more than 20 owls that were banded at other locations, ranging from Northern Ontario to Minnesota. In 2012, we banded 55 Saw-whet owls (0.18 birds/net-hour) and recaptured six Saw-whet owls banded in previous years or at other banding stations. Our busiest night was November 13, 2012, when we banded 25 Saw-whet owls (0.51 birds/net-hour). Our previous

data showed that the total catch-rate is similar each year, regardless of the varied total net hours (average 0.107).

The 2022 owling season started on October 29 and ended on November 28. The netting was operated 13 evenings, as much as the weather permitted, and a total of 199 hours were spent during that period. Despite the warmer weather in the early part of the season, we banded 36 Northern Saw-whet owls, 2 Eastern Screech owls, and recaptured 2 Northern Saw-whet and 1 Screech owl. The average catch-rate was 0.19 bird/net-hour and the busiest time was from November 14 to 22 with 0.3 bird/net-hour catch rate (see TABLE 11). Two of the recaptured owls from the fall were originally banded by us about a week before, and the third recaptured owl was originally banded on Kelley's Island, just to the south of Pelee Island (see TABLE 12). Another foreign encountered (recaptured) Saw-whet was originally banded last fall at PIBO and was recaptured in May 2022 at Whitefish Point, Chippewa County, Michigan, USA. TABLE 12 also shows a previous record of frequent encounter (recapture) between the same locations.

TABLE 11 - Northern Saw-whet Owls Captured in 2022									
Date	Species	Banded	Retrap	Net hours	Birds/net hour	Temp. ℃	Wind direction		
29-Oct	NSWO	2	1	14	0.21	9	SE		
30-Oct	NSWO	4		14	0.28	11	E		
31-Oct		0		8.4	0	16	sw		
2-Nov	NSWO	1		13.1	0.15	11	SE		
6-Nov		0		14	0	16	SW		
7-Nov	NSWO	4		16.9	0.24	9	NE		
9-Nov	NSWO	1		15.9	0.06	13	S		
14-Nov	NSWO	4	1	15	0.33	3	NE		
21-Nov	NSWO	8		21.6	0.37	3	NW		
22-Nov	NSWO	6		23.1	0.3	6	W		
23-Nov	NSWO	3		12.1	0.25	3	E		
26-Nov	NSWO	1	1	15.9	0.12	6	sw		
28-Nov	NSWO	2		15	0.2	3	SE		
Total		36 banded	3 retrapped	199 net-hours	Average 0.19				
Note: Two	of local bree	eders Eastern	Screech Owls	were also band	ed and one of then	n was recaptur	ed later day.		

Northern Saw-whet Owl Encounter (Recapture) Record

TABLE 1	TABLE 12 - Nnorthern Saw-whet Owl Recent Encounter Records									
Species	Banded Year	Banded Date	Banded Location	Recapture d Year	Recapture d Date	Recaptured Location				
NSWO	2018	Nov 3rd	Pelee Island	2020		Whitefish Point, Chippewa County, Michigan, USA				
NSWO	2021	Nov 23rd	Pelee Island	2022		Whitefish Point, Chippewa County, Michigan, USA				
NSWO	2021	Oct 22nd	Kelley's Island	2022	Oct 29th	Pelee Island				
NSWO	2022	Nov 7th	Pelee Island	2022	Nov 14th	Pelee Island				
NSWO	2022	Nov 21st	Pelee Island	2022	Nov 26th	Pelee Island				

Note: Highlited type shows foreign encounter. Please see the following map about the recaptured location.

Frequent encounter (recapture) has happened between Pelee Island and Innisfil, Simcoe County, ON and Whitefish Point, Chippewa County, Michigan, USA.



In 2006, for the first time, PIBO invited Islanders for an owling night at the netting area at Fish Point. Quite a good crowd of our Island friends came into our banding station, many for their first time, and we enjoyed cheerful talk sitting in the pitch dark between the net-rounds. Since then, every season we have opened our owling nights to the public at least three times from the end of October to the beginning of November.

After the first year, the owling project was moved to the Staff Cottage for the convenience of operating both daytime and evening netting with a minimal staff of two. For the last ten years, public owling has been held one night of every weekend from mid-October until the first weekend of November. For that period, if the weather stays warm, we could not expect to capture Northern Saw-whet owls for the event, since they migrate later. However, the Staff Cottage could not stay open after the weather dropped below freezing because it wasn't winterized. To host the owling nights, we need a suitable habitat for the netting location and it has to be convenient for the staff to work many hours in the dark and in cold-weather conditions.

In 2019, the popular CBC-TV program "Still Standing" came to Pelee Island and PIBO's public owling night became a popular part of the show. Unfortunately, PIBO could not continue with the high level of demand for public owling nights given its limited staff, unwinterized facilities, and Covid-19 restrictions. For the last two years, the PIBO field supervisor has tried to continue the owl monitoring herself, reducing the effort to a minimum and setting up the nets on private property, with owl banding starting after daytime banding was finished. Although public owling was in demand, there was concern about having owling-night visitors on private property, as well as the noise and traffic, which might scare the owls.

After conducting two owling seasons without a public owling night, we decided to bring back owling night in different way in 2022. We set up a tent at the roadside to avoid visitors driving near the netting area: we scheduled the public owing nights over three days on a weekend to increase the chance of good weather conditions on at least one of those days; and we announced when the nets would be checked, to avoid too many visitors staying for long periods near the netting area.

This pilot plan worked well in 2022, since the temporary netting area was surrounded by similar habitat to the Staff Cottage. Two of the three public owling nights had good wind conditions for migration but this was tempered by warmer temperatures, which was less than ideal conditions. About 24 visitors—some new faces and some repeaters—showed up and 7 owls were captured. Most visitors had a chance to see a Northern Saw-whet owl. Kindly, about \$80 was donated.

Thank you very much to all the visitors who came to our owling night, the individual who rented us the tent, those who brought baked goods to serve, and John and Hanne Hettinga, and Alex and Karen who helped prepare the tent, tables, chairs, lighting, signs and cookies and hot drinks, and worked as banding assistants and warm, welcoming hosts.



Breeding Bird Observation Record

by Sumiko Onishi

PIBO's summer breeding birds observation comprised four parts:

- 1. Purple Martin Colony Annual Survey
- 2. Observation of the individual Species at Risk that breed on the Island
- 3. Marsh Monitoring Program
- 4. Ontario Breeding Bird Atlas, the third year.

Field hours totalled more than 200 during June and July. Purple martins had another successful breeding season and territorial Prothonotary warblers were more crowded this season at Silver Maple Swamp. We recorded a Bald Eagle with the young showing agitative call toward us and watched a Belted Kingfisher go into a possible nest site.

1.Purple Martin Colony Annual Survey June to August 2022

This annual survey started in the summer of 2019 in partnership with Nature Canada, which donated two Purple martin box units (gourd and 'T-14') to the PIBO Staff Cottage, located on the south shore of Pelee Island. The survey started with recording the arrival date of the first Purple martin at the box site and monitoring from nest building to the young fledging. We estimated a total of 128 young fledged in the summer of 2022.

TABLE 13 - Purple Martin Colony Annual Survey effort 2022					
Observers					
Evan Sinclair, Sumiko Onishi,	Evan Sinclair, Sumiko Onishi, Graeme Gibson				
# of nest box checks					
9 (June 2, 12, 28; July 8, 9, 10	, 14, 25; August 1, 7				
12 hours					





After we recorded the season's first Purple martin on April 5 at Fish Point on the census (90 minutes standard count) during migration monitoring, a few martins were seen around the nest box site at PIBO's Staff Cottage on April 12. The numbers built to a crowd of several pairs inspecting the boxes over the next couple of days. From the end of April to mid-May, the martins mostly spent their time competing for the best nesting cavity. From June 2 to August 7, the nest boxes were checked 10 times.

Among the total of 28 pairs of martins, five banded birds were observed, presumably banded by us in previous years. About 80 percent of the boxes contained, on average, 5 eggs by June 2. The estimated date for first egg-laying was May 28. However, as the subadult (second-year bird) normally arrives about two weeks later than the adult bird, eight of the twenty-eight pairs—mostly second-year bird pairs or a pair that included a second-year bird—started laying eggs later than June 3. The latest date for egg-laying was June 18 and the clutch size of the late-start pair was smaller than early-start pairs.

In the early stage, there was evidence of disturbance by a European starling trying to nest at the T-14 units. We assumed the disturbance was the reason why three of the 14 cavities contained only nest materials and no eggs, and one cavity was taken by the starling.

By June 12, most of the nests contained five to six eggs, some in early incubation. The estimated period during which many of the eggs hatched was June 20 to 25. On July 9, a total of 131 young were growing in the nest box. The majority of the young presumably fledged around July 19. By August 1, not many martins were seen around the box, with the exception of several young with an adult bird. We banded the last six young from the late nester on August 1, for a total of 125 young martins banded for this season. The last nest box check was done on August 7 and confirmed all cavities were empty. Several days later, on August 13, about a hundred Purple martins were seen at Fish Point during the census, presumably gathering for their migration.

We recorded one case of mortality: a female died for some reason after she laid six eggs, and a dead male was found in the box later with the egg. The cause of mortality was unknown.







Table 14 - Summary of Purple Martin Colony Annual Survey 2022								
SITE ACTIVE						Rate eggs hatched	Rate young fledged	
T-14	14	10	71.4	53	52	52	0.98	1.0
Gourds	18	18	100	98	81	81	0.82	1.0
Total	32	28	88%	151	133	133	0.88	1.0

TABL	TABLE 15 - Comparison of Purple Martin Annual Survey from 2019 to 2022								
Year	Arrival Date	Date 1st egg laid	# active nest	# eggs	# eggs hatched	# fledgiling	Date young fledged	success rate	Male&Female ages (AM/AF/SM/SF/U)
2019	Apr 12th	May 31st	32	133	116	104	N/A	0.78	21 / 7 / 5 / 14 / 7
2020	N/A	Jun 7th	31	171	135	128	Jul 23rd	0.74	18 / 10 / 7 / 14 / 15
2021	Apr 11th	May 27th	30	161	141	136	Jul 16th	0.84	30 / 13 / 0 / 8 / 9
2022	Apr 12th	May 28th	28	151	132	133	Jul 19th	0.88	20 / 14 / 10 / 10 / 2
Note	Arrival date	e: First date	observed a	t the box					
Date 1st egg laid : estimated date most birds laid 1st egg									
Date young fledged: estimated date majority of young fledged									
	Success rate: estimated success rate of fledgiling (#fledgelings/#eggs)								



2. Species at Risk (SAR) Monitoring

In Ontario, under the Species at Risk Act (2022), twenty-four species of birds were classified as 'Endangered' or 'Threatened', and sixteen species were classified as 'Special Concern,' which could become 'Endangered' or 'Threatened' if no recovery or protective means are taken. The determination of the classification of a species is the responsibility of the Committee on the Status of Endangered Wildlife in Canada (COSEWIC), a group of experts that assesses and identifies Species at Risk.

Species at Risk

by Evan Sinclair

During migration and the breeding season, PIBO field staff observed and documented sightings of species at risk on Pelee Island. Sightings of species at risk were made during standardized migration monitoring, and non-standardized observations during migration and the breeding season.

A total of 24 species at risk, including 'special concern,' were observed on Pelee Island in 2022 (Table16). Of the eight species that were considered migrants, six are provincially listed as threatened or endangered. Probable or confirmed breeding status was documented for seven species including three listed provincially as threatened or endangered. A total of six provincially endangered, 11 threatened, and seven special concern species were observed.

TABLE 16						
	Provincial	National	Breeding Evidence			
American White Pelican	Threatened	Not listed	Possible			
Least Bittern	Threatened	Threatened	Probable			
Bald Eagle	Special Concern	Not listed	Confirmed			
Red-headed Woodpecker	Endangered	Endangered	Confirmed			
Peregrine Falcon	Special Concern	Special Concern	Migrant			
Piping Plover	Endangered	Endangered	Migrant			
Red Knot	Endangered	Endangered	Migrant			
Black Tern	Special Concern	Not listed	Migrant			
Common Nighthawk	Special Concern	Threatened	Possible			
Eastern Whip-poor-will	Threatened	Threatened	Possible			
Chimney Swift	Threatened	Threatened	Possible			
Barn Swallow	Threatened	Threatened	Confirmed			
Bank Swallow	Threatened	Threatened	Possible			
Wood Thrush	Special Concern	Threatened	Confirmed			
Eastern Wood-pewee	Special Concern	Special Concern	Probable			
Acadian Flycatcher	Endangered	Endangered	Possible			
Cerulean Warbler	Threatened	Endangered	Migrant			
Prothonotary Warbler	Endangered	Endangered	Confirmed			
Louisiana Waterthrush	Threatened	Threatened	Migrant			
Canada Warbler	Threatened	Threatened	Migrant			
Yellow-breasted Chat	Endangered	Endangered	Possible			
Bobolink	Threatened	Threatened	Migrant			
Eastern Meadowlark	Threatened	Threatened	Probable			
Rusty Blackbird	Special Concern	Special Concern	Presumed Migrant			

The provincial and national status and breeding evidence of species at risk observed on Pelee Island in 2022.

Species described in the following chapter

- Prothonotary warbler
- Yellow-breasted chat
- Red-headed woodpecker
- Wood thrush
- American white pelican
- Barn swallow
- Bank swallow
- Chimney swift
- Common nighthawk

- Whip-poor-will
- Pied-billed grebe
- American bittern
- Least bittern
- Virginia rail
- Sora
- Common gallinule
- American coot
- Marsh wren

Prothonotary Warbler (Endangered)

Throughout the latter half of May, the entire month of June, and the first two weeks of July, PIBO staff regularly monitored Prothonotary warbler breeding activity by walking along the road adjacent to the silver maple swamp and standing at the observation deck at Fox Pond in the Fish Point Nature Reserve. Several singing males were heard throughout May and June, and two nest sites were found.

The first Prothonotary warblers arrived in late April, and there were several singing males on territory by late May. It was not until May 29 that we observed the first female, and she happened to be carrying nest material into a short stump. Over the next few days, there was a male singing in close proximity to the stump and the female was foraging close by. On June 4, we took a look inside the nest and found there were three eggs. We did not continue to see the female on subsequent visits and presumed she was incubating eggs. There was a lack of activity around the nest over the next week, so we decided to look inside the nest again and found there were still only three eggs. We determined it was likely the pair had abandoned the nest for reasons unknown to us.

Throughout the first half of June there were at least seven birds: six singing males and one female. One male was on territory at Fox Pond, but we were unable to find it again after mid-June. We never saw two of the males as they were singing from an area of the swamp that was not visible from the road. Two males were continuously singing close to the road. These males were likely unpaired as we did not observe any signs of breeding activity other than singing.

We found another nest in the swamp on June 22. The sound of begging nestlings could be heard from the road. After scanning the general area where the sound was coming from, we observed a male and female actively carrying food into, and fecal sacs away from, the nest. The next day we looked inside the nest box and found five young birds. We did not see any activity around the nest a few days later, so we checked the nest a final time and found it empty. We presumed they had fledged successfully as there were no signs of predation.



Figure 1. Typical Prothonotary Warbler breeding habitat at Fish Point: A swamp dominated by Freeman's Maple with an abundance of natural (and artificial) nesting cavities.



Figure 2. The short stump that a pair of Prothonotary Warblers used for nesting. Three eggs were laid, but after further inspection, it was presumed that the nest was abandoned.



Figure 3. The box used by a pair of Prothonotary Warblers for nesting. Five nestlings presumably fledged.

Yellow-breasted chat (Endangered)

There were multiple observations of individuals during migration (see Rare and Unusual Species section). Even so, it was a quiet breeding season for Yellow-breasted chats. No birds were detected throughout the entire month of June, even though considerable hours were spent in key breeding habitat. Quite unexpectedly, a morning walk on the northwest section of Stone Road Alvar Nature Reserve on July 7 yielded two singing birds. Two were heard singing relatively close to each other. After we watched and listened for more than half an hour, they went quiet and disappeared into the vegetation. They did not display any breeding behaviors other than singing (or perhaps counter-singing). Approximately a half hour later and half a kilometer away from the previous sightings, another was heard singing on the east site of Stone Road across from the old schoolhouse. A singing bird was heard again during another visit to the northwest section of Stone Road Alvar Nature Reserve on July 11, but again, no breeding behaviors were obvious (although it was becoming more likely that the chat was on territory).



Figure 4. The location where two singing Yellow-breasted chats were heard on July 7. The habitat consisted of Eastern Red-cedar/Chinquapin oak savannah-type area with scattered thickets of Prickly-ash and Nannyberry.

Red-headed woodpecker (Endangered)

Dozens of birds were recorded during spring migration, including a single high count of 10 birds reverse-migrating at the tip of the Fish Point Nature Reserve in mid-May. Numbers dwindled through June and only one pair was observed throughout the breeding season. The pair was observed sporadically from the viewing platform at Fox Pond in Fish Point. Confirmed breeding evidence was obtained through observations of pair copulation on May 23 and occupation of a nest cavity on June 5. It is unclear whether they had a successful breeding season. There were no observations of adults carrying food into the nest site and no fledged juvenile birds were seen. It should be noted that several European starlings were breeding in the same area, and one was seen exiting the suspected but not confirmed Red-headed woodpecker nest cavity. So it is possible the Red-headed woodpecker pair was out-competed by European starlings for prime nest cavities. Individual Red-headed woodpeckers were subsequently seen foraging or exiting tree cavities, but there was no consistent evidence that they were having of breeding success.



Figure 5. A Red-headed woodpecker on a Northern Hackberry tree. Dozens of birds were seen during migration but only one pair was known to be breeding on the island.

Wood thrush (Nationally 'Threatened' and provincially 'Special Concern')

During standard migration monitoring in mid-May, a pair of Wood thrush established a breeding territory near the banding station in Fish Point. On May 23, they completed building their nest and were incubating eggs by May 26.

American White pelican (Provincially 'Threatened')

Because American White pelican nests on Lake Erie islands are inaccessible to PIBO staff, it is unknown how successful their breeding season was. However, frequent visits to the tip of Fish Point, where the pelicans are often seen foraging or resting, enabled staff to count the number of birds. A particularly noteworthy count was conducted on June 13, when 133 birds were seen in the water off the tip of Fish Point, apparently having a feeding frenzy with gulls and cormorants.



Figure 6. American White pelicans at the tip of Fish Point on June 13. Note the black feathers on the head and neck of some birds, which is characteristic of chick-feeding adults.

Aerial Insectivores

Barn swallows appear to have had a successful nesting season, with many fledged young birds flying around Stone Road. Several pairs were nesting on a wood house on the south shore near the PIBO Cottage.

Bank swallows were observed on three occasions throughout the breeding season. All observations were recorded at Lake Henry in the Lighthouse Point Nature Reserve during the evening Marsh Monitoring Program survey. A few individuals were heard flying over Lake Henry on June 10 and 24. At least a dozen Bank Swallows were observed on July 7 amidst the swarms of other swallow species feeding at dusk. It was not confirmed whether they bred on Pelee Island.

During the breeding season, one observation of **Chimney swifts** occurred in mid-June at Stone Road Alvar and another in early July at East Park Campground. Both observations were of two birds flying overhead. No convincing breeding evidence was obtained.

Common nighthawks and **Eastern whip-poor-wills** were heard on only a few occasions early in the breeding season. No higher probability or confirmation of breeding was documented.

3. Marsh Monitoring Program

The purpose of the Marsh Monitoring Program is to detect focal marsh breeding birds whose presence or absence will ultimately indicate the health of the wetland (Marsh Monitoring Handbook, 2008).

In 2022, PIBO staff conducted three Marsh Monitoring Program surveys at Lake Henry at Lighthouse Point. The surveys took place in the evening (approximately 18:30) on June 10, June 24, and July 7, each lasting about three hours and ending at dusk. A canoe was used to access the six survey plots located around the edge of Lake Henry. At each plot a 15-minute survey was conducted involving 10 minutes of passive observation and 5 minutes of song broadcasting to encourage a response from targeted species. In addition, secondary species were mapped on a semicircle and aerial foraging species were tallied.

The most interesting result from the 2022 surveys was the complete absence of focal marsh breeding species. It is likely that the invasion of European phragmites has had a significant impact on habitat suitability and may be responsible for the lack of marsh breeding birds.

On a positive note, there is still a considerable area of wetland untouched by European Phragmites that provides habitat for fish, birds, herptiles, muskrats, and invertebrates such as dragonflies. Clearly, parts of the wetland provide good habitat for swallows as hundreds could be seen foraging at dusk in July.

Marsh Birds

During the 2022 breeding season, PIBO staff observed and documented breeding evidence of marsh birds using non-standardized methods. Surveying was conducted entirely at the Florian Diamante Nature Reserve in atlas square 17TLG62 (See Marsh Monitoring Program section for marsh birds observed at Lake Henry, Lighthouse Nature Reserve, atlas square 17TLG63). The recent wetland restoration on the Florian Diamante Nature Reserve has

created ideal habitat for marsh nesting birds. Because the wetland was restored only recently, many of the marsh breeding birds in 2022 were not observed in atlas square 17TLG62 during the first (1980-1985) or second (2000-2005) Ontario Breeding Bird Atlas (Table 17). Breeding evidence was collected for several species that were not detected in 2021 (the first year of Atlas 3), likely due to the increased atlassing effort in marsh habitat.

	TABLE 17						
	Atlas 1	Atlas 2	Atlas 3	Atlas 3 Notes			
Pied-billed Grebe	N/A	Not Found	Confirmed	Fledged young on June 12			
American Bittern	N/A	Not Found	Possible	Heard singing only once			
Least Bittern	N/A	Not Found	Probable	Two singing and on territory			
Virginia Rail	N/A	Not Found	Possible	Heard singing only once			
Sora	N/A	Possible	Probable	One singing and on territory			
Common Gallinule	N/A	Not Found	Probable	One pair on territory			
American Coot	N/A	Not Found	Confirmed	Fledged young on June 28			
Marsh Wren	N/A	Not Found	Confirmed	Adult entering nest on June 28			

Table 17. The breeding status of marsh nesting birds recorded for atlas square 17TLG62 in Atlas 1 (1980-1985), Atlas 2 (2000-2005), and Atlas 3 (2020-2025). Notes highlight the type of breeding evidence observed and dates when status was confirmed.

While paddling between survey plots, an additional list of birds seen was recorded. The following is a list of interesting species observed:

Wood duck: Just before starting the first survey, 150 birds were observed

swimming in the wetland.

Caspian tern: Two observed flying over the wetland at dusk on the first survey.

Black-crowned night-heron: One individual observed during the first two surveys and at least

two seen on the final survey.

Green heron: One was observed on the second survey.

Trumpeter swan: A pair was seen during the second and third survey but no

evidence of breeding was apparent.

Bank swallow: A dozen were observed during the third survey. This was the only

place on Pelee Island that Bank Swallows were seen.

As we mentioned in the 2021 Year-end Report, the habitat has been changing over the past few years. Phragmites controls are in place and there has been a slow build-up of the breeding population of marsh bird species at a wetland restored by Nature Conservancy of Canada. This restoration of the Florian Diamante Nature Reserve (FDNR) started on the former farmland about ten years ago. During the summer of 2022, we observed a good variety of marsh bird species at the FDNR wetland (please see the chapter 'Ontario Breeding Bird Atlas 3' for more information). We will continue to conduct the survey at Lake Henry, but we also plan to monitor the FDNR wetland. This will provide an opportunity to study the change in wetland wildlife with the management between our current study site, Lake Henry at Lighthouse Point Provincial Nature Reserve, and the new wetland, Florian Diamante Nature Reserve wetland (FDNR).

Please see the Species at Risk chapter in the PIBO Annual Report 2020 and 2021 for the

previous record of Least Bittern during the Marsh Monitoring Program.







Photo of the view from the viewing deck at the Florian Diamante Nature Reserve (FDNR)

4. Ontario Breeding Bird Atlas 3

During the 2022 breeding season (primarily June and July), PIBO field staff observed and documented breeding evidence for Ontario Breeding Bird Atlas 3. Having already completed point counts the previous year, effort was devoted to 'general atlassing' (means observation of breeding evidence). Because it was the second year of Atlas 3, our goal was to upgrade the breeding evidence of as many species as possible from the previous year. Effort was primarily put into atlas square 17TLG62 and 17TLG63 (Table 18), and more specifically, into four locations: Fish Point Nature Reserve, Lighthouse Point Nature Reserve, FDNR Marsh, and Stone Road Nature Reserve, as well as a private property (Table 19).

TABLE 18					
	Hours/Square				
	17TLG62	17TLG63	17TLG52	Total	
Sumiko Onishi	37.5	6.5	9	53	
Evan Sinclair	88.1	17	0	105.1	

Table 18. The number of hours spent 'general atlassing' in each of the three atlas squares that cover Pelee Island during the breeding season in 2022.

TABLE 19					
	Hours				
Location	Evan Sinclair	Sumiko Onishi			
60 Browns Road (south trail)	2.7	1			
FDNR Marsh	13.9				
FDNR SE Field	4				
Fish Point NR	27.5	7			
Lighthouse Point NR	15	4.5			
Middle Point	0.6				
Rob's Property	0.5				
Richard&Beryl Ivy Property	0.5	2			
Sheridan's Point	2				
Stone Road Alvar NR	33.8	2			
Winery Property	4.7	2			
NCC Krestel	0	20.5			
Private Property	0	5			
West shore Rd		9			
Total	105.1	53			

Table 19. The number of hours spent 'general atlassing' in different locations on Pelee Island during the breeding season in 2022.

TABLE 20 - Upgraded to probable or confirmed in 2022					
Pied-billed Grebe	Belted Kingfisher	Black-capped Chickadee			
Least Bittern	Red-headed Woodpecker	Carolina Wren			
Trumpeter Swan	Red-bellied Woodpecker	House Wren			
Green Heron	Northern Flicker	Marsh Wren			
Black-crowned Night-hero	Eastern Wood-pewee	Blue-gray Gnatcatcher			
Blue-winged Teal	Eastern Phoebe	Eastern Bluebird			
Northern Shoveler	Great-crested Flycatcher	Wood Thrush			
Cooper's Hawk	Eastern Kingbird	Grey Catbird			
Sora	Horned Lark	Warbling Vireo			
Common Gallinule	Purple Martin	Common Yellowthroat			
American Coot	Barn Swallow	Brown-headed Cowbird			
Spotted Sandpiper	Blue Jay	Eastern Meadowlark			
Great Horned Owl	American Crow	House Finch			
		Total: 39			

Table 20. Species upgraded to Probable or Confirmed breeding status in atlas squares 17TLG62 and 17TLG63 during the 2022 breeding season.

TABLE 21 - Confirmed Breeders in 2022					
Pied-billed Grebe	Red-bellied Woodpecke	American Robin			
Mute Swan	Downy Woodpecker	European Starling			
Trumpeter Swan	Northern Flicker	Cedar Waxwing			
Canada Goose	Eastern Wood-pewee	Warbling Vireo			
Wood Duck	Eastern Kingbird	Yellow Warbler			
Mallard	Horned Lark	Prothonotary Warbler			
Blue-winged Teal	Purple Martin	Northern Cardinal			
Bald Eagle	Tree Swallow	Indigo Bunting			
Wild Turkey	Barn Swallow	Chipping Sparrow			
American Coot	American Crow	Field Sparrow			
Killdeer	Black-capped Chickadee	Brown-headed Cowbird			
Mourning Dove	Carolina Wren	Red-winged Blackbird			
Yellow-billed Cuckoo	House Wren	Common Grackle			
Great Horned Owl	Marsh Wren	Orchard Oriole			
Ruby-throated Humr	Blue-gray Gnatcatcher	Baltimore Oriole			
Belted Kingfisher	Eastern Bluebird	American Goldfinch			
Red-headed Woodp	Wood Thrush	House Sparrow			
		Total: 51			

Table 21. Confirmed breeding species in atlas squares 17TLG62 and 17TLG63 during the 2022 breeding season.

Eastern screech-owl Survey (part of Ontario Breeding Bird Atlas 3) by Sumiko Onishi

An Eastern screech-owl survey, provided by Ontario Breeding Bird Atlas (OBBA) 3, was conducted in early spring 2022 on two of the 10-km squares redefined on Pelee Island. The purpose of this survey was to determine the distribution of the nocturnal species during their breeding season.

The survey began about one half hour after sunset under suitable weather conditions—a clear night with gentle breeze—for playing the broadcast sound provided by the OBBA and recording the number of owls calling back. The square 17TLG62 covers most of the east shore to the inland area including Fish Point Provincial Nature reserve and Stone Road Alvar (Figure 7), and the square 17TLG63 covers the north side of the island including the Lighthouse Provincial Nature Reserve (Figure 8). Survey points were chosen from the redefined points where the suitable habitat of the targeted species existed in each square.





The survey provided the opportunity to see Eastern screech-owls in their breeding season, when they usually maintain a low profile in order to protect their nest and young from interference. We believe numerous Eastern screech-owls inhabit the Pelee Island forest, but during this survey the observer, while standing in the dark, could actually see them flying once the broadcast sound turned on.

A high density of screech-owls was observed at Fish Point Provincial Nature Reserve, along the Stone Road Alvar, and the north side of Harris Garno Road where the provincial nature reserve lies adjacent to Lighthouse Point. Unfortunately, no nests or young were found during this survey.

It is important to conduct future surveys to learn more about Eastern screech-owl breeding behavior.

TABLE 22 - Hours of Eastern Screech-Owl Survey

Observers: Sumiko Onishi

Dates surveys conducted: March 9, 17, 20, 2022

Hours: 5

TABLE 23 - Result from Eastern Screech-Owl Survey 2022						
Square ID # of points # of point counts Outstading # of Eastern # of Great # of Am. Woodco						# of Am. Woodcock
Square ID	within square	surveyed	Points	Screech-Owl	Horned Owl	# Of ATTI. VVOOGCOCK
17TLG62	40	10		23	5	3
17TLG63	9	8		16	9*	2
17TLG52	6	0	N/A	N/A	N/A	N/A

Note: We are planning to conduct the survey in the swuare 17TLG52 in 2023 early March

SPECIES COUNTS

2022 Botham Cup Bird Race Count

by Sumiko Onishi

In 2022, after two years of Covid-19 restrictions, we were thrilled by the return of birding visitors and Guest Birder for the Birds Canada fundraiser, the Botham Cup Bird Race.

The twenty-four hour race began at noon on Friday, May 6, in front of the Pelee Island Heritage Centre in chilly, rainy weather. There were not many participants this year, but PIBO's spring assistant bander, Evan Sinclair, and I (Field Supervisor) individually joined the race after we finished banding that morning at Fish Point.

We both decided to count only bird species as we walked around. Evan started his count from the west dock to Fish Point, and along the south shoreline on his way back to PIBO's Staff Cottage. I started my count from my own property on East West Road and walked to the south shore, and other surrounding areas. The next morning, we drove to Fish Point before sunrise to open the nets, as we always do. Unfortunately, there were not many birds around the netting area, but this gave us the opportunity to walk around to count additional species for our race.

In the end, Evan walked more than 20 km and I walked approximately 10 km before we finished the race at noon on Saturday, May 7. I recorded a total of 85 species; the highlights were a Prothonotary warbler found at Bob's Hole and a Golden-winged warbler. Evan recorded about 100 species. The Botham Cup was won by a team of hard-core field biologists from Nature Conservancy of Canada, with a count just a bit higher than Evan's.



May 2022 Botham Cup bird race on Pelee Island.

2022 Christmas Bird Count (CBC) (Lake Erie Islands Region) by Graeme Gibson

Once again Pelee Island teamed up with our American neighbours to the south for the Lake Erie Islands Christmas Bird Count on December 18, 2022. A total of 21 participants took part on four islands (Kelley, Middle and South Bass, and Pelee Island) and saw a total of 19,802 individuals representing 71 species, compared to 8,282 birds representing 57 species recorded in 2021.





The most numerous species documented were Red-breasted mergansers (4,918), European starlings (4,266), and scaup species (3,923). The most unusual species were Red-necked grebe, Surf scoter, and Lesser Blacked-backed gull, all seen by the team on Kelley's Island.

The birders on Pelee Island were Sumiko Onishi, Graeme Gibson, Brian and Lisa Kipp, Deb Crawford (feeder watcher) and David and Carol Snell (feeder watchers). South Bass island birders included Lisa Brohl, Sandy Funtal, Elizabeth Heineman, Richard Gump, and Juliane Market; feeder watchers on South Bass Island were Russ Brohl, Kit Knaser, Ruth Scarpelli, Michelle Heinemen, Carmen Trisler, Sarah Toole, Dino Uszak, Pam Stephens, Maryann, Anita, and Elizabeth McCann, Susan Ferguson, Walt Duff, Jim O'Donnell and Renee Fultz. Middle Bass Island was covered by Tyler McClain, Mariah Shearer and Teddi Keith Morris. On Kelley's Island, the following participated: John Pogacnik, Alex Panehal, Tom and Paula Bartlett, Emily Beal, Kari Warner, Lee and Sandy Tkach, Sean Williams, and Chris Ashley.

Thanks to Lisa Brohl for compiling the totals and to John Pogacnik, Lake Erie Island count coordinator, as well as everyone who participated. It was a cold, windy day and there weren't a lot of birds around compared to the days before and after, although we still managed to tally great species.

Migratory Monarch Butterfly Count

by Sumiko Onishi

During the 90-minute census count, the number of monarch butterflies and dragonflies was recorded along the Fish Point Provincial Nature Reserve census route. This monarch count became one of PIBO's variable records as the longest consistent monarch butterfly counts on their migration through Essex County. The data (since 2003) is shared with researchers and the public on the NatureCounts (Birds Canada) website through the Trinational Monarch Knowledge Network (birdscanada.org). This extensive database shares the collected observations and counts of monarchs and milkweed across Canada, Mexico, and the United States, in which Birds Canada takes part.

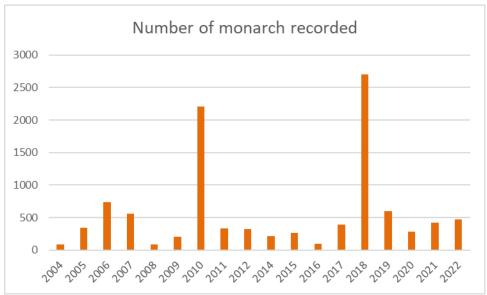


A total of 470 monarchs were recorded during the census from August 1 to November 3, 2022. The total number was slightly higher than last year's count, while the subtotal for September was similar to 2021. The highest counts were observed during the two weeks from mid-September to the end of the month. By contrast, in 2021 the highest count occurred September 2, with a couple of peaks also recorded during the first half of September, and another slight rise noted in mid-October.

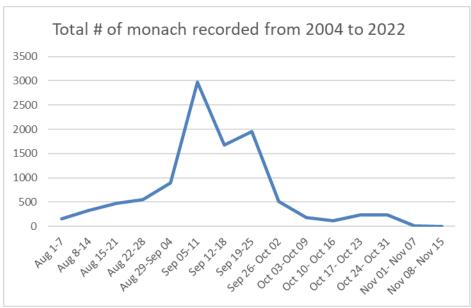
As we first mentioned in our 2020 Annual Report, the number of monarchs counted at Point Pelee and Pelee Island showed nonsignificant change/decline over the past ten years, in contrast to the significant decrease at Long Point (Danielle M. Ethier at Birds Canada in 2020). Among the population passing through north Lake Erie, the different migratory groups, flyways, stopover sites, and breeding ranges were considered the fluctuation factor, although further studies are needed.

"Monarch Population Status," a January 4, 2023, article on Monarchwatch.org by author Chip Taylor, describes the complicated mechanism of the population trend of monarch. Unlike bird migration, the monarch migration from the wintering to the breeding ground happens across several generations. Taylor describes the life cycle as the six stages - 1) wintering from November to April, 2) migrating to the north (the US) late February to April, 3) breeding from March to May in Texas and southern Oklahoma, 4) the first generation migrate and recolonize in the summer breeding area, 5) summer breeding period from May to September, and 6) migration from August to December. He described the successful/unsuccessful reproduction of the first generations is one of key to the increase/decrease of the entire population including the wintering population. In the same way the success/unsuccess of the second breeding at the north of mid to east west (from Minnesota to great lakes region) affects the increase/decrease of the number of migratory and wintery monarch population.

Generally, the early arrival to both their spring and summer breeding ranges will lead to a successful population at the fall migration. Tayler explained that the different stages of the monarch's life cycle were sensitive to excessive weather conditions such as high/low temperatures and drought. In this way, the numbers we recorded during fall migration support the theory of the impact of a successful monarch breeding season. The following table shows PIBO's past record of monarch count.



This graph shows # of monarchs counted during the census (90 minutes standardized bird count) at Fish Point Provincial Nature Reserve from 2004 to 2022. In 2018, we observed a large number of monarchs flying over the lake as well as a roosting colony.



This graph shows peak the migration period at Fish Point Provincial Nature Reserve during the past 19 years.

TABLE 24 - Mor	TABLE 24 - Monarch Butterfly Recorded During Census in 2022					
Date of Month	August	September	October			
1		0	2			
2	2 2 1	0	1			
3		2	0			
2 3 4 5 6 7	0	2 2 4 3	0			
5	1	4	1			
6	8	3	0			
7	1	24	0			
8	0	8	0			
9	1	3	0			
10	1	1	0			
11	5 3 5 0 2 2 1 2 5	0	0			
12	3	0	0			
13	5	0	0			
12 13 14 15 16 17	0	40	0			
15	2	60	0 2 0			
16	2	30	2			
17	1	1				
18	2	3	0			
19	5	0	0			
20	0	70				
21	0	9	0			
22	1 2	60	1			
23	2		0			
24	1	0	0			
25	1	1	0			
26	0		0			
27	2	17	0			
28	2	68	0			
29	2	0	0			
30	0 2 2 2 0 2	0	0			
31			0			
Sub total	55	406	7			
		nd and 3rd) were	e recorded			
Note: blank cell means no count						

Migratory Dragonfly Count

PIBO's unofficial dragonfly counts started in 2017 alongside the routine monarch count during our census (90-minute standardized bird count). Our sixth annual count in 2022 gave us the opportunity to learn about many dragonfly species, such as darners and saddlebags.

As with birds and monarch butterflies, the dragonflies we were counting are migrants, which we knew. However, it is hard to imagine that they do as dynamic a migration as monarchs. A study* about isotopes on the wing of green darners was published on December 19th, 2018 (Biology Letter). In the study, the specialist found a pattern of migration across the different generations from their wintering grounds in the Gulf of Mexico to summering grounds in Canada. It was fascinating to learn that they travel an average of 400 miles and can travel as far as 900 miles. We hope our data will also support the future study of dragonfly migration.



Photos of dragonflies taken by Evan Sinclair (top, left to right: Painted Skimmer, Widow Skimmer, and Calico Pennant; bottom, left to right: Calico Pennant, Blue Dasher, and Autumn Meadowhawk)

The following table shows the number we recorded each morning in 2022. Three hundred sixty-seven dragonflies, including Saddlebags, Green Darners, and Blue Darners, were recorded from August 1 to October 31:

TABLE 25 - Dragonfly Recorded During Census in 2022						
Date of Month	August	September	October			
1	0	3	0			
2	0	1 2	2 0			
3	0 2 2 7	2	0			
4	2	23	0			
5	7	21	0			
2 3 4 5 6 7	7 3 15	25	0			
	3	5	0			
8	15	6	0			
9	7	1	0			
10	10	3	0			
11	15	0	0			
12	20	0	0			
13	8	0	0			
14	1	50	0			
15 16	8	2	0			
16	8	1	0			
17	0	0	0			
18	2 7	0	0			
19		1	0			
20	1	5				
21	0	5 2	0			
22 23	2	2	1			
23	8		0			
24	5	1	0			
25	0 2 8 5 2	1	0			
26	2		0			
27	30	0	0			
28	5 1	0	0			
29	1	8	0			
30	1	2	0			
31	17		0			
Sub total	196	168	3			
Total 367 were						
Note: blank cell	Note: blank cell means no count					

Habitat Assessment for Migration Monitoring

by Sumiko Onishi

PIBO's netting area at Fish Point Provincial Nature Reserve

Over the last decade, flooding commonly occurs in early spring as a result of seasonal frequent precipitation. The clay soil creates muddy conditions along the net lane and the trail, which slowly dries out towards summer and fall. During the winter of 2020-21, the standing water left in our study area was especially high. The condition interfered our annual Prothonotary Warbler's nest-box cleaning, which we usually access without getting our shoes wet either at the end of fall or in early April. In 2022, however, we needed hip-waders to clean the nest-boxes. The flooding in our netting area lasted almost the entire 2021 season except for a couple of weeks during early September, which was unusual as well. As a result, the year 2022 started with regular muddy condition in the early spring, but it slowly dried out toward the summer and fall with less precipitation. It was remarkable this year to see growing vegetation under the Prothonotary Warbler's box area and south edge of the pond at Fish Point. The following photos were taken on May 8, 2022; they show less sprout on the shrubs along the net-lane in comparison with the photo from May 10, 2021.









We conducted a habitat assessment for the census and the netting area on May 18, 2022. John Ambrose, a botanist from Guelph and long-term seasonal island resident, and Evan Sinclair, PIBO's spring assistant bander who is also knowledgeable in native plants, advised during the survey. Please see the following the description and the result from the habitat assessment.

Conductors: Sumiko Onishi, Evan Sinclair, John Ambrose

Dates surveys conducted: May 18, 2022

Hours: 1

Habitat Assessment of Census Area

Date: May 18, 2022

Location: Fish Point, Provincial Nature Reserve

Habitat type: Woodland-Hackberry, Black Oak, Sugar Maple, White Ash,

Cottonwood, Red Mulberry Successional stage: Late

Percentage of the census route made up of this habitat type: 80%

Average height of tree canopy: 25 m Average height of shrubs: less than 1 m

Average height of herbaceous vegetation: 0.50 m

Vegetative layers	% Total cover	% Conifer	% Broad-leaf	% Forbs & ferns	% Grass-like	Main species
Upperstory (>15m)	70	0	100	0	0	Celtis spp., Quercus spp.
Midstory (5-15m)	20	5	95	0	0	Celtis app.
Understory (0.5 - 5m)	5	7	53	30	10	Cornus drummondii,
Ground cover (<0.5m)	5					Hydrophyllum appendiculatum, Dicentra cucullaria
% Live vegetation	55					
% Dead vegetation	15					
% Total non-vegetative	30 (water)					

Standing water: a pond, no seasonal flooding

Human-made corridors: Gravel road extends from south-west boundary near

the parking lot at Fish Point, at the beginning of census route

Human-made structure: A viewing deck extends into the pond where the count

area is approximately 200 meter from the parking lot

of dead trees: N/A

Habitat Assessment of Netting Area

Date: May 18, 2022

Location: Fish Point, Provincial Nature Reserve

Habitat type: Maple Swamp-Freeman and Silver Maples, Cottonwood, Black and Red Ash, White Elm, Red Mulberry, Bur, Swamp White and Pin Oaks

Successional stage: Late

Percentage of the netting area made up of this habitat type: 80%

Average height of tree canopy: 25 m Average height of shrubs: less than 1 m

Average height of herbaceous vegetation: 50 m

Vegetative layers	% Total cover	% Conifer	% Broad-leaf	% Forbs & ferns	% Grass-like	Main species
Upperstory (>15m)	60	0	100	0	0	Celtis spec., Acer spec.
Midstory (5-15m)	45	0	100	0	0	Celtis spec,
Understory (0.5 - 5m)	20	0	55	28	15	Impatiens capensis, Cornus spec.,
Ground cover (<0.5m)	95					Hydrophyllum virginianum
% Live vegetation	65					
% Dead vegetation	5					
% Total non-vegetative	30 (water)					

Standing water: Seasonal flooding approximately from mid-April to May

Human-made corridors: a pass goes around the banding hut and net-lane from

the public road

Human-made structure: small banding hut made by wood and screen

of dead trees: N/A

Data Usage

PIBO's long-term migration monitoring data is submitted by the Canadian Migration Monitoring Network and the Canadian Bird Banding Office at the end of each season for analysis as part of a nation-wide effort to track changes in the populations of native songbirds. The submitted data set and the analysis are presented on the website "Nature Count"

(naturecounts.ca) managed by Birds Canada, with a view to understanding the patterns and

dynamics of bird populations across the Western Hemisphere. As well, PIBO's Species at Risk records are sent each year to the Natural Heritage Information Centre and added to the province's historical database where they are used by species-recovery teams.

PIBO's substantial database of 20 years represents accumulated millions of standardized sightings of more than 300 species, as well as the full biometric (species, age, sex, winglength, mass) of more than 60,000 birds banded at Fish Point since 2003. The information collected by PIBO's many dedicated seasonal staff and volunteers is being used by several organizations and individuals including government ministries (Environment and Climate Change Canada and the Ontario Ministry of Natural Resources and Forestry), public and private institutions (the Nature Conservancy of Canada and Nature Canada). The website "Nature Counts" data set are available to the general public including universities, graduate and undergraduate students at naturecounts.ca.

An ongoing co-research project of Environment and Climate Change Canada and CMMN identifies the breeding and the migration range of Blackpoll warblers, the population of which has declined significantly since the 1970s. PIBO's banding data, including age, sex and wing chord, contributed to the research project "Blackpoll warbler: Partners in Flight."

Although it is an exceedingly small portion of the data, one significant contribution from our database provides information to the Committee on the Status of Endangered Wildlife in Canada (COSEWIC), which assesses the avian species at risk of extinction.

There were zero data requests in 2022 through Nature Counts.

II — Outreach and Education

by Suzanne Friemann

OUTREACH

Youth Community Activators

PIBO started the New Year by hiring two BIPOC youth employees, Davina Sanjqly and Lakshmi Tharuvai as Youth Community Activators, a program funded by grants from Nature Canada and the Windsor Essex Community Foundation. These two young women planned and hosted five events in Windsor designed to get their communities involved in bird watching, inform them about local conservation initiatives and introduce them to urban wildlife. The first event was an online games night.



In February, the BIPOC community activators hosted a Chickadee nestbox-building event, held outdoors on a frigid Saturday afternoon at Windsor's Ford Test Track Park. A dozen youth braved the cold for a few hours to build a nest box to put up in their yard. Pizza and hot chocolate warmed them up!

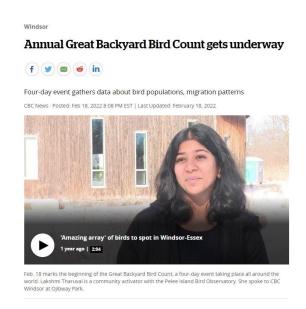


Lakshmi and Davina also contributed to PIBO's Instagram account, posting about working with PIBO and reaching a new, younger audience.



The Youth Community Activator program generated a lot of media coverage, undoubtedly introducing PIBO to a new and extended audience, thus furthering its conservation education aims.

Lakshmi was interviewed on CBC Windsor about the Great Backyard Bird Count on February 18. https://www.cbc.ca/news/canada/windsor/backyard-bird-count-1.6357604



A week later, on February 25, Davina was interviewed by former CBC radio host Tony Doucette about her position as a Youth Community Activator.

Backpacks for Birding



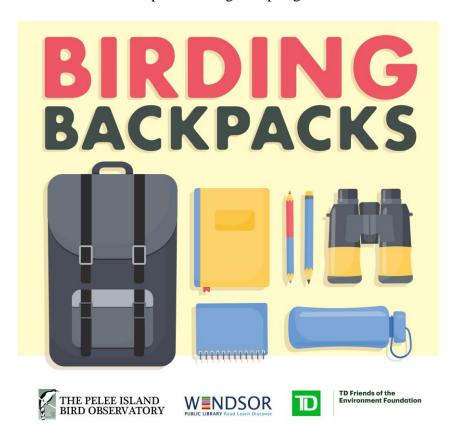
The McGivey Centre backpack (left) and the Caldwell First Nations Backpacks for Birding.

In March, with funding from TD Friends of the Environment and the Windsor Essex Community Foundation, PIBO prepared "Backpacks for Birding"—colourful backpacks filled with birding gear, including binoculars, bird books and bird lists for the area, as well as a bird feeder. Two Backpacks were donated to the Caldwell first Nation, one to the Pelee Island Public School, and one to the John McGiveny Children's Centre School in Windsor.



Students at the John McGiviney Children's Centre using the gear from the backpacks. Permission to use the photos granted by the JMC.

Later in the year, with funding assistance from TD Friends of the Environment, PIBO expanded Backpacks for Birding, developing a partnership with the Windsor Public Library to bring birding gear to library users. 22 backpacks were distributed throughout the city to library branches, with each library backpack stocked with Vortex binoculars, a harness, field guides, a binder with local birding hotspots and species lists and lens cleaners. This program is one of the library's most popular, with waitlists for the backpacks during the spring and fall season.



Urban Birding Events

In addition to the five events planned by the Youth Activators, PIBO hosted monthly bird walks through various parks in the city. These late winter and early spring events introduced Davina, Lakshmi and their peers to the world of urban birding. They had so much fun that brought family along, too. These walks blossomed into a new partnership with WEST (Women's Enterprise Skills Training of Windsor Inc.) and the formation of the Changemakers Birding Club.





Lakshmi, Davina and her family at Devonwood Park. Davina's little sister spotted a Downy woodpecker on this beautiful winter's day (left). Lakshmi and Jennifer (right), PIBO's former Urban Bird Educator, at Little River Park during a snowstorm. An immature Bald eagle flew over our heads just minutes later!



A bird walk in late March brought out a young woman and her father, who shared his birding experiences in Syria (left). A still-chilly early April bird walk in Kiwanis Park on Windsor's east side (right). Despite the overcast day, the group enjoyed seeing many shore birds at the beach.

Earth Day 2022

PIBO was present at the annual City of Windsor Earth Day event on April 24. Warm weather brought out hundreds of families and PIBO had a very busy day chatting with bird enthusiasts and leading short hikes in Windsor's Malden Park for new birders.









World Migratory Bird Day





On May 14, PIBO celebrated World Migratory Bird Day with a special event at the Optimist Community Centre in Windsor. Summer student Dante Bresolin presented information on our new program, "Lights out Windsor," and PIBO distributed free "window collision prevention" kits. Our two youth employees ran bird-themed games and we led a bird walk in Optimist Park. It was a perfect warm spring evening to spot some Red-winged blackbirds and American robins and enjoy all the delicious food!



The final event organized by PIBO's Youth Activators was a family-style picnic in Willistead Park in Windsor on May 28. Over two dozen youth and their families dropped in over the afternoon for birdwatching, games, and food. On a beautiful sunny day, the youth had fun playing "What Bird Am I?" and learning about local Citizen Science projects.





The Graeme Gibson Prismaticos Project

PIBO launched this special project in 2022 to collect previously loved binoculars and birding scopes from northern bird watchers and distribute them to conservationists and schoolchildren in central Mexico, the wintering grounds for many of the bird species that migrate across Pelee Island.

In the fall, dozens of binoculars and several scopes were sent to San Miguel de Allende, to PIBO's Mexican partner, bird guide and conservation activist Rodrigo Lopez. The binoculars were sorted and those deemed in need of cleaning and/or repair were sent to Mexico City to be fixed. In early 2023 Board members Merilyn Simonds and Wayne Grady, who initiated the project, will travel with Rodrigo to remote, economically challenged but avian-rich communities to deliver the binoculars and scopes.



Give your old binoculars a new home!

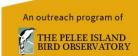


And help bring Nature into focus.

The **Graeme Gibson Prismáticos Project** collects donated binoculars & spotting scopes and distributes them free to schools, conservation groups, and individuals in central Mexico.

The Prismáticos Project

For more information, go to www.pibo.ca/en/prismaticos







Changemakers Birding Club

On July 30, PIBO, in conjunction with Women's Enterprise Skills Training of Windsor Inc. (WEST), launched Changemakers Birding Club, a birding club for young women that will meet once a month to learn birding skills and participate in local birding excursions.

The Changemakers Birding Club is part of WEST's Science, Engineering, Artistry and Technology program (SEAT), and contributes to Windsor's ongoing mandate to maintain its status as a <u>Bird Friendly City</u>.

Funding for this initiative was provided by the WindsorEssex Community Foundation's Community Impact Grant Program.



Changemakers at Windsor's Derwent Park, November 2022



At Ojibway Park, July 2022



At Oakwood Park October, 2022.



Sandpoint Beach Park September 2022 (left) and at Tall Grass Prairie August 2022.



Early in 2023, the young women of cohort 7 graduated from the SEAT program at WEST. PIBO welcomes the new group of young women in cohort 8, featured above. We look forward to birding with this new group of young birders this spring.

Bird Stories

To wrap up 2022, PIBO held a story contest, asking participants to tell us about their bird watching experiences in 250 words or less. Two winners were selected: Richard Galloway in the adult category and Wanya Haider in the under-16 category. Both Richard and Wayna took home some great prizes: PIBO t-shirts, a membership to the Purple Martin Association, and a heated birdbath.

EUCATION/ADVOCACY

Windsor, a Bird Friendly City



Margaret Atwood and Windsor mayor, Drew Dilkens, May 2022.

PIBO is very lucky to have Margaret Atwood on its PIBO Board of directors. PIBO had been working for years to complete the required steps to earning Windsor Nature Canada's designation as a Bird Friendly City. All that was missing was the endorsement of the City of Windsor itself.

When it came time to lay before the City of Windsor the reasons why it should commit to the policies that would qualify it as a Bird Friendly City, Margaret, together with fellow Board member Merilyn Simonds, had no trouble making the case to the Mayor of Windsor, Drew Dilkens, who gladly signed a letter supporting the initiative. On June 16, Windsor joined 15 other cities across Canada to be certified as Bird Friendly by Nature Canada. This certification, led by PIBO, has become the foundation for our outreach and education programs.

Numerous media outlets picked up the story including the one below by CTV News: https://windsor.ctvnews.ca/windsor-designated-bird-friendly-city-by-nature-canada-1.5949883

VINDSOR | New

Windsor designated 'Bird Friendly City' by Nature Canada



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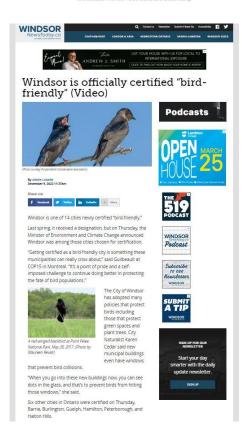
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Windsor is Canada's next certified "Bird Friendly City."

Nature Canada announced the designation on Thursday. Windsor is the 16th city in Canada to earn the title

Officials say Nature Canada's partners, led by the Pelee Island Bird Observatory, along with many other community organizations, have worked to make their community a safe haven for wild birds.

"Windsor has made strides toward becoming a cleaner, greener, healthier, and more sustainable place to live. A bird friendly city designation allows us to showcase these etforts, and help to do the same for birds and other wildlife, 'says Jennifer Nantais, urban bird educator with the Pelee Island Bird Observatory.



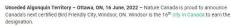
NEWS > PRESS RELEASES

Windsor earns Nature Canada's "Bird Friendly City" designation

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FOR IMMEDIATE RELEASE





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The Pelee Island Blird Observatory, collaborating with pathers in the CIfy of Windsor have been working towards certification of Windsor as a Bird Friendy City. We agree that healthy bird populations are of critical importance to biodeviersity and ecosystem health. As part of our commitment to Windsor becoming one of the first 30 cities to be certified in canada, we have been moving towards creation of a national urban park at the Diginary Praine Compiles. This would improve bird habitat it windsor, among many other benefits. Proclaming Windsor as a Bird Friendy City is a great boost for us, with economic and ecotourism potential, while positioning us alongside cities like rornot, Vancouver, Hamilton, Guelph, and London Many of the crients for community engagement and education have already been met, and I look forward to working with Windsor's Parks.

Department, Mature Canadap, Pilof, and Tourism Windsor Essex to determine next steps in this important initiative." "Windsor Mayor Drew Dilkens

The city has implemented bird friendly policies and actions to help birds thrive in Windsor. These actions include:

- Implementing a collaborative approach involving animal welfare groups, nature groups and researchers to mitigate bird mortality from cat predation,
- Developing municipal strategies to protect natural features, biodiversity and key habitat, while
 implementing actions to achieve goals identified in the strategies,
- Presenting effective educational campaigns led by community organizations to raise
 awareness of the threats birds face in Windsor and provide information about how to mitigate
 them to protect bird blodiversity.

Link to full story (left): https://blackburnnews.com/windsor/windsor-news/2022/12/09/windsor-officially-certified-bird-friendly-video/

Link to full story (right) : https://naturecanada.ca/news/press-releases/windsor-earns-nature-canadas-bird-friendly-city-designation/?

Lights-Out Windsor & Bird-Window Collision Prevention Program



From early May until July, PIBO's summer student, Dante Bresolin, connected with local small businesses to promote responsible light control and the prevention of bird-window collisions. Dante was present at local pop-up events and festivals and distributed almost three dozen @FeatherFriendly kits to local small businesses, kits than can prevent fatal bird strikes and thus save bird lives.

Also helping with the window collision prevention program was Andrea Hevia, a 4th year Forensics Science student who came to PIBO through the Internship and Service Learning program at the Faculty of Science with the University of Windsor. Andrea worked with PIBO from May until August, contributing to a number of PIBO initiatives, including gathering data on bird strikes in downtown Windsor in preparation for Global Bird Rescue Week and adding interest to our Instagram account by researching the contributions of women to ornithology, both past and present. As part of her work with PIBO, Andrea interviewed Marcy Heacker at the Smithsonian Feather Lab, which can be found on our YouTube channel. https://www.youtube.com/watch?v=SciKaUHWJfo



Global Bird Rescue Day

Each year during the first week of October, volunteers across the globe head outside in the early morning hours to rescue birds injured by flying into glass windows. Often these collisions are fatal, but the statistics collected on GBR day are important in informing governments and industries about the extent of the problem—up to one billion birds die each year in the United States due to windows collisions—and the importance of bird-friendly glass and responsible light usage in ensuring migrating birds stay alive. In 2022, PIBO participated in the GBR and our small team logged 8 bird collisions across Windsor on the Global Bird Collision Mapper that tracks bird window collisions worldwide.



SECTION III —FUNDRAISING

by Suzanne Friemann

2022 Fundraising Events

Windsor Spring Bird Gala
Online Auction
Springsong Bird Talk
Fall Garden Party

Fundraising Campaigns

Giving Tuesday

Great Canadian Giving Challenge



2022 Fundraising Projects

A Bird Watchers Banquet: Recipes from Birders and Worders (E- Cookbook)

Testaments by Margaret Atwood, Special Edition,

Art of Nature birds calendar

Fundraising Events

Windsor Spring Bird Gala

Our 12th annual fundraising dinner in Windsor, Ontario, saw a return to in-person events after a two-year hiatus during the COVID-19 pandemic. Margaret Atwood, poet and memoirist Lorna Crozier, and David Lindo, the Urban Birder, entertained a sell-out audience with readings and conversation, followed by a rousing auction with stand-in auctioneer, author Paul Vasey. (Ironically, our usual auctioneer was had COVID-19!) The evening was a bittersweet finale for this annual event, since the dinner has become too expensive to host as a fundraiser.



Online Auction



PIBO's third online auction was held over the first three weeks in May, 2022, using the online platform, GalaBid. What began as a necessity during the Covid-19 pandemic has turned into a new opportunity for PIBO. With almost 100 items donated in categories that included great art, birding tours in Spain, Mexico, and Canada, a virtual dinner with Margaret Atwood and book club appearances by well-known authors, the auction was such a success that PIBO is now committed to incorporating the event as part of its annual fundraising effort.

Organized by a committee led by volunteer Cathy Cooper, this event took a community of dedicated people working year-round to create a fun event that substantially adds to PIBO's coffers. Thank you to all the volunteers, donors of amazing items, and of course, the bidders!

Springsong Bird Talk

A new initiative to highlight PIBO's focus on birds beyond borders, the inaugural PIBO Bird Talk was held on the Sunday morning of Springsong Weekend, featuring PIBO Guest Birder, David Lindo, famous as the Urban Birder. David, who divides his time between Spain and the UK, leads birding tours throughout Europe. He is author of *The Urban Birder* and was recently named by BBC Wildlife Magazine as one of the most influential people in wildlife, the person who instigated (and some say ensured) the King Robin as Britain's National Bird.



David spoke to an eager audience about birding in urban areas, how he came to birding as a child — and about a town in Serbia where 700 Long-eared owls spend the winter:

He also participated as the PIBO Guest Birder in the Botham Cup Bird Race, a 24-hour birdathon to record the most individual species.



PIBO Guest Birder David Lindo (second from left) and Springsong Guest Author Lorna Crozier (third from left) take a birding break with PIBO supporters and Springsong regulars (left to right) Steve Burrows, Wayne Grady, Joan Jenner, and Merilyn Simonds.

Fall Garden Party

On October 2, 2022, noted philanthropist Salah Bachir and artist Jacob Yerex hosted a PIBO fundraising event at their home in Paris, Ontario.



Salah Bachir (right) and artist Jacob Yerex, hosts of the PIBO Fall Garden Party.

The four-hour garden party and art tour was enjoyed by more than 50 guests paying up to \$25,000 each to spend the afternoon with Margaret Atwood and friends. Apart from a sumptuous lunch, each guest received a signed copy of Margaret Atwood's novel *The Testaments*, and a jar of local honey. Sponsors received a special edition of Margaret Atwood's novel *The Testaments*, and Suzanne Rogers, the Presenting and Title sponsor, received two copies of a special edition of *The Testaments* and four prints of Jacob Yerex's *Flowers for Najla*.

The event was a huge success, raising almost \$100,000, which will go to support PIBO's vital, ongoing bird-monitoring work on Pelee Island, and its many local and regional outreach programs.

Fundraising Campaigns

The Great Canadian Giving Challenge

Canada Helps—an umbrella charity dedicated to increasing charitable giving across Canada by centralizing giving on a website that is very user-friendly for both charities and donors—developed the Great Canadian Giving Challenge to increase charitable giving at a time of year when donations typically take a dip. Canada Helps offers resources and incentives for their member charities to develop and monitor their Challenge campaign, which extends for the entire month of June.

Through the 2022 Great Canadian Giving Challenge, PIBO raised more than \$6,500 from 21 donors.

Giving Tuesday

Giving Tuesday is a global movement—the world's largest generosity movement, developed on the principle that "Everyone has something to give and every act of generosity counts." On November 29, 2022, 80 countries participated in Giving Tuesday. In Canada, 47 communities raised a total of \$43.7 million.

On Giving Tuesday, PIBO raised more than \$17,000 from 45 generous donors. Margaret Atwood generously matched donor gifts.



SECTION IV —ACKNOWLEDGEMENTS

Thank You!

The Pelee Island Bird Observatory depends on the generous support of the many organizations and individuals who contributed to its success in 2022. This help comes in many forms ranging from grants from charitable and environmental foundations and various levels of government to public donations and fundraising events.

Individuals have also had a significant impact on PIBO's ability to reach its goals in 2022 by volunteering at the banding station or at one of our education events; sewing the bird bags used to transport birds from the net to the banding station; attending our fundraising events; supporting our operations through sharing updates on social media and their own networks; donating binoculars to the Graeme Gibson Prismaticos Project; buying one of our calendars or our online cookbook; donating items for our online auction; making financial donations; and much, much more! PIBO is grateful for the collective effort of so many people, their show of support for the work we do, and the vote of confidence that helps us carry on.

Special thank you to Margaret Atwood for being PIBO's number one longtime supporter! And to Salah Bachir for hosting so many successful and creative fundraisers for PIBO over the last five years.

PIBO Partners

Avinet

Birds Canada Nature Canada

Canadian Migration Monitoring Network Nature Conservancy of Canada

Chatham-Kent Tourism Ojibway Nature Centre

City of Windsor Ontario Bird Banding Association

Essex County Field Naturalists Ontario Parks

Essex Region Conservation Authority Point Pelee National Park

Jack Miner Migratory Bird Foundation Pelee Island Heritage Centre

Municipality of Learnington Smithsonian Migratory Bird Centre

Municipality of Pelee Island Tourism Windsor Essex Pelee Island

Government and Foundation Grants

Government of Canada (Canada Summer Jobs)

Windsor Essex Community Foundation.

Nature Canada

Donald R. Sobey Family Foundation

Hibiscus Foundation

Ontario Trillium Foundation

The Donner Canadian Foundation

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Patricia Toal	Richard & Felicity Pope	Stuart Payne
Paul Vasey	Rick & Carol Tomalty	Sumiko Onishi
Pelee Island Heritage	Robert Dunlop	Susan Swan
Centre	Robert Edgerton	Suzanne Ivey Cook
Penny Kavanaugh	Rosamond Ivey	Sydney Smee
Peter Brett	Sandra Hager	Tamara Stomp
Philip Dyke	Shirley Grondin	Travis Farncombe
Pricilla Vipacheco	Sonia Colombo	Valerie Castro
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