

Long Point Bird Observatory, Ontario

This unique facility encourages volunteers to participate in important scientific research.

FOUNDED AS AN ALL-VOLUNTEER bird-banding facility under the auspices of the Ontario Bird Banding Association in 1960, the Long Point Bird Observatory is located on a peninsular wilderness area, on Lake Erie, which is renowned for its concentrations of migrating birds. It was the first Observatory in North America, and remains the only one of its scope in Canada. It is also Canada's most productive bird banding station, with over 300,000 birds banded to date.

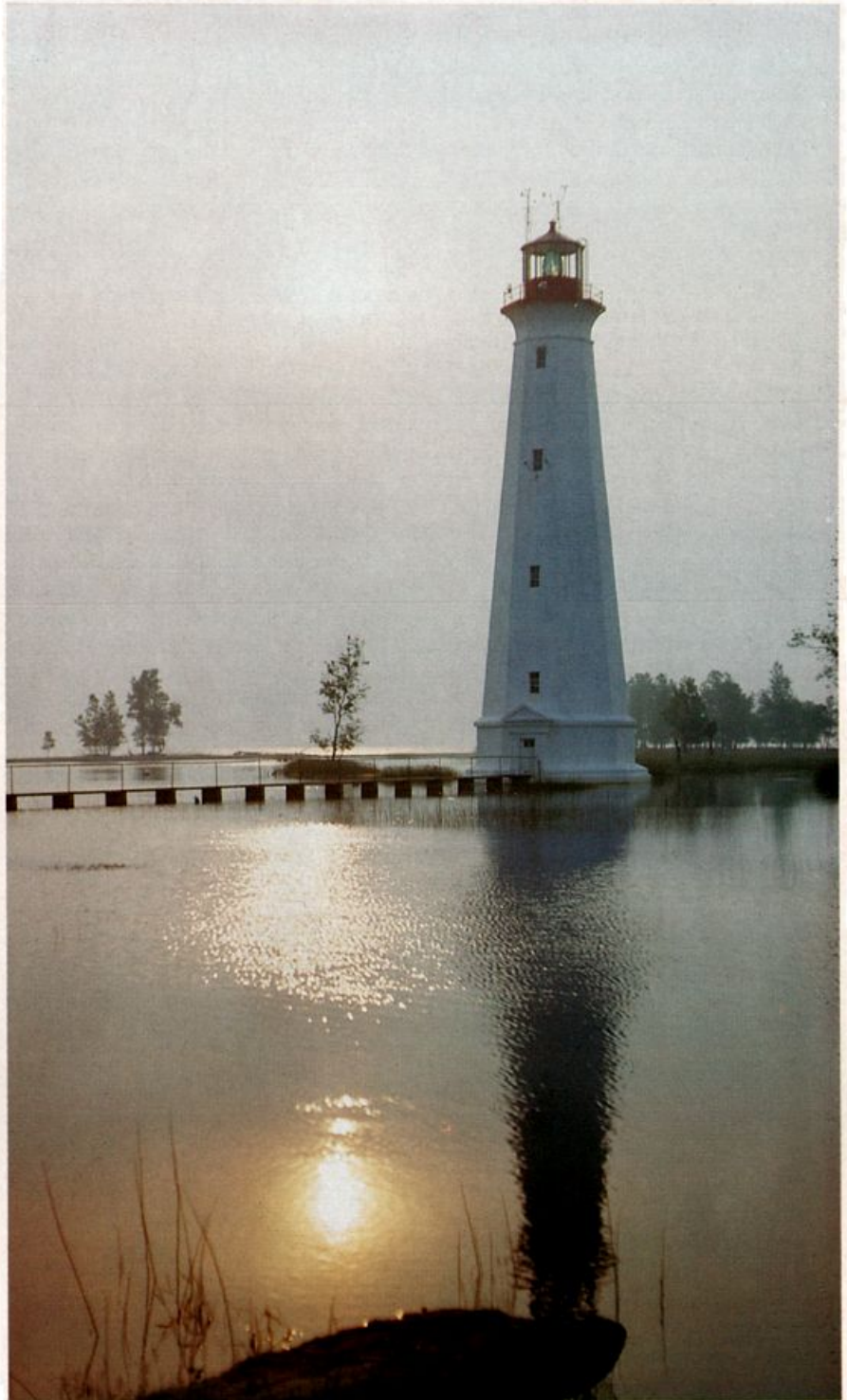
The Observatory became an independent membership-supported organization in 1968, and now employs staff to ensure the continuity of bird observation, provide greater service to members, and offer a wide variety of programs and workshops. The three staff members include the Executive Director, the Migration Program Manager, and a secretary.

The Observatory has three field stations on Long Point, two of them accessible only by boat, as well as an administrative headquarters on the mainland. Plans are underway to build a field headquarters and visitors center at the base of the point.

The primary purpose of the Observatory is still the study of bird migration, but it also sponsors educational programs and conducts surveys on a provincial scale. Special demonstrations and workshops are available for adults and the area's school children.

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Affiliated with the Federation of Ontario Naturalists, the Observatory is totally membership-supported, with additional monies supplied from time to time by grants and contracts for specific projects.



The Lighthouse at the end of Long Point peninsula has been in operation since 1830. Photo/David Hussell.

HISTORY

Most of the Long Point peninsula was originally owned by the Long Point Company, which purchased the land in a government auction in 1866. In 1978-1979, the Company donated one-half of its holdings (approximately 3000 hectares), to the Canadian Wildlife Service. The Long Point Company retains another 3000 hectares, which it uses for waterfowl hunting. The Observatory purchased its land from private owners, and the Ministry of Transportation allows the Observatory to use some of its land.

The lighthouse at the tip of the peninsula has been in existence since 1830.

HABITAT

The habitat diversity of Long Point, Ontario, has always attracted naturalists. The journals of William Pope, a British wildlife artist who traveled in the area from 1834-1902, provide the earliest accounts of Long Point's avifauna.

Many naturalists have visited the peninsula since then, but the most intensive studies of Long Point began with the founding of the Observatory.

Habitat ranges from dunes with scattered cottonwoods along the shoreline, to marshes and wooded wetlands, to sugar maple and red oak forests. This varied habitat is matched by an equally diverse population of birds. Over one hundred species have been recorded nesting on Long Point, including two species that



A view of one of Long Point's beaches.

are considered endangered in Canada: the Piping Plover (*Charadrius melodus*), and the Bald Eagle (*Haliaeetus leucocephalus*).

Species common to the dune grasses of Long Point include: Field Sparrow (*Spizella pusilla*), Song Sparrow (*Melospiza melodia*), Red-winged Blackbird (*Agelaius phoeniceus*), Common Grackle (*Quiscalus quiscula*), Eastern Kingbird (*Tyrannus tyrannus*), Eastern Meadowlark (*Sturnella militaris*), Killdeer (*Charadrius vociferus*), and Brown Thrasher (*Toxostoma rufum*).

Species common to marshes and wet-

lands include: Mallard (*Anas platyrhynchos*), Black Tern (*Chlidonias niger*), Long-billed Marsh Wren (*Cistothorus palustris*), Common Gallinule (*Gallinula chloropus*), Virginia Rail (*Rallus limicola*), American Coot (*Fulica americana*), Sora (*Porzana carolina*), Red-winged Blackbird, Common Yellowthroat (*Geothlypis trichas*), Common Grackle, Swamp Sparrow (*Melospiza georgiana*), Tree Swallow (*Tachycineta bicolor*), Canada Goose (*Branta canadensis*), Prothonotary Warbler (*Protonotaria citrea*), House Wren (*Troglodytes aedon*), and Blue-gray Gnatcatcher (*Poliptila caerulea*).

The wooded areas contain the following species: House Wren, Eastern Wood-Pewee (*Contopus virens*), Tree Swallow, Northern Oriole (*Icterus galbula*), Chipping Sparrow (*Spizella passerina*), Common Grackle, Eastern Kingbird, Common Yellowthroat, and Yellow Warbler (*Dendroica petechia*).

Other species suspected of breeding on Long Point, based on frequent sightings, include such rarities as Forster's Tern (*Sterna forsteri*), Little Gull (*Larus minutus*), and King Rail (*Rallus elegans*).

Projecting 30 kilometers into Lake Erie, Long Point is a major stopover point for migrating passerines as well as a staging area for migrating waterfowl. Birds are not the only feature of the peninsula. Foraging and spawning grounds for many fish species, including three considered rare or endangered in Canada, are provided in the shore and marsh areas. Long Point's herpetological fauna is also a major attraction for researchers



Most of the Observatory's migration work has been done on the eastern end of the Long Point peninsula.

SERVICES AND PROGRAMS

LPBO provides facilities to researchers doing compatible work in a variety of biological fields, from land-use investigation to studies on snakes and deer.

The Observatory also operates an Assistant's Program which annually allows approximately a dozen people the opportunity to gain field experience in biology during a one-to-six-month internship. This unpaid position attracts applicants from all over the world, and is of special interest to young people in the process of choosing a career.

Although the Observatory's core program is banding and censussing at field stations, it conducts many special projects.

Projects in the past included studies of avian borne encephalitis virus; color marking of shorebirds; migration of *Empidonax* flycatchers; mortality of nocturnal migrants at the Long Point lighthouse, and long-term breeding studies of the Eastern Kingbird and Tree Swallow. In a major cooperative study, the Great Lakes Beached Bird Survey, LPBO compiled baseline data on bird mortality from 1976 to 1983.

Current projects include:

Migration monitoring

Over 240 species have been banded at LPBO to date. Twenty-six years of banding at two sites on Long Point, and daily censussing and observation has provided the Observatory with an extensive data base.

The Observatory has been a world leader in developing analysis methods that demonstrate the value of migration counts for monitoring population trends. This is of particular value for birds which nest in inaccessible regions of northern Canada and winter in the tropics. Efforts are currently underway to simplify procedures so that they can be used routinely to provide reliable annual indices of abundance for many common species. LPBO analysis have also documented the effects of weather and other factors on migration volume.

The recovery rate of leg bands for small species has traditionally been very low. In 1984, suspecting that people who found banded birds were not opening the band to look for an address, LPBO began adding a second band with the address on



Many school groups visit the Observatory. Here (seen through a mist net), children learn about banding.

the outside. Even a minor increase in returned bands will add significantly to the understanding of migration patterns.

The Canadian Wildlife Service awarded the LPBO a small grant to cover the cost of the bands, but continuation of the project was unlikely without additional funding. The LPBO began Project Recovery to raise the additional monies. A

donation in support of a particular species results in a banded individual of that species becoming the donor's sponsored bird. The donor receives all of the banding information on that individual bird: age, sex, measurements, and details of the banding. If and when the bird is re-trapped or recovered, the donor receives full details of that event.



Long Point's sparse vegetation and concentrations of migrants makes this Heligoland trap a practical one. Two or more people walk towards the open end of the funnel to drive birds in and they are caught in a glass fronted catching box at the narrow end. It normally garners 5-20 birds in a drive. Photo/Erica Dunn.



Some Northern Saw-whet Owls were color-marked with different colors for each banding station so they could be identified at daytime roosts. Photo/Roy Smith.

Ontario Heronry Inventory Census

After compiling data on Great Blue Heron (*Ardea herodias*) colony locations, LPBO conducted a province-wide census in 1980-1981. All 83 locations in three large study areas were censused and 118 counts were made elsewhere, with extensive help from volunteers. The Ontario heron population was estimated at 13,000 pairs in 276 colonies. Colony location data are still being compiled and future censuses may be undertaken.

Ontario Atlas of Breeding Birds

This five-year project, (1981-1985), was aimed at determining the distribution of every breeding species in Ontario. Co-sponsored by the Federation of Ontario Naturalists, the project attracted 1500 volunteers, including many visitors from the United States. The atlas results are being compiled into a book, scheduled for publication in 1987, which should prove a landmark reference for both research and conservation purposes.



Spotted Sandpiper chicks in the hand. Photo/David Hussell.

Ontario Bird Feeder Survey

About 500 volunteers participate in this annual survey, which has been conducted since 1976. The purpose of the survey is to document the numbers and kinds of birds attracted to feeding stations, and to determine whether feeder observations are useful in monitoring population sizes of overwintering species. (See article by Erica Dunn in this issue.)

Ontario Lakes Loon Survey

Begun in 1981 to monitor the status of the Common Loon throughout Ontario, this continuing survey aims to provide early detection of any significant change in the province's population. Results to date have indicated the possibility of an adverse effect of acid precipitation on loon reproduction.

Tree Swallow Breeding

This long-term project was begun in the late 1960s. Since 1977, over 200 nest boxes at three locations have been monitored regularly during the breeding seasons and records kept on identity and measurement of adults (through banding), clutch size, egg weights, growth of young, insect abundance, and weather effects.

Baillie Memorial Fund

The James L. Baillie Memorial Fund for Bird Research and Preservation provides grants to support studies of Canadian birds in their natural environment, and for projects that contribute to the preservation or dissemination of knowledge of Canadian birds. Priority is given to projects which involve amateurs in research or field work. More than ninety grants totaling over \$41,000 have been awarded since 1978. The Baillie Birdathon, the longest-running Birdathon in North America, supports the Fund.

PUBLICATIONS

The publications listed here are only a small sample of those which appeared between 1980-1986. A complete list of publications is available upon request from the Observatory.

ALVO, R. 1984. Ontario Lakes Loon Survey progress report no. 3:1983. Long Point Bird Observ., Port Rowan. 39 numbered pages + 29 unnumbered pages.

———. 1985. The breeding success of Common Loons (*Gavia immer*), in relation to lake acidity. M.Sc. thesis, Trent Univ., Peterborough, Ont.

DeSTEVEN, D. 1980. Clutch size, breeding success and parental survival in the Tree Swallow (*Iridoprocne bicolor*). *Evolution* 34:278-291.

DUNN, E.H. 1979. Age of effective homeothermy in nestling Tree Swallows according to brood size. *Wilson Bull.* 91: 455-457.

DUNN, E.H. 1980. On the variability in energy allocation of nestling birds. *Auk* 97:19-27.

DUNN, E.H., D.J.T. HUSSELL and J. SIDERIUS. 1985. Status of the Great Blue Heron (*Ardea herodias*) in Ontario. *Can. Field Nat.* 99:62-70.

DUNN, E.H. and E. NOL. 1980. Age-related migratory behavior of warblers. *J. of Field Ornithol.* 51:254-269.

HOLROYD, G.L. 1983. Foraging strategies and food of a swallow guild. Ph.D. thesis, Univ. of Toronto, Toronto. x + 190 pp.

HUSSELL, D.J.T. 1980. The timing of fall migration and molt in Least Flycatchers. *J. of Field Ornithol.* 51:65-71.

———. 1981. The use of migration counts for monitoring bird population levels. *Studies in Avian Biology* 6:92-102.

———. 1981. Migrations of the Least Flycatcher in southern Ontario. *J. of Field Ornithol.* 52:97-111.

———. 1982. Migrations of the Yellow-bellied Flycatcher in southern Ontario. *J. of Field Ornithol.* 53:223-234.

——— and A.B. LAMBERT. 1980. New estimates of weight loss in birds during nocturnal migration. *Auk* 97:547-558.

——— and T.E. QUINNEY. 1986. Food abundance and clutch size of Tree Swallows (*Tachycineta bicolor*). *Ibis* 128: in press.

LAMBERT, A. 1981. Assessment of effects of winter navigation on bird populations on the Great Lakes. Final Report—Contract 14-16-0009-80-003 for the U.S. Fish



White-winged Crossbills are occasional visitors to southern Ontario. Photo/Long Point Bird Observatory.

and Wildlife Service. Long Point Bird Observ., 105 pp.

McCRACKEN, J.D., M.S.W. BRADSTREET and G.L. HOLROYD. 1981. Breeding birds of Long Point, Lake Erie. Canadian Wildlife Service Report Series No. 44, 74 pp.

NOL, E. and A. LAMBERT. 1984. Comparison of Killdeer (*Charadrius vociferus*) breeding in mainland and peninsular sites in southern Ontario. *Can. Field Nat.* 98:7-11.

QUINNEY, T.E., D.J.T. HUSSELL, and C.D. ANKNEY. 1986. Sources of variation in growth of Tree Swallows. *Auk* 103: in press.

MEMBERSHIP

Membership in the Long Point Bird Observatory entitles members to use library facilities, and to receive "The Long Point Bird Observatory Newsletter" (a triannual publication), as well as the an-

nual report. The basic membership fee is \$20 per year.

Members participate in the annual meeting held every spring. (The Baillie Birdathon is traditionally held on the same day.) They are invited to attend the fall meeting, which combines a lecture and a social evening.

Directory to Cooperative Naturalist's Projects in Ontario is also available to members. This biannual publication lists information on 40-50 natural history projects which require volunteer assistance. Each listing includes the project's objectives, qualifications of the participants, nature of the work, and the organizer's name and address.

For further information on membership, or for a complete list of publications, write to: Long Point Bird Observatory, P.O. Box 160, Port Rowan, Ontario, Canada N0E 1M0.

—M.G. Soares



A view from the lighthouse shows open dune habitat and the old field station building that was destroyed by fire in 1973. The new station, built in 1971, was lost in a storm in 1985, in which 50 feet of protective dune was eroded. Photo/Norman Lightfoot.