

Essex County
FIELD NATURALISTS'
CLUB

VOL. 4, NO. 4
DEC., 1987

THE EGRET.



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E.C.F.N.C. MEMBERS

Please consider submitting an article for our next Egret which will appear at our March, 1988 meeting. Please mail articles to B. Learmouth, 2405 Princess St., Windsor, Ont. N8T 1V2 before Feb. 15, 1988. Thank you.

ESSEX COUNTY FIELD NATURALISTS' CLUB

1988 MEMBERSHIP RENEWAL FORM

NAME _____

ADDRESS _____

POSTAL CODE _____ PHONE _____

INTERESTS _____

Please enter / renew my membership in the E.C.F.N.C. in the following category:

Individual membership - \$ 12.00 per year _____

Family membership - \$ 18.00 per year _____

Sustaining membership - \$ 25.00 per year _____

Life membership - \$100.00 one payment _____

Make cheque payable to the ESSEX COUNTY FIELD NATURALISTS' CLUB and mail to:

P.O. Box 3421,
TECUMSEH, Ontario. N8N 3C4

Thank you.

The Essex County Field Naturalists' Club is an incorporated, non-profit organization open to anyone with an interest in nature and conservation. Club objectives are to promote the appreciation and conservation of the diverse natural heritage of Essex County and surrounding region; to provide the opportunity for people to become acquainted with and to better understand the natural environment; to promote the identification, preservation, maintenance and restoration of natural areas of high quality for living things; to co-operate with and support other organizations with similar objectives. Meetings are held monthly from September until June, on the second Wednesday of each month at the Marlborough Community Centre at 7:30 p.m.

RABIES

RABIES. The mere word itself and we begin to conjure up images of mad animals baring gleaming white teeth and behaving in an abnormally vicious manner. Rabies has been around for a long time - likely before the birth of Christ. For a human being having rabies in those days, it meant being subjected to a variety of so-called cures - from eating the eyes of crayfish to being bled of at least two pints of blood! At one point in time it was believed that rabies was transmitted through the breathe of the infected person. In this case the contagious person would be smothered to death between two mattresses!

The rabies disease itself is actually caused by a virus. The virus is transmitted via saliva, usually through a bite, but also through contact with other mucous membrane such as the eye. Just recently it was discovered that rabies could also be passed on by what is called the aerosol route. An example of this occurred when a number of researchers developed rabies after working in a cave that contained the droppings of infected bats.

After an animal becomes infected with the rabies virus there is a recessional period, varying from two weeks to six months when the disease does not manifest itself and appears to be dormant. This phase of the disease, according to experts, is apparently the most mysterious and unknown segment of the virus cycle. This phase is also responsible for animals being confined or put into quarantine after receiving a potentially rabid bite.

If the animal is infected, the virus will go through the stage described above and then mysteriously travel up through the nerves to the spinal cord and the brain. Symptoms will then suddenly begin to appear. Rabies symptoms can appear in either the mad-dog or dumb form of behavior. Most of us would be familiar with the mad-dog behavior if we happen to be familiar with the Walt Disney classic "Old Yeller". The dumb form occurs most frequently in cattle. This results in a stupor or trance-like behavior in which the animal stands

in one spot staring directly ahead. The animal also tends to drool and bellow loudly.

A cure for rabies came in 1881 when Louis Pasteur developed a vaccine for the disease. His first step in finding a cure was to remove the spinal cord of a rabbit that was known to have rabies. He then suspended the cord in a sterile tube for fourteen days. Then he prepared an emulsion from the cord. This emulsion was injected into a healthy dog. Next, he prepared an emulsion from an infected cord that had been suspended for thirteen days, twelve days, and so on. Each one was injected into the dog. This procedure produced a successful vaccine that would be used for years to come, explaining the reason why vaccines consisted of a series of painful shots. Today, the vaccine consists of four painless shots in the arm or buttocks.

Rabies occurs almost everywhere in the world except for Australia, New Zealand, Antarctica and some islands including the British Isles, Cyprus and Hawaii. All warm-blooded animals can contract rabies, although some warm-blooded animals are more susceptible than others. Birds, for example, do not appear to be prone to rabies and, as well, smaller mammals such as mice, squirrels and voles, etc., are also unlikely candidates. Deer and moose are very rarely diagnosed as rabid.

Rabies was actually unknown in Ontario until about 1956, when it was said to have spread from northern Canada, possibly by sled dogs. Now we have the highest percentage of rabies cases in North America. Rabies costs the Ontario taxpayers literally millions of dollars each year.

The major carrier of rabies in Ontario is the beautiful red fox. Skunks are next, followed by bats, raccoons, coyote, wolf, woodchuk, and rabbit. Fox and skunk account for 75% of the rabies cases.

The potential danger and concern, in a country as big as Canada, is that the disease becomes widespread in wild animals. Rabies outbreaks in domestic

animals, as was the case in many European countries, can be controlled through vaccination, destruction of strays and importantly by the quarantining of any animals coming into the country. Rabies control for wild animals is a much different story. Obviously reducing wild animal populations by widespread culling is out of the question as well as impractical.

Given the alternatives and the seriousness of the situation, experts throughout the country decided in the late 60's that vaccination was the only sensible means of control. After years of intensive research studying the behavior of some of our wild animals, the Ministry of Natural Resources, in Maple, Ontario, devised a control mechanism. This mechanism consists of preparing small balls of ground meat laced with the rabies vaccine, and packaged in small plastic bags. For the past few years, Ministry of Natural Resources has been dropping these meatballs into various habitat locations throughout Ontario, in an effort to reach as many susceptible animals as possible.

A recent article in Seasons, the Federation of Ontario's magazine, describes the painstaking work that researchers went through to find the perfect bait. Dr. Voigt from the Ministry of Natural Resources in Maple was quoted as saying that it took weeks of grinding research before facts such as, mice like cheese, foxes can't open sealed plastic packets any easier than humans and baits dropped from airplanes into a metre of snow sink out of sight, were recognized! Recent reports indicate that the program has been a huge success.

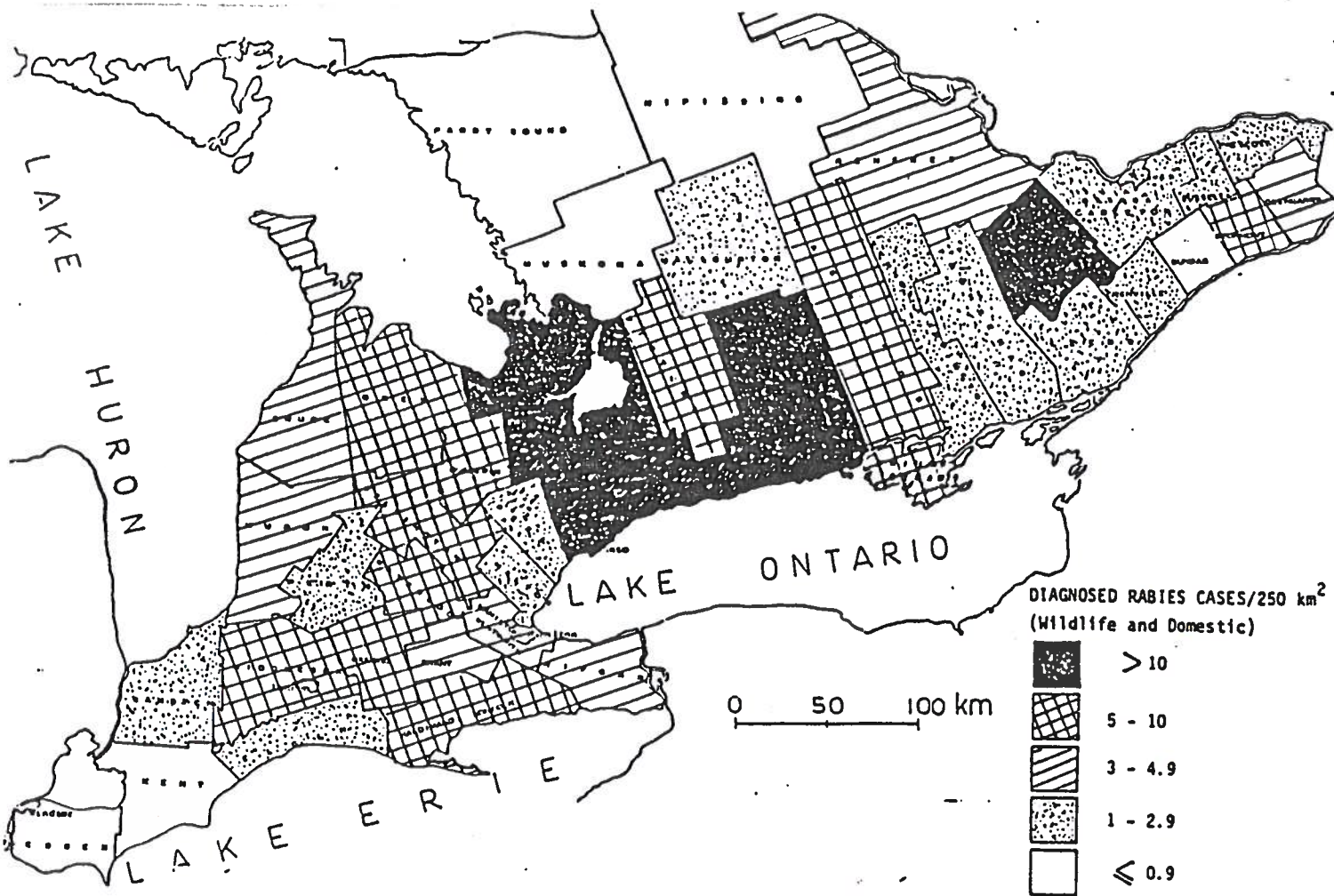
As residents of Essex County, we are unlikely to see little packets of ground beef fall from the sky. The map following depicts the areas in Ontario most highly afflicted with rabies.

If you should find yourself in the unfortunate circumstance of being faced with a rabid animal, experts state that you should contact your local veterinarian as soon as possible. It is strongly recommended that all domestic pets receive their rabies shots. This includes cats. For some reason people feel

that dogs, much more than cats, should receive rabies shots.

Anyone witnessing an animal in sheer agony dying of rabies will agree that this is one of the most pitiful sights there can be. The disease gains control of motor functions, paralyzing the animal and putting it through two-three days of painful torture before it finally takes over its respiratory process, the actual cause of death. No animal should be allowed to die this way!!!

--Shannon Managhan



Density of diagnosed rabies cases per administrative area in Ontario during April 1/1985 - March 31/1986

This map was reproduced from an unpublished report by the Ministry of Natural Resources, Maple, 1987.

A WALK IN THE FALL

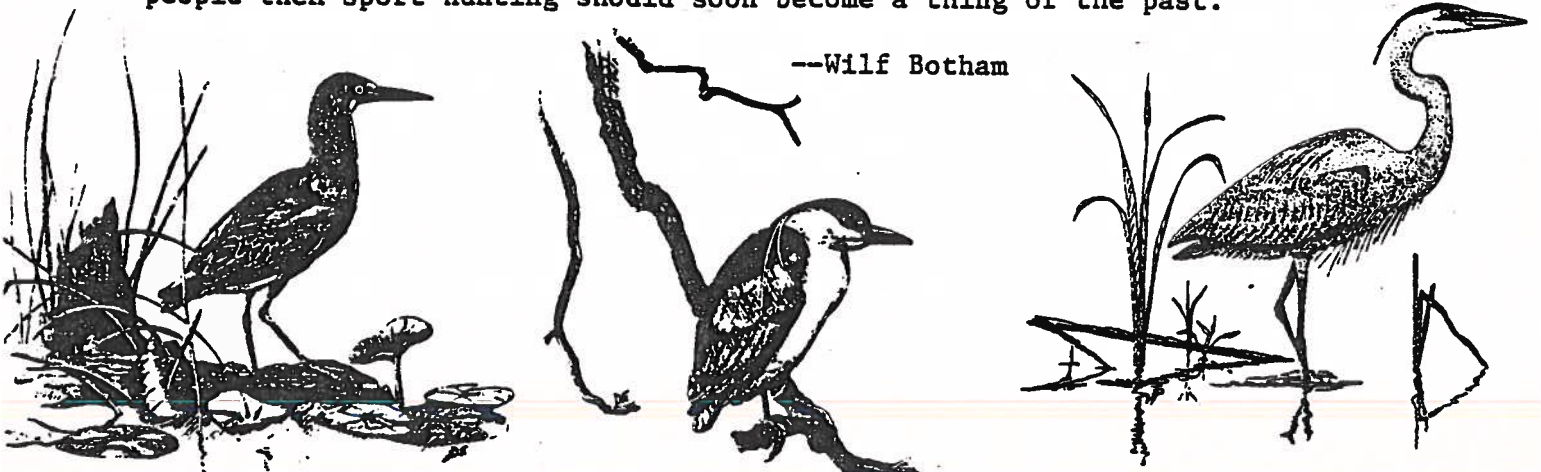
One day in September I visited the Tremblay Beach Conservation Area, hoping to see some interesting birds and plants. I was not disappointed. On and around Tremblay's Pond were Great Blue Heron, Great Egret, Black-crowned Night-Heron, Green-backed Heron, Pied-billed Grebe, Yellow-rumped Warbler, and gulls. As I was enjoying watching the remarkable concentration of wildlife I could hear gunshots from beyond the railway that separates Tremblay's Pond from the Stoney Point Sewage lagoons. Looking over I saw a man with a gun walking around the lagoons. Around him were three small children and three dogs. I do not know what he was shooting at - if anything.

I thought: What a poor approach to teaching youngsters about wildlife. This man could just as easily have left his gun at home and have taken his children around Tremblay's Pond pointing out to them the wealth of wildlife there-which includes plants and small water creatures, besides the birds mentioned above.

At this critical stage in man's time on the earth children need to be taught how to preserve wildlife, not how to destroy it. It is sometimes stated that naturalists also disturb and destroy wildlife in their zeal to see and photograph. It is probably true, but it must be kept in mind that the naturalist's objective is to preserve, the sport hunter's objective is to destroy wildlife.

Sport hunting is like smoking in that it is becoming more and more socially unacceptable. If a sympathetic interest in wildlife is fostered in young people then sport hunting should soon become a thing of the past.

--Wilf Botham



QU'EST-CE QUE C'ETAIT LE BOIS BLANC?

What was the white wood? First, it may come as a surprise to some that the Canadian island in the Detroit River opposite Amherstburg, popularly known as Boblo, is more correctly called Bois Blanc Island - literally white wood island. The name Boblo (or Bob-Lo) was adopted after the Detroit Belle Isle and Windsor Ferry Company purchased the island in 1898. Boblo was considered an improvement on the pronunciation 'boys blank' which Anglo-Michiganders were using. This was merely following a local tradition which reached its nadir in the pronunciation of Pierre Street in Windsor as 'peery'.

Bois Blanc Island, by any name, has an interesting history. In 1742 the French mission to the Hurons (Wyandots) moved from Detroit to the Amherstburg area, where it was known as the Bois Blanc Mission. Attacks by Indians caused it to move back up the river in 1747.

We hear nothing more about the island until 1796, when the British left Detroit to establish Fort Amherstburg (later Fort Malden). Blockhouses were built on either end of the island and all the large trees felled to give the guns a clear field. Farming on the island began in a small way with the opening of a lighthouse at the south end in 1836, and probably reached its height after 1869 when it became the estate of actors McKee Rankin and Kitty Blanchard.

Under their tenure the island was stocked with deer and peafowl, among other ornamental animals, and was serviced from the mainland by their private steam yacht. Some of the exotic trees on the island, such as European Ash, probably date from this period.

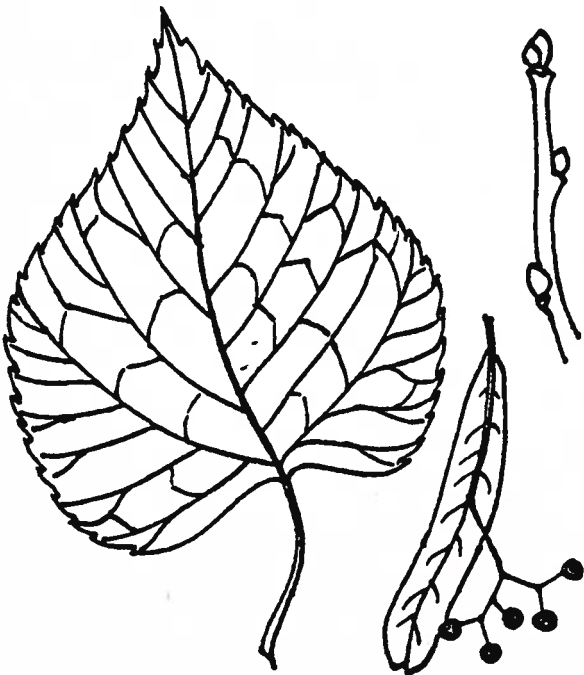
As interesting as the island's history may be, it doesn't tell us much about le bois blanc. According to the legend heard around Amherstburg, the name comes from the white birch trees which covered the island and mutely greeted the first hardy French explorers. What a scene that would make in the then unsullied waters of the Detroit River. Unfortunately this is all likely to be pure imagination.

The only birch tree presently native to Essex County is the yellow birch, Betula alleghaniensis, a dark-barked species. Driving Highway 401 east you will not see native white birch in the adjacent woodlots until past the Rodney exit. Travelling Michigan's I-94 north, none are seen until past the Marine City exit in St. Clair County. That puts our island out of the range of white birch. (It's interesting to note that Michigan's Bois Blanc Island, which lies east of the Straits of Mackinac, is well within the white birch range.) But regardless of all this the French for White Birch is not Bois Blanc but Bouleau Blanc or Bouleau à Papier.

Bois Blanc has been visited by three noted botanists: David Douglas (1823), John Macoun (1882) and C. K. Dodge (1914), and although they noted some interesting plants which are now extirpated (eg. Wild Hyacinth, Camassia scilloides) none of them documented white birch.

In English both Basswood, Tilia spp. and Tulip Tree, Liriodendron tulipifera are called white wood. I've never heard this name used locally except in specialty wood shops. There is a single specimen of Tulip Tree growing on Bois Blanc today, but it is in the southern park portion, is young, and appears to have been planted. Additionally the island's clay soils are very different from the sandy loams usually associated with Tuliptree.

Conversely, Basswood grows all over the island including the wilder northern portion. Unlike Tulip Tree, Basswood grows as far north as the Straits of Mackinac and well up the St. Lawrence River into Quebec. And it is in Quebec that several writers, including Pierre Boucher (1663), A. Cadillac (1695) and Peter Kalm (1749),



BASSWOOD, TILIA AMERICANA
LE 'BOIS BLANC'

describe a Bois Blanc which sounds unmistakably like Basswood. Today the Basswood is known as Tilk, Tillot or Tilleul d'Amerique. Nevertheless it wouldn't surprise me if it is still called Bois Blanc in some parts of Quebec.

So, qu'est-ce que c'etait le Bois Blanc? In all likelihood it was our common native basswood with its celebrated white heartwood.

--Gerry Waldron

THE BLACK OAK HERITAGE PARK

On Sunday, October 25, 1987, Black Oak Heritage Park was introduced to the public. An official unveiling of an attractively designed plaque accompanied the opening ceremonies at which several persons spoke about the significance of this area and the potential for enjoyment that it represents for the people of Windsor.

Lloyd Burrige, Commissioner of the Windsor Parks and Recreation Department, praised the Canadian Salt Company Limited for its significant donation of one hundred and twenty-nine acres of Carolinian woodland. Mr. Burrige remarked upon the savanna's close proximity to the original site of the French colony at Petite Cote which began in 1749. Windsor councillor, Tom Porter, commended the co-operation of a number of companies which was necessary for the savanna to be made available as public property. The Canadian Salt Company's manager, Paul Blair, expressed his company's pleasure upon the donation of this property to the City of Windsor, and Alex McCrindle, of Heritage Windsor, thanked the Canadian Salt Company for its donation of this site which future generations are certain to enjoy.

Before leading the group on a short walk through the Black Oak savanna, Paul Pratt outlined some of the special aspects of this area. It is the habitat of a number of mammals including White-tailed Deer, coyotes, and Long-tailed Weasels. Red-bellied Woodpeckers and Tufted Titmice have been recorded. Likely there are five hundred to six hundred native plants growing in this savanna and some sixty to seventy of these are plants that are rare to Canada.

The Black Oak savanna appears as a sunny, open site to visitors. Large trees

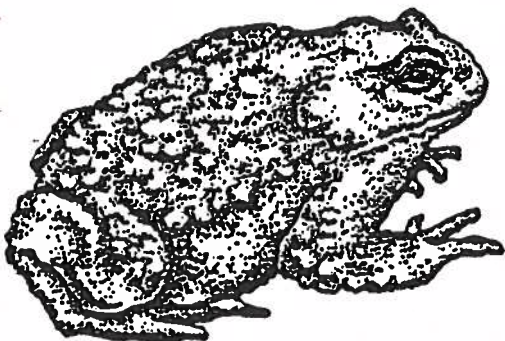
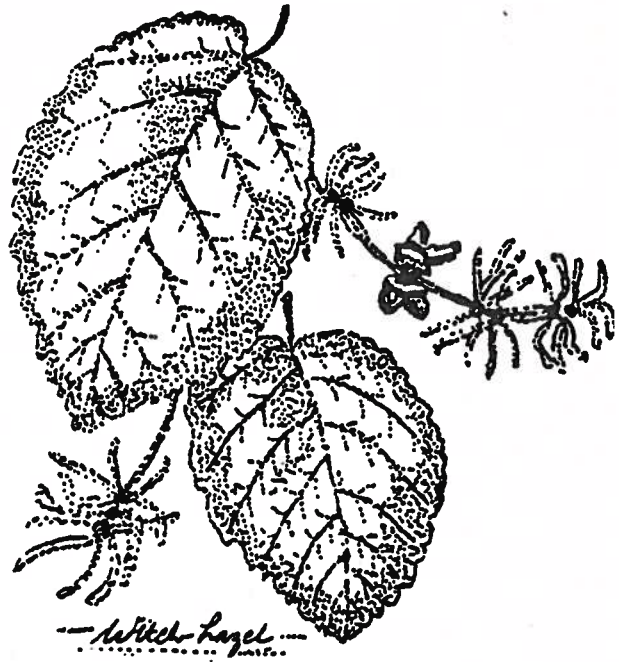
are scattered throughout a gently undulating terrain upon which prairie grasses, prairie flowers and small shrubs flourish. Spring grass fires retard the growth of these shrubs which ensures an open understory from season to season. The spring fires do not disturb the older, larger trees such as the dominant Black Oak which thrive on this well-drained site.

A highlight of our walk was the discovery of several groves of Witch Hazel in full bloom, indicating the end of the flowering season for the plants of the savanna. We were introduced to a wiry southern species of blueberry which was growing beneath the Witch Hazel. Although this plant is found on the Windsor Black Oak savanna, it is generally found in the United States.

The Park is located along the west side of Highway 18 opposite Ojibway Park. Access is limited to several dirt trails which can be reached from Broadway Avenue at Sandwich Street.

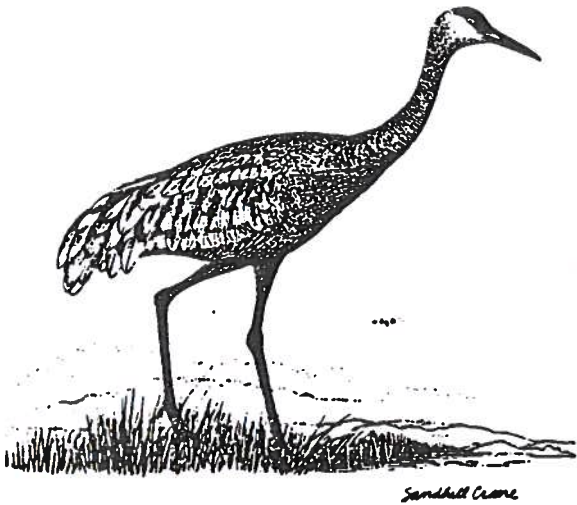
Members of the Essex County Field Naturalists may look forward to exploring the Black Oak Heritage Park with Paul Pratt during a spring flower walk to be arranged for late April, 1988.

--Betty Learmouth



Federation of Ontario Naturalists
Conference '88
at Guelph - May 27-29-1988

A FALL FIELD TRIP TO VIEW THE SANDHILL CRANES



Sixteen members met on October 18, 1987, for the one and one-quarter hour drive to Jackson County, Michigan, to view the Sandhill Cranes at the Phyllis Haehnle Memorial Sanctuary.

The Haehnle Sanctuary was established in 1955 and totals nearly seven hundred acres. It is owned and maintained by the Michigan Audubon Society. The sanctuary, a mixture of woodland and wetland, offers habitat for

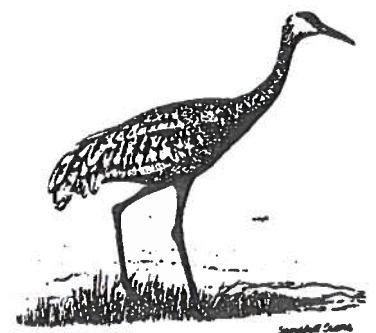
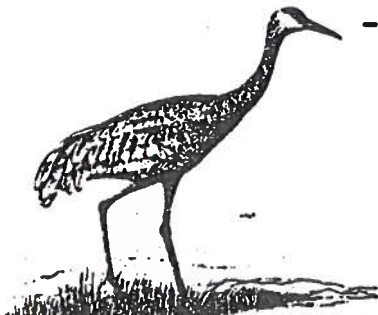
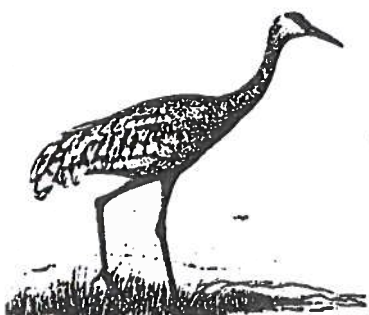
a small population of breeding Sandhill Cranes. From mid-October to mid-November, the wetlands become a roost for hundreds of transient cranes as they migrate toward their winter range in the southern United States and south to Central Mexico and Cuba.

Visitors to the sanctuary should plan to be in the area during the hours before sunset. The cranes fly to their roost at Mud Lake and Mud Lake Marsh from nearby fields where they have been foraging during the day. Bring a telescope for good views of the cranes as they fly into the wetlands.

Our members chose a particularly beautiful day to observe the cranes as the fall foliage was very colourful. Crane census takers told us over nine hundred cranes flew into the sanctuary that day. Earlier in the week there had been sixteen hundred cranes at the roost.

To reach the sanctuary, take I-94 west to the Race Road exit, exit 147. Follow Race Road north to Seymour Road, turn left and continue to the sanctuary entrance. It is about 6 km. from the Race Road exit to the sanctuary.

--Betty Learmouth



**ESSEX COUNTY FIELD NATURALISTS' CLUB
FINANCIAL STATEMENTS
DECEMBER 31, 1986**

(1)

(2)

Essex County Field Naturalists' Club,
Scarborough, Ontario, Canada.

ESSEX COUNTY FIELD NATURALISTS' CLUB

STATEMENT OF ASSETS

AS AT

DECEMBER 31, 1986

We have acted as accountants for the Club for the year ended December 31, 1986. Attached hereto are the following statements:

- Profit and Loss Statement for 12 months ended December 31, 1986.
- Balance Sheet as of December 31, 1986.

The above statements have been prepared from the records of Essex County Field Naturalists' Club and from other information supplied to us by the Company. In the preparation of these statements, we attempted wherever possible, through enquiry, comparison and discussion, to verify the information received. However, in accordance with the terms of our engagement, we have not performed an audit and consequently do not express an opinion on these Financial Statements.

CURRENT:

Cash on Hand	\$ 150.00
Bank - #1	1,321.69
- #2	<u>573.00</u>

TOTAL CURRENT ASSETS \$ 2,044.69

OTHER:

Organization Expense	\$ <u>170.05</u>
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TOTAL OTHER ASSETS 170.05

TOTAL ASSETS \$ 2,214.74

June 30, 1987.

H. W. DOWNS, C.G.A.

(3)

(4)

**ESSEX COUNTY FIELD NATURALISTS' CLUB
STATEMENT OF LIABILITIES AND MEMBERS' EQUITY
As At
DECEMBER 31, 1986**

**ESSEX COUNTY FIELD NATURALISTS' CLUB
PROFIT AND LOSS STATEMENT
FOR 12 Months ENDED December 31, 1986**

LIABILITIES

NT:	
Accrued Expense	\$ <u>260.00</u>
TOTAL CURRENT LIABILITIES	\$ 260.00

MEMBERS' EQUITY

Balance as of January 1, 1986	\$ 1,975.54
Loss to December 31, 1986	<u>(20.80)</u>
Balance as of December 31, 1986	<u>1,954.74</u>
TOTAL LIABILITIES AND MEMBERS' EQUITY	\$ 2,214.74

INCOME:

Memberships	\$ 1,917.00
Banquet	1,313.00
Bird A Thon	528.86
Donations	665.00
Miscellaneous Income	<u>328.40</u>

GROSS INCOME \$ 4,752.26

EXPENSES:

Advertising & Promotion	\$ 377.53
Membership Fees	80.00
Meetings	259.50
Postage	267.67
Printing	691.21
Office Expense & Miscellaneous	86.73
Banquet Expenses	814.50
Accounting & Legal	260.00
Rent	220.30
General Expense	1,476.68
Telephone	124.94
Interest & Bank Charges	4.00
Donations	<u>110.00</u>

TOTAL EXPENSES 4,752.26

THE E.C.F.N.C. THIRD ANNUAL DINNER

The Essex County Field Naturalists' Club held its third annual dinner on September 9, 1987 at the Knights of Columbus Hall on Lauzon Road. Deb Gorman Smith chaired the dinner meeting which was well attended by eighty-five of our members.

The dinner's guest speaker, Mary Gartshore, was introduced by Paul Pratt. Mary was co-chairperson of a recently completed study of environmentally significant areas for the Norfolk-Haldimand region, and Mary chose this study as her topic for a lively slide talk. Jo Barten, our dinner co-ordinator, thanked Mary and presented our speaker with a feeder and a very large bag of sunflower seeds for the flying squirrels around Mary's home near Long Point.

The auction of donated items raised \$505.00, and Peter Bondy, our auctioneer, entertained all of us throughout the auction.

Our members' continued support and attendance at our annual dinner is very much appreciated. The funds raised through our dinner and auction will enable us to carry on with our club's activities during the upcoming year.

ESSEX COUNTY FIELD NATURALISTS CLUB BANQUETRECEIPTS:

Sale of Banquet Tickets	\$1,275.00	
Auction Receipts	<u>505.00</u>	
Total Receipts	\$1,780.00	\$1,780.00

DISBURSEMENTS:

Knights Of Columbus Dinner	\$ 946.70	
Speaker Fees (Mary Gartshore)	50.00	
Gift to guest speaker	21.99	
Printing of tickets	22.19	
Gift Wrapping	<u>15.00</u>	
Total Disbursements	\$1,055.88	\$1,055.88

NET PROCEEDS:\$ 724.12

E.C.F.N.C. Dinner Meeting and Auction September 9, 1987

The E.C.F.N.C. wishes to acknowledge the generous donations by the following persons, businesses and publishers. All the contributions were very much appreciated and ensured the success of our third annual dinner meeting.

DONATIONS

Bird feeder / donated by Tecumseh Home Hardware

Bird Seed / donated by the Ojibway Nature Centre

Canadian Mint Coin Set / donated by Bill Morsink

Deer print / donated by John Pilkington

Guide to Watching Whales in Canada / donated by Gordon Soules Publishers

Hand knit sweater / created and donated by Thelma Walker

Handmade notepaper / created and donated by Anne Barbour

Handmade purse / knitted and donated by Mrs. Jean Sharkey

Membership to the Essex County Historical Association / donated by Jennifer Fox

Monogram sets / donated by Booth Photographic Limited

Nature photography books / donated by Wansborough's Photography

Plants / grown and donated by Colasanti's Greenhouses

Waterfowl and friends calendars / donated by Kit Breen Photography

WILD BIRD FOOD

OJIBWAY NATURE CENTRE

5200 Matchette Road. CALL 966-5852

SUNFLOWER CHIPS 50 lb. \$ 25.70

Husked sunflower seed is favoured by a wide range of birds but it is especially attractive to flocks of Goldfinches, House Finches and Redpolls. They do not have any shells to crack and you have none to sweep up.

WILD BIRD MIX 20 kg. \$ 9.95, 9 kg. \$ 5.25

This premium mixture contains greater amounts of millet, peanut and sunflower seed than economy mixtures.

BIRD FEEDERS \$ 12.95 each

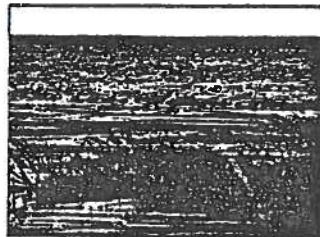
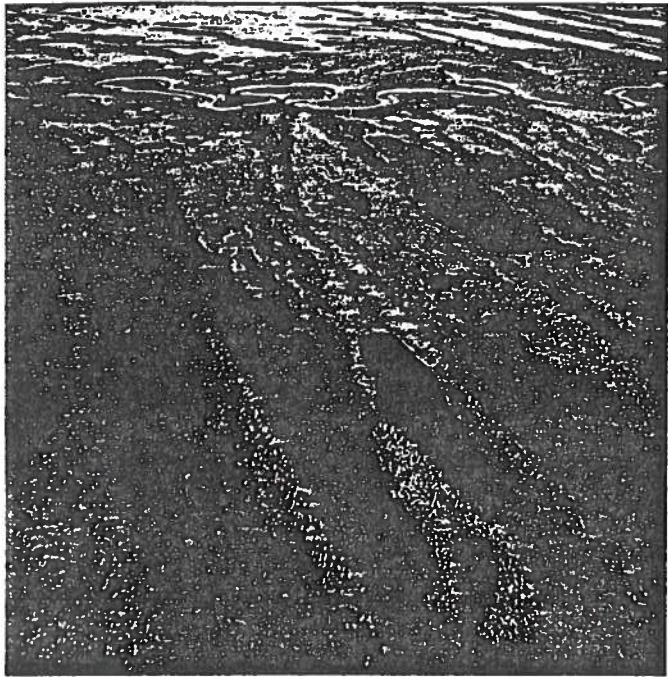
An attractive wooden tray feeder for hanging or pole mount

SUNFLOWER SEED 25 lb. \$ 8.88, 6 lb. \$ 2.79

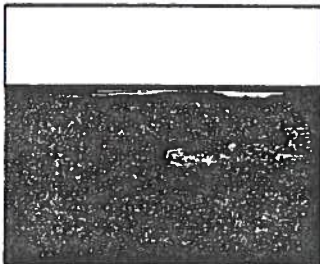
Whole large sunflower seed is the favourite food of Cardinals, Grosbeaks, Blue Jays, Nuthatches and Chickadees. It does not attract Starlings and Pigeons. The smaller black oilseed is favoured by Goldfinches and Redpolls.



RESOURCE ROUNDUP



Polar Bear Provincial Park, left, Hannah Bay and Moose River Migratory Bird Sanctuaries, above, and Point Pelee National Park, below, were designated wetlands of international significance



THREE WETLANDS PROTECTED UNDER RAMSAR

THREE IMPORTANT ONTARIO wetland areas comprising almost 2.5 million hectares were designated wetlands of international importance by the federal and provincial governments at the Ramsar Convention this year in Saskatchewan.

The Ramsar Convention (the Convention on Wetlands of International Importance) is named after the city in Iran where the first meeting of its delegates was held in 1971. The intent of this agreement—signed by 45 governments around the world—is to save wetlands which are disappearing at an alarming rate due to drainage, pollution and other factors.

Although it imposes no legal obligations, the Ramsar Convention has proven its worth as a conservation tool, since each signatory agrees to take whatever internal steps are necessary to protect its designated areas.

This May, as the contracting parties assembled in Regina for their fourth meeting, they received good news: Canada, with 25 sites already designated, was adding three major wildlife areas to the list. These three sites—all in Ontario—join eight others designated in Canada this year.

By far the largest at more than two million hectares is Polar Bear Provincial Park, Ontario's most northerly park on the shore of Hudson Bay. In addition to being home to hundreds of polar bear and a remnant population of woodland caribou, the park is a major water-

fowl habitat with large populations of ducks, shorebirds and Canada, snow and blue geese.

Farther south, the Hannah Bay and Moose River Migratory Bird Sanctuaries on James Bay near Moosonee comprise the second of the newly designated areas.

The third, Point Pelee National Park near Leamington, is an essential staging ground for dragonflies, monarch butterflies and hundreds of species of migrating birds; it also supports many rare and endangered flora and fauna.

To date, the participating nations have identified 380 sites as wetlands of international importance, thus committing themselves to the protection of more than 22 million hectares of wetlands. Canada leads the way with more than half that total.

Bill Gladstone

CONSERVATIONISTS HONORED DURING WILDLIFE '87

IN CELEBRATION OF WILDLIFE '87—the national wildlife conservation year declared by the federal government—the Ministry of Natural Resources is presenting a monthly award for outstanding contributions to wildlife conservation in Ontario. Lloyd Cook, Doug Ogston, Kay and Larry McKeever, and Jasper Miner received awards in the first four months of 1987. Joining those outstanding individ-

uals are Paul Eagles, Glenn Stinson and Marietta Lash, respectively the Conservationists of the Month for May, June and July.

Ornithologists everywhere should be grateful to Paul Eagles for his contribution to a massive five-year research project that culminated in the publication of the *Breeding Bird Atlas of Ontario*. (See Shapings in this issue for more information on the atlas.)

Glenn Stinson was instrumental in promoting the reintroduction of the wild turkey in Ontario. A founding member of the Quinte Wild Turkey Association in the

southeastern part of the province, Glenn kept an active and enthusiastic interest in the ministry's wild turkey program as it developed, and persuaded members of the Ontario Federation of Anglers and Hunters and other groups of its value.

Along with other members of the Canadian Association for Humane Trapping, Marietta Lash worked with the Ontario Trappers Association to propose the Humane Trapping Regulations that became law in Ontario in 1985. She has worked with the CAHT for more than a decade.

Bill Gladstone

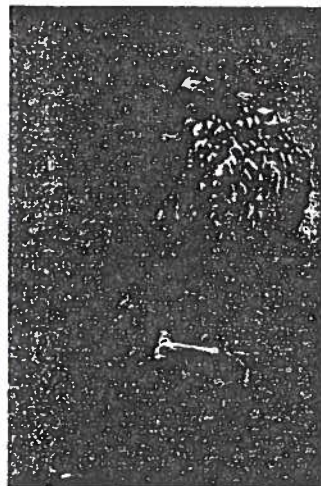
TORONTO BIRD FLIES COOP, DISCOVERED IN BOSTON LOVE NEST

A FEMALE PEREGRINE FALCON, which disappeared after it was released in Toronto in 1984, is alive and well and living in Boston.

The bird, which was identified by a numbered band on its leg, lives with a mate on the 16th-floor ledge of the McCormick Building, an historic post office and federal courthouse in downtown Boston. The nest site itself is also somewhat historic, since it is the first new peregrine nest site discovered in Massachusetts in 36 years.

State officials and local television and newspaper reporters have shown a keen interest in the story of the falcons. So have residents of a 40-storey condominium about 100 metres away, with an excellent view of the eyrie.

The male bird, which was released atop the McCormick Building in 1984 through the state's peregrine falcon program, was first sighted in the company of the female about 10 days after his return from a winter migration in the spring of 1986. "They could have met on the coast during their migration, or they could have met in town, which seems more likely," said Tom French, a biologist with



An endangered species, peregrine falcons are the world's fastest bird

the Massachusetts Division of Fish and Wildlife. "Boston is a place where a lot of birds funnel through in migration."

According to French, the pair courted throughout the summer, stayed in town that winter, and laid eggs last spring—in a trough of

sheet-metal that was "not a good spot." After a first clutch of four eggs broke in April, French placed a reinforcing "donut of gravel" around the site.

Early in May, four eggs from a second clutch were collected and sent to a hatchery in Boise, Idaho for incubation. Chicken eggs were placed on the nest site to act as substitutes and console the new parents-to-be.

In early June, the original eggs hatched, producing four healthy chicks. But biologists decided to send the Boston peregrines another couple's two slightly older offspring which would stand a better chance of survival.

The adult falcons have accepted their two adoptees which learned to fly shortly after they arrived in Boston.

The female bird was originally released in Toronto by the Ministry of Natural Resources in co-operation with the Canada Life Assurance Company and World Wildlife Fund Canada.

Bill Gladstone

MINISTRY IMPOSES "DRAGNET" IN WAR ON RABIES

IN THEIR CONTINUING BATTLE against rabies, MNR officials have instituted a dragnet to capture and immunize as many skunks and raccoons as they can within a 60-square-kilometre area in Scarborough, part of Metro Toronto.

Each week since the beginning of July, two teams of trappers set live-traps in a two-square-kilometre area. Their progress is recorded on a large grid map as they move systematically from square to square.

Skunks and raccoons caught in the traps are not harmed. Instead, they are ear-tagged, immunized with a vaccine known as Imrab, and released. The idea is to prevent the animals from becoming carriers of rabies, which is fatal to humans.

The operation was prompted by the alarmingly high incidence of rabid wild animals discovered in the Metro Toronto area in recent years—nowhere higher than in

Scarborough. It is believed to be the first urban wildlife vaccination program in the world.

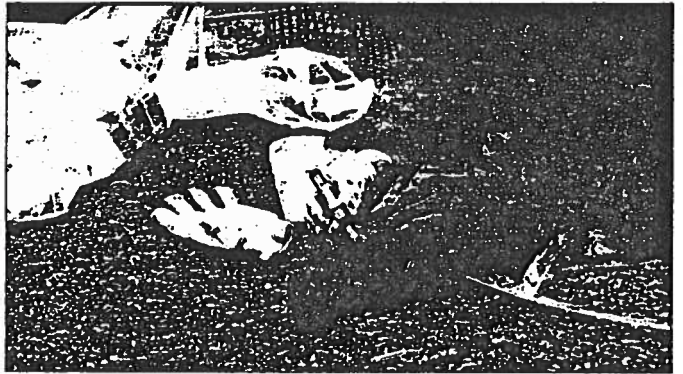
After the program is completed late in October, MNR officials will measure its effectiveness by comparing the number of rabid animals found in Scarborough with those found in a control area, the City of Toronto, where the disease is nearly as prevalent.

MNR also continues to fight rabies in rural areas. Last September, staff staged a rabies vaccine drop, releasing hundreds of baits

from the air over a 760-square-kilometre area in Huron County. Approximately one-third of the foxes in the drop area were successfully immunized after eating the bait, which consisted of vaccine-laced sponges coated with wax tallow and small bits of meat.

That operation marked the first time in North America wild foxes were vaccinated in the field. Another drop will occur this fall using baits modified in response to lessons learned last year.

Bill Gladstone



A skunk's blood is sampled to determine vaccine effectiveness

\$3.6 MILLION TO PROTECT CAROLINIAN ZONE

ENDANGERED PLANTS LIKE THE large whorled pogonia and the heart-leaved plantain have teetered on the brink of extinction in Ontario as their natural habitat rapidly disappeared.

But the chance of survival for rare plants like these has improved

since the Ontario government joined conservation organizations in a campaign to protect 36 sites in southwestern Ontario designated as important natural habitats.

Natural Resources Minister Vincent Kerrio and Citizenship and Culture Minister Lily Munro recently signed a memorandum of understanding to protect the designated areas, and pledged \$1.8 million for the protection campaign. The provincial funds match \$1.8

million pledged by three major conservation groups—World Wildlife Fund Canada, The Nature Conservancy of Canada and Wildlife Habitat Canada.

The designated areas include southern deciduous forests, wetlands, dunes, prairies and savannahs in Ontario's Carolinian zone, a unique vegetative belt containing plants and animals which are more typically found in the southern United States.

The Carolinian zone in Ontario lies south of an imaginary line connecting Grand Bend and Toronto, and extends along the north shore of Lake Erie from the Detroit River to the Niagara River. Over 2,000 kinds of native plants and 400 species of birds, including some of Canada's most rare, are found in this region.

But the favorable climate and rich soils of this densely populated area have made it one of the most intensely farmed in the province. It is also under enormous pressure from cities and towns in the area looking for room to expand. In many counties of the region, only three to eight per cent of the natural Carolinian wetlands, forests and prairies remain.

Four plants in the area—the large whorled pogonia (*Isotria verti-*

cillata), the heart-leaved plantain (*Plantago cordata*), the cucumber tree (*Magnolia acuminata*), also known as the magnolia, and the prickly pear cactus (*Opuntia humifusa*)—were recently added to the list of plants and animals protected under Ontario's Endangered Species Act, bringing the total number of species officially listed as endangered in Ontario to 18.

Under the Act, a person convicted of damaging a protected species or its habitat is liable to a fine of up to \$3,000, or imprisonment for up to six months, or both.

The Carolinian Canada protection program is designed to help preserve the habitat of rare plants like these through private stewardship and land acquisition.

People who own property in significant areas will be encouraged to maintain the land in its natural state through a tax rebate program offered by the provincial government, and a program of awards for private stewardship will be established by the Ontario Heritage Foundation, a branch of the Ministry of Citizenship and Culture.

Carolinian Canada funds will also be used to purchase significant areas where other methods of protection are not feasible.

Laura Ramsay



The cucumber tree of the Carolinian forest is now a protected species

VOLUNTEERS LET FLY WITH THE BREEDING BIRD ATLAS OF ONTARIO

There were indeed—thousands of them. The result of their efforts is the *Breeding Bird Atlas of Ontario*, possibly the largest voluntary ecological effort ever undertaken in Canada.

It all began in 1979 when George Francis, a keen birder and member of the Federation of Ontario Naturalists, spied the first such compendium while in England.

Francis took the British concept to the FON, which decided to sponsor the project along with the Long Point Bird Observatory. Museums, universities, private organizations, and the federal and provincial governments chipped in with financial and logistical help.

There was only one way to do the massive research required—fieldwork. And there was only one way to afford it—volunteers.

"At first we were concerned we'd have trouble finding people willing to go to some of the more remote

places," says Mike Cadman, co-ordinator of the atlas. "Instead, we had an incredible response. People applied from all across Canada, Great Britain and 47 of the United States. We had to set up a screening committee."

They needed a special kind of person. People who were dedicated, accurate, and highly knowledgeable about the subject matter. "Accuracy is critical in a scientific study like this," explains Paul Eagles, a professor at the University of Waterloo's department of outdoor recreation. He was one of dozens of regional co-ordinators who oversaw the fieldwork.

That's why 80 per cent of the cho-

sen volunteers were members of naturalists' clubs and experienced birders already.

"We also had to have people who were reliable. Some would need to be dropped off in a remote area and had to be able to survive on their own—in some cases, for weeks at a time," says Dr. Eagles. "Half of the province is not accessible by road."

A private company and the Ministry of Natural Resources, which operates the Ontario government air-fleet, helped by allowing volunteers going to some of the most remote locations to hitch rides.

The 1,400 volunteers had a massive job ahead of them. Their objective was to research and put together 300 maps of Ontario—one for each of the 300 species breeding in this province—showing each species' numbers and distribution, with explanatory text.

People assigned to southern Ontario were expected to put in at least 16 hours of coverage in each block of land they covered during the breeding season. In sparsely populated northern Ontario where the blocks were larger, the minimum coverage was set at 50 hours. Some volunteers spent as much as a month at a time camped out in isolated locations.

The field research began in 1981 and 407,000 data cards trickled in to the University of Waterloo through 1985. Then someone had to sort the mountain of data.

That task fell to Dr. Eagles, who put it all on computer. "There's much more data on computer than what will appear in the book, and it will be available indefinitely through the university," he says. "The information we've gathered will be used for many years ahead."

The atlas sells for \$53.50 and can be ordered from the University of Waterloo Press, Dana Porter Library, University of Waterloo, Waterloo, Ontario N2L 3G1, telephone (519) 885-1211, extension 3369.

FEATHERED FACTS

Some interesting facts gleaned from the research that has been compiled for the *Breeding Bird Atlas of Ontario*:

► The most commonly found species in the entire province of Ontario is, not surprisingly, the robin. The northern flicker, a mid-sized woodpecker, is runner-up. The common loon is also widely distributed across northern Ontario.

► The volunteers could not find six of the 300 species that have been known to nest in Ontario: the trumpeter swan, Brant goose, greater prairie chicken, black guillemot, passenger pigeon (now extinct), and Bewick's wren.

► Birds that were found, but without evidence of nesting, include: cattle egret, king rail, American avocet, dickcissel, Kirtland's warbler, and lark sparrow.

► The area with the greatest diversity of birdlife in all Ontario is a narrow band running from the Bruce Peninsula east to Kingston, around the Canadian Shield to Ottawa. More than 100 species were found there, where habitat is mixed.

► The most diversely populated single 10-by-10-kilometre square was at Rondeau Provincial Park in southwestern Ontario, where more than 140 species congregate in an area characterized by Carolinian forest, marsh and lakeshore habitats.

► People may be altering the environment radically, but not always to the detriment of birdlife. The ruddy duck and Wilson's phalarope, both essentially prairie birds that have been moving eastwards over the past few decades, have found new habitat in Ontario manmade sewage ponds. And water impoundments and dams—created to control flooding—offer a rich habitat for waterfowl and marshland birds.

► Atlas researchers discovered one species, the hooded warbler, is doing better than previously thought. Before the research began in 1981, only one or two nesting sites were known to exist in the Haldimand-Norfolk area. Atlas fieldwork reveals, in fact, there are up to 30 pairs breeding in the area each year.

Jane Naczynski

SEEDS

1 Seed coat

protects the seed against desiccation (drying out) or injury, sometimes over long periods

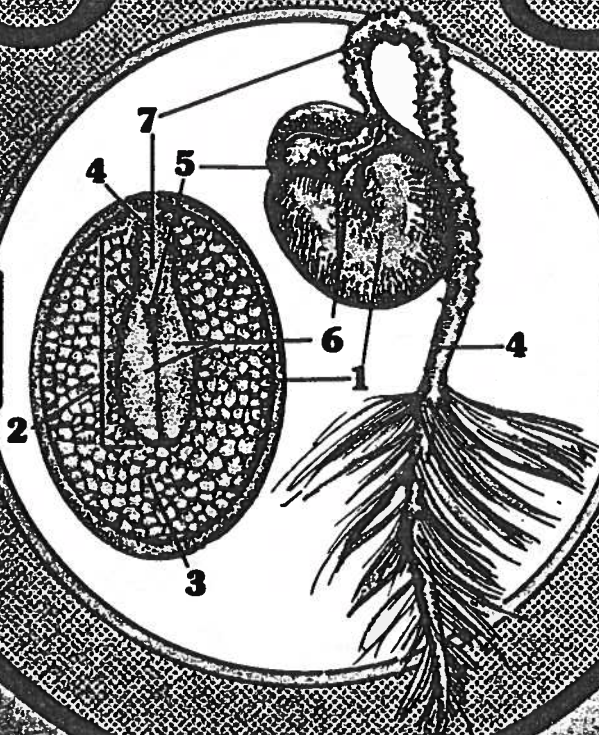
This generalized seed consists of the seed coat, an endosperm and the embryo, with its different parts.

2 Embryo

when the seed germinates, the embryo grows into the new plant

3 Endosperm

contains stored food used by the embryo early in germination before photosynthesis begins. Photosynthesis is the process whereby the plant "manufactures" its own "food"



5 Plumule - will be the first bud

The seeds of some plants, such as peas and beans, don't have any endosperm but have large cotyledons which contain stored food.

6 Cotyledons

will be the first leaves. They will begin photosynthesis as soon as they turn green.

7 Hypocotyl

may increase in length quickly following germination, thereby lifting the cotyledons and plumule above the soil.

4 Radicle - will become the primary root

As an avid gardener, one of my annual delights is the discovery of unplanted flowers coming up in my garden. I view them as gifts from nature - always welcome and greatly appreciated. Generally this phenomenon is explained by saying that the previous year's flowers went to seed. Let's take a closer look at what this phrase actually means.

Plants reproduce both sexually and asexually. The latter method involves the spreading of the plant via underground roots, bulbs or similar structures. Lily, trillium and bloodroot are some examples of native plants which reproduce in this way. The end product of asexual reproduction is another plant with the same characteristics of its single parent. As in humans, how-

ever, sexual reproduction involves the combination of male and female genetic material to produce an "offspring" with characteristics of both "parents". The egg cell in one flower is fertilized by a sperm cell from the pollen of the same, or a different flower. The usual result of fertilization is the formation of a fruit containing one or more seeds.

Germination

A viable seed contains a living embryo and is therefore capable of producing a plant. Many seeds are viable for only one year, or possibly two to three years at the most. The seeds of some species, however, may remain viable for ten or more years - some as long as 85 years! This exceptional ability allows seeds to wait for the "right oppor-

tunity before making their debut. Many of these successful plants are generally classified as "weeds" when they come up in gardens or cultivated crops.

The germination of a seed means that the embryo begins to grow, sending out a root and shoot. In order to germinate, the seed must be deposited in an area with suitable growing conditions, including water, oxygen, appropriate temperature and sometimes light. Although some seeds will germinate as soon as they reach a suitable environment, most must first undergo a period of dormancy (inactivity).

Dormancy may be inflated or terminated by a variety of mechanisms. Particularly in climates with low temperatures, some seeds must go through a cold period before



they will germinate. This special adaptation prevents the immediate germination of seeds formed in the summer or fall — a time when the seedling would not have enough growing time before the onset of winter. Instead, the seeds lie dormant until the following spring when growing conditions are much more favourable. Hepatica, spring beauty and marsh marigold are just some examples of spring flowers that will germinate only after a cold snap. In Ontario, most of our native plants undergo this type of dormancy. Some desert plants produce seeds which will only germinate if exposed to a certain amount of rainfall — even if it takes years. Again, this ensures that the plant starts out under good growing conditions, enhancing its chances for survival.

Some species' seeds, such as those of water lilies, lie dormant because the seed coat does not allow water or oxygen to reach the embryo, or it is so tough that the embryo can't break through. The gradual decay of the seed coat or cracking due to freezing and thawing will eventually allow germination. The cones of some conifers, like the jack pine, trap the seed inside, thereby preventing germination. Since intense heat is required to open these cones, forest fires are important in ensuring natural regeneration of some trees. The newly released seeds have a "head start" on other species and are able to germinate and quickly colonize the burned-over areas.

The germination of many small seeds is initiated by light. This may be an effective survival technique which ensures that the seed won't start developing when it is too deep to produce a successful seedling. In addition, light-dependent seeds can also accumulate in the soil, germinating only when they are brought to the surface. Gardeners and farmers are often unwittingly aiding the germination of a variety of "weed" seeds by cultivating the soil and bringing the seeds into the light.

Seed Eaters

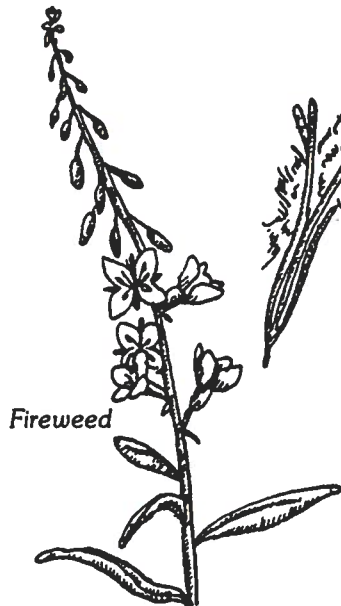
A variety of wildlife depend upon seeds for all or part of their food source. If you have a bird feeder you will already know that a number of birds, including blue jays, cardinals, evening grosbeaks and gold finches, rely on seeds. In addition to the food that you supply



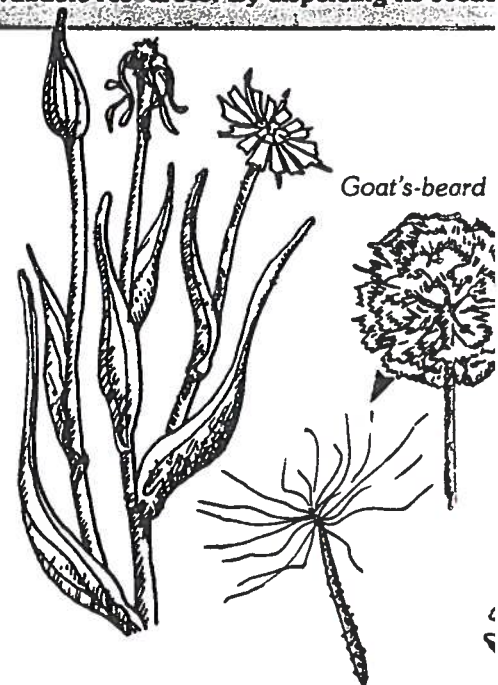
Common milkweed

HITCH-HIKERS & EXP

Seeds are produced in a wide variety of sizes, shapes, colours and structures. Ranging from miniscule orchid seeds to "giants" like coconuts, seeds have developed ingenious methods of dispersal. Why is "transportation" so important? Since plants depend on water, soil, nutrients and light in order to grow, the higher the concentration of plant in one area, the greater the competition for available resources. By dispersing its seeds



Fireweed



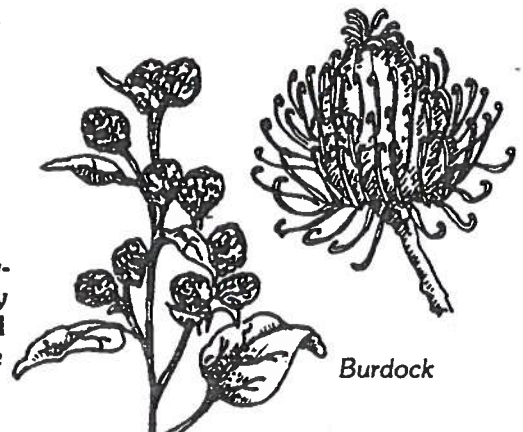
Goat's-beard



Dandelion

Sometimes animals, including you, can help disperse seeds without even knowing it! Armed with barbs or hooks, "hitchhikers", such as burdock, are well adapted for clinging to an animal's fur or a person's clothing, thereby getting a "free ride".

Some seeds are very light and specially-designed to be carried from the plant by wind. Dandelion, fireweed, goat's-beard and common milkweed are some of the more common "parachuters".

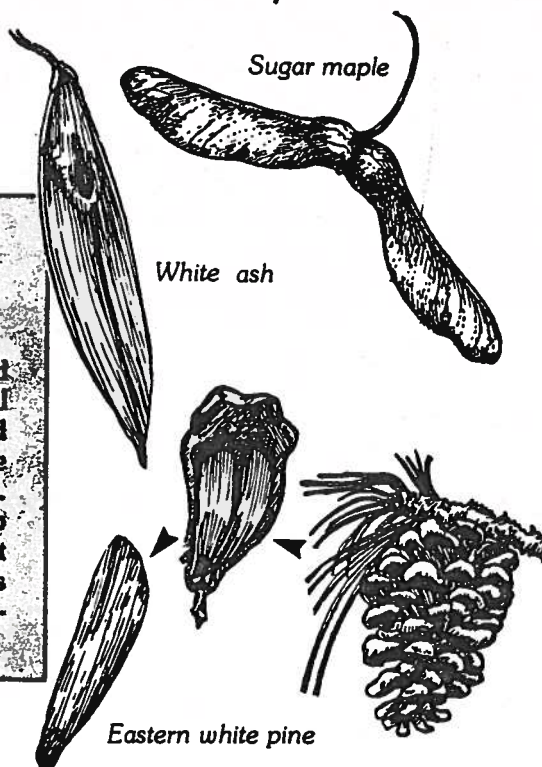


Burdock

HIKERS, HUNTERS, AND OTHERS

a plant helps prevent over-crowding and over-use of the nutrient supply. Dispersal also helps plants colonize new areas, and helps ensure that all of the seeds will not be wiped out by a single "disaster" in one area.

Since the majority of seeds will not end up in a place suitable for germination, a plant may produce an enormous quantity of seeds to improve its chance for successful reproduction.



Maples, ashes and some conifers have "winged" seeds which glide through the air for considerable distances, carried by the wind.

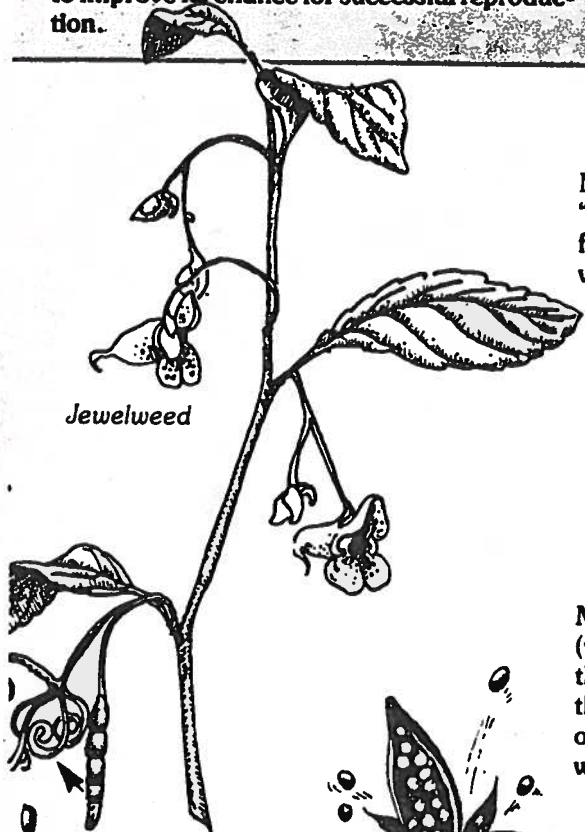
many native plants are excellent sources of bird seed. For example the seeds of dock are eaten by at least 31 species of birds, while ragwort attracts 64 species. Other seed eaters include a variety of moles, rats, raccoons, squirrels and chipmunks.

Careful observation in the woods can reveal a lot about seed eaters' habits. Small piles of seed coats, such as sunflower shells, may imply a small rodent like a mouse or vole. Cracked nut shells and other nuts often indicate the location of a squirrel's cache. You may even find a well-stashed of food, carefully collected by a well-prepared squirrel or chipmunk. Sometimes fresh scat (droppings) can also give you a clue as to the diet of various animals. It's the time to look for some of the clues and discover how important seeds are to the survival of so many of our wildlife.

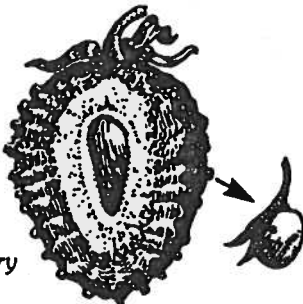
Seeds of Society

Seeds and their products are essential parts of our lives. How many different kinds did you benefit from today?

- 1) all of our farm crops and many garden plants come from the planting of specific seeds. Not only humans eat some of these plants directly, but the livestock on which we feed also eat some of the crops.
- 2) many seeds are eaten directly as good sources of nutrition, including beans, peas, peanuts, corn, wheat, rice and most nuts.
- 3) the seeds of celery, anise, caraway, dill, coriander and others are used to add flavour to food.
- 4) the products of some seeds are also consumed: coffee, cocoa and a variety of oils, such as corn, peanut oil and canola oil.
- 5) in addition to food, products such as linseed oil and cottonseed oil are made from seeds. The fibres from cotton seeds are woven into fabrics and other products and many different kinds of seeds are used in crafts and jewellery.



Jewelweed

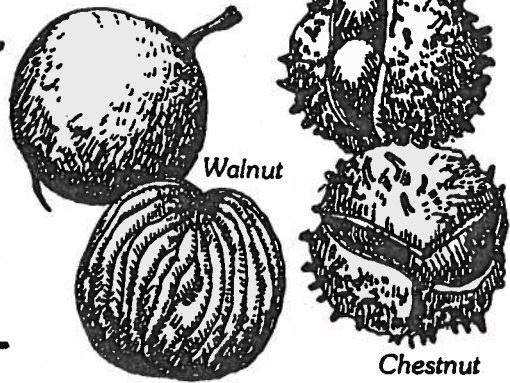


Strawberry

Many birds and other animals eat berries (which contain seeds) but can only digest the fleshy part of the fruit. Consequently, the seeds of strawberries, blueberries and other wild fruit are excreted, often a long way from their source.



Violet



Walnut

Chestnut

Some animals, especially squirrels, bury seeds, such as walnuts and chestnuts, for future food supplies, but sometimes fail to return and eat them. You could call these creatures "nature's gardeners".

Other seeds form in pods which burst when ripe, "shooting" the seeds into the open. Violets and jewelweed are good examples of "exploders".

THINGS

Seed Collecting



The different shapes, sizes and colours of seeds not only make collecting interesting, but can also be used to design an attractive display. Your collection may represent the seeds of your backyard or neighbourhood, a particular habitat such as a field, or special "travel" mechanisms such as "parachuters" or "hitch-hikers" (see pp. 2-3). The seeds can be displayed in a variety of ways: glue the seeds to a board; place them in cellophane packages attached to a board, or place them in clear "pill" bottles. Labels should be made for each specimen, detailing its identity and when and where it was found (habitat and geographic location). Judging from the physical characteristics of the seed, you might also indicate how it is dispersed.

A simple method of collecting seeds in a field is to let your feet do all of the work. Put a pair of old wool socks, or thermal socks turned inside out, over your shoes and walk through a field. A number of different seeds will be picked up by the hair or fuzz on your socks. At the end of your walk, take off the socks and use tweezers to pick off the seeds. Try to separate the seeds by size, shape or colour. How many different kinds did you get? What is the most common seed in your collection? What might this tell you about the vegetation in the field? Do you think you would pick up more or less seeds in a forest?; on a lawn?



In the Field

Look for these common field plants in the puzzle. Words may be written forwards, backwards, up, down or diagonally.

Queen Anne's lace
vetch
pigweed
teasel
milkweed
chicory
toadflax
daisy
mayweed
buttercup

burdock
thistle
viper's bugloss
mullein
St. John's wort
ragweed
goldenrod
aster
dock
bindweed
goat's-beard

D	E	E	W	K	L	I	M	L	F	J	T	R	E
O	O	S	P	D	C	Q	I	U	M	O	E	C	D
R	S	C	H	I	C	O	R	Y	L	N	A	S	E
N	D	T	K	L	M	T	D	B	R	L	S	K	E
E	A	R	J	P	E	A	P	R	S	D	E	P	W
D	T	V	A	O	U	T	Y	E	U	J	L	I	D
L	W	O	N	E	H	C	N	W	K	B	D	G	N
O	C	K	A	I	B	N	R	Y	E	E	R	W	I
G	H	D	S	D	A	S	S	E	E	E	G	E	B
A	R	T	T	N	F	I	T	W	T	Q	D	E	H
S	L	D	E	K	A	L	G	A	O	T	W	D	C
E	O	E	R	D	I	A	A	B	O	R	U	D	T
R	U	T	V	B	R	J	M	X	H	G	T	B	E
Q	S	S	O	L	G	U	B	S	R	E	P	I	V

PEREGRINE = "THE WANDERER"

What goes 300 km/hour at top speed and always causes a stir? The Peregrine Falcon - of course. On September 26, 1987 several hundred pairs of eyes scanned the skies at Point Pelee's tip in search of this rare speedster. Ten hours of diligent searching yielded a nice total of five Peregrine Falcons, a half dozen Merlins and a variety of other raptors for those who participated.

Park naturalist Don Wilkes and Tom Hince assisted visitors who wanted to glimpse the spectacular Peregrine, as part of the park's "Peregrine Festival." The Visitor Centre also had videos, theatre programs, demonstrations and special exhibits about Peregrine biology and reintroduction programs. Special "Peregrine" items including T-shirts, sweat shirts and an excellent poster of Peregrines were available (and still are) through the Friends of Point Pelee book store. The purpose of the festival was to promote public awareness of the Peregrine Falcon, an officially designated endangered species.

There was a special exhibit from the Michigan Department of Natural Resources which detailed the release program that started in Detroit this past summer. The program successfully tracked four birds into the wild and provided much valuable "p.r." for the species.

Park staff were very pleased with the response of visitors and the attendance of Peregrines at the event! Peregrines pass through Pelee in numbers from about September 20 until October 10 each year. On peak days as many as twenty individuals have been seen leaving the tip. Last year a grand total of eighty-eight birds were recorded moving south through Pelee! The Peregrines that pass through the Park originate from populations far to the north-west in the Canadian Arctic, where the species still breeds in numbers. The Peregrine disappeared as a breeder in eastern North America several decades ago due to high pesticide levels in prey it consumed. The reintroduction program's goal is to establish the species once again as a breeder in eastern North America.

The accompanying illustration is one artist's comment on the singular beauty of a Peregrine in the air. Manoeuvrability, streamlined shape and character make the Peregrine's presence a highlight of any day.

To all those who participated we thank you and look forward to seeing you at our next "Peregrine Festival." And remember - on your next natural history peregrination, to look out for this living bullet.

--Tom Hince



FALL OF THE LOON

EDITOR'S NOTE

The author is Provincial Coordinator of the Community Wildlife Involvement Program of the Ontario Ministry of Natural Resources.

A NATIONAL SYMBOL IS IN PERIL

BY MARK STABB

NINETY MILLION YEARS AGO LOON-like birds the size of humans fished prehistoric seas, while the formidable *Tyrannosaurus rex* stalked prey on the mainland. These giant predators eventually died out but the niche for a large fish-eating bird survived and was filled about 50 million years ago by ancestors of today's common loon.

Loons have survived the environmental changes of eons and are now North America's oldest living family of birds. Evolutionary history often determines where species rank on official bird lists, so loons have adorned the first pages of our field guides for decades. Now, our new dollar coin displays a common loon emblazoned on a golden lake.

But the loons are in peril, their populations suffering directly and indirectly from human activities. The call of the loon still rings across our northern lakes, reinforcing an image that all is well in the wilderness, but hiding an ongoing struggle with environmental deterioration. Individual loons can live for 30 years and occupy lakes every summer, while their means for long-term survival — their reproductive success — is on the decline.

Every spring, in April and May, loons return north from wintering areas around the Gulf of Mexico and off the east coast of the southern United States. With head and neck held low and feet pressed flat together behind the body, they fly like arrows to their targets: northern lakelands. Attaining speeds of up to 100 kilometres per hour, the loons easily fly from the eastern seaboard to Lake Ontario in a day, a distance of about 800 kilometres. They rest and feed on the lake overnight, in preparation for the last leg of their journey. The crack of dawn sees them flying again as they head to the lakes of the cottage country and the boreal forest beyond.

Why do loons leave civilized areas? The common loon once nested all along the shores of Lake Ontario and Lake Erie, while today the nearest nest is on Lake Scugog, some 60 kilometres north of Toronto.

Ross James, ornithological expert at the Royal Ontario Museum and adjunct

professor of forestry at U of T, speculates that loss of shoreline habitat and nest disturbance by dogs, cats and humans have rendered this area unsuitable for loons. "Loons are very wary birds, and are easily chased off their nests. Once off, they may not return for quite a while." This exposes the eggs to predators and unfavourable temperature extremes with the result that many are lost or do not hatch. Loons usually lay only one or two eggs at a time and do not always re-nest after egg loss, so the long-term effects of disturbance can be damaging.

New England loon populations have diminished so much in recent years that the common loon is a candidate for endangered species status in the U.S. and is listed as a rare or threatened bird in some regions. In New Hampshire "loon wardens" patrol some of the last breeding territories of loons in the state. These volunteers ward off the curious from active loon nests during the breeding season.

How is the loon population faring in Ontario? According to five years of data compiled for the Ontario Breeding Bird Atlas, the common loon is indeed still common and well distributed. However, throughout this range, loons are being affected by human activities in ways we cannot see. The first signs of trouble appeared in the U.S., but now the same trends are found in Ontario.

Between 1977 and 1979 the Ontario Ministry of Natural Resources surveyed 40 lakes in the Muskoka-Haliburton districts. It was found that the number of surviving young loons declined as human activity increased. Curious canoeists can scare incubating loons from nests. The wake of a motorboat can easily swamp a shoreline nest, damaging eggs in the process. Loons are clumsy at best on land (their name is probably derived from the Scandinavian "lom" for awkward), so they often nest just inches above the waterline. Loons also avoid nesting near cottages, so fewer find breeding space on the more developed lakes.

The report concluded, however, that loons could cope with recreational activity if it remained at a relatively low level. The

study documented an extreme case of a loon family which became accustomed to human presence and successfully raised two healthy young on a busy lake.

Interest in cottages and water-oriented recreation is increasing, so it is likely that the effects on loons will multiply in the future. All the while a more insidious threat lurks in the cold waters of northern lakes. Conservationists believe that acid rain contributed to the loss of loons from New England lakes, and there is growing evidence that it is having the same effect in other areas.

Members of the Long Point Bird Observatory, a non-profit research and conservation organization, had become concerned that recreational disturbance and acid rain were affecting Ontario loons. By 1980, they devised the Ontario Lakes Loon Survey (OLLS). Their project received the support of the Canadian Wildlife Service, the Ontario Ministry of Natural Resources, the North American Loon Fund, World Wildlife Fund (Canada), the Canadian Wildlife Federation and other groups.

Hundreds of volunteers were asked to provide information on loons and lakes in the Muskoka-Haliburton region to compare the breeding success of the loons to lake characteristics. Some OLLS volunteers reported that loon numbers had declined prior to the beginning of the survey and that the decline was more pronounced on lakes with increased lake-shore development.

The surveyed lakes were divided into acidic and non-acidic categories. OLLS staff found that loons had more trouble raising a family on the acidic water bodies. Of the lakes surveyed in 1982, for example, 77 of 138 in the non-acidic category harboured loons with chicks, while only 52 of 138 of the acidic lakes had healthy loon families. Similar figures were reported in 1983.

Robert Alvo, OLLS biologist for those years, conducted research for his master's degree from Trent University that supplemented the volunteer survey. In an intensive three-year study of 80 lakes in the Sudbury region, he confirmed that acidic lakes reduced loon productivity. His hundreds of hours of field observations may have disclosed the cause: "I can't prove it, but I think it is a shortage of food for the young loon chicks."

Loons appeared to lay and hatch the same number of eggs on all lakes, but newborn loons died or disappeared at a higher than normal rate on lakes that were acidic. Alvo observed that loons fed their young infrequently on a number of acidic lakes, probably due to reduced fish populations.

Determined to document this process, Alvo kept track of a loon family on a very acidic lake. In three years the loons were

able to hatch only one chick, and this one died after several weeks. The adult loons were never seen feeding fish to the chick, which requires this high-protein food during early stages of growth. The chick often fed alone on whirlygig beetles and other surface insects while the adults took turns flying off to other lakes, presumably in search of fish for their own nourishment. Although no part of the lake was beyond the reach of the deep-diving loons, they could not find enough fish to feed their offspring.

This is the hidden plight of loons on acid lakes. Adult loons may establish lake territories every summer, and give their familiar wilderness cry, while each year their chicks starve to death.

Still, OLLS observations from 1984 to 1986 suggest that loons were doing well where observations were being made. Unfortunately, we don't have much detail from the rest of the province. As Long Point Bird Observatory's David Hussell (an originator of OLLS) puts it: "The loons may be suffering in some areas but not in others. The important thing is that we have identified some potential problems that need to be investigated further."

Limnologists have discovered that acid rain affects more than the web of feeding relationships in lakes. Acidic run-off can break the chemical bonds between metals and soils in watersheds, and increased lake acidity releases metals from lake bottoms. Aluminum and mercury are two such metals that can be particularly toxic to fish. The fish populations dwindle, or they transfer their dose of metals to fish-eating predators. Either way, the loons lose out.

"We've already documented the movement of metals from the terrestrial environment, to the benthic (lake bottom) organisms, and eventually to fish," reports Harold Harvey, professor of zoology at U of T. His research, funded through the innovative Wildlife Toxicology Fund (a co-operative effort of government, industry and conservation interests), is tracing the movements of toxic pollutants through the food chain.

"We now know how high the concentrations of heavy metals are in fish that birds like the loon are eating. What we don't know is whether loons have the brains to leave acidified lakes where the fishing is lousy." He has seen loons hunting on lakes that he knows for a fact are fishless.

Trappers are assisting the next stage of Professor Harvey's studies. Graduate student Leah Bendell-Young is examining the carcasses of fish-eating predators such as mink, weasel and otter to determine how toxic metals in the ecosystem become stored in animal tissues.

When concentrations of metals reach high levels in both lakes and loons the results can be tragic. In the mid-1970s the Canadian Wildlife Service hired biologist Jack Barr to study loon population dynamics along the English-Wabigoon River system in north-western Ontario, a waterway infamous for its mercury contamination. Barr reported that 70 kilometres downstream from the point source of the mercury (a Dryden pulp mill), loons were barely able to survive, if at all, and 160 kilometres downstream loon productivity was unnaturally low. Only one pair of nesting loons was found on a large contaminated lake that normally would support more than 20 families. Loons that still managed to lay eggs often abandoned their nests for no

ONE PAIR OF NESTING LOONS WAS FOUND ON A LARGE LAKE THAT ONCE SUPPORTED MORE THAN 20 FAMILIES

apparent reason, a symptom of mercury poisoning.

The problems went beyond mercury contamination. Pollutants from the pulp mill and high turbidity caused by changing water levels reduced visibility in the lakes. Loons could see fewer fish, so fewer decided to establish breeding territories. Damming caused the waters to rise and fall dramatically. Many nests with eggs were completely flooded. The hundreds and perhaps thousands of dams built through loon country lead one to think that this problem is not confined to the English-Wabigoon system.

Jack Barr's detailed report conveys the struggle of a species, and an entire wildlife community, to survive ecosystem-level disruptions caused by humans.

People are rallying round the loon and other wildlife species affected by pollution and human disturbance. The North American Loon Fund is raising money specifically for loon conservation projects. Private citizens involved in volunteer lake surveys are providing artificial islands for loons on lakes in Ontario and New England where nesting habitat has been lost.

The Wildlife Toxicology Fund is forging new links between government, industry and conservation groups in aid of applied ecological research. Initial funding was provided by the federal government for administration by the World Wildlife Fund (Canada) which found a wide variety of corporate and government sponsors to support the program. The toxicology fund program also means action:

research must address current problems and lead to direct conservation benefits.

This year the Canadian Wildlife Service injected new life (and money) into the Long Point Bird Observatory and the volunteer lake survey to follow more closely the status of the common loon in Ontario. Jane McCracken, OLLS project biologist, is pushing to expand the program and happily reports that about 500 lakes were under observation this summer.

"We'd like to get as many people involved as possible," she says. "If a large number of people report with useful information, the CWS may make the loon survey a permanent biomonitoring project." By monitoring the loons we are monitoring the health of Ontario lakes.

I was Robert Alvo's research assistant in 1983. On a typical summer afternoon we nosed our canoe into "Lake No. 57" for one of many shoreline searches for loon nests on acidified lakes. Almost immediately a loon at mid-lake gave a tremolo distress call. We were glad to hear it: a disturbed loon boded well for a successful nest search.

We paddled around the debris of the shoreline for more than an hour, with the loon following our progress at a distance. At length we reached the inlet to a particularly marshy bay. The loon had remained silent for much of this time but now again began to call. "Must be getting close," we thought. Loons will nest in secluded marsh areas when the preferred island nest sites are not available.

We soon found the old nest amidst the reeds and sphagnum moss islets of the bay — a dense mud-packed mass of vegetation at the waterline. No egg.

We also found what was probably the mate — decaying at the bottom of the marsh. We could see the body, wings splayed across the mud, a metre below the canoe. At that moment from the lake proper came a long low wail. It was the mournful call film-makers reserve for lonely, isolated wilderness scenes.

How had the loon died? Was it shot from the shore while feeding? Although officially protected from hunting, poachers still occasionally shoot at loons. Did it die from old age or succumb to sickness after a long migratory journey? And the watching loon — was the dead bird its mate of a decade or more? Like Canada geese, loons are monogamous until separated by death.

No loon chicks would be raised on that lake that summer. Part of a generation would be lost. We didn't express it at the time, but Rob and I both felt a strong sense of sadness for the solitary loon. I will never forget that eerie call. What did it mean? Leave me alone? Get out of my lake? I chose to interpret it my own way. I took it to be a call for help.

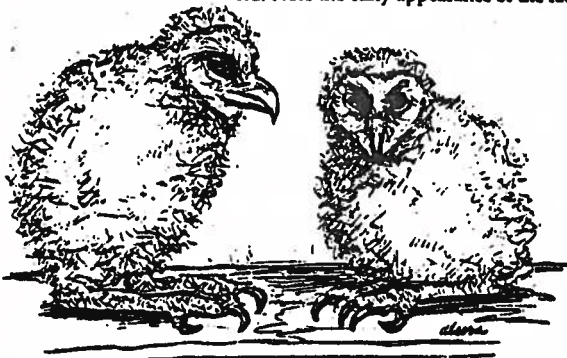
CUBA - 1988

In March of 1987 a number of E.C.F.N.C. members had the pleasure of discovering the birds and natural history of Cuba. The one week trip centred around Playa Larga, a beautiful cottage style resort on the infamous "Bay of Pigs." From this base we explored a variety of habitat in a very rural and friendly countryside setting.

The birding was quite simply - superb. Over one hundred and fifty species were observed, which included fifty new species for myself. My favorite was the Cuban Tody (endemic to Cuba) a delightful tiny bird whose metallic green coloration and humorous feeding actions seemed too good to be true. Others were drawn by the intrigue of the world's smallest bird, the Bee Hummingbird. Yet who would argue with point blank views of Bare-legged Owl, Stygian Owl, Cuban Pygmy-Owl and Barn Owl! The tour recorded twenty-one species that are found nowhere else in the world (= endemic) except Cuba!

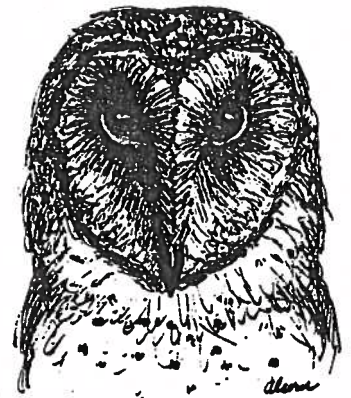
If all this is making you curious, Cuba is accessible in 1988 through "Great Auk", a Toronto based tour group run by author Graeme Gibson. I will be organizing one of "Great Auk's" Cuba trips for the week Feb. 7 - 14, 1988 for those who would like to enjoy a week of fine birding, scenery, and companionship. At the time of writing I have only one space left (14 spots are taken) but there are other dates available, namely January 2, 16 and 30 and March 5 and 27th (week following each date). You won't be sorry if you go - only if you don't. Graeme can be contacted at 105 Admiral Rd., Toronto, Ontario M5R 2L7 - Telephone: (416) 960-8383.

.. Downy young of Barn Owl, about two weeks old. Note the early appearance of the face mask.



COMMON BARN OWL
Tyto alba (Scopoli)

--Tom Hince



Face mask of Barn Owl.

MONARCHS - THE 1987 FALL MIGRATION

Fall and Point Pelee are synonymous with the gathering of Monarch butterflies. For those who are lucky enough to catch concentrations of Monarchs they may at times number in the thousands along the Park's Tip Trail. The primary month for migration is September, though sizeable concentrations occur from late August until mid-October.

Predicting when the Monarchs will occur is difficult to say the least. It is far commoner to see few Monarchs rather than concentrations. The reason is simple. Monarchs concentrate along many of the peninsulas and habitat islands on the Great Lakes that offer a shorter route across the water or perhaps shelter. Water is a significant barrier to the butterflies' migration because once over it, they become susceptible to weather and other migratory risks. As a result they make their journey shorter by following the Pelee peninsula as far south as possible - to prolong being over land. The point's natural funnel shape further concentrates the butterflies to one small area. Monarch concentrations usually are linked with cool nights, cold fronts and/or northerly winds. When the numbers of butterflies arrive they may depart very soon, albeit right away, if favourable conditions for crossing the lake are present!

In 1986 there were two nice concentrations of Monarchs with the largest of 4400 on October 8th. In 1987 by contrast only one smaller concentration of 2700 butterflies occurred on September 21, and 22. If you are a frustrated Monarch watcher you can see why the best day is hard to predict.

The difficulty in catching these colorful migrants makes the reward even more special.

Park staff would be interested to hear if anyone noted Monarch caterpillars that had been parasitized or "turned to soup" by an infection. In mid-summer Monarch populations seemed quite high and the comparatively poor migration was surprising. Perhaps a bacterial or viral disease affected the late summer brood. Let Don Wilkes (322-2365) know any of your thoughts or observations.

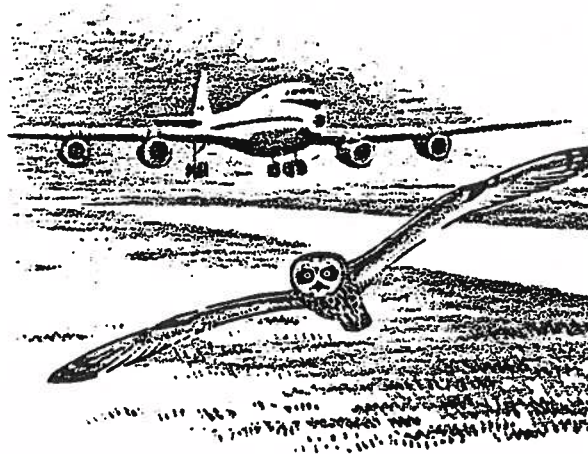
For those who are interested in reading an excellent detailed monograph on the Monarch Butterfly. I would suggest "The Monarch Butterfly : "International Traveler" by Fred Urquhart (available by special order through the Friends of Point Pelee). Though expensive, (\$59.95) it is an excellent addition to anyone's library and good value.

--Tom Hince

ACTIVITIES CALENDAR

Hotline	252-BIRD
E.R.C.A.	776-5209
Ojibway	966-5852
Point Pelee	322-2365

- Dec. 9 - E.C.F.N.C. Monthly Meeting
Members' Night
- 12, 13 - Christmas in the Country
John R. Park Homestead
12:00 - 4:00 p.m.
- 19 - Cedar Creek Christmas Bird Count
Contact : Paul Pratt
- 20 - Rondeau Christmas Bird Count
Contact : Keith Burke (676-2570)
- 21 - Point Pelee Christmas Bird Count
Contact : Don Wilkes
- Jan. 7 - Winter Birding Course
Ojibway Nature Centre
7:30 p.m.
- 9 - Winter Birding Field Trip
- 9, 16 - Cross Country Ski Course
23, 30 Times : 10:00 - 1:00 p.m.
Location : Ojibway Nature Centre
- 13 - E.C.F.N.C. Monthly Meeting
Marlborough C.C. - 4:30 p.m.
Speaker : Nancy Phillips
Topic : Erie Wildlife Rescue
- 17 - Winter Festival
Ojibway Nature Centre
1:00 - 5:00 p.m.
Build a bird feeder or Bluebird nesting box, watch a film, come out for a hike. A special children's programme will be offered.



- Jan. 23 - Winter Birding Field Trip
- 24 - E.C.F.N.C. Field Trip to Erie Wildlife Rescue
Meet at Fox Glen Golf Club on Howard Ave at 1:30 p.m.
Leader : Nancy Phillips
- 27 - E.C.F.N.C. Board Meeting
- Feb. 6 - Winter Birding Field Trip
- 10 - E.C.F.N.C. Monthly Meeting
Marlborough C.C. - 7:30 p.m.
Speaker : Charles Wilson
Topic : National Parks of Canada
- 14 - E.C.F.N.C. Field Trip
"Branch out and learn your winter trees"
Meet at 1:30 p.m. at the Civic Centre,
360 Fairview Ave., Essex, for an inside
workshop followed by a visit to Maidstone C.A.
Leader : Shannon Managhan
- 20 - Winter Birding Field Trip
- 24 - E.C.F.N.C. Board Meeting
- 28 - E.C.F.N.C. Field Trip
A visit to a woodlot in Gosfield S. Township
Meet at the Arner Town Line and Highway 18 at 1:30 p.m.
Leader : Bill Balkwill
- Mar. 9 - E.C.F.N.C. Monthly Meeting
Marlborough C.C. - 7:30 p.m.
Speaker : Shannon Managhan
Topic : to be announced
- 30 - E.C.F.N.C. Board Meeting



Great horned owl

* MONTHLY RAFFLE *
* *
* Donations to our monthly raffle table would be appreciated. *
* Home preserves, dried floral arrangements, baked goods, note *
* paper etc., would all be appreciated. *
* *

MEMBERSHIP RENEWALS 1988

E.C.F.N.C. Memberships are for the calendar year, January to December.
Please renew your memberships now, using the handy form in this issue of the
Egret, and ensure that you will receive the March 1988 issue.

Our membership chairperson is Dick Taylor.

NATURAL HISTORY NOTEBOOK

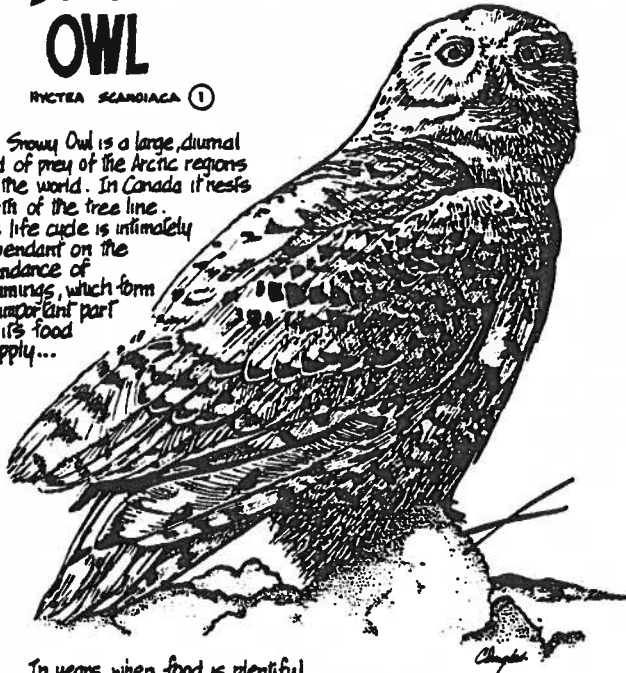
PRESENTED BY: THE NATIONAL MUSEUM OF NATURAL SCIENCES, OTTAWA



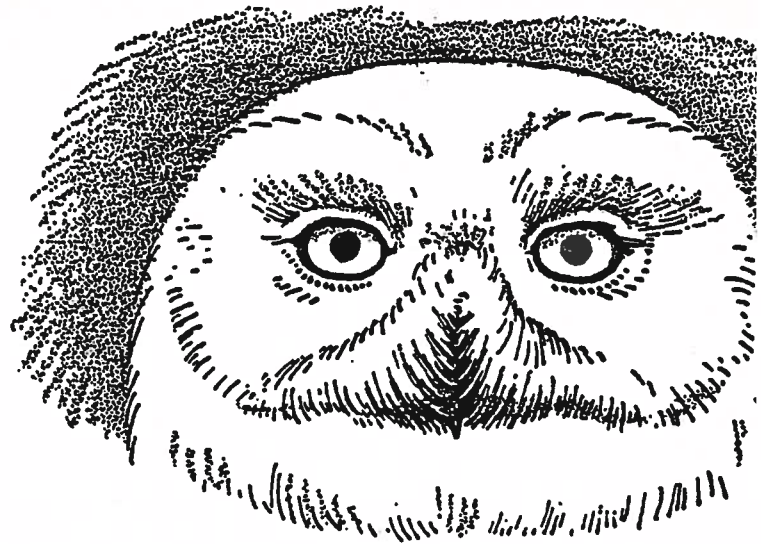
SNOWY OWL

NYCTEA SCANDIACA ①

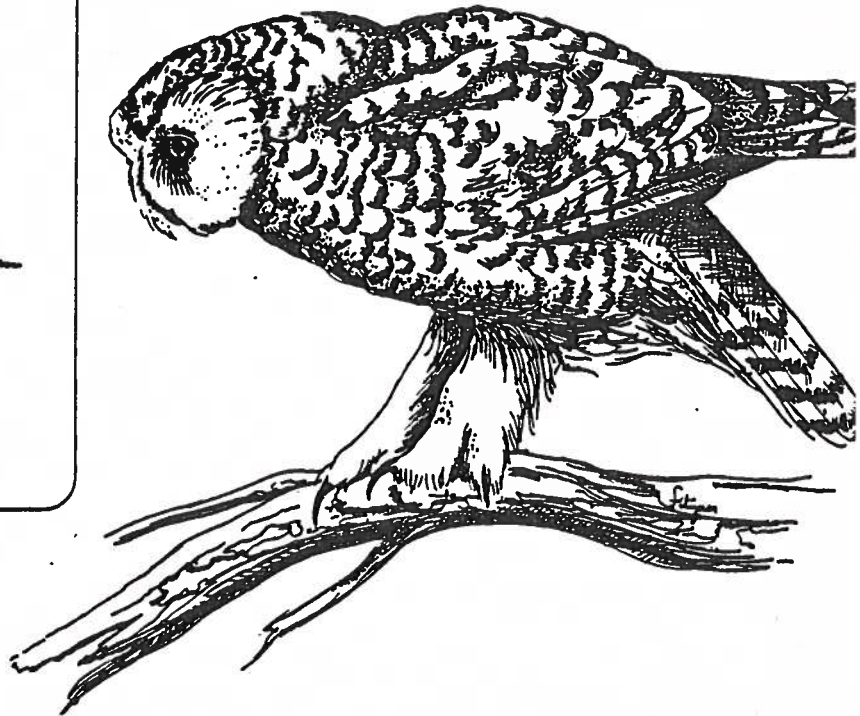
The Snowy Owl is a large, diurnal bird of prey of the Arctic regions of the world. In Canada it nests north of the tree line. Its life cycle is intimately dependant on the abundance of lemmings, which form an important part of its food supply...



In years when food is plentiful the Snowy Owl reproduces... in years of scarcity nesting does not take place and the birds wander off to the south. These cycles occur every 4 or 5 years.



Snowy owl



TUNDRA



THE EGRET, Volume 4, Number 4, December 1987; newsletter of the Essex County
Field Naturalists' Club, P.O. Box 3421, Tecumseh, Ontario. N8N 3C4.

Address correction requested.

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NOR 1B0