



TRAIL & Landscape

A PUBLICATION CONCERNED WITH
NATURAL HISTORY AND CONSERVATION



TRAIL & LANDSCAPE

Editorial Committee:
Barbara Coleman
Ted Mosquin
Sheila Thomson

Production Staff:
Leone Brown
Henk Sweers
Harry Thomson

THE OTTAWA FIELD-NATURALISTS' CLUB

- Founded 1879 -

President: Mr. Hue MacKenzie, 228 Royal Ave., Ottawa
Secretary: Mr. A. W. Rathwell, Can. Wildlife Service

Objectives of the Club: To promote the appreciation, preservation and conservation of Canada's natural heritage; to encourage investigation and publish the results of research in all fields of natural history and to diffuse information on these fields as widely as possible; to support and co-operate with organizations engaged in preserving, maintaining or restoring quality environments for living things.

Club Publications: THE CANADIAN FIELD-NATURALIST, official journal of the Club, devoted to the publishing of research in natural history.
TRAIL & LANDSCAPE, a non-technical publication of general interest to local naturalists.

Field Trips, Lectures and other natural history activities are arranged for local members.
See page 98.

Application for Membership should be addressed to:
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Box 3264 Postal Station C, Ottawa 3.

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TRAIL & *Landscape*

Vol 3 No 3

Published by

THE OTTAWA FIELD-NATURALISTS' CLUB

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18 Briarcliffe Drive
Ottawa 9, Canada

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MOVING IN NEW DIRECTIONS

Over the years, the OFNC has been active in two major spheres: publication of the results of research in natural history, through the pages of *The Canadian Field-Naturalist*, and a program to interest and instruct local members in natural history through lectures, workshops and field trips. These two areas of activity continue to be the club's principal functions, and have satisfied members until quite recently, when it became obvious that there is need for involvement in matters of conservation as well. There is much urgency now to preserve areas of land for the protection of natural beauty and wildlife habitat, particularly close to metropolitan centres. Here, land is rapidly being transformed into living space for an increasing human population, and the demand is growing for land to be used for recreation - including many activities which detract from an area's natural beauty and destroy its value as wildlife habitat.

At the 1966 Annual Meeting of the general membership, discussions took place which indicated that quite a number of persons would like to see our club enter into a more active program in the area of nature preservation. Early in 1967, two proposals were made to the Council of the club to initiate such a program. In a letter to members of the Council, Ted Mosquin outlined these projects, to be considered at their first meeting of that year: (1) purchase of a suitable property as a wildlife refuge or natural area somewhere near Ottawa, and (2) the publication of an attractive periodical designed for amateur naturalists and written mainly by our local members. Dr. Mosquin saw these two projects as intimately related. A locally-oriented, popular magazine would appeal to many people who were not yet acquainted with our club; it would increase local membership, and might help to bring in public support for the larger project -- the proposed wildlife refuge.

Both projects were approved at the Council meeting in January 1967. Work began on the day following the decision to go ahead with the publication, and the first issue of TRAIL & LANDSCAPE was in the hands of members before March. Material results of project number one could not be expected quickly, but a first step was appointment of a Natural Areas Committee to examine in detail all aspects of the acquisition and preservation of a natural area near Ottawa. Under the chairmanship of Ted Mosquin, this committee also was to locate and examine areas which might be suitable for acquisition. The assistance of club members was sought in exploring the region with this in mind. A request for information, containing an outline of the requirements of a suitable tract, was circulated to T & L readers. For those who tuned in late: "the region to be explored is eastern Ontario from Mattawa to Hawkesbury, and north of a line between Gananoque and Barry's Bay, Renfrew County". The area sought "should have a richness and diversity of wildlife and the landscape itself should be interesting. It should preferably contain...strong natural features such as a canyon, hills, and perhaps a river or stream. A large marsh would be an important asset. Parts of the area should have good potential for development of walking trails to be used by members of the club and by the public." The search is still on -- any reader who knows of an area which might be suitable, or who discovers such on travels through the region this summer, is urged to pass on the information to a member of the Natural Areas Committee (directly or through the Editor at 749-2400 if preferred). In a later issue, we will give a summary of the work of the Natural Areas Committee to date.

Within the Council it was felt that before land acquisition could be undertaken, changes would be required in the club's constitution, not substantially altered since 1949. There were other matters needing constitutional change, such as bringing the membership structure up to date, and so a complete revision of the constitution was undertaken. This occupied members of the Council throughout a large part of 1967 and 1968. Approval of the final draft was given by the general membership at the latest Annual Meeting.

While work toward the creation of a nature reserve has been slow in the past year, the Council has taken steps to assure protection of natural features in other areas. When it was discovered that a new public campsite would engulf the most spectacular colony of pink ladyslippers close to Ottawa, negotiations between club members and NCC and City of Ottawa officials resulted in agreement on a plan for the layout of roads and parking lots which will minimize damage to these beautiful orchids. Again, notified by the OFNC of rare orchids growing on parkland near the Ottawa River, the NCC has taken steps to preserve them from "tidying-up". Many club members are anxious that Gatineau Park should remain largely in a natural and undeveloped state, and that particular areas of outstanding beauty and natural history interest should be protected from destruction in plans for the future of the Park. In a brief prepared by the Natural Areas Committee, the views of the OFNC concerning Gatineau Park were submitted to the NCC and were well received.

We hope these notes have given club members, particularly our many new ones, some idea of how their Council has been occupied recently. The Council is elected by the general membership to undertake action on behalf of the whole club, and to represent members' views in communications with other groups. It is very important that members at large should keep the Council informed of their opinions. The general meeting in September should provide an excellent opportunity for discussions; and letters to the President, to the Council, or to the Editor, T & L, will suggest future directions for the OFNC. Let us know what you are thinking.

A REMINDER

This is the SUMMER ISSUE of T & L. Your Editorial Committee and Production staff, being naturalists too, find it hard to buckle down and produce an issue in June, when Nature pulls us outdoors with strong lures. We'll be back in September - refreshed and re-inspired no doubt. Meanwhile, we hope this Summer Issue will add to your enjoyment outdoors in the Ottawa area.

AN ACCOUNT OF THE NESTING OF
A COMMON SNAPPING TURTLE

Kathleen Jones

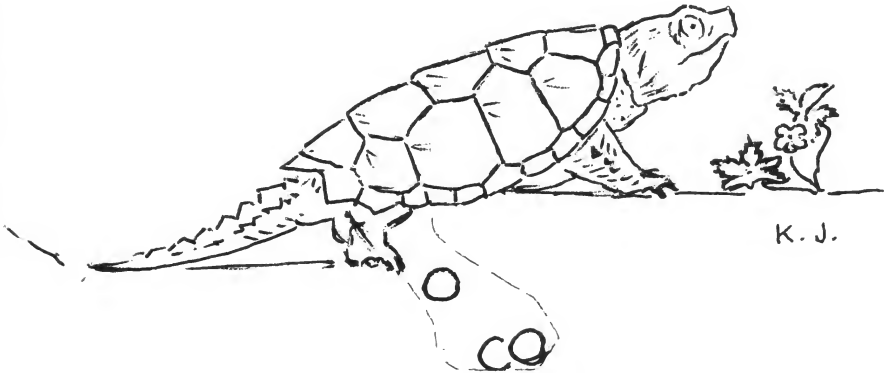
While walking along the southeast side of Rideau Creek on June the 9th, 1968, we saw a snapping turtle (Chelydra serpentina) standing on her nest. We were about 7 miles from Merrickville, Ontario, a half mile from the road which runs from the Smiths Falls Highway to Merrickville. The afternoon was cloudy and the temperature was 70° F. The turtle's nest was in sandy gravel with a little humus and earth, situated on high ground about 150 feet away from the creek, and fully exposed to the elements.

We watched this turtle for some time, during which she did not move. Returning after a ten-minute walk we found that she had moved about a foot and a half further away, and had started shoving in to the earth with her snout, pushing soil and sparse grass, lichen and weeds to either side with her forelegs. With about a quarter of her shell covered with earth, she sat and peered about, now and again stretching her wrinkled neck.

Her high carapace was about a foot long, flat and almost smooth on top where the scutes were largest, and having smooth edges except for the notched rear portion. It was still damp; a very thin layer of mud obscured possible colours other than the dark shade of the shell. The much-wrinkled neck extended to six inches from snout to shell. The tail, about four inches in length, appeared saw-toothed along the top. Algae adhered to the tail and the sides of the carapace. The legs were not round in section, but had skin frills along the sides from body to clawed foot. Black leeches clung to the hind legs. The head was smooth on top and tapered to a somewhat pointed snout with clearly defined nostrils. The turtle's skin was not scaly, but rather somewhat pimply in appearance, and almost black with no markings visible.

It was about 3:45 p.m. when we discovered the first turtle; a half hour later my husband spotted another turtle digging her nest on the northwest side of Rideau Creek. This turtle appeared to be about the same size as the first, and the above description would fit the second turtle also. She was about 75 feet distant from the creek, on ground a few feet above creek level, which here was sandy gravel with some earth, sparse grass, strawberry plants, weeds and lichen. Cedars grew near the nest site and shaded it part of the day. The turtle was in shade when she was laying.

Snapping turtles first bulldoze the earth with their snouts and push loosened soil to both sides with their forelegs. Climbing part way out of the lower level thus formed, the turtle's body slants upward at about forty degrees, the fore part resting on the undisturbed earth. They then begin digging with their hind legs into the bank beneath the body, stretching down into the earth to form a hole for the eggs.



I examined two freshly disturbed areas nearer the creek, which I strongly suspect this second turtle had scraped, but found no eggs. She had just about finished her digging when she was spotted, and I cannot say whether any eggs had been laid before observation began. The hole was as deep as the reach of her hind leg -- about five inches in depth and four inches wide. It had been dug into the earth beneath the fore part of the body, leaving two or three inches of undisturbed earth for the roof of the nest.

She laid her perfectly round, glistening white eggs easily. They looked as though they were oiled, and they clinked against each other as she gently pushed each one into place using the upper part of her hind leg, while the claws were folded in toward the sole of the foot. When satisfied that the latest egg laid was in position, she promptly laid another; altogether we counted 48 eggs. She pushed the eggs away to make room for the next to be laid, and if she appeared to have some trouble moving an egg with the right hind leg, she used her left one. I was able to push eggs into vacant spots without disturbing her in any way. It might have taken 15 to 20 minutes to lay the 48 eggs -- I was so fascinated that I never thought to time the proceedings. It is quite likely the eggs were dropped at intervals of 20 seconds, give or take a few. When the right leg rested briefly there appeared a swelling in the fleshy folds where it joined the body. At the time I wondered if the egg passed there on its way to the "exit", but then I thought it was probably a contracting muscle. When ready to lay an egg, the turtle crouched with her hind legs and pushed the back part of the body toward the hole so that the egg would almost roll into it. The first ones did, but she gently placed them in the position she wished them to have.

After the turtle finished laying, she rested for a few seconds, then began filling in the hole. Her hind parts called to mind a miniature elephant dancing a ballet, and she fairly packed the earth back. Then she moved forward, raised herself with legs fully extended, her plastron three or four inches off the ground, and walked unhurriedly back to the creek. She then swam, fully submerged, to a spot almost directly across the creek, where cedar boughs and roots overhang the water.

Editor's note Observations such as these on the behaviour of a local reptile could be made by any alert naturalist. We remind you that notes on such observations could be of interest to a professional biologist, as outlined by Francis Cook in "What Should an Ottawa Field-Naturalist Observe?", T&L, March 1969.

BEAUTY AND THE BEAVER

Harry Brown

Today all of us who love nature are concerned with the effect of man's efforts on the face of the earth. Swamps are drained, forests are razed, and in their place springs up a jungle of new houses.

In our grandfathers' day this change in the environment was slow; today with bulldozers, power shovels and dynamite we can change the landscape drastically in a single summer. Much as we regret the changes that are taking place in the Ottawa region, reason tells us that an increasing population puts increasing pressure on all natural resources.

This problem is not entirely confined to the human species. In the last ten years, for several reasons, the population of beaver in the Ottawa area has been increasing at an unprecedented rate and their efforts can also create major changes in the landscape in a short time.

Some people may think of a beaver pond as a pleasant pool surrounded by evergreens and with only an occasional ripple to break its mirror-like surface. In an area that beaver have occupied for many years, perhaps centuries, such ponds may exist. However, a new beaver pond is difficult to consider beautiful, and for many years its appearance does not improve.

These photographs were taken last November in an area of one square mile about forty miles from Ottawa. There must be over one hundred beaver dams in this small region but views were selected to show beaver ponds at various stages in their development.

The first shows an area where beaver have been at work for a few months. The water depth is only a few feet and there are many signs that the animals are transporting their food to another pond. The standing trees have not yet been killed by the flooding but the trees that have been cut down are in, or near, the water. A person can travel over many parts of the pond by walking on logs.



In the second scene the water is deep and covers many acres. Most of the trees in the flooded area are dead, with many limbs broken off. In the background there is a grove of dead spruce. When these trees are first flooded the needles turn a reddish brown and remain on the branches for some time. Thus the dam is probably three or four years old.



In the third beaver pond the trees have rotted and fallen, leaving only snags showing above the water. Under the surface, however, there are many pieces of rotten logs. This pond might be seven or eight years old since it did not appear on aerial photographs taken ten years ago.

In the next photograph the dam is clearly visible although it is not a big one. The water behind the dam is fairly clear, at least on the surface, and beaver have used this pond for at least ten years.

In the last pond there is nothing showing except reeds and marsh grass. There is still an occupied lodge off to the right of the picture. The age of this pond is difficult to determine because it is marshy and in all probability there were never any large trees growing in the flooded area. However, the beaver are cutting poplar trees over one hundred yards from the water, and are dragging them down a number of trails. People who visited this area nearly thirty years ago have told me that this beaver pond was not much different in appearance then.

The resurgence of beaver in an area does make the landscape look untidy but it is a more natural untidiness than that produced by the work of man. It can both help and harm the existence of other wildlife. Obviously the mosquito population of the area can increase tremendously! Then the various kinds of frogs find a bonanza and go forth and multiply. Small birds find life easier because of the proliferation of insect life, but suffer from the natural increase in the number of predators. Large birds have more difficulties. The most prevalent large bird in the area is the Black Duck, and he is feeding in the ponds as soon as the water is a foot deep. Nesting, however, is a more formidable problem. As long as a beaver pond has many logs on its surface it is easy for mink, raccoon or other predators to investigate every possible nesting site. It is only in the last two stages of the development of the beaver pond that a duck can build a nest on an island with some sense of security.

If the present low price of fur, relative to wages, continues, many of these ponds will eventually acquire a mature form and be a haven for ducks and other water birds.

BIRDING is undoubtedly the most popular activity of OFNC members, yet T & L has published little about this subject so far. The Editor was pleased therefore when the Bird Census Committee offered to do a series of reports on how birding went in the season just past. The newspaper columns provide rapid reports on exciting finds, which are then forgotten when a new season rolls around. The attempt here is to summarize highlights of a longer period, and provide a reference for comparison with birders' experiences in other years. We think the compiler has made a good start on a difficult task; if this first report is not the ideal format, we welcome suggestions on the best way to present such information in future issues. Ed.

WINTER BIRDING 1968-69

D. F. Brunton

CHRISTMAS BIRD CENSUS: Ottawa's 50th annual census was golden in more than name only. By the end of the day (Dec. 22) 24 records had fallen or were tied. Much of the credit remains with the birders and is not due to any great increase in our bird population. However, Evening Grosbeaks (705), Pine Grosbeaks (345), Bohemian Waxwings (204) and Gray Partridge (498) were present in unusually good numbers. In a record total of 61 species, the standout was, far and away, the Rose-breasted Grosbeak. This species is rare even in the southern United States at that time of year, and it is only the second Ontario winter record. Pied-billed Grebe (1), Canvasback (1), the Rose-breasted Grosbeak, Brown Thrasher (2) and Swamp Sparrow (1) were all new for the Census.

WINTER SEASON: Deep snow throughout the winter period hindered movement for birders, and added stress to winter resident birds by covering food supplies. Though temperatures were not unusually severe, a sleet storm in January was disastrous for many birds. In all, 78 species were seen in the period December to February. How this compares to experiences of past years is not known. A summary, compiled mainly from newspaper reports, is given below. XC = Christmas Census.

Waterfowl Though not an exceptional winter for them, several good finds were had: 2 late Red-necked Grebes (Dec. 21), a teal sp. (Dec. 1), several Bufflehead (Dec. 7). Although 11 Red-breasted Mergansers were seen on the XC, none were seen again until Feb. 22 (1).

Hawks Goshawks were in relatively good numbers throughout, and a record 7 were seen on the XC. A Cooper's Hawk (Feb. 15) at Manotick was probably wintering. The Marsh Hawk on Pine Road (Feb. 24) was very early. The best hawk find of the winter period was undoubtedly the Peregrine Falcon seen Dec. 7 on Fallowfield Road.

Gallinaceous birds This promised to be a tremendous year for Gray Partridge as almost 500 could be found in December. However, the January sleet storm changed all that. Birds were caught below the icy surface and the destruction and/or covering of available food certainly took many. Up to 80% of the population may have been killed off. Ring-necked Pheasants also seem to have had a hard time of it - the Arboretum group is down to a handful.

Coot Dec. 6 was a late date for Coot (Billing's Bridge).

Gulls It was a poor season for these birds. Few white-winged gulls were to be found this fall. The first Glaucous Gull was observed at the Champlain Bridge on Dec. 8. Many Herring Gulls stayed very late this past fall, with up to 50 seen as late as Dec. 6.

Owls To the Chinese, this is the year of the Cock. To Ottawa birders, it was certainly the winter of the Owl! Six species of owls were seen, highlighted by the occurrence of 4 Great Gray Owls in Aylmer (see p. 94). The most reliable of the several Hawk Owls that were reported was one individual at Manotick (Jan. 11). It stayed right into March. We also experienced a wonderful winter for Barred Owls - over 15 were reported to the papers and 6 were seen in 2 days in the Maniwaki area (Dec. 27-28). Up to 4 Snowys could be seen in a day (Feb. 8), and the record for Great Horned Owls on the XC was shattered (15), mostly through the efforts of the Aylmer crew.

Woodpeckers Pileated Woodpeckers were rare this winter. Only two were seen on the XC and only very occasionally after that. Three-toed Woodpeckers were far less common

than in former years, although both species could be seen in a small woods in Aylmer (Feb. 24-25).

Jays, gleaners Canada (Gray) Jays were seen in good numbers this season; 5 were at a feeder north of Aylmer (Feb. 15). There were very few reports of Brown Creepers, although Red-breasted Nuthatches were in fairly good numbers throughout.

Waxwings, Shrike Bohemian Waxwings were quite common this winter; numerous flocks were being seen constantly, and in groups up to 200. Northern Shrikes were observed in record numbers on the XC (13).

Warblers A Myrtle Warbler in Lucerne on the XC was our third such record.

Blackbirds These birds were found in small numbers throughout the winter. Six Grackles wintered at a feeder in Lucerne. A group of 10 blackbirds was seen going to roost under the Champlain Bridge on Feb. 12. Two Cowbirds were seen on the XC, and a further, wintering individual was spotted in Britannia on Feb. 25.

Finches We experienced a truly great winter for Cardinals. A record of 5 was seen on the XC and at least 8 birds were noted at various feeders during the period. The high population of Evening Grosbeaks was maintained through the season, but the Pine Grosbeaks became fewer in number after December. Common Redpolls were in good numbers (though by no means record numbers), but they too were reduced in January. The Hoary Redpoll, however, was in amazing numbers; in any flock of more than 50 redpolls, at least one Hoary was almost a certainty. Up to 10 could be seen (exceptionally) in large flocks. Only very few reports of Common Goldfinches were evident (e.g. 12, Jan. 24). There were a mere 2 records of Pine Siskin all winter - the latest Feb. 14 at the Arboretum. There were no Crossbills seen whatsoever!

Sparrows After December, Tree Sparrows were very difficult to come by, although a healthy total of 91 was recorded on the XC. White-throated and White-crowned Sparrows were both seen into January at various feeders. Two White-throats (Canada birds) were recorded on the XC, and a White-crowned Sparrow was observable until Jan. 16 in Manotick. The Swamp Sparrow seen on the XC in Britannia was kept company by 5 Song Sparrows, all of which had left before Jan. 2.

Any BOOKS for us?

The Macoun Field Club, the OFNC's "junior" branch co-sponsored by the National Museum, has a natural history library which is its pride and joy. In its breadth of coverage, we try to reflect the breadth of interests of the young club members, and this is considerable. We have over 500 volumes and add to the collection steadily. The library is consulted constantly by the members, and many of the books become worn through use.

Despite our already rich collection, we are always interested in receiving new books, that is to say, books new to us. If any members of the OFNC would like to contribute books to the Macoun Club Natural History Library, we would be most grateful.

The subjects covered are: botany, astronomy, archaeology, geology, birds, mammals, fishes, reptiles, insects, invertebrates, general natural history, stories with natural history themes, even books of poetry about nature. We also have a few encyclopedias and some books on the physical sciences (although we really do not deal with chemistry or physics in the club program).

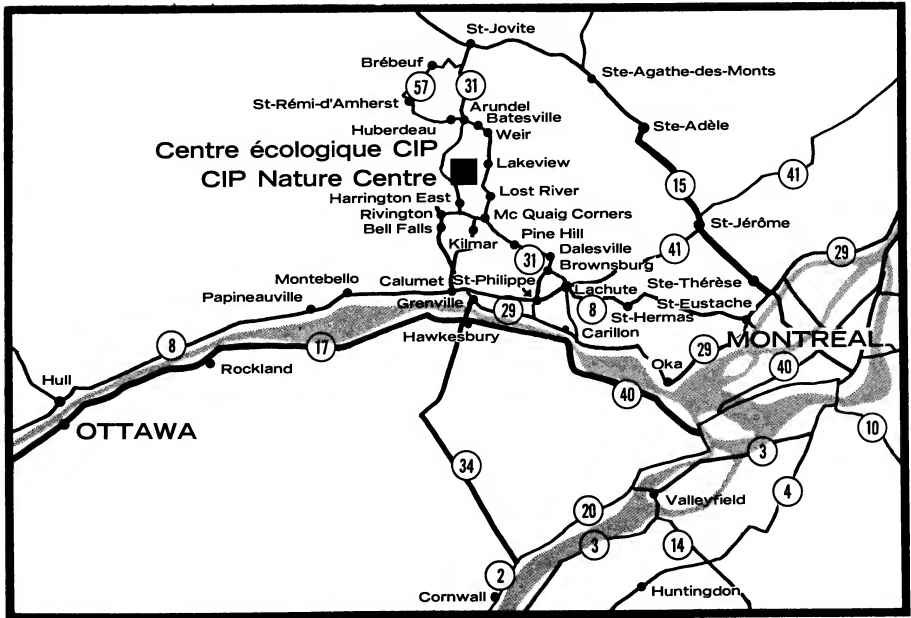
The books donated can be any age, as long as the information covered is not badly out-of-date. They should preferably be hard-covered (unless they are pamphlets) because of the hard wear they get.

We most badly need books on paleontology and astronomy. Books with stories or narration are always popular (like Durrell's tales and observations).

Anyone with a book donation can contact me at 995-6038, or simply drop the books off at the National Museum of Natural Sciences (Metcalfe and McLeod) with Mrs. C. Dutremble or Mr. Pat Wohler in the Information and Education Division on the 3rd Floor.

Irwin M. Brodo,
Chairman,
Macoun Field Club Committee

A Visit to the CIP Nature Centre



In the first T & L we mentioned the centennial project of the Canadian International Paper Company: the Nature Centre at Harrington, Quebec, designed to provide an outdoor laboratory for teaching and research in resources management. The conservation program there is oriented to the instruction of groups. Youth groups and schools are invited to use the Centre's facilities; woodlot owners and tree farmers receive instruction and practical assistance in management of forested areas. Individuals and families, however, are welcome to visit the Nature Centre, and the experience will be particularly enjoyable for naturalists.

On a July weekend in 1967, we had a look at part of this 15,000-acre Forest Farm in the lower Laurentians. Before we reached the headquarters buildings we noted the Wildlife Pond with its heron, the tree nursery, and several attractive picnic sites. At the office

we were given a handful of maps -- major roads to the Centre (reproduced here); CIP forest roads in Grenville Woods Division; map of the Nature Centre hiking trails; and "My Nature Check List" with sketches of some trees, birds and mammals which a child could recognize along the trails. (No herps or insects on the checklist, although the woods were full of toads and butterflies!) A pleasant 3/4-mile stroll up to Lookout Rock rewarded us with a panorama of the Rouge River winding between forested hills and valley farms.

We found the Nature Trails ("Woodpecker" and "Trout") to be instructive as well as attractive. Numerous signs along the way provide the names of most species of trees and conspicuous plants in this pleasant bit of bottom-land forest. Beyond mere names, though, there is much information in these labels about the history and development of the area. Examples are shown of growth and decay working changes in the forest. Attention is directed to ecological processes of which even naturalists may be unaware until they are pointed out. One can then go on to find one's own examples, and one begins to see the forest as a complex interacting system, not just a random collection of plants and animals.



Rouge River and part of the CIP Nature Centre
Photo by Malak, Ottawa

Beyond the labelled Nature Trails there is a network of forest roads, not open to motorists (in 1967), and two hiking trails, 6 and 6½ miles long. These trails and roads cross or coincide in such a way as to provide a number of possible loops. By using part of a road, we cut the 'Beaver' trail down to a 4-mile hike, enough for our 5-year-old for one day.

In the soft green gloom under mature hardwoods we saw fallen giants of an older forest. Young trees have sprouted on ancient stumps. In some places they are developing stilts: their roots have reached the mineral soil and are taking over support of the trunk as the stump rots out from under it. Climbing through a rocky section we paused to admire a mysterious-looking cave, the entrance completely surrounded with lacy ferns. Birds are numerous in this forest, to judge by the music that accompanied us on most of our walk. A sudden crash startled us at one point and we glimpsed a deer bounding away through the underbrush.

The hardwoods pass into an evergreen forest of boreal aspect with a bouncy floor of rotted wood and needles laced through with elastic roots. Pink lady-slippers grow beside the trail. A call of "Free beer!" told us there was an Olive-sided Flycatcher on boggy Pine Lake. Further on, more hardwoods, rushing rocky streams, overgrown logging roads, marshy meadows below rugged cliffs - this trail has great variety.

The Company has done considerable work on these trails without detracting from their interest or beauty. It is possible to imagine oneself in the wilderness here without the possibility of becoming lost, as the trails are discreetly well-marked. Rough planks bridge the numerous streams; long boardwalks are provided through extensive springy areas. One memorable boardwalk crosses a beautiful bog forest of large tamaracks and cedars where the carpet of thick moss is exquisitely decorated with wood sorrel and twinflower. Had we not been drenched already by a downpour we could have finished the trail dryshod.

Our route had shown us a fair sample of the Nature Centre country, and we left Harrington with a feeling that we would like to return some time and see more of it.

Moths are the obscure members of the order Lepidoptera, when compared with the more familiar butterflies. The majority of moths are nocturnal, whereas the butterflies are diurnal. There are about 10,000 species of moths in North America north of Mexico, and most of these are very difficult to identify. This is one reason why most people who become casually interested in moths prefer to study four relatively small groups whose members are large and colourful.

The SPHINX MOTHS (family SPHINGIDAE) fly most commonly from early dusk until midnight. They may be found from spring until autumn. There have been thirty-three species collected locally. Six of these fly during the day.

The SILK MOTHS (family SATURNIIDAE) are night flying moths of the spring and early summer. They are not usually seen until after midnight. There are seven species recorded locally.

The TIGER MOTHS (family ARCTIIDAE) are mostly night flying moths. Although they may be found any time during the night they are often most abundant between 1 a.m. and 4 a.m. They may be found from spring until autumn. Thirty-six species are found in and near Ottawa.

The UNDERWING MOTHS (genus CATOCALA) are night flying moths. They are usually found from mid-July until late September. There are twenty-three species found in the Ottawa area.

There are many ways to capture moths either to make a collection or to identify the insect, possibly to photograph it, and release it. Most members of the groups mentioned above can be identified very quickly, and the specimen does not necessarily have to be killed. I will briefly discuss several of the best ways to collect moths.

An ultraviolet light trap is used only by persons wishing to make an extensive collection. It may catch



♀ CECROPIA MOTH

Photos by Alice V



e Watson, Ottawa

♀ POLYPHEMUS MOTH

and kill several thousand moths in one night. The light source is surrounded by metal plates (usually four) which radiate out around the light like spokes. This is set over a can with a funnel top. Moths attracted to the light hit the plates and fall down the funnel into the can. This can must contain a poison which will kill the moths quickly or they will demolish their wings flying around inside the container.

Sugaring is particularly good for Underwing moths. This is done by preparing a thick syrup of brown sugar and several kinds of fruit. Yeast is added to this and the mixture is allowed to ferment for about a week. It is then painted onto the trunks of ten or fifteen trees, between three and six feet above the ground. This should be done on a night when there is a very slight breeze. To get successful results the trees should be treated every night for at least several days. The mixture attracts moths which alight to feed, and they can easily be poked into a bottle. If any of the syrup is dropped onto the ground the tree will be overrun by ants.

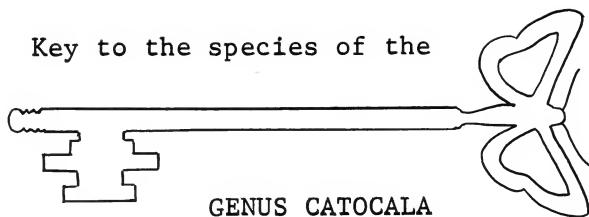
Another good method is to carry a Coleman lantern in one hand and a net in the other, through the woods. Moths can be caught as they fly past or as they come to the light. A milkweed field, or any other extensive area of flowers, is good for Sphinx or Tiger moths.

A light may be suspended about three feet above the ground. White sheets are hung on two sides of the light so that they are illuminated. Moths of all families should alight on the sheets. This is one of the best ways to catch Silk moths.

One of the simplest methods to catch moths is at a bright porch light, or at a store near a woods. Some of my rarest finds have been collected this way.

In conclusion, I will recommend a few books which may be of use for identification. The Golden Nature Guide to Butterflies and Moths, by R.T. Mitchell and H.S. Zim, is very good for Sphinx moths and Silk moths. The Moth Book, by W.J. Holland, has recently been reprinted by Entomological Reprint Specialists, P.O.Box 207, East Lansing, Michigan 48823, USA. It deals with about 2000 of North America's most common species.

Key to the species of the



GENUS CATOCALA

found in Ontario

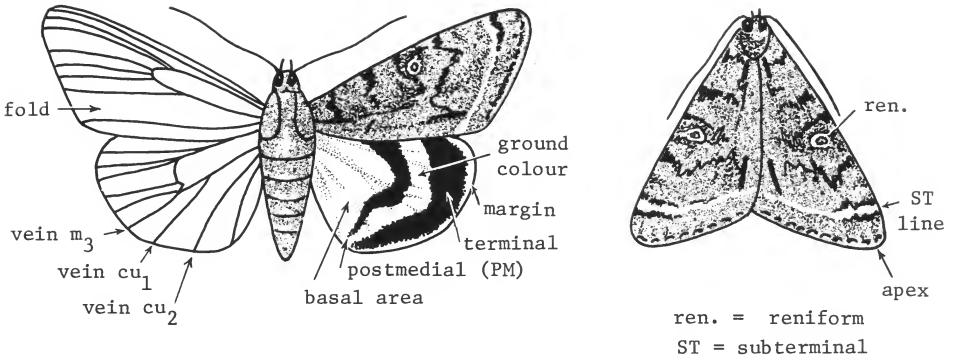
J. D. Lafontaine

The genus Catocala is a large genus of moths commonly called "Underwing moths". They usually have a dark coloured forewing (FW) and a brightly coloured hindwing (HW) which is concealed when the moth is at rest. This is believed to be a form of protection, for there is a certain element of surprise when the moth takes flight. The moth is virtually invisible when at rest on a dark surface.

It is hoped that this key will make identification fast and easy, for it does not require a person to have a knowledge of many wing and body structures. In order to use this key properly, a few notes on wing areas should be understood. The basal area of any wing is that part closest to the point where the wing joins the body. The underside of the forewing resembles the hindwing's upper surface in that it is a bright colour with two dark bands. Once again, the outermost colour area is considered to be the ground colour. Note that the moth pictured in the diagram (similar to Catocala habilis Grote), has a basal dash, a dash in the fold but no apex dash. The presence or absence of these dashes is important in this key. Unless the key states "underside" of wing, it is always the upper surface that is being considered.

A moth with a yellow hindwing crossed by four wavy black bands is not a Catocala, but is Euparthenos nubilis Hubner*.

KEY TO THE SPECIES OF THE GENUS CATOCALA FOUND IN ONTARIO



VENATION

HINDWING

RESTING POSITION

1	Ground colour and base of HW pure black	2
	Ground colour of HW other than black	7
2	Black dash in fold of FW	3
	No black dash in fold of FW	5
3	FW below fold mostly black	<i>insolabilis</i>
	FW below fold mostly gray	4
4	Except for 3 dashes, FW light gray	<i>vidua</i>
	FW dusky with many brown spots	<i>retecta</i>
5	FW bright brown	<i>epione</i>
	FW dusky gray	6
6	Margin of HW white	<i>obscura</i>
	Margin of HW gray	<i>residua</i>
7	Ground colour of HW white	<i>relicta</i> *
	Ground colour other than white	8
8	Ground colour of HW yellow	9
	Ground colour of HW red or pink	27
9	HW with no black PM band	<i>amica</i>
	HW with black PM band	10
10	On underside of FW, ground colour very yellow like base	11
	On underside of FW, ground colour white or lighter than base	18
11	FW very black	<i>antinympa</i> *
	FW with much brown or gray	12
12	Basal area of HW underside, white (lighter than ground)	<i>palaeogama</i>
	Basal area of HW underside, as dark as ground colour	13
13	FW brown, very little gray	14
	FW with extensive gray	15

14	FW light brown, dark at base and apex	nebulosa
	FW dark brown, very dark near reniform	piatrix
15	FW light gray, base and ST area solid black or dark brown	coelebs*
	FW gray with at most dark streaks	16
16	FW with no conspicuous brown	habilis*
	FW with distinctive brown spots and streaks	17
17	Black lines on FW on gray background	neogama*
	Black lines on FW contrasted by white edges	subnata*
18	Base of HW very dusky, blending into black PM	cerogama*
	Some of base as bright as ground colour	19
19	Distinct dark shading below dash in fold of FW	20
	If a dash, no distinct dark shading below it	22
20	Dark shading all along bottom of FW	21
	Dark shading only below dash	grynea
21	Contrastingly whitish around reniform	crataegi*
	Uniform gray around reniform	gracilis
22	3 long dashes in fold from base to edge of FW	clintoni*
	If any dashes, no more than 2	23
23	Black terminal band of HW continuous	24
	Band interrupted with yellow between veins Cu_1 and Cu_2	25
24	Sharp white ST line	blandula*
	ST line faint and indistinct	mira*
25	Black dash in fold	praeclara*
	No black dash in fold	26
26	FW dusky gray	sordida*
	FW brown with light gray spot at apex	similis*
27	Ground colour of FW underside, red	coccinata*
	Ground colour of FW underside, white	28
28	Basal band on FW underside, red or orange	29
	Basal band on FW underside, white	31
29	Black shading in and below fold of FW	ultronia*
	Fold not conspicuously darker than rest of FW	30
30	Clear basal dash on FW	ilia*
	No sharp basal dash, may be dark shading	innubens
31	FW chocolate brown	cara
	FW light brown, gray, or black	32
32	FW with no white	33
	FW mottled with white or a white patch by reniform	34
33	FW even gray	concupens*
	FW gray or brown, a dark patch extends from base to apex	amatrix*
34	FW with black dash in fold, at base and apex	parta*
	FW with no such dashes	35
35	Black PM band on HW makes 90° turn at vein Cu_2	meskei*
	PM band is semicircular (follows margin)	36
36	Black PM band ends at vein Cu_2	semirelicta
	Black PM band extends to inner margin of HW	37
37	FW blackish, large white area along ST line	briseis*
	FW gray, inconspicuous black and white mottling	unijuga*

* found in or near Ottawa

PESTICIDES: BOON OR BANE?

There can be no doubt whatever that pesticides have produced a large number of important benefits. Combined with increased mechanization, improved varieties of plants and increased use of improved fertilizers, they have contributed to substantial increases in quantity and quality of agricultural produce grown at very reasonable cost... In addition, there are many instances of forests having been saved from destruction by outbreaks of insects... and of insect-borne diseases brought under control in many parts of the world. No one would deny that, in many respects, pesticides have been a boon to mankind.

There are, however, many problems associated with the way in which modern chemical pesticides are used in Canada and other parts of the world. For one thing, these chemical poisons are often not confined to the target area. Applied as fine powders or as minute droplets, they may drift to adjacent areas or may be carried aloft to fall back to the surface many miles away. Even the portion which reaches the target area may be carried by surface water into nearby watercourses... or percolated downward to contaminate ground water supplies. Traces of pesticides have been found far from the site of application, as in the eggs of ducks nesting on the edge of the Arctic in northern Canada, in seals which spend their lives in the Antarctic...

Many pesticides should really be called "biocides" since they are capable of killing any living thing, from mosquito to man. Others are much more specific in their range of toxicity. Pesticides are sometimes referred to as being "broad-spectrum" or "narrow-spectrum" depending upon the range of species to which they are toxic... Some pesticides, particularly some of the organochlorines, break down very slowly after application and are referred to as "persistent". Others are effective over a period of only a few days.

There are economic advantages to using persistent, broad-spectrum pesticides capable of killing a variety of insect pests and requiring only one or two applications during the growing season. However, these are the pesticides which are capable of spreading through-

out the environment and affecting a host of non-target species, including wildlife and man, even when they are applied by approved methods. To use them is to lose control of their effect. Extremely dilute concentrations may be multiplied several times within the bodies of small organisms and multiplied again as they are fed upon by animals higher in the food chain. The end result may be lethal for consumers at or near the top of the natural food pyramid...

Virtually all of us contain substantial amounts of persistent, broad-spectrum pesticides in our bodies, stored in our fatty tissues or organ systems. Under normal circumstances, these concentrations of pesticides in our systems may have little or no effect upon us. However, the evidence from experimental work on wildlife is anything but reassuring. Experimental animals carrying moderate amounts of pesticides in their systems appear to remain normal and healthy until placed under some form of stress which causes them to use up their reserves of stored fat. Pesticides thus released into the blood stream have produced effects ranging from decreased fertility to sickness or death...

Natural, complex communities of plants and animals have their own built-in checks and balances which, although they sometimes operate imperfectly, do tend to keep pest populations under reasonable control. Parasites, predators and competitors give the natural community a measure of stability. By comparison, a cultivated crop forms a very simple community which is likely to be unstable, particularly if it covers a large area. Application of a broad-spectrum pesticide, which may kill some of the parasites or predators which act as natural controls of the pest species, further increases the instability. If, as often happens, the target species develops resistance to the chemical used, instability increases enormously. Thus, use of pesticides may lead to dependence upon chemical controls, with new chemical formulations required as target species develop resistance to those used previously. Sometimes the effects on non-target species of two chemicals acting together are very different from, and much more toxic, than those of the single formulations applied separately. Unfortunately, it is often not possible to forecast the severity of these combined effects.

An understanding of the ecological and behavioural relationships of pest species has led to development of effective biological controls. Successful examples include maintaining a habitat which provides living conditions suitable to the predator, parasite and competitor species which help to keep the pest species under control; development of pest-resistant strains of plants; introduction of pest-specific viruses; use of natural attractants to lure pest species to locations where they can be killed or sterilized without the release of toxic substances into the environment; and releasing large numbers of sterilized males to breed unproductively with the females of the natural population. Research leading to the development of biological controls is of a type which must normally be undertaken at public expense. The large expenditures on research required to develop chemical controls, on the other hand, are usually made by companies engaged in commercial production of pesticides. It is obvious that development of a broader range of biological controls will depend to a large degree on the amount of public funds devoted to research in that field.

It has been demonstrated that biological controls can be combined with use of chemicals, carefully selected and applied so as to minimize damage to non-target species, to give safe, satisfactory, "integrated" control of pest populations. It is these integrated control methods which offer the greatest hope of holding pest populations within acceptable limits without dangerous contamination of the environment which we share with all other living things. Greater use of integrated controls would require substantial public expenditures and research, of course, to develop methods of biological control and more chemicals which are highly specific in their effects...

As with other forms of pollution which detract from the quality of our lives or threaten our health, solving the pesticide problem is largely a matter of economics and public policy. Are we sufficiently concerned about the quality of our environment to pay the cost of keeping it free of this destructive form of contamination?

(Reprinted from background material on National Wildlife Week, 1968; prepared by the Canadian Wildlife Federation)

"A FEW DREAMERS IN CANOES"

Walter Gray, Director
Algonquin Wildlands League
(from an address to the Ottawa Committee, A. W. L.)

"Those of us who consider unexploited wilderness areas as an integral and very necessary part of the Ontario scene felt last year the time had come for an organized citizens' voice to challenge those who seek - and who have gained but abused - special privileges in such areas as Algonquin Park. So it was that the Algonquin Wildlands League came into being....

"In narrow economic terms "value" is a price determined in the marketplace by supply and demand. Under this definition the only way to realize the value of a tree, for example, is to cut it and either saw it up into boards or turn it into paper. A stand of white pine has no value until it is harvested.

"If we accept the values of the logging operator, then the tulips along the Rideau Canal are worthless, the waters running over Niagara Falls have no value other than to produce hydro power, a deer bounding through the autumn woods has no value unless shot and eaten, and a white pine tree has no value unless cut and sawed.

"But there are aesthetic values which are as real as the economic values of the marketplace. And if the realization of these aesthetic values implies that certain trees mature, fall, and are regenerated by other trees taking their place, with the whine of the saw and the growl of the logging truck never heard on the pine ridge, it does not mean that society is failing to gain the greatest value and failing to make the highest use of the ridge of pine....

"...ultimately all values are human values, whether economic or aesthetic. Some trees must and should be cut to provide homes and income. This applies to most mature trees. But some must be left so that man can gain pleasure, relaxation, and relief from stress and tension far from the evidences of the commercial activities of his fellow man. And that does not mean just that Disneyland front of trees at the water's edge, but over the ridge and beyond...."

"The League does have some basic requests to make to the Government of Ontario: (that)

- 1 The Department of Lands and Forests reaffirm the wilderness philosophy that brought Algonquin Park into being.
- 2 The Department produce a reasonable and equitable plan to discontinue lumbering operations in the primary wilderness area of the park and hold this area in trust in its natural state for future generations.
- 3 The Department leave the eastern half of the park for multiple-use purposes. In this zone lumbering operations could be continued, but under strictly controlled conditions, thereby ensuring stability of the economy of those communities who rely to some extent on these operations.
- 4 The Department zone the remainder of the park for management as a total resource in its own right. Natural and recreation areas would be clearly defined. The greater area of the park would be designated as primitive zones.
- 5 The Department of Lands and Forests should now undertake a study of the lumber industry of Algonquin Park and assess the present and future value of its operations against the present and future values of Algonquin Park as a recreational resource in its own right.
- 6 The Department should undertake a public education program to inform the public of the true role of Algonquin Park in the changing environment of a rapidly growing province that is desperately in need of more park and recreational space for the people as a whole.
- 7 The League urges the Department to open up Crown lands in northern Ontario for recreational use, and we challenge the forest industries, who espouse the concept of multiple use in public lands, to allow those who seek recreational enjoyment into the vast forest reserves they hold under lease....

"Public interest in this issue must be impressed upon the Government of Ontario. This is the primary role of the Algonquin Wildlands League - to make the Government aware that the individual citizen cares...."

T & L readers are reminded that they may join the League by sending \$2.00 to Box 114, Postal Station Q, Toronto 7. Although an Ontario-based organization, the League is dedicated to the preservation of natural areas anywhere. Persons who have never canoed in Algonquin, but who enjoy hiking and trail-skiing in Gatineau Park, have good reason to join.

Incidentally, our title for the above excerpt was provided by Mr. R. B. Loughlin, Manager of the Ontario Forest Industries Association, who said in a recent issue of Pulp and Paper Magazine of Canada, "...there is vast injustice in a system whereby a whole industry can suddenly find itself fighting for its life because of a few dreamers in canoes".



WILDERNESS TRAVEL ...

courtesy Ontario Department of Lands and Forests

"Rise free from care before the dawn and seek adventures.
Let the noon find thee by other lakes and night overtake
thee everywhere at home." Henry David Thoreau

A LARGE *ELM* NO LONGER HERE



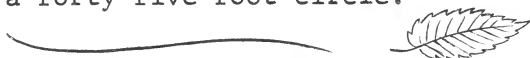
Herbert

Groh

Many club members will remember the huge American (white) elm which, until recently, stood just off the Chelsea Highway overlooking the cement works opposite Wrightville. Unaware of any measurements ever having been published, I am glad to have turned up some of my own, taken July 13, 1923, along with a snapshot of the venerable tree. At the time when the starling was spreading into the area, one of its first observed nestings was in a knothole in the horizontally emerging lower branch, seen in the picture.

Circumference of the tree was taken at seven feet, and at two feet lower, where the spread to the roots had begun, and was found to be sixteen and eighteen feet; diameter about five feet. The lowest branches at about twelve feet from the ground were about two feet in diameter. The tree was judged to be less than one hundred feet in height with a shapely crown of similar spread, and well draped below with hanging boughs to a level at which they would be liable to damage.

The canopy overhead was carried by six or seven main pillars. Buttressing roots went underground at a few feet from the trunk to a distance that might be marked by a forty-five foot circle.



Mr. Groh, a past President and honorary Life Member, joined the Ottawa Field-Naturalists' Club in 1909.

A TOWNSEND'S SOLITAIRE near AYLMEER, QUEBEC

On the 22nd of November 1968, along with John and Robert Dubois, I saw a Townsend's Solitaire. We were close to some mixed woods bordering a pasture. I was squeaking when John Dubois spotted a bird directly above us and about 30 feet distant. Using binoculars we noted its eye-ring and gray appearance. We were so close that there was not a field mark we couldn't check easily. It looked like a large bluebird with a long notched tail; a hint of brownish feathering was noticeable in the wings and was especially apparent when the bird flew. The bird's long blackish tail (darker than the back) bordered by white was the most striking characteristic. We spent at least 10 minutes observing the bird as it perched on fence posts and spruce branches. John Dubois spent another 8 minutes with the bird after Robert Dubois and I left to notify others. Unfortunately the bird could not be found again. For the most part I can say that I am familiar with this bird through many observations made in British Columbia and Alberta in June 1968.

Ron Pittaway
Aylmer East, Quebec.

THE GREAT GRAY OWL - FACT AND FICTION

R. Pittaway and D. F. Brunton

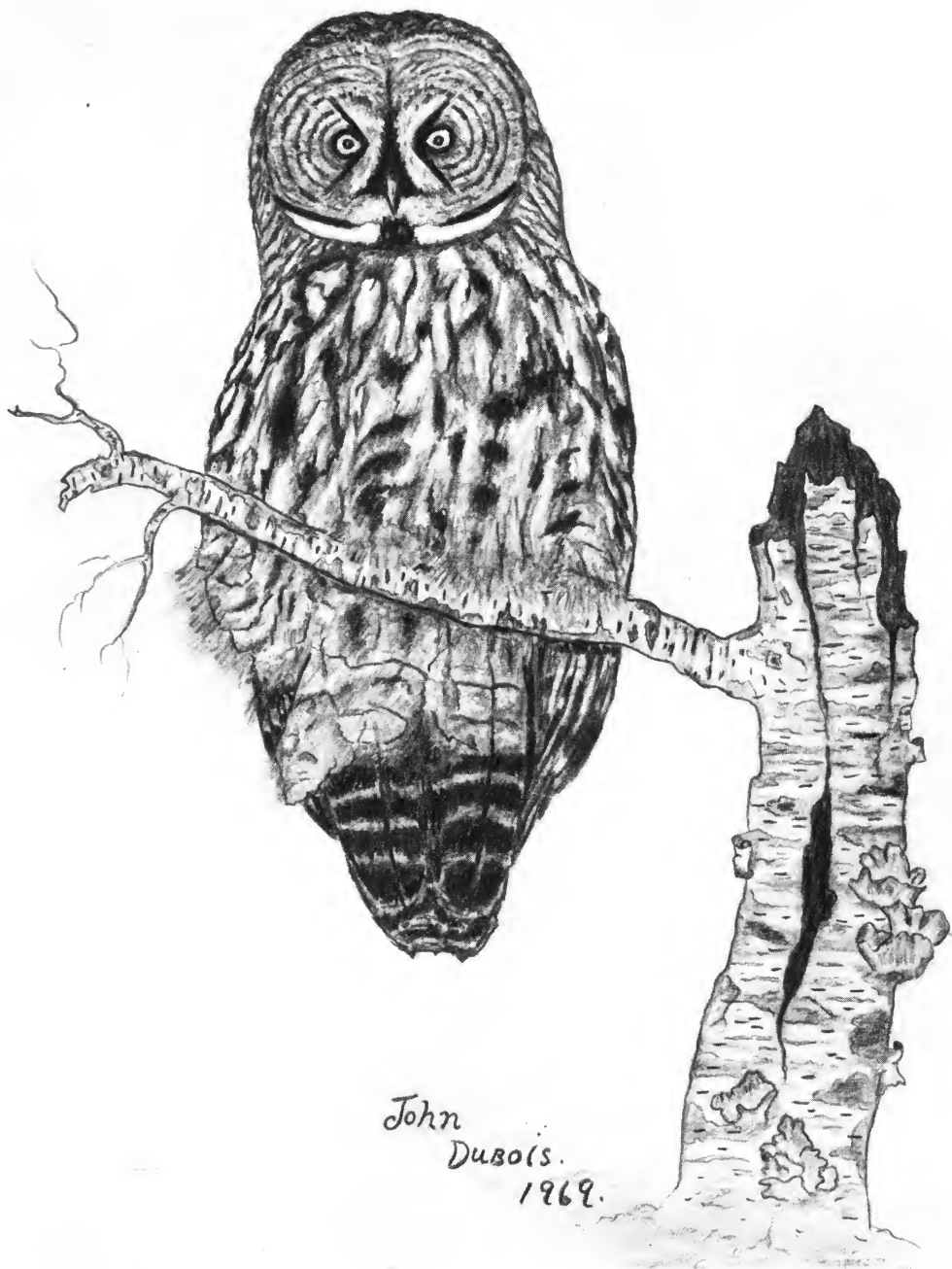
In February of 1969, four Great Gray Owls appeared in the Aylmer, Quebec area. This occurrence was of great interest due to the rarity of the birds, and also since they were found in exactly the same locality as that in which three Great Gray Owls resided during the memorable 1966 invasion. So exact was the location that Great Grays were photographed in the same tree in 1966 and then again in 1969! To everyone who observes this bird for the first time, it has many surprises. We intend the following to reveal some of the fascinating peculiarities of this owl.

The appearance of the bird in a sitting position can best be described by examining the excellent drawing by J. Dubois. We feel that this illustration is probably the best ever produced.

The bird is huge. If one has any doubt, it is quickly dispatched when viewing the Great Gray on the wing. In flight, it very closely approaches the size of a Great Blue Heron - mainly due to the gigantic rounded wings that have been likened to huge ping-pong bats! The bird has been identified with certainty at distances in excess of a half mile. Its large head and the bulge of the neck give it a front-heavy appearance in flight.

The Great Gray likes an open area in which to "do his thing". Ideally, poor, abandoned farmland with a coarse overgrowth of shrubbery and small trees is occupied. These fields are generally bordered by extensive and deep mixed or coniferous forests. In most cases, the owl stays well clear of the heavily cultivated or grazed farmlands.

These birds set up a definite "home base" and tend to stay within its borders. It doesn't seem to actively defend this territory against competitors (e.g. Sparrow Hawk and Northern Shrike) although the reverse certainly does not hold. Sparrow Hawks have been seen furiously diving one of the birds and screaming defiantly. The Great Gray could not have cared less! It will show some interest in another Great Gray near its territory, but clashes are rare.



John
Dubois.
1969.

The Great Gray Owl is absurdly tame. If the bird doesn't feel like flying, it cannot be moved (short of being shot!) Repeatedly, one of them has flown directly past observers, within inches of them without changing direction or course whatsoever. It is often the case that the bird is difficult to interest in even looking in the direction of the observer.

The normal flight is generally low, with two or three flaps and much gliding. Being very light, and with large proportions, it floats leisurely through the air. The wing beats are slow and powerful, suggestive of the flight of a Great Blue Heron.

The hunting habits are fascinating. It usually picks a perch well out in the open where visibility of the surrounding landscape is excellent, and can be seen continually scanning this area. Many observers have rubbed their eyes in disbelief upon seeing this huge animal balancing on a ridiculously slender branch which would immediately be bent to the ground by other similarly sized birds. They are so light that one was actually seen perching on a goldenrod without even bending it!

It constantly moves from perch to perch until prey is suspected, and will occasionally search a field by quartering over it. The Great Gray Owl prefers to hunt at close range, and when prey is suspected, it peers down at a sharp angle to the ground. It seems almost hypnotized by the prey activity below. In such a position it strongly resembles a huge, gray Hawk Owl. At close range, hearing perhaps plays an important role in locating prey.

When a mouse is located below the snow, the owl flies out over the spot and hovers briefly (with feet dangling), or hangs momentarily, as it takes aim on the prey. It then crashes into the snow, often feeling around actively for the mouse. Upon capturing it, the Great Gray (still sitting on the snow) scans the surrounding area and then reaching down, grasps the prey in its bill, and swallows it immediately. This latter action occurs so rapidly that an observer may easily miss it and think the owl has been unsuccessful - thus concluding falsely that the Great Gray often misses a kill. It regularly spends considerable lengths of time on the ground.

This is not to say that the Great Gray Owl is near-sighted! In fact, its remarkable eyesight has been proven in several incidents similar to the following: Suddenly a mouse appears on the snow 200 yards away. The owl immediately launches from its perch and with almost continuous flapping, soon reaches the prey. The last 100 feet is a silent, swift, descending glide to the spot in question, where it swipes up the mouse.

Peak hunting hours appear to be in the early morning and the late afternoon until dusk. When pressed for food, however, they will hunt throughout the day, but generally seem to rest (dozing and preening) around noon.

It is the opinion of the writers that the Great Gray Owl is exclusively a diurnal and crepuscular hunter. Numerous observations over a period of three years support this assertion, and supply evidence against the Great Gray Owl being a nocturnal hunter. On several occasions, observing these birds from noon until dusk (when activity decreased drastically), and then checking later after dark, we noted that they had rarely moved and were not active at all.

The Great Gray has a sweet tooth for mice! Upon examining what pellets we could find, this affinity was even more evident. Almost exclusively the birds were seen to catch the common meadow vole (Microtus pennsylvanicus) although the occasional short-tailed shrew remains (Blarina brevicauda) were found in pellets. We find reports of the Great Gray Owl killing rabbits and grouse subject to great suspicion. One bird was seen to land directly over a covey of Gray Partridge and although the partridge probably aged several years in that moment, the owl showed no interest at all - and the "Hun" is small, as gallinaceous birds go! A Great Gray was observed trying to catch a red squirrel this winter. The most tremendous battle ensued in which the squirrel escaped once, and although bleeding profusely, eventually got away. After this lengthy combat, the owl appeared "bushed". Further, Great Grays have been seen surrounded by scolding chickadees and juncos without paying them the least bit of attention. It seems apparent that this bird is a confirmed "mouser".

One can only hope that we will shortly be thrice blessed and experience another influx of these intriguing owls. If so, we might further untangle this enigma that is the Great Gray Owl.

O F N C COMING EVENTS

arranged by the Excursions and Lectures Committee;
L. C. Sherk, Chairman

MARK THESE ON YOUR CALENDAR NOW, SO YOU WON'T FORGET

Wednesday 7 May OFNC ANNUAL DINNER

Don't forget!! R.A. Centre, Riverside Drive.
Social hour 6:00 p.m. Dinner 7:00 p.m.
Reservations accepted until 4 May. Call Miss Anne
Banning, 235-8759, or Mrs. Joan Keddie, 733-4691.
See March-April T & L for additional details.

SATURDAY MORNING BIRD TRIPS

Saturday 3 May

Leader:	Don Lafontaine
" 10 "	" Monty Brigham
" 17 "	" Brian Morin
" 24 "	" John Kelly

Long a favourite for May. All walks begin at 6 a.m.
Meet at Vincent Massey parking lot, by Heron Rd. Bridge.
(For novices and pros alike)

MARSH BIRDS: RAMSAYVILLE

Sunday 4 May

Leader:	George McGee
" 11 "	" to be announced
" 25 "	" to be announced

Another long-time favourite, of interest to the expert
and beginner as well. Meet on Anderson Road at the
CNR tracks north of Russell Road. Leaders will be
on the spot at 7:00 a.m.

MAY EVENING WALKS

Thursday 1 May

Informal walks, what-have-you, starting at the Filtration Plant, Britannia, at 6:30 p.m., weather permitting. Come along and enjoy a pleasant evening stroll; birds, plants, insects...
" 8 "
" 15 "
" 22 "
" 29 "

Questions? Call Mickey Narraway, 729-2677

...continued on next page

Saturday 10 May SPRING WILDFLOWERS

Gilmour's Woods, Chelsea, long a favourite spot, and one of the areas visited by the botanists when the International Botanical Congress was held in Montreal in 1959. Leaders: Ruth and John Arnold

Meet: 1 p.m. Health & Welfare Bldg. or 1:30 p.m. at Chelsea; turn right on road marked "Mill", go over RR and turn left immediately. Park at end of road.

Saturday 31 May HARRINGTON FOREST FARM

Joint trip with the Province of Quebec Society for the Protection of Birds, to the interesting CIP Nature Centre north of Hawkesbury. (See page 76)

Leaders: Bill Holland (Ottawa), Terry Thormin (Montreal)

Meet: National Museum, Metcalfe & McLeod Sts. Ottawa

Time: 6:00 a.m. Bring a lunch.

Sunday 1 June PINK LADYSLIPPER ORCHIDS

A field trip to see a large colony of the pink ladyslipper, plus many other spring wildflowers.

Leader: Ed Greenwood

Meet: Elmvale Shopping Centre, Smyth Road and St. Laurent Blvd. (NE corner of lot)

Time: 10:00 a.m.

Sunday 8 June BREEDING BIRDS: GATINEAU PARK

All day trip to Eardley, Ramsay Lake, Masham, to see a good selection of the birds which nest in the Park. Bring a lunch. Fly dope too!

Leader: John Dubois

Meet: Glenwood Domaine Shopping Centre, Aylmer
Call your friends, if you haven't a car.

Time: 6:00 a.m.

Saturday 14 June INSECTS: BELL'S CORNERS

Other than flies and mosquitoes, we hope!

Leader: Ron Stewart

Meet: Health & Welfare Bldg.

Time: 8:00 a.m. until noon; weather permitting

....continued on next page

Saturday 21 June OUTING TO CARLETON PLACE

Wildlife (birds and plants) of the Carleton Place area. Bring your boots and a lunch.

Leader: Bill Holland

Meet: Health & Welfare Bldg. at 8:00 a.m. OR
Findlay Ltd. plant, Carleton Place at 9 a.m.

Sunday 6 July FERNS OF THE GATINEAU

An old pro brush-up. Novice, don't be afraid -- you won't be overwhelmed. Destination: Carbide Wilson's Dam, one of the richest areas for ferns; other areas for the unusual walking fern, etc. Want a good reference? Purchase "Ferns of the Ottawa District", Queen's Printer, Ottawa, price \$1.30.

Leader: Bill Cody

Meet: Health & Welfare Bldg.

Time: 9:30 a.m.

Saturday 19 July THE WILDS OF PAKENHAM: MARY STUART'S

Birds, plants, rocks. Bring a lunch and enjoy a summer's day in the wilds.

Leader: Bill Holland

Meet: Health & Welfare Bldg.

Time: 8:00 a.m.

Saturday 9 Aug. MIGRATING BIRDS: PRESQU'ILE

Because of an early start, an overnight stay (Friday) at the WHITEHOUSE, Brighton, is recommended. For reservations and further information, phone Leader John Dubois (684-7477) before 5 August. Start Saturday 7:00 a.m. at the restaurant inside Park gate.

Saturday 16 Aug. CARNIVOROUS PLANTS

A chance to study some insect-eaters and their habitats in Gatineau Park. Be prepared to get your feet wet.

Leaders: Anne Hanes and Sheila Thomson

Meet: Health & Welfare Bldg.

Time: 9:00 a.m. until 2:00 p.m. Bring lunch

...continued on back cover

NOTE: The list of COMING EVENTS for
the summer season starts on page 98.

Saturday 30 Aug. MIGRATING WATERFOWL

A half day at Ottawa Beach - Shirley's Bay.

Start of the fall migration.

Leader: Brian Morin

Meet: Britannia Filtration Plant

Time: 7:30 a.m.

Fall 1969

NATIVE PLANTS FROM SEED

Trever Cole, Plant Research Institute, Ottawa, will give a demonstration this fall on growing native wildflowers, trees, and shrubs from seed. Collect your seeds this summer. Trevor will discuss germination requirements in general, and the requirements for the seeds you collect. Don't bother with the native orchids; even the scientists have had very little success with these to date. Trilliums and Viburnums aren't that easy either. For time, place and date, see the next issue of T & L.

TRAIL & LANDSCAPE

published by

THE OTTAWA FIELD-NATURALISTS' CLUB

Postage paid in cash at 3rd class rate
Permit No. 3037

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Box 3264 Postal Station C, Ottawa 3.



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