

HALIFAX FIELD NATURALISTS' NEWSLETTER

September '90 to November '90

No. 60



Evening Primrose
Oenothera Biennis



Return address:
Halifax Field Naturalists
c/o Nova Scotia Museum
1747 Summer Street
Halifax, NS B3H 3A6

HALIFAX • FIELD • NATURALISTS

- Objectives** To encourage a greater appreciation and understanding of Nova Scotia's natural history, both within the membership of HFN and in the public at large. To represent the interests of naturalists by encouraging the conservation of Nova Scotia's natural resources.
- Meetings** On the first Thursday of every month at 8:00 pm in the auditorium of the Nova Scotia Museum, 1747 Summer Street, Halifax.
- Field Trips** Are held at least once a month, and it is appreciated if those travelling in someone else's car share the cost of the gas.
- Membership** Is open to anyone interested in the natural history of Nova Scotia. Memberships are available at any meeting of the society, or by writing to: Membership Chairman, Halifax Field Naturalists, c/o NS Museum. **New memberships**, starting from September 1, will be valid until the end of the following membership year. The **regular membership** year is from January 1 to December 31. Members receive the HFN Newsletter and notices of all meetings, field trips, and special programmes. The fees are as follows:

Individual.....	\$10.00 per year
Family	\$15.00 per year
Supporting	\$20.00 per year

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Illustrations **This Issue (No. 60):** Cover - *Decorative Plant and Flower Studies*, J. Foord, Dover Pictorial Archive Series; pp. 3 - H. Derbyshire; 5 - from the collection of Doris Butters; pp. 4, 7, & 10, *Pond Life*, a Golden Guide, Golden Press, New York; p. 6 & 10 - *A Field Guide to Edible Wild Plants of Eastern/Central North America*, Lee Allen Peterson, Houghton Mifflin Co.; p. 8 - *Familiar Flowers of North America, Eastern Region*, Audubon Pocket Guide, Alfred A. Knopf, New York and p. 8 & 11 - *A Field Guide to the Birds East of the Rockies*, R. T. Peterson, Houghton Mifflin Co.; p. 11 - Tide Table courtesy Department of Transport; p. 12 - Frans Lanting, from *International Wildlife*, Vol. 17, # 6, November - December, 1987.

HFN NEWS AND ANNOUNCEMENTS

EDITORIAL

The laissez-faire days of summer seem to have affected naturalists and even computers. Most people have tanned beautifully, so presumably the season was spent well and lazily. Now with the goldenrods and asters of fall we are pushing this newsletter through unfamiliar programmes (upgraded and, of course, IMPROVED, while we weren't looking).

It is satisfying to announce that this newsletter is to be printed on recycled paper. The paper has been delivered to the NSM, and we hope all goes according to plan at the printing end.

John Strong, who has coped with the collation and distribution of the Newsletter for several years now, has asked to be replaced. Thank you, John and Ruth Strong, for your generous and extremely efficient work! So we ask anyone who would like to help collect the box of printing from the Museum; and collate, fold and label, to call the Newsletter committee or a Director. We usually ask for at least one man to volunteer, because of the weight of the box.

MACNAB'S ISLAND SURVEY

At least 3 visits have been made to MacNab's Island as part of HFN's short survey of the flora and fauna. 4 people nearly froze on the first, a shore survey; the second was a botanical trip; the third, to look at marshes, had one participant, and there may have been some private visits. The results will be collected after the field season ends.

THE WILD BIRD COMPANY

This shop was left out of the 1990 telephone directory by accident. The missing number is 835-5000, and the store address, 750 Bedford Highway. The Company provides information, equipment and bird seed for bird watchers, has helped with various HFN and Atlassing projects in the past, and is involved with Project Feeder Watch.

THE CANADIAN NATURE FEDERATION'S NEW BOOK

CNF is bringing out a companion volume to Endangered Spaces in November; it is titled The Last Wilderness, and will be launched by Freeman Patterson in a cross-country speaking tour. HFN has been asked to co-sponsor the local event, on Thursday 29 November; watch for time and place to be announced.



— Ursula Grigg



NEW AND RETURNING MEMBERS

Mr. & Mrs. Donald
Charlotte Lindgren
A. R. Locke
Beverly Sarty
Roger Smith
Roberta Spicer
Michael Weiler & Julie Snair
Mike Whitlock & Barbara Hodkin
Susan M. Hunter
Joanne Irwin

Martin & Linda Langille
the McCann family
Patricia McKnight
Ronald David Murphy
Lynda Noble & family
Belinda Wilkinson

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SPECIAL REPORTS

THE FEDERATION OF NOVA SCOTIA NATURALISTS

Over the past year we've kept you up to date on efforts to establish a Federation of Nova Scotia Naturalists. As of Parks Day (June 9) 1990, the federation exists.

The first annual general meeting in Acadia was a very satisfactory launch for the new organization. (Thanks, Blomidon) The purposes of the federation are to further communication and cooperation among naturalists and natural history societies in Nova Scotia, and to work towards a coordinated effort on the provincial level to protect the natural state of our environment.

Halifax Field Naturalists is one of eight members. The others are the Les Amis du Plein Air, the Annapolis Field Naturalist Society, the Blomidon Naturalist Society, the Cole Harbour Rural Heritage Society, the Eastern Mainland Field Naturalists, the Nova Scotia Wildflower Society, and the Tusket River Environmental Protection Association.

At that meeting I submitted a proposal to the federation to allow them to work towards all the things that FNSN was formed to do. In essence I would work half time through the summer as a volunteer setting up the equivalent of an office, getting all the initial contacts completed, and fund raising. If my fund raising efforts are successful I continue as their paid Executive Director. (If not, then I find other employment and FNSN is still ahead by the things I accomplish as a volunteer.)

They accepted the proposal (subject to working out the details).

The board meets again in September. There will be a quarterly newsletter. The first issue of their yet unnamed newsletter is expected in late October, followed by one in December. Thereafter there should be issues every March, June, September, and December. Planned articles include the status of the Eastern Cougar (Oct?), the Gulls and Terns (March?), the Atlantic Coastal Plain Flora (June?, or a special publication?). The editor is Sean Smith.

All HFN members will receive the first three FNSN newsletters because HFN has decided to pay the 1990 federate fees for all our members. For the 1991 membership year the HFN membership renewal form contains an extra box. This allows you to opt for FNSN membership and include your payment with your HFN dues. You may also join the federation directly. This costs more (\$12.00, or \$10.00 students or seniors; or \$15.00 for families) but it's also extra support for FNSN. There is no difference in services. The FNSN membership year begins April 1. FNSN is also applying for charitable status and we

are hoping for strong support from the naturalist community as we prove our merit.

Suggestions for newsletter names or FNSN logos would certainly be welcome. FNSN, like HFN, uses the NS Museum as a mailing address: Federation of Nova Scotia Naturalists, c/o NS Museum, 1747 Summer St., Halifax, N.S. B3H 3A6.

CONSERVATION ISSUES COMMITTEE REPORT

Like most of you, we've taken it a bit easier over the summer. The following are mostly updates on issues that have been followed over the past little while.

MACNABS ISLAND

The Halifax Harbour Task Force has released its final report. It recommends a single primary treatment facility with discharge into the mid-harbour zone roughly off Georges Island. Their list of five possible sites is based largely on the amount of land and the distance from the harbour and outflow site. It includes MacNabs. Unlike the other sites the report does not put a value on the land, but notes that the replacement value as parkland could be extremely high.

This is a rather terse summary of 18 recommendations and 80 pages of text and figures. We may comment further once we've had a chance to discuss it as a committee. We also intend to have our copy of the document at the regular HFN meetings for the next few months.

THE GREEN PLAN

Doug Linzey and I were able to attend both the information sessions (April) and the Halifax consultation (May). HFN also submitted a written brief (June). I was unable to secure a position at the Ottawa consultation on the next phase (only 4 NS environmentalists could be accommodated).



The "Framework" document asked a lot of questions. Despite a preamble which indicated the goal was to make Canada the industrialized world's most environmentally friendly country by the year 2000, the document was largely focused on the federal government's role. I think the general environmental view (as opposed to government, industry, or labour) could be summarized as do all (or most) of the things you suggest, and more, and faster, and involve the other players more strongly in the planning and actions. Make it a plan for Canada, not just the federal government. We'll comment on whether the Ottawa document takes this advise when we see it.

ENDANGERED SPACES

Although the Halifax Shopping Center was still undergoing its renovations we had a lot of people by the WWF / FNSN / HFN (combined) display. We talked to a lot of people over the 3 days. Most visitors were surprised at how little of Nova Scotia is actually protected, and how little of the protection is under provincial auspices. We gained over 600 signatures on the Wilderness Charter.

The Wilderness Committee at the Ecology Action Center (which is also extensively involved in Endangered Spaces activities) has been particularly concerned with old growth stands at Keppoch and Creignish in Cape Breton. At the mall display, Environment Minister John Leefe announced the addition of these sites to the Special Places candidate site list.

CARMANAH AND TEMAGAMI

We received replies from the Premiers of BC (Carmanah) and Ontario (Temagami) thanking us for our interest and comments, and indicating the actions that their respective governments had recently announced.

For Carmanah the current decision is to protect the lower half of the valley as a BC Provincial Park and to authorize clear cutting of the upper half if studies to be conducted by MacMillan Bloedel show the lower valley won't be impacted. "The Save Carmanah" forces feel this is inadequate and are continuing their efforts to protect the entire watershed. MacBlo is also unhappy with the compromise.

The announcement for Temagami was the protection of most of one "block", including settlement of most of the native concerns. This protects perhaps a quarter of the area, and some, but not all, of the highest priority stands. Logging of the other areas may proceed.

CONRADS BEACH (ISLAND?)

The former channel is still filled in from hurricane Gabrielle. Although the level is well below the fore dune it is above most tides, and vegetation in line with the dune system is becoming established (though sparsely). 6 or 7 Piping Plover were seen on the beach early in their breeding season. We haven't had any word on breeding success yet.

Efforts to see the more effective preservation of Conrads Beach through signage, as part of the Cole Harbour/Lawrencetown Provincial Park, and through improvements to the parking areas and more controlled access to the beach, are progressing slowly. Unfortunately, lately we have been the ones who haven't kept the issue

front and center.

MUNICIPAL ROUND TABLES

The Federation of Canadian Municipalities and the Canadian Nature Federation have produced a joint document calling for the adoption of the round table for environment and economy process at the municipal level. As a CNF affiliate we have been asked to consider supporting this call locally. We are writing the Mayors and Warden of the municipalities in the region not only suggesting that the process is worthwhile, but also offering to be involved from the natural areas and greenspace perspective.

ATLANTIC COASTAL PLAIN FLORA

An international scientific conference on this group of species which generally reaches their northern limit in Southwestern Nova Scotia will be held at Mount St. Vincent University September 13 and 14, 1990. There are six species found in Nova Scotia which are on national or internal endangered species lists. Three of these are protected at the Tusket River Nature Reserve, and the other three will hopefully soon be protected in a Nature Reserve on Ponhook Lake.

For information on the conference contact Nick Hill at MSVU (443-4450).



— Collin Stewart

POINT PLEASANT PARK REPORT

PARK COMMISSIONS RESPONSE TO TAC'S EFFORTS

Many developments have taken place since the last Point Pleasant Park report in the Summer HFN Newsletter. 9 of our TAC met with 5 members of the Point Pleasant Park Commission on May 4, 1990 to present our recommendations for a long-term Park Management Plan. We received a written reply from them on June 14.

The PPP Commission noted that the Bark Beetle Programme had been initiated with the placement of 30 pipe-traps, 30 girdled trees, and 30 previously-cut logs. They also noted that while they endorse the concept of User and Ecological Surveys, there would be insufficient funds to carry them out this year, because available money is being used for the construction of a sea-wall along the Atlantic shore. They hoped the above Surveys could begin in 1991.

The Commission wanted to increase the Terms of Reference to include:

- 1) a statement of the health of the forest; recommendations on diversification of habitats, vegetation, and consequently bird species; and recommendations for both short and long-term measures required to perpetuate the forest atmosphere in this urban park;
- 2) the input of park users, TAC, Police and Fire Depts., Parks Canada, and naturalist groups;
- 3) recommendations as to Park staffing requirements and management, starting from the present situation as the base case;
- 4) any other recommendations from the TAC.



Later paragraphs indicated the Commission did not understand fully the role of the Park Management Plan, the preliminary studies to initiate it, or the TAC's perception of their own role.

Despite our repeated insistence on the necessity of halting all short-term works until a long-term (500 years) management plan is adopted, they once again proposed 4 short-term projects for this summer. These were:

- 1) photographic monitoring procedures by the Park Superintendent of all aspects of the Park;
- 2) the planting of a shelter belt adjacent to the shore road;
- 3) the beginning of silviculture operations (thinning);
- 4) the attraction of more birds to the Park by planting appropriate tree species adjacent to the bandstand area.

The Commission thanked us for our hard work and hoped we could come up with more advice for their short-term projects.

Our reply of July 30 stated: "The substance of (your) letter indicates that Commission members have misinterpreted the intent of our Park Management Plan. Professionals, including those on TAC, understand a Park Management Plan to involve the collection, assessment, and analysis of data to produce options for monitoring or altering a site (i.e. managing) to achieve defined goals. In short, the management plan is a tool by which political decisions can be factually-based to determine short- and long-term goals for the site. These physical considerations must be joined with user requirements to develop an integrated operational and maintenance strategy.

It is essential that the Commission recognise that we are pursuing the first phase of a management process by which the PPPC will determine the goals of the Park. For these goals to be feasible, the Commission must understand the potential ramifications of the course of action they select on the basis of professional and technical information collected and analysed by the TAC. It is our feeling that adding to the Terms of Reference will distort the process, minimise the contribution of the TAC and add unnecessary costs to the project."

We continued by indicating once again, that since none of the suggested short-term works is directed to long-term goals, their merits are questionable. We requested a written response to our letter by August 20.



TAMARACK



BALSAM FIR



EASTERN HEMLOCK

At the time of this article, a meeting between the TAC, the PPPC, and Mayor Ron Wallace had been proposed for September 7, at 12:30 noon at Halifax City Hall.

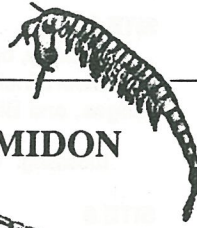
BARK BEETLE SURVEY

The results of bark beetle collecting from the 30 stovepipe traps have been tabulated. Gareth Harding, Rick Ballard, and I, for 5 weeks starting on June 6, collected all the beetles and at certain traps all the insects, from our respective 10 traps each. The mosquitoes weren't as bad as anticipated. There were only two collecting days on which I had to cover arms, legs, hands (with garden gloves), and head and neck (with a very large scarf), and daub my face with mosquito repellent. Each week, all the insects were taken to the Nova Scotia Museum to be rinsed, sorted, and labelled according to their trap #, and then identified, mounted, labelled, and catalogued by Mr. Barry Wright, entomologist and Curator of Zoology. They are now a part of NSM entomological collections.

There were 15 species of beetles; they have been sent off to Ottawa for confirmation. We have begun to sample bark on the girdled trees which have now been cut, and the log traps. The investigation to find literature of a comparative nature has been started, so that we have another sampling of bark beetle infestation with which to compare our findings when all this information has been collated.

— Stephanie Robertson

FIELD TRIPS



WILDFLOWER TRIP TO BLOMIDON

DATE: May 19, 1990

PLACE: Blomidon Provincial Park

WEATHER: unseasonably cold, with drizzle

LEADER: Pierre Taschereau

PARTICIPANTS: 24



Fairy Shrimps

After driving through cold drizzle, the convoy arrived at Blomidon Park under overcast skies. First gathering in the main parking lot, we spread out in a line, looking for a place to park near to the trail head. Not finding a place on the first try, the leading car, like a snake swallowing its own tail, met up with the rear echelon! Continuing on our way, we finally found a good spot, then disembarked and proceeded on foot, taking care not to overly excite a nearby family of skunks.

An interesting feature of this trail is that it winds through alternating bands of open hardwood and coniferous forests, so you are continually changing habitats.

Soon we saw our first wildflowers — scattered Red Trilliums along the edge of the cliff. Next we came upon large masses of Wild Leeks — one of the few places these are found in Nova Scotia. They were so strongly scented we could smell them as we walked by. There were many clumps 3 metres across in an area half the size of a football field, in rich open hardwood forest.

One of the more interesting finds was an intermittent pond containing a large population of Fairy Shrimp, one of which was captured for photographing later.

It being fairly early in a cold spring, only a small number of other wildflowers were blooming: White, Yellow and Purple Violets, Spring Beauty, and Dutchman's Breeches. The strange meat-like odour of the Purple Trillium was checked by a few brave souls. Two early fern species were unfurled already — Long Beech Fern and Sensitive Fern. There were a few interesting fungi; a single large specimen of the deadly Thick-stalked False Morel was found on the ground, and Witch's Butter Fungus and the edible Tree Ear Fungus were seen on branches.

— Rick Ballard

FIELD TRIP TO HAYES CAVE PARK

DATE: June 3, 1990

PLACE: Hayes Cave Park

WEATHER: sunny and warm

LEADER: Michael Crowell

PARTICIPANTS: 15

Starting out, everyone had first to wade across a knee-deep river, to reach the trail's beginning. Here where the overflowing river has deposited a rich soil, were blooms of

Purple and Downy Yellow Violets, scattered small specimens of Jack-in-the Pulpit, and Nodding Trilliums, among Ostrich and Sensitive Ferns.

We saw a graphic demonstration of one of Nova Scotia's few poisonous animals when the leader's dog bit a toad and frothed at the mouth profusely for 15 minutes. Later, a large (15 cm.), prehistoric-looking Wood Turtle came crawling through the woods.

As we approached the actual deposits, we began to see such gypsum-loving plants as the small Gypsum Fleabane, and the red-stemmed Bulblet Fern. We also saw Marginal Wood Fern and Oak Fern here.

We had lunch at a fine Lookout up on top of the gypsum; nearby a poisonous Conifer False Morel mushroom was found in one of the many sinkholes. One of the larger sinkholes, probably 10 metres deep, still had about a foot of snow at the bottom. The snow, and the fording of the river on the way back, were welcome remedies for the day's heat.

— Rick Ballard

NATIVE ORCHID FIELD TRIP

DATE: July 22, 1990

PLACE: Black River Lake Bog, Kings Co., and Area

WEATHER: Hot and sunny

LEADER: Bernard Forsythe

PARTICIPANTS: 20

Twenty participants from not only HFN, but also the Nova Scotia Wildflower Society and the Orchid Society of Nova Scotia took part in this trip. The trip leader, Bernard Forsythe, began by explaining that he had scouted around his favourite spots for two weeks prior to the trip to find pockets of blooming orchids for us. One of his rewards for doing so was his discovery of a species which up to now was unknown in Nova Scotia — the Southern Twayblade (*Listera australis*).

On the trip we were privileged to see 18 species of orchids including the Southern Twayblade.

SITE 1

The first stop was at Bernard Forsythe's house where a young, mixed forest provided dry and wet areas with sphagnum moss that supported a variety of orchid species:

Blooming: Ragged Fringed Orchid (*Platanthera lacera*)
Tuberled Orchid (Northern form)
(*Platanthera flava*)
Finished: Pink Lady's Slipper (*Cypripedium acaule*)

The Downy Rattlesnake Plantain Orchid (*Goodyera pubescens*) represented a transplanted orchid from the

Acadia Museum collection. Normally the transplantation of native orchids is discouraged. Our native orchids must live in a symbiotic/parasitic relationship with particular species of fungi around their roots in order to obtain certain nutrients required for growth. Transplants are frequently unsuccessful. If the conditions are not right, the fungi do not survive. A transplanted orchid may live for a few years but it eventually dies for lack of fungi. This Downy Rattlesnake Plantain Orchid transplant was a special case in which the plant was removed from a construction site.

SITE 2

On Bishopville Road, several fine specimens were found on the roadside ditches:

Blooming: Large Purple Fringed Orchid (*Platanthera grandiflora*)
 Finished: Tall Leafy White Orchid (*Platanthera dilatata*)



SITE 3

A dry sandy roadside habitat on Parkmeadow Road provided an excellent opportunity to view the earliest blooming species of Ladies' Tresses (*Spiranthes lacera*) in full bloom:

Blooming: Slender Ladies' Tresses (*Spiranthes lacera*)

This species is noteworthy for the spiral arrangement of flowers on its flowering spike.

SITE 4

At Black River Lake, a mature deciduous forest supported a fine specimen of a rather rare (in Nova Scotia) large orchid in the leaf litter:

Blooming: a large Round-leaved Orchid (*Platanthera orbiculata* var. *macrophylla*)

SITE 5

Deeper in Black River Lake's forest:

Blooming: Tesselated Rattlesnake Plantain Orchid (*Goodyera tessellata*)
 Green Adder's Mouth (*Malaxis unifolia*)
 Finished: Hooker's Orchid (*Platanthera hookeri*)
 Blunt-leaved Orchid (*Platanthera obtusata*)

The latter is rather rare — up to recently reported only in Shelburne County and Cape Breton.

SITE 6

Was a wooded bog in the Black River Lake forest:

Finished: Heart-leaved Twayblade (*Listera cordata*), just finished blooming
 Southern Twayblade (*Listera australis*), just finished blooming

The Southern Twayblade was until recently unknown in Nova Scotia. In the past year the existence of this species was confirmed by Acadia University botanists at this site. Two specimens were taken for the Acadia University collection. This species is very similar to the Heart Leaved Twayblade in appearance and could easily have been missed earlier due to its similarities.



Large Purple Fringed Orchid

SITE 7

A sunny, open, wet sphagnum bog supported many wildflowers including Pitcher Plants, Sundews, grasses, sedges, and Bladderworts. Among the orchids were:

Blooming: Grass Pink (*Calopogon tuberosus*)

SITE 8

Deep in a hilly mature forest dominated by conifers:

Blooming: Broad-leaved Helleborine (*Epipactis helleborine*)
 Spotted Coral Root (*Corallorhiza maculata*)

The Broad-leaved Helleborine is a very attractive European species that has naturalised in North America. It was first reported in Nova Scotia in the 70's and apparently is spreading rapidly. The plants observed were just beginning to bloom.

We all thoroughly enjoyed the trip. We would like to thank Bernard Forsythe for taking us on the walk and the time he spent in preparation so that we could see so many species.

— Steve and Beverley Saunders

ROOSTING SHORE BIRDS AND SWIFTS



DATE: August 4, 1990

PLACE: Grand Pré and Wolfville

OBJECTIVES: to see roosting shorebirds and roosting Chimney Swifts

WEATHER: clear all day, sunny, hot, humid, slight breeze

LEADER: Jim Wolford

PARTICIPANTS: about 20 at midday, 100+ in evening

This joint HFN/BNS excursion met at high tide. We formed a 10-car caravan, drove slowly through Wolfville's "Mud Creek Days", and searched the Grand Pré dykeland fields for roosting shorebirds, that is, birds resting between low-tide feeding periods.

Our first roost was so distant from us and poorly angled that we could only see Black-bellied Plovers and gulls. Then at noon we hit paydirt. I stopped to scan ahead in some large, short-grass sod fields. Close to the road were two Whimbrels. Behind them was a roost containing a Hudsonian Godwit, 3 Ruddy Turnstones, 20 Dowitchers (very probably Short-billed), and 40 Black-bellied Plovers. An adult female Northern Harrier was seen hunting.

We carried on to our usual beach spot, east of Evangeline Beach. Below the bluff where we ate lunch was a roost of peeps (mostly Semi-palmated Sandpipers, a few hundreds of both Semi-palmated Plovers and Least Sandpipers, 5 White-rumped Sandpipers, and 2 Sanderlings). This carpet of peeps was gusted from 5,000 (myself and Bob MacDonald) to 12,500 (other observers). This flock was not noticeably augmented by other flocks as the tide receded; this usually happens when peak numbers are present. We found out from two

independent observers that 4-7 days earlier the peeps had been there in hordes.

After a long relaxing pause on the bluff we walked east on the beach towards Boot Island. The stroll was uneventful and the end of the beach, which is usually productive for large shorebirds a couple of hours after high tide, had only 4 Black-bellied Plovers.

We all chose rocks for seats and waited for a fairly long time. At 3 hours after high tide, a flock finally came in from the dykelands over our heads to land at the receding waterline. There were 2 Hudsonian Godwits, plus Ruddy Turnstones, Black-Bellied Plovers, and Dowitchers. The latter wasted no time in becoming 'living sewing machines', drilling the muddy sand for food.

This was the end of the first part of the field trip. Our only disappointment was in not seeing any of the captive-released Peregrine Falcons from Blomidon Park.

I showed two people a Mockingbird nest in east Wolfville. We could see at least 3 near-fledglings in it.

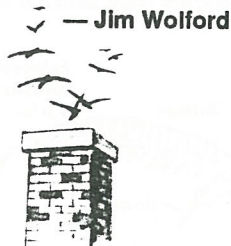
There was a long break for supper and relaxation, then some of us regrouped at the new Robie Tufts Nature Centre at 8 pm where I explained the history of Chimney Swifts roosting in Wolfville. The 1990 numbers (post-spring) are much below those of 1989 and the current roosting site is at University Hall at Acadia University; then we all walked, biked, or drove there.

An impressive crowd of at least 100 people, augmented by "Mud Creek Days" celebrators, gathered on the lawn south of University Hall. The experienced spectators had brought lawn chairs. We had lots of time to chat, as for some reason the Swifts did their show very late.

Sunset came and went at 8:40 pm; a couple of early Swifts entered the big southwest chimney at 9:00 and 9:07. Numbers built up very slowly, and the flock disappeared for long periods. Only 5 had entered by 9:15, and it was not until 9:20 (extremely late for this time of year) that there was any rapid funneling into the chimney plus lots of near-misses. There was so little light that I moved up to the base of the chimney; it was too dark to see anything by 9:25.

My total guessed entries, which I believe were accurate, were only about 120 — others estimated 160 and 190+. The very large crowd applauded but this was a terribly poor show.

At the Robie Tufts Nature Centre, Jake MacDonald saw a few flocks of Swifts, and one flock was seen to leave the vicinity of the Centre and fly towards the University Hall big flock, which it probably joined.



MOTHS OF PORTER'S LAKE

DATE: August 16, 1990

WEATHER: Clear and warm

LOCATION: Porter's Lake Provincial Park

LEADER: Barry Wright, NSM Entomologist

PARTICIPANTS: 32

This field trip was held in conjunction with the "Parks are For People Program" of the Department of Lands and Forests. Because of this there were more young people participating than on a typical HFN field trip, which was pleasing to see.

Mr. Wright began by explaining that there were some 2,000 species of moths and butterflies in Nova Scotia. We would try to attract and observe some of the moths by a UV-Light against a sheet, a UV-Light trap, and by "sugaring" for moths. Each method tended to attract different groups of species. The last method was rather intriguing. A viscous liquid of fermented apple sauce was smeared on tree trunks with a paint brush. Certain species, given a bit of time, would come back and feed on the trunks where they could be observed. The liquid tasted rather like apple cider — which brings us to another story we don't have room for here!

The most commonly observed group of moths was the family of Noctuidae. Most noctuids are small, brownish moths with thick bodies. Many of their caterpillars, such as cutworms, are serious pests. The most common noctuid that we saw, and most common moth for that matter, was the Army Worm Moth, which was attracted to the sugared tree trunks. Also at these sugary traps were the Red Underwings, the European Yellow Underwing (a 1978 introduction from Europe), and the Black Cutworm Moth; another frequent visitor there was the pretty *Calyptra canadensis* which is related to the underwings.

The UV-Light and sheet attracted many members of the Geometrid family. These are small, nondescript moths with slender bodies. Spanworm, Leaf Roller, Case Bearer Moths, and *Calyptra canadensis* were found. Others included an agrotine moth, Harris's Three-spot, the Arched Hooktip moth, and Grass moths (crambid). Other insects, including caddisflies, a diving beetle, and an ichneumon wasp (whose larvae live inside caterpillars), were also attracted to the light.

At the UV-Light trap we found the noctuid moths *Eurois occulta* and *Plusia*; and Sod Webworms or crambid moths. There were Leaf Roller Moths and caddisflies as well.

Dr. Wright had planned two other "Parks Are For People" Moth field trips in different parks on successive Thursdays. He explained that he anticipates different frequencies of moths on each trip. Even in the same location the frequency of species can change night by night. We all left feeling that there was much more to learn about our moths.

— Steve and Bev Saunders

NATURAL HISTORY

LIVING WITHOUT WATER

The field party that went to Blomidon Provincial Park in May saw rare Fairy Shrimps once again in the isolated intermittent pool beside the forest path. There are also rare crustaceans in Halifax; Rain-barrel Seed-shrimps have appeared in a backyard pond.

Both these creatures lay eggs which can dry out completely and still hatch when wetted again. Eggs of Rain-barrel Seed-shrimps have been dried in an autoclave under similar conditions to freeze-drying of foods; the eggs hatched when put in water, some after several years. Dried eggs of this Seed-shrimp and of Fairy Shrimps blow around with dust, and have been collected in aerial plankton. Such animals usually live in places where conditions are too severe for such predators as fish - the pools dry up in summer and freeze solid in winter.

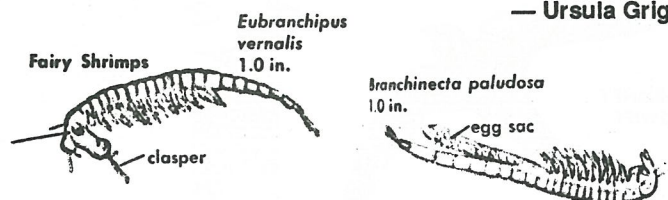
This ability to survive dehydration is quite common; garden seeds have it, and so does dried yeast, in fact the whole yeast organism is dehydrated. There are small animals, including nematodes, tardigrades, and rotifers, which can dry out whole and revive again when wet. Once dried they too may survive extreme conditions, including exposure to lethal doses of x-rays. These animals commonly spend most of their lives dried up and can be dehydrated more than once.

To us, who need water more than food or sleep, and would hate to spend more than half our lives suspended, these abilities are fascinating research topics. Researchers have found that the ability to survive dehydration in animals is associated with the formation of the sugar trehalose during dehydration. Trehalose seems to support cell membranes which normally depend on water molecules for their integrity. Yeast forms trehalose too, but in seeds the sugar which prevents cell death is sucrose.

Certain organisms which do not usually survive drying have done so in the presence of trehalose. Now there are all sorts of candidates for dehydration. There is the possibility of a dry blood replacement with long keeping qualities, and ideas for transport and safe storage of other biological materials without refrigeration. Farmers could spray beneficial organisms on their fields, spreading and reviving them in one operation; fish eggs could be shipped ready to hatch in pond or aquarium.

From the Fairy Shrimp, an animal with a very long fossil history, to modern technology, reality is hard to separate from science fiction.

— Ursula Grigg



EBENEZER'S OAKS

In 1761 John Bishop and two of his sons, John Jr. and Peter, left New London, Connecticut, to take up land in King's County, Nova Scotia. About 1840 one of their descendents, Ebenezer Bishop of Noggins Corner, visited New Hampshire, returning with White Oak (*Quercus bicolor*) saplings to plant on the lawn of his daughters' school, Ashburn Seminary. Miss Sophia and Miss Nancy conducted a ladies' 'finishing school', well deserving of special trees. These trees have outlasted Ebenezer and Ashburn and have begun to colonise the fields and forests of Noggins Corner, Greenwich.

Approximately 25 wild trees have been found in Greenwich, the acorns probably scattered by Blue Jays. Since Blue Jays rarely take the acorns more than one mile from the trees and the young tree requires 30 years before it produces an acorn, the spread of the trees is slow.

Ebenezer's oaks can be seen on the lawn opposite the large cream-coloured house just west of Noggins Corner Farm in Greenwich. The trees are characterised by bi-coloured leaves — shiny dark green above, pale velvety green below. This rugged hardwood has drooping lower branches and the young bark soon peels into large scales. The acorns are distinctive, having a long stem and a slight fringe along the cup.

— George E. Forsyth and Blomidon Naturalists; abstracted from the *Kentville Advertiser*, 9 February 1990, by Doris Butters.

TABLE DES MAREES

HALIFAX (HNA Z+4)

1990

OCTOBER-OCTOBRE						NOVEMBER-NOVEMBRE						DECEMBER-DECEMBRE													
Day	Time	Ht./ft.	Ht./m	Jour	Heure	H./pi.	H./m	Day	Time	Ht./ft.	Ht./m	Jour	Heure	H./pi.	H./m	Day	Time	Ht./ft.	Ht./m	Jour	Heure	H./pi.	H./m		
1	0525	5.2	1.6	16	0020	.9	.3	1	0605	6.3	1.9	16	0115	1.7	.5	1	0030	1.3	.4	16	0125	2.0	.6		
	1125	1.8	.5		0620	6.0	1.8		1240	.9	.3		0655	6.1	1.9		0625	6.6	2.0		0705	5.9	1.8		
MO	1730	5.3	1.6	TU	1255	1.1	.3	TH	1835	5.8	1.8	FR	1345	.7	.2	SA	1315	.4	.1	SU	1350	.8	.2		
LU	2345	1.1	.3	MA	1835	5.7	1.7	JE				VE	1930	5.6	1.7	SA	1905	5.9	1.8	DI	1950	5.4	1.6		
2	0605	5.6	1.7	17	0105	1.0	.3	2	0050	1.0	.3	17	0150	1.7	.5	2	0125	1.2	.4	17	0155	1.9	.6		
	1215	1.4	.4		0655	6.2	1.9		0650	6.6	2.0		0730	6.0	1.8		0715	6.7	2.0		0750	5.9	1.8		
TU	1815	5.6	1.7	WE	1335	.9	.3	FR	1330	.6	.2	SA	1415	.7	.2	SU	1410	.1	.0	MO	1425	.8	.2		
MA				ME	1915	5.8	1.8	VE	1920	5.9	1.8	SA	2010	5.6	1.7	DI	2000	6.0	1.8	LU	2030	5.5	1.7		
3	0030	.9	.3	18	0145	1.1	.3	3	0140	1.0	.3	18	0220	1.8	.5	3	0220	1.2	.4	18	0225	1.9	.6		
	0645	6.0	1.8		0730	6.2	1.9		0735	6.7	2.0		0810	5.9	1.8		0805	6.8	2.1		0830	5.9	1.8		
WE	1305	1.1	.3	TH	1410	.7	.2	SA	1420	.3	.1	SU	1445	.8	.2	MO	1500	.0	.0	TU	1455	.9	.3		
ME	1900	5.8	1.8	JE	1955	5.8	1.8	SA	2010	6.0	1.8	DI	2050	5.5	1.7	LU	2055	6.1	1.9	MA	2110	5.5	1.7		
4	0115	.7	.2	19	0220	1.3	.4	4	0230	1.0	.3	19	0250	1.9	.6	4	0315	1.3	.4	19	0300	1.9	.6		
	0725	6.4	2.0		0800	6.2	1.9		0825	6.7	2.0		0845	5.8	1.8		0900	6.7	2.0		0905	5.8	1.8		
TH	1350	.8	.2	FR	1445	.7	.2	SU	1510	.2	.1	MO	1515	.9	.3	TU	1550	.1	.0	WE	1530	1.0	.3		
JE	1940	5.9	1.8	VE	2035	5.7	1.7	DI	2105	6.0	1.8	LU	2130	5.5	1.7	MA	2150	6.2	1.9	ME	2145	5.5	1.7		
5	0200	.6	.2	20	0250	1.5	.5	5	0325	1.1	.3	20	0320	2.0	.6	5	0415	1.4	.4	20	0335	2.0	.6		
	0805	6.5	2.0		0840	6.0	1.8		0915	6.6	2.0		0925	5.7	1.7		0955	6.5	2.0		0945	6.7	1.7		
FR	1435	.6	.2	SA	1515	.8	.2	MO	1605	.3	.1	TU	1550	1.0	.3	WE	1650	.2	.1	TH	1605	1.1	.3		
VE	2030	6.0	1.8	SA	2110	5.6	1.7	LU	2155	5.9	1.8	MA	2210	5.4	1.6	ME	2240	6.1	1.9	JE	2225	5.6	1.7		
6	0250	.7	.2	21	0315	1.7	.5	6	0425	1.4	.4	21	0355	2.1	.6	6	0520	1.6	.5	21	0415	2.1	.6		
	0850	6.6	2.0		0915	5.8	1.8		1005	6.3	1.9		1005	5.5	1.7		1050	6.2	1.9		1020	5.6	1.7		
SA	1525	.5	.2	SU	1545	.9	.3	TU	1705	.5	.2	WE	1630	1.2	.4	TH	1750	.5	.2	FR	1645	1.2	.4		
SA	2115	5.9	1.8	DI	2150	5.4	1.6	MA	2250	5.8	1.8	ME	2245	5.3	1.6	JE	2335	6.0	1.8	VE	2300	5.6	1.7		
7	0335	.9	.3	22	0345	1.9	.6	7	0530	1.7	.5	22	0435	2.3	.7	7	0625	1.8	.5	22	0500	2.2	.7		
	0935	6.5	2.0		0950	5.6	1.7		1100	6.0	1.8		1045	5.4	1.6		1140	5.9	1.8		1100	5.5	1.7		
SU	1620	.6	.2	MO	1615	1.1	.3	WE	1810	.7	.2	TH	1715	1.4	.4	FR	1850	.7	.2	SA	1725	1.3	.4		
DI	2205	5.7	1.7	LU	2230	5.2	1.6	ME	2350	5.6	1.7	JE	2325	5.3	1.6	VE				SA	2335	5.6	1.7		
8	0430	1.2	.4	23	0420	2.1	.6	8	0645	1.9	.6	23	0530	2.4	.7	8	0030	5.9	1.8	23	0600	2.2	.7		
	1020	6.2	1.9		1030	5.4	1.6		1155	5.7	1.7		1125	5.3	1.6		0730	1.8	.5		1135	5.3	1.6		
MO	1720	.7	.2	TU	1655	1.3	.4	TH	1915	.8	.2	FR	1805	1.5	.5	SA	1235	5.5	1.7	SU	1815	1.5	.5		
LU	2300	5.5	1.7	MA	2310	5.1	1.6	JE				VE			SA	1945	1.0	.3	DI						
9	0535	1.6	.5	24	0500	2.3	.7	9	0050	5.5	1.7	24	0005	5.2	1.6	9	0125	5.8	1.8	24	0015	5.6	1.7		
	1110	5.9	1.8		1110	5.2	1.6		0755	1.9	.6		0635	2.5	.8		0830	1.8	.5		0700	2.2	.7		
TU	1830	5.9	1.8	WE	1750	1.5	.5	FR	1300	5.4	1.6	SA	1205	5.1	1.6	SU	1340	5.2	1.6	MO	1220	5.2	1.6		
MA	2355	5.2	1.6	ME	2350	4.9	1.5	VE	2015	.9	.3	SA	1855	1.6	.5	DI	2035	1.3	.4	LU	1905	1.6	.5		
10	0655	1.9	.6	25	0600	2.4	.7	10	0200	5.4	1.6	25	0055	5.2	1.6	10	0220	5.7	1.7	25	0105	5.7	1.7		
	1205	5.6	1.7		1155	5.1	1.6		0855	1.9	.6		0735	2.4	.7		0925	1.7	.5		0800	2.1	.6		
WE	1935	.9	.3	TH	1845	1.6	.5	SA	1410	5.2	1.6	SU	1255	5.0	1.5	MO	1445	5.0	1.5	TU	1315	5.0	1.5		
ME				JE				SA	2110	1.1	.3	DI	1950	1.7	.5	LU	2125	1.6	.5	MA	2000	1.7	.5		
11	0100	5.0	1.5	26	0040	4.8	1.5	11	0310	5.5	1.7	26	0145	5.3	1.6	11	0320	5.6	1.7	26	0155	5.7	1.7		
	0805	2.0	.6		0710	2.5	.8		0955	1.7	.5		0835	2.3	.7		1015	1.5	.5		0900	1.9	.6		
TH	1310	5.3	1.6	FR	1240	4.9	1.5	SU	1525	5.1	1.6	MO	1355	4.9	1.5	TU	1555	5.0	1.5	WE	1425	4.9	1.5		
JE	2040	.9	.3	VE	1945	1.7	.5	DI	2205	1.2	.4	LU	2040	1.7	.5	MA	2220	1.8	.5	ME	2055	1.8	.5		
12	0220	4.9	1.5	27	0135	4.8	1.5	12	0415	5.6	1.7	27	0245	5.5	1.7	12	0410	5.7	1.7	27	0300	5.8	1.8		
	0910	2.0	.6		0810	2.5	.8		1050	1.5	.5		0930	2.0	.6		1110	1.4	.4		1000	1.6	.5		
FR	1430	5.1	1.6	SA	1340	4.8	1.5	MO	1635	5.2	1.6	TU	1505	4.9	1.5	WE	1655	5.0	1.5	TH	1540	4.9	1.5		
VE	2140	.9	.3	SA	2035	1.7	.5	LU	2255	1.4	.4	MA	2130	1.6	.5	ME	2315	2.0	.6	JE	2200	1.8	.5		
13	0350	5.1	1.6	28	0240	4.9	1.5	13	0500	5.8	1.8	28	0345	5.7	1.7	13	0500	5.7	1.7	28	0405	6.0	1.8		
	1015	1.8	.5		0905	2.3	.7		1140	1.3	.4		1025	1.7	.5		1155	1.2	.4		1105	1.2	.4		
SA	1550	5.2	1.6	SU	1445	4.8	1.5	TU	1725	5.3	1.6	WE	1615	5.1	1.6	TH	1745	5.2	1.6	FR	1650	5.1	1.6		
SA	2235	.9	.3	DI	2125	1.6	.5	MA	2350	1.5	.5	ME	2225	1.6	.5	JE				VE	2310	1.7	.5		
14	0455	5.4	1.6	29	0340	5.1	1.6	14	0540	6.0	1.8	29	0440	6.1	1.9	14	0005	2.0	.6	29	0505	6.2	1.9		
	1110	1.6	.5		1000	2.1	.6		1230	1.1	.3		1125	1.3	.4		0545	5.8	1.8		1210	.8	.2		
SU	1700	5.3	1.6	MO	1555	5.0	1.5	WE	1810	5.5	1.7	TH	1715	5.4	1.6	FR	1240	1.0	.3	SA	1755	5.4	1.6		
DI	2330	.9	.3	LU	2215	1.5	.5	ME				JE	2330	1.5											



NO!

No sun - no moon -
No morn - no noon -
No dawn - no dusk - no proper time of day -
No sky - no earthly view -
No distance looking blue -
No road - no street - no "t'other side the way" -
No end to any Row -
No indications where the Crescents go -
No top of any steeple -
No recognitions of familiar people -
No courtesies for showing 'em -
No knowing 'em -
No travelling at all -
No locomotion -
No inkling of the way - no notion -
"No go" by land or ocean -
No mail - no post -
No news from any foreign coast -
No Park - no Ring - no afternoon gentility -
No company - no nobility -
No warmth - no cheerfulness - no healthful ease -
No comfortable feel in any member -
No shade, no shine, no butterflies, no bees,
No fruits, no flowers, no leaves, no birds -
No-venber!

Thomas Hood: found by Doris Butters

! NEXT DEADLINE !
November 15 for December Issue

Contributions to the Editor, HFN
c/o NS Museum or phone 455-8126