

HALIFAX FIELD NATURALISTS NEWSLETTER

#2

c/o Nova Scotia Museum
1747 Summer Street
Halifax, N. S.

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DECEMBER 1975

NUMBER TWO

Meetings are on the second Tuesday of each month, at 8 pm; in the lounge, fifth floor of the Biology building in the Life Sciences complex at Dalhousie University. See maps below.

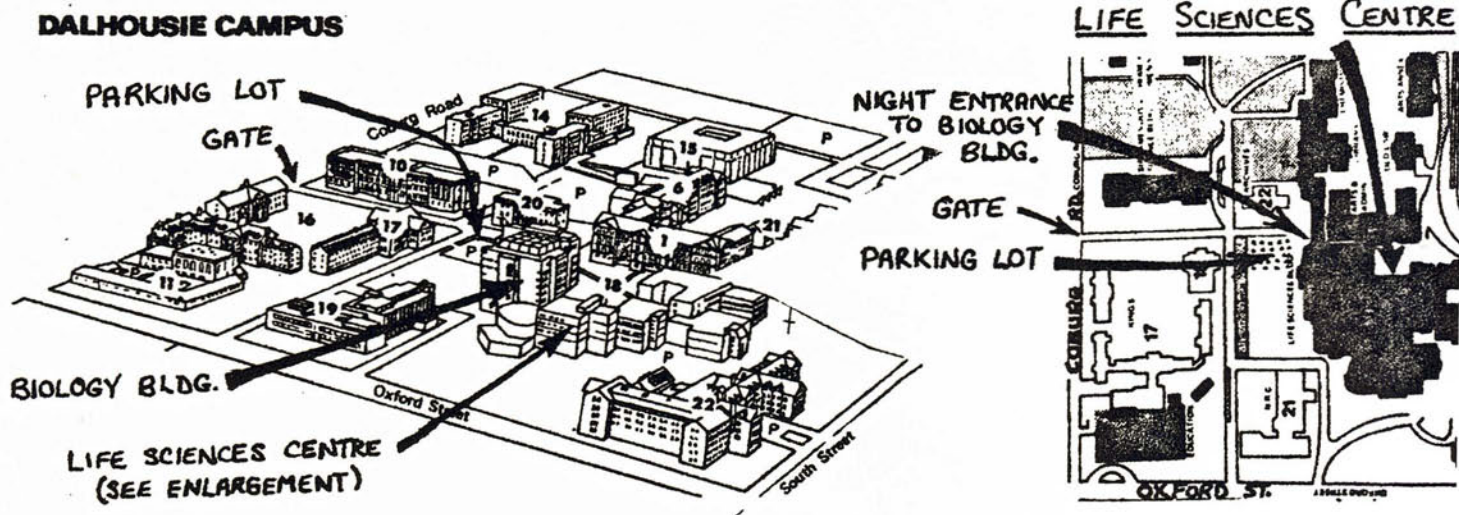
Field Excursions are held at least once a month.

Membership is open to anyone interested in the natural history of Nova Scotia. Membership is available at any meeting, or by writing the Halifax Field Naturalists, care of the Nova Scotia Museum in Halifax. Fees are two dollars yearly.

Executive for 1975-76

President	Paul Keddy	422-7238 evenings
Secretary	Winnifred Cairns	455-9513 evenings
Newsletter	Debra Burleson	429-4610 daytime
Program Committee .	Scott Cunningham	
	. Anne Linton	
	. plus other executive members	

Mailing address Halifax Field Naturalists
 c/o Nova Scotia Museum
 1747 Summer St.
 Halifax, N. S. B3H 3A6



NOVEMBER EVENTS

November Meeting--Regional Parks for Halifax-Dartmouth

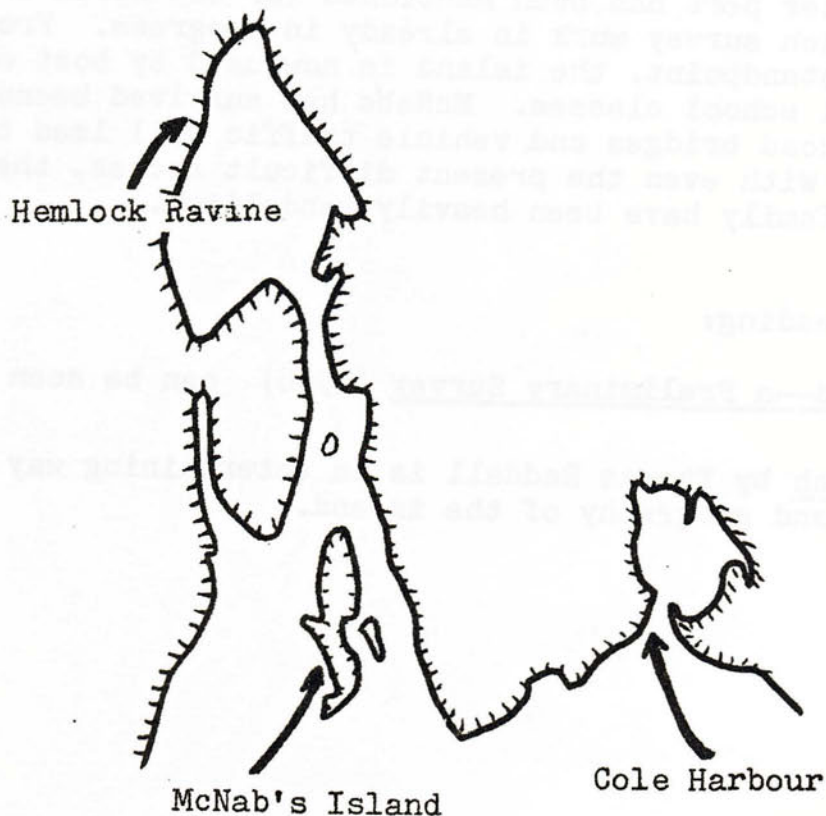
report by Marcus Waddington

Alan Ruffman began the meeting by outlining the plans of the Metropolitan Area Planning Committee (MAPC). On the basis of MAPC's work, the province identified seven areas to be set aside for park purposes: Cole Harbour and Conrad Beach; Sandy Lake; the Long Lake and Chain Lake area; Admiral Cove; McNab's Island; the Lake Charles area; and Hemlock Ravine. The original plan was put forward in 1971, with revisions in 1973 and most recently in April of 1975. Both municipal and provincial governments are involved in the implementation of the plan, with MAPC acting as general coordinator.

Referring to the seven areas, Mr. Ruffman expressed doubts as to whether their projected use as parkland will be respected. Urban growth, private land ownership, and uncertainty as to what "park" should mean pose serious problems. Mr. Ruffman argued for stronger legislation to ensure the protection of these areas. He encouraged research and input from conservation-oriented groups such as the Halifax Field Naturalists.

Three speakers then addressed the meeting on specific sites: McNab's Island, Hemlock Ravine, and Cole Harbour.

The most recent report on Regional Parks is available for \$2 from Information Canada on Barrington St., Halifax.



McNab's Island Roger Pocklington presented a slide talk on the natural history of McNab's . Throughout the talk he communicated his enthusiasm for the island, an environment not unique but rare in an urban setting like Halifax. He favoured preservation of the island as a natural park with access to pedestrians only. He felt that the delicate island ecology, including several nesting pairs of ospreys, would be damaged by any large scale development, even for recreational purposes.

ed. note: The history of McNab's is perhaps as interesting as its natural history. Peter McNab, a Scottish businessman, acquired it from the Cornwallis family about two hundred years ago. He sold the south half to the British Government for the defence of Halifax, and sold the rest in parcels. The island has been cleared and farmed, most successfully with sheep. According to writer Thomas Haliburton, 55 families worked the land in his time. The defence value of the south half is obvious to anyone examining the view from the three forts still standing there. Around the forts the island is mainly scrubby regrowth and open fields. The north section is older growth softwoods. Habitats are varied, and many roads and trails cover the island. McNab's Island has had a recreation tradition since the picnickers of the early 1900's.

In 1966 the Museum and the Bird Society surveyed the island and produced a catalogue of species. This catalogue may be seen at the Museum. Counts of 160 bird species have been made in a day, with especially good traffic in hawks. It is a safe island for visiting birders of all ages.

A deepwater port has been mentioned for the north end of the island, and much survey work is already in progress. From a recreational standpoint, the island is now used by boat owners and occasional school classes. McNab's has survived because it is an island. Road bridges and vehicle traffic will lead to its destruction. With even the present difficult access, the gravestones of the McNab family have been heavily vandalized.

for further reading:

McNab's Island--a Preliminary Survey (1966) can be seen at the N. S. Museum

Hangman's Beach by Thomas Raddall is an entertaining way to absorb some history and geography of the island.

Hemlock Ravine Lynton Martin, Director of the N. S. Museum, gave an outline of the natural history of the Hemlock Ravine. "Like any mature hemlock forest", he said, "it is a very fragile habitat." Mr. Martin pointed out that Hemlock Ravine could not withstand intensive public access and that it required careful consideration and treatment. He encouraged the Halifax Field Naturalists to undertake a study of the ravine, as little biological information is corrently available. For example, when walking in the ravine one has the impression that only the very old age classes of hemlock are represented.

ed. note: Hemlock ravine consists of 75 acres of hemlock and yellow birch woods, on the steep south slope, with diseased beech and maples on the drier north slope. Whether this is virgin hemlock woods is difficult to say, as it was common for loggers to remove the white pine from such forest. Taschereau surveyed the ground cover briefly for the Museum several years ago; it is fairly typical of such forest in Nova Scotia. The ravine is fragile in that mature hemlock is very susceptible to wind. Visit the area before and after an August gale and the number of windfalls is striking. If opened to the public, and promoted as a park, the ground cover would immediately suffer; loss of the stabilizing influence of ground plants on the steep ravine soils would not further the survival of the shallowly-rooted hemlock trees. Before any park decision is made, we need to know what that ravine will look like twenty years from now.

Ownership of the ravine and surrounding buffer zones is spread among government and private owners. Current price for the area is placed at \$300 k. The province and the Nature Conservancy have agreed to pay \$75 k. each; the city is also involved in bargaining. The Museum has been mentioned as caretaker, and Mr. Martin favours this if the ravine is kept as a preserve, and not a park in any sense of the word.

Current use of the ravine, to my knowledge, includes local hunters, children (some of whom like to push down old hemlocks), Sunday hikers, and Bedford school classes. For those who missed HFN's Sunday hike, entrance to the ravine is through the parking lot of the Seaking Motel on the Bedford Highway. Just follow the brook.

further reading: there is little hard information in print. The best I have seen is in the files of the Halifax representative of the Nature Conservancy of Canada.

Conrad Beach Mr. Ralph Connor, a very talented and accomplished photographer, gave us a pictorial tour of the Cole Harbour and Conrad Beach area. He offered a sampling of the flora and fauna of Conrad Beach in all seasons. Among his photos were slides of phalaropes, pipers, plovers, snow buntings, and other shore birds. Hatchlings, adults, in all their natural habitats were featured. Additional slides from Rosemary Eaton of the Cole Harbour Historical Society completed the presentation.

Look for an excursion to Conrad Beach in mid or late January.

Further information is likely available from the Cole Harbour Historical Society, the Bird Society, or any of their members.

The Cole Harbour Historical Society is a residents' group, with Rosemary Eaton as its moving force, which is interested in the History, natural history, and preservation of the Cole Harbour area. To raise money this Christmas, the group is selling a set of scenes of the area (pen and ink renderings by L. B. Jensen). They are usefully packaged and suitable for Christmas or any occasion. Some of these cards, at \$2 a package, will be available at the December meeting. They may also be obtained in Halifax from Michele Rankin at the Nova Scotia Museum.

Naturalists of the Nether Regions

Did you know of the existence of the N. S. Speleological Society? This small but skilled and extremely dedicated group is a conservation organization which has been exploring and collecting data on the cave systems of Nova Scotia for some time now. Due to the nature of the society, members feel obliged to try to preserve the caves of the province in as natural a state as possible. It is not a recreational society.

The N.S.S.S. publishes a newsletter, copies of which can usually be seen at the Museum. Halifax members include Barry King and David Blake, Dalhousie Biology students, and Jim Cleveland, a biology teacher at Queen Elizabeth High School. If you would like us to arrange for the N.S.S.S. to visit the HFN, let us know.

The editor of this newsletter recently accompanied Jim Cleveland and his grade 12 biology class to Frenchman's Cave, near Windsor, and found that she was much, much happier above the ground than beneath it. When she can force herself to recall the experience, she promises an article on "Mud, Fear, and the Value of Slimness--A First Caving Experience".

The Christmas Bird Count

by Anne Linton

The reputation birders have acquired as being perhaps a bit odd, may well be based on their annual fit of madness, the Christmas bird count. On certain days (usually the coldest) in late December, small flocks of birdwatchers can be seen clustered at roadsides, trudging over open fields, scanning beaches and sand dunes, driving irregularly over highways and backroads. All are participating in what has been called the biggest cooperative bird venture in the world today.

These people, and others like them, are taking part in an annual census of bird species, with coverage of many parts of Canada, the United States, Central America and the West Indies. Last year 1102 separate counts were taken, the result of the efforts of 27,184 observers. The total number of species recorded from Canada and the U. S. was 603. These facts are quite remarkable when one considers that the first Christmas bird counts held on Christmas Day in 1900 involved only 27 observers on 25 separate counts. In addition, it is interesting to note that this first count was held as an alternative to the Christmas "side hunt" during which hundreds of birds were shot annually.

The many benefits of Christmas bird counts are worthy of mention. To the participants, a Christmas count provides good fun and valuable birding experience in the company of one's comrades d'esprit. In addition, the vast amount of data which is collected is of great scientific value, particularly with regard to the spatial distribution and temporal variations in bird populations.

The annual event is held in many parts of Nova Scotia, the counts being organized, logically enough, by the Nova Scotia Bird Society. If you are a moderately experienced birdwatcher, and don't mind the cold and the questioning glances from passers-by, contact Anne Linton about getting in on THE birding event of the year.

For more facts about the Christmas counts, look for an article by L. H. Heilbrun in vol. 29 #2 of American Birds, pp. 151-155. It's called "The Seventy-fifth Audubon Christmas Bird Count."

By the way, the Nova Scotia Bird Society meets regularly on the last Thursday of every month, at 8 pm, in the auditorium of the Nova Scotia Museum on Summer Street.

Cape Split Field Trip

by Howard Ross

Cape Split, in the Land of Glooscap, was the site of our field trip on November 30. Twenty-two hikers walked the five miles from Scott's Bay to the Cape along the excellent trail that follows the backbone of the peninsula. The calm and sunny weather combined with the leafless, skeleton-like hardwood forest to produce a tranquility that was felt by all.

The majority of the trail passes through a mixed hardwood forest containing many old maple and yellow birch and in one of these we sighted a pileated woodpecker. Other interesting bird sightings were a hairy woodpecker, goshawk, gray jays, and chickadees. A dead porcupine, probable cause of the many barkless trees, and a large owl cast containing a small rabbit jaw and fur were encountered along the trail. The diversity of plants was low because of the season, but evergreen clumps of wood, holly, and Christmas ferns, and shining clubmoss were frequently located. Many hikers also showed a strong interest in the mosses and lichens that become more noticeable in the fall.

We had lunch at the Cape, a treeless promontory surrounded by precipitous cliffs affording an excellent view of the turbulent boiling waters of the Minas Strait as it rushes out with the tide. The cape is of considerable botanical interest because it is an island of arctic plants in a sea of boreal forest. In the summer, arctic grasses and flowers can be found on the narrow ledges and crevices where species of more southerly origin cannot live. On the hike we were fortunate to find the dried stalks of rose root, an arctic plant.

Overcast sky and a threat of rain hastened our steps back to the cars but no water fell. The outing proved an enjoyable experience to which members of the group can again look forward for future trips.

If you are looking for a guide to trees in winter, a long-time favourite of some members is Bulletin No. 19 of the N. S. Department of Lands and Forests, titled "Identification of Nova Scotia Woody Plants in Winter". It covers the same species in much the same way as its summertime companion, "Summer Key to Woody Plants" (Bulletin No. 16). The guide includes trees and shrubs, both native and naturalized. It uses a dichotomous key, plus line illustrations and, by the author's own admission, "somewhat lengthy" text. This 56 page booklet is available for about 75¢ from the Information Canada Bookstore on Barrington St. in Halifax.

SPECIAL REPORT

Spruce Budworm--a Natural Element of the Spruce-Fir Forest
by Paul Keddy

In a recent article in the Forestry Chronicle¹, G. L. Baskerville emphasized that spruce budworm is a natural component of the spruce-fir forests of eastern Canada. He pointed out that budworm outbreaks are thought to have occurred at least six times since the early 1700's, but only recently have they received much attention. The reason for this recent attention, he says, is a change in tree species used by industry. Over the last ten years, industry has increased utilization of balsam fir, red spruce, and white spruce--bringing itself, for the first time, in major competition with the eating habits of the budworm.

He points out that left to itself, the budworm-forest system is a stable natural system. The budworm periodically destroys older areas of forest, and in doing so starts off a new generation of spruce and fir, which in time will feed new generations of budworm. Thus, periodic destruction by budworm was a natural element of forest succession.

The preferential destruction of balsam fir apparently also helped ensure continued survival of tree species that would otherwise be eliminated by fir, such as white spruce and birch. Thus in a natural system, budworm outbreaks not only changed the forest so as to provide continual food regeneration, but also apparently increased the diversity of tree species.

If such outbreaks are natural, one might expect that certain animals would evolve to cope with them, or even exploit them. In fact, Robert MacArthur², a well-known ecologist, argued that both the Cape May Warbler and Bay-breasted Warbler (plate 49 in your Peterson Guide) are largely dependent on budworm for their survival. He pointed out that they are common only in times and places of budworm outbreak. In his studies of these two species, he showed that their average clutch size is roughly 5.5 eggs. Three other common warbler species laid only 4 eggs on the average. He argued that the larger clutch size of the Cape May and Bay-breasted Warblers enabled them to more quickly respond to changes in food abundances (budworm populations). He further showed that Bay-breasted warblers in New Brunswick laid larger clutches during years of budworm outbreaks. (There was inadequate data to determine whether Cape May Warblers did the same.) It appears that both of these bird species have adjusted their life histories to take

advantage of budworm outbreaks. Don Mac Dougall tells me that he studied Bay-breasted Warblers in a control area of New Brunswick-- that is, an area not sprayed, to permit study of natural processes. In this area the normal density of Bay-breasted Warblers was 4 to 5 pairs per acre, but this jumped to as high as 250 pairs per acre during the budworm outbreak! The Tennessee Warbler is a third species which fluctuates with budworm, and it too lays large clutches. All three of these warbler species breed in Nova Scotia.

Many other bird species benefit from budworm. Studies on White-throated Sparrows in Ontario demonstrated that during a budworm outbreak, they reproduced much more successfully than in normal years. White-throats will often lay a second clutch during a summer; normally these second clutches do not fare well, but during the budworm outbreak, the abundant food supply ensured the survival of a great many of these second clutches. Thus the White-throated Sparrow populations were increasing in response to spruce budworm.

It has been pointed out³ that when budworms are scarce, birds are very influential in population control. The Evening Grosbeak, Slate-coloured Junco, and Chickadee also eat budworm. At high budworm levels, however, there is some disagreement regarding their value in budworm control.

About 90 species of insects parasitize budworm, but here again they are most effective at lower population levels. Once a budworm outbreak starts, these natural predators seem unable to stop it.

While spruce budworm is an economic headache for foresters, it is none the less interesting to examine it from a purely biological point of view. At times we may tend to forget that budworm (like balsam fir and spruce) has been around for many thousands of years, and has a natural role in the spruce-fir ecosystem.

References:

1. G. L. Baskerville. Spruce Budworm: Super Silviculturalist. The Forestry Chronicle 51(4). (August 1975) p. 4-6.
 2. R. H. MacArthur. Population ecology of some warblers of northeastern coniferous forests. Ecology, vol. 39 (1958) p. 559-619.
 3. C. A. Miller. Spruce Budworm: how it lives and what it does. The Forestry Chronicle 51(4). (August 1975) p. 2-4.
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Report on Budworm Action

At the November meeting considerable concern was expressed over reports that Nova Scotia Forest Industries had requested permission to undertake widespread spraying in Cape Breton to control what they claimed was a major spruce budworm outbreak. This was to be followed by a government spraying program. After some discussion it was agreed that the executive should investigate and take some appropriate action. During our research, we found out that Lands and Forests intends to make a decision soon, and that considerable pressure was being exerted in favour of a spraying program. Scott Cunningham visited Baskerville at the University of New Brunswick; Baskerville is regarded as an expert on the N. B. spraying program. He provided us with a great deal of helpful information, some of which will be discussed in the next newsletter.

It appears that there may be some economic justification for spraying to protect certain areas until such time as they can be harvested. Clearly though, there are many areas which will not be harvested in the near future; natural budworm processes followed by natural forest regeneration could be permitted in these areas. We understand that for logging companies to admit that they really can't harvest all such land is equivalent to admitting that they have asked the government for more land than they really need. Clearly such an admission would be politically disadvantageous--and thus we face the prospect of large areas being sprayed even when there is little likelihood of their being harvested for years to come.

After examining these facts, we took the following action:

1. A letter was sent to Dr. DeLory, the Hon. Minister of Lands and Forests, to Premier Regan and to Glen Bagnell, Minister of the Environment, expressing our concern. Basically we stated our opposition to the program, "until it is reasonably demonstrated that there will be minimal impact upon wildlife and that there will be real long-term advantages produced". The letter, and replies, will be printed in full in a later newsletter.
2. We agreed to co-sponsor a Spruce Budworm Symposium, along with Ecology Action Centre and the N. S. Resources Council. Speakers representing various points of view will be invited; we look to a January date.

In the meantime, an outstanding and very readable series of short articles on budworm can be found in the July 1975 Forestry Chronicle. It is must reading for those interested in the problem. Why not drop a short note about spraying to Dr. DeLory or Mr. Bagnell? Letters from private citizens can be effective in determining policy. Write care of their respective departments, 1740 Granville (Lands and Forests) or 1690 Hollis (Environment).

Upcoming Spring Forestry Conference

An alert member showed us a notice of intention from Lands and Forests to hold a Forestry Conference in March. The notice appeared in the Halifax dailies. We reprint it here for those members who do not place the city papers on their priority reading list.

FORESTRY CONFERENCE

The Hon. M. E. Delory, M. D., Minister of Lands and Forests intends to convene a Forestry Conference, tentatively scheduled for Thursday to Saturday, March 18th to 20th, 1976. Participation will be invited from individuals representing privately owned forest land, large and small industries, and organizations having some involvement or particular interest in the development and use of our forest resources.

Details of the meeting have not been concluded but the main theme will revolve around yields of fibre for forest products. However, the increasing need to consider wildlife, recreation, water and other environmental issues cannot be ignored. Suggestions for the agenda would be welcomed.

The meeting will provide an opportunity for the participants to meet and exchange views on the forest resource, to comment on past and present activities and to recommend a future course of action in the Province.

At this time, the Department is seeking to determine the extent of interest in the meeting and some indication of the number of participants. On the basis that the meeting will be held in Halifax and cost of meals and accommodations will be met by those attending, please fill out the following tear sheet if you are interested in attending...further information will be sent to those answering this inquiry.

The deadline given in the notice was December 1, but don't give up. Send your name, address, and suggestions for agenda to:

Office of the Deputy Minister
N. S. Department of Lands and Forests
Dennis Building
1740 Granville St. P. O. Box 698
Halifax B3J 2T9

The executive of the HFN encourages as many members as possible to respond to this request, especially in view of the present emphasis on "yields of fibre".

Coming in the new year *****

- January 13 (monthly meeting) Ian MacLaren on SABLE ISLAND
- 18 Sunday afternoon excursion to CONRAD BEACH, led by Derek Davis of the N.S. Museum. Meet at the Dal. Biology parking lot at 1 pm, or at the site.
- February 10 (monthly meeting) WILDLIFE IN WINTER
- 15 Sunday (full day) excursion to visit CONIFEROUS WOODS IN WINTER.
- 28 A Saturday film night. View some films, have refreshments, and relax.
- March 9 (monthly meeting) Paul Keddy on HARDWOOD FOREST ECOLOGY
- 21 March excursion to be announced.
- April 3-4 Special MAPLE SUGARING excursion; details to follow. a rainy mid-April evening -- trip to watch the ANNUAL AMPHIBIAN EXCURSION.

This schedule is reasonably firm, but consult subsequent newsletters for notice of changes. Suggestions from members are always welcome; speak to an executive member, or write to the Editor, HFN, c/O the N. S. Museum.

MEMBERSHIP in the Halifax Field Naturalists is open to any person interested in the natural history of Nova Scotia. To join, give us the following information by mail or at any monthly meeting, along with two dollars membership fee:

Name

Address

Telephone

Occupation or special interests

Any suggestions for excursions or meetings?

This Newsletter appears (so far) monthly, and will be distributed to members before or during regular Tuesday monthly meetings. We welcome reports of HFN outings or meetings, general notes on the natural history of Nova Scotia, or notes on issues of concern to you as a naturalist. We can also print pen and ink drawings. Send newsletter material to the Editor, HFN newsletter, c/o the Museum.

Articles for the January issue should be received at the Museum by Monday, December 29. The opinions expressed in the newsletter are those of the authors, and not of the Halifax Field Naturalists unless expressly stated as such.

** Merry Christmas and a Happy New Year to All Members **

We hope to see you in January to help us prove that winter is not a lifeless time of year, even in these far northern latitudes!

