HALIFAX FIELD NATURALISTS NEWSLETTER

c/o Nova Scotia Museum
1747 Summer Street
Halifax, Nova Scotia
B3H 3A6

MARCH – JUNE 1979

HALIFAX FIELD NATURALISTS NEWSLETTER

March – June , 1979. NUMBER: 20

Meetings are held on the first Thursday of every month, at 8.00 p.m. in the Auditorium on the ground level of the Nova Scotia Museum, 1747 Summer Street, Halifax.

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 to - Membership, Halifax Field Naturalists, c/o the Nova Scotia Museum. Individual membership is five dollars yearly; family membership is seven dollars. Members receive the Newsletter and note of all excursions and special programs.

Directors for 1979-80:

President	Joe Harvey
Vice-President	Anne Linton
Membership Secretary	Marjorie Willison
Treasurer	Pat Cunningham
Directors	Mike Burke
	Nancy Davis
	Erick Greene
	Linda Morris

Newsletter . . . . . Anne Linton
Mike Burke
Doris Butters

Mailing Address:

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

HFN is a member organization of the Canadian Nature Federation.

HFN is incorporated under the Nova Scotia Societies Act.

hfn news

The Nova Scotia Museum has indicated a need for volunteers to lead nature walks in and around the Metro area. In the past, many adult and youth groups have made enquiries at the Museum for guides, but Museum staff has been hard pressed to meet the demand.

HFN, in conjunction with the Museum, has recently initiated a training program for members who are interested in acting as guides. Naturalists involved in the program will develop their expertise in the natural history of a specific area (location in or near the city will be stressed) throughout the month of May and will plan to be available to the Museum throughout June and the remaining summer months. Five HFN members have already expressed interest and have attended an organisational meeting on the 11th April at the Museum.

If you are interested in becoming involved, call ANNE LINTON (423-8919, evenings) for more details.

NEWS ON THE LEACH'S STORM-PETREL CENSUS

Upon the submission, to the Nova Scotia Department of Lands and Forests, of our report on the census of Leach's Storm-Petrel (see Newsletter no. 19), we have received favorable comment and an offer of additional funds to carry out another census this year. We hope to conduct this second census during the first or second week of August and spend at least two days on the island. The Canadian Wildlife Service is presently conducting similar census work in the Maritime provinces (for the purpose of inter-year comparisons) and is interested in including this census with theirs. All in all, the project is beginning to take on more significance. Those who are interested and willing to become involved, please contact Anne Linton (evenings at 423-8919).

TO SPRAY OR NOT TO SPRAY

On Friday, June 5, the Aldermen of City Council met to consider a proposal to spray the city's trees. The insecticides suggested for use were Malathion and Sevin, both with dubious if not dangerous reputations. The infestation problem in the city, we felt, was purely a cosmetic one, not warrenting widespread spraying of the trees. Several months ago HFN made its views known to the Aldermen of City Council by distributing an article on city spraying which appeared in Newsletter no. 18 (pp. 3-6). Joe Harvey, our President, reiterated these views on radio (June 3, Information Morning). In addition, Joe attended the June 5 Council meeting along with Dr. David and Mrs. Patriquin, Ken Neil (of Dalhousie University) and Susan Mayo (Ecology Action Centre), all of whom had prepared very effective opposition to the proposed program. As a result of the efforts of these and others, the Aldermen's decision was 9 to 1 against ratification of a spray program.

HFN ANNUAL GENERAL MEETING AND SYMPOSIUM.

The HFN Annual General Meeting and Symposium, held on 3 February, was very well attended (140 people) and a great success (details to follow).

At the meeting, a motion was passed which enabled the new Executive (see inside cover) to represent the membership in a letter to government, outlining recommendations regarding oil and gas exploration in the North. Quickly, we drafted the following, which we hope underlines the major concerns arising from the Symposium and sent it to the Prime Minister, the Leader of the Opposition and the Minister of Indian Affairs and Northern Development.

7 February, 1979

The Rt.Hon. Pierre Trudeau
Prime Minister
House of Commons
Ottawa, Ontario.

Dear Mr. Trudeau,

The Halifax Field Naturalists held a symposium this past weekend (3 February) entitled "The environmental hazards of deep-water drilling in northern regions of Canada". Presentations were made by members of the Canadian Wildlife Service, Marine Ecology Laboratory of Bedford Institute of Oceanography and the Canadian Arctic Resources Committee. As a result of this meeting, the membership of H.F.N. has ratified the following proposals:

i. that the application to drill in Lancaster Sound by Norlands Petroleums, Ltd., in 1979, should be rejected;

ii. that the decisions regarding oil exploration in the Canadian Arctic be recognised as the first steps in the establishment of a major hydrocarbon-producing area rather than simply short-term investigations. Serious and lengthy discussion involving public debate of the risks as well as the benefits should precede such decisions;

iii. that biologically important areas in the Canadian North (as described by the Canadian Committee for the International Biological Programme) be considered for complete protection from future development. The Lancaster Sound Marine Area, critical to the production and survival of a large proportion of the total seabird populations in the Canadian High Arctic, qualifies for such protection.

It is our view that these proposals be seriously considered by Cabinet in the decision-making process regarding oil and gas exploration in the Canadian North.

Thank you for your attention.

Sincerely,

SUMMARY OF THE HALIFAX FIELD NATURALIST'S SYMPOSIUM

"Potential Hazards to the Environment from Deep Water Drilling in Northern Regions of Canada".

Saturday, February 3, 79.

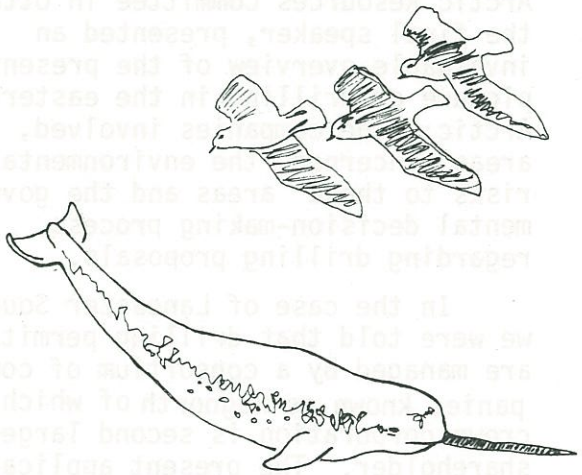
The aim of the symposium was to outline the biological importance of northern marine areas (particularly in the eastern Arctic) and to describe the risks to this environment that proposed oil and gas exploration would present. Four speakers gave presentations at the symposium.

Dr. D.N. Nettleship of the Seabird Research Unit of the Canadian Wildlife Service began by describing the biological importance of the Canadian eastern Arctic, emphasising the vast numbers of seabirds which breed there (roughly three million pairs). In Lancaster Sound (mouth of the North-west Passage) 66% of the North American Fulmar population and 28-30% of the Thick-billed Murre population congregate during the breeding season. Six to eight million Dovekies feed at the entrance to the Sound in May on their way to breeding colonies in Western Greenland. In addition, over 33% of North America's Belugas (White Whales) and at least 85% of North America's Narwhals migrate through these waters. Other noteworthy concentrations of marine mammals found in Lancaster Sound include Ringed, Bearded and Harp Seals, Walrus and Polar Bear.

As no major oil spills have occurred in arctic or subarctic waters, very little is known of the effects of oil on marine environments such as Lancaster Sound. However, judging from the numerous temperate spills, the outcome would be disastrous with massive mortality of seabirds. Oil spills in the English Channel beginning in 1907 and continuing up to the Amico Cadiz disaster in 1978 have reduced Murre and Puffin numbers at channel colonies to virtually zero.

Dr. R.G.B. Brown also of the Seabird Research Unit of the Canadian Wildlife Service stressed the biological effects of oil on an arctic marine system, again stressing the impact on seabirds. He expressed the opinion that an oil spill was inevitable in the north once drilling and oil transport were underway and that as we lack the suitable technology for oil containment and clean-up, virtually nothing could be done once an accident occurred.

The oil industry has predicted that leaks from offshore operations would probably result in the release (under pressure) of very small particles of oil into the water column. Such small amounts of oil coming in contact with seabirds, have important sub-lethal effects which interfere with normal physiological processes. These affect the growth rate of young and, in adult females, delay egg-laying and reduce egg-fertility. In the arctic environment where the breeding season is short, the impact for populations of seabirds, some of which are already declining, would be crucial.



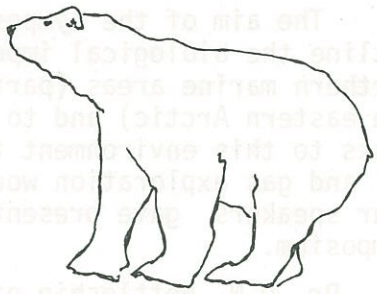
Dr. John Vandermeulen of the Marine Ecology Laboratory at Bedford Institute considered the numerous physical and biological factors which act upon an oil slick at sea. Experience in temperate waters has shown that the fate of a spill is generally dependent upon five processes;

1) evaporation, which reduces slick volume,
2) high mobility, which leads to rapid diffusion and dilution of slicks,
3) apparent buoyancy of most oil slicks preventing high concentrations at depth (most oil slicks then are surface phenomena),
4) physical wave action which breaks up slicks,
5) microbial degradation which eventually removes sediment-bound hydrocarbons.

Dr. Vandermeulen speculated upon the special and as yet unknown, case of an Arctic marine spill with respect to the above processes. Ice, covering the water for 75% of the year, would reduce the evaporation and dispersion of oil extending the time marine organisms would contact toxic hydrocarbons. For the same reasons, degradation and decomposition are likely to be much slower in Arctic waters.

Mr. Donald Gamble of the Canadian Arctic Resources Committee in Ottawa, the final speaker, presented an invaluable overview of the present picture of drilling in the eastern Arctic; the companies involved, the areas concerned, the environmental risks to these areas and the governmental decision-making process regarding drilling proposals.

In the case of Lancaster Sound we were told that drilling permits are managed by a consortium of companies known as Magnorth of which a crown corporation is second largest shareholder. The present application to drill in Lancaster Sound in 1979 comes from Norlands Petroleum in agreement with Magnorth. The incentives are obviously the possibility of an oil or gas find, but equally important are the federal government's tax incentives which essentially provide a 200% tax subsidy to those companies drilling in a frontier area before 1980.



Mr. Gamble underlined the fact that the probability of an oil spill was high and the ability of Norlands to finance a clean-up negligible. An oil blowout could go unchecked for one or two years, discharging tens or hundreds of thousands of tons of oil into Arctic waters.

The real issue, however, does not revolve around the decision to allow one hole to be drilled in Lancaster Sound. Rather the issue is the precedent it would set and the certainty that any large deposit would be developed. This is a major deficiency of the federal government's permit application and granting procedures; that it does not consider the logical outcome of an approval to drill, i.e. full development of the entire target potential; the building of an oil and gas transport system (pipeline or tanker route out of Lancaster Sound), offshore storage facilities, processing plants, etc.

> "The proliferation of proposed IBP sites, the ongoing interest of Parks Canada, the interest in the area for a Canadian contribution to the United Nations World Heritage List, the substantial use of the area by North America's migratory birds ... and the overarching issue of unresolved aboriginal rights, indicate that the Lancaster Sound area is of major regional, national and international importance .. an area too valuable to be risked for short-term economic gain."

A. Linton

UPDATE

Both Donald Gamble and Dr. D.N. Nettleship attended public hearings regarding Norland's application to drill in Pond Inlet, N.W.T. this past winter. Present also were representatives from the Canadian Nature Federation and Canadian Wildlife Federation, native groups and others.

The final decision on the part of the Minister of Indian Affaires and Northern Development was not to allow Norlands to drill in Lancaster Sound in 1979. Well and good ... but the battle next year will be the same if not more serious. Petro Canada is slated to apply to drill in the same area in 1980.

NOTES ON THE HFN DURING 1978 -

One of the pleasant things to do is to thank the many people who have helped in various ways to run H.F.N. during the past year. The only problem is that it is not possible to mention all names, so first, a big thanks to everyone who helped in any way. However, I should mention a few names such as Doris Butters who types the Newsletter, Lesley Butters who provides publicity and along with Sue MacKay and a host of others, make tea and cookies, etc.

The Newsletter was edited by Ray Pierotti before he resigned to concentrate on his thesis. Since September Anne Linton has been our editor and Mike Burke, Aileeen Meagher and her group do the collating, stapling and stamp-licking. Indeed, every address was handwritten until late 1978 when Marjorie Willison punched cards enabling the automatic printing of addresses at the Dalhousie Computer Centre. This eliminated a great deal of boring work. Perhaps the least known story concerning the Newsletter is that after Cathy Keddy left, Louise Cooke printed it single-handed on the Gestetner Duplicator in the Dalhousie Department of Biology for almost a year. More recently the Nova Scotia Museum has printed the Newsletter on their offset machine at nominal charge but Louise still duplicates the flyer of events.

In the Executive Committee we had several resignations during the year; Huguette Mallet leaving for Quebec City, Tony and Ann Bull for Waterton Lakes National Park and Jane Spavold for Fredericton. Of those who lasted until the end of the year but who are not continuing in the current year we have to thank; Secretary Will Robertson, Treasurer Rosemary Barbour who kept very neat accounts, Past-President Kathy Aldous and John Robinson.

Finally, we have to thank the Director of the Museum, Lynton Martin, for continuing to provide us with a meeting room and mailing address in addition to the printing service.

M.J.H.

Halifax Field Naturalists
Statement of Receipts and Disbursements
For the Year Ended December 31, 1978

Receipts

Membership dues	$ 687.00
Receipts from Fern Project	62.00
Receipts from Symposium Publication	30.00
Total receipts in year	$ 779.00

Disbursements

Meeting expenses	$ 93.56
Publications and stationery	80.00
Postage	90.34
Dues Canadian Nature Federation	25.00
Bank service charge	1.00
Projects - Science Fair Book Prize	25.20
- Ecology Action Centre Budworm Symposium	40.00
- Regional Resources Awareness	3.50
- Fern Project	4.95
Total disbursements in year	$ 363.55
Excess of receipts over disbursements	$ 415.45
Add - Opening Balance - January 1, 1978	69.23
Closing Balance, December 31, 1978	$ 484.68

Consisting of:

Cash in bank	$ 459.68
Cash on hand	25.00
Total	$ 484.68

Auditors' Report

I have examined the above Statement of Receipts and Disbursements of Halifax Field Naturalists for the year ended December 31, 1978 and report that in my opinion it presents fairly the results of their operations for the year.

Halifax, Nova Scotia
January 30, 1979

A.W. Linton
Chartered Accountant

editorial

KNOCKING THE NUKES - A DISSENTING VIEW -

In the past few years the safety of nuclear generating plants has become a major topic of public debate, thanks largely to the agitation of environmentalists. Public concern reached a peak following the recent accident at the Three Mile Island plant in Pennsylvania, and the anti-nuclear stances adopted by the Nova Scotia Opposition as well as the new P.E.I. government, enjoy wide public support.

Yet I believe that our current near-exclusive preoccupation with nuclear power is short-sighted, and that environmentalists must begin to look at the energy crisis in a much broader perspective. The Three Mile Island incident made headlines as a "disaster" and a "catastrophe". Yet no lives were lost and there were no injuries. In contrast, Nova Scotia has already suffered real disasters in 1979 from two other energy sources, namely the Glace Bay mine explosion which deprived several families of husbands and fathers, and the Kurdistan breakup, which has blackened our beaches, killed our seabirds, and struck another blow to the embattled marine ecosystem.

Yet for some reason we do not make the connection between our present oil and coal-fired generating plants, and the very serious hazards involved in supplying them with fuel.

The use of coal and oil poses not only short term, but long term threats. For example, the combustion of fossil fuels contributes to "acid rain", which is lowering the pH (and the productivity) of our lakes. Even more perilous is the menace to world climatic stability from combustion-released carbon dioxide, whose atmospheric concentration has risen substantially since pre-industrial times. Rising CO_2 levels could conceivably one day lead to the flooding of most of the world's populated areas by trapping enough solar heat to melt the polar ice caps.

The possibility of this sort of calamity may appear remote, but it is probably no more so than the chances of a nuclear plant blowing up. The effects of a Fundy tidal project are also clouded by uncertainty: we strongly suspect that some groups of animals would suffer heavily, but no-one can rule out the possibility that major oceanographic and climatic change might ensue.

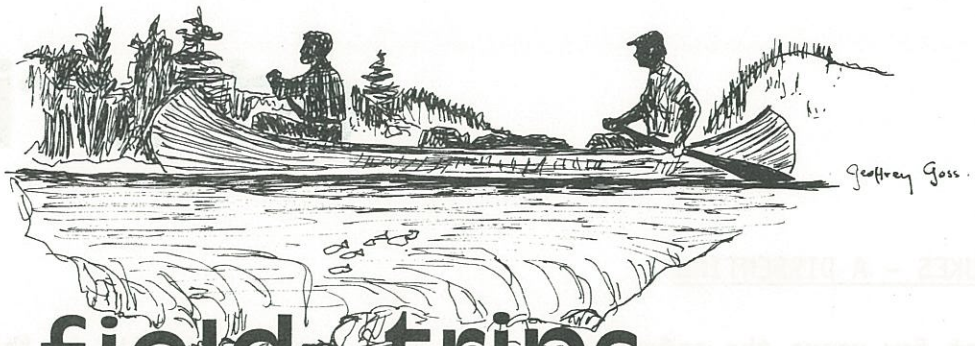
In short, coal, oil and tidal power, which are the immediately available alternatives to nuclear energy, have severe disadvantages which make them, in my opinion, as much of a long-term threat as nuclear energy.

It is probable (though by no means certain) that the next few years will see breakthroughs in solar technology that will solve the electrical energy crisis for the foreseeable future. But in the meantime the environmental movement should be educating the public on the dangers of all present methods of generating power, and we should do our best to encourage conservation and the use of "soft" alternatives.

In the past few years federal and provincial governments have been promoting fuel conservation through subsidy and publicity. But the environmental movement, which should be in the vanguard of the shift to the "conserver society", has been strangely uninvolved with this campaign. In regard to alternate technologies, we must try to raise public pressure to have development spending increased, and we should be doing all we can to publicise successful installations.

This sort of approach, I believe, would be much more productive than our present obsession with slaying the nuclear dragon.

David Cairns



field trips

A VISIT TO SANDY COVE AQUACULTURE STATION - 10 February 1979.

On Saturday, February 10, 25 field naturalists braved the cold for an exceptionally nice, albeit indoor field trip. Past signs for "Souvinir lobster traps" and piles of odoriferous Ptilota sp. (a prolific winter-blooming red alga), we entered a poorly-insulated NRC building on the shores of Sandy Cove (also called Fink Cove, located south of Ketch Harbor on route 349). Inside, we were captivated by Dr. Keith Morgan and Peter Shacklock who described the values of "seaweed" and demonstrated how marine algae are cultured at the station. Both emphasized that the station did not grow algae for commercial purposes, but was entirely devoted to researching the marketable properties of algae and passing the resulting information on to commercial growers.

One of the plants grown at the station, Palmaria palmata or dulse, is the only common seaweed that can be digested by humans. Even though some people find dulse objectionable due possibly to its high salt content, it does have a 25% protein content which is equivalent to that found in soybeans. A related genus, Porphyra, is widely cultured in Japan in submarine gardens and is considered a great delicacy.

In one greenhouse several tanks were set up (old tubs with washing machine motors driving paddle wheels) in an attempt to find an easy, cottage industry way of producing dulse. This has met with little success however. Both male and female plants must be present in the culture in order for sexual reproduction to take place and at this time very little is known of the identity and characteristics of male plants. A sterile plant, which would have more easily controllable vegetative growth, is being sought. In the meantime, dulse will continue to be collected in managed quantities in the wild at such places as Grand Manan.

Chondrus crispus or Irish Moss is the other experimental, marine algae cultured at the station. Carrageenin, an emulsifying agent used in a variety of products, is extracted from Chondrus and sold commercially. We were told that there are two different types of carrageenin, a kapa and a lambda variety, each with distinctly different gelling properties. A sterile kapa plant has been developed which presumably, when ideal growth conditions are found, could help to revolutionise the carrageenin industry.

Our visit was rounded off by a look at a set of solar collectors built near the station's pumphouse to assist in bringing incoming seawater (used in the culture tanks), to the desired temperature.

Thank you Keith Morgan and Peter Shacklock for a very enjoyable and informative morning.

Nancy Covington.

WAVERLEY GAME SANCTUARY WALK -
3rd March, 1979 -

Sixteen adults and four children led by Udo Prager and Erick Greene went to the Waverley Game Sanctuary on Saturday, March 3rd, to see what could be learned from the still-frozen woodlands. Udo helped us see many things we otherwise would have missed or misinterpreted and his interest in the woods inspired many questions which he answered patiently and generously. We practised the use of a winter key, using twig features, bud arrangement and old bud scars to identify the trees in the area. During the walk, the shallowness of the soils, the frequent occurrence of bedrock outcrops, the low nutrient availability in the soils (indicated by the general yellow colour of conifer needles) and evidence of past cutting in the form of stump sprouts were all too obvious. The importance of stump sprouting in Red Maple regeneration was pointed out. After being cut, Red Maple has a propensity for sending up new shoots from the cut stump. These shoots grow very quickly, as they are being nourished by an extensive well-established root system. However, the shoots are deformed and are prone to rotting in the middle since they are growing from a rotting stump. This phenomenon of stump sprouting allows rapid growth but the wood is not useful as quality lumber.

Erick kept us on the right path, cheerfully lending a hand to the less agile on the steep, and/or slippery stretches, and when a too-venturesome child fell through the lake ice it was Erick who came to the rescue demonstrating approved Red Cross methods.

We ate our lunch on the shore of Soldier Lake where Udo showed us, for comparative purposes, two aerial photographs of the area, one taken in 1948, and the other in 1971. These gave us a general impression of the rate of regeneration of the area. The extent of shrub-covered areas had decreased while the forest-covered areas had increased. The present site conditions, with an abundance of early succession species (red maple, poplars, paper birch and alder) and the past site history (most of the cutting probably occurred before 1926) suggests a relatively low rate of succession.

The Waverley Game Sanctuary was established in 1926, in response to a request from the Canadian General Council of the Boy Scouts Association. About one third of the sanctuary is privately owned, and the owners still retain harvest rights. The Boy Scouts Association has practised little forest or wildlife management in the area

Udo recommends the following texts for those interested in the identification of trees in Nova Scotia:

1. Identification of Nova Scotia Woody Plants in Winter, by James F. Donly. Published by Department of Lands and Forests. Bulletin No. 19 (1960).

2. Summer Key to the Woody Plants in Nova Scotia, by A.E. Roland and D.A. Benson. Published by Dept. of Lands and Forests. Bulletin No. 16 (1955).

   Both of these keys are available at government bookstores ($1.00) or the Department of Lands and Forests office in Truro. (free).

3. Native Trees of Canada, by R.C. Hosie. Published by the Canadian Forestry Service (1975). Available at Trindles (Historic Properties) and the Trail Shop.

other than restricting hunting privileges. None of the sanctuary is prime game territory and the forests are generally in poor condition. At present the Department of Lands and Forests is considering converting the sanctuary into a provincial park.

Lack of snow cover this year allowed us to see masses of mayflower leaves and to identify many other old friends of the forest floor - partridgeberry, wintergreen, bunchberry, goldthread and snowberry among them.

Many thanks to Udo and Erick and to the generous drivers who transported the car-less among us. It was a good day.

Maud Godfrey.

EARLY MORNING BIRDWALK -
Saturday, April 21 -

(Hereafter to be known as The Glossy Ibis Walk)

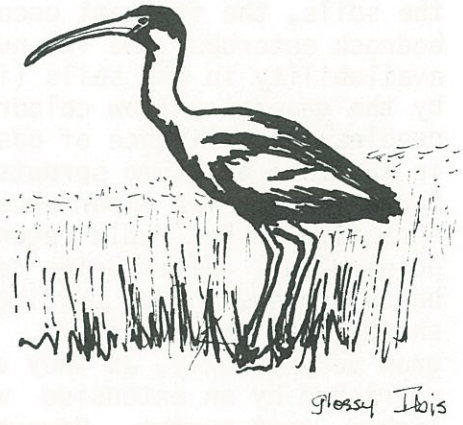
Gray skies and a chill wind failed to cool the enthusiasm of the 18 adults and one child whom Eric Cooke led to the Lawrencetown area to look for migrating shore birds. The morning yielded sightings that were exciting even for the most seasoned birdwatchers among us.

Heartbreak Hill on highway 207 provided the vantage point for our first view of a flock of Canada Geese. Eric Cooke and Erick Greene both set up their telescopes to give everyone a good look. A little further on, a pair of Common Mergansers and one Red-breasted Merganser were seen on the water in Cole Harbour.

As we drove east towards Lawrencetown, we spotted several Osprey soaring over and alighting on two nests in the treetops near Lawrencetown bridge. A solitary seal was also sighted lolling in the surf like a bather on a summer afternoon, but perhaps he, like us, was watching the Old Squaw ducks and the four Horned Grebes feeding not far off shore.

Lawrencetown Lake yielded a close view of the Canada Geese feeding and everyone had a good chance to watch these graceful, handsomely marked birds.

The high point of the day came when Eric Cooke led us to the spot where he had previously discovered four Glossy Ibises . Robie Tufts, in his Birds of Nova Scotia, describes these birds as: "Visitant. Very rare and equally irregular... The first record was in 1865, others 1946, 1958, 1965, 1966, and 1970...They have been seen in singles or in very small numbers and invariably were reported as frequenting wet, marshy grounds. The Glossy Ibis is slightly larger than crow-size. It has long legs neck and bill, the bill being decidedly down-curved. It is a native of tropical and subtropical regions in both hemispheres and its occurrence here is purely accidental". Robbins' Birds of North America says: "Uncommon but extending its range. Feeds in small flocks in fresh or salt marshes. Adult is a uniform bronze brown, which appears black at a distance. ...The thin decurved bill, outstretched neck, rapid wingbeats and alternately flapping and gliding flight distinguish it from herons."



The Ibises obligingly stayed together, feeding in a small area, one of them demonstrating, with great energy and rapidity, how they dig their food out of the mud.

Conrad's Beach, our next stop, supplied yet more excitement. First our ears picked up the plaintive calls of Piping Plovers and we located them easily because their backs, the colour of beach sand on a warm summer day, showed clearly against the dark, wet sands of April. For several minutes we watched these dainty little birds, one of whom appeared to be hollowing

out a nest in the sand near a tuft of grass. Due to increasing disturbance to vegetated dune slopes (dune buggies are the worst offenders) which are the preferred nesting habitat of this species, it has been declining throughout its range and at present numbers only about 300 to 350 pairs in eastern Canada (HFN Newsletter no. 18).

A Black Duck, and a Common Loon in winter plumage attracted our attention seaward in time for us to see the approach of a large flock of Common Eiders. Hundreds of these striking black and white ducks presented a marvelous display as they flew, wheeling and turning to and fro.

Many thanks to Eric Cooke for giving us this rewarding morning. Left to ourselves we should have reported - "Oh, just some gulls and ducks", but Eric's experienced eye and ear picked up signals to which many of us would have been blind and deaf. Our score for the walk was: Belted Kingfisher, Black Duck, Canada Goose, Common Eider, Horned Grebe, Common Loon, Common Merganser, Glossy Ibis, Great Black-backed Gull, Great Blue Heron, Great Cormorant, Herring Gull Oldsquaw, Osprey, Piping Plover, Red-breasted Merganser, Red-tailed Hawk, Robin, Song Sparrow and a Belted Kingfisher.

Maud Godfrey

HIGH SCHOOL SCIENCE FAIR -

The winner of the 1979 HFN Metro Area High School Science Fair prize in natural history was Heidi Maass. Her exhibit described the natural history of the common garden spider, a specimen of which she kept indoors and keenly observed throughout the winter.

Although our own judges (Marjorie Willison and Anne Linton) did not know it at the time, the High School judging panel considered Heidi's exhibit the best in her age class and she received a prize and trip to Toronto to attend the National Science Fair. Our prize was a book token and a year's membership in HFN, but since Heidi is already a member through her family we shall have to extend the Maass family membership for next year.

Congratulations, Heidi!

Membership in the Halifax Field Naturalists is open to anyone interested in the natural history of Nova Scotia. Former members are encouraged to renew their memberships and new members are always welcome.

Membership fee is five dollars annually, family membership seven dollars.

Halifax Field Naturalists
c/o Nova Scotia Museum
1747 Summer Street,
Halifax, B3H 3A6.

Halifax Field Naturalists: new _____ renewal _____

Name _____

Address _____ Postal Code _____

Occupation or interests _____