HALIFAX FIELD NATURALISTS NEWSLETTER

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

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JAN - FEB 1976 NUMBER THREE

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.

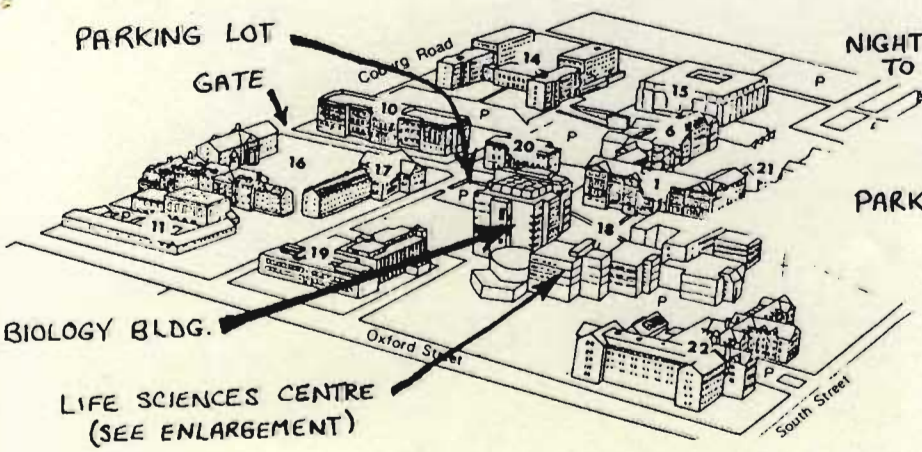
Executive for 1975-76

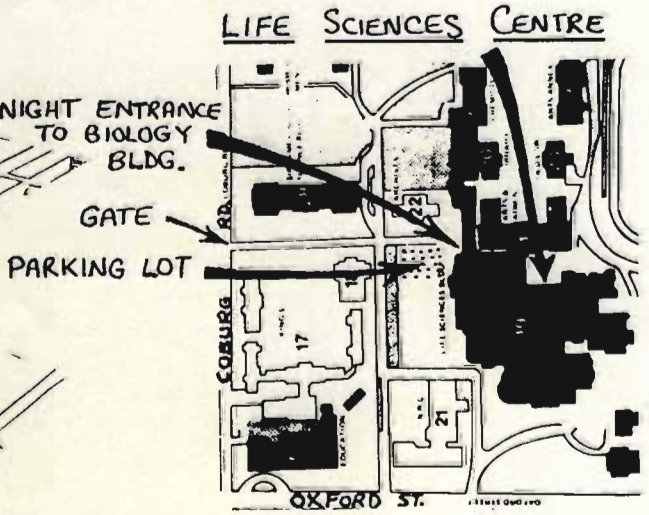
President	Paul Keddy	422-7238 evenings
Secretary	Winnifred Cairns	455-9513 evenings
Newsletter	Debra Burleson	429-4610 daytime
Program Committee .	Scott Cunningham	
.	Anne Linton	
.	plus other executive members	

Mailing address

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

DALHOUSIE CAMPUS





HFN News

ZOOM! Our membership has passed seventy-five. It looks as though the time was right for a natural history society for Halifax.

HFN has taken some of that membership money to become a supporting member of the Canadian Nature Federation. Look for their quarterly journal, Nature Canada; it is excellent.

We have decided to introduce a new category of membership--a family membership--at a rate of three dollars. If your family is at present paying several single memberships, see Winniefred Cairns, our treasurer.

The Natural History Society of Prince Edward Island, whose newsletter we now receive, has published a collection of natural history notes, under the title Winds of Sea and Wood. The short notes and drawings are collected from the Society's newsletter, and from articles written by members for local newspapers during Environment Week last year. In this effort the Society received assistance from the University of Prince Edward Island the Department of Tourism, Parks and Conservation. The HFN executive has a copy of the book, which is available for about two dollars from the Society.

Looking for an indoor natural history project? There is need for a reading list (at about the Junior High or High School level) on endangered species. If you would like to do some searching, or know of any material that should be on such a list, contact Debby Burleson at the N. S. Museum, 429-4610.

The first issue of AHOY!, an Atlantic magazine for children, should be in the schools by this time. If you have a yen to write or draw for children, or if your children are writers, get in touch with the editor: Joan Waye, Suite 709, 1030 South Park St., Halifax. This project is sponsored by the Junior League of Halifax.

A great fuss and fanfare for Scott Cunningham, co-ordinator of the successful Jan. 24 Spruce Budworm Seminar. TA-DAH, Scott.

The N. S. Speleological Society's latest newsletter has a good article on the bats of N. S., including some original work and observations. See it at the Information Center of the N. S. Museum.

Things to Come

February 10 monthly meeting: Neil van Nostrand, wildlife biologist with the Department of Lands and Forests, will talk to us about wildlife in winter. Mr. van Nostrand is a specialist in fur-bearers biology, and serves as liason between trappers and the Department of Lands and Forests, as well as keeping an eye on Fur-bearer populations. We'll also have a film on winter wildlife.

February 15 excursion: to visit coniferous woods in winter. We haven't chosen the site yet, but come to the Dalhousie Biology parking lot at 10 am. Bring a lunch; we'll return likely around 4 pm.

February 28: a Saturday movie night. Our films are chosen to interest both adults and children, so bring the whole family and relax. A snack will be provided, or bring along an edible. Same meeting place as usual, 8 pm. Here are the titles:

Bighorn 10 min. A close look at the Bighorn Sheep of Canada's Rocky Mountains.

World in a Marsh 21 min. Have you ever seen a frog eat a snake? This is just one of the excellent sequences in this film on marsh ecology.

Evolution 10 min. An award winning animation that takes a humourous look at the process of evolution.

The Face of the High Arctic 13 min. The advance and retreat of the glaciers have shaped both the land and the plants and animals of the Arctic.

The Loon's Necklace 11 min. An Indian legend explains how the Loon got the white band around its black neck.

The Changing Forest 17 min. Hardwood forest ecology. The interrelationships of the forest plants and animals, and how the maple tree dominates hardwood forest.

March 9 monthly meeting: Paul Keddy, HFN president, will speak on hardwood forest ecology.

March 21 Sunday excursion: to be announced. Suggestions?

The Seals of Sable Island by Edward H. Miller

Sable Island affords sanctuary for large numbers of two seal species: the grey seal and the common, or harbour seal. In centuries past vast herds of walruses, probably numbering ten thousand or more, regularly gathered there to rest and moult, but man has long since extirpated them in this part of the range. Grey and common seals are persecuted to varying degrees throughout most of their range, and are therefore typically encountered by naturalists only fleetingly and in small numbers. However, both species maintain large breeding populations on Sable Island where they are (to date) little disturbed by man, in the form of transient birdwatchers and researchers, and residents of the meteorological station.

The seals of Sable Island belong to the same family (Phocidae) yet have divergent social systems and ecological relations. Common seals number about 1,200 and in the spring and early summer bring forth single pups in the sea, small lakes, and less commonly on the beaches. The bond between female and pup is the most enduring social attachment in the life of the common seal, yet is briefer than two months. In this period pups and their mothers remain in close association on land and in the water, and nursing takes place in both locations. Females and pups form herds on shore, but these herds are evanescent and not always composed of the same seals from day to day. Females finally come on heat, and mate in the water during a brief period (several days?). Shortly thereafter the female-pup bond weakens and disintegrates, and another reproductive cycle begins.

Grey seals have a complex terrestrial society in which large old males compete, through fights and threats, for space on beaches where females pup. Males generally haul out several days prior to the arrival of pregnant females, on beaches used only by the species during the brief winter breeding season. Females arrive ashore and bear the white-coated pups there within a few days, and are attended by males virtually from the time they come out of the sea. Females typically remain ashore for the entire 3 - 4 weeks of lactation, during which they fast. Near the end of their stay they enter a few days of sexual receptivity, then return to sea. Their pups remain ashore for one or more weeks to complete their moult, then venture to sea alone. Because female grey seals are fairly sedentary between the time they give birth and mate, and because many females bear pups within a brief period on certain beaches (about 1,500 pups were born last winter, mainly in January), males often achieve the status of polygamists. In a crude sense, then, grey seals have a "harem" type of social organization.

Grey and common seals have very different modes of social life and reproduction, and in the absence of chronic disturbance by man both species are maintaining large healthy populations on Sable Island. Serious and recurrent complaints by the fishing industry will likely necessitate a reduction of the grey seal population on Sable, through planned culling. Similar control operations in Great Britain have not threatened the survival of grey seal populations there, and are not likely to here. Other possible objections to such a management program for Sable Island grey seals are yet to be raised.

January Excursion -- Conrad Beach by Lauren Michell

On a cold bitter Sunday in January, thirty or more members of the Halifax Field Naturalists gathered together for an excursion to Conrad Beach. This unique beach is one in the Halifax region that displays typical sand dune characteristics and vegetation. Exposed to wind and wave action, this dynamic system, like others, is able to survive only if serious interventions by man are prohibited. The trip provided the field sequel to Dr. Ian MacLaren's recent talk on Sable Island.

At the beach the group broke into two, some tending towards the shore to observe marine life while others stayed to the dunes, watching for shore life.

The winter storms having washed much of the sand out to sea, left very little marine life on the beach. Outcrops of rock were observed where during the summer months several feet of sand would be. In spite of this, bits of Sand Dollars, Sea Urchins, the carapace of a Crab, Dogwhelks, and other small shells were found. The macroscopic stage of Laminaria or kelp displaced by the storms was found in abundance about the shore. The most impressive find for the trip, and a relative rarity for Nova Scotian beaches, was a perfectly preserved Seahorse. This fish and other species native to tropical regions sometimes are carried north to these latitudes by the Gulf Stream system. Spin-offs from the main current against Nova Scotia's shores allow the organisms to wash up on the beach.

For the birders among us it was a successful afternoon. Juncos, Snow Buntings, Purple Sandpipers, Black-headed and Black-backed Gulls were sighted. A Meadowlark brought a touch of the unusual as this bird is not often seen during the winter months in this region.

Part of the trail led into a small coniferous bush. The stillness and quiet of the wood was a startling contrast to the crash of waves on the shore. Unfortunately, the spirit of the hike was somewhat marred by the discovery of several fox snares. There has been a pair of foxes nesting in the beach area for quite some time. Every spring naturalists and their families can be seen out watching for the pups. Needless to say the snares were released.

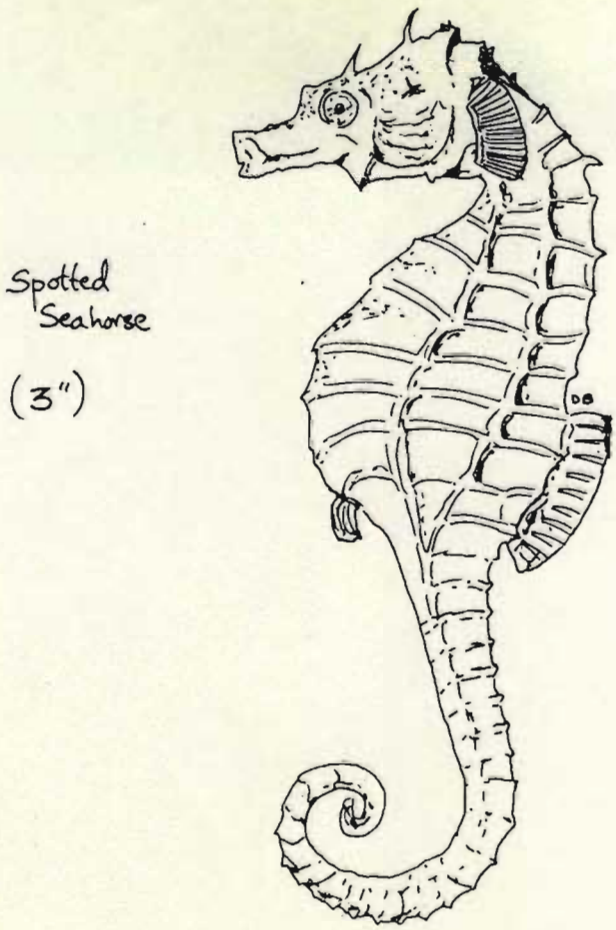
At the far end of the rocky spit was the remains of an old shed. Neglected, it has now succumbed to the natural elements--wind, water and time.

In the natural world nothing is static. Constantly the environment is changing, making conditions intolerable for existing life forms and allowing others to take over. This process of ecological succession is most vividly observed in a sand dune area and serves as a reminder that nature--the environment--is self-sustaining.

That Seahorse was not likely a willing visitor to these cold waters. Seahorses are fishes, in the order Solenichthyes, which also includes such oddities as the pipefish and tubesnouts. All of these are fishes of shallow, warm seas in tropical, subtropical, or temperate marine areas. The Seahorses and Pipefishes are of interest because of their unusual breeding biology. The eggs are laid by the female in a brood pouch on the abdomen of the male where they incubate, eventually emerging from the pouch fully developed and able to take care of themselves.

I have seen live pipefish in shallow inlets near Lunenburg, but the few Seahorses that are reported each year are found dead. Often they are collected tangled in mackeral nets. Seahorses normally range from Cape Cod to North Carolina--a rather restricted range. The tail is prehensile, with propulsion by means of the dorsal fin. The Seahorse maintains an upright position, and draws copepods, amphipods and other Crustaceans into its mouth with a sucking action.

WHO HAS THE SEAHORSE? If it's still in good shape, please call John Gilhen at the Museum (429-4610). He'd like to photograph it.



Spotted Seahorse

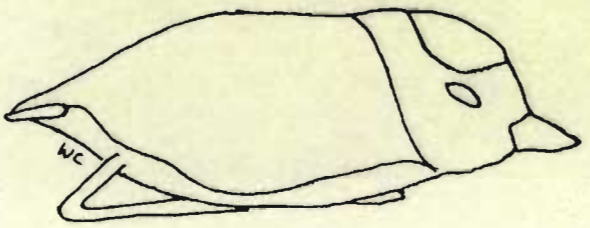
(3")

The Piping Plover by Winnifred Cairns

One of the earliest of the summer visitors which flock to Atlantic Province beaches each year is the Piping Plover. So keen is it to get back that it barely waits for the snow and ice to leave the coast before it can be seen along our outer shores. The first birds arrive by mid April and soon begin the serious business of courting and establishing nesting territories. The males choose an appropriate expanse of flat dry sand which they spend much time patrolling. While running about in this area, they sometimes pause to nestle down onto the sand, vigourously wallowing to form a hollowed scrape in the sand.

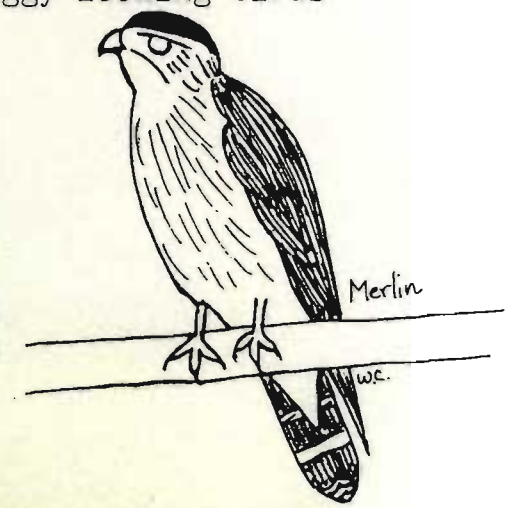
The males also spend long intervals simply standing on some vantage point within their territory, perhaps choosing a small sand drift or an old log for this purpose. If another male enters the territory, it is immediately chased, the resident bird either chasing it in flight or approaching the intruder at a running charge with head down and feathers ruffled. Sometimes the birds meet along a common boundary. In this case the two frequently commence strutting up and down the line, often stopping to face each other and bob their heads several times. Strutting birds assume very erect postures, maximizing the visual effect of their shiny white breasts and bellies and black neck ring.

It is from these territories that male Piping Plovers take off on their display flights. With deep slow wingbeats that show a flashing white from a distance, they fly over their territories in broad sweeping circles, uttering either a rapid series of high notes or a slower plaintive series of calls. After a female has veen successfully courted, and the pair has mated, a clutch of four eggs is laid in a scrape on the sand. The nest scrape is sometimes lined with bits of broken sea shells. Both parents share in the incubation duties, relieving each other so each has time for feeding on the lower beach. Both adults defend the territory. After four to five weeks the eggs hatch and several hours later the young begin to run about, pecking the sand in search of food. During the next five weeks the parents may be seen escorting their broods down to the feeding territories that border the waterfront like cottage lots. While not feeding, the birds are usually moving about or resting in the nesting territory. As the young learn to fly, they break away from the family group, spending increasing amounts of time feeding on their own. By mid August most Piping Plovers have left the beaches and are on their way south to spend the winter along the Florida and Texas coasts.



Hawks Hit Halifax by Winnie Cairns

If you've been wandering around the streets of Halifax recently, you may have noticed a couple of craggy looking birds perched in the tree tops and on power lines. Two Merlins (or Pigeon Hawks) have been wintering in the city, keeping a wary eye out for small birds. The Merlins make the rounds of the local bird feeders, picking up an unsuspecting meal here and there. Members of the falcon family, Merlins can fly and strike with lightning speed. A favourite haunt is the Oxford street area, in the vicinity of the well-known pigeon feeding center. Merlins are not common in Nova Scotia, and generally breed in spruce-lands and barrens far from towns.



On the subject of hawks, I happened to observe an airborne drama early in January. While walking on William Hunt Avenue (near the Halifax Shopping Center), I heard several short, shrill pips. I looked up in time to see a House Sparrow dart behind a house, followed closely by what I'm fairly certain was a Sharp-shinned Hawk. The hawk emerged from behind the house with a gray bundle in its talons. Several Sharp-shins have been reported in the city. These birds often visit towns in winter, and seem to do pretty well at feeding stations. At least one Sharp-shin has been turned in to the Museum, dead from colliding with a window.

Wildlife is not so far away as you may think -- an Armdale resident and her young son went walking along the south shore railroad line, where it begins very near the Armdale Rotary. A light snow had fallen the night before, making prime tracking conditions. They followed several rabbit trails, until one in particular attracted their interest. Tracks indicated that the rabbit was moving slowly, then broke into a run in leaps and bounds. Sure enough, a fox track soon joined the rabbit's and paralleled it. Besides fox, rabbit, and squirrel, they also identified weasel tracks and found many, many mouse runs, with clear tiny footprints from one snow tunnel to the next.

Seen something interesting lately?

Drop a note to your newsletter, care of the Nova Scotia Museum.

A Private Member's Bill: Canada Sea Coast Conservation Authority

Just after Christmas HFN received a letter from Ian Watson, M. P. (Laprairie), requesting support for Bill C-253 which provides for the establishment of a Canada Sea Coast Conservation Authority. Paul Keddy has studied the bill, and here follow his thoughts. Bill C-253 is reproduced on the opposite page.

"As mentioned at the January meeting, we will shortly be drafting a reply to Ian Watson's letter. Members with specific comments on the material contained in Bill C-253 should contact a member of the executive.

"As it now stands, I think we can write and give our support in principle to the bill. As naturalists, the sea coast is dear to us. Members on the field trip to Conrad beach probably noted the proliferation of building lots in the area; many other natural coastal areas are facing similar pressures. A Canada Sea Coast Conservation Authority might well be able to protect such areas.

"Specifically, however, the bill presents a number of problems.

"In section 3(a), the Rederal government representatives on the body would include Indian Affairs and Northern Development, Public Works, and the Ministry of State for Urban Affairs. Where does the Federal Department of Environment fit in? Surely they have more of an interest in coastal protection than Public Works or Urban Affairs! Perhaps Public Works could be replaced by Environment.

"In section 3(c) the bill suggests a representative from each province. To prevent these positions from being used merely to pay political debts (as has happened on some committees), why not add 'to be selected jointly by the conservation groups of each province'.

"Thirdly, and quite important, is section 6, stating that the object is 'to protect the beauty of Canada's coastlines and to oversee the conservation for public recreational use of the sea coasts of Canada'. While we cannot quarrel with the first part, surely it is precisely intensive recreation which threatens certain areas of our coastline, such as the sand dune systems. 'Recreational use' could justify dune buggies, hot dog stands--and Coney Islands. I think there is strong justification for re-working this section.

"When we draft a reply, these comments as well as any from members will form the basis of our response. Bill C-253 is a private member's bill with little chance of passing.

"Still, as Ian Watson pointed out, a letter of support (at least support in principle) might encourage the government to put forward its own legislation. The Canadian Nature Federation national office in Ottawa suggested that we send a copy of our reply to Prime Minister Trudeau as well.

Paul Keddy

THE HOUSE OF COMMONS OF CANADA

BILL C-253

An Act to provide for the establishment of a Canada Sea Coast Conservation Authority

Her Majesty, by and with the advise and consent of the Senate and House of Commons of Canada, enacts as follows:

ort title

1. This Act may be cited as the *Canada Sea Coast Conservation Authority*.

nition

s coasts"

2. In this Act,

"sea coasts" shall mean shore line and the lands bordering the shore line to a depth inland to be recommended by the Authority having regard for the natural features and the aesthetics of the area of coastline to be acquired or protected.

da Sea t Conserva- Authority

3. There is hereby established a body to be called the Canada Sea Coast Conservation Authority composed of fifteen persons who shall be appointed by the Governor in Council from among the following persons:

a) a representative from each of the federal departments of Indian Affairs and Northern Development, Public Works and the Ministry of State for Urban Affairs;

b) representatives from each of the provinces of British Columbia, Manitoba, Ontario, Quebec, Nova Scotia, New Brunswick, Prince Edward Island and Newfoundland; and

c) a resident from each of the provinces of Canada and from the Northwest Territories and Yukon Territory who is not a member of the public service of Canada,

the provinces or of the Northwest Territories or Yukon Territory.

Tenure

4. Every person appointed under section 2 shall hold office during pleasure and serve without remuneration.

Chairman and Vice-Chairman

5. The Governor in Council shall designate one of the members to be Chairman and one of the members to be Vice-Chairman.

Object

6. The object of the Authority is to protect the beauty of Canada's coastlines and to oversee the conservation for public recreational use of the sea coasts of Canada which are accessible to the general public.

Advising Governor in Council

7. In carrying out its objectives, the Authority may advise the Governor in Council in respect of the following matters:

a) the compilation of an inventory of the sea coasts of Canada including the determination of their

(i) accessibility to the public,

(ii) recreation potential

(iii) ownership, and

(iv) acquisition cost estimate; and

b) the methods whereby the Sea Coasts of Canada can be best conserved and made more easily accessible for and on behalf of the people of Canada.

8. The Authority is empowered

a) in association with the Department of Public Works of Canada to acquire control of all Canadian sea coasts presently owned by the Crown in right of Canada;

b) to enter into agreements with a province to acquire control, in association with the relevant ministry of the province concerned, accessible sea coast owned by the Crown in right of that province;

c) to enter into agreements with the provinces or municipalities providing there is provincial consent, or with private persons including associations and corporations to protect existing and traditional uses of sea coast lands;

d) to enter into agreements with the provinces or municipalities with provincial consent, or with private persons including citizen groups, associations and corporations and/or Central Mortgage and Housing Corporation and/or Heritage Canada, to protect and conserve buildings reflecting the traditional architecture of the various coastal regions of Canada;

e) to enter into agreements with the provinces or municipalities with provincial consent, or with private persons including citizen groups, associations and corporations and/or Central Mortgage and Housing Corporation and/or Heritage Canada, to promote awareness and to encourage usage of traditional maritime architectural forms, and to encourage and promote the usage of architectural forms which are compatible with, and aesthetically complimentary to the landscapes and seascapes of Canada's various coastlines.

Financial Contributions

9. The Authority may receive financial contributions from sources outside of the federal government to defray the costs of its administration and the acquisition of sea coast property.

News about Endangered Species

from The Canadian Field Naturalist, Vol. 89(3), July/Sept 1975

Canada has ratified (April 1975) the international convention regulating trade in endangered animals and plants. The convention was adopted by 80 nations in March 1973 to help curb commercial over-exploitation of certain species of wild fauna and flora. The agreement, effective 90 days after the tenth nation has ratified it, imposes import, export, and transit controls on these species. Canada is the eighth nation to ratify the convention.

The restrictions imposed by the convention will affect zoological gardens, pet dealers, private collectors, the fur industry, horticulturalists, tourists, and persons who purchase curios and artifacts made from the by-products of these species. The restrictions placed upon a particular animal or plant or its by-product vary according to how it is listed in the convention. Trade in species listed in Appendix I, those which are considered endangered (such as cheetahs and alligators), is allowed only under exceptional circumstances and then both an export and import permit are required. Appendix II species (such as chimpanzees and orchids) need protection so they will not become endangered through excessive trade. Appendix III species, those which are protected under each participating nation's laws (like the Walrus and Snowy Owl in Canada) need an export permit frim the originating nation.

Convention controls apply when a listed species is shipped between two nations of which at least one has ratified the agreement. In Canada, these controls will not replace or supersede and domestic legislation, such as the health requirements of the Department of Agriculture. If an imported animal or plant or its by-product lacks the proper convention permits, it will be seized at the point of entry and then either returned to the country of origin at that country's expense or disposed of. Live species which are seized in Canada and not returned will most likely be donated to approved organizations having the proper facilities to care for them.

Canadian convention permits will be issued in accordance with the Export and Import Permits Act. The federal Department of the Environment will issue all convention import permits as well as convention export permits for species which are a federal responsibility The provinces and territories will issue convention export permits for species which come under their jurisdiction. Further information on the convention is available from the Canadian Wildlife Service.

by Scott Cunningham

The first detailed public analysis of the spruce budworm problem in Nova Scotia took place on Saturday, January 24, at Dalhousie University. The symposium's origin reaches back to the November meeting of the Halifax Field Naturalists. At that time it was pointed out that an application for a spraying permit had been made to the provincial government by a major pulp and paper company in the province, Nova Scotia Forest Industries Ltd. The implications of such a move were discussed and it was decided to forward a letter to the Premier and the Minister of Lands and Forests expressing our concern (letter and reply follow this report). The idea was pursued and interest snowballed as several other national as well as provincial organizations also believing that the problem warranted attention, agreed to co-sponsor a symposium on the subject. The result was last month's well-attended exchange of ideas.

All sides of the problem were represented either through the speakers presentations or through questions from the floor. The symposium lasted the entire day and began with Gordon Baskerville (Faculty of Forestry, UNB) who provided the background. He analysed the budworm and its life cycle along with the development of the New Brunswick situation. Gerrit van Raalte (N. S. Liason Officer, Maritimes Forest Research Centre) dealt with the infestation in Nova Scotia. Bruce MacLeod (Chemical Control Research Institute, Ottawa) and Bill Varty (M.F.R.C., Fredericton) described the evaluation of pesticides, their effect on the environment, and alternative biological controls.

The afternoon session had Bud Irving (General Manager, Forest Protection Ltd.) describing the cost-benefit analysis and the operational aspects of the spray program in New Brunswick. Hollis Routledge (Assistant Woodlands Manager, N. S. Forest Industries Ltd.) and Bob Murry (Woodlands Manager, Scott Paper Co. Ltd.) viewed the problem as seen by their companies and the symposium was closed with a wrap up by Richard Torn, President of the Conservation Council of New Brunswick.

The complexity of the situation became evident to those who had any doubts before, during the course of the symposium. No firm or satisfactory answers to many questions could be supplied. -- How long will the Nova Scotia outbreak last? How far will it spread? Would spraying tend to prolong the outbreak and what would be the long term effects on the environment? How costly would a spray program be and who would pay for it?

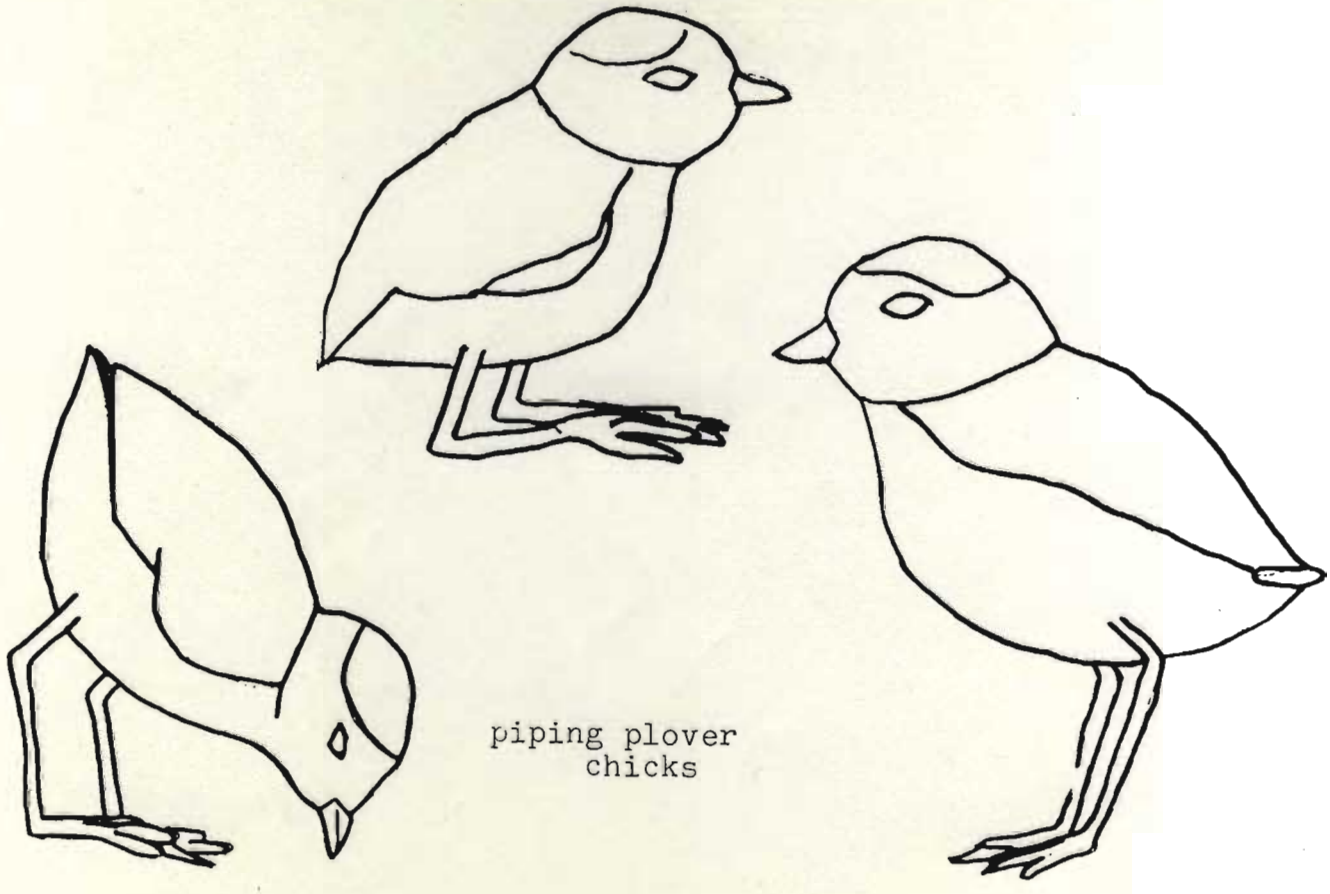
In making a rational decision dealing with the epidemic, some answers to these questions must be attempted. The difficulty is that with any one question the response depends upon numerous variables none of which can be determined with certainty. For example how long will the outbreak in Cape Breton last? No one would venture an answer. -- It depends on how things go in New Brunswick. It depends upon the weather. It depends upon variables of which we are not yet aware. If a spray program is initiated what will the effect be on non-target species? -- That depends upon the insectiside used and how it is applied - which depends upon the terrain and the weather conditions. It depends upon the length of the spray program and the results of experiments that are not yet planned let along carried out. And so it

.../2

goes with all these questions.

What to do? Someone has to make some decision. If trees are not sprayed some will die. How will that affect the economy of the region? Vast areas of dead trees are of little use to anyone, but is the damage to be expected this year so great that we can't afford to wait awhile? Can we afford to wait another year in anticipation of a better understanding of the problem on which we can base a more reasoned approach? I would tend to think that we can. Too many hasty decisions in the past have resulted in the creation of more problems than were to have been solved. However, in making my decision as a citizen of this province I must also be prepared to accept my part of the responsibility for the welfare in that region if the budworm creates significent economic hardship. One is entitled to oppose spraying but only if he acknowledges and accepts tha possible consequences for that decision. That is also the responsibility that the government must accept no matter which way they choose to go. It is a difficult decision to make!

The symposium was a success only through the effects of many individuals: Don MacDougal (N. S. Resources Council), Dick Parker (N. S. Wildlife Federation, CWF), Paul Keddy and Anne Linton (Halifax Field Naturalists), Fred Dobson (N. S. Bird Society), Susan Mayo and Jim Reid (Ecology Action Centre) and Ian McLaren (Canadian Nature Federation).



piping plover chicks

Halifax Field Naturalists,
c/o N.S. Museum,
1747 Summer St.,
Halifax, N.S.

Hon. M. DeLory, M.D.,
Minister of Lands and Forests,
Department of Lands and Forests,
Halifax, N.S.

Dear Dr. DeLory:

At the last meeting of the Halifax Field Naturalists, considerable concern was voiced over the prospects of a large scale spruce budworm control program in Cape Breton. I was asked to carry this concern to you on behalf of our membership.

Considering the possibilities for severe impact upon Nova Scotia's wildlife, on a long term as well as short term basis, we believe a long and careful study should precede any decision on such a program.

We would point to evidence that spraying in New Brunswick has turned what would have been a temporary outbreak into a chronic problem, necessitating continuous spraying with no end in sight. In spite of large scale programs since 1952, spruce budworm shows no sign of a decline in New Brunswick. We understand that the spraying operations have already cost 36 million dollars. To us these facts raise serious questions about undertaking a similar program in Cape Breton.

In view of the lack of knowledge on the long term impact of spraying upon forest ecosystems, we believe it would be a serious mistake to begin such a spray program without a thorough investigation. And until such time as it is reasonably demonstrated that there will be minimal impacts upon wildlife and that there will be real long term advantages produced, we remain opposed to any sort of spraying program.

Yours truly,

Paul A. Keddy
President
Halifax Field Naturalists

c.c. Hon. G. Bagnell
Hon. G. Regan, Q.C.

P.S. For your interest, a copy of our first newsletter is attached.

...and Mr. DeLory replied

MINISTER OF LANDS AND FORESTS
PROVINCE OF NOVA SCOTIA

P. O. Box 698,
Halifax, Nova Scotia
B3J 2T9
December 9, 1975

Mr. Paul A. Keddy,
President,
Halifax Field Naturalists,
c/o Nova Scotia Museum,
1747 Summer Street,
Halifax, N. S.

Dear Mr. Keddy:

Thank you for your letter of recent date in which you express concern on behalf of the Halifax Field Naturalists respecting any spray program for Spruce Budworm control in Nova Scotia.

I can assure you that I too am most concerned and certainly this is a most difficult decision to make in that there are no clear-cut answers. I can assure you, however, that no decision will be made until the matter has received full consideration.

Thank you for writing to me to express your concern.

Yours very truly,

M. E. DeLory

c.c. Hon. Gerald A. Regan, Q.C.
Hon. Glen Bagnell

Whatever Happened to Those Christmas Stars?

Away back in December we were visited by Sherwin Williams of Hantsport, naturalist, astronomer, and prominent member of the Blomidon Naturalists Society. Sherwin brought along a friend with his homebuilt 8" reflecting telescope. With a series of slide, some of them his own, Sherwin took us on a flight from the edge of the universe home (up? down? in?) to planet Earth. Galaxies, stars, nebulae,comets and quasars were all encountered during our magic carpet ride.

All of us have at one time or another learned something about the make-up of the universe. I vividly remember learning the mnemonic "Man Very Early Made Jars Stand Up Nearly Perpendicular as an exam reminder of the order of the planets with regard to distance away from the sun. But it was many years later before someone told me that I could look up on a clear night and actually see Very, Made, Jars, and Stand (as Venus, Mars,Jupiter and Saturn I fondly remember). And Mars was red!

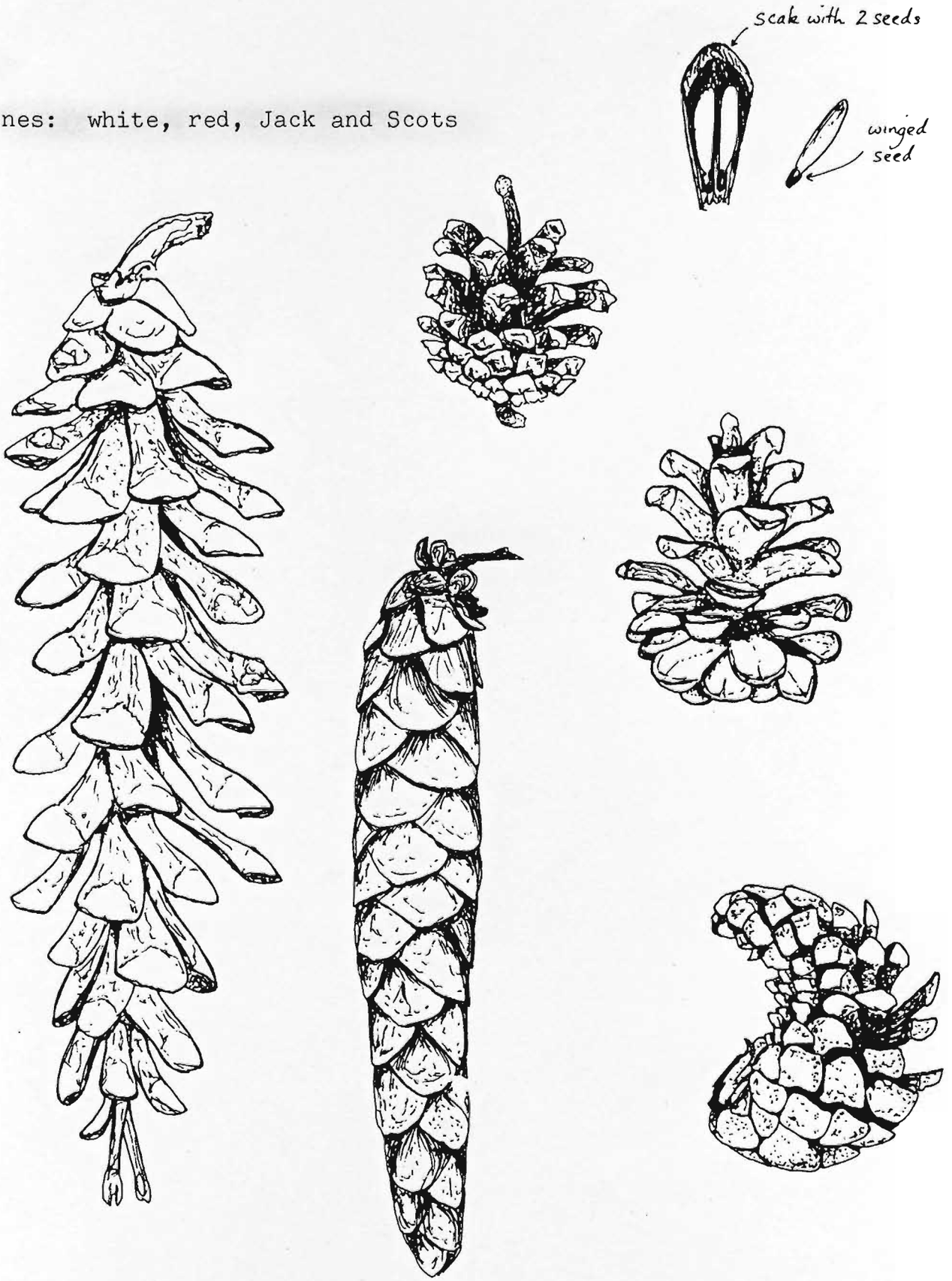
The night sky is something perhaps learned a bit at a time. Most people can find the Big Dipper, or Great Bear. So start with what you know. Get a book or star-map, and look for stars that are near the Dipper. Devise clues for yourself--like "follow the curve of the Dipper's handle to Arcturus", or "two fists up and one fist left to Polaris". Star-charts and tips appear every month in the magazine Natural History, available at most libraries. You can pick up a copy of the paperback Golden Nature Guide to the Stars or the Sky Observer's Guide--A Golden Handbook for $1.50 at book-stores and even some grocery stores now. For a year's worth of prescience, including sunrise, moonrise, planetary positions, meteor showers, comets, eclipses and many more obscure phenomena, by the Observer's Handbook of the Royal Astronomical Society of Canada for three dollars. You can probably pick one up at a meeting of the Halifax Center, third Friday of each month, 8 pm, at the Museum on Summer Street.

The best way to get started in stargazing is to have someone point a few things out to you. We tried, and several members showed up to watch stars peek out from behind broken cloud cover. We'll try again, but meanwhile, get yourself started. Look south on a clear night, even in Halifax, and see three bright stars close together in a row. These formthe belt of Orion the Hunter, the dominant constellation of winter. Take the brighter stars above and below the belt as hands, knees and feet, and you have a good idea of what the Greeks had in mind. Nearby are Taurus and Gemini, two easy constellations with bright stars.

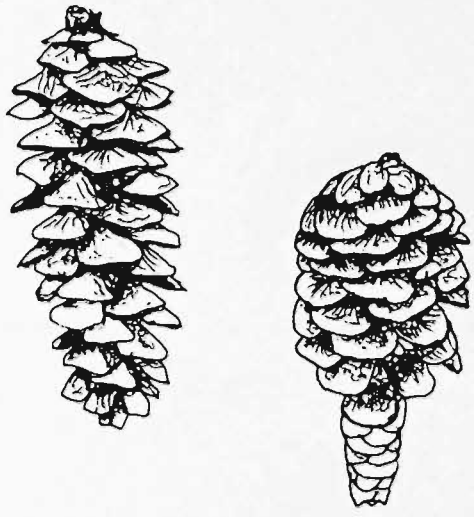
Much can be seen with the naked eye. Good binoculars or a small telescope will bring you craters on the moon (quarter or crescent is best for viewing) and the moons of Jupiter. The pamphlet "Beginning Stargazing" from the Museum has mare suggestions.

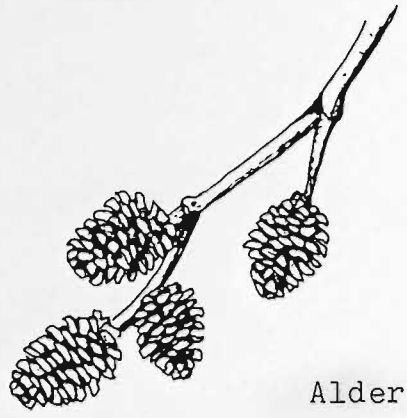
How are you on CONES?

Pines: white, red, Jack and Scots



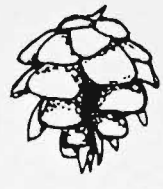
and more cones

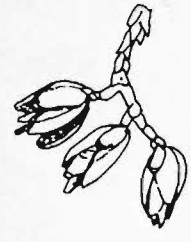




Alder

Spruces: white, black and red





Hemlock

Cedar