

HALIFAX FIELD NATURALISTS NEWSLETTER

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



5
May
June
76

*A. W. Linton & Family
1162 Studley Ave.,
Halifax.*

HALIFAX FIELD NATURALISTS NEWSLETTER

MAY/JUNE 1976

NUMBER FIVE

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.

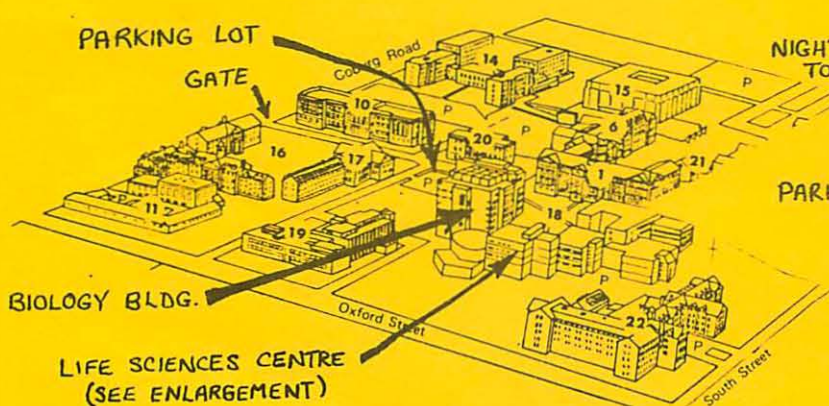
Executive for 1975-76

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	

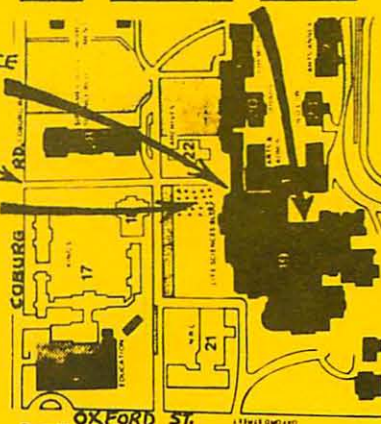
Mailing address

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

DALHOUSIE CAMPUS



LIFE SCIENCES CENTRE



Coming Up

with Halifax Field Naturalists

- June 5 McNab's Island day trip. Advise an executive member if you are coming, so we whether to string lifelines from the dory. Boat fare will be about three dollars. Details on request.
- June 8 June meeting--A Naturalist at Peggy's Cove. Explore the geology and natural history of this famous spot with our speakers. 8pm at Dalhousie.
- June 12 Field trip to Peggy's Cove for a first-hand look from a naturalist's point of view. Meet at 1pm in the Dalhousie Biology parking lot. A snack, warm clothing, and insect repellent might all prove useful.
- June 27 Field trip to the Maitland area to explore gypsum formations, possibly including Hayes Cave, and to examine the unusual flora of gypsum lands. Meet at 9am in the usual parking lot, and bring lunch.
- July 10-11 Weekend camping overnight at Ralph Widrig's seaside preserve at Port Hebert near Lockeport. Details will follow.
- July 20 July meeting--note not our regular Tuesday, as that follows too closely the overnight trip. Topic: Ecology of Gypsum Lands.
- August 7 Early morning shorebird walk at Cole Harbour. Meeting around 6:30am, place to be announced later.

Got a favourite spot you'd like to share? Why not lead an HFN excursion there. No need to be an expert, just lead us on and we'll explore. We would like to have more field trips in this pleasant season, but we need people to coordinate them. Contact an executive member with your idea or offer.

Changes on the Executive

Winnie Cairns, Secretary-Treasurer, is spending much of the summer with Piping Plovers on the beaches of Nova Scotia. Pat Evans will be filling her position for the next few months.

Anne Linton of the Program Committee is off to the Arctic to study bird life.

Two new members have joined the executive--Mary Primrose, keen naturalist and photographer extraordinaire, and Don MacDougall, naturalist and active conservationist, will be with us until the end of the year.

Anne Linton of the Program Committee is off to the Arctic to study bird life.

Two new members have joined the executive--Mary Primrose, keen naturalist and photographer extraordinaire, and Don MacDougall, naturalist and active conservationist, will be with us until the end of the year.

About 30 enthusiastic people gathered at the bottom of the path up Dagle's Rock in spite of the fog that hung heavy and cold in the air. Paul Keddy gave us a prep talk on the plant life we would encounter and passed around examples so that we could identify things along the way. Then it was Lyndon Jenson's turn. He told us that what we were about to climb was a quartzite ridge. He went on to explain that many years ago the area would have been composed of slate and quartzite veins, but the less resistant slate gradually eroded away, leaving steep ridges of quartzite.

We began our ascent on the southward facing slope. This side of the slope is usually sunny and dry, and as we puffed our way up the rather rough, rocky path, we could see all around us the plant species typical of a mixed forest community. The trees were mainly white birch, white pine, beech and red oak with some spruce and fir scattered throughout. There were also many shrub sized plants--viburnum, service berry and striped maple--and the ground was almost covered with teaberry and sheep laurel.

Finally we reached the top of the hill and found ourselves on a cliff. People say that you can get a wonderful view from this spot but, unfortunately, we couldn't see through the fog. Because it is very windy and exposed on top of the cliff, the types of plants that grow there are different than those in more sheltered places. Nearest the cliff edge there were only species that grow close to the ground, mainly broom crowberry, bearberry, and teaberry. There were no trees for several feet back from the edge and they were rather stunted spruce and fir. It seems that only the hardiest of plants can grow on cliffs because of the constant exposure they get to the elements.

After peering through the fog for a little while, we continued along the path that led down over the other side of the ridge. We came to a little gully where tall hemlocks, spruce and pines stood, widely spaced and shading the moss-carpeted ground. Then we were walking through mixed forest again and trying to stay on our feet as we stumbled down the rather steep and slippery path.

Once we reached level ground again, we found ourselves looking up at the cliff. The rock face is almost verticle and to climb it would probably be a formidable task. A few red pines could be seen growing on ledges of the cliff face. It is amazing that they could have found enough nourishment there to grow so tall. Below the cliff was a large pile of boulders. According to Lyndon Jenson, such a pile is called a tallus slope and is formed when chunks of rock fall out of the cliff face due to erosion processes.

Paul pointed out that we were now in another different kind of looking up at the cliff. The rock face is almost verticle and to climb it would probably be a formidable task. A few red pines could be seen growing on ledges of the cliff face. It is amazing that they could have found enough nourishment there to grow so tall. Below the cliff was a large pile of boulders. According to Lyndon Jenson, such a pile is called a tallus slope and is formed when chunks of rock fall out of the cliff face due to erosion processes.

Paul pointed out that we were now in another different kind

At this point, the hike came to an end and everyone went back to the cars so they could go home and get warm. It was a nice walk and quite worthwhile as it was interesting to experience the subtle but distinct changes in plant communities according to the geological features.

Who's Who in Conservation

The preservation of wildlife and habitat diversity is something which we as naturalists all have a concern in. Many people across the province and across Canada share our interest in the outdoors and our concern for its future. In each issue of our newsletter, we intend to look at other groups who in some way share our values, and whose existence we should be aware of. This is the second in the series.

The Canadian Arctic Resources Committee

Paul Keddy

An appropriate group to deal with this month is the Canadian Arctic Resources Committee (or CARC for short). CARC has been continuously present at the Berger Hearings, and more recently at the National Energy Board hearings. It has been an uphill battle all the way, with public interest groups such as CARC matching their thousands of dollars against the millions of dollars of the oil and gas corporations.

In its own words, CARC is not "for or against ... the idea of a Mackenzie pipeline. It is here to assist in a full and complete study of the issues". And the issues that have been raised are interesting indeed! A few intriguing tidbits, chosen for illustrative purposes, include:

*Cabinet gave approval in principle to the project in 1970--although there had been no studies of environmental or economic impact.

*In April, 1972, when Prime Minister Trudeau announced (on the eve of an election) plans for an all-weather highway through the Mackenzie Delta, there had been no prior consultation with native peoples or environmental studies. When environmental problems arose, the Department of Environment was forbidden to delay the project.

*Digby Hunt, Assistant Deputy Minister of Indian Affairs and Northern Development, who was responsible for northern resource development, environmental and social planning, is also a director of Pan-arctic Oils, Ltd.

*The government task force on northern development decided in 1969 and 1970 not to initiate any research on environmental impact of the pipeline for fear it would generate public interest and concern.

The idea of CARC was to form an organization of citizens and industries with the aim of promoting a more complete study of northern development. The emphasis upon simple public education was foremost. They deliberately avoided forming a group of environmental zealots. In spite of this, few industries offered financial support; the government was equally hesitant.

Yet, CARC has had a successful record of encouraging public participation in northern development. In 1975 they won a large White Owl Conservation Award for their work. Their newsletter "Northern Perspectives" contains stimulation, well-researched articles on northern development. Although CARC does not have membership fees, it is a very active organization.

The idea of CARC was to form an organization of citizens and industries with the aim of promoting a more complete study of northern development. The emphasis upon simple public education was foremost. They deliberately avoided forming a group of environmental zealots. In spite of this, few industries offered financial support; the government was equally hesitant.

Yet, CARC has had a successful record of encouraging public participation in northern development. In 1975 they won a large White Owl Conservation Award for their work. Their newsletter "Northern Perspectives" contains stimulation, well-researched articles on northern development. Although CARC does not have membership fees, it is a very active organization.

The Great Annual Amphibian Migration Fiasco

It is 11:20 pm on a cold, rainy Thursday (?). The phone rings. You are sitting, warm and relaxed, perhaps reading or watching television. You pick up the phone, and some nut says, "Tonight is the night of the frogs. Are you coming?" Well, nine people said yes, and by midnight we were in two cars on the way to Enfield. One of the froggers was a CBC Radio person, with a tape recorder. And later on, there was HFN (Halifax Field Nuts!) frogging away for listeners of first Maritime Magazine on Sunday morning, and then Five Nights--a national program. Of course tape recorders never lie. Here, only slightly abridged, is the true account of that night.

DB: We hope that tonight is the night of the great amphibian migration, the night when the salamanders and frogs that have been hibernating all winter wake up and cross the wet roads, which are kind to their moist skins--cross to get to the breeding ponds.

(Twangs of guitars, very upbeat)

With any kind of luck at all, we'll drive slowly along the shoulders of the roads, and we'll all be leaning out over the hoods. Some people will be hanging out the windows, people occasionally get out and sit on the hood, looking for salamanders, spring peepers, toads, all sorts of amphibians we'll pick out in the headlights of the car. They'll just be sitting there on the roads, crossing them, to get to the other side.

I'm _____, and I'm the leader because I've been on one of these before.

CP: I'm a hanger-on. I'll believe this when I see it. I've heard stories... and tonight we'll see.

Interviewer: You're a doubter?

CP: Yes, a doubting Thomas.

PK: I'm president of the Halifax Field Naturalists, sponsoring this trip.

NC: I'm just interested, nothing else.

DR: I'm a biology student, and I hope to get a few pictures tonight.

MS: I teach school and I want to tell the kids.

CS: I thought I'd do something different on Thursday night.

Int.: Are you ready for what may come?

CS: What may come!

Int.: You don't have a phobia against snakes, do you?

CS: laughter; Nope.

PK: Snakes won't be out tonight, anyway; no snakes. Just amphibians--frogs, toads, and salamanders.

Int.: Got anything against salamanders?

(general laughter) PK: if you've got a phobia against one of those things, it isn't a night to go out. We should see more of them tonight than you'll see in a whole year put together.

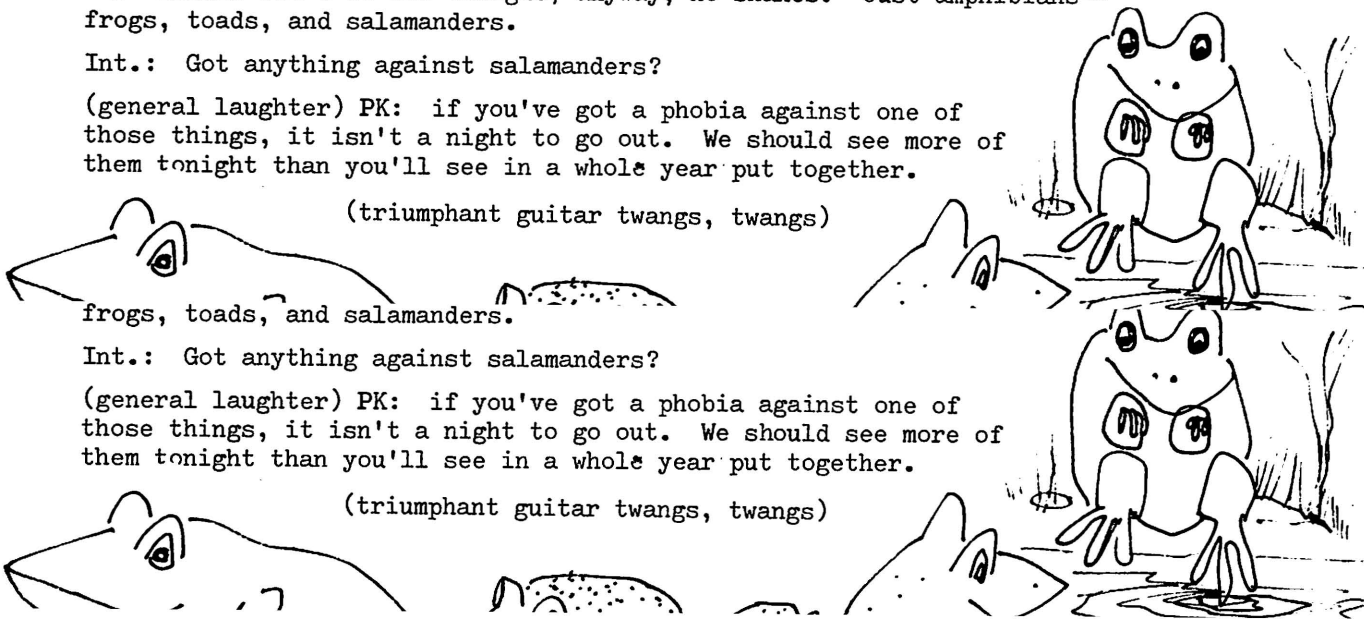
(triumphant guitar twangs, twangs)

frogs, toads, and salamanders.

Int.: Got anything against salamanders?

(general laughter) PK: if you've got a phobia against one of those things, it isn't a night to go out. We should see more of them tonight than you'll see in a whole year put together.

(triumphant guitar twangs, twangs)





Sound of van door sliding open, tractor-trailer roars by.

Int.: Why are we looking down here especially?

DB: This is a cattail pond, first one along the highway, so it's as good a place as any just to stop and listen.

SILENCE--car horns

We should hear the frogs, but the salamanders are voiceless, so they don't give any indication of their presence.

SILENCE

DB: (doubtfully) I don't hear any peepers. None here at all.

Int.: Is that a real tadpole?

PK: It's a real tadpole alright, but I don't know what it's doing out tonight, because bullfrogs are the only ones that supposedly have tadpoles that live for two year.

Int.: Can you tell me what that tadpole would have been doing until just this moment?

DB: That tadpole doesn't leave the water. Since its two inches long, it's most likely a bullfrog tadpole. Bullfrog tadpoles spend 3 years in the ponds before they turn into bullfrogs. They dig into the mud and hibernate there over the winter, and when the ponds warm up they just dig themselves out.

Int.: Is a tadpole a good sign?

DB: Ummmmmm, yes, it's a sign that something's woken up, anyway.

?: That's awfully cold pond water!

CP: It's a very cold night. I wouldn't want to be out crawling around half-naked. (Twangs, etc.)

DB: At LAST! Number one, and that car didn't hit it. It's a female.

Int.: Oh look! How can you tell?

DB: Size, mostly, and they're a bit different brown shade than the males. She's quite full of eggs, feel her, she's very plump.

Int.: Has she met up with a likely prospect yet?

DB: Not yet. She's on the way. Their fertilization is external, so they keep the eggs inside until the male fertilizes them as he squeezes the female to squirt the eggs.

Int.: She's anxious to get on.

?: Oh, it's a live one! Which way is she going, does she know?

DB: She was pointing that way. Why don't we see if there's a pond over there.

?: Let her go and see where she goes.

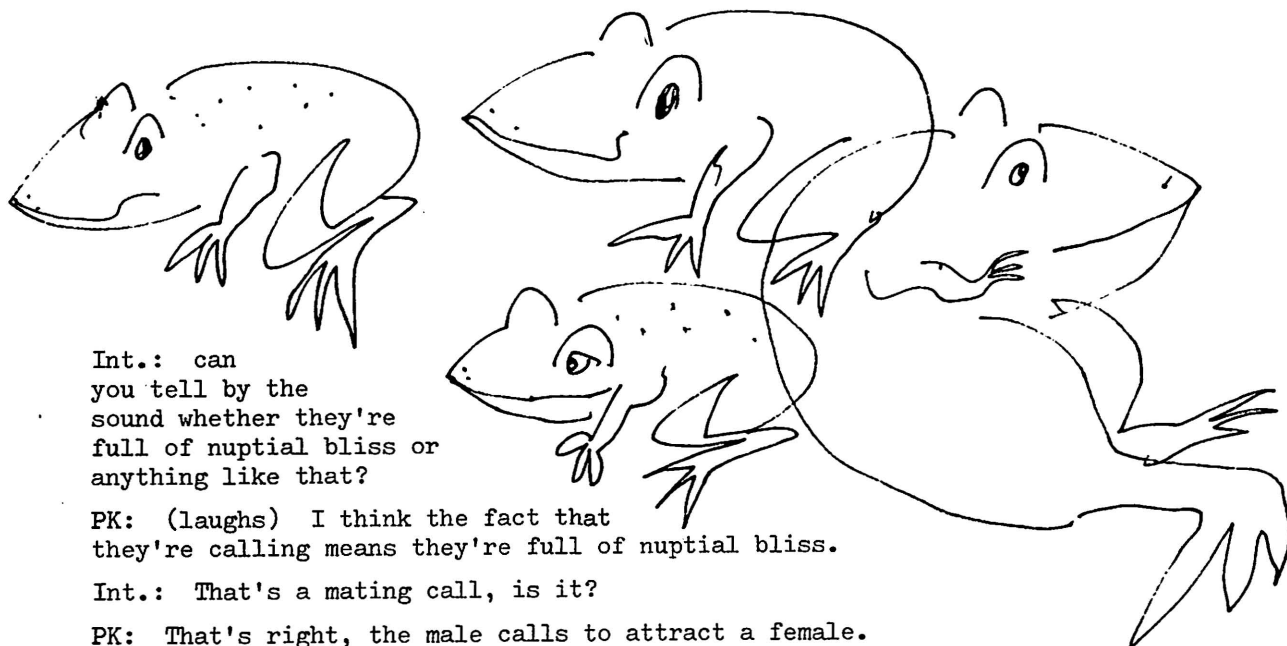
(sound of wood frogs croaking)

DB: (whispers) Wood frogs! The kind we found on the road. Very small brown frogs you don't often see.

PK: (whispers) Wood frogs calling.

DB: They have sort of a dry croaking sound.

(sound of dryly croaking wood frogs)



Int.: can
you tell by the
sound whether they're
full of nuptial bliss or
anything like that?

PK: (laughs) I think the fact that
they're calling means they're full of nuptial bliss.

Int.: That's a mating call, is it?

PK: That's right, the male calls to attract a female.

Int.: And then what happens?

PK: I'm sure I don't have to explain that to you.
(train whistle, footsteps)

DB: Oh, its a little peeper.

?: Ahhhhh

DB: Beautiful. Spring peeper. Give us a peep, there. Here comes a car. Look out.
(rrrrroarrr) Peeper, first one. Good God--quarter to two. If anyone had told me
this morning that at quarter to two I'd be way the heck out on the road frogging...

Int.: So we're going to look some more?

DB: As long as you stay awake and my gas holds out.
(car doors slam. sound of piping peepers)

Int.: So this is what you came to find. What do you find beautiful in that?

PK: (sighs) Symbolizes the night, wild things, unfettered by man. It symbolizes--
to me it symbolizes wilderness, being out on a canoe trip first thing in spring, on
a quiet lake, perhaps loons calling, and spring peepers.

DB: Shall we call it a night? Are you getting tired, cold?

Int.: Did you see what you hoped to see?

NC: Ah, I didn't have too many expectations, so I'm quite happy with what we did.

LJ: Well, I'm not. I wanted to see a whole road just crawling with all these
amphibians coming out of everywhere. I'm really disappointed.

PK: You want your money back! (general laughter)

Int.: I guess the real question is, did they get the job done?

DB: From the sounds we're hearing in that pond tonight, I strongly suspect so.
(sounds of peepers in nuptial bliss)

The night's total (in the hand): 1 peeper, 2 wood frogs, 1 murdered salamander.
RIBID

note: DB made four later night trips. On one night, one mile stretch of road
near Rawdon yielded 14 peepers, 4 toads, 2 yellow-spots, 9 wood frogs. It's true!
Now next year....

The night's total (in the hand): 1 peeper, 2 wood frogs, 1 murdered salamander.
RIBID

note: DB made four later night trips. On one night, one mile stretch of road
near Rawdon yielded 14 peepers, 4 toads, 2 yellow-spots, 9 wood frogs. It's true!
Now next year....

TO: The editor, HFN Newsletter.

I wish to correct several mis-statements in the article "The Second Annual Hayes Cave Bat Census" (H.F.N. N/L #3 p.9)

First, the census is not annual. The first census was held in 1972, the second in 1976.

Secondly, the 1972 census revealed 6100 individuals. This year their numbers were reduced to 4990 (+ 250). A decrease of 20% is extremely disturbing, especially because the colony in Hayes Cave is the only surviving large colony in Nova Scotia.

The final paragraph of the article, though strictly correct, leaves an incorrect impression. The original proposal was made by members of the present Nova Scotia Speleological Society in 1972, and our efforts to protect the bat colony were directly responsible for the formation of this Society. The cave was subsequently included in the proposed IBP South Maitland Ecological Reserve, which also contains an important river intervalle. This proved a mixed blessing. Linking the two features strengthens the case for both, but action on Hayes Cave was slowed down while the whole question of ecological reserves grinds through the political mill. Meanwhile the situation has deteriorated, and will soon be critical. The only other major bat colony has become virtually extinct, and the Hayes Cave colony has declined alarmingly. Published articles implying that there is no serious problem do not help.

Our proposal for Hayes Cave is outlined and documented in "Proposal for a Bat Preserve in Nova Scotia (Revised)" issued by the Nova Scotia Speleological Society. A reference copy has been lodged with H.F.N.

Max Moseley,
President,
Nova Scotia Speleological
Society



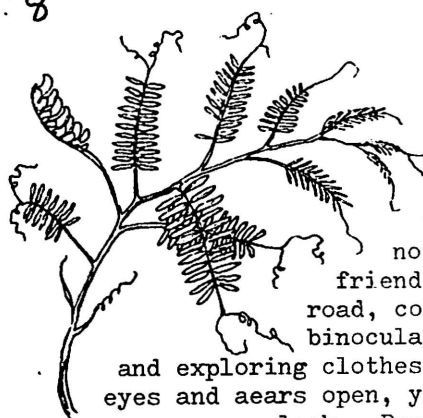
Now here's a naturalist!

A woman in England says she is concerned that the wild leeches in her area may be going extinct from lack of human blood. She is therefore going to voluntarily submerge her feet in water and allow leeches a free meal now and then! (CBC Radio says so)

While we can't comment on the biological validity of the case, she is certainly a naturalist at heart--and at feet too?

Knee-deep
in
Knapweed

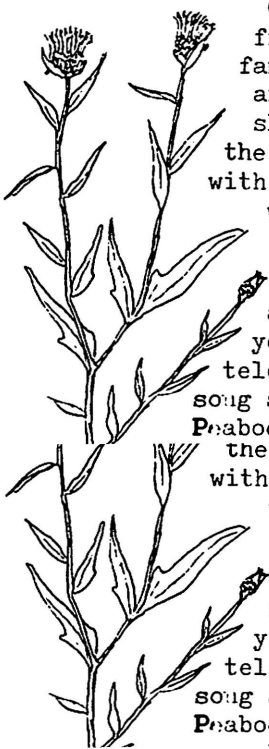
Barbara R. Robertson



Tufted vetch
(prob. introduced)



Couch
grass
(native)



There can be a special pleasure in taking a few days at a time to get in touch with the rest of creation. A vacation need not be long to be refreshing. The planning is simple. Choose a friend whose interests mesh with yours. Study the map for an off-beat road, coloured brown on Nova Scotia maps. Load the car with nature books, binoculars, and other essentials of living. Wear your beachcombing shoes and exploring clothes. Then set off on a mini-vacation for a day of two, with your eyes and ears open, your foot gently on the gas. Stop often. Step out to take a closer look. Breathe in. The clover smells marvelous in July; you'll remember it in January. Big fat bumblebees sip at the flowers, ensuring that next July the clover will bloom again. The hay is being cut and the smell caresses your nose. Are your ears tuned in? A robin, a junco, and a white throated sparrow may all be practising their lines at once.

In Nova Scotia most off-beat roads give you great variety--shore, woods, fields, ponds, lakes--within a short distance. In turn this variety of locations has a seemingly endless selection of wildflowers, birds, insects, rocks, shells, and animals for your exploring senses to discover. Collect them with your mind, or your camera, or with pencil and paper. Try some drawing or make a written record. If you write down all the wildflowers you find or all the birds you see and hear, you'll be amazed at the length of your lists.

In two days in mid-July you can easily see thirty different varieties of wildflowers. They bloom along the roadside, in the fields and woods, in the ponds and lakes. You can find all the blues, the yellows, and the reds of the spectrum. All the countless combinations of these primaries will be there. Shades of green and subtleties of white are also waiting to please your eyes. The yellow and white flowers are more numerous. They are accented with the blue and pink and purple blooms of chicory, vetch, and self-heal, of fireweed, wild roses and musk-mallow, of the twisting hedge-bindweed and the erect confident knapweed, resembling thistle but without the thistle's scratch. The yellow flowers range from the pale yellow of the mustard to the deep yellow of the brown-eyed susan to the orange of the daylilies. In between are the yellow shades of St. John's wort, the cinquifolios, swamp candles, yellow sorrel, mullein, bladder campain, hawkweed, and of the evening primrose which opens its blooms for the visit of a night flying moth. Intricate patterns and designs are here for the looking. The white flowers will give you chickweed, yarrow and dogbane, the delicacy of meadow rue and meadowsweet, the happy look of daisies, the tracery of

Queen Anne's lace, and the dry and crispy touch of pearly everlasting. The fringed orchids bloom yellow, white and purple. The clovers are numerous family. They can be found in several shapes and in three colours--white, red, and yellow. The ponds, lakes, and wet places will grow bog-cotton and marsh skullcap. You may find white waterlilies, their blossoms opening and closing as the light changes, their waxy green leaves under-coated with red. Pickerel weed with blue flowers, and green bur-reed looking like an animated chemistry formula, will be at home in the watery spots.

How many kinds of birds can you see and hear? Even a beginner can list fifteen or more in a day or two. There'll be blue jays, a bob-o-link, and a belted kingfisher. Barn swallows will swoop at you while their newly evicted young practise flying or huddle pressed feather to feather like a cut-out on a telephone wire. Your list will have seagulls, terns, robins, crows, loons, and song sparrows. There'll be white-throated sparrows that sing "old Sam Peabody, Peabody, Peabody". You'll hear the cry of a catbird, see the flash of yellow the light changes, their waxy green leaves under-coated with red. Pickerel weed with blue flowers, and green bur-reed looking like an animated chemistry formula, will be at home in the watery spots.

How many kinds of birds can you see and hear? Even a beginner can list fifteen or more in a day or two. There'll be blue jays, a bob-o-link, and a belted kingfisher. Barn swallows will swoop at you while their newly evicted young practise flying or huddle pressed feather to feather like a cut-out on a telephone wire. Your list will have seagulls, terns, robins, crows, loons, and song sparrows. There'll be white-throated sparrows that sing "old Sam Peabody, Peabody, Peabody". You'll hear the cry of a catbird, see the flash of yellow

lucky you may see a ruffed grouse walking down a byroad with her half-grown brood.

The length of your lists is chiefly determined by your ability to identify what you discover. Your list may have question marks and such notations as "rusty, size of sparrow", "yellow, five petals, 1/2-inch flower, runners like a strawberry", "larger than a robin, white rump in flight". The question marks make the lists more intriguing. Maybe the answer is in a nature guide. Maybe a more experienced explorer can help solve the puzzle. Maybe you'll get a clearer view of it next time.

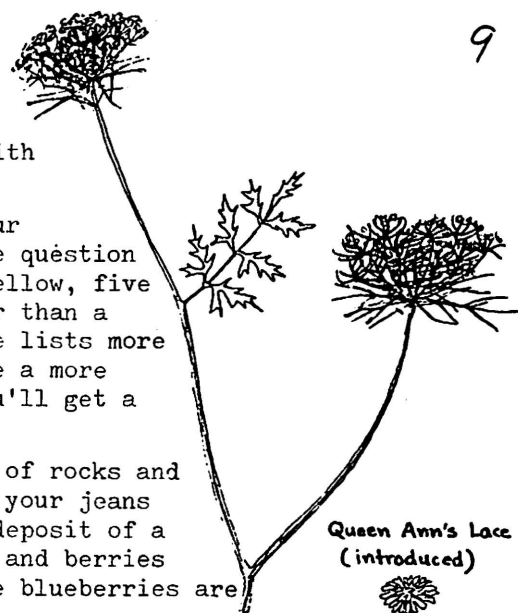
Other discoveries await you. The colours and shapes of rocks and shells can be so interesting that you find the pockets of your jeans full of ballast and the floor of your car resembling the deposit of a recently melted glacier. The colours and shapes of fruit and berries are inviting. The raspberries are sweet and juicy and the blueberries are turning blue. A snack is yours for the picking.

Remember the white foamy substance you see on stems of grass? We used to call it "snake-spit" when we were children, making up tales about the danger we were in when we walked across a field. How misinformed we were. Nova Scotian snakes are harmless and the so-called "snake-spit" is the product of the spittle bug. You may find him jumping jeffily sideways like some miniature mechanical toy. He seldom flies. Remember how we called dragonflies "devil's darning needles", and told scary stories of how they'd sew up your mouth and eyes? In the realm of make-believe that long, slender, rounded body does resemble a darning needle, but dragonflies are dangerous only to other insects. The dragonflies are a large family of five thousand members and you can enjoy them in living colour--blue, black, red, and iridescent green. Those smaller ones that rest with their wings folded back parallel to the body are damselflies. What imaginative person named them dragon and damsel? The mind's eye envisions the saving of "damsels in distress". If you look down to the shallow bottom of a pond, perhaps you will see the nymph of a dragonfly. Can you find the discarded shell of a nymph who has ascended to the surface, dried out, and become an adult of his kind? Maybe you'll find a scarlet water-mite clinging below the surface to a pond plant as you drift over the pond in your punt.

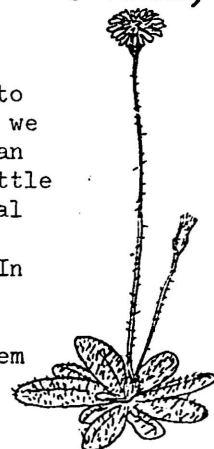
Be still and look around you. Spiders' webs hang dripping with diamonds in the early morning. Fireflies flash off and on at night, competing with the stars which hang close and bright when you're camped out on a dark hillside. A rabbit may hop up to look you over as you cook breakfast. The squirrels will want to share your picnic and the mosquitoes may make a picnic off of you. A loon may laugh mockingly at a group of excited crows in the trees around a lakeshore. Maybe two ducks will fly past as you eat your supper by the water's edge, the ducks quacking out instructions to one another as you talk about "cabbages and kings".

What can a mini-vacation give to you? It can give you the excitement of learning something new, perhaps something new about yourself. It gives you sights and sounds and smells and tastes and textures to store up. They can be taken out and savoured on a day when you're surrounded by a seen or unseen wall. It helps you rise to the surface and shed your shell like the nymph, to look down and up and out at living things which are bigger and smaller than you, taller and shorter than you, harder and softer, stronger and weaker. You will find things that, like you, see and hear, taste and touch, breathe and grow. You can grow strong and quiet; you can laugh and wonder. you can

What can a mini-vacation give to you? It can give you the excitement of learning something new, perhaps something new about yourself. It gives you sights and sounds and smells and tastes and textures to store up. They can be taken out and savoured on a day when you're surrounded by a seen or unseen wall. It helps you rise to the surface and shed your shell like the nymph, to look down and up and out at living things which are bigger and smaller than you, taller and shorter than you, harder and softer, stronger and weaker. You will find things that, like you, see and hear, taste and touch, breathe and grow. You can grow strong and quiet; you can laugh and wonder. you can



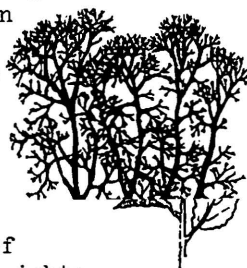
Queen Ann's Lace
(introduced)



Mouse-ear hawkweed
(introduced)



Steeple-bush
(native)





"A honey bee by stinging me,
did stop my mortal breath."



New England Gravestone inscription, 1814

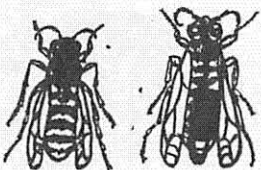
Though insects produce silk, honey and shellac, though they pollinize many plants and provide food for birds and fish, they are usually more noted for crop destruction, bites and stings. To most people, an insect sting is a painful experience, but one that's forgotten overnight. For one person in a hundred, the sting of an insect may be fatal.

Though fatal insect stings are hardly new, allergic reaction has only recently been reckoned as the cause. Extreme human sensitivity to stings that result in serious or fatal reactions is confined almost entirely to cases involving bees, wasps, hornets, bumblebees and ants, all belonging to the order Hymenoptera. Some individuals may also experience mild constitutional symptoms from the bites and stings of other insects--mosquitoes and fleas, for example--although severe and systemic reactions are rare.

How do you know if you are allergic to insect stings? Experts say that if you're bitten or stung and something happens to a part of your body other than the part actually stung, you are having an allergic reaction. An immediate reaction is characterized by one or any combination of the following: hives, swelling of the blood vessels, inflammation of the mucous membrane of the nostril, dizziness, pallor, fainting, cold skin, sickness, and shock. Some doctors also believe that once systemic sensitivity occurs, it almost always increases in severity with each sting. Delayed reactions may be either local or systemic. Swelling may involve the entire arm, leg or head, and last for a week. Painful joints, fever, hives, and black and blue spots on the skin may occur, in a matter of hours or as late as two weeks after the sting.

I was fortunate in that my first sting was just a warning. I was cycling home one summer evening several years ago, and collided head on with an object travelling in the wrong lane. We were both outraged, but it struck first--a searing sting just below the neck. Too late, I brushed it away, noting that it was a yellowjacket. The stinger remained in, and I had to ask a rather amused woman tending her garden to remove it for me, as I couldn't see it. Fifteen minutes later, at home, my eyes began to puff up. The welt around the sting was about five inches in diameter by that time. When my tongue and nostrils began to thicken and impair breathing, I headed for V.G. Emergency. And the doctors there treated it as an emergency--gave injections of anti-serum and made quite a fuss. By that time, I was a swollen mass of red welts and my one eye was almost puffed shut. So now, come spring, I dig out "the pill"--an allergy prescription that accompanies me wherever I go. I haven't been stung since, but I'm much more fond of winter than I used to be.

Let's have a look at a sampling of the gallery of Insects that Sting.



Yellowjackets, hornets, and paper wasps are Vespids--short waisted, robust insects; colour black and yellow or white combination. They nest in the ground or in trees and buildings; nests of papery material. Sting produces sharp localized pain for short period of time; if systemic reaction occurs, call a physician immediately. If stung and stinger is in skin, don't squeeze it out--remove it cleanly with a knife, as soon as possible. Sometimes the poison sac keeps pumping out toxins even when detached from the insect.



Thread-waisted wasps (Sphecoids) have plum-shaped bodies, colour black and yellow or metallic blue. They nest in wood, ground burrows, or mud cells. Sting similar to Vespids but not as often as serious.



Spiders are not much of a problem in our latitudes. Many will bite, but few are dangerous. One type called the Brown Recluse is reported to sometimes be carried north in the campers and gear of tourists--its bite can be very serious.



Centipedes are wormlike, with many jointed segments and legs; behind the head is a pair of poison fangs. They are predators of the soil and leaf litter. Bite is often painful, varying with the size of the centipede.



Mosquitoes are widespread, especially abundant at night and around swamps and woodlands and rot-holes of trees. They mostly bite exposed skin, but can also penetrate clothing.



Horse flies are black or brown, fly-shaped, sometimes striped or spotted, $\frac{1}{2}$ to 1" long, with pointed beak mouthparts. Widespread, especially abundant in moist wooded areas and places close to cattle. Repeated, sloppy, painful, blood-sucking bite.



Blackflies and Gnats are small, clear-winged, humpbacked, chunky, blackish, about one-eighth inch long. Breed in ripples and running water. Very irritating, blood-sucking bite which can become increasingly itchy and swollen. Ensure clothing is securely closed at ankles, neck, and wrists. Repellants containing dimethyl phthalate are recommended by some sources.



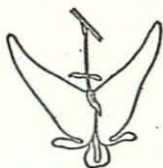
Wood ticks--get a group of woodsmen or campers together in June and the conversation will eventually turn to wood ticks. These are dark, reddish brown or grayish white, one-sixteenth to one-half inch, oval shaped with tiny head and eight legs. They cling to bushes or tall grass with arms outstretched, ready to hook on to passing mammals. Attaches to skin, inflammation may develop. Some percentage (quite high around Idaho, but I don't know what it is here) carry fatal tick paralysis or fever if not removed. Use insect repellants; when leaving or at the end of the day, check yourself and your comrades, especially around neck and head. Remove attached tick by touching with lighted cigarette or hot needle; apply antiseptic to wound. Ticks are very hard to kill. Perhaps in the next newsletter we can print some information about the interesting (and alarming) spread of ticks east in N. S.. At a recent meeting of foresters I was told of definite reports from Chester and Pictou.



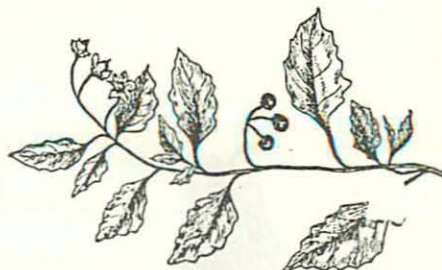
high around Idaho, but I don't know what it is here) carry fatal tick paralysis or fever if not removed. Use insect repellants; when leaving or at the end of the day, check yourself and your comrades, especially around neck and head. Remove attached tick by touching with lighted cigarette or hot needle; apply antiseptic to wound. Ticks are very hard to kill. Perhaps in the next newsletter we can print some information about the interesting (and alarming) spread of ticks east in N. S.. At a recent meeting of foresters I was told of definite reports from Chester and Pictou.



Ants are usually a minor irritant. Carpenter ants (largeish, found



"Gather ye rosebuds while ye may"



The first bud of spring beckons us outside to enjoy the newness of nature. It also attracts us to the plants that grow in nearby fields and gardens. And more than even these last few years, many of us envision the plants chopped up in salads, covered in cream sauce, or just for crunching along the trail. It is tempting to sniff, taste, or swallow these plants, and for sure many are delicious. Some people hold that "a little bit won't hurt" in the plant kingdom. But there's another side to the coin. The plant species common today have combatted the problem of animal foraging for a long time--and successfully too, we must assume, or they wouldn't be here and healthy. Some plants can take care of themselves.

Just for fun I checked through the botany sections of a library bookshelf. I counted fifteen volumes on edible plants, and I know of many new ones not on that list. Following these books on the shelf was a lone volume called Poisonous Plants of the United States and Canada, by John Kingsbury--626 pages of potential grief. In my own bookshelf I found the pamphlet, "Poisonous Fruits", by F. H. Montgomery, a special publication of the Federation of Ontario Naturalists.

Death due to plant poisoning is not a frequent occurrence. Often, though, the victims are children. There is a dearth of experimental data about the poisonous nature of many plants, but those who plan to try foraging should be as aware of the known dangerous species as they are of the delicacies. Here follow a few baddies, selected from the hundreds included in Kingsbury's book.

In the garden: hyacinth, narcissus, and daffodill bulbs can cause nausea, vomiting, diarrhea, and may be fatal.

Castor bean seeds--one or two is near the lethal dose for adults. Larkspur and Monkshood cause digestive upset, nervous depression or excitement, and may be fatal.

Iris--underground stems cause severe, but not usually serious digestive upset.

Foxglove--a source of Digitalis. In large amounts can cause dangerously irregular heartbeat and pulse, and mental confusion.

Dutchman's Breeches may be poisonous in large amounts, and is known to be fatal to cattle.

Rhubarb leaves, raw or cooked, can cause convulsions, coma, followed rapidly by death.

Tomato and potato leaves--these plants are in the nightshade family, Solanaceae.

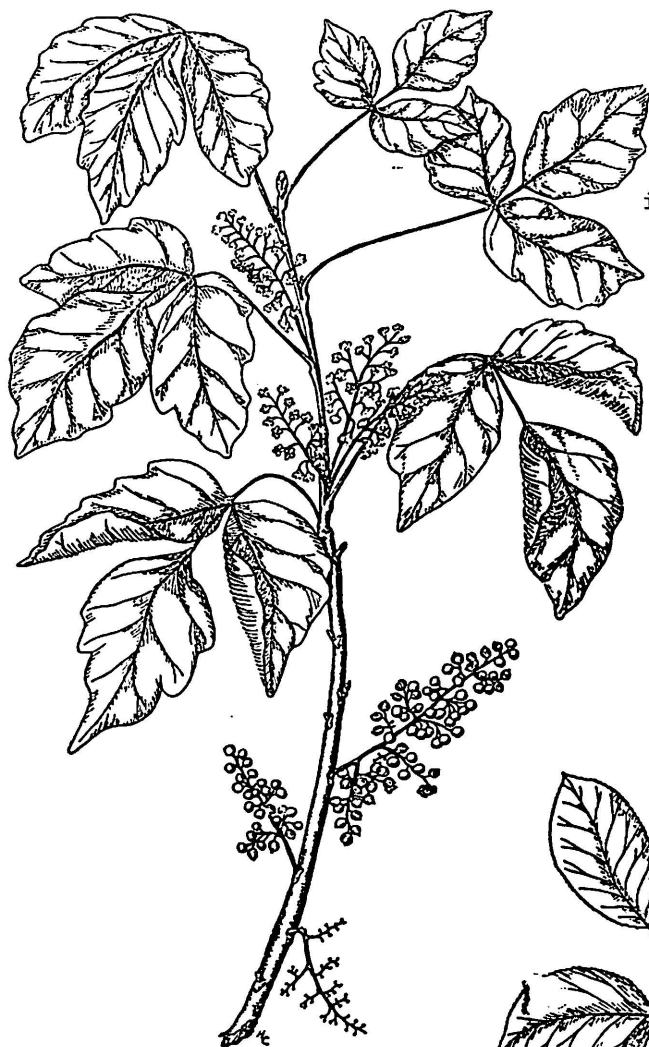
Daphne--a few berries can kill a child.

Rhododendron--all parts produce nausea and vomiting, depression, difficult breathing, prostration and coma.

Yew foliage and berries produce sudden death, usually without warning symptoms.



Monkshood



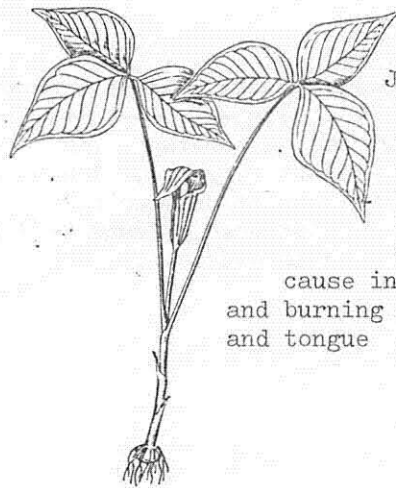
Poison ivy--can be a dwarf shrub or a climber. Sap contains skin irritating substance that seems to affect everyone. I have only seen it once or twice in N. S., but when I found it I found lots and lots.

Wild cherries--pin and choke--have twigs that release cyanide when eaten. Not a good leaf for brewing tea.



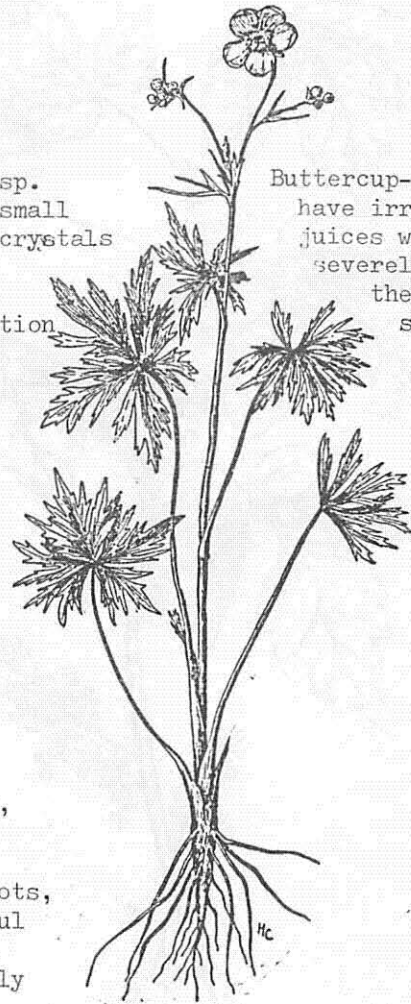
Lambkill got its name somehow. Laurel, leatherleaf, Andromeda, and other Heath plants are known to cause poisoning in animals, and one human death has been

Lambkill got its name somehow. Laurel, leatherleaf, Andromeda, and other Heath plants are known to cause poisoning in animals, and one human death has been attributed to a laurel, but not the one

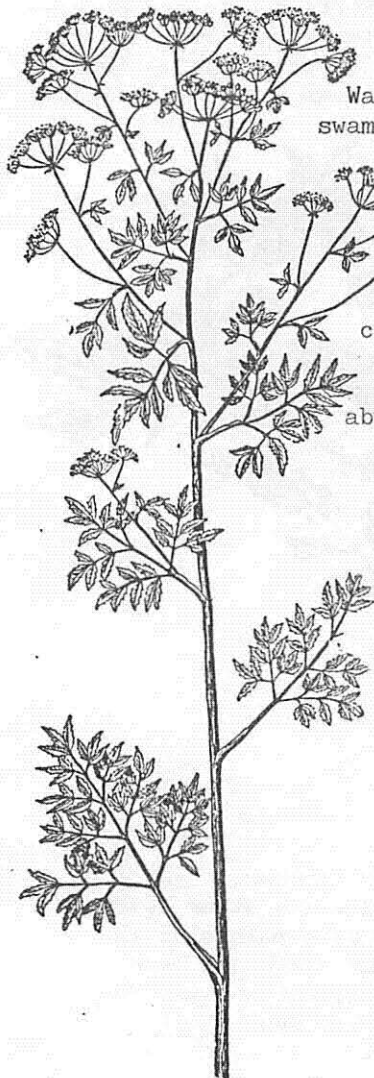


Jack-in-the-Pulpit

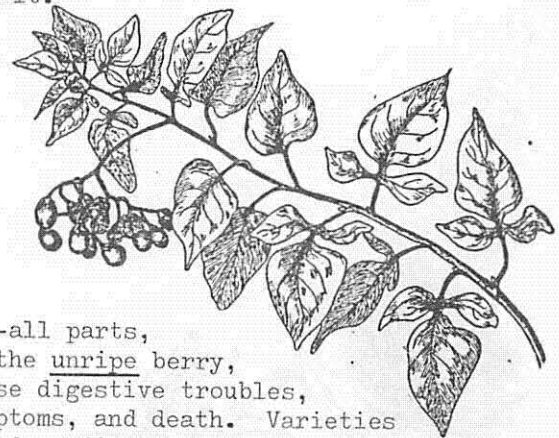
all parts, esp. roots, have small needle-like crystals of Calcium Oxylate that cause intense irritation and burning of the mouth and tongue



Buttercup--all parts have irritant juices which may severely injure the digestive system



Water-hemlock grows in swamp or muck areas, often 8 feet tall. Showy white umbel flowers, hollow stem with purple stripes. All parts, esp. roots, cause violent and painful convulsions. Many known deaths from this. Fairly common in N. S., and abundant when you find it.



Nightshade--all parts, especially the unripe berry, cause intense digestive troubles, nervous symptoms, and death. Varieties found in garden, field and seashore.

The Berger Commission Comes to Halifax!

Paul Keddy

No doubt everyone is aware of the increasing controversy over the plans of Canadian Arctic Gas Pipelines Ltd. (a consortium of multinational corporations and Canadian companies) to put a gas pipeline down Canada's Mackenzie Valley. This pipeline will be the first step in opening a great development corridor to Canada's Arctic, a corridor with unknown impacts upon the arctic environment and its native peoples. Thus far the Canadian government has made virtually all decisions at the senior civil servant level without any public input.

The Berger Commission has the mandate to assess the impact of the proposed pipeline north of 60°. The National Energy Board will deal with problems of energy exports and Canadian energy planning. They have spent many months listening to submissions from and cross-examinations of representatives from the oil and gas industry, native peoples, and public interest groups. Now they are touring southern Canada for opinions from the rest of the country.

On June 8, at 8pm in the Lord Nelson Hotel, the Berger Commission will listen to submissions from the citizens of Nova Scotia. At the last executive meeting of HFN, we decided that HFN should be represented. Paul Keddy and Don MacDougall agreed to prepare a submission. Interested members are invited to the hearing. It is open to the public, although unfortunately it conflicts with our own June 8 Tuesday meeting.

Outdoor Education at Hebbville

Barb Shaw

For quite a long time now, at least since 1960, the out-of-doors has been an integral part of the science teaching at Hebbville Consolidated High School, near Bridgewater. The school only came into being in 1960 but even during that year field trips to local beaches, such as Green Bay and Crescent Beaches, and to the wooded areas around the school were undertaken. Students were also taken to the old gold mines area not far from the school, and in time also to Kedgie Park. For the first few years, possibly since 1970, the area of school property beyond the playing fields has been organized as an Outdoor Laboratory, and all the students at the High School (grades 7-12) use its facilities for science study activities.

In February, 1976, we were pleased to be contacted by Bernard Hart of Audio-Visual services (Department of Education) asking us about making a film of the Outdoor Lab at the school. Twelve teachers became involved in discussions as to the suitability of our area for such a movie and eight have contributed written reports of the work done in the area with their students. The subject areas included are social studies, mathematics, English, biology, Junior High Science, chemistry, geology, and physical education. Our approach to the proposed movie is an integrated one and we are becoming increasingly excited about the project as the actual filming date approaches. Filming will take place by the CBC in late May and during June of this school year.

During the fall of 1975 several of the teachers attended orienteering meets in Halifax County and also at the Wentworth Youth Hostel. Our school area was then visited by Arne Naess of Orienteering Nova Scotia, and with Kjell Larson from Sweden, a map of our school grounds and outdoor lab was made for us. This map has been very successfully used by our Junior High classes at the school, and most recently at an in-service training day for teachers when our resource personnel for orienteering and acclimatization were Glyn Bissix and Roger Mannell of Acadia University. A very challenging and enjoyable part of the in-service programme was conducted in our Outdoor Lab.

During the fall of 1975 several of the teachers attended orienteering meets in Halifax County and also at the Wentworth Youth Hostel. Our school area was then visited by Arne Naess of Orienteering Nova Scotia, and with Kjell Larson from Sweden, a map of our school grounds and outdoor lab was made for us. This map has been very successfully used by our Junior High classes at the school, and most recently at an in-service training day for teachers when our resource personnel for orienteering and acclimatization were Glyn Bissix and Roger Mannell of Acadia University. A very challenging and enjoyable part of the in-service programme was conducted in our Outdoor Lab.

Down to the Sea in Books

Debby Burleson

Seashores figure prominently in our summer activities, and though a book display will be a part of our June meeting of Peggy's Cove, I can't resist offering my personal assessment of the guides and naturalists' books available. Some of the books are available off-the-shelf in Halifax bookstores, but many had to be ordered from the publisher. The list is most incomplete, and if you have a favourite that I've overlooked, consider bringing it along to the June 8 meeting.

A Beachcomber's Botany by Loren Petry, published by the Charham Conservation Foundation. Hard to get, but an excellent guide to seaweeds and shore plants. It was written for the Cape Cod area, but applies to N. S. with a few exceptions. Each page contains a soft, accurate drawing, with hand-printed notes about the species.

There are also general notes of interest about seashores and salt marshes, plus small detail drawings. Over a hundred species are discussed, including the mushrooms, lichens, and higher plants that frequent the salt-spray environment. Paperback, but not a pocketbook. Good for identifications and fun to leaf through; words kept to a minimum.



Seabeach Sandwort

(*Arenaria peptoides*)

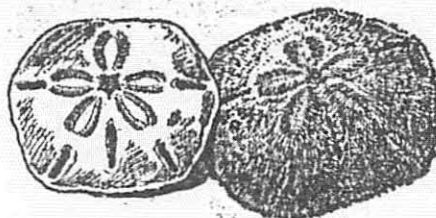
Flowers: small, few at leaf axils.

June ~ August

Leaves: fleshy

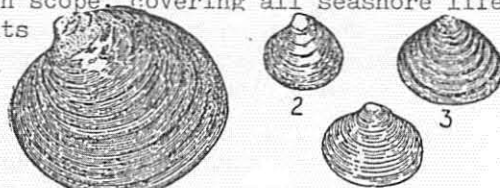
A succulent, procumbent beach plant, forming large carpets

The Edge of the Sea and others by Rachael Carson. These enjoyable books are the source of much of the lore of seaside creatures that field naturalists like to share. All are beautifully written, though I like The Edge of the Sea best, and illustrated at frequent intervals with sketches by the author. The sketches are not well reproduced in the paperback version, but they help. Tells all--life histories, what things eat, how they live, adaptations, odd features, anatomy--a mother lode of information.



Sand dollars

Field Book of Seashore Life by Ralph Waldo Miner; Putnam's Sons. Probably the layman's book most likely to tell something about that weird thing you found on the beach after a winter storm. Encyclopedic in scope, covering all seashore life but best on invertebrates. Does not cover plants. Not too much natural history, just the facts. Great for strictly identifying things, but not really fun to read.

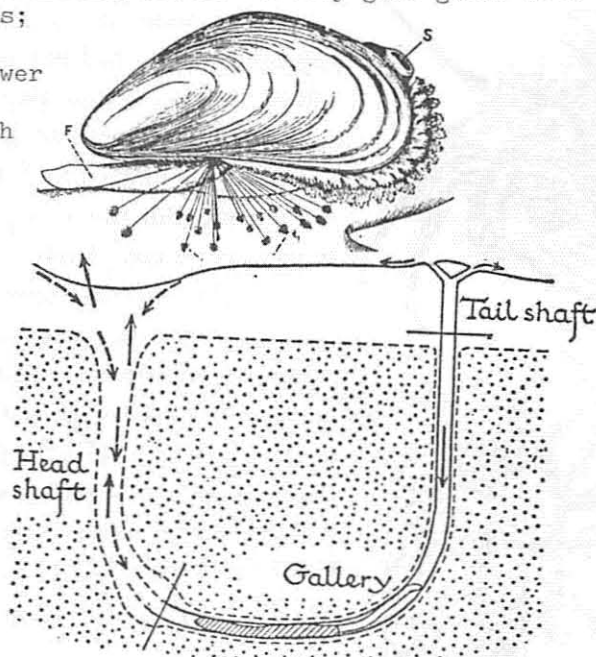


The Rocky Shore by John M. Kingsbury; Chatham Press. An informative and entertaining little guide to the rocky coast of Maine, completely applicable to our rocky shores. A Rachael Carson sort of style, but with better drawings and not quite as rambling. Very ecological, comprehensive treatment of interrelationships between plants, animals, and the physical world. Not a field book, but something to read before or after a shore visit.



The Sea-Beach at Ebb-Tide by Augusta Foote Arnold; Dover. A very good guide with lots of illustrations and some photographs; perhaps more "Scientific" than the other, with the possible exception of Miner. Fewer anecdotes, more facts, lots of detailed information. This one got me well through university invertebrates course. Covers plants and animals of both rock and sand shores.

The Sea Shore by C. M. Yonge; Collins. A natural history of British shores, with a whole different style. Very high quality, interesting drawings of creatures in their habitat, also many pages of excellent quality black-and-white photographs. Good, solid information plus folklore and stories of the author's experiences. Not as florid as Rachael Carson's--much more restrained, but one of my favourite of this type.



Canadian Atlantic Sea Shells by E. L. Bousfield; Queen's Printer. This book has been out of print for several years now, and it's too bad. It is a very usable guide to the shells of eastern Canadian waters, with Canadian distribution information. Treats shelled creatures and echinoderms, illustrated mostly with photos of individual. Little text--for identification only. If you haven't bought one now, write to Ottawa and beg them to reprint it.



41. *Hydrobia minuta* X 3

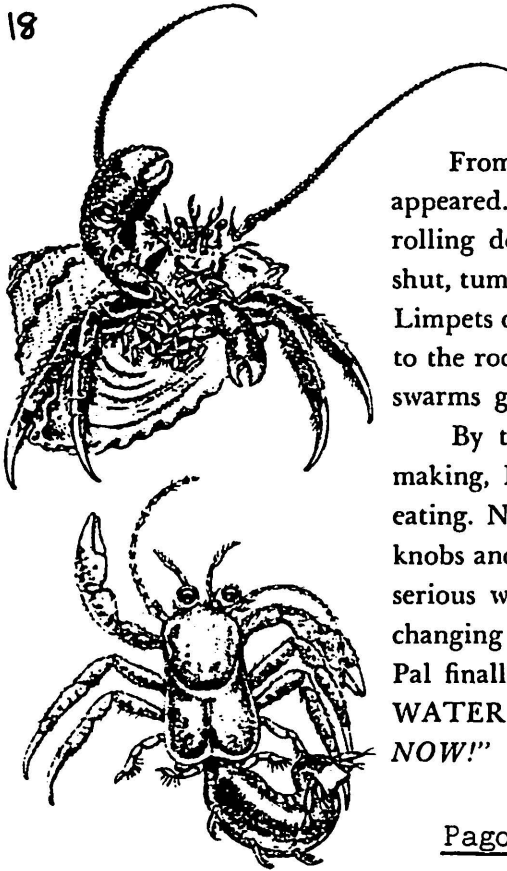


The Golden Nature Guide to Seashores--one of that series of small, colourful paperbacks about just about everything. While I usually swear by the value of these \$1.50 gems, I'm not fussy about the Seashore Guide. Too many bright pictures of things that freeze to death way up north in N. S.. But it does fit in a pocket, is cheap, easy to get, and describes many local species.

Seaweeds of Newfoundland by Robyn South of Memorial University. There aren't many seaweed guides around, and this is still a bit stiff for many laymen, but try it. It's a booklet published jointly by Memorial and Oxen Pond Botanic Park; I obtained a copy free by writing to the university. Lots of text, not exceedingly well illustrated with soft black and white photos.

I'll bring all of these and more to the June meeting; I hope you will bring along your favourites.

But my very favourite book is yet to come ...



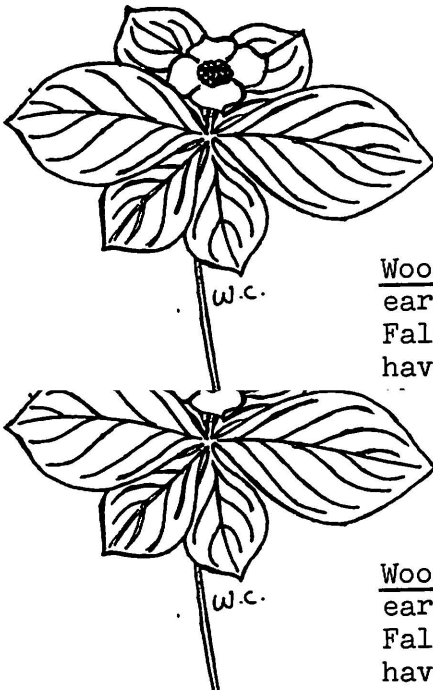
PAGOO'S NEW REAR END
LOOKED DOWNRIGHT PECULIAR

From under the lavender ruffle at the pool's rim, several Snails appeared. Pagoo had not noticed them grazing there—now they came rolling down on him like marbles. Tucked into their shells, doors shut, tumbling down the slopes, they thumped him on all sides. Nearby Limpets only hugged their home bases more closely, clung more tightly to the rock. But tiny copepods darted about in the sea-soup like insect swarms gone completely crazy.

By these frantic signs and the fuss Old Instinct seemed to be making, Pagoo was awakened to danger. He long since had stopped eating. Now, from the fringes of his small feelers right down to the knobs and hairs on the rest of his body, he understood that something serious was happening. This rain pelting into the pool was rapidly changing the comfortable salted water into weak, unsalted stuff! Old Pal finally got through to Pagoo with the urgent message, "FRESH WATER WILL KILL YOU! GIT, SON—AND I MEAN *RIGHT NOW!*"

Pagoo by Holling Clancy Holling; Houghton Mifflin.

This book, intended for "young readers", gives an enthralling peek into tide-pool life through the eyes of Pagoo, a hermit-crab (genus Pagurus). It is accurate, fun, magnificently illustrated in both colour and black and white. If you don't mind a little anthropomorphism, it's for you; otherwise, get one for a young reader and read it yourself first. Great for reading aloud and full of fascinating episodes in the life of Pagoo, from plankton to adult. It's in the public library.



Woodland neighbours common in spring and early summer are Bunchberry (left) and False Lily of the Valley (right). Both have white flowers often seen carpeting



Woodland neighbours common in spring and early summer are Bunchberry (left) and False Lily of the Valley (right). Both have white flowers often seen carpeting

About this newsletter...

This is the official newsletter of the Halifax Field Naturalists, published every two months through the courtesy of the Nova Scotia Museum. We welcome articles from members or non-members--reports of field trips, nature notes, book reviews, observations, highlights from other publications, notices, drawings, anything pertaining to the natural history of Nova Scotia. Material for the July-Aug issue should reach the Museum by Friday, July 16.

Membership in the Halifax Field Naturalists is open to anyone interested in the natural history of Nova Scotia. Membership fee is two dollars annually, family membership three dollars. Come to a meeting or write care of the Nova Scotia Museum, 1747 Summer St., Halifax.

name _____

address _____

occupation or interests _____

suggestions for programs? _____

Moving? We're thinking particularly of our student members, but if you are moving be sure to give us your new address. Field trips, meetings, and the newsletter will continue through the summer, and we would like to keep all our members informed of HFN activities.

We're Moving, too HFN is considering changing our place of meeting to the auditorium of the N. S. Museum. Seating is more comfortable, projection facilities good, and the building is perhaps a bit easier to find than our present site, especially for new members. Museum facilities become available in the summer or fall. If you have strong feelings one way or the other, please let a member of the executive know.



From Water-Colour Drawing by Birket Foster. By permission of Mr. Vincent Brooks.

GATHERING SEA-WEED.

GATHERING sea-weed on the beach,
Wandering far as eye can reach;
Gleaning on the lonely shore
Sea-weed till they find no more;
See the patient workers there—
Thoughtless they and free from care.

Round the headland, where the rocks
Brave the tempest's wildest shocks,
Jutting outwards toward the sea,
Frowning in their majesty,
Perpendicular and high,
Darkening now the summer sky.