Halifax Field Naturalists Newsletter

JUNE - AUGUST 1984 No. 36

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

Halifax Field Naturalists

JUNE - AUGUST 1984 No. 36

MEETINGS: First Thursday of every month at 8.00 pm in the Auditorium of the Nova Scotia Museum, 1747 Summer Street, Halifax.

FIELD TRIPS: are held at least once a month.

MEMBERSHIP: is open to anyone interested in the natural history of Nova Scotia. Memberships are available at any meeting of the Society or by writing to --- Membership Chairman, Halifax Field Naturalists, c/o Nova Scotia Museum.

Individual memberships ..... $7.00 per year
Family " ..... $10.00 " "
Sustaining " ..... $15.00 "
This covers our fiscal year - January 1 to December 31.

Members receive the HFN Newsletter and notices of all meetings, field trips and special programs.

EXECUTIVE for 1984:

President	John van der Meer	(r) 455-1029.	(o) 426-8276
Vice-President.....	Edna Staples	(r) 868-2919	
Treasurer	Bernice Moores	(r) 422-5292	(o) 445-2500
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NEWSLETTER Editor ..... Doris Butters 463-0033
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Aileen Meagher

MAILING ADDRESS: Halifax Field Naturalists
c/o N.S. Museum, 1747 Summer Street, Halifax, B3H 3A6.

HFN is a member organisation of the Canadian Nature Federation.
HFN is incorporated under the Nova Scotia Societies Act.
HFN NEWSLETTER is produced by courtesy of the Nova Scotia Museum.

*** Now that running a car is so expensive, it would be appreciated if those travelling in someone else's car on field trips share the cost of the gas. Thank you.

hfn news

CONRAD'S BEACH -

Just a reminder that, while the mini-survey of Conrad's is coming along, help would still be welcomed.

Linda is concentrating on insects and the bird list is quite extensive, but the intertidal zone needs to be worked on and mammals have been quite neglected. Much of the flora has been listed, but as the plants bloom in sequence over the full season, there is sure to be something unrecorded.

On July 7, Linda, Lesley and I took an Australian visitor to the Conrad's Beach area, using the opportunity to do a little collecting. Our visitor was most helpful and she it was who found the tiny snail, *Succinea* sp. This little chap was found in the area behind the dunes so is probably the species known as the 'infamous' Amber Snail.

Among the more common and obvious flowers in bloom that day were Field Bindweed, Beach Pea, Vetches, Clovers, Sheep Sorrel, Oxeye Daisy, Cinquefoil, Silverweed, Hawkweeds, Buttercups, Yarrow, Pineapple Weed and some Wild Strawberries still in flower.

Of the less obvious ones we found Yellow Rattle, Blue-eyed Grass, Lesser Stitchwort, Kidney-leaved Buttercup, Sandwort and Sea Milkwort. The path to the dunes was bright with golden-yellow Buttonweed (*Cotula*), which is very prolific in that area, but which I have not noticed in any other local beach area.

If you would like to help with HFN's Mini-survey of Conrad's Beach please call LINDA MORRIS at 463-3150 and find out how best you can assist with this project. Thank you!

CONGRATULATIONS -

To DR. BILL and MRS. FREEDMAN on the birth of Rachel Stephanie Jennifer, born on July 25, 1984.

ODE TO THE PUBLIC GARDENS by Ricki G-S

The Garden in the spring
Is such a lovely thing;
And to see it in the summer
Nothing is more 'funner' (ouch!)
We can't ignore the fall
With trees so colourful and tall.
But when snow is on the ground
we find we have to walk around.

DON'T FORGET THE HFN LOGO CONTEST -

Try your hand at designing a logo for us - as simple a one as possible and send or drop it off at the N.S. Museum. Yes - there is a prize for the lucky winner, give it a try.

A BREEDING BIRD ATLAS IN THE MARITIMES?

by

Peter Payzant

(reprinted from Nova Scotia Birds, with permission)

An exciting new aspect of birding may be about to develop in Nova Scotia. Following in the footsteps of successful work in Great Britain, New York, Ontario and elsewhere, Maritime birders and interested naturalists may have the opportunity to take part in the compilation of a Breeding Bird Atlas for the Maritime Provinces.

A Breeding Bird Atlas is a book of maps. Each map shows the breeding range of a single species of bird, much like the maps in field guides. Dots on the map indicate the breeding status of the species: a large dot indicates a confirmed record, a medium-sized dot a 'probable', and a small dot a possible breeder.

The first atlas was completed in Britain in 1976, after five years of field work. Britain was divided into squares, 10km on a side, and volunteers were assigned to each square. Between 10,000 and 15,000 people worked on the project over its five year life, spending hours out in the field looking for indications of breeding activity. The result was the first detailed record of what breeds where in Great Britain, and it was compiled almost entirely as the result of volunteer, and in most cases, amateur, labour. Figure 1 shows a typical map from the British atlas. Each dot represents a square where the Oystercatcher was found breeding, during the Atlas period.

Other countries became enthused, and projects began in Europe, Australia and North America. In Canada, atlas projects are currently underway in Alberta and Ontario, and are in the planning stages in Quebec and Saskatchewan.

The area to be covered by the atlas is divided into squares, usually 10km on a side as in the British atlas. Figure 2 shows the location of 10km squares in Nova Scotia, as defined on topographical maps. Each square is visited by a team who look for and record signs of breeding activity. No attempt is made to locate nests, partly because it takes too long, but mainly because it would disturb the breeding bird and might even lead to predation. Instead, the observers look for clues, such as food or nesting material being carried, presence of recently fledged young, and so on. A set of criteria is used to classify each observation into possible, probable, or confirmed breeding status.

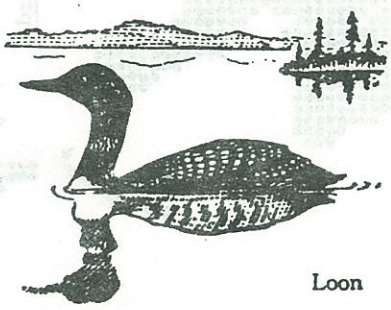
Notes are kept on pre-printed cards which are sent to local coordinators at the end of the season. After the cards are checked by the coordinator, they are entered into a computer, which, in the end, plots a map of the data returned by the observers.

Because of the large areas covered, organisers generally plan on the fieldwork taking five years. This may seem like a long time, but in terms of population dynamics it amounts to almost a snapshot in time. The Atlas is valuable then as a source of baseline information. Ten or twenty years down the road, it will be a good guide as to how the populations of various species are changing. At present, it is almost impossible to make a convincing argument about changes in bird populations.

One of the most valuable aspects of the BBA project is that it documents areas of special habitat. If a bird is detected as breeding in only a few unique places in the Atlas area, then these places should be kept in mind as needing protection when threatened by development. Also, of course, this may indicate that the species itself is in low numbers within the Atlas area, and many be in need of protection as a 'threatened' or 'endangered' species.

A Breeding Bird Atlas project is a golden opportunity to make a real contribution to the corpus of scientific

knowledge about birds. You will be acknowledged in the pages of a major scientific work, and most importantly, one square (at least) on each of the 200-odd maps will be Your Square. If it is filled in, it is filled in because you found evidence that a particular species was breeding in that square. If it is blank, it is blank because you looked and looked, and didn't see any sign of that species breeding.



Loon

What about the beginner, perhaps one who is a little unsure about his (or her) ability to correctly identify birds? This is all the more reason to get involved. Since this is a five-year project, you can have a few years to go out with others and learn the ropes. Then having acquired the necessary knowledge, you will be all set to lead a team into a square yourself. If you already can identify most of our birds, this is a chance to learn a new birding skill - very few of us at present have the ability to analyse bird behaviour to tell whether or not an individual is breeding.

Other reasons? Working on a square is a good excuse to go into unfamiliar territory and find out about new birding areas you may never have known existed. It gives you a good reason to get out into the field during a traditional lull in birding activity: late spring and summer. And then there is the thrill of 'square-bashing' or 'block-busting' - making a special trip to a remote or difficult area to quickly and efficiently survey it, and then leave - a special task requiring dedication and endurance.

The Maritime Breeding Bird Atlas project will require the joint efforts of naturalist organisations in Nova Scotia, New Brunswick and Prince Edward Island. Considerable support will be required from Government agencies, and a full-time coordinator will have to be hired for at least part of the project. At present, it looks like the project will begin with a practise season next spring (1985), followed by the first actual field season in spring and summer of 1986.

The most important ingredient in a Breeding Bird Atlas project is volunteers. In order to decide whether we go ahead with the project or not, we need a good idea of how many people are interested in taking part. If you want to be included in this project, or if you just want more information , please get in touch with

Peter Payzant 861-1607, or by mail at
The Nova Scotia Bird Society,
c/o The Nova Scotia Museum
1747 Summer Street, Halifax, N.S.
B3H 3A6

There is something for everyone in a Breeding Bird Atlas project. It is an ambitious and worthwhile task, and taking part in it would be a real milestone, not only for you as an individual, but also in the history of naturalist organisations in Nova Scotia.

Peter Payzant.

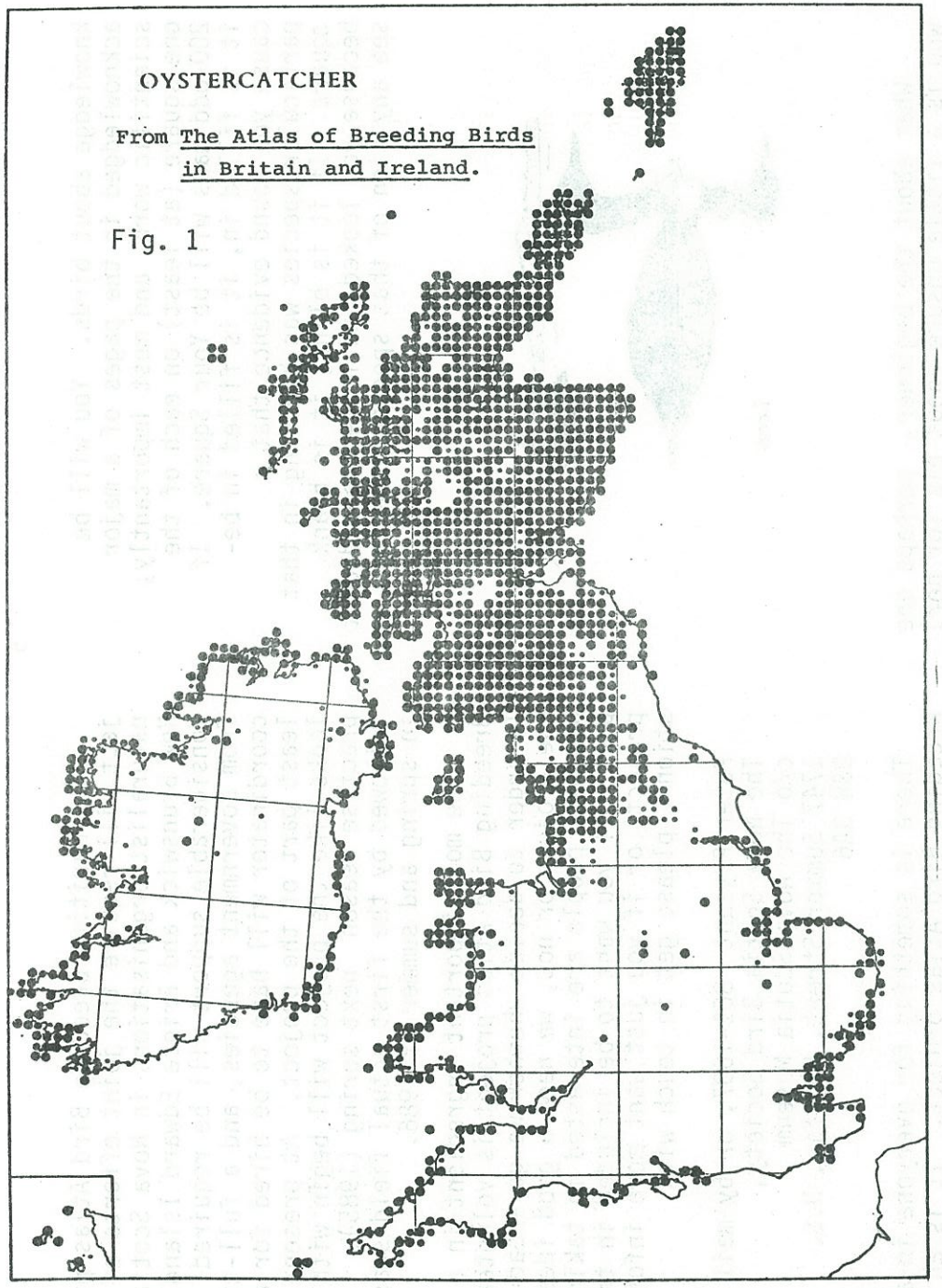
NEXT DEADLINE -

25 October 1984 for the NOVEMBER issue. Mail contributions to to N.S. Museum OR phone the Editor at 463-0033

OYSTERCATCHER

From The Atlas of Breeding Birds in Britain and Ireland.

Fig. 1



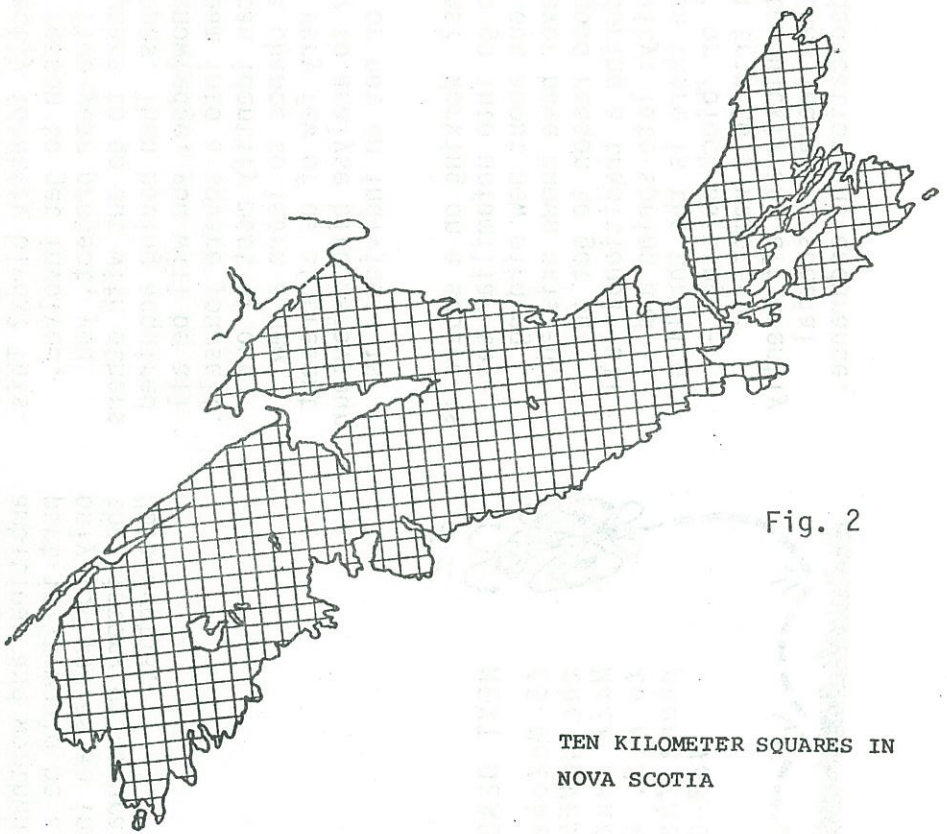


Fig. 2

TEN KILOMETER SQUARES IN NOVA SCOTIA

nature notes

Most naturalists like to discover something new, and many happy naturalists have left Brier Island, in southwestern Nova Scotia, with a new feather in their caps (or on their lists). Since many well-known naturalists, including Van der Kloet, McLaren, Mills, Roland, Erskine, Caldwell, Tufts and others, have made pilgrimages to Brier Island in search of the rare and unusual, one would not expect to discover too much that is new on the island.

Yet the blood of the naturalist is thick and causes the mind to be stubborn. For years birders from all across Canada have gone to Brier Island, not only to see what others have seen, but hoping they will find something new. Plants found nowhere else in Canada have been, and may continue to be, discovered there. (e.g. Mountain Avens (*Geum Peckii*). The path to Brier Island is well-trodden, and in keeping with the almost religious tradition of the Halifax Field Naturalists 'to keep an eye on Nova Scotia', Jim Stewart and I set out on this long journey (four hours from Halifax).

Both of us being young and foolish (myself more the latter), we hoped to discover a new species of frog. I had heard Spring Peepers and Wood Frogs along with another strange frog, which I hoped could be the Chorus Frog - a species unrecorded in Nova Scotia.. A week after hearing the strange frog, and after lengthy persuasion, Jim was willing to abandon all in quest of the unknown but interesting (the sign of a true naturalist!).

Looking into the unknown is like running into a cave - you don't see anything until your eyes have had time to adjust. It is the unpredictability of the unknown that is the subject of this nature note.

This is what happened. In the process of investigating ponds in search of the elusive Chorus Frog, we shone our flashlights into the dark waters. It was then that the unexpected occurred. A predacious Diving Beetle swam up from the goo at the bottom of the pond and grabbed a Spring Peeper. The beetle munched the peeper several times and then dragged it to the bottom where it continued tearing at the frog's legs and stomach. Although the peeper was larger, the beetle was by far the stronger and perhaps smarter, because its first attack was directed at the peeper's strength - its muscular legs. Such an occurrence may have been witnessed by someone else, somewhere else, but to Jim and myself it was a true discovery of something <u>new</u>! In many ways the joy of being a naturalist is enhanced if your definition of 'new' is not new to the world, but new to <u>you</u>.

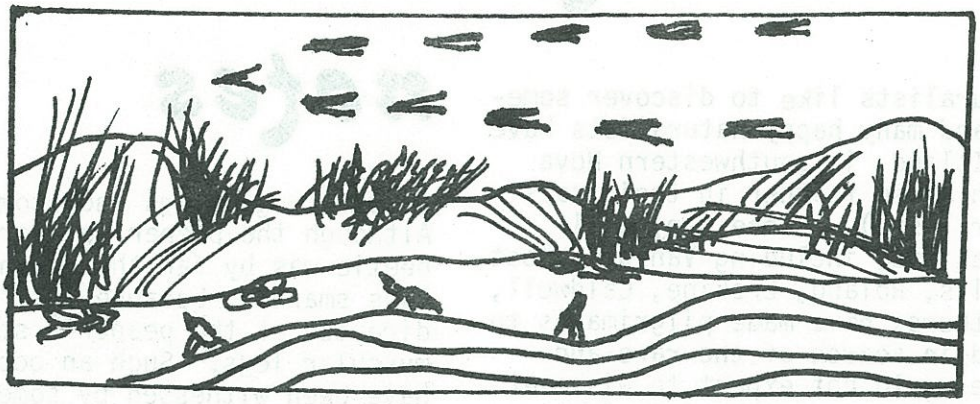
By the way, we didn't find any Chorus Frogs. The strange-sounding frogs I had heard turned out to be peepers! Thus we also found out how different Spring Peepers can sound - and that was also <u>new</u> to us.

David Lawley.

... Early in August at Sandy Cove, Edna Staples watched an Osprey with a fish being attacked by a seagull, the Osprey was forced to drop his catch which the gull then took

..... Four young but quite well-grown starlings were lying on the grass with wings flat on the ground and heads turned towards the sun, then while still lying on the ground each lifted its left wing so that both head and wing faced the sun. Ricki Garrett Smith, who noticed the birds, asks, does anyone know why they would behave this way? - "almost like a ballet", she commented.....

A tid-bit from Audobon magazine, appropriate to Barry Wright's September talk on wasps. Cornell University researchers needed 200 wasps but figured they'd have to have help, so issued an appeal for live-queen yellow-jackets to be used to start lab. colonies. They sweetened their request by offering a pound of honey for every insect received in good condition. So many donors lined up at the lab with bottles buzzing with yellow-jackets - nearly 400 of them - that the university had to issue a cease-and-desist order! Once the lab colonies are going, the researchers will 'milk' the insects of venom to develop a serum to counteract the poison of the sting; this has already been done with the honey-bee.



field trips

WATER BIRDS ALONG THE EASTERN SHORE IN SPRING.

Date: Sunday, April 15, 1984. Participants: 13
Site: Eastern Shore, including Cole Harbour, Conrad's Beach, Three Fathom Harbour and area.
Weather: Bright, warm sun, breezy off the water.

The deep inlets and sandy beaches along the coast east of Halifax provide just the right kind of habitat for sea-birds, shorebirds and naturalists. Eric Cooke shared with us his many years of experience in this area, directing us to locations most important to water birds and pointing out distinguishing field marks of the various species.

The rusty CN rails no longer carry freight trains - instead, they lead eager naturalists out over Cole Harbour, a brackish inlet abounding in wild life.

A company of Red-breasted Mergansers dived from the surface for a breakfast of small fish, while a hungry Osprey skirted the shoreline, hovering in that awkward-looking position as though trying to climb up onto the edge of an invisible table. Of special interest for me was a single Black-headed Gull flying lazily low over the water in a looping figure of eight - apparently in no hurry to get to a nesting site somewhere in Iceland, northern Europe or perhaps, Siberia.

Our next stop was Conrad's Beach where the breeze blowing off the water cooled the sun's rays quite a bit. However, our spirits lifted at the sight of fleet-winged Red-Breasted Mergansers darting overhead and the graceful flight of a Great Blue Heron, slowly wafting its large wings, to glide silently into the marsh behind the dunes. With scopes trained on wave-crests, we discovered Oldsquaw, Common Eiders, Common Loons and a seal hiding in the wave-troughs just beyond the surf. Far out to sea the faint grey outline of a migrating "V" emerged from the mist. Geese? Eric then taught us how to distinguish between geese and cormorants at a distance of five miles. Geese are very orderly, while cormorants are not quite so devoted to rigid form. The irregular lines of this "V" indicated migrating Double-crested Cormorants. Great Cormorants have already moved north to nesting sites.

The beach beyond Fox Island raised excitement and a sigh of relief - five Piping Plover. This species has been declining in numbers throughout its range in North America during the past 30-40 years. Even on protected beaches, such as Long Point in Lake Erie, the Piping Plover has disappeared, unable to compete with the increasing number of gulls whose summer roosting areas coincide with Piping Plover

breeding beaches. I'm not sure how large the Conrad's Beach population was fifty years ago, but for the past twenty years only about four or five pairs of this endangered species still return to raise young. As we watched these small birds dodging the waves in their search for food in the wet sand, I wondered whether I would be lucky enough to see them again next year.

A dozen amateur naturalists gathered in the lee of the sand dunes to feed on an assortment of sandwiches. They drank hot tea and finished up with a rich milk chocolate, which no doubt provided them with the energy to continue their trek along the eastern shore.

The marshy inlets and spit-bound lagoons provide habitat for Black Duck, Canada Geese, Great Blue Heron, Green-winged Teal, Osprey and Red-breasted Merganser.

Our last stop, at Three Fathom Harbour, yielded a couple of surprises. An Iceland Gull was feeding on the mud flats amongst several Herring Gulls, instead of heading for Baffin Island nesting sites. And closer inspection disclosed two Short-billed Dowitchers also pecking in the mud. These birds are common here in the autumn, but rarely seen in the spring.

Before returning to the city, we paused to reflect on the large number of different species using this section of coastline. It's really amazing what can be discovered with binoculars, field guide and someone like Eric, to point you in the right direction.

John Brownlie.

Species sighted - Eastern Shore, April 15, 1984 -

Gold Finch; Song Sparrow; Black-capped Chickadee; Osprey; Red-breasted Merganser; Common Loon; Black-headed Gull; Great Blue Heron; Old Squaw Duck; Common Eider; Double-crested Cormorants; Black Ducks; Mallard; Piping Plover; Herring Gull; Black-backed Gull; Killdeer; Canada Geese; Red-winged Blackbird; Iceland Gull; Short-billed Dowitcher; Green-winged Teal; Downy Woodpecker; Grackle; Starlings; Raven; Crow; and an elusive Kingfisher.

THE ROCKY SHORE AT PEGGY'S COVE

Date: Sunday, 10 June, 1984. Participants: 17
Site: Cranberry Cove 1km west of Peggy's Cove
Guide: Dr. Chris Corkett, Department of Biology, Dalhousie University.
Weather: Warm (22°C), northerly wind at about 10 knots, clear sky, excellent visibility.

The Halifax Field Naturalists couldn't have chosen a better day to extend an invitation to the Blomidon Field Naturalists for a joint trip to the rocky intertidal zone at Peggy's Cove. Two sites were visited: one located in a sheltered area, the other in full exposure to the ocean swell (it was very gentle that day due to an offshore wind). We hunted between the rocky crevices, among the seaweeds and along steep walls for a variety of animals and plants. The littoral fringe (upper part of the intertidal zone) consists of a zone of lichens (*Calloplaca* sp.), a zone of blue-green algae, a zone with Rough Periwinkle (*Littorina rugosa*) and a transition zone of bare rock.

The midlittoral fringe showed a not-too-well developed barnacle zone (*Balanus balanoides*), a mostly absent Blue Mussel (*Mytilus edulis*)) zone, a dense cover of Fucus (*F. vesiculosus* and *F. edentatus*) with Smooth (*Littorina obtusata*) and Common Periwinkle (*L.littorea*) and Dog-whelk (*Thais lapillus*). At the bottom of this zone extended a fringe of Irish Moss (*Chondrus crispus*) and other red seaweeds.

The sublittoral fringe being rarely exposed to the air, suffers no dessication or freezing, and consequently carries a rich fauna and flora. Several kelps (*Alaris esculenta*, *Laminaris digitata*, *L.saccharina*) and red seaweeds (*Corallina officinalis*, *Palmaria palmata* or dulse, and others) typify the zone. Animals include the Horse Mussel (*Modiolus modiolus*) bryozoans, hydrozoans, the sea anemones (*Actinia equina*), limpets (*Acmaea testudinalis*), and others.

A particularly interesting observation included a comb jelly named *Beroe*, a member of the plankton, which propels itself along by means of eight rows of combs. Tens of Hermit Crabs (*Pagarus* sp.) lugging their periwinkle shell homes, crawled over the bottom.

Towards noon, a tall bordeaux-sailed schooner, the last of the Tall Ships, ploughed its way towards the sizzling Halifax Harbour. The absentees were wrong.

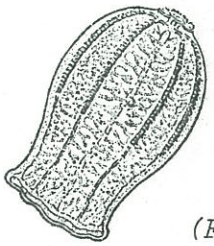
Filip Volckaert.

We also received a report from Jim Wolford of BFN's (thank you, Jim), who noted that the tidal range at Peggy's is less than 2m "pretty paltry by Minas Basin standards..." !! He also commented on the barrens plants (e.g. crowberry etc.) and the bare rock transition zone with its black Rock Tripes(*Umbilicaria* and *Lasallia*) and noted amphipod and isopod crustaceans, green crabs, shore anemones and tiny fuzzy colonies of hydroids, mussels, limpets, *Lacuna* snails and their egg cases.

He observed specifically the beauty of the Comb-jelly "...its red, moving comb-plates of cilia reflecting irridescent colours from the sunlight..."

Later, Jim and others of the group went into Dartmouth for an across-the-harbour look at the docked Tall Ships, plus the scores of private sailing rigs from windsurfers to schooners, and throngs of "gawkers like ourselves".

BEROE SP.



(FIELDBOOK OF SEASHORE LIFE, by Miner, 1950)

BIOLOGICAL FARMING IN ANNAPOLIS VALLEY.

Date: Sunday, June 24, 1984. Participants: 28-30
Site: Basil Aldhouse's Chicken Farm, Lawrencetown, Annapolis Valley
Weather: Bright, warm - about 20°C, fairly strong S.W. breeze.
Leader: Dr. David Patriquin, Biology Dept., Dalhousie University.

The weather was warm and sunny as we met at the NSM for this most interesting trip to Basil and Lillian Aldhouse's 'natural farm' in Lawrencetown. Seven or eight years ago, Mr. Aldhouse noticed that there were no earthworms in any of his farm soil, and realised that his farm was in deep trouble indeed. With the help and guidance of Dave Patriquin, he began an experimental chicken-legume operation, entirely free of artificial fertilisers, pesticides and herbicides. Weeds were allowed to grow hand-in-hand with the crops and the naturally-occurring insects are still being studied by Dave's assistant, for their important role in the scheme. Because of the saving in money by not having to buy increasingly expensive fertilisers, herbicides and pesticides, the farm is now beginning to show a profit.

The 1500 chickens are kept happily in a large, open, airy barn. The floor is thick with winter-wheat straw (grown on the farm) as litter. It becomes rich with nutrients from the chicken droppings, and when it is renewed, the enriched litter is recycled into the soil, at the appropriate time for each crop. There are ten fields under a rotation system, planted cyclically with faba beans, oats, clover and winter wheat. The pesticide and chemical-free eggs are marketed locally, as are homemade gouda cheese, butter, milk and cream,from Lillian's Jersey cow.

Faba beans are a rather new crop in North America, and are superb 'nitrogen-fixers'; that is, they can transfer nitrogen from the air to the soil where it can be used as a nutrient by the plant. This leguminous crop is used to feed the Aldhouse chickens.

This whole system was explained in detail by Dave Patriquin at one of our regular monthly lectures. It is a system still in use in South America, and as I see it, here are the main points of importance. ..... The fields are planted with double the usual amount of best quality seed at the crucial time when, even though the naturally-occurring weeds that seem to go with each crop are allowed to grow, the main crop wins out. The accompanying weeds, by providing full ground cover, give protection to the soil from sun-drying and leaching-out of the nutrients by rain. They help to fix nutrients; and weeds with long taproots encourage earthworms, which, as we all know, are essential for aeration of soil and humus protection.

In a fallow, weedy field, Dave demonstrated the three 'horizons' which make up the local soil: "A" - 8"or 9" of dark surface soil; "B" - a red horizon; and "C" - a dark profile of a clayey 'parent' soil. They have good reason to believe, he told us, that plants with long taproots, e.g. Canada Thistle, also have a part to play by bringing up from the lower layers nutrients which are held in the green part of the plant, to be returned to the soil as"green manure"when ploughed under.

Each crop seems to have its own special array of weeds and Dave suspects that this is an essential part of the whole working system. After six years the earthworms are back, and also, more importantly , it has supplied a naturally self-correcting neutral pH to Nova Scotia'a normally acid soil, eliminating the need for the expensive additions of lime and calcium.

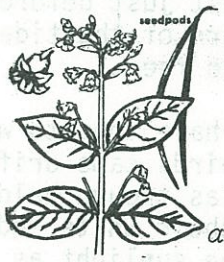
As Dave pointed out, it is actually all old knowledge which we are now,slowly and painstakingly, trying to re-learn.

After lunching in the sunshine, and admiring the Jersey's new calf and the huge blooms in the flower garden, we purchased eggs, cheese,butter, etc., from Mrs. Aldhouse, and headed back to Halifax.

Stephanie Robertson.

P.S. - Although engrossed with the techniques involved in running a self-sufficiency farm - we could not help but notice the number of trees stripped bare by the caterpillars of Winter Moth. Their tents develop on certain fruit trees - notably cherries - then as a greater food source becomes necessary, the growing caterpillars spread out, spinning a fine thread as they go, and attack oak, poplar and birch trees. We saw long lines of 3" long black caterpillars crawling up one roadside oak, and the road beneath was dark with squashed bodies. Another pest - green inchworm., was chewing on the maple leaves. Apparently the larvae of most insects are very choosy , and the fact that most weeds have their dependent pests seems to account in part for the healthy condition of Mr. Aldhouse's main crops.

SPREADING DOGBANE



(A FIELD GUIDE TO WILDFLOWERS, Peterson and McKenny, 1968)

Roadside weeds differ quite considerably from field weeds, and among the more common roadside plants we found Spreading Dogbane (*Apocynum androsaemifolium*) in bloom. Related to the milkweeds, its stems contain a milky juice; the petals of its fragrant pale pink bells dangling from curved stalks, are striped inside with deep rose, and are strongly recurved.

One final note - the fallow field was sheltering Bobolinks, which flew up out of the tall grass at our approach.

BIRDING ALONG THE MINAS BASIN WITH THE BLOMIDON FIELD NATURALISTS

Date: Sunday, 29 July, 1984
Place: Grand Pré area, nr. Wolfville.

Participants: 8 HFN'ers; 30 BFN'ers.
Leader: Jim Wolford, Blomidon Field Naturalists

Weather: Clear, sunny, about 21°C, S.W. breeze.

We met the Blomidon Field Naturalists around 1.30 pm at Grand Pré Park, made suitable anti-fly preparations and moved off in caravan around the experimental dyked farm area towards Evangeline Beach. Carefully skirting a dead skunk in the roadway, we parked the cars and crossed a ploughed field towards a flock of gulls - mainly Herring and Blackback and a couple of Glaucus - waiting for the turn of the tide. Edging quietly forward, 'scopes and binocs at the ready, we waited while our BFN guides explained that the migrants we could expect to see would be adult birds who come through first; the fledglings follow later although they have never travelled the route before! After breeding in the Hudson Bay area these shore birds break their passage here for ten or so days, feeding on shrimp-like creatures, insects, etc., to increase their body fat in readiness for the long flight to South America. They seek open fields in which to rest just before high water, then at the turn of the tide spread out on the mudflats to feed.

We did not have long to wait before thousands of birds came drifting in, wheeling in unison as though held in an invisible net, their white undersides flashing in the sunlight as the flocks reversed and circled before setting down. The whisper of wings and faint 'peeping' seemed to flutter the air above us.

Among the predominant sandpipers we noted dowitchers, willets, Semipalmated Sandpipers, Black-bellied Plovers, Hudsonian Godwit, Ruddy Turnstones, Knots, Ring-bills, and Semipalmated Plovers. Our Valley friends proved unhesitating in their identification of individuals among the fast-moving flocks.

We eventually moved to a second area, past a field as colourful as an alpine meadow, thick with clovers, Canada Thistle, Wild Radish, Purple Vetch and Ox-eye Daisy. In the second area a greyish patch of 'peeps' rested, almost invisible against the stones and clumps of manured earth. Now and again a few birds would fly up a little way, move over and settling again - disappear. Apart from Semi-palmated Sandpipers we observed a Short-billed Dowitcher, a Least Sandpiper and a Hudsonian Godwit.

By this time the tide was on the turn so we headed for the beach behind Marshcrest Farm. Here tens of thousands of shorebirds, barely visible against the beach stones, were already spreading out for hundreds of yards along the water's edge, following the fast-retreating tide.

Far out to sea a line of Eider Ducks could be seen, and a few single cormorants flapping steadily over the wave tops. Closer to hand we watched a hang glider suspended from a colourful 'chute being towed above a motor boat.

We rested awhile, lazily watching the birds and the water and talking with our new BFN friends until it was time to leave for Halifax. Altogether a most satisfying afternoon, a perfect day for a shore-bird walk in good company. Thank you very much Blomidon F.N'ers. One final note - it was great to see so many children in the group.

Doris Butters.

BLACK-BELLIED PLOVER

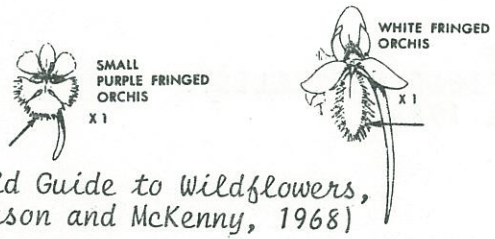
(A GUIDE TO FIELD IDENTIFICATION OF BIRDS OF NORTH AMERICA, by Robbi Bruun, Zim and Si 1966)

HIKE TO ST. CATHERINE'S RIVER BEACH

Date: Sunday, 5 August 1984. Participants: 6
Site: St. Catherine's River Beach at Port Joli, Queens County
Weather: 20°C - clear skies - fresh S.W. breeze - fog offshore.
Leader: Tim Randall.

It's a long drive to St.Catherine's River Beach (once known as Cadden Bay Beach) but well worth the effort. On this particular day the rock-filled path through the conifer woods was quite dry, although sphagnum bordered the path and we found scattered Horned Bladderwort (*Utricularia cornuta*). Through a boggy area and across an open barren to the shore, we noted witherod, rhodora, spiraea(still in bloom), an occasional wrinkled rose, blackberries, blueberries aplenty and alders.

"Specials" of the day, found by Tim Randall were a Small Purple Fringed Orchis (*Habenaria psycodes*) and a few White Fringed Orchis (*H. blephariglottis*)



(*A Field Guide to Wildflowers, Peterson and McKenny, 1968*)

The path to the beach is quite lengthy - perhaps one mile - but the view from the end of the trail as it winds down to the shore is breathtaking. The dull roar of the breakers at the far end of the beach can be heard quite clearly across the barrens, long before they can be seen. Out to sea thick fog obscured the horizon and the lighthouse.

As we left the bush habitat and entered the beach area, we came to the series of small bays before the long stretch of beach. There we decided to have lunch, a decision reinforced by the sight of two separate flocks of birds, taken to be cormorants, sitting on the water, and several seals sunning themselves on a rock. In the bay, an older seal was keeping watch while two younger seals frolicked as the young of all species do. They chased over and around each other - their tails flicking the water - the splash being quite clearly heard they were so close in-shore. As the tide was coming in the sun bathers were soon in the water as well, though none seemed to join in the sport.

By this time deer flies were making their presence felt, so we decided to explore further, noting mica shining in a split rock in one area.

Two of us continued to the end of the long stretch of silvery beach to where the river runs gently into the sea. Lesley Butters walked inshore along the river for some distance and reported that there is much to be explored back there when one has enough time. We tried wading but despite the hot sun the water was icy. At this end of the beach a flock of sand pipers(?) milling around the water line, rose, wheeled and set down again just too far away to be identified without binoculars. Finally they rose, turned towards the dunes, pale undersides flashing, then in mid-air - seemed to disappear!

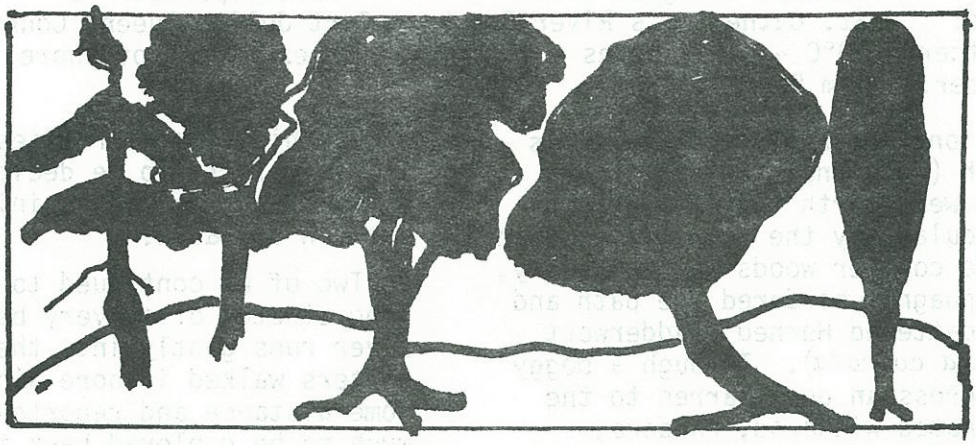
A few small white seabirds hovered over the mouth of the river, then dropped like a stone into the water apparently to spear fish, although I did not actually see a fish. The birds were smaller than gulls, had quite sharp tails, black heads and a high-pitched, chipping cry. Then a number of Herring Gulls came in out of the mist as the tide turned.

As we walked back along the beach we found several beautiful, glossy, brown and white feathers (from a two-year old gull, perhaps?)

One member of the group who had stayed back at one of the small bays reported how the seals had exhibited considerable curiosity about a very well-behaved dog which arrived on the scene, but the arrival of a small motor boat had caused the birds and seals to disappear, leaving the sea unenlivened except for the ghostly shapes of a sail boat and the Little Hope Island lighthouse, now gleaming dimly through the fog which had receded towards the horizon.

By then it was time to start the trek back to the cars - berry-picking as we went - and the long drive home, carrying a memory of one of Nova Scotia's most magnificent shorelines.

Elizabeth Surrett



WHERE HAVE ALL THE BIG TREES GONE?

by Larry Bogan
(Extract from BLOMIDON FIELD NATURALISTS Newsletter, of September 1983).

I love trees, especially big, old trees with character. Nova Scotia, being a province of trees with 80% of its land forested, should be an excellent place to see these trees. Unfortunately, most of the trees I walk under are smaller, less stately plants. I would like to have a place where there are groves of large, towering, impressive trees.

In my days I remember two places, maybe three, where I experienced the awe and reverence provided by large trees. The first one I'll mention is farthest from home, in New Zealand, where the residents are proud of their trees and make an effort to preserve the large old ones. In touring that country I was pleased to find large trees of several species, noted on maps for people to visit. I saw Kauri 'pines' up to 46ft in girth and 167ft tall, and 1200 years old; I saw large old Totara trees in a virgin forest; a large Matai, and the oldest Puriri - a hardwood. In New Zealand there are abundant nature reserves set aside to preserve such trees and other native habitats.

The second spot that comes to mind was in the rain forest of Olympic National Park in the State of Washington, where magnificent Douglas Fir trees grow. But even closer to home I stood beneath a stand of 200 year old pines in northwest Connecticut, and was awe-struck. They towered 150ft above me, and the forest floor was open and scattered with pine needles and a few shrubs. The quiet magnificence of this site has given the name of 'Cathedral Pines' to these trees. They are near Cornwall, Connecticut, and are probably the best stand of trees in New England.

My question is: why can't we have something like these sites here in Nova Scotia? What happened to such trees that surely existed in the original Nova Scotia forests? Even though our forests have been cut since 1632 when the Frenchman, Nicholas Denys, first started fishing and lumbering here, surely something original is left, or at least regrown to a respectable size.

How have our forests been treated in the past... Denys only lumbered on the South Shore for three years in a small way, and it wasn't until the 1760's when the number of mills grew significantly... in 1728 the British extended the 'Broad Arrow' policy of New England to Nova Scotia. All White Pines two feet in diameter and 12' above the ground were reserved for masts for the British Navy and marked with a broad arrow slash mark. The woods supplied other naval commodities such as rosin, pitch, tar and planks. Large oaks were eagerly sought for planking and knees. At the time there were many oaks with a girth of 9-12 feet and a height to the first branches of 20-30 feet. By 1767 the New England Planters had 27 lumber mills in Peninsula Nova Scotia and were exporting wood to England, the West Indies and South America.

However, it was still a small industry, and it was not until the Napoleonic Wars that cutting of the forests really accelerated.The traditional source of wood for Britain was the Baltic countries, but Napoleon blockaded these and Britain turned to North America for supplies. Although most timber came from the Canadas and New Brunswick, cutting in Nova Scotia increased significantly. In 1800, only 604 shiploads left Nova Scotia, whereas by 1818 28,000 shiploads were leaving per year. Permission to trade with other countries in 1824 further increased use of the forests. Between 1831 and 1838 Nova Scotians built thousands of large vessels (about 100,000 tons/vessel) and this continued as a trend until the late 19th century when steam and iron replaced wind and wood on the high seas.

In about one century the forests were changed in character. The cleared land was taken over by faster-growing, shorter-lived trees such as fir, red maple, and aspen. Fire was not carefully controlled and frequently started by operations in the woods - coal burning locomotives being the prime source. As a result, some areas in the dry granitic counties of western Nova Scotia have been degraded to heath land and rock barrens. To add to the destruction, white pine blister was imported accidently in 1900 on nursery stock, and beech bark disease decimated the beeches in 1930.

Methods of harvesting did not promote a strong,healthy forest. The biggest and best-shaped trees were taken while poorly-formed, short, weak trees remained to make the next generation of forest stock. The Department of Lands and Forests was enacted in 1926 to start fire control and reforestation of Crown Lands. However, only 30% of the forests were in Crown hands, because much had been sold or given away in the past. Regulations on forest harvesting were first attempted after World War II when lumbermen in western Nova Scotia became alarmed at the over-harvesting. The result was the "Small Tree Act" which did more harm than good, because it required a minimum cutting size. This just led to more high grading of the forests. Finally in 1965 the Forest Improvement Act was passed but only recently (1977) has federal and provincial money been available to encourage private land owners to practise good forest management.

What are our trees like after 200 years of exploitation? The Department of Lands and Forests does a comprehensive forest survey every ten years which yields information on forest growth, age range of trees, species and forest volumes.

Unfortunately the survey will not direct me to groves of stately old trees of various species. And... ...if they did exist they would be cut down because they are overmature and growing too slowly to justify their existence.

Nature reserves are needed to set aside unique and valuable habitats including old trees (maybe 'mature' is a better adjective) beyond the National and Provincial Parks that we do have. But do we know where to find the 'best' trees? The American Forestry Association has a list of championship trees with locations. Do we? No - but one has been started by the N.S. Forest Technicians Association and I have included results of their Big Tree Contest as of 1980.

Larry Bogan, Cambridge.

Larry concluded his article by suggesting that field naturalists in their own area should start a similar list, adding to the Forest Technicians' list or locating the largest trees in each area. Not all the species growing in Nova Scotia are on the list - the largest of other trees could be included: White Spruce, Jack Pine, Black Spruce, Trembling Aspen, White Birch, Black Cherry, Red Maple, Hawthorn, White Oak, etc.

To estimate tree sizes a tape measure and a 45° triangle will work. Measure the circumference at breast height with the tape and estimate the height by moving away from the tree until the top and bottom of the tree are 45° apart as viewed by you (sight along the triangle to do this). The height is the distance you are from the tree and can be measured with the tape. Larry's group would like to hear from us on trees in our area, and hopefully to visit them. Send your large tree candidates to Larry Bogan, RR2, Cambridge Station, BOP 1GO.

If interested in more details on the history of our forests, the N.S. Department of Lands and Forests has the following publications:

Historical Highlights - N.S. Crown Lands 1603-1972 - Bulletin 36;

Lumbering in Nova Scotia, 1632-1953 - Bulletin 26;

A more definitive history is being prepared for future publications.

BIG TREE CONTEST : N.S. FOREST TECHNICIANS ASSOCIATION.

Species	Circum.	Height	Location and County
Balsam Fir	5'3½"	73ft.	Upper Middle River. Victoria Co.
	4'7¼"	58	Kaizers Meadow, Lunenburg
Red Spruce	6'8"	82	Kelly Lake, Cal. Hants
	8'4"	--	Falmouth Mtn., Hants
	6'7"	85	Big Indian Lake, Hants
White Pine	9'10"	78	Waugh's River, Colchester
	11'6"	116	Watford, Lunenburg
Red Pine	6'8"	92	New Minas, Kings
Larch	4'6"	56	Perry Road, Yarmouth Co.
	4'11"	60	Lake Annis, Yarmouth
Hemlock	9'7"	74	Panuke Lake, Hants
	10'10"	76	Meteghan River, Yarmouth
Yellow Birch	7'6"	74	Panuke Lake, Hants
	14'5"	--	MacNutts Island, Yarmouth
Beech	4'8"	--	Falmouth Mountain, Hants
	4'4"	55	Lake Annis, Yarmouth
Elm	17'3"	60-65	Wanglis' River, Colchester
	13'1"	71	Kempton Crown, Hants
	17'8"	70	Brookside, --
White Elm	8'9"	74	St. Croix, Hants
Sugar Maple	9'4"	--	Northfield, Queens
	11'8"	60	Lays Lake Road, --
Red Oak	14'9"	89	Waugh's River, Colchester
	15'7"	--	Oakdene School, Digby
Ash (White?)	9'9"	--	Caledonia, Queens
	10'8"	35	Cole Harbour, Halifax
Horse Chestnut	14'0"	55	Concession, Digby

JANE AND JOE: THE CHEMICAL COUPLE-

(reprinted from a series in the Hamilton Spectator).

The ring of the alarm clock still in their ears, Jane and Joe automatically reach for their first cigarette of the day.

Before they go down to breakfast, they proceed through their normal morning routine: washing with deodorant soap, brushing their teeth, rinsing with mouthwash.

He uses a mentholated shaving cream, after shave, a hair dressing and an aerosol deodorant.

She takes her birth control pill, uses a deodorant, hair spray, cologne, mascara, eye shadow, foundation cream, blusher, lipstick and hand cream.

Listening to the news while getting breakfast, they are both outraged at yet another discovery of a pollutant found in the Great Lakes. It never occurs to them that they have just added traces of a host of chemicals to the environment by flushing them down the sink, toilet and tub or spraying them into the air.

They have also swallowed, inhaled or absorbed this chemical cornucopia.

This little tableau illustrates some of the ironies and inconsistancies in the public reaction to environmental hazards of all kinds.

Canadians rely on chemicals to maintain one of the highest living standards in the world. Their cupboards are full of solvents, adhesives, polishes, detergents, waxes and cleansers. Their garage shelves are stocked with pesticides, herbicides and chemical fertilisers. They outfit their homes and clothe themselves in man-made materials. Yet they somehow expect none of these products to get into the environment, either through their manufacture, use or disposal.

The laws of physics can't be repealed or disobeyed: matter can be changed, but it can't be destroyed.

Joe drove home last night after drinking five beers, but he gets hostile whenever he hears about substances in air, water, soil or the workplace if there's even a hint they may present some risk to his health and safety.

His union is fighting for even greater reduction of noise on the job, but Joe and Jane spent at least a couple of nights a week at discos when they were all the rage, and they never bother with ear plugs on their winter weekends with matching his and hers snow-mobiles.

He's particularly critical of government regulatory agencies that "don't come down hard on these damned companies that are doing all the polluting," but he's never seriously considered forming a car pool so four men would take only one car to work. Nor does he want to take a bus to work; he likes the feeling of independence that his own transportation gives him.

And it's never occurred to him that one government agency is probably presenting more of a health and safety risk to him as a driver or pedestrian than anything he's seen in the headlines. That's the Liquor Licensing Board of Ontario that requires parking facilities at establishments that serve alcohol.

Joe and Jane are frustrated. To save energy, as well as to save money, they practically made their home airtight: extra insulation, weather stripping around all doors, caulking around all the windows.

Now they are being told that lack of air exchange is adding to the air pollution in the house. Their cigarette smoke, cooking vapours, aerosol cosmetics and cleaners, and fumes from all the synthetic materials in their home's construction aren't being dispelled as they used to be.

Last December, the federal government put a temporary ban, now made permanent, on one type of insulation, urea formaldehyde, because of health problems caused by fumes from this foam in well-insulated homes: stinging eyes, skin rashes, headaches, nausea and respiratory problems. Until then, the same government would subsidize you to put in this insulation.

They're also frustrated because no one can tell them for sure what's a safe level of anything. Their reaction to that tends to be "If the safe level isn't known, then eliminate it entirely."

Confront them with the inconsistencies in the hazards they voluntarily assume as part of their lifestyle and their insistence that no one be allowed to contaminate to any degree their more general environment, and their answer is: "If I decide to take a risk I know about, that's my business. But I don't want anybody subjecting me to things I don't know about, or imposing things on me that I don't agree to."

There are those who argue that even drawing comparisons between private choices and involuntary hazards is an attempt to make a victim a villain: somewhat like saying a rape victim was "asking for it" by wearing provocative clothing.

In an era in which people feel they are increasingly losing control over the forces that control their lives and decide their fates, Joe and Jane are uneasy about the helplessness they feel against another mysterious threat out there.

The unknown is always more frightening than the known, and they feel they're too old to have to deal with unseen bogeymen.

A WEEKEND AT KEJIMKUJIK NATIONAL PARK -

Congenial company, fine weather and an interesting program of events combined to make our Keji Weekend a most enjoyable affair. Seventeen of us (including 4 German visitors, camped inside and out at Lesley's cottage on the Medway close to the Park. Filip had worked out a really good program with John Brownlie (Park interpreter and HFN member) and between them they managed to keep us more or less on time for the various events.

We rambled, observed, canoed and swam in the lake, and went on a rather unproductive Owl Hoot after the slide show at Keji's outdoor theatre. Interpreter Millie Evans has a distinct flair for the dramatic and her program on the history of the Park proved to be most amusing (if you'll forgive me - that's where we did get a 'hoot').

In the guise of a country wife, grumblingly cleaning house, she finds an old album and putting down her broom sits and looks at the photographs. As she turns the pages she reminisces on the memories each picture evokes, and "my Walter's" reactions to the events of those long gone days. We of course saw the photos up on the theatre screen.

The Park has an excellent interpretive program and guides who are not only efficient and patient, but even after two or three months of daily spiels can still sound spontaneous and interested in their topics and their listeners. Guides can be so dull when routine reduces them to a glassy-eyed, monotonous drone.

By way of a bonus, we were treated to a gorgeous sunset over the river, a black velvet, star-spangled, night sky and a pearly dawn.

By next Newsletter deadline (25 Oct.) we should have in short reports on the nature trips that we took.

Editor.

¶¶¶ Thanks to all contributors to the Newsletter .... keep it coming; we are ALWAYS in need of ARTICLES, NATURE NOTES, SKETCHES, FIELD REPORT TRIPS. Tell us about the exciting things that happened to you during the summer,regarding natural history¶¶¶