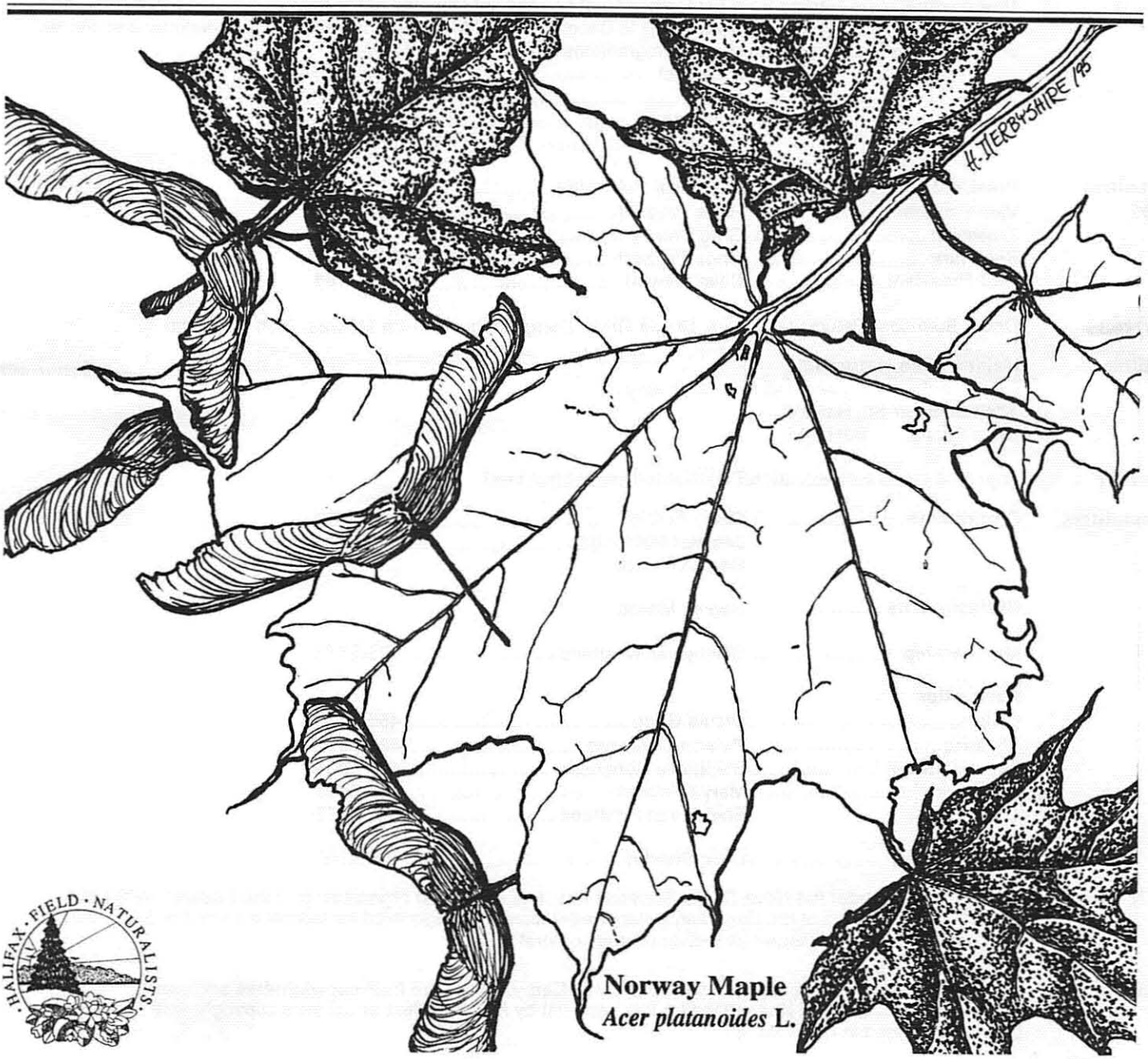
HALIFAX FIELD NATURALISTS' NEWSLETTER

September to November 1996 No. 84



Norway Maple
***Acer platanoides* L.**

Return address: HFN, c/o NS Museum of Natural History, 1747 Summer Street, Halifax, NS, B3H 3A6

HALIFAX • FIELD • NATURALISTS

Objectives To encourage a greater appreciation and understanding of Nova Scotia's natural history, both within the membership of HFN and in the public at large. To represent the interests of naturalists by encouraging the conservation of Nova Scotia's natural resources.

Meetings On the first Thursday of every month at 8:00 pm in the auditorium of the Nova Scotia Museum of Natural History, 1747 Summer Street, Halifax. Meetings are open to the public.

Field Trips Are held at least once a month, **and it is appreciated if those travelling in someone else's car share the cost of the gas.** Everyone, member or not, is welcome to take part in field trips.

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 Secretary, Halifax Field Naturalists, c/o NS Museum of Natural History. New memberships starting from September 1 will be valid until the end of the following membership year. The regular membership year is from January 1 to December 31. Members receive the HFN Newsletter and notices of all meetings, field trips, and special programmes. The fees are as follows:

Individual	$12.00 per year
Family	$18.00 per year
Supporting	$20.00 per year
FNSN (opt.)	$5.00 per year

Executive 1995

President	Stephanie Robertson	422-6326
Vice-President	Peter Payzant	861-1607
Treasurer	Greg Crosby	422-4650
Secretary	Linda Payzant	861-1607
Past President	Colin Stewart	466-7168

Directors Debra Burleson, Patricia Chalmers, Ursula Grigg, Doug Linzey, Bernice Moores, Rich Peckham

Mailing Address
Halifax Field Naturalists
c/o Nova Scotia Museum of Natural History
1747 Summer St., Halifax
Nova Scotia B3H 3A6

Internet http://ccn.cs.dal.ca/Recreation/FieldNaturalists/fieldnat.html

Committees

Programme	Cathy Fulton	835-8289
	Jennifer MacKeigan	883-9766
	Regina Maass	
Refreshments	Regina Maass	
Membership	Shirley van Nostrand	835-3673
Newsletter		
Editor	Ursula Grigg	455-8160
Almanac	Patricia Chalmers	422-3970
Layout/Artwork	Stephanie Robertson	422-6326
Distribution	Mary Primrose	423-5165
	Shirley van Nostrand	835-3673
Conservation	Colin Stewart	466-7168

HFN is incorporated under the Nova Scotia Societies Act. It is a member organisation of the Federation of Nova Scotia Naturalists and of the Canadian Nature Federation. It is registered for federal income tax purposes. Official receipts will be issued for individual and corporate gifts.

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This Issue (No. 84): all illustrations for this issue not by H. Derbyshire or not from copyright-free sources will be acknowledged in issue No. 85.

HFN NEWS AND ANNOUNCEMENTS

EDITORIAL

Although the beginning of summer was cold and wet, that was soon forgotten when the sun reappeared at the end of July. Plants loved all the rain, but there seem to have been fewer insects this summer than usual. Mosquitoes were not missed; on the other hand, there were reports of *Luna* and *Cecropia* moths in Metro. These were both quite common in Halifax twenty years ago.

It looks as if HFNers are beginning to appreciate insects, for we have had enjoyable forays to find both butterflies and dragonflies this summer.

There are no reports yet on the various summer surveys: PlantWatch; the ladybug survey; or the butterfly census. The Payzants have reported on their Uniacke Estate nesting bird census, and we will hear about it next.

The Report on the Public Meetings to discuss the future of McNabs and Lawlor Islands has appeared. Commissioner Evelyn Meltzer summarised each submission and combined the results; nearly all presentations asked that the islands remain close to their natural state but be provided with landing facilities and basic amenities.

A Canadian Landbird Conservation Programme is just being formulated under Environment Canada, and a group including Canadian Nature Federation is concentrating on an international list of priority sites for birds. The present drop in bird numbers is due largely to habitat destruction, and can occur at either end of their migration routes, or at their staging halts.

Other things to watch for are developments concerning parks and green spaces in Halifax Regional Municipality, and activities of the Ecology Action Centre and of Clean Nova Scotia Foundation. The Almanac is a useful source of meeting dates.

There may be autumn trips to Mount Uniacke Estate, as an inventory of trees along some of the trails is needed, and to McNabs Island, to start an inventory of fresh water habitats. These will not be on the programme, so anyone interested should call Jennifer MacKeigan (883-9766) for Mount Uniacke, or Ursula Grigg (455-8160) for McNabs.

And may everyone's tomatoes ripen, even yet!

— Ursula Grigg

PETERSON FIELD GUIDE CHRISTMAS ORDER

Giving Peterson Guides for Christmas? Consider ordering through the Halifax Field Naturalists.

Why: It's a fund raiser for us. We get the bookseller's share on sales.

How: Place your order at or before the November 7th monthly meeting, the order will go in on November 8. Delivery is expected 2 to 3 weeks later. Even allowing for delays, this is in time for Christmas.

Price: Essentially the same as bookstores, but buying them from HFN ensures you pay no tax! All the Peterson titles are available, but you'll need to phone Doug Linzey, 429–5997, or Colin Stewart, 466-7168 for prices.

HFN SALE ITEMS

Support your club and its activities by purchasing the following items as gifts, or for yourself. Because we are a non-profit organisation, **YOU SAVE BY PAYING NO GST OR PST!** We have the following available:

HFN LOGO PINS **$5.00,** **save $1.93!**
(very attractive & colourful)

HFN HASTI-NOTES **$5.00,** **save $1.93!**
(tastefully done, useful gift; in memory of Aileen Meagher)

PIPING PLOVER SWEATSHIRTS **$25.00,** **save $4.69!**
(excellent quality material. XL, L, & M; in granite or white)

ENDANGERED SPACES T-SHIRTS **$15.00,** **save $2.81!**
(help preserve our valuable ecological habitats)

OPLER B'TT'RFLY FIELD GUIDE **only three left!**
(new, up-to-date!) **$23.00,** (members) **save $4.32!**
$25.50, (non-mbrs) **save $4.79!**

NEW AND RETURNING MEMBERS

These members will be listed in the next issue, No. 85.

CONTENTS

SPECIAL REPORTS

OUR NATIONAL PARKS — CHANGING TIMES.

Recently there have been several items in the papers and on the news about privatising parks, including our national parks. There are actually several things going on at once, all of them budget related.

Most of the reports of privatisation refer to the opening of some jobs in the parks — such as some aspects of maintenance, to competitive bidding. The salaried staff who formerly did these jobs are being let go or encouraged to resign (or words to that effect), and encouraged to form companies or cooperatives and bid to provide these services. This is being done as a cost saving measure, touted as more efficient, and yet government also claims that the process is good for the former employees.

Whatever *you think* of the social aspects of this, for now the same work is being done, very often by the same people. It really is contracted out, not privatised. The difference is that Parks Canada pays a fee to obtain a service. Privatisation would involve the contractors collecting a fee for their services directly from the public. I hear some rumours, usually about other regions, but even they suggest that Parks Canada is being careful to keep control of management and policy decisions. Keep in mind that managing the gift shops has been left to the cooperating associations for years.

Another change was announced in the 1996 budget. Parks Canada is currently part of the Department of Canadian Heritage. It will stay there, but within the department, on April 1, 1997, it will become an agency. This was the topic of a recent set of consultations across Canada, attendance by invitation only. Many of the senior staff see the change as beneficial and are looking forward to it. They emphasise that it is not a change in the mandate of Parks Canada, only in how they will be allowed to operate.

But what does it mean? The immediate and most enticing benefit is that Parks Canada will keep a great proportion of the revenue it generates.

One of the widely expressed concerns is the subtle pressure to change the orientation of Parks Canada. Currently the National Parks Act is clear: while the parks are preserved for use and enjoyment, when use and enjoyment (or anything else) conflict with ecological integrity, the integrity has priority. However, there is pressure on all parks to increase income, and the park that generates the income can now keep a good deal of it.

In recent decades, the idea has been that services provided are to facilitate enjoyment and appreciation of the park and park values. There has always been the argument that if you can get them in the gate, you might be able to get them to the evening interpretative programs, and so on. Parks have tried to walk the line, and not let the quality of the campgrounds become the reason for visiting the park. They have also tried to leave that 'high-end' to the private sector. Does the agency status, and the keeping of more of your income mean that if the campgrounds are frequently full, you expand? If full services (electricity, water, sewage) generate a better return, do you upgrade?

The federal government's current reduction is ominously called Phase 1; by its end in 1998 many sections of government, including Parks Canada, will have been cut by 25%. The beginning of these cuts came with a greater ability to keep revenue. *Perhaps* you noticed the increase in park entry fees? And in back-country charges? Personally, although it costs me more, I think it's about time we paid a reasonable fee for back-country sites, given the cost of maintaining them! The season's pass disappeared 2 years ago when the Atlantic Parks couldn't agree on revenue sharing. It seems once you get to keep revenue, it matters more who collects it. Apparently there is a directive for interpretation programs to become self-supporting over three years. Does this mean charges for information, walks, and talks? What is the potential for breaking even on tours of Halifax's Citadel? What about the Mill Falls interpretative hike or the Mersey paddle at Keji? Now, most of the cooperating association-run book stores are profitable...

There you have it. Since income from taxes will not increase, the two major changes ('contracting out,' becoming an agency) are portrayed as beneficial. I believe the staff's commitment to park *principles* is sincere, but there are a number of hidden pressures, pitfalls, and slippery slopes.

A brighter note to end on: the government continually restates its commitment to completing the system of representative national parks. There have been announcements of recent agreements to create park reserves at Tuktut Nogait and Churchill. Both of these claim that native agreement has been reached in prinicple, but 'reserve status' indicates that details still need to be worked out before final designation. The Manitoba Lowlands are also proceeding with a three-site proposal out for discussion. On the other hand, because of mining interest in formations similar to Voisey Bay, and some unresolved Inuit issues, the proposal for Labrador's Torngat Mountains is looking both smaller and less representative.

— Colin Stewart

HFN TALKS

METRO BIRDS IN JUNE: BY CLARENCE STEVENS — 6 JUNE

Clarence, a long-time HFN member, who is now a full-time nature guide and speaker, came to tell us about the birds of June, and what we can see near home. In June, the best birding is in woodlands, where many warbler species are nesting, but still singing. Marine and shore-birds, on the other hand, are in more remote places — but check out the Willets in the Chezzetcook and Conrads Island Marshes just outside Dartmouth.

We heard about song-birds which sing at night, and how to distinguish between the various thrush-like songs from hard-to-see birds right in our built up areas.

Clarence told us what changes to expect in July and August, and introduced his new book, "Birding in Metro Halifax", reviewed on page 12.

CRANES — AN ILLUSTRATED PRESENTATION: BY GEORGE ARCHIBALD — SATURDAY, 6 JULY

George Archibald interrupted a family holiday to give this long-awaited talk on the work of the International Crane Foundation, of which he is co-founder. Many people, some in formal dress after a festive pot-luck supper or straight from the Highland Games, followed crane signs across Dal Campus to fill up a theatre where flocks of coloured origami cranes foraged around the podium, making George feel quite at home.

The light-hearted atmosphere continued as George talked about the Foundation's Cranedominium in Wisconsin where all 15 crane species (many endangered) are being bred for restocking in the wild. Here natural conditions for each species have been researched and as far as possible reproduced. The Foundation has contacts and colleagues in many countries, and has helped to establish Crane Working Groups overseas.

The Foundation's work is as much diplomacy as biology. Tact is required to coax national governments into protecting shrinking wild populations and their habitat. For example, peace between Russia and China threatens Siberian Cranes in marshes which were formerly no-man's-land but are now coveted for agriculture. The Foundation finds elegant solutions to such problems: in this case, local farmers were "given a cheese factory" in exchange for leaving the marshes alone.

Also on the plus side, another small population of Siberian Cranes was discovered this summer, in a place where a chick with orange down and knobby knees was mistakenly taken by tourists last year. It was "left with a Siberian woman who gave it to her Siberian Huskies." This bird is now half-grown but thinks it is a sled-dog.

Cranes are migratory, flying twice a year over land becoming increasingly 'developed' and polluted, and over tracts where hunters find 25-lb. poultry too tempting to miss. In fact, the status of the world's wide-spread crane species is a good indicator of the natural and political condition of their equally wide-spread habitats and flyways.

Diplomacy and resourcefulness are also needed in dealing with cranes, whose rituals must be respected if the birds are to produce properly socialised young. George once learned the mating dance of the Whooping Crane, then nearly extinct, to encourage a female to lay, and workers at the Foundation pioneered disguises — white robes and cranes' head-puppet gloves — to simulate parents for chicks hatched in incubators.

The Halifax Field Naturalists, the Nova Scotia Bird Society, the N.S. Museum of Natural History, and the Dalhousie University Biology Department sponsored this talk, and many people contributed to its success. From admission fees, gifts, and various fund-raising efforts, $1,532 was given to George for the work of the International Crane Foundation.

— Ursula Grigg

HALIFAX FIELD NATURALISTS
THE SECOND TEN YEARS — 1985-1995

PART I

Doris Butters wrote the history of the first ten years, ending at the point where she stepped down as President, and Halifax Field Naturalists had been awarded a plaque for its part in planning the future of Kejimkujic National Park.

Doris joined HFN almost at its beginning; by 1986 she had done everything from being President to serving tea, and from 1982 to 1989 she edited the Newsletter. In 1987, Doris was made the first Honorary Life Member of Halifax Field Naturalists.

People and activities

By the time HFN was ten years old, the graduate students who had started it had gone on, got jobs, married and started families. Paul and Cathy Keddy moved to Ontario, where Paul continued to work on plants and came to deplore the encouragement of white-tailed deer. Ann Linton married Erick Greene, and went to the United States to study birds and vegetable gardening. Others, like Debra Burleson and Colin Stewart, found work in Nova Scotia.

HFN was carried on by university faculty and local naturalists, who did not have much spare time, or the stamina to work until 2 a.m! The connection with Dalhousie University was broken, so they had no common meeting place — this sort of convenience has returned in 1996 with an Internet connection for directors.

The need for discussion and comment into environmental issues became greater every year. HFN had to formalise its objectives and be ready to offer advice or objections with one voice. Meanwhile, the talks and field trips continued, arranged by a series of programme committees.

1985: John van der Meer was president, with Bernice Moores as Treasurer and Michael Downing (from Ontario) as Secretary. Filip Volkaert, a graduate student from Belgium, was programme co-ordinator.

Brian Mulroney's government cut funding to environmental programmes, including the Herring Gull egg investigation, the indicator of pollution in the Great Lakes water system.

Judith Kennedy was appointed co-ordinator for the proposed Maritime Breeding Bird Atlas; Clarence Stevens planned to take an atlas square for HFN.

The Woods property near Keji was expropriated by the Nova Scotia government, and Winnie Cairns started to investigate the success of Piping Plovers nesting on the beaches there. This was the start of the Piping Plover protection programme.

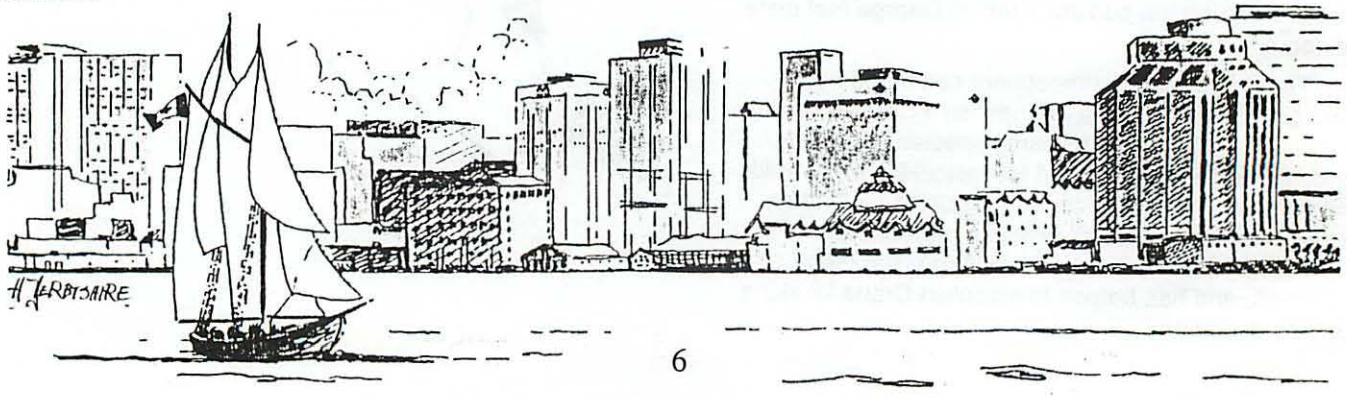
Nationally, the campaign to protect Port Moresby and Meares Island forests, in British Columbia, was at its height.

HFN members walked the North West Arm tow path from The Dingle to Halifax in November; this has always been considered a right of way.

1986: Michael Downing became President, with Leigh Mazany as Secretary, and the board appointed standing committees for Programmes, the Newsletter, Publicity, Membership, and Conservation. A revision of bylaws was proposed but actually only achieved in 1995, with a couple of amendments.

HFN considered starting a new organisation to protect access to scenic and wild trails, because Duncan's Cove was fenced off and there was concern about Cape Split. The first meeting of the Trails Federation took place in the Fall, bringing together a co-operative group of hikers, skiers, snowmobilers, cyclists, horseback riders, and the Volksmarch. Michael, who claimed a talent for flipping pancakes, proved it at a lunchtime picnic.

The Newsletter advertised summer courses on terrestrial biology and marine mammals, and the club took its first whale-watching cruise. HFN members worked a square in Lunenburg County for the Maritime Breeding Bird Atlas., and Pierre



Taschereau campaigned to save sea-slugs. We supported the South Moresby Caravan, which passed through Halifax. Members built fences at Lawrencetown, to protect the dunes; the sea washed them away. I joined the Newsletter as Assistant Editor.

1987: President Michael Downing; Secretary, Nancy Witherspoon

Colin Stewart chaired a two-day Symposium on Trails, at which needs of all classes of users, possible environmental consequences, and the rights of land-owners, were discussed. This subsequently produced a printed report. Doug Robertson, Executive Director of the Bruce Trails Association in Ontario, spoke of the need to protect landscape.

HFN criticised the revision of the N.S. poaching laws, which removed protection from scarce game birds.

Paul Keddy promoted protection of the Tusket River Valley, which holds a remnant Coastal Plain flora; this later achieved Special Place status, and the Tusket River Environmental Protection Association was formed.

We observed pack ice in Halifax Harbour, signed a contract to provide 100 signs for identification of trees in the Public Gardens, and made inventories on Conrad's Beach, and at Lake Egmont.

1988: President, Michael Downing; Treasurer, still Bernice; Secretary, Ursula Grigg

The Programme Committee consisted of Norma and Milton Gregg, and Stephanie Robertson; waiver forms were introduced.

HFN put up a sign about protection of Piping Plover nesting sites at the entrance to Conrad's Beach; Clarence Stevens and Stephanie Robertson carried it out and it was unveiled at the beginning of Environment Week. Breeding Bird Atlassing continued.

1989: The same executive. HFN achieved charitable status.

The Public Garden signs were finally all in place; a corn-boil was held to celebrate. The Trails Federation became a legal entity, with power to speak for all kinds of user.

Several Special Places were being named; Bob Ogilvie, now Special Places Curator, led trips to MacFarlane Woods, Black River Bog, and Piper Glen, in Cape Breton.

The Newsletter was transferred to computer, and was produced by Stephanie Robertson. Ursula Grigg became editor. After some battles with copiers, it was printed by APL, by offset.

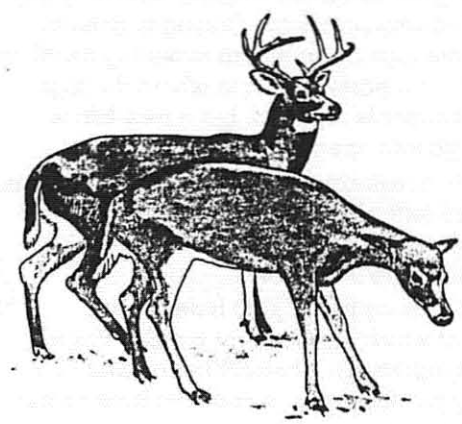
1990: President, Michael; Treasurer, Belinda Wilkinson; Secretary, Jim Ross

HFN criticised the new N.S. Provincial Parks Act, which left parks open to abolition. HFN became involved with several local issues: Protection of Point Pleasant Park, threatened with clearing on account of a presumed bark beetle 'infestation'; and the development of McNabs Island as a park, threatened by a plan to build a sewage plant there. The Blue Mountain area was threatened with excavation. We were also involved in the Federal Government's Green Plan, proposed by Environment Minister Lucien Bouchard!

Stephanie Robertson undertook a survey of Bark Beetles in Point Pleasant Park, with some other members, and demonstrated that there is no infestation; the most destructive conifer bark beetle wasn't even present. She also demonstrated that long-term park management was lacking. Our initiative to influence management of this historic park has been a failure; it is still being logged.

To be continued.

— Ursula Grigg



FIELD TRIPS

WINDHORSE FARM

DATE: May 25, 1996
PLACE: Windhorse Farm, Lunenburg County
WEATHER: Chilly and windy
INTERPRETER: Jim Drescher
PARTICIPANTS: 7

A note of sadness in his voice, a hint of anger on his face, Jim Drescher recounts the abuses perpetrated on the land by the stark clearcut we can see all too well across the lake. Soil degradation and runoff, loss of water-buffering capacity, habitat loss... "The white marks that you can see from here are exposed rock. The soil has gone."

This is glaciated land. The hills are largely glacial till, rock and sand and clay, with little organic material to sustain life. A meagre layer of soil has accumulated over Nova Scotia's south shore since the glaciers receded some 10,000 years ago, sufficient to support a healthy forest, but fragile and so easily squandered. To stay healthy, the forest here must retain as much of its biomass as possible.

That's just one of many watchwords here at Windhorse Farm, where sustainability is the overriding theme.

The 144-acre farm in Lunenberg County was first settled by the Wentzell family in the 1840s. The forest was as virgin as it comes in these parts when they arrived. The Wentzells lived off the property and logged it every year for 150 years, using 'patch' logging and selective logging techniques. Apart from some clearcut for pasture, the volume of biomass has remained pretty constant throughout those years. In 1990, Jim Drescher bought the property from Carroll Wentzell, only after convincing the old man that his goal was to keep the land in as natural a state as possible and to continue the legacy of sustainable forestry.

English Oak

The farm and logging operation now support as many as 14 people year-round. They log and mill lumber from the property using horses on plank and sawdust roads. They also manage two other properties in the area, using the same techniques. And they buy logs from certified eco-woodlots. Cutting is done in winter, to keep the logs clean and to make log handling easier. They move a portable mill to where the logs are. So far, all lumber is air dried, but a new kiln is nearly ready to go into operation.

They have two milk cows, 100 free-range chickens, bees. They have extensive gardens that supply the bulk of annual food needs. They sell such items as eggs, honey, and some vegetables.

They produce more than 1,000 bales of hay annually, many of which are used for mulch ("We try never to cut turf, but mulch it heavily in preparation for planting"). They produce tons of compost from all the animal and garden wastes.

All fencing is 'brush-wall.' Brush is piled up six to seven feet high. After one season, the pile has dropped to about half the original height and is topped up. Vines (grape, hop, wisteria . . .) are planted adjacent to the walls to green up the brush and help tie it together. The walls provide windbreaks and much habitat for small creatures, and will ultimately become natural hedges.

They are restoring wetland. Two creeks run through the property, entering the lake just below the house and gardens. The Wentzells had originally straightened out the creeks, drained the land, and created pasture right to the lake edge. Jim has managed to slow the water considerably (to the consternation of some of his neighbours, who think he's totally nuts) with ponds and bends and the like.

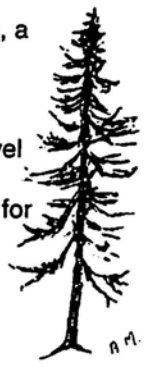
(One of Jim's biggest challenges was to find an equipment operator able to move earth without damaging everything in sight. He said there was no such person [they're all trained to get the job done as cost effectively as possible - in the most direct and shortest way], but one young fellow volunteered to learn. Jim says it took 3 years, but now he has the best and gentlest operator in the world.)

Not wanting bare soil to be exposed to water, he carefully removed the surface soils and turf from a small area, setting it aside. After digging out the rest, he replaced the top material on the bottom of the hole, then went on to the next piece. By the end of the day, he said, you couldn't tell from a distance that the land had been lowered by as much as eight or ten feet, a new pond ready for flooding.

They run a school of eco-forestry (the only other one in North America is on the west coast), which offers a four-year course leading to a certificate in eco-forestry. Up to six first-year students spend a whole year at Windhorse farm, learning the principles and practices. Students provide much of the labour, from gardening and moving compost and gathering eggs to logging, milling, carpentry and handling horses. Their second year is spent in the temperate rainforest, in BC or Oregon, learning similar stuff out there, but in a much different forest to our Acadian one. For their third year they go to a tropical rain forest. Then they return to Windhorse Farm for the fourth year, in which they spend some time instructing.

Eco-forestry certification has three parts: certifying eco-foresters, who are competent to carry out sustainable logging, to supervise operations, and to advise woodlot owners on eco-forestry practices; certifying woodlots; and certifying lumber produced the eco-way. Apparently, demand for eco-lumber is growing fast. So is demand for eco-foresters.

Seven of us from HFN gather on a chilly, windy May morning near the west shore of Wentzell's Lake, a wide part of the LaHave River about 10 kilometres upstream from Bridgewater. This is the Drescher home. The classic white farmhouse, chickens, beehives, and gardens are on the lake side of a gravel road. On the other side of the road, where our tour begins, are the red barn and some smaller buildings for storage and workshop space. A cow, curious, moos territorially and inspects us from its second storey window.



Jim introduces us to Hassan (Huss) Kapasi and Sarah Gower, two first-year students who will accompany us and help us understand what the school is all about. They will show us their living quarters — fine, sturdy student-constructed cabins nestled in the woods. They will proudly describe their roles in the ongoing experimental work in the greenhouse and gardens. They will enthusiastically share their as-yet-incomplete knowledge of sustainability, eager to discuss what they have learned and observed so far. We will depart, having caught the flavour of their enthusiasm, prepared to spread it in turn beyond the boundaries of Windhorse Farm.

Leading us to the forest edge, Jim points out the moderating effect of the forest, an effect immediately welcomed by our group as the wind at ground level dies to a whisper, and we start to feel noticeably warmer. We don't get to experience the opposite effect — cooling on a hot summer day.

For today, we're all students. Up in the woods, Jim gives us a quiz, "What's the difference between the trees on this side compared to those on the other?" Our tentative answers finally converge on the right one: the forest on the north side is more diverse; it's more representative of the original balance. The area to the south had been cleared at one time, now boasting more even-sized trees, fewer species — old by human standards, but still a long way to go.

Farther on, in a place where logs are stacked awaiting the mill, Jim places his hand on one of them. What kind of tree is this? We mumble guesses — no leaves, no shape, no familiar clues — just bark and a cross-sectional view of the cut end. It's a Red Spruce, says Jim. What's this one? Pine, someone tentatively ventures. Nope, it's Hemlock. What about this one? Tree after tree after tree, Jim's hand slapping them, demanding identification. Hey, after a while this isn't so hard; we start to get them right, subtle differences in colour and texture beginning to make sense. Well, we 'are' naturalists, right?

At some point during our tour, Jim hands out slips of paper with one-line messages. We're to discuss them as we go along, ask questions. One of mine says, "Don't cut the tallest tree." This is one of the criteria for selective logging. (According to rumour, no tree likes to have any other tree taller than it is) Another says, "Clearcutting means death for the Atlantic salmon," a reference to the havoc that clearcutting wreaks in the salmon's spawning habitat. Yet another reads, "If it comes from the land, it belongs here; if it doesn't, you don't need it." Now we're getting close to the heart of the Windhorse Farm ethos — living in harmony with nature. "Gentleness through self-sufficiency" — another reminder.

Jim Drescher is a man in love with what he does. We stop often, to learn more lore about his forest. "There's more life in a dead tree than in a live one," he says, pointing out some snags and leaners. "We don't ever cut down dead or dying trees. That's one of the rules of sustainable forestry." Jim explains some of the basics for deciding which trees will be cut. At first, it sounds simple — slow grading (pick the slower growing trees), representation (how many of a species are there?), commercial versus ecological value - but it starts to get complex, like nature, and we realize that there is a lot to learn; much more than we can hope to pick up in a three-hour conversation.

So we relax, enjoying the sights and sounds of this magnificent piece of Nova Scotia. A flock of Red Crossbills samples fresh cones of Hemlock and Spruce; the thin voices and brilliant orange throats of Blackburnian Warblers betray the tiny birds as they forage above our heads. We sample the sour lemony Wood Sorrel leaf, imagining its place in a complementary salad. We admire the tiny lilies of the Rose Twisted-stalk. We marvel at the delicate Painted Trillium. We chew on Goldthread, the rootstock of *Coptis groenlandica* teased from below a carpet of mosses and thin soil; it's good for us. We wonder at all the things we don't know, we naturalists.

Diversity is number one in the eco-forestry curriculum. Not just how many species there are, but also structural diversity, which measures the thickness of the forest — from the top of the tallest tree to the bottom of the deepest root. (Now you know the real reason that the tallest tree remains uncut.) And genetic diversity. And age diversity.

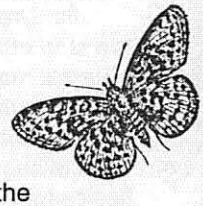
There is also an astonishing geographical diversity to the Acadian forest. In our brief journey through a part of this single property, we experience slopes of all exposures, flat land, soils thick and thin, wetland, dry land, running water and dry gullies. This side of the lake features glacial deposits, tens and hundreds of feet thick. The massive granite foundation of the Drescher barn, on the other hand, is made of blocks carved from exposed bedrock to the east, visible across the lake. The gardens, pastures and lake shore are also part of the forest. All of this diversity of soil and aspect contributes in turn to the diversity, visible and invisible, of flora and fauna.

Jim Drescher, along with his family, colleagues and other interested people, is demonstrating that human beings can live and prosper without upsetting the balances of nature, and in fact can repair much of the damage done unwittingly in the past. He is showing that sustainable forestry and agriculture can be an economic and fruitful reality, not just empty buzzwords. Jim is a dedicated and tireless experimenter and teacher. I, for one, plan to go back for another lesson.

— Doug Linzey

BUTTERFLIES

DATE: Saturday, July 6 1996
PLACE: Various meadows near Oakfield Provincial Park
WEATHER: Scattered clouds, warm
INTERPRETERS: Linda and Peter Payzant
PARTICIPANTS: about 35



This was our second butterfly field trip of the summer, and it was even more popular than the first one. We had a wonderful day for it, and the butterflies cooperated fully.

One of the reasons for holding a second trip in the same location as the first trip was to observe the changes that just two weeks could bring. Great Spangled Fritillaries had emerged from their pupae in the intervening time, Silver-bordered Fritillaries which had been so abundant earlier were almost gone, as were Tiger Swallowtails and Silvery Blues, and we saw no coppers or sulphurs (surely very elemental butterflies?) at all.

A pleasant but fleeting surprise was a glimpse of a Viceroy as it flew by on strong wings. This is a first cousin to the shining White Admiral, although you would never expect it to look at them. The Viceroy is the famous mimic of the Monarch, taking advantage of the fact the Monarchs are unpalatable and somewhat poisonous. Apparently most birds can't tell the difference, but if you look at the hind wings, you'll see an obvious difference - the Viceroy has a bold sub-marginal line which is missing on the Monarch.

While this was intended to be a butterfly trip, we couldn't help noticing a few moths as well. There were hordes of small white moths low in the grass, which assumed a tubular shape at rest. Most of these were in the Genus *Crambus*. A brilliant iridescent purple moth with orange scales around the head was a common dayflier, the Virginia *Ctenucha* moth. These, too, are thought to be unpalatable, and this enables them to fly by day without much danger of being eaten.

The biggest 'lep' of the trip by far was the giant silkmoth *Polyphemus*, apparently flushed by one of the observers. Almost as big as your hand, this warm brown moth with transparent "eyespots" in all four wings looked batlike as it stumbled through the air, on its way to a new roost until the evening. Like all silkmoths, it doesn't feed, and has only a few days to live after it emerges from the cocoon.

We finished off the first trip with a charming look at a mammal, and concidentally someone found one for us this trip, as well. This time, it was a bat, presumably a Little Brown Bat, clinging to the side of a large deciduous tree, and looking for all the world like a piece of bark.

It was a fine day for the butterflies, a fine day for the observers, and with any luck, we'll be back to do it again next year.

Species Mentioned:

Virginia *Ctenucha* Moth	*Ctenucha virginica*
Crambus species	*Crambus sp.*
Polyphemus moth	*Antheraea polyphemus*
Canadian Tiger Swallowtail	*Papilio canadensis*
Great Spangled Fritillary	*Speyeria cybele*
Silver-bordered Fritillary	*Boloria selene*
Silvery Blue	*Glaucopsyche lygdamus*
'Copper' species	*Lycaena sp.*
'Sulphur' species	*Colias sp.*
Viceroy	*Limenitis archippus*
White Admiral	*Limenitis arthemis*
Little Brown Bat	*Myotis lucifugus*

— Peter Payzant

DRAGONFLY FIELD TRIP

LOCATION: Frog Pond, Purcell's Cove Road
DATE: Saturday, 27 July 1996
WEATHER: Sunny, warm, with a breeze
INTERPRETER: Paul Brunnell
PARTICIPANTS: 6

I went to Frog Pond early, with an eye on the sky and my mind recalling what I knew about dragonflies: that they are predatory aerialists, were among the earliest flying insects, and have not changed much since 300 million years ago when Nova Scotia's coal-forming marshes were full of trees. There is a dragonfly in one of the scenes of early dinosaurs at the Parrsboro Fossil Museum. Like bumble bees', dragonflies' wings should not be capable of flight, according to some who have tried to analyse their action.

Quite a number of people were strolling in the first really warm weekend of this summer, but it was easy to recognise Paul, who was down by the water with a net. His 4-WD car, loaded with nets, outdoor gear, and a surprising minnow trap, was also easy to spot.

When our party had assembled, the minnow trap was explained; it contained his catch, ready to be shown off and then released. Paul does not kill his captures unless they are really needed, but does collect exuviae (larval skins), which can also be identified.

The prize specimen was enormous, with two pairs of wings extended sideways when at rest, and a head which seemed to be all eyes. It was *Anax junius,* a species which comes from Maine each spring and breeds here. Some of the new generation fly south in the fall, but most probably die here — none of its stages survives our cold winters.

Others in the minnow trap were quite small, with delicate thin bodies coloured in gorgeous blues, greens, and shades of red. Some folded their wings along their backs when at rest, and one had some hitch-hiking mites on its head and thorax. The dragonflies were passed among us, and then allowed to take off with explosive leaps into the air.

Paul described the lives and habits of dragonflies. There are two groups: dragonflies proper, with wings spread sideways when at rest; and damselflies, which fold their wings over their backs. There are several common names for them, such as darters, darning needles, and mosquito hawks, but these are not applied to any particular species.

They have aquatic larvae (naiads) which moult about twelve times before reaching full size; naiads are dull creatures which lurk in ponds and lakes, eating other insects, small molluscs, and tadpoles, using a peculiar snatching apparatus (the mask) to catch them. When full-grown, each naiad climbs a plant into the open air; the drying outer skin splits and the young adult pulls itself out, pale and wizened, leaving the skin (the exuvia) on the plant. Gulps of air help the young adult to expand, and no doubt a good meal helps it to mature. It lies low for a few days and then joins the aerial dance, hunting and mating over and near to water.

Dragonflies are voracious predators from the moment they hatch, and are well adapted to hunting. They are important controls on mosquitoes and other biting insects, the adults catching them in the air and the naiads hunting their aquatic larvae. The adult's enormous compound eyes allow it to see prey at a distance and its speed and manœuvrability make capture easy. The same equipment allows dragonflies to avoid birds, their main predators. They become more vulnerable as they age; their wings become cloudy, worn, and less efficient.

Paul passed round the nets and took us back into the woods, where we saw quite a lot of dragonflies and dip-netted some naiads. We began to tell the species apart, although their scientific names were hard to remember; Paul named them as they flew past. Capture is quite different from the elegant netting of butterflies. Dragonflies fly fast, straight, and often high and have to be ambushed with a net on a telescopic handle, or lunged at across an expanse of water! They seem to stop in midair, or suddenly move sideways; their reactions are instantaneous and they often dodge the net.

On the other side of the road from Frog Pond, a wide pool with water lilies and pond-weed showed us the insects in action. When dragonflies mate, which they do in the air, the male grasps the female by the back of her head and she curves her body round to pick up his sperm. After that, some species part, but some fly in tandem for a while until the female is ready to lay. The eggs are scattered into the water, or laid in slits in water plants, at or under the water surface.

In at least one species, the female walks down the plant right underwater to deposit her eggs, and her mate keeps hold of her and helps her to return to the surface. Not gallantry, apparently; by keeping in contact so long, the male ensures no other can displace him as parent.

Most dragonflies have one brood a year, emerging in early summer. All the Nova Scotian species have individual habits and flight periods; some are territorial, some wander great distances. They have habitat preferences — there are forest dragonflies, bog dragonflies, small and large pool dragonflies, and so on.

Paul has worked for some years to produce a checklist of Nova Scotia dragonflies; he has added many names himself, and verified reports of species seen here but not collected. His list will be published this autumn.

When we went back to the parking lot, Paul thought he saw a species reported from Nova Scotia, but never confirmed, flying over our heads. He failed to catch it, but returned on several days afterwards and finally secured it; it is indeed a new record for the Province.

Thanks to Paul for insight into a different insect world.

Species seen on 27 July:

Anax junius
Dorocordulia lepida
Ischnura verticalis
Lestes eurinii
L. disjunctus
Leucorrhinia intacta
Libellula quadrimaculata
L. exusta
Sympetrum semicinctum

Pentala hymenaea: seen, confirmed later — first confirmed record for Nova Scotia.

— Ursula Grigg

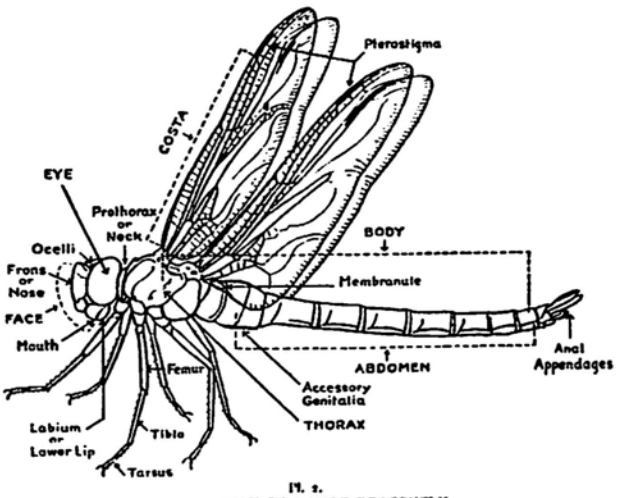


FIG. 2.
DIAGRAM OF A MALE DRAGONFLY.

ENDANGERED SPECIES AND FORESTRY

If you're expecting a report about birds or mammals that are being endangered by mega-forestry practices, be prepared for a surprise. A recent article in the Summer 1996 issue of "CoNServation", published by the Department of Natural Resources, explores the widespread decline in beneficial forest beetles. This is due to the lack of natural deadwood in incorrectly managed forestry areas. The article is of particular interest to HFN because of our 1990 year-long study trapping and identifying the forest beetles in a very local forest indeed — Point Pleasant Park. A central tenet of both this article and the HFN Point Pleasant Park Study is also supported by Doug Linzey in his Windhorse Farm Field Trip report on page 8 — that dead wood is essential for a forest to remain vigorous. We found that the majority of Point Pleasant Park's beetles were in the deadwood and slash of the central holding areas for logs awaiting removal, and barbecue firewood culled from felled trees. 84% of the PPP catch was represented by only two beetles, *Hylergops rugipennis pinifex* Fitch and *Trypodendrum lineatum* Fitch; both these beetles eat only deadwood and slash.

"Beetles and Forestry: The 99% That Aren't Pests", by Acadia graduate student Daniel Kehler, highlights the essential role that deadwood-requiring beetles play in the biotic web — they turn dead trees into fertile, enriched soil.

> "No other human activity in Nova Scotia alters landscapes as extensively or rapidly as forestry. ... In Finland, over 200 forest wildlife species are declining, while in Sweden 130 beetle species alone have been declared in need of attention. Many of these species required dead or decaying wood to complete their life cycle. In Britain, 12 species of deadwood-requiring beetles have already gone extinct and many more are threatened. The absence of this important microhabitat may represent one of the largest differences between managed and non-managed forests. The decrease in deadwood as a result of intensive forest management also illustrates a break in the normal cycling of nutrients."

Daniel Kehler took part in a research project on Nova Scotian forest beetle communities. The goal was to obtain results which could be incorporated into ecologically sound forest management.

They trapped over 17,000 beetles in a range of areas, aiming for the oldest stands, such as the nature reserve near Abraham's Lake in Guysborough County. Over 200 species were represented in the catch, 30 of which were first records for Nova Scotia. By comparison, 1,070 beetles, representing 20 species, were trapped at Point Pleasant Park.

There was a higher diversity of beetles in hardwood stands than in softwood; and of course, the more deadwood there was, especially if the pieces were large and well-decayed, the more diverse were the beetles. They also found that several beetle species could be used as indicators of high diversity. This will make it easier in the future to assess forest health quickly.

The NS Forestry sector had declared that Point Pleasant Park was in a poor state of health because of an 'infestation' of bark beetles. HFN's survey indicated that there was a dearth of beetles in comparison with a similar survey done in Ontario, and that this was a very important factor in the forest's declining vigour.

Let's hope this work is indeed used to improve Nova Scotia forestry and park management, especially in Point Pleasant Park.

— Stephanie Robertson

BOOK REVIEW: "BIRDING IN METRO HALIFAX", BY CLARENCE STEVENS

"Birding in Metro Halifax" is a Nimbus guidebook, narrow enough for a rucksack pocket, and a good read anytime. It is described as a month-by-month adventure guide, but is also a guide to natural habitats within the cities of Halifax Regional Municipality.

The first section describes a birder's year, in which there is no off-season; there are gulls and ducks in January, summer migrants' nestings in June, then on through fall migrations to winter again. The presentation is chatty, mentioning the mannerisms of birds, thus making identification easier and behaviour understandable. Feeding, nest boxes, protection (Piping Plovers), and other topics are covered in the appropriate chapters. Clarence knows birds well, and his guided field trips must be fun too.

In the second section, the reader is introduced to every small green space, pond, brook, and shore in the city. A recent street map is a necessity and so are field guides, for of course one finds much more than birds in these oases. This section ends with an introduction to birding opportunities in Halifax County.

Section Three presents a bird checklist based on habits and habitats, and probably easier for hobbyists to use than the usual list based on natural order (I had no difficulty with it, in spite of being a systematist). There is a list of clubs and organisations involved with birds and habitat conservation, and a good index. However, long strings of page numbers follow many bird names in the index, the result of monthly arrangement of the text; I found myself referring to Robie Tufts's "Birds of Nova Scotia" instead of following them up in 'Birding in Metro'. Putting major references in bold, and checklist references in italics would improve the index — at the next printing?

This is a refreshing book; I think both Clarence Stevens and Nimbus Publishing should take a bow.

— Ursula Grigg

ALMANAC

This almanac is for the dates of events which are not found in our program; field trips or lectures which members might like to attend, or natural happenings to watch for, such as eclipses, comets, average migration dates, expected blooming seasons, etc. Please suggest other suitable items.

If the spring is short in this country, Nature has compensated us for the deficiency, by giving us a second edition of it at this season, called the 'Indian summer'. The last fortnight is restored with sunny skies, bland south-west winds, and delicious weather, which has the warmth of the spring without its showers, the summer sky without its heat, and autumn nights wihout their frost. It is Nature's holiday - the repose of the seasons, the lingering beauty of maturity, ere the snows of age efface it forever.

— Thomas Chandler Haliburton, The Old Judge, or Life in a Colony (1849)

NATURAL EVENTS

SEPTEMBER	the busiest month for most migrating birds
mid-Sept.-mid-Oct.	flights of migratory hawks visible over Brier Island
mid-September	Comet Hale-Bopp should be visible to the naked eye
22 September	Autumnal Equinox at 15:00 ADT. Fall begins
late Sept./October	Shaggy-mane Mushrooms, *Coprinus* sp., are abundant
26/27 September	Total eclipse of the moon. From 10:12 p.m. to 1:36 a.m.; the total phase lasts 70 minutes
27 September	Full moon — this is the 'Harvest Moon'
30 Sept.	first frost in Halifax (that is, Environment Canada says there is only a one in ten chance that we will have frost before this date)
OCTOBER	mating season for deer, foxes, and porcupines
October	huckleberry leaves, *Gaylussacia* sp., turn blood-red in the bogs
1-10 Oct.	Mercury is bright in the morning sky
early-mid October	our native witchhazel, *Hamamelis virginiana*, blooms — the last bloom of the season
12 Oct.	partial solar eclipse
26 Oct.	Full Moon — this is the 'Hunters' Moon'
26/27 Oct.	Return to Standard Time. Turn clocks back one hour

2 NOVEMBER	Southern Taurid Meteor Shower
12 Nov.	Northern Taurid Meteor Shower
17 Nov.	Leonid Meteor Shower
22 Nov.	daily minimum temperature at Shearwater goes below 0°

7 DECEMBER	daily average temperature at Shearwater goes below 0°
21 Dec.	Winter Solstice at 10:06 AST. Winter begins
23 Dec.	Geminid Meteor Shower — the biggest of the season
24/25 Dec.	Annual nocturnal circumglobal migration of Arctic Reindeer

Sources — Allen, C.R.K. A Naturalist's Notebook: Yarmouth County (1987); Atmospheric Environment Service, Climatic Normals 1951-80 Halifax (Shearwater A) N.S. (thanks to Peter Payzant for this); Colombo's Canadian Global Almanac, 1996; Dickinson's "Night Watch" column; Erskine's Atlas of Breeding Birds of the Maritime Provinces, 1992; Royal Astronomical Society of Canada's Observer's Handbook, 1996; the personal observations of the compiler.

SUNRISE AND SUNSET ON LATE SUMMER AND FALL SATURDAYS

7 Sept.	6:44	19:39	**5 Oct.**	7:17	18:47
14 Sept.	6:52	19:26	**12 Oct.**	7:26	18:34
21 Sept.	7:01	19:13	**19 Oct.**	7:35	18:23
28 Sept.	7:09	19:00	**26 Oct.**	7:45	18:11
2 Nov.	6:54	17:01	**7 Dec.**	7:38	16:34
9 Nov.	7:03	16:52	**14 Dec.**	7:44	16:34
16 Nov.	7:13	16:45	**21 Dec.**	7:48	16:37
23 Nov.	7:22	16:39	**28 Dec.**	7:51	16:41
30 Nov.	7:30	16:36			

— courtesy of David Lane,
Burke-Gaffney Observatory, Saint Mary's University

ORGANISATIONAL EVENTS

Dartmouth Volksmarch Club — Meets for organised walks, usually at least 10K, every Sunday at 10:00 a.m. Pick up their schedule at the Trail Shop on Quinpool Road, or phone 435-5252 for information.

Friends of McNabs Island — for more information call Dusan Soudek at 422-1045 or Mike Tilley at 465-4563.

22 Sept. Fall Beach Sweep - Departs Cable Wharf at 10:00 a.m. Rain date 29 September.
20 Oct. Fall Foliage Foray - Departs Cable Wharf at 10:00 a.m. Rain date 27 October.

Halifax Hiking Club

22 Sept. Blackrock - Hike in the Kentville area. Phone Maria Jacobs, 455-3461
29 Sept. Hantsport to Gaspereau - Bike trip. Phone John Stanton, 454-4681.
6 Oct. Abrahams Lake - Hike. Phone John Stanton, 454-4681.
20 Oct. Hospital Hill - Hike. Phone John Stanton, 454-4681.

Mainland South Heritage Society — Meets on the last Thurs. of the month at the Capt. William Spry Centre in Spryfield, 7:30 p.m. Their 3-4 hr. Sunday trips can be rugged — wear sturdy footwear. Phone 443-9633 after 6 p.m. for more information.

29 Sept. North West Arm Path from the Dingle to the R.N.S.Y.S. — meet at the Outdoor Recreation Centre at 2 p.m.
6 Oct. Herring Cove Walk — meet at the Capt. William Spry Centre at 1 p.m.

Maritime Museum of the Atlantic — Programs are usually on Tuesdays at 7:30 p.m. For more information phone 424-7490.

17 Sept. "On the Beaches of Sable Island" - talk by Zoe Lucas.
29 Oct. "Home Pool: the Fight to Save the Atlantic Salmon", a new book by Philip Lee, will be launched.
12 Nov. "There Be Dragons" - James Boxall will talk about maps.

Nova Scotia Bird Society — Meets 4th Thursday of month, Sept. to Apr., at the NSMNH, 8 p.m. More info ph. 852-2428 or http://cfn.cs.dal.ca/Recreation/NS-BirdSoc/nsbnmain.html. Much more info on their 'Bird Information Line', — ph. 852-CHAT.

22 Sept. Northumberland Shore - Stu Tingley, (506) 532-0885.
6 Oct. Hartlen's Point - Peter Macleod, 852-1228.
11-14 Oct. Bon Portage Island - Peter Macleod, 852-1228.
12-14 Oct. Briar Island - Fulton Lavender, 455-4966.
20 Oct. Prospect, Terence Bay -Peter Macleod, 852-1228.
24 Nov. Prospect, Terence Bay - Peter Macleod, 852-1228.
28 Nov. "The Nature of Shorebirds" - talk by Harry Thurston.
30 Nov. Hartlen's Point - Fulton Lavender, 455-4966.
8 Dec. Prospect, Terence Bay - Peter Macleod, 852-1228.
In Dec. Join a Christmas Bird Count in your area - phone Fulton Lavender at 455-4966 or 852-CHAT for more information.

Nova Scotia Museum of Natural History — Programs usually on Wednesdays at 7:30 p.m. Phone 424-6099 or 424-7353.

19 Oct. "Newport Landing Fossil Walk" - leader Bob Grantham. Leaves Museum at 9:30 a.m. Call 424-3563.
28 Nov. "The Nature of Shorebirds", a new book by Harry Thurston, will be launched at 6:30 p.m. at the bookstore.

Nova Scotia Wild Flora Society — Meets 4th Mon. of the month, Sept. to Apr., at the NSMNH, 7:30 p.m. For more information phone Heather Drope at 423-7032 (daytime only), or http://fox.nstn.ns.ca:80/~csensen/

23 Sept. Members' Slide Night.
28 Oct. Series of mini slide presentations by various members.
25 Nov. "Relationships Between Plants and Birds" - Clarence Stevens.

Orchid Society of Nova Scotia — Meets 2nd Sun. of the month, Sept. to June, at the NSMNH, 7:30 p.m. Orchids are usually on display before the meeting. For more information phone Jean Hartley at 443-3080, or ip-osns@cfn.cs.dal.ca

19-20 Oct. The Canadian Orchid Congress and an American Orchid Society judged show at City Centre Atlantic, Halifax. Sales, displays, seminars.
20 Oct. "Native Orchids of Nova Scotia" - Heather Drope; a seminar at the Congress.

Photographic Guild of Nova Scotia — Meets 2nd Mon. and 1st and 3rd Sun.'s of the month, at the NSMNH, 7:30 p.m. Special Events take place at St. Mary's University, Theatre A, Burke Education Centre. Phone Branimir Gjetvaj at 422-3407.

26 Oct. Fall Show, Burke Education Centre, St. Mary's University, 8 p.m.
11 Nov. "Four Corners: Travelogue of the Southwest USA" by John Webb.
9 Dec. "Nova Scotia Protected Areas: How Much is Enough?" by Colin Stewart.
15 Dec. "The Colour Landscape" by Stephen Patterson.

Royal Astronomical Society of Canada (Halifax Chapter) — Public shows are presented at 7 p.m. on most Thursdays at the Planetarium in the Sir James Dunn Building, Dalhousie University. These last about an hour.
There will be no shows on 31 Oct., 26 Dec., or 2 January!

— compiled by Patricia L. Chalmers

TIDE TABLE

October-octobre

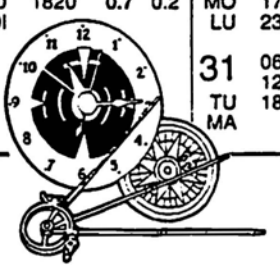
Day	Time	Ht./ft.	Ht./m	Jour	Heure	H./pi	H./m
1	0510	1.1	0.3	16	0405	1.4	0.4
	1045	6.0	1.8		1005	6.0	1.8
TU	1740	0.8	0.2	WE	1650	1.0	0.3
MA	2315	5.6	1.7	ME	2240	5.5	1.7
2	0600	1.5	0.5	17	0500	1.6	0.5
	1130	5.6	1.7		1050	5.9	1.8
WE	1835	1.1	0.3	TH	1750	1.1	0.3
ME				JE	2330	5.4	1.6
3	0000	5.3	1.6	18	0605	1.9	0.6
	0700	1.8	0.5		1140	5.7	1.7
TH	1215	5.3	1.6	FR	1855	1.1	0.3
JE	1930	1.3	0.4	VE			
4	0055	5.0	1.5	19	0020	5.3	1.6
	0755	2.0	0.6		0720	2.0	0.6
FR	1305	5.0	1.5	SA	1235	5.5	1.7
VE	2020	1.5	0.5	SA	2000	1.1	0.3
5	0150	4.8	1.5	20	0125	5.2	1.6
	0850	2.2	0.7		0830	2.0	0.6
SA	1405	4.8	1.5	SU	1340	5.4	1.6
SA	2110	1.5	0.5	DI	2100	1.1	0.3
6	0300	4.8	1.5	21	0240	5.3	1.6
	0940	2.2	0.7		0935	1.8	0.5
SU	1515	4.8	1.5	MO	1455	5.4	1.6
DI	2200	1.6	0.5	LU	2200	0.9	0.3
7	0405	4.9	1.5	22	0400	5.5	1.7
	1030	2.1	0.6		1035	1.6	0.5
MO	1620	4.9	1.5	TU	1615	5.5	1.7
LU	2245	1.5	0.5	MA	2255	0.8	0.2
8	0500	5.1	1.6	23	0505	5.9	1.8
	1115	1.9	0.6		1135	1.2	0.4
TU	1715	5.1	1.6	WE	1720	5.8	1.8
MA	2330	1.5	0.5	ME	2355	0.7	0.2
9	0545	5.4	1.6	24	0555	6.3	1.9
	1155	1.6	0.5		1230	0.9	0.3
WE	1800	5.3	1.6	TH	1815	6.0	1.8
ME				JE			
10	0010	1.4	0.4	25	0045	0.6	0.2
	0625	5.7	1.7		0640	6.6	2.0
TH	1240	1.4	0.4	FR	1320	0.5	0.2
JE	1840	5.5	1.7	VE	1905	6.2	1.9
11	0050	1.2	0.4	26	0135	0.6	0.2
	0700	5.9	1.8		0725	6.7	2.0
FR	1315	1.1	0.3	SA	1410	0.3	0.1
VE	1920	5.6	1.7	SA	1950	6.3	1.9
12	0125	1.1	0.3	27	0225	0.6	0.2
	0735	6.0	1.8		0805	6.7	2.0
SA	1355	0.9	0.3	SU	1450	0.3	0.1
SA	1955	5.6	1.7	DI	2035	6.2	1.9
13	0205	1.1	0.3	28	0305	0.8	0.2
	0810	6.1	1.9		0850	6.5	2.0
SU	1435	0.8	0.2	MO	1535	0.4	0.1
DI	2035	5.7	1.7	LU	2120	6.1	1.9
14	0240	1.1	0.3	29	0350	1.1	0.3
	0845	6.1	1.9		0930	6.2	1.9
MO	1515	0.8	0.2	TU	1620	0.6	0.2
LU	2115	5.6	1.7	MA	2205	5.9	1.8
15	0320	1.2	0.4	30	0435	1.5	0.5
	0925	6.1	1.9		1015	5.9	1.8
TU	1600	0.8	0.2	WE	1700	0.9	0.3
MA	2155	5.6	1.7	ME	2250	5.7	1.7
				31	0525	1.8	0.5
					1100	5.6	1.7
				TH	1750	1.2	0.4
				JE	2335	5.4	1.6

November-novembre

Day	Time	Ht./ft.	Ht./m	Jour	Heure	H./pi	H./m
1	0620	2.1	0.6	16	0605	1.9	0.6
	1145	5.3	1.6		1130	5.9	1.8
FR	1840	1.4	0.4	SA	1840	0.9	0.3
VE				SA			
2	0020	5.2	1.6	17	0015	5.7	1.7
	0715	2.3	0.7		0715	1.9	0.6
SA	1230	5.1	1.6	SU	1225	5.7	1.7
SA	1930	1.6	0.5	DI	1940	1.0	0.3
3	0115	5.1	1.6	18	0115	5.6	1.7
	0805	2.3	0.7		0820	1.9	0.6
SU	1325	4.9	1.5	MO	1330	5.4	1.6
DI	2015	1.7	0.5	LU	2040	1.0	0.3
4	0210	5.0	1.5	19	0225	5.7	1.7
	0855	2.3	0.7		0925	1.7	0.5
MO	1430	4.8	1.5	TU	1440	5.3	1.6
LU	2105	1.8	0.5	MA	2140	1.1	0.3
5	0315	5.1	1.6	20	0335	5.8	1.8
	0945	2.1	0.6		1025	1.5	0.5
TU	1535	4.8	1.5	WE	1600	5.4	1.6
MA	2150	1.8	0.5	ME	2235	1.1	0.3
6	0410	5.3	1.6	21	0440	6.1	1.9
	1030	1.9	0.6		1120	1.1	0.3
WE	1635	5.0	1.5	TH	1705	5.6	1.7
ME	2235	1.8	0.5	JE	2335	1.1	0.3
7	0500	5.5	1.7	22	0530	6.3	1.9
	1120	1.6	0.5		1215	0.8	0.2
TH	1725	5.1	1.6	FR	1800	5.8	1.8
JE	2325	1.7	0.5	VE			
8	0540	5.8	1.8	23	0030	1.0	0.3
	1205	1.3	0.4		0615	6.5	2.0
FR	1810	5.3	1.6	SA	1305	0.6	0.2
VE				SA	1845	5.9	1.8
9	0010	1.5	0.5	24	0120	1.0	0.3
	0620	6.0	1.8		0700	6.5	2.0
SA	1250	1.0	0.3	SU	1350	0.4	0.1
SA	1850	5.5	1.7	DI	1935	6.0	1.8
10	0055	1.4	0.4	25	0205	1.1	0.3
	0700	6.2	1.9		0740	6.5	2.0
SU	1330	0.8	0.2	MO	1430	0.4	0.1
DI	1930	5.7	1.7	LU	2015	6.0	1.8
11	0140	1.3	0.4	26	0245	1.2	0.4
	0740	6.3	1.9		0825	6.3	1.9
MO	1415	0.6	0.2	TU	1510	0.5	0.2
LU	2010	5.8	1.8	MA	2100	6.0	1.8
12	0220	1.2	0.4	27	0325	1.5	0.5
	0820	6.4	2.0		0905	6.2	1.9
TU	1455	0.5	0.2	WE	1550	0.7	0.2
MA	2055	5.8	1.8	ME	2145	5.9	1.8
13	0305	1.3	0.4	28	0400	1.7	0.5
	0900	6.4	2.0		0950	5.9	1.8
WE	1545	0.6	0.2	TH	1625	0.9	0.3
ME	2140	5.9	1.8	JE	2225	5.8	1.8
14	0355	1.5	0.5	29	0440	2.0	0.6
	0950	6.3	1.9		1030	5.7	1.7
TH	1635	0.7	0.2	FR	1705	1.2	0.4
JE	2230	5.8	1.8	VE	2305	5.6	1.7
15	0455	1.7	0.5	30	0530	2.2	0.7
	1035	6.1	1.9		1115	5.5	1.7
FR	1735	0.8	0.2	SA	1745	1.4	0.4
VE	2320	5.8	1.8	SA	2350	5.5	1.7

December-décembre

Day	Time	Ht./ft.	Ht./m	Jour	Heure	H./pi	H./m
1	0620	2.3	0.7	16	0000	6.1	1.9
	1155	5.2	1.6		0700	1.7	0.5
SU	1835	1.6	0.5	MO	1210	5.9	1.8
DI				LU	1920	0.8	0.2
2	0035	5.4	1.6	17	0055	6.0	1.8
	0715	2.3	0.7		0805	1.6	0.5
MO	1245	5.0	1.5	TU	1310	5.5	1.7
LU	1920	1.8	0.5	MA	2020	1.0	0.3
3	0120	5.3	1.6	18	0200	5.9	1.8
	0805	2.3	0.7		0905	1.5	0.5
TU	1340	4.8	1.5	WE	1420	5.3	1.6
MA	2010	1.9	0.6	ME	2115	1.2	0.4
4	0215	5.3	1.6	19	0305	5.9	1.8
	0855	2.1	0.6		1005	1.4	0.4
WE	1440	4.7	1.4	TH	1535	5.2	1.6
ME	2055	2.0	0.6	JE	2215	1.3	0.4
5	0310	5.4	1.6	20	0410	5.9	1.8
	0945	1.9	0.6		1105	1.1	0.3
TH	1545	4.8	1.5	FR	1645	5.3	1.6
JE	2145	2.0	0.6	VE	2315	1.4	0.4
6	0405	5.5	1.7	21	0505	6.0	1.8
	1040	1.7	0.5		1200	0.9	0.3
FR	1640	4.9	1.5	SA	1740	5.5	1.7
VE	2240	1.9	0.6	SA			
7	0455	5.8	1.8	22	0010	1.4	0.4
	1130	1.4	0.4		0555	6.2	1.9
SA	1730	5.1	1.6	SU	1250	0.7	0.2
SA	2335	1.7	0.5	DI	1830	5.6	1.7
8	0545	6.0	1.8	23	0100	1.4	0.4
	1225	1.0	0.3		0640	6.2	1.9
SU	1820	5.4	1.6	MO	1330	0.6	0.2
DI				LU	1915	5.7	1.7
9	0025	1.5	0.5	24	0145	1.4	0.4
	0625	6.3	1.9		0725	6.2	1.9
MO	1310	0.7	0.2	TU	1410	0.5	0.2
LU	1905	5.7	1.7	MA	2000	5.8	1.8
10	0115	1.4	0.4	25	0225	1.5	0.5
	0710	6.5	2.0		0805	6.2	1.9
TU	1355	0.5	0.2	WE	1450	0.6	0.2
MA	1950	5.9	1.8	ME	2040	5.9	1.8
11	0205	1.3	0.4	26	0300	1.6	0.5
	0800	6.6	2.0		0845	6.1	1.9
WE	1440	0.3	0.1	TH	1520	0.8	0.2
ME	2040	6.0	1.8	JE	2120	5.9	1.8
12	0255	1.2	0.4	27	0330	1.7	0.5
	0845	6.6	2.0		0925	6.0	1.8
TH	1530	0.3	0.1	FR	1555	0.9	0.3
JE	2125	6.2	1.9	VE	2200	5.8	1.8
13	0345	1.4	0.4	28	0405	1.9	0.6
	0935	6.6	2.0		1005	5.8	1.8
FR	1620	0.3	0.1	SA	1625	1.1	0.3
VE	2215	6.2	1.9	SA	2240	5.8	1.8
14	0445	1.5	0.5	29	0440	2.0	0.6
	1025	6.4	2.0		1045	5.7	1.7
SA	1720	0.5	0.2	SU	1700	1.3	0.4
SA	2310	6.2	1.9	DI	2315	5.7	1.7
15	0550	1.7	0.5	30	0525	2.1	0.6
	1115	6.2	1.9		1125	5.4	1.6
SU	1820	0.7	0.2	MO	1745	1.5	0.5
DI				LU	2355	5.6	1.7
				31	0620	2.1	0.6
					1205	5.2	1.6
				TU	1830	1.7	0.5
				MA			



HUNTING SEASON IS UPON US!

Black Bear season	16 September to 26 October
Bow-hunters' Deer season	28 Sept. - 19 Oct.
Ring-necked Pheasant season	1 Oct.- 15 Dec.
Ruffed Grouse/other small game season	1 Oct.- 31 Dec.
Duck season	8 Oct. - 31 Dec.
Geese season	8 Oct. - 15 Jan.
Moose season	14 Oct. - 26 Oct.
Regular Deer season	25 Oct.- 7 Dec.
Rabbit season	15 Nov. - 15 Feb.
2nd Bow-hunters' Deer season	9 Dec. - 14 Dec.

There are hunters abroad: Remember — dress to be seen in the woods!

NATURE NOTES

Halifax Area — In June juvenile Peregrine Falcons were seen by Regina Maassin Jollimore.

Doug has been seeing some of those 'great grey slugs' that were reported to have escaped from a lab somewhere in Halifax many years ago. A increasing invasion?

Shirley van Nostrand reported Juncos nest-building in her hanging basket of Fuschias! They didn't fledge. Jim Woolford pointed out that this is a habit of these endearing birds.

Cathy Fulton reports that the goldfish in Julie's Pond have some kind of disease that is reducing their numbers. This will mean less predation upon the Yellow-spotted Salamander eggs laid there in early spring, and more future Salamanders for us to count on our annual Salamander Meander!

Peter Payzant reported that Merlins had been seen nesting around the North West Arm area in early Summer, and apparently have been using this area for some years.

Marriott's Cove — Doug Linzey found a 6-foot-long, dead and partially decomposed Leatherback Turtle washed up on the beach. The NSMNH is collecting data on this animal.

! NEXT DEADLINE !

5 NOVEMBER FOR DECEMBER ISSUE

contributions to the Editor, HFN
c/o NS Museum of Natural History

Please phone 455-8160 to alert the editor