

THE HALIFAX FIELD NATURALIST



No.107
June to August 2002



Indian Pond Heron, *Ardeola grayii* on Mango, *Mangifera indica*

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

HFN

is incorporated under the Nova Scotia Societies Act and holds Registered Charity status with Revenue Canada. Tax-creditable receipts will be issued for individual and corporate gifts. It is an affiliate of the Canadian Nature Federation and an organisational member of the Federation of Nova Scotia Naturalists, the provincial umbrella association for naturalist groups in Nova Scotia.

OBJECTIVES are 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 are held, except for July and August, on the first Thursday of every month at 7:30 p.m. 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. All participants in HFN activities are responsible for their own safety. Everyone, member or not, is welcome to take part in field trips.

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

EMAIL <hfnexec@chebucto.ns.ca>

WEBSITE <<http://chebucto.ns.ca/Recreation/FieldNaturalists/fieldnat.html>>

FNSN ADDRESS Federation of Nova Scotia Naturalists
c/o Nova Scotia Museum of Natural History, 1747 Summer St., Halifax, Nova Scotia, B3H 3A6

EMAIL <doug@fundymud.com> (Doug Linzey, FNSN secretary and Newsletter Editor)

WEBSITE <<http://chebucto.ns.ca/Environment/FNSN/hp-fnsn.html>>

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 1 September will be valid until the end of the following membership year. The regular membership year is from 1 January to 31 December. Members receive the HFN Newsletter and notices of all meetings, field trips, and special programmes. The fees are as follows:

Individual	\$15.00 per year
Family	\$20.00 per year
Supporting	\$25.00 per year
FNSN (opt.)	\$ 5.00 per year

EXECUTIVE	President	Bob McDonald	443-5051
2002-2003	Vice-President		
	Treasurer	Janet Dalton	443-7617
	Secretary	Suzanne Borkowski	455-2922
	Past President	Ursula Grigg	455-8160

DIRECTORS Elliott Hayes, Patricia Leader, Bernice Moores, Linda Payzant, Peter Payzant, Stephanie Robertson, Colin Stewart

COMMITTEES **Membership** Linda Payzant 861-1607

Programme

Talks & Trips	Pat Leader	457-9197
	Jean Sawyer	445-4938
Production	Stephanie Robertson	

Newsletter

Editor	Ursula Grigg	455-8160
Almanac	Patricia Chalmers	422-3970
Production	Stephanie Robertson	011-880-2-881-0292
Distribution	Elliott Hayes	835-9819
	Pat Leader	457-9197
	Judi Hayes	835-9819

Refreshments Regina Maass

Conservation Colin Stewart 466-7168

FNSN Representative Ursula Grigg 455-8160

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HFN NEWS AND ANNOUNCEMENTS

EDITORIAL



Although this is supposed to be a time of global warming, Nova Scotia has had one of the coldest springs in many years. Flowering times and nesting routines have been delayed about two weeks, which should produce some interesting statistics for the "Thousand Eyes" project. Finally the season is catching up, transplants have been replaced, plants and birds are going through their annual routines, and Halifax Field Naturalists are going about theirs.

A great deal of conservation work is going on and some new working groups are being formed, some in connection with the protection of green space in Halifax Regional Municipality. There is a race between residential and commercial development, and the preservation of green and open spaces. In the province, there are new regulations to protect streams and wetlands; attempts are being made to reduce clear-cutting in the forests, and to reduce ATV damage to trails and wetlands. The Federation of Nova Scotia Naturalists is taking part, and the theme of this year's AGM at Mount St. Vincent University was "The Good, the Bad, and the Ugly". At times the stories were depressing; at times, as when the Sackville River Society discussed the return of mature salmon (and ospreys) to the river to breed, the news was invigorating. Unfortunately, many rules are being ignored, some through ignorance; many speakers asked us to let our representatives in all three levels of government know our opinions, and report violations (the blue pages of the phone book give addresses.)

This newsletter has overflowed, and some items are being held for the next issue. These include an account of the FNSN meeting, some species lists for plants beside the Sackville River, and the talks for the past quarter. There should be more information on the greening of Halifax, among other events.

So here's to a good summer, – short, but enjoyable!

– Ursula Grigg

THOUSAND EYES – WATCHING NOVA SCOTIA NATURE

A. H. MacKay was the Nova Scotia Superintendent of Schools from 1891 to 1927. He involved students from all 1,500 Provincial Schools in collecting the dates of natural observations; this is called phenology.

One hundred years later – we invite you to help us look for evidence of climate change in Nova Scotia!

For more information visit our website <<http://www.thousandeyes.ca>>; phone (902) 424-7370; fax (902) 424-0560.

HERP ATLAS



This is the fifth year of a five-year project, and some map squares still need to be covered! Cards and instructions for recording sightings of reptiles and amphibians can be found at the Museum of Natural History, Summer Street, Halifax, or Acadia University.

To help out, contact Fred Scott and/or Sabrina Taylor of the Herp Atlas Project, c/o Biology Dept., Acadia University, Wolfville, N.S., B0P 1X0; 902-585-1313.

Ask for the colour identification sheet. And, go to <<http://landscape.acadiau.ca/herpatlas>> for the colourful, informative website.

PANUKE LAKE OLD FOREST WALK



Join David MacKinnon and the Nova Scotia Nature Trust staff on this moderate hike. It will be a visit to Nova Scotia's best example of remnant old-growth Eastern Hemlock-Red Spruce forest, on Sunday, 14 July, from 1:00 p.m. to 5:00 p.m. **Bring sturdy boots, water, snacks, sunscreen, and fly repellent.**

Meet at 1:00 p.m. in the Sobey's Parking lot, Tantallon (Exit 5, Hwy 103).

For more information or to register, contact Toby Rowe, Forest Legacy Coordinator, at the Nova Scotia Nature Trust, 425-5263; or <toby@dbis.ns.ca>.

FRIENDS OF POINT PLEASANT PARK



On Sun., June 23, 3:00 p.m., The Friends of Point Pleasant Park Association led a walking tour of the Park. President Ian Taylor and other members described the geography, history, and biology of the Park.

On Mon., 24 June, 7:00 p.m., at the The University Club, Dalhousie, Christopher Majka presented "Beetles and Trees: Point Pleasant Park Partners", a talk about his extensive research on the rich and fascinating fauna of beetles there and their absolute necessity in a forest's renewal cycle – animating a discussion of policy and management implications for the Park.

Christopher recently has been running the Thousand Eyes Project for the NSMNH where, for the past three years, he has been studying the Park's beetles. He has worked on ecological research projects in Poland, Persia, Peru, Brazil, Canada, Great Britain, and the United States.

For more information on the FPPP and their activities, contact President Dr. Ian Taylor, 425-0668; <mapman@hfx.andara.com>.



NEW AND RETURNING

Angela Carter and Kent Park
Joanne Cook and family

Reta Cook

Lorraine Hurtig

Leslie Rogers

Karen Woolhouse



SPECIAL REPORTS

FORESTRY – YET AGAIN LEAVING THE MODEL FOREST

At its March 24th, 2002, meeting, the FNSN board voted to withdraw the Federation from the Nova Forest Alliance (NFA). For the past two years, we had been one of some 45 partners, of which about five were in the 'environmental' category. Earlier this year, three of the environmental partners pulled out: The Eastern Shore Forest Watch Association on January 23rd; and the Ecology Action Centre and the Nova Scotia Environmental Network Forest Caucus on February 25th. The Nova Scotia Woodlot Owners and Operators Association also withdrew on the 25th.

In a joint press release dated February 26th, the latter three demanded "that the Nova Forest Alliance, a Model Forest project, do what it is supposed to do: promote leading edge forest practices in Nova Scotia." They go on to say that their "participation has been used to bolster the credibility of industry partners and the Nova Scotia Department of Natural Resources" and that they now understand that they "were co-opted into an effort that allows forest companies to claim publicly that they are participating in a multi-stakeholder process along with environmentalists and woodlot owners, while having absolutely no intention of implementing any real on-the-ground improvements in harvesting practices."

The three groups decided that "maintaining their partnership in the NFA will lend a false credibility to the NFA and allow the organisation to apply for model forest status before it has developed a process that recognises and represents the concerns and interests of all stakeholders."

FNSN board member Jill Comolli and her colleagues in the South Shore Naturalists Club put in a lot of time and effort to analyse the situation with the NFA, which was in the process of finalising a draft plan for the management of an independently funded Nova Scotia Model Forest apart from the Fundy Model Forest. They concluded, that given the performance of the NFA since its inception, and the withdrawal of organisations with more experience than FNSN, our continued membership would not result in the NFA meeting its stated vision and objectives. Rather, a united voice from outside the NFA might have more influence with the funding organisation.

Member clubs were aware of the situation, and some had discussed it to one degree or another. The directors discussed at length the motion to withdraw. Generally, the Federation believes that in the long run more can be accomplished from a position on the inside rather than pounding on the door from the outside. In this case however, the inside position was looking dire, and the board voted for withdrawal.

Now, of course, we have a responsibility to encourage the funding agency – Natural Resources Canada – to encourage, in return, the NFA to take

seriously its stated vision: "to achieve sustainable forest management through a co-operative partnership within the context of Nova Scotia's Acadian forest ecosystems."

The twig that broke the Alliance's back was the recently released Genuine Progress Index (GPI) Forest Accounts Report. It paints a dismal picture of Nova Scotia's forestry practices: clearly unsustainable, ecologically damaging, and not economically viable in the long run. Unfortunately, the chairman of the NFA publicly denigrated the report, which has been otherwise favourably received as being reasonably impartial and scientifically valid.

You can visit the NFA on line at <www.novaforestalliance.com>.

The GPI Atlantic web site is at <www.gpiatlantic.org>. The Nova Scotia GPI Forest Accounts report can be ordered from this site (\$35 each for the two volumes). For an abstract, see <www.gpiatlantic.org/ab_forest.shtml>.

– Doug Linzey
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OWL MONITORING

Bob McDonald, Patricia Chalmers and I volunteered to survey two routes for the Nova Scotia Nocturnal Owl Monitoring Survey, which is sponsored by Bird Studies Canada. This is the Project which Bob McDonald described in the last issue of the Halifax Field Naturalist after he attended a workshop in Sackville, N.B. last November.

One of our routes was almost entirely inside the Pockwock Lake Water Supply Area and required permission from Halifax Regional Water Commission officials to enter, and keys to access a large portion of the logging trail that made up our route. The other was at Sandy Lake, in Tantallon, on lands contracted to Bowaters Mersey and, again, we needed permission to gain access and keys to proceed. Staff in both areas were very co-operative and keenly interested. At Pockwock Lake, the Watershed Manager even helped us plot our stops as he drove us over the nearly impassable trail.

On April 5th, at sunset, the three of us started out, eager with anticipation and properly accoutred with a CD player, a compass, flashlights, and warm clothing. At our first stop, the Playback CD boomed with Boreal Owl, *Aegolius funereus*, calls, startling us and soliciting barks and howls from a nearby dog. As the playback progressed, more dogs joined in until I wondered if someone was going to throw open a window and start yelling at us! Stops 2 and 3, inside the gate, were uneventful, but the dogs were still able to hear us and were not pleased with our presence. Stop 4 took us well into the woods. It was quiet, dark, and peaceful. Then we heard it – the distinct call of a Barred Owl, *Strix varia*, less than half a kilometer away! As we strained our ears to listen, we heard a second owl, a Great Horned, from a little further away! Excitement mounted as we stood grinning happily at each other; then the Barred came closer, flew across the road, and perched in a tree clearly outlined by the moon and stars!

We had a total of eight owls that first night: five Barred, one Great Horned and two we weren't sure of – their calls were brief notes making identification uncertain. We returned home cold and tired but very pleased with our results.

Bob and I tackled the Sandy Lake route on April 11th. The first five stops were unproductive – stops 1 and 2 were very close to Highway #103. We completed our sixth stop, trying not to feel discouraged, got back in the car and heard a distinctive “Who cooks for you? Who cooks for you?” call right outside our window!

“Shoot!” muttered Bob.

We can't count calls that are heard after the Playback ends. Since it seemed so close, we couldn't resist getting out and trying to see it. As we searched the branches of the Spruce in front of us, a second Barred Owl started calling – then a third! The experience was too enjoyable for us to remain disheartened. We wrote it up in the Comments section and continued on our way. At the next stop we clearly heard the unmistakable “Toot, Toot” of a Northern Saw-whet Owl, *A. acadicus*! And at another stop we heard a pair of Great Horned Owls, *Bubo virginiana*. All calls that night were close enough and long enough to be easily recognisable. Our final tally for that route was six owls: three Barred; two Great Horned; and one Northern Saw-whet; plus the three Barred heard outside the listening period!

The three of us ran both of these routes again in May for comparison purposes. We found the roads drier and the weather a little milder; but it sure gets cold when you're standing still in the middle of the woods for any length of time! The increased noise level was a negative factor. The Spring Peepers, *Hyla crucifer* were almost deafening in some places; and running water seemed inordinately loud. As for the owls – Sandy Lake in May produced six that were countable plus three heard outside the listening period, cackling contentedly! Pockwock Lake produced an amazing eighteen owls – all countable – some seen!

We submitted our data for all four runs to Becky

Whittam at Bird Studies Canada, on computer scannable forms. Our routes were two of forty-seven that had been selected at random throughout Mainland Nova Scotia. The Project is slated to run for ten years to estimate population trends and to gather location information on rare or little known owl species. The same team is supposed to survey the same route(s) from year to year for consistency; however, as more routes are added, more volunteers will be needed. If you would like more information, you can contact Becky directly at: <becky.whittam@ec.gc.ca>, or visit the BSC Owl Monitoring website at: <www.bsc-eoc.org/regional/nbowls.html>.

– Suzanne M. Borkowski



CONSERVATION

CARING FOR SHUBIE PARK

Spending five hours± each week walking my dog in Shubie, I've come to know it quite well. Over time the park changes, some natural, some man-made; some good, some not. Users have posted their concerns on the entrance signs or some of the trees. Two recent 'letters to the editor' raised complaints particular to Shubie, but most issues broached apply to other natural parks as well. And, I have my own contentions.

Lack of maintenance. Shubie, Hemlock Ravine, and the Dingle receive less staff time than Point Pleasant; the Shubie complaint is that trees have fallen across trails, remaining there until removed by locals (I've dragged some to the side of the trail myself). Also, the trail washes out, leaving foot deep gaps only 20 metres from the parking lot which aren't addressed for months.

Failure to empty garbage cans. Park users do a decent job of picking up litter and getting them to the garbage drums. But the garbage cans overflow, then additional garbage gets piled around their bases. The Fairbanks Centre isn't operated by the Shubie Canal Commission any more, and garbage is an increasing problem; Fairbanks Centre Staff have been volunteering to distribute it to willing neighbours.

Trees left leaning against others. I disagree that this is a neglect. Most wind-throws are away from trails and behind other firm trees; when they eventually drop they can't possibly touch a trail. I figure anyone who goes off trail to stand under one of these leaners during a storm or when they're heavily laden with ice or snow doesn't deserve our sympathy. Leaners are part of nature; many birds need leaners but not fallen trees; other species use them as runways. They continue to contribute to habitat diversity as they slowly collapse to the ground, slowly rotting to form richer soil for the next generation. When the

leaners were cut down, and cut into convenient 4-foot lengths, they would disappear. We phoned the city and complained; since then none of the off-trail leaners have been cut down. One leaner had reminded the writer of an elderly relative – frail, damaged and dependent, but still determinedly surviving. To find it cut down had been a shocking and upsetting experience.

Trees have large areas of bark falling off. The falling-bark observation is accurate; 30 older and larger spruce have died, and large patches of bark are now dropping off. The complainant supposes this is due to the Spruce Budworm or the Brown Spruce Long-horned Beetle (BSLB). This is incorrect. Shubie has been thoroughly checked for BSLB; six trees were found and have been removed. Spruce Budworm is not the cause; it is after all a 'bud'worm.

Vandalism Bird feeding stations that appeared around the park last winter were destroyed this spring. I don't condone this, but I was bothered by how many there were – at least 20 evenly distributed along the trails, and – they were nailed to trees throughout the park. Besides injuring trees, they attracted squirrels and chipmunks. By tradition, there had been a few flat rocks where food was left for squirrels by relatively few people, but these recent stations were well supplied by many people. Squirrel/chipmunk populations thus increased; but supplying of feed dropped off towards summer. Now, whatever natural food is available in the forest, including future tree seeds, becomes the target of an increased and healthy population. It takes years, but the composition of forests does respond to the herbivores in them. **Wildflowers** – Mayflowers, Lady-slippers, and Trilliums are the favourite targets of park users. Staff told me of a lady intercepted two years ago with an armful (over 50) of Lady-slippers. We used to see wilted Trillium flowers on the trails near the Trillium patches; Trillium patches are no more – only four isolated plants were seen so far this year. **Young trees** – some people can't stand to see a tree get above an inch in diameter. Too small – they're no fun to destroy, but when they're bigger and a challenge to break, they must be broken. If they survive to be a bit bigger, the challenge is to pull oneself to the top, bending the tree so it touches the ground. Some break; some uproot; others are badly deformed. The result is a lack of young hardwood trees near the edges of the trails, precisely the trees that we would hope to eventually provide shade to the trails and character to the park.



A Short History

Shubie Park includes and commemorates the Shubie Canal; the big ditch is the cut between a stream feeding Lake Micmac and Lake Charles. Many workers lived on site during the forest disturbance of the long construction period; remnants of their primitive shelters remain along the canal. Most likely all wood anywhere near the site was cut as fuel; while some of the present trees are relatively large, there is nothing to suggest they predate the canal's completion in 1861. Completed, there was no particular need to keep its banks clear; indeed, it was abandoned in the 1870s. Shortly thereafter, trees would have seeded themselves. Bare rock with scattered dirt is not the best start; nonetheless, a healthy stand of mostly Red Spruce did become established; they are now of the age where they will die and provide essential nutrients and soil for the



next generation. Trees are a bit deceptive – as long as they have green needles their size suggests they are well, but they may not be, and a few die every year. It's not clear whether beetles or the like hasten their demise, or merely take advantage of it. Either way, it doesn't seem to be an epidemic. Anyway, this is natural, and decay accelerates once they are dead; these are old trees, at the end of their life span.

There have been three other major forest disturbances. Highway 111 was put through in the 60s and 70s. Bulldozers left mounds of earth and rock with relatively flat tops along the highway edge, and these now sport stands of birch, poplar, and spruce, with more young spruce filling in recently. There was a large subdivision clearance near Lake MicMac about the same time (which spurred efforts to save the canal thus created the park), some streets laid out and culverts and hydrants placed. Finally, there was a forest fire near Lake Charles which has left an area now dominated by young White Birch. Thus, away from the canal, there are only a couple of areas where the age of the forest appears to be similar to that of the canal side (up to 120 years). Overall the park forest is young.

Bicycles now use all the trails in the park. About five years ago a branch of the Trans-Canada Trail (T-CT) was built through Shubie, and most of the other trails were 'upgraded' with gravel and crusher dust (salted). Prior to this the park was posted against bicycles, and most trails would only allow two people together, turning frequently enough that lines of sight were a problem. The T-CT allows cycles, so speed limits were posted, and all the non-T-CT trails were signed 'No Bicycles'. Now, all the 'No bicycles' signs have disappeared – sometimes just the sign, sometimes the whole post. None has been replaced. Bicycles use all the trails in the park now, creating more as well. Most riders are considerate, but not all; each year increasing numbers of cyclists move through ever faster, thinking the park is as much for bicycles as for pedestrians. Worse, some cyclists think the trails aren't enough; they need the challenge of weaving through the woods. While this isn't vandalism in human terms, it is in a forest's terms, and it will quickly and drastically damage the forest floor and trees.

The gravel trails, in places, erode with every major storm. Usually repaired, (though often only several months later), it produces ribbons of gravel and crusher dust heading downhill; in places where the trail was on a side-slope, the new material has spreads down as well, effectively widening the trail and degrading the forest floor and its plants with salt and gravel.

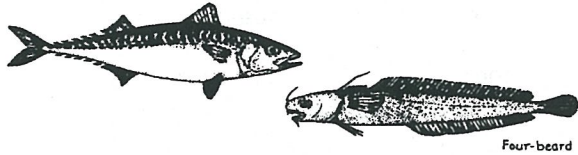
The T-CT has greatly increased the number of park users; while exploring the trail they discover the park. A 4-km trail extension along Lake Charles is supposed to be built this summer; hopefully the land will be added to the park.

For our parks not to become further degraded, it is important that users and HRM maintenance staff value them, understand them, and work to protect them. We need the full support, education, and understanding of the public, park users, and the people in charge of their preservation and protection.

Perhaps there is a role for naturalists.

– Colin Stewart

'THE PLYMOUTH MARINE FAUNA', THE ORIGIN OF MIDI



Some time in the 1880s, The Honourable Guild of Fishmongers in Britain financed an institution named The Plymouth Marine Laboratory and built it on Plymouth Hoe. This is near the bowling green in Devonshire from which Sir Francis Drake assessed the invading Spanish Armada in 1588. Drake saw that the Spanish, used to sunny Mediterranean seas, had misjudged conditions in the Western Approaches of the Atlantic, and he finished his game of bowls before sailing off to deal with them.



Similarly unperturbed by their task, scientists at the new Plymouth Laboratory began to investigate the fauna of the stormy English Channel and Atlantic Approaches, especially the life histories of commercially important fish and their prey.

Most maritime nations had marine stations then; the Danes in particular, at the other end of the Channel, were designing collectors for the planktonic larvae common among marine species, and The Laboratory followed suit. At once, many planktonic creatures, named as species long ago, were identified as larvae of well-known adults. They were renamed after the adults, which had also undergone taxonomic revision.

To spread the knowledge being collected, the scientific Journal of the Marine Biological Association was first published in 1887, and a file of records began to document the local distribution of animals. The items came from observations made in the Laboratory by scientists and the public; fishermen's observations were important from the start. Members of staff became specialists in various phyla, and one of them had the job of editing the files. Visiting scientists, who could rent bench space and work in the excellent public aquarium and the sea-water tables, contributed information. Local naturalists were invited to bring in specimens and to talk to staff; many became welcome associates. In 1904 the first edition of The Plymouth Marine Fauna appeared, containing distribution records compiled from the vast collection already made. It quickly became an important textbook, and has gone through several editions, which incidentally reflect changes in fauna over the years.



All species in the book have been reviewed by scientists familiar with the group they represent. Dubious records aren't refused but remain in the files, in case they are later shown to have been accurate, or interesting. The Laboratory is the custodian of these records, and the guarantor of their accuracy when published.

Our local MIDI (Marine Invertebrate Database Initiative) was modelled after The Plymouth Marine Fauna, but is to be an electronic archive, including a lot more data. The area covered by MIDI includes the coasts around Nova Scotia and the Gulf of Maine, out to the edge of the Continental Shelf. MIDI expects to have input from professionals – especially fishermen – and from our many naturalists, scholars, and amateurs; the Nova

Scotia Museum of Natural History is the guarantor. Environment Canada and the Department of Fisheries and Oceans are involved, and so is the Ecology Action Centre.

MIDI's records were accessed as soon as any appeared. In fact, MIDI was promptly scolded for lacking the species people wanted to find! But MIDI is only two years old, and is, typically, meeting rough waters at its start. However, the organisers have planned their course with the same confidence that Drake had surveying the Armada, and the first staff of The Laboratory faced the turbulent and interesting Western Approaches (now renamed the Celtic Sea).

What marine invertebrates do we know? What can we contribute? The minimum information required isn't much; if you see a few shells or invertebrates on some local beach, you can list them, saying which guide-book you used to name them. That's it. But if you like, taking specimens to the Museum is helpful.

Of course, you'd be welcome also to read the topic up a bit and summarise information on your species for MIDI, and see if there are already data on file.

Their web page; <www.fundyforum.com/MIDI>.



– Ursula Grigg

HALIFAX URBAN GREENWAY ASSOCIATION



The Halifax Urban Greenway Association (HUGA) has been working for some time on a proposal for a 'greenway' along the Canadian National Railway cut, through the south-western part of the Halifax Peninsula. The plans, developed by this organisation of community volunteers over the past two years, would preserve the green belt which exists along the railway from haphazard development, and promote trails along its length. They would include a multi-purpose trail, wide enough to accommodate both cyclists and pedestrians, which would provide a safe and accessible route from the Armdale Rotary to the universities in the South End (i.e. King's, Dalhousie, SMU, and AST). This route would extend from Chebucto Road to Young Avenue, more-or-less paralleling the railway cut, a distance of 4.5 kilometres. There would also be side tracks to public waterfront areas along the Northwest Arm, such as those at the foot of Oakland Road on Rockcliffe Avenue, and in the Marlborough Woods Park, as well as to Point Pleasant Park. There will also be a second, narrower footpath or nature trail along a portion of this route, which would be closer to the cliff edge above the rail line. Areas unsuitable for footpaths might be designated as conservation areas.

HUGA has informally surveyed the route along the railway cut and has a number of ideas for making this a safe, pleasant, and accessible trail. Within the past year HUGA members have consulted widely, meeting with various representatives from the Halifax Regional Municipality, including City Parks, the Trails committee, several councillors, and the Halifax Regional Police, as well as from Saint Mary's University, Dalhousie, Canadian National, Nova Scotia Power, and other organisations. They have met with public and private support for their proposal. The Halifax Regional Municipality is very interested in establishing bike routes through the city, and has encouraged this effort, with the hope that HUGA will be able to achieve a community consensus.

Details aren't quite ready to be made public, but HUGA is working to achieve support for the general concept. They have engaged the services of a landscape architect, who is preparing conceptual drawings and maps. The thought and effort that have been put into this is impressive. They have laid the foundation so that something very worthwhile could happen if this route is implemented, while an opportunity with great potential would be lost if the railway lands are built upon. A public information meeting is planned for 18 September. Watch for details in early September.

HUGA is anxious that the multi-purpose trail be implemented without sacrificing the natural values of the area, or transgressing over the areas where a low-impact footpath would be desirable. HUGA particularly welcomes the assistance and expertise of local conservation and naturalist groups in planning the route, so as to avoid losses of sensitive historical or natural features. On their website, <<http://www.region.halifax.ns.ca/greenway/>>, under the heading "Trail Interpretation", it is stated that they "are looking for additional interpretation content on the Greenway's natural habitat and history. Topics of interest include: bird sightings; parks, ..." The only reports under "Railway Cut Natural History" which they presently have online now, are courtesy of "the Halifax Field Naturalists and Pierre Taschereau for permission to extract from their Area Study on the South End Railway Cutting"; this study was one of several which Dr. Joe Harvey initiated back in the early 1980's.

I recently attended a meeting of the Halifax Urban Greenway Association (HUGA) on behalf of the Halifax Field Naturalists. The meeting was called to consult with representatives of a variety of groups which might be interested in and supportive of the Greenway. HFN has always had an interest in urban ecology, and in fact our theme, when we hosted the Federation of Nova Scotia Naturalists back in 1997, was "Green Spaces in Urban Places". It is appropriate, therefore, for HFN to lend its support to this initiative. Our participation will probably be limited to biota surveys, route planning and trail interpretation. If you would be interested in learning more, and perhaps assisting, please contact Patricia L. Chalmers.

– Patricia L. Chalmers

WEST NILE DISEASE

Nova Scotia and Health Canada are on the lookout again for West Nile virus. It has never been detected in the Maritimes, but health officials across the country are taking precautions since the virus appeared in Ontario last summer.

West Nile Virus can be transmitted to humans by mosquitoes that have fed on infected birds. The symptoms are almost always mild, but people with more serious symptoms – including a severe headache, high fever, stiff neck, and muscle weakness – may need medical attention. The Department of Health is telling the public to take normal precautions to avoid mosquito bites. They're also urging people to try to eliminate stagnant water sources around their homes, where mosquitoes breed.

"We are asking the public to watch for dead crows, blue jays, or ravens, and to report them to the nearest field office of the Department of Natural Resources," said Dr. Maureen Baikie, Nova Scotia's associate medical officer of health. "The Department of Natural Resources will track these reports and may arrange to collect and test the dead birds depending on the circumstances."

Fact sheets on West Nile Virus can be found on the Department of Health Web site, <www.gov.ns.ca/health/westnile/wnil.htm>; or contact Morris Green, Department of Health, 902-424-3731, email <greenm@gov.ns.ca>.

(There's a report that most of the birds examined from the Maritimes so far died from pesticide poisoning. – Editor)



TWO MORE FISHERS RELEASED

The Department of Natural Resources released two fishers, *Martes pennanti*, in Hants County on Wednesday, 27 March 2002, as part of a project to strengthen the mammal's presence in the province.

The fishers were live-trapped and then relocated in an effort to join the eastern and western populations. Since 1994, when the project began, 55 fishers have been trapped and released.

Fishers are members of the weasel family. They eat porcupines, foxes, skunks, rabbits, and mice (mice for hors d'œuvres no doubt!). It is *not* the same animal as the Wolverine – being smaller, prettier, better tempered, and 'more polite'. – Ed.)

At one time fishers were found throughout mainland Nova Scotia. But by the 1930s, the population had disappeared from the province. Re-introductions of fishers in the 1940s and 1960s resulted in the two separate populations.

HFN TALKS

U.S. ADVENTURES

4 APRIL

Joan Czapalay, whose subject is linguistics and her profession, teaching, is having adventures, and finding all doors open to her. She recently took a course in linguistics at the University of Arizona in Tucson, a place quite unknown to her. Luckily the local Audubon Society had an outing every Wednesday morning, so Joan quickly learned the geography. It is a country of birds, flowers, cacti, bats, Gila Monsters and elusive Cougars.

Tucson is in the Sonoran Desert, in a flat stretch bordered by four ranges of mountains. Views are spectacular, with canyons and caves, including a formation called Montezuma's Castle. Indian occupation was established at least by 10,000 years ago, and has left extensive traces. Tucson's rich history is well preserved by dry conditions. The atmosphere is clear – there is an observatory nearby – and the weather typical of deserts, being hot by day but cooling fast at dusk. As there is an US air base there, security is strict, and there is a blackout. This led to one of Joan's solitary adventures, when she was caught by sundown beyond city limits, but she found her way back in the dark by waiting until she could see the nearest mountain range against the sky.

Before coming home, Joan stayed alone in the desert for three satisfying days, imitating the rites of young Indians, and finding cougar tracks near hers in the mornings, a story often told by other visitors to such places. Before closing, Joan advised us of the best clubs around; the 'Wild, Wild West' has the biggest dance floor, but the 'Cactus Moon' is the best known.

SEALS FEEDING



2 MAY

Debbie Austin and Margi Cooper, post-graduate students at Dalhousie University, have been looking into the food of Sable Island Grey Seals, *Halichoerus grypus*, and where they obtain it. This study was designed to increase knowledge of the natural history of Grey Seals, especially as these have been increasing and are thought to take a toll on fish stocks.

Debbie discussed the yearly cycle of the Grey Seal. Females haul out in the early part of the year, pupping on land in January or February; they stay with their pups for about three weeks, feeding them such rich milk that they just about triple in size, before being abandoned to continue developing and shedding their white coats. They go to sea, learn to fish, and continue to grow. All the seals, including males, disperse; some of them stay in the vicinity and some swim great distances - around the coast - but all, including juveniles, turn to their home grounds for a few weeks in summer, at mating time. Some are tracked by radio telemetry; some have been marked so that they can be recognised again.

Margi discussed the method of identifying prey by assessing the fatty acids accumulated in the blubber of a sample of seals. This is based on the finding that all prey animals have distinctive spectra of fatty acids in their bodies and these can be identified chemically. This information on prey species has been obtained previously. Similar traces of fatty acids can be identified in narrow plugs of blubber taken from a seal; the fats closest to the musculature have been deposited most recently. Some

juveniles are caught when they come ashore in summer and cores taken to determine what they have been eating. The seals are penned on land, and force-fed a puree of known amounts of certain prey fish; later, another set of plugs gives samples of known composition for comparison with layers laid down earlier. The compositions of most meals can be determined from this. The penned seals are then released, and judging by their tempers are none the worse. From the human point of view, the job is wet, dirty and often cold, and needs considerable muscle to hold a seal still!

Results are still incomplete, but can be interpreted so far, and also be compared with work done on other species, including the Harbour Seal, *Phoca vitulina*. Seals are opportunistic feeders, and fats from fish eaten elsewhere can be compared with those from the puree. Flounder is a popular food locally, and not more than 5% of the diet is cod anywhere (the herds, however, amount to many thousand seals). Previously, seals had to be killed to obtain this sort of information.



SALT MARSHES

1 JUNE

Tony Bowron is the Ecology Action Centre's co-ordinator of the Saltmarsh Restoration project and a member of the coastal issues committee; he is also a post-graduate student at Dalhousie University. Saltmarshes have a characteristic structure, with flat surfaces colonised by Cord-grass, *Spartina alterniflora*, and are lush in summer and brown in winter, when they become churned up and some material washes out to sea. 53 commercially important organisms are connected to the low marshes, and some, like Sea Lavender sold for dried flower arrangements, come from the high marsh. Many shorebirds nest there, and amphipods, *Corophium* spp. feed thousands of migrating sandpipers. Willets and Nelson's Sharp-tailed Sparrows are indicators of a healthy saltmarsh!

Saltmarshes have long been threatened by building – the Acadians started it by draining them for agriculture. 75% of our coastal plain has become fields. The Department of Agriculture has to protect dikelands, but they tend to become built on, mostly for shore-front residences.

Tidal barriers are the biggest threat now; the marsh built by the Windsor Causeway is an example. Nowadays, bridges are being built to reopen river flow. However, a lot of marsh has been lost to secondary roads with culverts installed, many improperly. Where a culvert is not level with the river, fish cannot pass up and down; where a culvert is too high, water may filter through the road-bed below and wash it out. This can be fixed! Culverts can be replaced by bridges, and fields can be undiked!

There is an example at Cheverie, where plans to replace the culvert are going ahead in spite of lack of money. Tony is a mediator, who talks to all parties and propose solutions, backed up by inventories and knowledge of property issues. The N.S. Department of Transport and Federal Department of Fisheries and Oceans approve – one has no money, and the other has no jurisdiction.

– all by Ursula Grigg

FIELD TRIPS

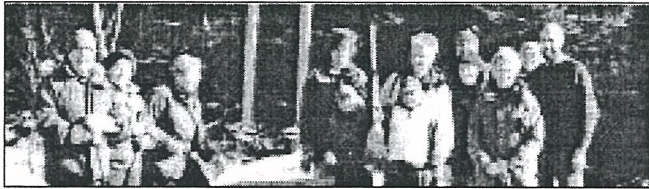
ADMIRAL'S COVE

DATE: Sunday, 17 March

PLACE: Admiral's Rock Cove Park

WEATHER: Very cold but sunny

PARTICIPANTS: 13



There are lots of ways one might celebrate St. Patrick's Day, but a few of us tried to make sure that the green of the environment was not covered up by litter. It was a cold but very sunny day when 13 people met at the entrance to Admiral's Rock Cove Park on Shore Drive, Bedford, armed with garbage bags, gloves, and even a pick-up stick usually reserved for the more frail. We entered the woods, then side-stepping a few icy patches, we found our way down a fairly steep path to the beach. Emerging from the woods by a small stream, we immediately found the mother-lode ... of litter. The beach here is a catchment area for any litter flowing in this part of the Basin.

Having cleaned up here, we moved along the beach, sometimes taking the shore-line and dodging around or over large rocks, or else cutting through the edge of the woods. Apart from the usual coffee cups, chunks of styrofoam, plastic and glass bottles, plastic bags (for chips, nachos, and road salt), and tangles of rope – we picked up shoes, flower pots, plastic toy parts (a snake head and a llama), part of an inhaler, sanitary pads and tampons, pop cans and bottles, a birthday candle, a biro and a fountain pen, a real estate board, a broom, and a 14-foot length of plastic piping. One conglomeration of styrofoam formed a twofoot ball which had been floating long enough to make a home for some marine gastropods – in fact, limpets! Even after this time, very little of the styrofoam had broken down. In addition, as it had rolled across the beach it had gathered such organic matter as soil and leaves. Broken glass also littered the shore, along with older pieces smoothed by wave action against the beach. As can be imagined, the styrofoam, plastic bottles, and bags would have seen a long life span if we had not curtailed their travels. With the glass and the rope tangles, they would have been a hazard to animals, birds, and people.

Unfortunately, the litter we collected represents only a small sample of what floats in the basin. It does not address the other inorganic matter which has sunk, nor less tangible waste like chemicals or micro-organisms which affect the environment in a negative way.

Mindful of the incoming tide and our ability to trundle back up the hill with our 'treasures', we

returned to the cars for a group picture. The afternoon was still glorious and we headed off to find the entrance to Eagle Rock Park nearby. We parked on Snowy Owl Road, went through the woods and were soon on the edge of the high rocks. Eventually we found the steep face where more gallant souls practice rappelling later in the season. However, we chose to look at the views across the Basin and up past the McKay Bridge. Jean and Barry Sawyer regaled us with stories of their previous attempts to discover a route from the top to the road below. We were also pleased to welcome Cathy Bangay from Calgary who was waiting in Halifax to help her mother after surgery. Having seen our advertisement, Cathy had decided to join us.

It was a lovely afternoon where we could enjoy being outdoors while making a difference to the environment. As the Irish say, "May the wind be always at your back", but we might remind you that coffee cups, styrofoam packing, and plastic bags, can be quickly whisked away by the little people and taken to a beach near you.

We were thankful to have some free advertising on ATV's Breakfast Show, and another spot on Monday March 25th, when I could do a 'Show and Tell' about some of the litter.

– Patricia Leader

SECOND LAKE PARK, I

DATE: Saturday, 13 April

PLACE: Second Lake Park

WEATHER: Cool, grey

INTERPRETERS: Park Association members

PARTICIPANTS: 23



We commenced our tour of the 690 acre Second Lake Park Reserve in Sackville with a briefing on the process being followed in the attempt to get this land declared a park. Four members of the Second Lake Park Association hosted our group – Frank Wormald (leader), Marilyn Challis, Dan Jennings, and Jamie Jennings.

The Second Lake Park Association was formed in February 1998, and has about 55 members. The park reserve includes land that was destined to be a highway, until the Park Association was formed and got agreement from DNR to allow them ten years for the process to make it a park. Right now the Park Association is working on a management agreement with DNR, and is starting preparation of a resource inventory. They will eventually have to build a trail system to get approval as a park, but this will be costly. Estimates are in the neighbourhood of \$300 per metre for trail development, partly because of the uneven terrain and the need to make the main trails accessible to all, which means less than a five degree grade along them. The Association will have to do a lot of fund-raising before the trail work can actually

start. Total requirement is estimated at \$1.2M for four kilometres of trail, plus cost of benches and other amenities.

The park reserve has many enjoyable features – pleasant woods, lots of lake frontage on Second Lake, occasional small beaches, bubbling brooks, some hundred-year-old oak trees, and a lot of quiet. Our group spent almost three hours strolling five kilometres through it from end to end, stopping to admire Mayflowers, to learn how to differentiate Hemlock and Spruce, to inspect the foundation of an abandoned 1920's farmhouse, and to sit on a tree shaped like a fishhook. Second Lake itself has Loons and ducks, Brook Trout, Small-mouth Bass, Catfish, freshwater mussels, and the occasional Beaver. The water regularly tests pure.

The plants that we saw included yellow Colt's Foot, Christmas Fern, emerging pussywillow, Mayflower about to bloom, Goldthread, Wintergreen, Tea Berry, and Partridge Berry. The trees that we saw included Hemlock, oak, fir, Red and Black Spruce, Eastern White Pine, lots of alders and Aspen, and Ash. The birds that we saw included: Junco, Osprey, Red-breasted Nuthatch, Loon, and American Robin.

The afternoon was a lot of fun in spite of the cloudy weather, and we were all very grateful to the Second Lake Park Association for hosting us on this outing.

– Karen Woolhouse



SECOND LAKE PARK, II

DATE: Saturday, 13 April

PLACE: Second Lake Park

WEATHER: Cool, grey

INTERPRETERS: Park Association members

PARTICIPANTS: 23, inc. 4 from Sackville High

Forest technician Jamie, plant specialist Martine, and birder Pat helped, among others, to interpret this trip for us, accompanied by a photographer.

We met at Leslie Thomas School, parked half our cars at Armcrest, and took the other half to Crimson Drive. The sky was grey and the air cool – no mosquitoes and no sunburn – just right for walking. 22 people participated, and we all had appropriate footwear for the muddy trail.

At the start of the trail at Crimson Drive, Martine explained the difference between a spruce and a pine tree based on their needles; also how hemlock needles differ. Further along the trail we came to a gigantic, stately white pine, rumoured to be 150 years old. I took a picture of various individuals under its huge spreading boughs – what tales of days gone by it could tell!

Our Second Lake tour guide, Frank, explained the

difference between the two watersheds, First and Second Lake, and how the ridge we were walking across delineated the two. As we walked down from the ridge toward Second Lake, a smell of pine and fir permeated the air and one could feel the Spring there too. During the walk we looked at oak trees, ash, beech, aspen, White Pine, Hemlock, fir, and spruce, some of which were old-growth. Our forester, Jamie, commented on an oak tree saying we could identify it, because it was unique in retaining a few of its leaves over winter. There was a gorgeous carpet of bright green moss on the rocks, and tree-stumps along our path, indicating lots of moisture.

In the First Lake watershed we came to the foundation of an old farmstead occupied back in the 20s, and earlier. Jamie told us that the Indians in bygone days used to make use of some of the ash trees in the area for their handcrafted baskets. Along the trail an old rusting truck from the 50s had been left there for posterity. Down near the lake the first Mayflowers of the season were beginning to bud – a real harbinger of Spring for Nova Scotians. Martine pointed out a pretty Partridge Berry plant with teeny red berries and green leaves. Two fishermen had their rods in Second Lake, fishing, and a man accompanied by his friendly Golden Lab was walking the trail toward us. At the lake we saw an osprey fly by, and some loons paddling around at a distance. About 50 feet out I could see ripples in the water which I thought meant fish.

Along the lake we found remains of fresh water mussels – but were not sure if they were left there by a Raccoon, Muskrat, or seagull. Dan, a Second Lake member, found a 6-foot branch/pole that had been neatly carved by a beaver, but we did not see the beaver lodge. The symmetry and roundness of the pole would make it a perfect walking stick. Some trees had fallen down due to winter weather, and we found that someone had chopped down a couple of trees.

The area above the school on Cavalier Drive, which runs down to Second Lake, showed where a lot of rain had run off; a gorge had been cut by the water, not good for the trees on the slope as a couple of them were leaning over dangerously, and not good for the lake due to soil washing into it. However, the trickling and babbling of water coming down the steep slope had a musical sound to it like a small river; it was relaxing and peaceful to listen to. We came to a large comfortable rock just then, and one of the women sat on it, enjoying the tranquillity and the sound of the water; we named the rock 'Betty's Rock'. Further on, at a small cove, we saw an odd curved tree in the shape of a fishhook so we named it, after the man who was sitting on it, 'Michael's Tree'.

We heard and saw some more birds during our walk. As well as the Osprey and Loons seen earlier, we saw a Red-breasted Nuthatch and a Junco. Holes were observed in some of the rotted trees where a woodpecker had been foraging for insects. A Pileated Woodpecker has been seen in the area recently. The

day and time were possibly not attractive to birds, for normally there are lots of chickadees and woodpeckers; but the weather was cool and it was mid-afternoon.

The beach midway along at the bottom of Metropolitan was a beehive of activity, with people in powerboats, and a canoe getting ready to launch. Sadly, there was much debris on the ground; a cleanup should be next on the agenda of lake enthusiasts. Just past the beach, before the bottom of Metropolitan, an all-terrain vehicle had ploughed through the undergrowth straight toward a marshy area, making wide troughs with its tires.

Some of us walked up Metropolitan heading home, but most of us branched off, continuing our walk on the trail to Armcrest. The landscape is quite different on the Armcrest side of Second Lake Park compared to the First Lake/Crimson side, in that the trees are denser and taller, so the area is shadier and less open. A winding river meandered gently through the forest on its way toward Second Lake.

The walk took about three hours, as we stopped along the way to observe points of interest. The group from the Field Naturalists was quite taken with the tranquillity and beauty at Second Lake. The trees, the rocks, the mossy carpet, the pine/fir scented air, the quiet lake – all contributed to a general feeling of well-being and camaraderie among the participants.

Questions were raised as to when the trail might finally be developed, and whether we would have interpretative panels, and benches for people to just sit and enjoy the view. It will happen – all it takes is money and fund-raising and careful, judicious planning – but what a recreational gift to the community and northern metro!

– Marilyn Challis

SECOND LAKE SPECIES

Vertebrates

Beaver	<i>Castor canadensis</i>
Muskrat	<i>Ondatra zibethicus</i>
Small-mouth Bass	<i>Micropterus dolomieu</i>
Brown bullhead	<i>Ameiurus nebulosus</i>
Brook Trout	<i>Salvelinus fontinalis</i>
Loon	<i>Gavia immer</i>
Ducks	Anatidae
Osprey	<i>Pandion haliaetus</i>
Pileated Woodpecker	<i>Dryocopus pileatus</i>
Woodpeckers	Picidae
Chickadees	<i>Poecile</i> sp.
Red-breasted Nuthatch	<i>Sitta canadensis</i>
American Robin	<i>Turdus migratorius</i>
Dark-eyed Junco	<i>Junco hyemalis</i>

Invertebrates

Fresh-water Mussels	Bivalvia
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Plants

Trees

Balsam Fir	<i>Abies balsamea</i>
Red Spruce	<i>Picea rubens</i>
Black Spruce	<i>P. mariana</i>

Hemlock	<i>Tsuga canadensis</i>
White Pine	<i>Pinus strobus</i>
Beech	<i>Fagus grandifolia</i>
Oak	<i>Quercus</i> sp.
Alders	<i>Alnus</i> spp.
Aspen	<i>Populus</i> sp.
Ash	<i>Fraxinus americana</i>

Flowers

Gold Thread	<i>Coptis trifolia</i>
Pussy Willow	<i>Salix</i> sp.
Tea-berry	<i>Gaultheria procumbens?</i>
Mayflower	<i>Epigaea repens</i>
Wintergreen	<i>Pyrola elliptica?</i>
Partridge Berry	<i>Mitchella repens?</i>
Colt's Foot	<i>Tussilago farfara</i>

Mosses

Christmas Fern	<i>Polystichum acrostichoides</i>
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WILDLIFE RESCUE CENTRE

DATE: Saturday, 27 April

PLACE: East. Shore Wildlife Rehabilitation Facility

INTERPRETER: Hope Swinimer, Facility Director

WEATHER: Cloudy, cool

PARTICIPANTS: about 35°C

'Zorro' and 'River' were two of the main attractions when approximately 35 HFN members and guests toured the Eastern Shore Wildlife Rehabilitation Facility on April 27. In spite of the cool, cloudy weather, our host, Hope Swinimer, gave us a very warm welcome. Hope runs the facility with the help of seven or eight volunteers in a lovely pastoral setting in Seaforth. With the ocean just across the road, a fresh water lake by the barn and marshland behind the property; Hope explained that it is an ideal area to release rehabilitated birds and animals back into their natural habitats.

This facility is one of six rehabilitation centres in Nova Scotia under the direction of the Department of Natural Resources, which conducts yearly inspections. In the year 2001, over 1,000 wild birds and animals were cared for there; over 80 species and 3,000 wildlife in total since Hope began operation in 1997. She works full-time at a Veterinary Hospital, and both Dartmouth and Eastern Shore Vet Hospitals donate supplies to her facility. The centre depends on donations from groups and individuals. This year a new barn roof will be provided through TD Canada Trust 'Friends of the Environment'.

Hope welcomed us into her kitchen where we met a 'Turtledove', a sugar baby marsupial; a pigeon with

two babies and mystery eggs; baby Red Squirrels; and Zorro, the 10-year old tame skunk. She explained her feelings that all species are connected and all have their part in the environment. She does not mix domestic and wild animals, in order to protect the natural instincts of the wildlife. The young creatures' most important needs are food and warmth and the centre is looking for new incubators at present. Hope has recently acquired permits to care for migratory birds and seals as well.

When we went outside to the barn, we were greeted by River, the River Otter, and his friend the Raccoon. Others in residence were Gracie the goose, Benni the rabbit, a Raven, a gull, and a hungry Red Squirrel. We saw the flight cage, and inside and outside kennels, as River swam in the lake and dried his face on our pantlegs. Later he entertained a group of us with his antics in the barn.

Hope speaks to school classes and other groups about her work, and has designated dates for groups to visit the Rehabilitation Centre. Her love and concern for these wild creatures is evident as she speaks of the hard decisions that must often be made. This visit surely heightened our awareness of the plight of wildlife as humans take over more and more of their natural habitat. We are fortunate to have such a facility in this area.

Appreciation was expressed to Hope Swinimer for her hospitality. You may visit her website at <www.rodew.com/rehab>.

- Judi Hayes



ANNUAL CANOE TRIP

DATE: Saturday, 4 May

PLACE: Meaghers, Musquodoboit River

WEATHER: Fair

INTERPRETER: David Bessonette

PARTICIPANTS: 19

The cold, wet weather preceding the canoe trip did not inspire dreams of an idyllic day out on the middle Musquodoboit River. But... David Bessonette must paddle with the gods, for the day of the trip was the first good spring day in many weeks.

Nineteen people willing to flex and challenge their winter muscles met at the Mic Mac Mall. The group then travelled convoy-fashion to the airport, then via Route 212 to the put-in place at Meaghers. While a few cars went to the take-out point, the four canoes and eleven kayaks were packed for the trip. With all the recent rain, the water level was high and there was a light breeze to help us on our way. Soon we

were all aboard and heading downstream cheered on by a Belted Kingfisher and a busy Muskrat.

Compared with Halifax, the trees and bushes were behind in spring growth.

Around midday, David directed us to a beautiful lunch spot called Porcupine Meadows which was flat enough to bring up the kayaks. Shirley discovered the spotted leaves of the Trout Lily while we were bringing up the canoe.

Soon David had a pot boiling and offered us hot dogs. Other offerings were passed out — cheese, meats, and cookies — and we enjoyed these amidst our beautiful surroundings. Then it was time to leave, and a little while after, we paddled by a golf course which bordered the river. The only putters on the greens were a group of Canada Geese. Other birds spotted on the trip were an Osprey, a mature Bald-headed Eagle, a Downy and a Hairy Woodpecker, a Yellow-rumped Warbler, and a hawk.

Near the end of our journey we passed Gibraltar Rock, which is at the northern end of the Musquodoboit Rails-to-Trails hike. At this point we paddled to the right and crossed over Gibraltar Lake to where the Gibraltar Brook tumbles into the lake over a waterfall. A pathway accompanied the brook upstream. Three other paddlers emerged from the woods, running with the canoe and their gear and soon the three were launched and disappeared across the lake. We left our boats and went upstream enjoying the cool woods. We had a chance to test our balance as we crossed the stream on several large logs. As we walked, we saw young ferns emerging as well as Mayflowers still in bud. The trail took us to another section of the lake where we made a brief stop and looked at some erratic boulders, some with polypod Ferns.

After this pleasant deviation, we were back on the main river and all too soon were bringing the boats up on the bank. A few kayakers lingered to try the small rapids nearby but eventually we were all packed up and ready to ferry people back to their cars.

Many thanks to David for yet another paddling adventure. Hope to see you on the river next spring.

- Pat Leader



CANOE TRIP SPECIES

Birds

Canada Goose	<i>Branta canadensis</i>
Bald Eagle	<i>Haliaeetus leucocephalus</i>
Osprey	<i>Pandion haliaetus</i>
Downy Woodpecker	<i>Picoides pubescens</i>
Hairy Woodpecker	<i>P. villosus</i>
Belted Kingfisher	<i>Ceryle alcyon</i>
Yellow-rumped Warbler	<i>Dendroica coronata</i>

Mammals

Muskrat	<i>Ondatra zibethicus</i>
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Plants

Polypod ferns	<i>Polypodium</i> spp.
Mayflower	<i>Epigaea repens</i>
Trout Lily	<i>Erythronium americanum</i>

NOVA SCOTIA TRAILS DAY

DATE: Saturday, 1 June

PLACE: Sackville River, Bedford

WEATHER: Sunny with a slight breeze

INTERPRETERS: B. Sawyer, R. Peckham, W. Reagan

PARTICIPANTS: 14

'Parks are for People' listed six activities throughout the province to celebrate Nova Scotia Trails Day.

HFN participated in a walk along the Bedford section of the Sackville River, to identify wildflowers and shrubs. As this was a joint venture, we had representation from Barry Sawyer – the N.S. Wildflora Society and HFN; Richard Peckham and Walter Reagan – The Sackville River Association (SRA); and Don Ambler – the N.S. Trails Association.

It was a fine afternoon as we collected near the bridge close to the Ponderosa Restaurant. After introductions we crossed the bridge and saw a small school of young fish (unknown species) in the shallow area near the bank. There were plenty of wildflowers and shrubs to see, and as several people had brought guidebooks some interesting discussions followed. The first plant was Gout Weed, usually a gardener's nightmare, but used here as a hardy ground cover near the river bank. Following the trail along the river we came to a second bridge, a strange one because it did not straddle any water, and was in fact parallel to the river and a playing field. Rich asked us to think about the purpose of this bridge.

It was of course in place for those times when the Sackville River flooded and swept over the playing field, which was also the flood plain. Rich described periods when he had seen boats on the field, and pieces of floating ice. Last winter, when I had been checking the area prior to a hike, it was a huge pond full of seagulls. The first bridge was not even passable, and where the river flowed into Bedford Basin it was a ferocious torrent of water. These observations will provide an idea of the amount of flooding that can occur. The design of the trail, therefore, enabled the river to 'do its thing,' and the plants reflected this as we saw rushes and cuckoo flowers close to the playing field. Near this area we spotted an American Goldfinch, heard a woodpecker, and saw a Starling's nest.

The group continued along the path, passing under Highway 102 where the SRA had used some heavy bark mulch. This area continues to be a meeting place for a few people who leave graffiti and litter. Emerging from the tunnel, we noticed signs indicating that this section of the river borders on DND property, and also that this was the present end of the trail. The trail does continue as a narrow path along the base of the highway embankment, but its closeness to the traffic makes it unsafe for a public trail. The Sackville River Trail continues to be a work in progress.



We returned to the parking lot after a pleasant walk. Barry urged us to visit the site throughout the year, as there are many more flowers to see in the different seasons.

– Patricia Leader



BUTTERFLIES I

DATE: Saturday, 8 June

PLACE: Uniacke Estate Museum Park

WEATHER: Sunny, about 20 C.

INTERPRETERS: Peter and Linda Payzant

PARTICIPANTS: 6

After ominous weather forecasts and a long string of dark, rainy days, Saturday turned out to be bright and calm, ideal weather for butterflying. We began our search at Uniacke Estate Museum Park, and very soon noticed that in spite of the good weather, there weren't large numbers of butterflies on the wing – perhaps the poor conditions earlier had delayed emergence from their pupas.

This early in the season we didn't expect many species, and indeed part of the interest lay in what had not yet emerged. For example, there were no branded skippers yet, and only one fritillary species, and that in small numbers. We also didn't see any clearwing moths, which are common at Mount Uniacke later in the year.

The first Ringlets of the year had emerged, but there were very few. This species is usually among the most numerous butterflies in the meadows at Mount Uniacke, so we must have just encountered the beginning of their flight period.

There were still lots of Silvery Blues, as well as one of the azures. I say 'one' because we can't be certain which of our three native species it was. A few years ago, the Spring Azure was split into three species: the Spring, the Summer, and the Cherry Gall azures. The Summer Azure is distinct enough in appearance that it can be identified reliably in the field. But unfortunately, the Spring and Cherry Gall azures are very similar in appearance, so other clues must be used to assist in identifying them in the field.

According to Layberry, in *The Butterflies of Canada*, the Cherry Gall Azure flies after the Spring Azure. The previous weekend (June 1), on a butterfly field trip to the same area, we noticed essentially no azures flying, although Spring Azures had been quite plentiful in May. Our conclusion from this is that the 'real' Spring Azure had finished flying, and that what we were seeing was probably the Cherry Gall Azure, recently emerged. However, the best way to be sure

is to watch where the females lay their eggs – if it's in galls on cherry trees, that confirms the identification. Unfortunately, we weren't able to observe this behaviour. The Cherry Gall Azure as yet does not have a scientific species name.

On the woods road through the Pockwock watershed, there were lots of Dreamy Dusky Wings around, and one participant thought that he caught a glimpse of an Elfin. That's typical; they are so small, so dark, and their flight so erratic, that it is difficult to follow them by eye. It was rather late in the season for an Elfin, but we had seen one there a week earlier, so it wasn't unexpected.

Our final species was a very fresh Silver-bordered Fritillary, which we examined in the hand. The fact that it only appeared to have four legs (the front pair is much reduced and held close to the body) was quite interesting, particularly when looked at through a hand lens.

We also encountered a couple of snakes on the Pockwock Road. We picked up and admired a little Redbelly Snake before returning him to the coolness of the roadside plants, and some of us saw a Green Snake sliding away through some Poison Ivy. Needless to say, we didn't try to capture that one.

It was a very satisfying afternoon, and it left us all looking forward to Butterflies II on July 6.

– Peter Payzant

BUTTERFLIES I SPECIES

Butterflies

Canadian Tiger Swallowtail	<i>Papilio canadensis</i>
Cabbage Butterfly	<i>Pieris rapae</i>
Clouded Sulphur	<i>Colias philodice</i>
Brown Elfin	<i>Incisalia augustinus</i>
Cherry Gall Azure (?)	<i>Celastrina</i> sp.
Silvery Blue	<i>Glaucopsyche lygdamus</i>
Silver-bordered Fritillary	<i>Boloria selene</i>
Ringlet	<i>Coenonympha tullia</i>
Dreamy Dusky Wing	<i>Erynnis icelus</i>

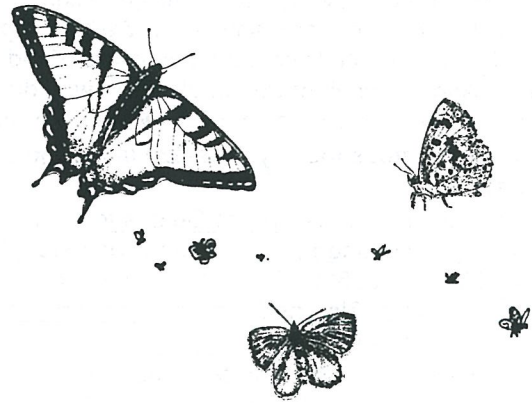
Reptiles

Northern Redbelly Snake	<i>Storeria occipitomaculata</i>
Maritime Smooth Green Snake	<i>Opheodrys vernalis</i>

Plants

Poison Ivy	<i>Rhus radicans</i>
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– Peter Payzant



NATURAL HISTORY

LETTER FROM BANGLADESH, MAY 2002

The morning bird symphony in Dhaka is wonderful; crows, sparrows, starlings, kingfishers, herons, and as always in the tropics– the ubiquitous street cockerels. This particular morning, a very dignified and aloof Brahminy Kite, *Haliastur indus*, was perched on a roof's 30-foot television aerial across the road, pretending casual disinterest in any gustatory intent.

From the fourth floor of an apartment building, where the ceilings are ten-feet high, one gets good views of all these birds. There is an empty lot next to us (awaiting another apartment complex), and there are tremendous trees in the neighbourhood, many are about 80 feet tall; most are lush with blooms and fruit. Also, one of the local parks (uddans) is across the street.

There is a pretty, abundant Asian Pied Starling, *Sturnus contra* – black and white with a large, pointed, yellow bill, red at its base. There's a curved, narrow stripe of white across its back from shoulder to shoulder, and the breast, undertail, and legs are white-feathered as well. It has white patches around its eyes; they are quite striking against its deep orange orbital skin.

Every evening, Indian Pond Herons, *Ardeola greyii*, flock to roost across the street in a large Mango tree, *Mangifera indica*. Seemingly all white in flight, as soon as they settle in amongst the large leaves they are almost invisible as their wings disappear under their pale dun-coloured wing coverts, their long necks and heads the same colour, and their backs only slightly darker. The mango trees, evergreen members of the cashew family Anacardiaceae, are dense with coriaceous leaves. Amongst these the herons almost disappear until they raise their long necks, or stretch out the whiteness of their wings, fluff up their back feathers from a dull tan to a redhead rust, or – make themselves eminently visible by perching splay-footed on the tree's outer surface as on a riverbank. In the morning, they all fly off to one of the many local lakes (there is one just behind us).

At the Canadian Club, these herons have 'their own' night tree – a magnificent Mango again, while the crows claim a different species. The mango trees are presently burdened with fruit, and the first are already falling.

Always seen gliding and circling here on the upcurrents over the city, is that chestnut to brown raptor, the Brahminy Kite – one or two always in the distance high in the sky over all of Dhaka's sea of trees, or harrying other birds, or perching high up on

apartment buildings. About 48 cm, the Brahminy has a slightly rounded, splayed tail when airborne. The adult looks a bit like our Bald Eagle, with its white head and breast and its yellow beak; the juvenile has no white feathers, but is browner, darker, and very speckled.

The local House Crow, *Corvus splendens* – is bi-coloured, and very precocious. They have appropriated one of our two small balconies, and I am *not* allowed to be there. They inform me, in no uncertain terms, perched right beside me on the railing, what they think of my intrusions. This *Corvus* is thinner than ours, has a pale black beak, and a beautiful medium grey shawl just over the back of its head, round its neck, and blending down to the whole breast and underbelly. It prefers to perch, argue, and endlessly debate in the beautiful nitrogen-fixing tree, the Royal Poinsianna, or Flame Tree, *Delonix regia*, in full bloom now with tremendous clusters of red flowers. Another brilliant tree in bloom now, a distant relative, is the Yellow Poinsianna, *Peltophorum* spp.

From the rooftops the city is ablaze in red, gold, and green.

Our bird guide here is Pocket Guides to the Birds of the Indian Subcontinent, 1999, Oxford University Press, ISBN#019565155-3. By Richard Grimmett, Carol Inskipp, and Tim Inskipp, it's large and heavy – much too big for any pocket!

The rainy monsoon has started – hot and humid. It doesn't rain constantly (not yet, anyway); mostly just at night and the occasional day; it cools things down, and makes everything tremendously cleaner and refreshed. Sometimes there is dramatic thunder and lightning, sudden strong winds, sometimes sudden hail: trees are ripped up; balcony plants are overturned; power goes out.

Vehicular traffic is a different species and family all together here. It's a honking, tightly jacquard-woven tapestry of pedestrians, bicycle rickshaws, noxious baby taxis with their two-stroke engines, cars and trucks, giant battered buses, and of course, the ubiquitous SUV. They range from sparkling new to shapeless, unrecognisable genetic mutations, and all play the survival game with only two rules of the road, emerge unscathed – and drive on the left; the latter is often flouted.

One particularly battered mid-80s SUV has emblazoned upon both dented sides the hand-painted words 'Butterfly'. It belongs to Toben Larsen, author of Butterflies of Kenya, who is presently studying the local butterflies to produce a Bangladesh butterfly guide. I attended his slide presentation on the butterflies he has found so far. Bangladesh butterflies are not well-known, but East Bengal is just a stepping stone between the Khasi Hills, Assam, Tripura, and Burma, so some populations are probably shared with these places, and India as well. No previous lepidopteran field work has been done here.

His slides meandered through the variety and beauty of his Bangladeshi finds, with a special

attention to the effects of the chemicals found in the milkweed butterflies, and also to the seasonal variations in colouration that are found in this climate.

Many of his sightings were surprising to him; known in India and other surrounding countries, but unexpected here, partly because of the paucity of tropical forest. But Toben feels they are gradually migrating and increasing, because of the the growing abundance of weed species that attract butterflies due to the great land clearances taking place around Dhaka for apartment buildings and high rises. Also, the number of garden cultivars from native wild plants in many private gardens, and in the many garden nurseries here, are attracting them. For instance, there is an explosion here now of the Indian Cabbage White, *Artogeia canidia*, similar to the European Cabbage White. The Common Mormon, *Papilio polytes*, the Citrus butterfly, *Papilio demoleus*, and the Knight, *Lebades martha*, are also increasing.

His many slides were beautiful, and he had some humorous field trip anecdotes to share. One in particular, from his surveys in Kakamega in the southwest corner of Kenya, was of the theft of five or six full Johnny Walker bottles from the floor of his van. These bottles are square, therefore don't roll around underfoot while driving. The culprit must have been surprised at the contents – they were filled with urine to set out in the field as a well-known lure for the White-banded Rajah, *Charaxes hierax*!

Interesting slide highlights were: a breathtaking, large Giant Oakblue, *Arhopala amantea*, found in one of the National Parks; the Onyx, *Horaga onyx*, which has a 'false head' and makes a lightning-swift 180° turn before it lands; the electric-blue Dark Cerulean, *Jamides bochus*, almost as shining as a Morpho and which flies like a string of blue jewels; a Hair Pencil, *Euploea* sp., which has good smell; a magnificently beautiful white and silver Jewelled Nawab, *Polyura delphis*; and the Indian Map Butterfly, *Cyrestis thyodamas*, its wing markings looking just like a road map.

He has found four milkweed butterflies, or Monarchs (Danainae), here. Monarchs are some of the most avid users of plant chemicals, for both protection (cardenolides – horrible taste), and procreation (pyrrolizidines – sexual attractant). Feathery 'love-dust' dispensers disseminate this chemical (the more, the better) to attract females. One slide showed a male opportunistically extracting pyrrolizidine from a dead colleague; 'waste not want not'!

Two of the butterflies shown that exhibit seasonal, protective colour variations in this climate were the Peacock Pansy, *Junonia almana*, and the Common Evening Brown, *Melanitis leda*. Time of emergence dictates appearance for either the dry (looking like dead leaves) or wet seasons (more colourful).

– Stephanie Robertson



ALMANAC

This almanac is for the dates of events which are not found in our programme: for 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.

The shores of North Lake were wooded with second growth almost to the water's edge. The challenge was to find a subject among so much sameness. It taught me to see subtle variations in the greens, from the bluer green of the pines to the lighter and yellower green of the birch and poplar. Skies were always changing. I learned the difference between cumulus and cirrus clouds and how to describe the tones of the night sky, with stars or in moonlight, and one memorable night after rain I saw a moon-bow and painted it. There was a small bay covered with lily pads, and the undersides of the floating leaves ranged from crimson to orange-yellow, which showed when the wind turned them over. The movement of the water and the reflections of rock and trees were worth hours of study and endless attempts ...

– Doris McCarthy: **A Fool in Paradise: An Artist's Early Life (1990)**

NATURAL EVENTS

21 June Summer Solstice at 10:22 ADT: Summer begins in N. Hemisphere. The longest day; 15 h. and 34 min. in Hfx.

22-30 June The latest evenings of the year: sun sets at 21:04 ADT.

24 June Full Moon – the 'Strawberry Moon'.

1-12 July Milky Way very visible in the night sky, away from city lights.

20 July Canada's 'Parks Day'. Look for events at local parks.

24 July Full moon – this is the 'Buck Moon'.

5-12 Aug. Hottest days of summer (average daily maximum is 22.5 C°).

9-12 Aug. Perseid Meteor showers peak: the highlight will occur early Sunday morning, 12 August.

13 Aug. Temperatures start decreasing.

22 Aug. Full moon – this is the 'Corn Moon'.

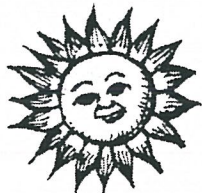
21 Sept. Full moon – this is the 'Harvest Moon'.

23 Sept. Autumnal Equinox at 01:54 ADT: Fall begins in the Northern Hemisphere.

30 Sept. Average date for first frost in Halifax (Environment Canada says there is only a 1:10 chance that we will have frost before this date). Look forward to 210 days of frosty weather.

– Sources: Atmospheric Environment Service, Climate Normals 1951-80 Halifax (Shearwater A) N.S.; Royal Astronomical Society of Canada's Observer's Handbook 2002; and the personal observations of the compiler.

SUNRISE AND SUNSET ON SUMMER AND EARLY FALL SATURDAYS



1 June	5:32	20:53	6 July	5:36	21:02
8 June	5:29	20:58	13 July	5:41	20:58
15 June	5:28	21:02	20 July	5:48	20:53
22 June	5:29	21:04	27 July	5:55	20:46
29 June	5:32	21:04			
3 Aug.	6:03	20:38	7 Sept.	6:44	19:40
10 Aug.	6:11	20:28	14 Sept.	6:52	19:27
17 Aug.	6:19	20:17	21 Sept.	7:00	19:14
24 Aug.	6:27	20:05	28 Sept.	7:08	19:01
31 Aug.	6:35	19:53			

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

ORGANISATIONAL EVENTS

Blomidon Naturalists Society: Indoor meetings take place on the third Monday of the month in Room 241 in the Beveridge Arts Centre, Acadia University, 7:30 p.m. Field trips usually depart from the Robie Tufts Nature Centre, Front St., Wolfville. For more information; <<http://www.go.ednet.ns.ca/~bns/home.htm>>.

Burke-Gaffney Observatory: Public shows at the Burke-Gaffney Observatory at Saint Mary's University are held on the 1st and 3rd Saturday of each month, except from June through September when they are held every Saturday. Tours begin at 7:00 p.m. between November 1 and March 30, and at either 9:00 p.m. or 10:00 p.m. (depending on when it gets dark) between April 1 and October 31. For more information, phone 496-8257; or <<http://apwww.stmarys.ca/bgo/>>.

Friends of McNabs Island: For more info, <<http://chebucto.ns.ca/Environment/FOMIS/>>; or phone Cathy McCarthy, 434-2254, or Mike Tilley, 465-4563.

14 Sept. "Annual Paddle & Cleanup of McNabs & Lawlors Island Prov. Park", with leader Dusan Soudek, 422-4015.

Friends of Point Pleasant Park: For more info, phone Iain Taylor, 425-0668.

23 June "A Walk in the Park; History, Geography, Biology", with geographer and President Dr. Iain Taylor, 422-6885.

24 June "Beetles and Trees; PPP Partners", with speaker and entomologist Christophe Majka, 425-3725.

Halifax Urban Greenway Association: For more information; <<http://www.region.halifax.ns.ca/greenway/>>.

18 Sept. "Public Information Meeting", location to be announced.

Nova Scotia Bird Society: Indoor meetings take place on the fourth Thursday of the month, October to April, at the Nova Scotia Museum of Natural History, 7:30 p.m. For more info, <<http://www.chebucto.ns.ca/Recreation/NS-BirdSoc/>>; or phone Peter Richard, 463-5612.

5/6 July "Port Greville and Cape Chignecto", with leader Joan Czapalay, 348-2803; or joancz@ns.sympatico.ca.
Pre-registration is necessary.

14 July "Wallace Bay", with leader Paul MacDonald, 627-2568; or rita.paul@ns.sympatico.ca.

27 July "Pictou County", with leader Ken McKenna, 752-7644; or kenmcken@north.nsis.com.

3 Aug. "Mahone Bay", with leader James Hirtle, 624-0893; or jrhbirder@hotmail.com. **Please pre-register.**

24 Aug. "Point Michaud, Cape Breton", with leader George Digout, 535-3516; or george.digout@ns.sympatico.ca.

25 Aug. "The Hawk, Cape Sable Island", with leader Murray Newell, 745-3340; or murcar@klis.com.

31 Aug.-2 Sep. "Bon Portage Island", with leader Joan Czapalay, 348-2803 (1 Jul.-12 Aug.), or 422-6858 (after 12 Aug.); or joancz@ns.sympatico.ca. **Pre-registration is necessary.**

Nova Scotia Lighthouse Preservation Society: Monthly meetings and organised visits to lighthouses, including boat trips to islands. For more information, phone Dan Conlin, 424-6442; or <<http://www.ednet.ns.ca/educ/heritage/ns/lps/>>.

Nova Scotia Museum of Natural History: For more info, <<http://museum.gov.ns.ca/mnh/>>; phone 424-6099, 424-7353.

29 June "Bat Walk at Smiley's Park", with Museum zoologist Andrew Hebda. **Pre-register, 424-7353.**

1 July "Butterfly Social".

1 July-Sept. "Butterfly Pavilion: Catch the Magic of Live Tropical Butterflies".

2 July "Peggy's Cove Rock Walk", with DNR geologist Howard Donahoe.

3 July "Book Launch: Hiking Trails of Nova Scotia, 8th Edition", with Michael Haynes.

6 July "Provincial Rose Show", with the Halifax Westmoor Horticultural Society.

17 July "Botanical Ramble in the Public Gardens", with Museum Botanist Alex Wilson. **Pre-register from 2 July, 424-7353.**

28 July "Butterflies: Up Close and Personal", illustrated talk with Museum botanist Alex Wilson.

3 August "Stream Saunter at Smiley's Park", with Museum zoologist Andrew Hebda.

18 August "Butterflies: Up Close and Personal", with Museum botanist Alex Wilson.

25 August "Bogs, Barrens and Berries: Crystal Crescent Beach Walk", a hike with Museum botanist Marian Munro.

8 Sept. "Taylor Head Natural History Past and Present", with botanist Marian Munro and geologist Deborah Skilliter of the Museum.

Nova Scotia Nature Trust: For more information, phone 425-5263.

14 July "Panuke Lake (Halifax Co.) Old Forest Walk", with leader David MacKinnon.

10 Aug. "Great Pubnico Lake Plant Walk", with leader Lillian Perry.

11 Aug. "Rare Plants of the Atlantic Coastal Plain at the Tusket River Nature Reserve". A hike.

25 Aug. "Ponhook Lake (Queens Co.) Nature Reserve Walk".

19 Oct. "Silent Auction and Dinner", with guest speaker Wade Davis.



Nova Scotia Wild Flora Society: Meets fourth Monday of the month, September to May, at the Nova Scotia Museum of Natural History, 7:30 p.m. For more information, phone Keith Vaughan, 445-9887; or <<http://www.chebucto.ns.ca/~nswfs/>>.

24 June "An Evening Walk at Uniacke Estate Museum Park" (outdoors), with leader Keith Vaughan, 445-9887.

6 July "Taylor Head Provincial Park", with leader Heather Drope, 423-7032.

27/28 July "Economy Area, Cumberland County", with leader Barry Sawyer, 445-4938.

10 Aug. "Kejimikujik Seaside Adjunct: Plant Survey", with leader Marian Sensen, 422-8985.

14 Sept. "Fall Berry Walk", with leader Ray Fielding; phone Heather Drope, 423-7032.

Photographic Guild of Nova Scotia: Meets second Monday of the month, as well as the first and third Sundays of the month, at the Nova Scotia Museum of Natural History, 7:30 p.m. Shows are held at Saint Mary's University, Theatre A, Burke Education Centre. For more info, <<http://www.chebucto.ns.ca/Recreation/PGNS/>>; or phone Kenneth Moore, 826-1121.

28-30 June "CAPA Canada Camera College 2002: Halifax" – field trips, seminars, banquet, competitions, etc.

Royal Astronomical Society of Canada (Halifax Chapter): Meets third Friday of each month at the Nova Scotia Museum of Natural History, 8:00 p.m. For more information; <<http://halifax.rasc.ca>>.

9-11 Aug. "NOVA EAST, the Maritime Region's Premiere Star Party", at Smiley's Provincial Park.



– compiled by Patricia L. Chalmers

HALIFAX TIDE TABLE



HALIFAX AST Z+4

2002

TIDE TABLES

July-juillet

August-août

September-septembre

Day	Time	Feet	Metres	jour	heure	pieds	metres	Day	Time	Feet	Metres	jour	heure	pieds	metres	Day	Time	Feet	Metres	jour	heure	pieds	metres
1	0010	4.9	1.5	16	0005	5.6	1.7	1	0105	4.6	1.4	16	0145	4.9	1.5	1	0215	4.3	1.3	16	0405	4.6	1.4
	0655	1.3	0.4		0700	0.7	0.2		0730	1.6	0.5		0840	1.3	0.4		0845	2.3	0.7		1035	2.0	0.6
	MO 1250	4.9	1.5		TU 1240	5.9	1.8		TH 1330	4.9	1.5		FR 1405	5.6	1.7		SU 1425	4.9	1.5		MO 1605	4.9	1.5
	LU 1940	2.0	0.6		MA 1950	1.0	0.3		JE 2025	1.6	0.5		VE 2125	1.0	0.3		DI 2135	1.6	0.5		LU 2305	1.0	0.3
2	0055	4.6	1.4	17	0100	5.2	1.6	2	0200	4.3	1.3	17	0255	4.6	1.4	2	0325	4.3	1.3	17	0515	4.9	1.5
	0735	1.3	0.4		0800	0.7	0.2		0820	2.0	0.6		0945	1.6	0.5		0945	2.3	0.7		1130	2.0	0.6
	TU 1335	4.9	1.5		WE 1335	5.6	1.7		FR 1420	4.9	1.5		SA 1510	5.2	1.6		MO 1530	4.9	1.5		TU 1715	5.2	1.6
	MA 2030	2.0	0.6		ME 2045	1.0	0.3		VE 2115	1.6	0.5		SA 2225	1.0	0.3		LU 2235	1.3	0.4		MA		
3	0150	4.6	1.4	18	0205	4.9	1.5	3	0305	4.3	1.3	18	0415	4.6	1.4	3	0440	4.6	1.4	18	0000	1.0	0.3
	0820	1.6	0.5		0855	1.0	0.3		0915	2.0	0.6		1050	1.6	0.5		1050	2.0	0.6		0605	5.2	1.6
	WE 1430	4.9	1.5		TH 1435	5.6	1.7		SA 1515	4.9	1.5		SU 1620	5.2	1.6		TU 1640	5.2	1.6		WE 1225	1.6	0.5
	ME 2115	1.6	0.5		JE 2145	1.0	0.3		SA 2210	1.3	0.4		DI 2325	1.0	0.3		MA 2330	1.0	0.3		ME 1810	5.2	1.6
4	0255	4.3	1.3	19	0315	4.9	1.5	4	0410	4.3	1.3	19	0525	4.9	1.5	4	0535	4.9	1.5	19	0045	1.0	0.3
	0905	1.6	0.5		0955	1.3	0.4		1015	2.0	0.6		1145	1.6	0.5		1145	1.6	0.5		0650	5.2	1.6
	TH 1520	4.9	1.5		FR 1540	5.6	1.7		SU 1615	4.9	1.5		MO 1725	5.2	1.6		WE 1740	5.6	1.7		TH 1310	1.6	0.5
	JE 2205	1.6	0.5		VE 2245	0.7	0.2		DI 2305	1.3	0.4		LU				ME				JE 1855	5.6	1.7
5	0400	4.3	1.3	20	0425	4.9	1.5	5	0510	4.6	1.4	20	0020	0.7	0.2	5	0025	0.7	0.2	20	0130	1.0	0.3
	0955	2.0	0.6		1100	1.3	0.4		1110	2.0	0.6		0620	4.9	1.5		0630	5.6	1.7		0725	5.6	1.7
	FR 1610	4.9	1.5		SA 1640	5.6	1.7		MO 1710	5.2	1.6		TU 1240	1.6	0.5		TH 1240	1.3	0.4		FR 1350	1.3	0.4
	VE 2250	1.3	0.4		SA 2340	0.7	0.2		MA 1820	5.6	1.7		LU				MA 1820	5.6	1.7		JE 1835	5.9	1.8
6	0455	4.6	1.4	21	0530	4.9	1.5	6	0000	1.0	0.3	21	0110	0.7	0.2	6	0110	0.3	0.1	21	0205	1.0	0.3
	1050	2.0	0.6		1200	1.3	0.4		0605	4.9	1.5		0710	5.2	1.6		0715	5.9	1.8		0800	5.6	1.7
	SA 1700	5.2	1.6		SU 1735	5.6	1.7		TU 1210	1.6	0.5		WE 1330	1.6	0.5		FR 1330	1.0	0.3		SA 1420	1.3	0.4
	SA 2340	1.0	0.3		DI				MA 1800	5.6	1.7		ME 1910	5.6	1.7		VE 1925	6.2	1.9		SA 2010	5.6	1.7
7	0545	4.6	1.4	22	0035	0.3	0.1	7	0050	0.7	0.2	22	0155	0.7	0.2	7	0200	0.0	0.0	22	0235	1.0	0.3
	1145	2.0	0.6		0630	5.2	1.6		0650	5.2	1.6		0750	5.2	1.6		0800	6.2	1.9		0835	5.9	1.8
	SU 1745	5.2	1.6		MO 1255	1.3	0.4		WE 1300	1.6	0.5		TH 1410	1.6	0.5		SA 1425	0.7	0.2		SU 1455	1.3	0.4
	DI				LU 1830	5.6	1.7		ME 1850	5.9	1.8		JE 1955	5.6	1.7		SA 2015	6.6	2.0		DI 2050	5.6	1.7
8	0030	1.0	0.3	23	0125	0.3	0.1	8	0140	0.3	0.1	23	0230	0.7	0.2	8	0245	0.0	0.0	23	0300	1.0	0.3
	0630	4.9	1.5		0720	5.2	1.6		0740	5.6	1.7		0830	5.6	1.7		0845	6.6	2.0		0910	5.9	1.8
	MO 1235	1.6	0.5		TU 1345	1.3	0.4		TH 1350	1.3	0.4		FR 1450	1.6	0.5		SU 1515	0.3	0.1		MO 1525	1.3	0.4
	LU 1830	5.6	1.7		MA 1920	5.9	1.8		JE 1940	6.2	1.9		VE 2035	5.6	1.7		DI 2105	6.6	2.0		LU 2125	5.6	1.7
9	0115	0.7	0.2	24	0215	0.3	0.1	9	0225	0.0	0.0	24	0305	0.7	0.2	9	0335	0.0	0.0	24	0330	1.3	0.4
	0715	5.2	1.6		0810	5.2	1.6		0825	5.9	1.8		0905	5.6	1.7		0930	6.6	2.0		0940	5.6	1.7
	TU 1325	1.6	0.5		WE 1430	1.6	0.5		FR 1440	1.0	0.3		SA 1525	1.6	0.5		MO 1610	0.3	0.1		TU 1555	1.3	0.4
	MA 1915	5.9	1.8		ME 2010	5.9	1.8		VE 2030	6.2	1.9		SA 2115	5.6	1.7		LU 2150	6.2	1.9		MA 2200	5.2	1.6
10	0200	0.3	0.1	25	0255	0.3	0.1	10	0310	0.0	0.0	25	0335	1.0	0.3	10	0425	0.3	0.1	25	0400	1.6	0.5
	0805	5.2	1.6		0850	5.6	1.7		0915	6.2	1.9		0940	5.6	1.7		1015	6.6	2.0		1010	5.6	1.7
	WE 1410	1.3	0.4		TH 1515	1.6	0.5		SA 1535	1.0	0.3		SU 1555	1.6	0.5		TU 1705	0.3	0.1		WE 1630	1.3	0.4
	ME 2000	5.9	1.8		JE 2055	5.9	1.8		SA 2120	6.2	1.9		DI 2150	5.6	1.7		MA 2240	5.9	1.8		ME 2235	5.2	1.6
11	0245	0.3	0.1	26	0335	0.7	0.2	11	0400	0.0	0.0	26	0405	1.0	0.3	11	0520	0.7	0.2	26	0430	1.6	0.5
	0850	5.6	1.7		0935	5.6	1.7		1000	6.2	1.9		1015	5.6	1.7		1100	6.2	1.9		1045	5.6	1.7
	TH 1500	1.3	0.4		FR 1555	1.6	0.5		SU 1630	1.0	0.3		MO 1630	1.6	0.5		WE 1805	0.7	0.2		TH 1710	1.6	0.5
	JE 2045	5.9	1.8		VE 2135	5.6	1.7		DI 2210	6.2	1.9		LU 2230	5.2	1.6		ME 2330	5.6	1.7		JE 2315	4.9	1.5
12	0330	0.0	0.0	27	0410	0.7	0.2	12	0450	0.0	0.0	27	0435	1.3	0.4	12	0625	1.0	0.3	27	0515	2.0	0.6
	0935	5.6	1.7		1015	5.6	1.7		1045	6.2	1.9		1050	5.6	1.7		1150	5.9	1.8		1120	5.2	1.6
	FR 1550	1.3	0.4		SA 1635	1.6	0.5		MO 1725	0.7	0.2		TU 1710	1.6	0.5		TH 1905	0.7	0.2		FR 1800	1.6	0.5
	VE 2135	5.9	1.8		SA 2215	5.6	1.7		MA 2300	5.9	1.8		LU 2300	5.9	1.8		MA 2305	5.2	1.6		VE 2350	4.9	1.5
13	0420	0.0	0.0	28	0445	1.0	0.3	13	0545	0.3	0.1	28	0510	1.6	0.5	13	0025	5.2	1.6	28	0610	2.3	0.7
	1020	5.9	1.8		1050	5.6	1.7		1130	6.2	1.9		1125	5.2	1.6		0725	1.6	0.5		1200	5.2	1.6
	SA 1645	1.3	0.4		SU 1715	1.6	0.5		TU 1830	1.0	0.3		WE 1750	1.6	0.5		FR 1240	5.6	1.7		SA 1905	1.6	0.5
	SA 2225	5.9	1.8		DI 2255	5.2	1.6		MA 2350	5.6	1.7		ME 2345	4.9	1.5		VE 2005	1.0	0.3		SA		
14	0510	0.3	0.1	29	0520	1.0	0.3	14	0640	0.7	0.2	29	0555	1.6	0.5	14	0120	4.9	1.5	29	0040	4.6	1.4
	1105	5.9	1.8		1130	5.2	1.6		1215	5.9	1.8		1200	5.2	1.6		0830	1.6	0.5		0715	2.3	0.7
	SU 1745	1.3	0.4		MO 1800	2.0	0.6		WE 1930	1.0	0.3		TH 1845	1.6	0.5		SA 1340	5.2	1.6		SU 1245	4.9	1.5
	DI 2315	5.6	1.7		LU 2340	4.9	1.5		ME				JE				SA 2105	1.0	0.3		DI 2005	1.6	0.5
15	0605	0.3	0.1	30	0600	1.3	0.4	15	0040	5.2	1.6	30	0025	4.6	1.4	15	0235	4.6	1.4	30	0135	4.6	1.4
	1150	5.9	1.8		1205	5.2	1.6		0740	1.0	0.3		0645	2.0	0.6		0935	2.0	0.6		0820	2.3	0.7
	MO 1850	1.3	0.4		TU 1845	2.0	0.6		TH 1310	5.6	1.7		FR 1240	4.9	1.5		SU 1450	4.9	1.5		MO 1345	4.9	1.5
	LU				MA				JE 2030	1.0	0.3		VE 1940	1.6	0.5		DI 2205	1.0	0.3		LU 2105	1.6	0.5
				31	0020	4.9	1.5					31	0115	4.6	1.4								
					0645	1.6	0.5							0740	2.3	0.7							
					WE 1245	5.2	1.6							SA 1325	4.9	1.5							
					ME 1935	2.0	0.6							SA 2035	1.6	0.5							



NATURE NOTES

From 4 April Meeting

'Willy', Suzanne Borowski's Wilson's Warbler, is in bright spring plumage and is still happy where he is. He is finding some of his own food but still taking mealworms.

Regine Maass saw a Yellow-spotted Salamander in Albion Rd. on 1 April.

Pat Leader has seen both Coltsfoot and Mayflower in bloom.

Joan Czapalay saw a caterpillar eating a beetle, in Walnut St., and wonders why it chose this food.

The Comet is still visible in the sky.

From 2 May Meeting

There were very few observations; most flowering plants and shrubs have finally come out. Willy had a good meal one morning shortly after our last meeting, straightened his feathers, lifted off, and flew west. He has not been seen since.

From 6 June Meeting

Janet Dalton asks how the Osprey nest on a light-pole on the Wanderer's Grounds is progressing, as she hasn't seen or heard of a bird there for some days.

Pat Chalmers says there has been a small Green Heron on the Frog Pond in Jollimore; it was seen last weekend during the FNSN AGM. She saw a Flicker at a hole in a live tree in Victoria Park; starlings evicted it. She says beetle traps are turning up on street boulevards; believed to be put there by CFIA in search for Japanese Beetles.

Lesley Butters is enjoying walks on undeveloped land in Burnside during her lunch-hours; many parts will be developed, but some, for example around the water tower, and some reserved for public use, will not. Wetland near Akerley Boulevard will be developed; it's polluted by the old Burnside dump, but being cleaned up, and proposed for trails, parkland, etc. An Osprey is active at the end of John Savage Drive. She saw Cabbage White Butterflies, Silvery Blues, Eastern Tiger Swallowtails, Sulphurs, Dreamy Duskywings, and Brown Elfin Butterflies.

Pat Leader has been seeing destruction of wild plants around Metro; Pink Lady's-Slipper Orchids destroyed by developers in Clayton Park, and Shubie Park denuded of Trilliums. (Note "Conservation; Caring for Shubie Park" - 'Vandalism', page 5).

! NEXT DEADLINE !

**1 September for September Issue
contributions to the Editor, HFN
c/o NS Museum of Natural History**