

THE HALIFAX FIELD NATURALIST



No. 119
June to August, 2005



Cornus canadensis
Point Pleasant Park, 06/05

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



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 Nature Canada 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.

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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

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HFN NEWS AND ANNOUNCEMENTS

EDITORIAL

Weather; we live in Canada at the 45th parallel on the North Atlantic, and we can't change the resulting extreme variations we may receive in any season.



However, this spring was one of 'those' that even I found a bit much. Teenagers in flooded-out Hebbville water-boarded in their own backyards; ducks swam inland; and gardens and farmer's fields were unattended in the floods, heavy rains, and chilling cold. And still the rains kept coming.

On the May 24th weekend, a group of weekend bird-banders, including HFN Board Member Brian Bartlett, became stranded for seven days on Bon Portage Island (Outer Island) near Shag Harbour.

Despite the discomforts, Brian reported the experience as fabulous. "Nothing like being stranded on a small island to get to know it better in a more intimate way", he said. Finally, on May 27th, there was a pocket of calmer sea time for two Shag Harbour fisherman to get them back to land. (*Look for Brian's longer write-up in the Halifax Field Naturalist Fall Issue #120.*)

Teasingly, on June 1st, true summer weather arrived for two to three days at least, with the thermometer showing 25°C in the shade on our back deck. But as I write this, 8°C with more rain is the norm. Hard to see the stars, but plants and ducks are happy. Nova Scotia!

— Stephanie Robertson

ELIZABETH MAY BOOK LAUNCH

In Halifax, at Kings College on June 13th, there was a book launch of Elizabeth May's *At the Cutting Edge: The Crisis in Canada's Forests*. Its purpose was to draw attention to the continued threats facing forest ecosystems in Canada. This launch was part of a cross-Canada book tour promoting the release of a revised, updated, and expanded edition.

For more info, or if you missed the launch or are interested in the new book, contact Minga O'Brien, <forests@ecologyaction.ca> or <nspic@ecologyaction.ca>, Forest Conservation Coordinator, Standing Tall Campaign, Ecology Action Centre, 429-1335, 1568 Argyle St.

PARKS ARE FOR PEOPLE

The 2005 *Parks Are For People* calendar is out, and there are listed approximately 100 field trips/activities/talks — from May 14th, 2005, to January 14th, 2006!

There is a very useful map on the centre page showing a partial listing of the N.S. Provincial Parks (for a full listing, get their N.S. Provincial Parks Brochure), the dates when each is open, and a contact phone number for each as well.

You can get one of these event calendars at the Nova Scotia Museum, at many other museums, at parks and tourist bureaus, and on the web at <<http://parks.gov.ns.ca/programs.asp>>.

— from Pat Chalmers



CONSERVATION AWARDS

For Canadian Environment week, June 5-11, a very interesting and hopeful booklet was included in an early June Globe and Mail — *Canadian Environment Awards 2005: A Celebration of Community Achievement*. The main sponsors were Canadian Geographic, the Federal Government, and Shell Oil.

Dr. David Suzuki received a Citation of Lifetime Achievement award. The award categories were: Climate Change; Conservation; Environmental Health; Environmental Learning; Restoration and Rehabilitation; and Sustainable Living.

Nova Scotian Stephen Hawboldt, of the Clean Annapolis River Project (CARP), won an award in the sixth category for restoring the Annapolis River. Marshland is now protected by conservation agreements, over 15,000 trees have been planted in riparian zones, more than 10k of fish habitat has been restored, and Atlantic Salmon are spawning again in the river's tributaries. Stephen has agreed to give us a talk about this project in the coming year.

Ellen Kenchington, a DFO research scientist in Halifax, was one of six panelists for the awards.

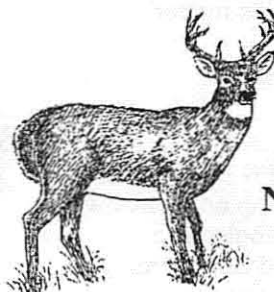
— Stephanie Robertson

COURSE OFFERED

"Environmental Interpretation - Sharing Nature With Others"; this is a course offered through the Nova Scotia Outdoor Leadership Development Programme to help outdoor leaders gain confidence and skills in sharing an appreciation and understanding of nature with others. If you are interested in attending, it will take place in Fleming Park, Halifax, from 9:00 a.m. to 4:30 p.m., on Saturday, September 10th. The cost is \$35.00 and it includes lunch and materials. **Registration deadline — Sept. 6th.** Contact Janet Barlow, 494-7644; email <j.barlow@ns.sympatico.ca>.

For more about the Nova Scotia Outdoor Leadership Development Programme (founded in 1979), go to <www.gov.ns.ca/ohp/srd/nsold>.

— from Wendy McDonald



NEW AND RETURNING

Geoffrey Hurley
Rachel Hobbs

SPECIAL REPORTS

CONSERVATION

BLUE MOUNTAIN/BIRCH COVE LAKES

For many years, DNR has been trading away Crown land from the Blue Mountain/Birch Cove Lakes; e.g., a Crown land swap in the 90's removed 240 acres from the area — the last piece of public land from Quarry Lake.

Chris Miller <birchcovelakes@yahoo.ca>, the moving force behind the push to preserve this area, received a letter from DNR suggesting that having some sort of public documentation on record might help them oppose future Crown swaps.

He has circulated a petition that several HRM groups have signed in support of its preservation. The groups are HFN; the Birch Cove Lakes Wilderness Society; Canadian Parks and Wilderness Society; Canoe Kayak Nova Scotia; Ecology Action Centre; Halifax North West Trails Association; Long Lake Provincial Park Association; Sierra Club of Canada (Atlantic Canada Chapter); and the Tourism Industry Association of Nova Scotia.

The text of a letter from Chris to Minister Hurlburt follows:

"Dear Honourable Richard Hurlburt:

We, the undersigned, call on the Department of Natural Resources to maintain the magnificent Blue Mountain/Birch Cove Lakes wilderness in the realm of public ownership. This remarkable area is an important place for outdoor recreation and has long been identified by your Department as a candidate provincial park.

Unfortunately, large portions of Crown land have been traded-away from the Blue Mountain/Birch Cove Lakes wilderness over the years, particularly to private land developers, so much so that now precious little public land remains at this location for the benefit and enjoyment of all Nova Scotians.

This practice is unacceptable and is now beginning to threaten the public's very right to access these incredible lands. Suddenly, what used to be available to everybody is fast becoming available only to a select few.

We strongly feel that the Blue Mountain/Birch Cove Lakes wilderness should forever remain a publicly-owned natural space, and we look to you to ensure that no more public lands are sold, traded, or otherwise disposed from this very important Crown block.

Thank you for your attention to this matter.

Sincerely,

Birch Cove Lakes Wilderness Society."

LETTER TO MARITIME NOON

Jim Wolford, a member of the HFN Board of Directors, wrote the following after hearing an interview on Maritime Noon with DNR's entomologist Eric Georgeson about the Black-headed Budworm.

"My name is Jim Wolford, a biologist/naturalist/

conservationist in Wolfville, and I have been tired of so-called forest entomologists 'crying wolf' about the latest in a long line of perceived 'pests' that are about to devastate the Earth and its trees!

In my opinion, entomologists like Eric Georgeson who are trained with strong biases toward forestry, not forests, cannot truly be objective about potential enemies of trees. They often consider the value of trees and forests in terms of their board feet or cubic metres of fibre, rather than for their ecological services, like utilisation of carbon dioxide, reducing erosion, etc.. Consult GPI Atlantic, <www.gpiatlantic.org>, for an inventory and approximate audit of the unbelievably high (and irreplaceable) monetary value of such services.

It is too tempting to think we have to come up with some 'management' strategy, which sounds like we actually know what we're doing, and calling it a 'trial' spray initially in order to get the foot in the proverbial door. They will even mistakenly claim to be using the precautionary principle, when in fact they are twisting its meaning to the opposite of what was intended.

The Black-headed Budworm is a native species, and I agree with Geoff May in the Herald that this means it has a legitimate role to play in its ecosystem.

Another thing Geoff points out properly is that the spruces and firs in the highlands now are very different from those in the 1970s that were devastated by a different species of caterpillar, the Spruce Budworm (which prefers fir as its favourite food). The 1970s firs and spruces were old and unhealthy, compared with the vigour and relative youth of the current conifers.

Thus, especially since the current budworm species has a largely unknown track-record when it comes to outbreaks, it is very likely that even with some defoliation taking place (which is *not fatal to healthy trees*), the trees will bounce back much more quickly than the scenario that Eric Georgeson painted for all your listeners (Maritime Noon, Thursday, 26 May).

'Let nature take its course,' is a much more reasonable course of action and the environmentally right thing to do.

Sincerely, Jim Wolford,

P.S. Occasionally, native species *can* become problematic. For example, the Pale-winged Gray Moth has been defoliating hemlocks in Kejimikujik National Park since 2002. Parks Canada is slowly trying to develop a management strategy, and is involving the public in early June with a series of workshops in three locations in order to inform them and get their opinions, too.

Yet the Canadian Forest Service has internally decided, no doubt in partnership with the Nova Scotia Department of Natural Resources, to conduct *this* particular trial spray program of the Black-headed Budworm with no attempt to solicit input from the public or environmental groups."



HFN TALKS

N.S. SEA SERPENTS

5 MAY



On the side, Andrew Hebda has been working for about ten years on historical records of 'sea serpent' sightings in and around the Maritime Provinces. Combing through historical records, he and his volunteers have noted any passages about strange sea animals or fish, and arranged them chronologically to see what explanations might emerge for these sightings.

Andrew, the NSM Curator of Zoology, brought a wood 'puncheon' to the meeting, a 200-gallon wood barrel about three feet across by four feet high, commonly used centuries ago for storage. Many of the sea serpent references compared their observations to this size of puncheon, and he wanted us to see just how large it was.

The First Nations word for large sea creatures is 'Jipijka'm'; the presence of the name is evidence of their historical sightings as well. Andrew showed chronological slides of pictures and texts of strange marine sightings, from very old hand-done illustrations to more modern grainy photos of 'blobsters' — large, unrecognisable washed-up specimens that originated some monster stories (e.g. the Parker's Cove Sea Monster).

We saw a 1640 illustration of 'mermaids' (Beothuks?) in St. John's Harbour, and on a more modern note, serpent-like photos from Keji; also, an image of a white porpoise-like creature in Minas basin which was referred to in 1877 Gilpin's Mammals of N.S.

There was a report of a 4m long creature in Lake Ainsley, called the 'old man of Lake Ainsley' by early Scottish settlers, and in Aspey Bay, C.B., a large serpent-like creature 25m long was seen, "the size of a puncheon". In 1656 Nicolas Denys, a French businessman with very many interests, reported the very first cougar sighting, and also a 'merman', in his famous 1656 book of observations.

More realistically, in the late 1600s, a Katherine Kinsman made meticulous whale observations. New Minas reported white porpoises, and in 1746 Charles Morris recorded a pod of beluga whales there (they had been all harvested by the 1800's).

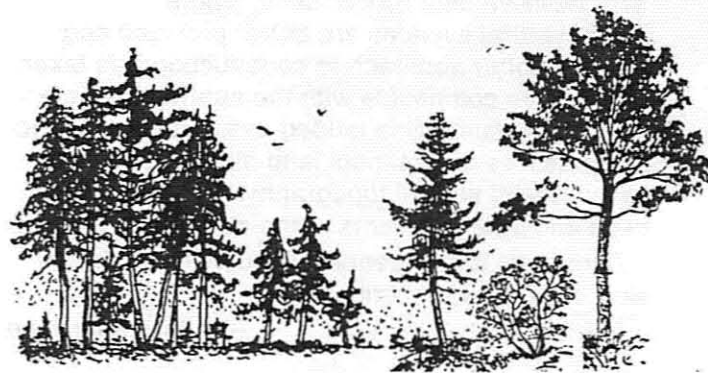
In 1836, a ship's log noted a multi-looped sea serpent, and in 1833 there was another report of it by our reliable Joseph Howe, along with his sighting of a whale in fresh water (porpois *have* been seen in rivers, also turpins and sturgeons). A Charles Dawson reported two sightings of a 20m long, 1m diameter, 'humped sea serpent' at Arisaig, and in 1844 in Merigomish, a 'sea serpent' 31m long was noted.

In 1846, two teachers from Mill Cove saw a 10m long creature with a "barrel-sized head". Near Pearl Island in 1849 a "snake", 24m long, "as thick as a puncheon" was seen, and its scales and teeth were described.

Besides the giant squid and cetaceans, Andrew feels one of the candidates for many of these sightings is the deepwater Oarfish, *Regalecus glesne*. This is a global eel-like fish of very great length, with very long orange-red dorsal appendages from the top of its head, an orange-red dorsal fin the length of its body, silvery blue-grey skin with dark wavy markings, and has been seen swimming vertically. Its reported size varies from two to 30 metres. (*Enter 'Oarfish' in your search engine, and you'll find many photos and stories about sightings of this creature. — Ed.*)

Thank you Andrew, for a fun and interesting talk.

— Stephanie Robertson



URBAN FORESTS

7 APRIL

Christine Anne Smith treated the April HFN meeting to a discussion on the importance of urban forests and the damage being wrought by some residential construction practices. She explored the dichotomy between the benefits trees provide us and our inability to control the kind of development that destroys them. This topic is increasingly important for the Halifax Regional Municipality in light of the rapid growth of the area and the virtual explosion of residential construction, much of it in fully-treed areas previously used for low-impact recreation — walks, hikes, nature observation, and just plain rejuvenation and relaxation.

She listed many of the benefits we derive from trees in urban settings. These benefits range from essential functions like oxygen production, erosion control, flood control, protection of groundwater sources, and carbon sinks, to less essential but equally important functions like providing shade and protection from the wind and helping to preserve moisture in the soil, and to convenient, but no less important, functions like providing noise buffers, a sense of peace and security, and privacy.

She condemned the situation that, against these obvious benefits from a blessing provided free by nature, the process of housing development actually spends money to remove trees, primarily through practices like clear cutting all or most vegetation, heavy blasting for foundations, soil removal, and water diversion.

Christine pointed to inappropriate practices in the development of the Hemlock Ravine area as examples of how *not* to do it. Apart from the loss of essentially all natural vegetation in some parts the development, she cited problems with water quality and the water table itself, problems with hydrology, and substantial erosion. She also described problems with the Kingswood development in terms of a lack of centralised sewer system and water supply.

Christine compared these developments with other more responsible areas such as Clayton Park (the older part), Uplands Park, Ravenscraig, Shauneslieve, and Stonemount, where infrastructural services are better-provided and where a softer approach to construction was taken that is more compatible with the natural characteristics of the land. She lauded design and construction practices that respect land morphology, take advantage of natural topography, and preserve trees and other elements of the natural vegetation.

Christine's talk engendered much lively discussion; thank you, Christine.

— Allan Robertson



NS BUTTERFLIES

2 JUNE

Peter and Linda Payzant are well known in the Halifax area for their butterfly walks, their 'Butterflies of Nova Scotia' webpage (<<http://www.chebucto.ns.ca/~aa095/NSLEps/>>), and their [Butterflies of Nova Scotia Field Checklist](#) and [Dragonflies of Nova Scotia Checklist](#), available from HFN and the Nova Scotia Museum.



Their talk was entitled "The Lives, Habits, and Humour of Butterflies".

Peter began by discussing his interest in butterflies, their fascinating life cycle and endless variety, as well as their beauty. He noted that insects make up 75% of the 1,000,000 species of animals on the earth, and butterflies (Lepidoptera) are the third largest group of insects after beetles and flies. Peter discussed the modern trend away from killing and collecting butterflies, toward using photography as a preferred, non-lethal method of recording butterfly sightings and discoveries. Peter and Linda's talk was fittingly accompanied by excellent slides from their exploration of butterflies on four continents, including various species from Kenya and Costa Rica. Peter discussed the difference between moths and butterflies, and took the audience through some of the common distinguishing features.

He then described the amazing life cycle of the butterfly, beginning with the laying of eggs. On average, only 2 for each breeding pair will survive to create the next generation of adults. For many butterflies, eggs must be laid in very specific habitats to provide food plants for the young.

A successful over-wintering of certain species, whether as pupae or eggs, often requires freezing temperatures. In the spring, larvae emerge as caterpillars and go through a series of successive instars, or stages of growth, shedding and replacing their hard exoskeleton on the way. Finally, the larva forms a chrysalis and the pupa undergoes its incredible transformation to emerge as a butterfly. Peter continued with a discussion about butterfly behaviour, their widely varied and often specific feeding needs, and the secrets of their bright and vibrant wing colouration.

Linda Payzant stepped in to present the 70 butterfly species native to Nova Scotia. These include the Tiger, Black and Short-tailed Swallow-tail (Papilionidae), and 14 varieties of Skipper (Hesperiidae). There are 29 butterflies in the Nymphalidae group found in Nova Scotia, including the common Viceroy (often mistaken for the Monarch), the White Admiral, and the Question Mark.

Linda then outlined the life and travels of the Monarch butterfly, one of the most well known and popular species. She used charts and maps to illustrate the Monarch's remarkable journey from central Mexico across much of North America. A highlight of the talk featured slides that she and Peter took on a visit to Anganguero, Mexico, the winter migration site of Monarch butterflies.

The photographs of millions of Monarchs settled in the trees were a striking end to this beautiful and informative presentation.



— Peter Webster

FIELD TRIPS

WATERFALLS HIKE

Date: Saturday, 16 April

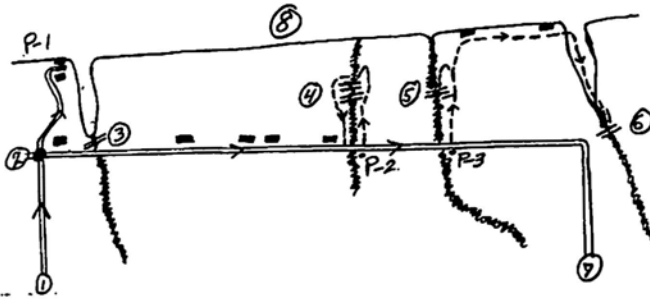
Place: Baxter's Harbour area

Region: 720; Basalt Ridge

Weather: Clear/sunny (all day) 2° - 15°C

Interpreters: Richard and Grace Beazley

Participants: 20 enthusiastic naturalists



Baxter's Harbour area waterfalls (map not to scale)

- ① Paved road to Baxter's Harbour
- ② Baxter's Harbour (end of pavement)
- ③ Fraser Brook Falls
- ④ Two falls on unmapped brook (no trail, follow brook)
- ⑤ Cobby Irving Brook Falls
- ⑥ Black Hole Brook Falls (accessible at low tide only)
- ⑦ Black Hole Road (gravel)
- ⑧ Minas Channel

— Roads
- - - Walks
~~~~~ Brooks

■ House or cottage

P-1: Park at end of road

P-2/P-3: Park at side of road

From ② to P-1 is 0.1km

From ② to P-2 is 1.2km

From P-2 to P-3 is 0.31km



What an awe of a morning, absolutely beautiful! There was not a cloud in the sky. The morning was warm and still as we gazed in total fascination at the marvelous panoramic valley view from the Blomidon Lookoff.

Richard and Grace Beazley greeted each one of the naturalists with great enthusiasm, enough to set the scenery for the remainder of the day. Before the last head count, we saw a graceful Bald Eagle fly directly in front of the gathered group. It seemed strange to see such a magnificent creature fly lower than we were at that point. Once the eagle was out of sight, we too set off in convoy style to explore waterfalls and their surrounding landscapes.

All the waterfalls of the day were in the Baxter's Harbour area. Black Hole Falls lies 3 km east of Baxter's Harbour, just off Black Hole Road.

With backpacks swung over our backs off we set down a widened laneway to the shoreline and the cliffs of the Minas Channel. The morning light on the surrounding beach was beautiful, enough to entice those with cameras to stop in their tracks and snap a few frames before adventuring across the beach to the first waterfall. Black Hole Gorge and its waterfalls is accessible only at low tide, and we had struck it lucky, as the tide at that moment was at it's lowest. This gave the group plenty of time to linger and savour the majestic beauty of the towering cliffs on either side of the gorge that was separated by an attractive brook leading down from the waterfalls. Pockets of sculptured snowdrifts and icicles hung in suspension on either side of the towering cliffs, not at all bothered by the warmth of the sun and slight warm spring breeze.

Leaving the cobbles behind, we preceded in single file alongside the brook. The terrain on either side was steep and very narrow. Rocks were laced with bladder seaweed closest to the salt water, though further up the creek the rocks and boulders were covered in various green mosses — lichens, Polypody, and Christmas Ferns. As we navigated around the rocks and fallen trees, we crisscrossed our way up the latter part of the creek to Black Hole Falls. Despite lack of precipitation over the past few weeks, the falls were exceptionally beautiful in the early afternoon light. After our spiritual connection with the glorious surroundings and the sounds of falling water, we began to drift slowly back along the meandering watercourse to the beach and on to the next falls.

Just a little west of the Black Hole Falls was our second attraction, the Cobby Irving Falls. We retraced our tracks up the widening lane then veered off into the woods and down a steep slope to the brook's edge.

We single-filed our way up the gorge, marvelling at the serene setting and the very large mossy and lichen-covered boulders on either side of the brook. Mature Yellow and White Birch trees dominated the gorge, and surprisingly, some mature trees were growing within the rock veins of some of the largest boulders. We couldn't see any visible signs of soil pockets in the rock's structure, so it made for a real bit of fascination amongst us naturalists. A huge chunk of turquoise-coloured ice had come to rest at the base of these waterfalls. Icicles hung from rock ledges and water gushed to the waiting pools below. Had the water temperature been a slight bit warmer I am sure a few of us would have adventured into the flowing water, just like in the movies!

After our morning of scrambling, we were hungry. One of the members very kindly invited us to have lunch at his cottage located near Baxter's Harbour, overlooking a section of Minas Bay with Cape Split in the background. Despite the stiff cool breeze off the Bay, the sky was clear which made for excellent binocular viewing.

After lunch we set off to Fraser Brook Falls aka Baxter's Harbour Falls. These falls could be seen from Baxter's Harbour Beach, and even from the parking lot. Since the tide was still quite far out, we ventured on to view the falls at a closer vantage point. The brook flows under the main road through a culvert and down over the cliff. When the tide is low, the rush of water from the falls is most spectacular, especially if one is standing quite close to them so as not to see the culvert. At the high tide mark the water has less space in which to fall, which creates a different sort of effect. Baxter's Harbour Beach is quite intriguing with its naturally sculptured sandstone formations.

The last waterfall of the day was one of Grace and Richard's very special finds — the 'No-Name Falls', situated about 500 metres east of Cobby Falls. The brook leading to these falls is not on today's topographical maps. Someone suggested it could be 'Cobby Branch' or 'Son of Cobby Waterfalls'.

Despite having no name, both the meandering brook leading down from the roadway and the fall itself was a place of great beauty. Tucked away in an alcove, these falls offered peace and tranquility. Several old streambeds cut through the high cliffs into the mixed forest above, like giant fingers. Fascinating! Following the same path upward, the meandering stream seemed to take on a different look as it zig-zagged over and along rock ledges leading to the falls.

Tuckered out from the day's excursion of scrambling up and over rocks, Jim Wolford suggested a different sort of closure to our fascinating Falls field trip. He led us to Starr's Point to view a Great Horned Owl and owl nest. Mama owl got a little anxious as we bumbled out of our cars. With binoculars in hand we fled to the opposite field to view Mama owl and a baby that looked to be almost the size of Mama! One little fluffy owl with beady eyes seemed fascinated at all the excitement from below. Mama hopped from branch to branch, until she felt all was safe, then nestled herself down into her offspring's soft, fluffy bundle of feathers. The pair of them peered down to us with that 'wise ol' owl' look. Eventually, the naturalists quietly dispersed and went on to the next oversized nesting sight.

Down the street and around the corner from the Great Horned Owl's nest was an eagle's nest. We could just barely see the top of the eagle's head.

We had no luck in seeing the eagle's offspring but then again the nest was in an obscured setting and quite high up. Yellow Finches in the same tree as the nesting eagle provided some activity to those naturalists who were without binoculars.

Thank you to Grace and Richard for a fascinating, wonderful day of observing waterfalls and breathtaking scenic landscapes. It was exquisite! And, thank you to Jim Wolford for finishing off our day with a spring delight — nesting birds of prey.

— Lesley Butters

## REGION 720

**Soils** — shallow, well-drained silt loam derived from basalt. Distinctive for large populations of earthworms which have incorporated the surface mull into the mineral soil.

**Flora** — on the coast at higher elevations shade-tolerant hardwoods, Red Spruce, White Spruce; further inland spruce, fir, and pine forests turn gradually to Sugar Maple Yellow Birch, and American Beech. Rare arctic-alpine and Alleghenian plants found at Blomidon/ Cape Split. Seaweeds; almost no salt marshes.

**Fauna** — mostly forest habitats with many deer, moderate small-mammal diversity. Many migratory birds, particularly hawks and owls; also migratory bats. Good intertidal habitat with large tidepools.



## ATLANTIC GARDENS 30 APRIL

**Date:** Saturday, 30 April

**Place:** Atlantic Gardens, Sackville

**Weather:** Damp, cold, and rainy

**Interpreters:** Robin Hennigar, Plant Manager

**Participants:** 12 enthusiastic naturalists

**Theme Region:** n/a

A dozen avid HFN gardeners were treated to an insiders' tour of the Sackville Atlantic Gardens large nursery and greenhouse facilities, one of the area's biggest retail and wholesale gardening supply companies, with four retail locations in the area, including a large garden centre in Bedford. It's a locally-owned family business that the Hennigar family has been operating for 35 years.

Robin explained that the company grows some annuals from seedlings, but an increasing number of plants like roses, privets, hydrangea, and others are imported and then grown by them to marketable sizes. They buy products mainly from Canada, the States (a lot from Oregon and Minnesota), and Europe (mostly Holland). Most nursery stock comes from Canada, as does about half of the purchased plants.

The seedling operation used what seemed like thousands of plastic growing trays. The seeds must be at least an inch deep (sorry about that, you users of metric measurements) or gravity won't



draw water down to the seeds. Even then, the seeding soil must be pre-wetted before use. The seed trays are kept in a greenhouse with bottom-heated tables to keep the temperature at about 70°F to 80°F (again, apologies to users of Celsius thermometers, but Fahrenheit is what the industry uses). The growing operations must be kept scrupulously clean to eliminate the threat of mildew and other damage. The greenhouses are scrubbed down with soap and disinfectant upon each change of product.

The growing trays are not made from the type of plastic that is locally recyclable, but the operation uses so many plastic items that they contract with a local recycling business to handle them. This business, White Star Plastics, grinds up all kinds of 'non-recyclable' plastic and sends the residue to a plant in Ontario where they are used to produce other plastic products.

The soil used for potted plants is called Pro-Mix. It's expensive, so a few years ago Atlantic Gardens decided to make their own. It's made from perlite (a processed organic aerator), peat moss, powdered lime, a very light fertilizer (typically a 2-3 6 mix), and water. The ingredients are blended and put into growing pots in a special-purpose Rube-Goldberg-like machine.

They buy plants from North America and Europe which are shipped in one of three 'states' – bare root, in a pot, or wrapped in burlap. While there are few restrictions for product from North America, plants shipped from Europe must have bare and completely clean roots, because there is a potential for importing soil nematodes, and the Canadian Food Inspection Agency inspects all European imports upon arrival to insure cleanliness. 'Bare root' plants from North America arrive with soil clinging to the roots. Much of the purchased product is shipped in pots – ball and burlap product is on its way out due to its low post-planting success rate (reportedly only about 40%).

Responding to a question about which varieties are most popular, Robin said it's almost like the fashion industry in terms of what people ask for. Some buyers even bring illustrated magazine articles to show what they'd like. One new trend is for 'vertical gardens' because of space shortages in many gardens, and hanging plants are becoming more popular.

Plants in baskets and large containers also appear to be growing in popularity, particularly with commercial customers like hotels, convention centres, and casinos. The plants are kept in a warm environment at first while they're rooting; after rooting, when they're held at about 60°F, they grow rapidly. One concern with these kinds of products, though, is that the type of customer who

purchases them sometimes doesn't place much emphasis on maintenance. The result can be unhealthy plants, and, of course, it's always the vendor's fault.

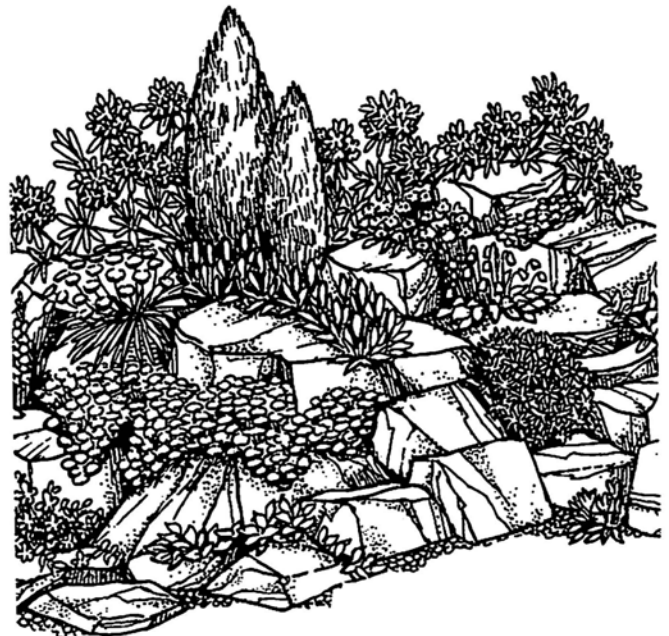
Most nurseries where Atlantic Gardens buy their imports are quite specialised, and a wide variety of different plants are available to local buyers. The imported plants are very consistent in quality and growth characteristics – they can all be virtually guaranteed, for example, to reach maturity at the same time, to be of the same size at maturity, and to be consistent in colour and other characteristics.

The cost of energy is a critical element of the greenhouse business. Apart from keeping the greenhouses and the root tables warm, extra heat is frequently needed during snow storms to keep heavy snow formations from breaking the glass roofs. During White Juan, for example, Robin said the extra energy costs were over \$1000. But heating with oil or gas is expensive – to the point where it isn't economical. Atlantic Gardens plans to install a biomass furnace this year.

An unexpected cost of doing business for greenhouses is something most of us wouldn't think of – theft of equipment like growing lights, timers, and associated items for use in illegal marijuana growing operations. The Atlantic Gardens greenhouses are now extensively wired with security alarms.

You've read how the business recycles its plastic items; it's reassuring to know that this approach extends to all parts of Atlantic Gardens' operations. All waste is composted or otherwise reused – an approach that makes good business practice and is good for our environment.

— Allan Robertson



## CAPE SPLIT

**Date:** Sunday, 29 May

**Place:** Scott's Bay/Cape Split

**Region:** 720; Basalt Ridge

**Weather:** Cloudy/damp, 4 -7°C; sun for lunch

**Interpreters:** Lesley Butters

**Participants:** 13



Despite the cold, overcast, and dreary Sunday morning, a small crowd of naturalists arrived at the Nova Scotian Museum to partake in our annual Cape Split field trip. Enroute, a few of us saw some interesting 'nature notes' material.

A Bald Eagle was being harassed by two determined crows. The eagle made divebomb sweeps over Hwy 101, and at one exciting moment it swooped down just a few metres away from my car with the crows in hot pursuit! As I was cruising along at highway speed, it was very tricky to view the outcome.

A few kilometres past the Mt. Uniacke exit, a mature Great Horned Owl flew directly in front of my vehicle into the woods on the opposite side of the road. His or her wingspan seemed too lengthy to fly through the forest without smashing into the trees.

Shortly past the owl sighting two hares raced out of the shrubbery alongside the road, about to bound out into traffic; wisely, they darted back into it again.

Looking at the time, and at the sky, one thought it best to get a wiggle on in order to meet the others at the Cape Split parking lot, when suddenly another wonderful sighting — two Canada Geese sitting in the gypsum pond just after the Falmouth exit. The geese looked like wooden decoys alongside a lone fisherman when suddenly one took off in flight.

While thinking that was enough sightings for less than an hour of driving, a gorgeous male Pheasant strutted along the side of the highway near the Wolfville exit.

Exhausted by trying not to concentrate on the wildlife rather than my driving, I finally reached the Blomidon look-off where the scene below was covered in a blanket of cloud. With only minutes to spare, I continued along wondering who beside the wildlife and the few field trip participants would want to venture out on such a grey and cool morning. To my astonishment there were others who too were enthusiastic about viewing the unfolding flora and bird life.

The trail at the beginning was a bit sloppy but improved as we began to gain elevation. Observations were slim 'til we got to the 'boot tree' area, which displays one of the prettiest wildflower areas on the trail to the split.

On the wet part of the trail nothing was in bloom,

and the leaves on most plants and trees were just beginning to show the first delicate new growth. Here we saw horsetails, and ferns — Beech, Christmas, Cinnamon, Interrupted, and Sweet with the stalk and leaves just opening; also a Mourning Dove, three Yellow Warblers (black face mask), two Robins, and five or six Black-capped Chickadees.

Leaving the conifer forest we started our climb into the deciduous areas. The forest floor was covered in semi-open spring wildflowers and gorgeous shades of the greens and greys of old lichens. The spring plants not in flower yet, only just budding, or only in very early leaf, were Sarsaparilla, Heal-all, Bluebead Lily, False Solomon Seal, Lily-of-the-Valley, Elderberry, Ground Ivy, and Yellow Birch. The Trillium blooms were saucer size!

When we finally arrived at the end of the trail, the sun graced us with its presence in time for lunch. On the way back, because the tide was 3/4 in, the beach couldn't be explored too much, but chunks of ocean-worn agate and jasper were seen. Altogether, it was a very rewarding wildflower and wildlife trip.

— Lesley Butters

### CAPE SPLIT SPECIES

#### Ferns

Beech Fern  
Christmas Fern  
Cinnamon Fern  
Interrupted Fern

*Dryopteris phagopteris*  
*Polystichum acrostachoides*  
*Osmunda cinnamomea*  
*O. claytoniana*

#### Plants

Sweetfern  
Horsetail  
Spring Beauty  
Red Trillium  
Wood Sorrel  
Bedstraw  
Bunchberry  
Chickweed  
Sarsaparilla  
Heal-all  
Twisted Stalk  
Blue-bead Lily  
False Solomon Seal  
Lily-of-the-Valley (abundant)  
Dandelion  
Star Flower  
Bluets  
Wild Strawberry  
Goldthread  
Baneberry  
Common Blue Violet  
Common White Violet  
Ground-ivy  
Dutchman's Breeches

*Comptonia peregrina*  
*Equisetum* sp.  
*Claytonia caroliniana*  
*Trillium erectum*  
*Oxalis grandis*  
*Galium* sp.  
*Cornus canadensis*  
*Stellaria* sp.  
*Aralia nudicaulis*  
*Prunella vulgaris* L.  
*Streptopus amplexifolius*  
*Clintonia borealis*  
*Smilacena racemosa*  
*Maianthemum canadense*  
*Taraxum officinale*  
*Trientalis borealis*  
*Houstonia cærulea*  
*Fragaria virginiana*  
*Coptis trifolia*  
*Actæa* sp.  
*Viola papilionacea*  
*V. blanda*  
*Glechoma hederacea* L.  
*Dicenta cucullaria*



|                        |                                      |
|------------------------|--------------------------------------|
| Elderberry             | <i>Sambucus canadensis</i>           |
| Bristly Black Currant  | <i>Ribes lacustre</i>                |
| Striped Maple          | <i>Acer pennsylvanicum</i> L.        |
| Yellow Birch           | <i>Betula alleghaniensis</i> Britton |
| White Birch            | <i>B. papyifera</i> Marsh            |
| Shadbush (Indian Pear) | <i>Amelanchier weigandii</i> Nelson  |

**Birds**

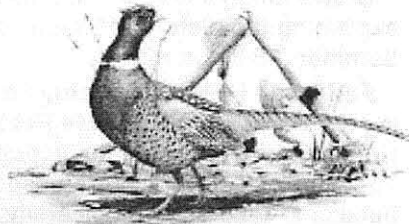
|                                |                                  |
|--------------------------------|----------------------------------|
| Mourning Dove                  | <i>Zenaidura macroura</i>        |
| Pileated Woodpecker            | <i>Dryocopus pileatus</i>        |
| Chickadees                     | <i>Parus atricapillus</i>        |
| Rose Grosbeak                  | <i>Pheucticus melanocephalus</i> |
| Evening Grosbeak               | <i>Hesperiphona vespertina</i>   |
| Yellow Warbler                 | <i>Dendroica petechia</i>        |
| Warblers (heard; sky too dull) | <i>Dendroica</i> sp.             |
| American Robin                 | <i>Turdus migratorius</i>        |
| Nuthatch                       | <i>Sitta</i> sp.                 |
| Hairy Woodpecker               | <i>Picoides villosus</i>         |
| Black-backed Gull              | <i>Larus</i> sp.                 |

**Mammals**

|             |                                |
|-------------|--------------------------------|
| 2 Chipmunks | <i>Tamias striatus</i>         |
| 5 Squirrels | <i>Tamiasciurus hudsonicus</i> |

**REGION 720**

(please see page eight for details - Ed.)



**SHUBIE NATURE INVENTORY**

There are growing concerns regarding the environmental degradation of Shubie Park through overuse, misuse, and abuse.

This lovely park in the Port Wallis area of Dartmouth protects sites of archaeological interest. These lie in a natural forest setting along the portion of the historic Shubenacadie Canal which links Lake Micmac to Lake Charles. The park was a long-time favourite of Colin Stewart and his wife Betty Hodgson, and as long ago as 1998 Colin proposed to the executive of the Halifax Field Naturalists that we should do a nature inventory of the Park. Apparently no inventory exists of the flora and fauna there, but Colin, with his usual larger view, hoped we could list amphibians and butterflies, too.

More recently, encroaching highway developments to nearby Burnside have renewed concerns about the impacts on Lake Micmac and the Park. Betty Hodgson raised the question of an HFN survey again, as she is eager to record what is present before the developments progress very far. I used to visit Shubie quite often, and have lots of notes about plants, birds, and butterflies, so I have promised to help, and to organise my own records too. It seems a good time to establish a baseline of information.

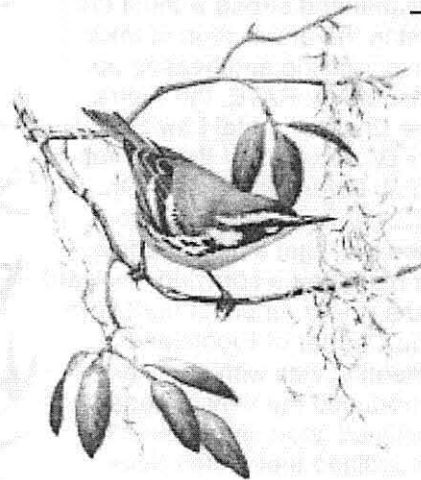
Betty and I made a start on Saturday, the 5th of June, and it was a brilliantly sunny morning. This was the first time I have been in the park since Hurricane Juan. As expected, a lot of conifers came down, and many spots are more exposed than I remembered. We spent several hours walking along the canal as well as the lakeshore paths, and part of the Trans-Canada Trail. Amongst many other species, the abundant Pink Lady Slippers and Rhodora stood out. We were pleased to find the less common Painted Trillium in a few spots, and Betty showed me several flourishing clumps of Nodding Trillium, *Trillium cernuum*, which was a surprise to me. I expect to see this in the richer hardwood areas in the Valley and Pictou County, but have not seen it in Halifax County before.

There was a male Cardinal, singing beautifully from the thickets along the canal, and we had a close encounter with a curious Hermit Thrush. I think both species breed here. There were a few Red-eyed Vireos but no flycatchers yet. Other new arrivals seen and heard included Black-and White, Black-throated Green, Chestnut-sided, Magnolia, Common Yellowthroat, and Yellow Warblers. Three Osprey fished over Lake Micmac.

The recent HFN meeting with the Payzant's talk on butterflies was fresh in our minds, so we looked at the many lepidoptera with renewed enthusiasm. There were several of the dark-winged skippers, in two different sizes, and after checking my field guide I think we saw both Dreamy Duskywing and Juvenal's Duskywing. There were also many Spring Azures, and a few Cabbage Whites. Two very large Painted Turtles, the size of dinner plates, basked on rocks along the edge of the lake.

Betty and I expect to make more visits to Shubie Park as the season progresses, and will be compiling our observations. We would be interested in hearing what other people have noted in the Park.

— Patricia L. Chalmers



# HALIFAX FIELD NATURALISTS

## THE THIRD DECADE, 1995 - 2005

### PART II, 1998 - 2001

**Spring/98** — The positions of President, Vice-President, Secretary, and Past President remained this same as Winter/98. Control of the Treasury was passed from Greg Crosby to Tony MacKay. Elizabeth Keizer joined the Programme Committee. Mary Primrose had left the Newsletter Committee, and Doris Young and Carol Klar joined it to help with distribution. Colin Stewart continued as Conservation Chair.

At our March AGM, with sadness and regret, President Peter Payzant acknowledged the death of well-loved HFN founding member Mary Primrose. Dalhousie's Biology Department photographer, Mary served HFN over the years in many capacities and positions. She loved to photograph Nova Scotia's wildflowers and mushrooms, delighting us with her beautiful slides at Members' Slide Nights, and at some other special presentations as well. Her legacy is recorded in her Wildflowers of Nova Scotia, New Brunswick, and PEI. An Indian Pear tree, (*Amelanchier* sp.), was planted in her memory on the grounds of the NSMNH.

The Plantwatch and Ladybug inventories continued this year for naturalists to contribute to. The Natural History of Nova Scotia, in two volumes, was launched at the NSMNH on February 14th, and the new Roland's Flora of Nova Scotia was launched on May 14th.

Happily, early in the year, Cole Harbour Marsh was donated to the province for a wildlife management area.

The recently formed and very important local group RATE (Real Alternatives to Toxins in the Environment), which HFN heartily supported, came up with local solutions and programmes for HRM gardeners to keep their gardens viable and strong without the use of poisons. Interest in the eradication of toxic chemicals in HRM was increasing and heating up. One meeting was sponsored by RATE, the Sierra Club, and the Dalhousie Environmental Law Society. A second had speakers Dr. Roy Fox of the Environmental health clinic in Fall River, Dalhousie's Dr. David Patriquin, and MLA Howard Epstein, who outlined for the audience the legal actions people could take to stop their neighbours spraying. Howard cited the successful case where an uncut front lawn was protected under the Charter of Rights and Freedoms. The third meeting was with speaker Elizabeth May. She introduced the very important subject of the legally unlisted 'inert' ingredients in these toxic brews, and outlined their deleterious effects.

On a more pleasant note, on May 13th, Alice Reed had a showing of 'Sacred Worth', her breathtaking paintings of the 31 Crown sites proposed for protec-

tion in Nova Scotia.

On March 16th, the Supreme court of Nova Scotia declared that the Provincial Government was within its mandate when it restored Jim Campbell's Barren to its list of protected sites. Kudos and thanks to HFNER Colin Stewart for all his hard work to this end.

**The total HFN membership for 97/98 was 107.**

**Summer/98** — The Herp Atlas project, in which many naturalists and HFNers took part, was launched by the NSMNH; also the Leatherback Turtle survey project, by the Leatherback Turtle Working Group.

During this summer, HFN lost another of its loyal and supportive members, Dr. Murray Cunningham. Dr. Cunningham designed and carved the wooden HFN 'stick' that is put on the display table at our monthly meetings.

Ursula Grigg's first article appeared outlining and explaining the history of biological classification in our Summer /98 issue #91.

**Fall/98** — HFN was awarded a plaque for supporting the Parks are for People Programme. Biologist Ursula Grigg reiterated the importance of our Field Trip species lists which are used as valuable contributions to records of biodiversity and population studies in the province. There was a record total of nine very interesting and well-written Field Trip reports in our Fall/98 issue, and the number of species recorded was approximately 250!

**Winter/98** — On behalf of HFN, President Peter Payzant wrote to Premier Russell MacLellan discouraging the proposal to use Pearl Island, favoured by breeding seabirds (including the endangered Roseate Tern), as a memorial site for the SwissAir disaster.

On November 13th, three years after all the public hearings, the Federal and Provincial governments finally released their eight-page 'Land Use Strategy' for Macnabs and Lawlor islands. Parks Canada transferred Lawlor and almost all its holdings on MacNabs to the province for a future park. Most importantly, all government-level officials and the public agreed that the unique natural character of the two islands should be preserved in perpetuity.

November 18th — and another inconclusive Point Pleasant Park planning and information session was held at the N.S. Community college on Bell Road.

On November 27th, HFNers joined a 400-strong audience at a Nova Scotia Nature Trust event and silent auction in support of endangered species legislation, to hear David Suzuki give one of his marvelous talks about what unbridled development is doing to our planet.

On December 3rd, the N.S. Legislature passed both the Wilderness Protection Act and the Endangered Species Act. On December 8th, a coalition of 55 Naturalist groups, including we HFN instigators



who had fought long and hard for these bills with much revising and fine-tuning, presented framed certificates of appreciation to all the supportive MLAs. The ceremony was held at the Prince George Hotel, and was appropriately graced with the beautiful Nova Scotian 'Sacred Worth' prints by Alice Reed. The passage of these acts was announced at subsequent Suzuki talks in Calgary and Edmonton to rounds of applause.

In the Fall/98 issue #93, Stephanie Robertson outlined some important work related to the above acts. The article was introduced with references to Point Pleasant Park management practices and the vital necessity of insects in forests. It concerned our local GPI (Genuine Product Index) Atlantic, and the 1997 global report by economist Robert Costanza. His research had concluded (taking the lowest end of their figures) that the world's ecosystems provide the planet with \$33 trillion worth of services every year — \$8 trillion more than the GNPs of all the countries on earth!

Late in 1998, Cole Harbour Provincial Park was created by combining Lawrencetown, Conrad's Island, Rainbow Haven Park, and land around Cole Harbour including some new acquisitions near Lawrencetown.

**Spring/99** — Ursula Grigg took over as President; Vice President was now Bernice Moores; the Treasurer and Secretary remained the same; Past President, Peter Payzant; Programme Chair, Marie Moverley; Harry Beach, Bob McDonald, Marie Moverley, and Stephanie Robertson were added to the list of directors, with Debra Burleson and Doug Linzey stepping down this year.

We continued to support Plant Watch and the Herp Atlas, and advertised requests to support the North-east Loon Study, which was to measure mercury in their feathers. The 'MAI-not' (Multinational Agreement on Investment) site was still running, and the Hon. Paul Martin's speech against the agreement could be accessed there.

In the Spring/99 Issue #94, Ursula Grigg concluded her very interesting article outlining and explaining all anyone ever wanted to know about the history of biological classification, accompanied by a diagram of the development of life over earth's four and a half billion year history.

We reported a Larch Caseborer, *Coleophora laricella*, 'infestation' on Grand Manan. A number of European parasites were introduced to combat this population explosion (take note, CFIA).

**No membership statistics were recorded for our year 98/99.**

**Summer/99** — It was an unusually sunny summer, and both bird and insect populations were more abundant than usual. A poll taken for HRM by RATE showed that, happily, nearly 80% of residents would support a bylaw regulating the use of pesticides.

August 11th featured a celestial double-whammy — the century's final total eclipse, and the same evening, the Perseid Meteor showers.

A few environmental concerns were: the renting of Crystal Crescent Beach to the film industry; the unnecessary cutting of the underbrush in Cole Harbour Heritage Park (home to small birds, butterflies, insects, and a lot of flowers); overly aggressive grooming of trails in parks; and the public realisation of the damage off-road vehicles were doing to our natural and wild places.

Ursula contributed an article about the fascinating world of microbes (without which animals would not survive) and their long association with humans, in our Summer Issue #95. This is well worth rereading, for those who have back issues of The Halifax Field Naturalist.

**Fall/99** — In spite of the long hot summer, local flora and fauna flourished. However, the Annapolis Valley wetlands and their species languished, as water was pumped to save crops.

Jupiter's brightest, highest, and closest approach to Earth of the decade occurred on October 6th; while Saturn did the same on November 6th; and, for the first time in decades, Mercury crossed the face of the sun.

Nova Scotia Nature Trust's Birdathon was announced. Statistics Canada designated Ron Coleman's N.S. GPI (Genuine Product Index) as a pilot project, and Ron hoped his important work would have an impact beyond Nova Scotia.

IRM — Integrated Resource Management; since the mid 1990s The Department of Natural Resources had been quietly deciding, on the public's behalf, what to 'do' with 1.2 million hectares of public land — 22% of the province's land base. The scale of this exercise? — unprecedented in Nova Scotia. Every one of the parcels of unprotected Crown Land was designated as one of three categories: Category I, 'multi-use' — a wide range of resource uses including clear-cutting, mining, road building, or selling for private real estate; Category II, 'modified multi-use' — the same sort of development as Category I, but with greater modification to enhance 'compatibility' with competing land uses (?); and Category III — lands to be protected and therefore off-limits to ecologically destructive use. Even after the 1998 Wilderness Act, the province conceded that only 23 of the 80 significant sample terrestrial natural regions had a satisfactory level of protection.

DNR has a resource development mandate (it is essentially a forestry and mining department), and had already committed most of the 1.2 million hectares to forestry agreements. They did not want to take any of its Category I and II lands out of their jurisdiction and into protected status.

Through its Wilderness Committee, the Ecology Action Centre, under its 'Visions for Public Lands', set about rectifying this situation as much as possible through volunteer organisations and lobbying the province for 'hot spots' in need of protection. Two such areas were Eigg Mountain, near Antigonish, and Gully Lake, near Truro, both containing large intact blocks of hardwood forest.



'MAI-2' — The World Trade Organisation was planning its international summit in Seattle, Washington (now famous for its successful protests). The Council of Canadians urged key MPs to abandon any type of agreement, and to develop instead a trade policy that benefits citizens, not trans-national corporations.

**Winter/99** — Our Winter Programme boasted a total of 23 field trips.

Friends of Hemlock Ravine was formed in response to a summer /99 clear-cut by a developer there, in a site bordering the most sensitive area of the park — the ravine itself — an area which contained the highest density of Eastern Hemlock.

Barry Sawyer submitted a very interesting and thought-provoking article on Nova Scotian birding that is also worth a reread, 'Some Thoughts on Birding in Nova Scotia', in the Winter Issue #97; there is also another memorable one, in the same issue, by Lesley Butters, 'God Talking to St. Francis', about urban lawns.

**Spring/00** — The chief executive officers remained the same except for the office of Secretary; Linda Payzant handed over all her papers to Harry Beach for that position. Tony MacKay stepped down and handed over the Treasury to Janet Dalton. Linda MacKay and Bernice Moores left the Board of Directors. Bernice also resigned from the Programme Committee, along with Carol Klar, leaving Marie Moverley at the helm. Carol Klar also left the Newsletter Distribution committee.

We continued supporting the NSMNH's Herp Atlas, and HRM invited input into their plans for the city's future from groups and individuals.

Colin Stewart reported on the reason for the sudden Hemlock clear-cut; the city had forgotten that the area was designated a park, and had re-zoned it to allow for development! Many meetings subsequently took place, to try to prevent the same sort of thing happening elsewhere.

SMU Biology Professor Nick Hill, who spoke at our very first and very successful and enjoyable Spring Social (a Uniacke walk, natural history quizzes and prizes, a delicious dinner, all wonderfully organised by the Payzants), emphasized the important and valuable role naturalists play in ecology.

Ursula Grigg reported on the necessity of 'casual housekeeping' on cottage properties and gardens in our Spring 00 Issue #98 — another submission worth repondering and still timely for cottagers this year.

**Total membership for 99/00 was 138.**

**Summer/00** — This was a season of many serious conservation concerns. But first the good news — HRM passed a by-law banning the use of pesticide sprays on lawns and gardens. They also set up a community training programme to help gardeners learn to garden successfully without them. Per-versely, despite the Unsightly Premises Committee planning new by-laws more favourable to more natural gardens, HRM still cast a stern and negative eye on those who deliberately practice truly 'wild'

gardening in order to encourage the healthy presence of a large diversity of insects, grubs, lepidoptera, birds, and small mammals.

Also, the first Leatherback Turtle to be radio-tagged, a female named Helen, launched the beginning of a still extant Leatherback tracking study to increase our understanding of their habits in order to help them survive better.

On June 21st, after the Hemlock Ravine clear-cut debacle, Colin Stewart reported that the Draft Management Plan for Hemlock Ravine had been released for public review and comment.

Jay Meeuwig of CPAWS warned against an up-and-coming management plan for Crystal Crescent Provincial Park that would allow for seaside resort development and entry fees.

Friends of Point Pleasant Park (FPPP) was formed, with HFN member Stephanie Robertson as Vice-President. They sued the Federal Government over the CFIA's \$2,000,000 planned tree-cut.

The CFIA would not share their trapping information, and an Access to Information request had to be filed. Also, their order to cut was declared before the final draft of a pest Risk Assessment was issued, thus violating their own regulations. Like N.S. Forestry ten years before, they were going to cut based only on the presence of sap lines on the bark, lines which have many more causes than that of the *Tetropium fuscum*, the Brown Spruce Long-horn Beetle (BSLB). The tree-cull began in August, but, with seven legal affidavits submitted against it (two from HFN members), FPPP won a full stay on the cut until a full judicial review was carried out.

This victory represented a first in Canadian legal history. FPPP set three important precedents: the legal recognition of the 'standing' of adjoining land-owners; the legal recognition of the irreplaceable value of trees; and a successful public injunction against a federal agency.

Jim Wolford reported on the first International Symposium on Deep-Water Corals, which took place in Halifax. Deep-water corals and the important habitats they provide marine life are being threatened world-wide by modern fish trawling/dragging. Three or four sites were considered for possible Marine Protected areas including the Gully off Sable Island and the Hell Hole Canyon off Brown's Bank.

It was reported that 337 records were submitted to the Herp Atlas for 1999; Blanding's Turtle, the Wood Turtle, the Northern Ribbon Snake, the Four-toed Salamander, and the Blue-spotted Salamander were all either endangered, threatened, or vulnerable.

Colin Stewart reported that The World Wildlife Fund's Endangered Spaces Campaign ended on June 30th, and a network of protected areas were now a part of Canada's vision for the future, despite the threat of DNR's IRM mining and forestry resource plans.

Ursula Grigg submitted another interesting article about the latest developments in the science of taxonomy in our Summer/00 Issue #99.



**Fall /00** — In September, the Nova Scotia Museum of Natural History (NSMNH) co-launched the 'Thousand Eyes' project. 100 years before, Dr. A. H. MacKay, N.S. Superintendent of schools from 1897-1923, began this important work. Back then, the project lasted for 26 years, involving 1,500 provincial schoolchildren observing 107 natural phenomena each year and recording their findings in school ledgers. This new venture, the 'Thousand Eyes', required observational recordings of only 50 natural phenomena; but, the new plant and animal records were important indicators of climate changes and weather trends in Nova Scotia, since flora and fauna are sensitive indicators of temperature, precipitation, daylight hours, and humidity.

Despite the CFIA's media hype of "50 BSLB trapped in 1999" (not true), the BSLB population is at the explosive stage" (no basis), and "no predators" (also not true), and other non-scientific claims, FPPP lost the judicial review in October under a new judge, but a meeting with the CFIA and the long fight to protect the park from an overkill response brought the estimated cut from 50,000 to 1,000.

Our Fall Issue #100 culminated 25 years of HFN history.

**Winter /00** — In Halifax, in January, the Sierra Club of Canada hosted "Environmental Issues and Skill Building: Making a Difference in Your Community". Also, the Halifax Urban Greenway Association was formed to preserve a 'green rail-trail' from Chebucto Road to Young Avenue.

**Spring /01** — Bob McDonald took over the Presidency from Ursula Grigg; Stephanie Robertson became Vice-President; Linda Payzant became Membership Chair; Pat Leader became Programme Chair; and our FNSN representative was Doug Linzey.

HFN was asked to continue supporting the Herp Atlas and the Thousand Eyes project.

**Total membership for 00/01 was 145.**

**Summer /01** — A call for help was put forth for the newsletter; Production Editor Stephanie Robertson was to be away for two years overseas. Wild orchid specialist and HFN member Carl Munden's book, Native Orchids of Nova Scotia: A Field Guide, beautiful illustrated and listing our 39 species of wild orchids, was published by the UCCB Press.

Another important book was published this summer by the Atlantic Geoscience Society — The Last Billion Years: A Geological history of the Maritime Provinces of Canada. This is a book worth buying.

A further important report on FPPP's findings re the CFIA's alleged 'infestation' of the BSLB was published in our Fall/01 Issue #103. It listed the known local PPP predators and biological products that could be used against it, and also detailed behavioural information about its food preferences and habits.

FPPP obtained thousands of pages of data under the Access to Information Act from the Provincial and Federal governments. Nothing read there justified all

the CFIA's claims, and the federal government dropped its claim that the BSLB attacks healthy trees.

Stephen Ward, an outdoorsman and valued amateur in lichen and moss identification, died at the age of 81. He served on the board from 1991 to 1993, and the HFN Board gratefully received several gifts in his name.

**Fall /01** — Due to the stressful move to Bangladesh by the Newsletter Production Editor very near the historic '9/11' date, and to other factors, for the first time in the history of The Halifax Field Naturalist, it was shortened to four pages (one 11" x 17" sheet)! The programme still remained full as usual, and was included with it.

**Winter /01** — An Atlantic Canada Owl Monitoring Workshop was held at Mt. Allison University in November. The challenges of owl monitoring, and the history and results to date, were outlined, and everyone agreed that although many components contribute to the success of such a venture, the most significant aspect of this programme was a good roster of volunteers.

The implementation of the drastic broader implications and plenipotentiary powers of the CFIA's 'order of cut' for the BSLB were beginning, on all private and public lands, private and public parks, and any other remote locations — with cutting on McNabs and Hemlock Ravine.

In January, a public meeting was called about the filling in of Moir's Pond on the Bedford Highway by Sobey's for more buildings. Even though it had already been degraded and much reduced in the past, surprisingly, many local residents still felt strongly enough about preserving it for their pleasure and use to attend and express their views. Sobey's, in compensation, were planning to install a fishway from Moirs Pond to Mill Run Brook, which would be the first stage in opening up Paper Mill Lake again to migratory fish.

**Spring /02** — Bob McDonald continued as President; Stephanie Robertson was overseas and stepped down from the Vice-Presidency (it remained vacant), remained on the Board and continued to produce the newsletter by email from there; Suzanne Borkowski took over from Harry Beach as Secretary; and Elliott Hayes and Pat Leader (she also joined the Board) took on Newsletter distribution from Shirley McIntyre and Doris Young.

On April 3rd, a Moirs Pond Community meeting was held with DFO to discuss the environmental assessment process for Sobey's infilling.

Volunteers were called for the Piping Plover Guardian Programme, Thousand Eyes, Wormwatch, and the Herp Atlas. We were still sponsoring a child for Sunship Earth Camp.

**Total membership for 01/02 was 139. (To be cont'd.)**

— Stephanie Robertson



# NATURE NOTES



## 7 APRIL

Not surprisingly, many of the announcements below relate to 'Signs of Spring'.

Leslie Butters noted a very large (~300!!) **flock of Grackles** in her backyard today (April 7th). She also saw a patch of blooming **Coltsfoot** in Burnside. Several others also saw flowers of this alien species, often growing in the most challenging of locations. Jennifer MacKeigan had heard that **Ruby-throated Hummingbirds** had already reached New York State in their northward migration. (To follow the migration of hummingbirds, visit <[www.hummingbirds.net/map.html](http://www.hummingbirds.net/map.html)>).

Regina Maass has seen **bees and other insects** in her garden; Pat Leader has already seen **red lily beetles** in hers. Another observer reported a **furry black caterpillar** in Musquodoboit Harbour. Stephanie Robertson reported a raft of 150-200 **Common Eider** off Point Pleasant Park. Patricia Chalmers reported **beaver activity** at the Frog Pond; she and a youngster observed '**beaver spit**' on a freshly cut stump!

Keith Vaughn has had a **Northern Flicker** at his backyard feeder all winter; Peter Bigelow reported **garter snakes** in Point Pleasant Park; and Betty Hodgson enjoyed the antics of a number of 'surfing' **gulls** at Conrads Beach in November. Jim Wolford reported a **Great Horned Owl's nest** near Prescott House Museum; the continuing presence of **Red-headed and Red-bellied Woodpeckers** from the winter; and **Bald Eagles** (2 adults/1 immature) feeding on a carcass on the median of Hwy 102 near Uniacke House. — Bob MacDonald

## 5 MAY

Linda Payzant saw her first butterfly this year, a **Cabbage White**, and also saw **blackflies** on May 5th. Someone reported a **leopard slug** on a Berlin St. property. Peter Webster saw **12 herons** on Crescent Beach in Queens County, and also sighted **Blue Herons** on the Eastern shore near Rainbow Haven. Leslie Butters reported **Blue Swallows** on May 3rd in Burnside; a **small butterfly (an Azure?)** on April 21st; **ants and blackflies** at the Waegwoltic; and **Sycamore Maple flowers** opening in one hour — both the red and the yellow.

Regina Maass noted a **Red-breasted Nuthatch** and two **Red-bellied Woodpeckers**, and, on the last week of April — a **flicker** on her chimney! Stephanie Robertson, on the city side of Point Pleasant Park, heard the **Spring Peepers** very loudly echoing all the way from the Purcell's Cove area; also seen — **three young deer** by the highway near Shubenacadie. Pat Chalmers saw **Red Trilliums** along the Western shore (early by about two weeks), and saw a **Nashville Warbler**, and a **Fly Honeysuckle** in bloom.

Jim Wolford saw **Spring Beauties** a few weeks ago at Cape Split, and Joan Czapalay saw **Skunk Cabbage** (Spay) at Cape Forshu near Yarmouth; noted —

Shelburne's climate is much ahead of rest of province. Ursula Grigg saw an **Osprey** on the Sackville River, and Keith Vaughan noted that today was 05/05/05, not a 'nature note', but noteworthy in the grand scheme of things! Also reported — a **Great Egret** on the Hemlock Ravine heart-shaped pond, a 7-spotted **ladybug**, and a blooming **Tiger Lily**. Bob MacDonald saw **Red-berried Elders almost in bud** on the MSVU campus and noted that it seemed to be an early Spring for flora and fauna (*although by the temperatures it was hard to believe. -Ed.*)

— Allan Robertson

## 2 JUNE

Stephanie Robertson had seen **two dead almost-fledged crows** side by side on the ground at the old Stanfield property, with no sign of injury. A week earlier she had seen a strangely-acting **rat** being besieged by adult crows. An attempt to protect and save the rat near the same site failed; it died. Perhaps the adults fed some of this possibly poisoned rat to their young. Also, she saw a **brown butterfly with dark markings** and interesting hind-wing behaviour on **Forget-me-nots**. Peter Payzant thought it might be one of the **lycaeninae** family

Regina Maass spotted an obviously intelligent **crow** dipping a piece of dry bread in a puddle, and a pair of **Red-belly Woodpeckers** building a nest in the Jollimore area.

Jim Wolford had seen at Doug Linzey's place, North of Canning, **Trout Lilies** still in bloom. He also noted some **Beaver** road kill they had seen on Belle Isle, and he made reference to a recent beaver attack on a woman. Jim said that 2-year old **Beavers** are banished from the lodge and this may account for this type of aggression. (*A few days after our meeting, CBC aired a story of a man who had hit a Beaver while crossing a bridge in a heavy rain storm. He got out to see if he could help and was repeatedly attacked by the Beaver, which injured his calf and later his back as he returned to his truck. He managed to get the beaver off his back by hitting the animal with some tools.*)

Linda Payzant had already seen her first **Tiger Swallowtail** and **Hummingbird** for this year.

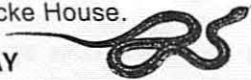
Blake Maybank saw a **Monarch**, and on May 13th a **Flying Squirrel** near his feeder.

While dog walking, Betty Hodgson had seen a **turtle** sunning itself on a rock; Jim suggested it might have been a **Painted Turtle**.

Patricia Chalmers had seen two **Bitterns** on the Musquodoboit trail, her first **Nighthawk** of the year, and lots of **warblers**; **Flycatchers** were still scarce.

Peter noted that for the first time **Dog Ticks** were recorded in the Canning area. Jim said his records had never included Canning; he wondered if this was another indication of global warming.

— Patricia Leader





# ALMANAC



This almanac includes the dates of events which are not found in our HFN 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.

"Such a procession of long-drawn-out, delicious half-lights, nearly every evening, continuing on till 'most 9 o'clock, all through the last two weeks of June and the first two of July! It was worth coming to Canada to get these long-stretch'd sunsets, in their temper'd shade and lingering, lingering twilights, if nothing more."

— Walt Whitman, Diary in Canada, undated entry from June/July of 1880

## NATURAL EVENTS

- 10-20 Jun. The earliest mornings of the year. The sun rises at 5:29 ADT.
- 21 Jun. Summer Solstice at 3:47 ADT. Summer begins in the Northern hemisphere. The longest day of the year, with 15 hours and 33 minutes of daylight at Halifax.
- 22 Jun. Full Moon.
- 22-30 Jun. The latest evenings of the year. The sun sets at 21:04 ADT.
- 17 Jul. Canada's "Parks' Day". Look for events at local parks.
- 21 Jul. Full Moon. Moonrise at 21:45. Perigean spring tides will be very large on the following day.
- 5-12 Aug. Average dates of the hottest days of summer (average daily maximum is 22.5°C).
- 11-12 Aug. Perseid Meteor showers peak.
- 13 Aug. Average date for temperatures to start decreasing.
- 19 Aug. Full Moon. Moonrise at 20:42. Perigean spring tides will be very large on the following day.
- 17 Sept. Full Moon.
- 22 Sept. Autumnal Equinox at 19:21 ADT. Fall begins in the Northern Hemisphere.
- 28 Sept. Second anniversary of Hurricane Juan.
- 30 Sept. Average date for first frost in Halifax. Env. Can. says that there is only a 1:10 chance 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.; Blomidon Naturalists Society's 2005 Calendar; Burke-Gaffney Observatory, Saint Mary's University

## SUNRISE AND SUNSET ON SUMMER AND EARLY FALL SATURDAYS



|           |      |       |          |      |       |
|-----------|------|-------|----------|------|-------|
| 4 June    | 5:31 | 20:55 | 2 July   | 5:34 | 21:03 |
| 11 June   | 5:29 | 21:00 | 9 July   | 5:39 | 21:01 |
| 18 June   | 5:29 | 21:03 | 16 July  | 5:45 | 20:56 |
| 25 June   | 5:31 | 21:04 | 23 July  | 5:52 | 20:50 |
|           |      |       | 30 July  | 5:59 | 20:42 |
| 6 August  | 6:07 | 20:33 | 3 Sept.  | 6:40 | 19:47 |
| 13 August | 6:15 | 20:23 | 10 Sept. | 6:48 | 19:34 |
| 20 August | 6:23 | 20:12 | 17 Sept. | 6:56 | 19:21 |
| 27 August | 6:31 | 20:00 | 24 Sept. | 7:04 | 19:08 |

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

## ORGANISATIONAL EVENTS

**Blomidon Naturalists Society:** Indoor meetings take place on the 3rd Monday of the month, in the K. C. Irving Environmental Science Centre auditorium, University Avenue, Wolfville, at 7:30 p.m. Field trips usually depart from the Wolfville Waterfront, Front Street, Wolfville. For more information, go to <http://www.go.ednet.ns.ca/~bns/>.

- 20 Jun. "Kentville Migratory Bird Sanctuary", with speaker Bernard Forsythe.
- 25 Jun. "The Old Wolfville Reservoir on Gaspereau Mountain", with leader Ford Spidle, 679-0233.
- 9 Jul. "Black Rock Hiking Trails", with leaders Reg and Ruth Newell, 542-2095.
- 13 Jul. "Kentville Ravine", with leaders Reg and Ruth Newell, 542-2095.
- 19 Sept. "Ocean Migration of Atlantic Salmon", with speaker Mike Dadswell.

**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, 496-8257; or go to <http://apwww.stmarys.ca/bgo/>.

**Nova Scotia Bird Society:** Indoor meetings take place on the 4th Thursday of the month, September to May, at the Nova Scotia Museum of Natural History, 7:30 p.m. For more information, Suzanne Borkowski, 445-2922; or go to <<http://www.chebucto.ns.ca/Recreation/NS-BirdSoc/>>.

- 2 Jul. "Cape Chignecto - Birds and Botany Walk", with leader Joan Czapalay, 348-2803; <[joancz@ns.sympatico.ca](mailto:joancz@ns.sympatico.ca)>.
- 9 Jul. "Bird Islands", with leader Maureen Cameron-MacMillan, 727-2733; <[maureen\\_cameron@excite.com](mailto:maureen_cameron@excite.com)>. **Pre-registration is necessary for the trip with Bird Island Tours!**
- 17 Jul. "Wallace Bay", with leader Paul MacDonald, 627-2568; <[paulrita2001@yahoo.com](mailto:paulrita2001@yahoo.com)>.
- 30 Jul. "Pictou County", with leader Ken McKenna, 752-7644(h), 752-0044(w); <[kenmcken@pchg.net](mailto:kenmcken@pchg.net)>.
- 6 Aug. "Mahone Bay", with leader James Hirtle, 640-2173 E-mail: [jrhbirder@hotmail.com](mailto:jrhbirder@hotmail.com)
- 13 Aug. "Taylor Head Provincial Park", with leader Karl Tay, 772-2287 E-mail: [swallowhollow2972@hotmail.com](mailto:swallowhollow2972@hotmail.com)
- 20 Aug. **Rain date 21 Aug.** "Point Michaud, Cape Breton", with leaders George/Sharon Digout, 535-3516; <[george.digout@ns.sympatico.ca](mailto:george.digout@ns.sympatico.ca)>; and Billy Digout, 535-2513.
- 28 Aug. "Cherry Hill Beach", with leader Eric Mills, 766-4606; <[E.Mills@dal.ca](mailto:E.Mills@dal.ca)>.
- 10 Sept. **Rain date 11 Sept.** "Hartlen Point", with leader Fulton Lavender, 455-4966.
- 17 Sept. "Eastern Shore", with leader Peter Richard, 463-5612; <[Prichard@ns.sympatico.ca](mailto:Prichard@ns.sympatico.ca)>.
- 23 Sept. NSBS 50th Anniversary in Sydney N.S. "The Birds of Bird Islands", with speaker Dave McCorquodale. **This replaces the regular monthly meeting in Halifax!**
- 24 Sept. "Schooner Pond and Morien Bar", with leader Maureen Cameron-MacMillan, 727-2733; <[maureen\\_cameron@excite.com](mailto:maureen_cameron@excite.com)>.

**Nova Scotia Department of Natural Resources:** Many outings that will take place in Provincial Parks are listed in the "Parks are for People" Programme, available free from the Dept. at 424-4321, at many museums, parks, and tourist bureaus, and on the web at <<http://parks.gov.ns.ca/programs.asp>>.

**Nova Scotia Lighthouse Preservation Society:** Monthly meetings, and organises guided trips to lighthouses, including boat trips to islands. For more information, Dan Conlin, 424-6442; or go to <<http://www.nslps.com/>>.

**Nova Scotia Museum of Natural History:** For more information, 424-6099 or 424-7353; or go to <<http://museum.gov.ns.ca/mnh/>>.



- Jun. to mid-Sept. The Butterfly Pavilion will be open.
- 21 Jun. "Rock Walk at Peggy's Cove", with geologists Martha and Bob Grantham. A 'Parks are for People' Programme.
- 1 Jul. "Canada Day - Butterfly Social".
- 1 Jul. to 30 Oct. "Sable Island" exhibit.
- 1 Jul. to 27 Nov. "Under the Weather", an exhibit on climate change.
- 12 Jul. "The Secrets of Alpine Plants: Saxifrages & Meconopsis", with Finn Haugli, Director, Botanic Gardens, Tromso, Norway.
- 13 Jul. "Annual Botanical Ramble through the Public Gardens", with Museum Botanist Alex Wilson.
- 16 Jul. "Stream Saunter at Smiley's Provincial Park", with Museum Zoologist Andrew Hebda.
- 23 Jul. "Bat Walk at Smiley's Provincial Park", with Museum Zoologist, Andrew Hebda.
- 6 Aug. "In Search of the Wild Banana: Bogs & Barrens Hike", with Frances Anderson, Research Associate, and Marian Munro, Assistant Curator of Botany.
- 9 Aug. **Rain date 10 Aug.** "Family Butterfly & Dragonfly Hike", with Research Associate Derek Bridgehouse. **Register by 1 Aug., 424-3563.**
- 10 Aug. "Innovative Rhododendrons: The Barlup Breeding Program", with Jim Barlup from Washington, U.S.A.
- 30 Aug. **Rain date 31 Aug.** "Family Butterfly & Dragonfly Hike", with Research Associate Derek Bridgehouse. **Register by 1 Aug., 424-3563.**

**Nova Scotia Wild Flora Society:** Meets 4th Monday of the month, September to May, at the Nova Scotia Museum, 7:30 p.m. For more information, Barry Sawyer, 449-4938; or go to <<http://www.chebucto.ns.ca/~nswfs/>>.

- 27 Jun. "Evening walk in the Peggy's Cove area". Contact Heather Drope, 423-7032, or 440-5032.
- late Jul. "Evening walk to survey Halifax's downtown flora", with leader Jeremy Lundholm.
- 29 Jul. to 1 Aug. "Coastal Plain Species, Bridgewater to Brier Island". Contact Charlie Cron, 477-8272. **Register by 1 June.**
- 17 Sept. "Hemlocks and Hardwoods Trail at Keji", with leader Peter Hope.

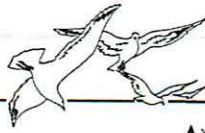


**Royal Astronomical Society of Canada (Halifax Chapter):** Meets 3rd Friday of each month, Room L176 of the Loyola Academic Building, Saint Mary's University, 8:00 p.m. For more information, go to <<http://halifax.rasc.ca/general.html>>.

2-5 Sept. "Nova East, Atlantic Canada's Star Party", a weekend of camping and observation at Smiley's Provincial Park.

— compiled by Patricia L. Chalmers

# TIDE TABLE



# HALIFAX

## 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 |           |         |     |     |           |         |     |     |
|-----------|---------|------|--------|-----------|---------|-------|--------|-----------|---------|------|--------|-----------|---------|-------|--------|-----------|---------|------|--------|-----------|---------|-------|--------|-----------|---------|-----|-----|-----------|---------|-----|-----|
| <b>1</b>  | 0340    | 4.9  | 1.5    | <b>16</b> | 0230    | 4.6   | 1.4    | <b>1</b>  | 0530    | 4.9  | 1.5    | <b>16</b> | 0420    | 4.9   | 1.5    | <b>1</b>  | 0040    | 1.3  | 0.4    | <b>16</b> | 0010    | 0.7   | 0.2    | <b>16</b> | 0615    | 5.9 | 1.8 |           |         |     |     |
|           | 1020    | 1.6  | 0.5    |           | 0850    | 2.0   | 0.6    |           | 1150    | 2.0  | 0.6    |           | 1035    | 2.0   | 0.6    |           | 0645    | 5.2  | 1.6    |           | 0615    | 5.9   | 1.8    |           |         |     |     |           |         |     |     |
|           | FR 1600 | 5.6  | 1.7    |           | SA 1450 | 5.6   | 1.7    |           | MO 1725 | 5.2  | 1.6    |           | TU 1630 | 5.9   | 1.8    |           | TH 1255 | 2.0  | 0.6    |           | FR 1235 | 1.3   | 0.4    |           | FR 1235 | 1.3 | 0.4 |           |         |     |     |
|           | VE 2305 | 1.0  | 0.3    |           | SA 2155 | 1.3   | 0.4    |           | LU      |      |        |           | MA 2330 | 1.0   | 0.3    |           | JE 1840 | 5.6  | 1.7    |           | VE 1825 | 6.2   | 1.9    |           | VE 1825 | 6.2 | 1.9 |           |         |     |     |
| <b>2</b>  | 0450    | 4.9  | 1.5    | <b>17</b> | 0340    | 4.6   | 1.4    | <b>2</b>  | 0020    | 1.3  | 0.4    | <b>17</b> | 0535    | 4.9   | 1.5    | <b>2</b>  | 0120    | 1.0  | 0.3    | <b>17</b> | 0100    | 0.3   | 0.1    | <b>17</b> | 0705    | 6.2 | 1.9 | <b>17</b> | 0705    | 6.2 | 1.9 |
|           | 1120    | 1.6  | 0.5    |           | 0950    | 2.0   | 0.6    |           | 0625    | 4.9  | 1.5    |           | 1140    | 1.6   | 0.5    |           | 0720    | 5.2  | 1.6    |           | 0720    | 5.2   | 1.6    |           | 0720    | 5.2 | 1.6 |           |         |     |     |
|           | SA 1655 | 5.6  | 1.7    |           | SU 1550 | 5.6   | 1.7    |           | TU 1240 | 2.0  | 0.6    |           | WE 1735 | 6.2   | 1.9    |           | FR 1330 | 2.0  | 0.6    |           | SA 1330 | 0.7   | 0.2    |           | SA 1330 | 0.7 | 0.2 |           |         |     |     |
|           | SA 2355 | 1.0  | 0.3    |           | DI 2255 | 1.0   | 0.3    |           | MA 1820 | 5.2  | 1.6    |           | ME      |       |        |           | VE 1920 | 5.6  | 1.7    |           | SA 1920 | 6.2   | 1.9    |           | SA 1920 | 6.2 | 1.9 |           |         |     |     |
| <b>3</b>  | 0545    | 4.9  | 1.5    | <b>18</b> | 0450    | 4.9   | 1.5    | <b>3</b>  | 0105    | 1.0  | 0.3    | <b>18</b> | 0030    | 0.3   | 0.1    | <b>3</b>  | 0150    | 1.0  | 0.3    | <b>18</b> | 0150    | 0.0   | 0.0    | <b>18</b> | 0750    | 6.6 | 2.0 | <b>18</b> | 0750    | 6.6 | 2.0 |
|           | 1215    | 1.6  | 0.5    |           | 1055    | 2.0   | 0.6    |           | 0710    | 5.2  | 1.6    |           | 0635    | 5.6   | 1.7    |           | 0755    | 5.2  | 1.6    |           | 0755    | 5.2   | 1.6    |           | 0755    | 5.2 | 1.6 |           |         |     |     |
|           | SU 1745 | 5.6  | 1.7    |           | MO 1650 | 5.9   | 1.8    |           | WE 1325 | 2.0  | 0.6    |           | TH 1245 | 1.3   | 0.4    |           | SA 1400 | 1.6  | 0.5    |           | SA 1400 | 1.6   | 0.5    |           | SU 1425 | 0.7 | 0.2 |           | SU 1425 | 0.7 | 0.2 |
|           | DI      |      |        |           | LU 2355 | 0.7   | 0.2    |           | ME 1905 | 5.6  | 1.7    |           | JE 1835 | 6.6   | 2.0    |           | SA 1955 | 5.9  | 1.8    |           | SA 1955 | 5.9   | 1.8    |           | DI 2010 | 6.2 | 1.9 |           | DI 2010 | 6.2 | 1.9 |
| <b>4</b>  | 0045    | 1.0  | 0.3    | <b>19</b> | 0550    | 4.9   | 1.5    | <b>4</b>  | 0145    | 1.0  | 0.3    | <b>19</b> | 0125    | 0.0   | 0.0    | <b>4</b>  | 0220    | 1.0  | 0.3    | <b>19</b> | 0240    | 0.0   | 0.0    | <b>19</b> | 0835    | 6.6 | 2.0 | <b>19</b> | 0835    | 6.6 | 2.0 |
|           | 0635    | 5.2  | 1.6    |           | 1155    | 1.6   | 0.5    |           | 0750    | 5.2  | 1.6    |           | 0725    | 5.9   | 1.8    |           | 0825    | 5.6  | 1.7    |           | 0825    | 5.6   | 1.7    |           | 0825    | 5.6 | 1.7 |           |         |     |     |
|           | MO 1305 | 2.0  | 0.6    |           | TU 1750 | 6.2   | 1.9    |           | TH 1400 | 2.0  | 0.6    |           | FR 1340 | 1.0   | 0.3    |           | SU 1430 | 1.6  | 0.5    |           | SU 1430 | 1.6   | 0.5    |           | MO 1515 | 0.3 | 0.1 |           | MO 1515 | 0.3 | 0.1 |
|           | LU 1830 | 5.6  | 1.7    |           | MA      |       |        |           | JE 1945 | 5.6  | 1.7    |           | VE 1935 | 6.6   | 2.0    |           | DI 2030 | 5.9  | 1.8    |           | DI 2030 | 5.9   | 1.8    |           | LU 2055 | 6.2 | 1.9 |           | LU 2055 | 6.2 | 1.9 |
| <b>5</b>  | 0130    | 1.0  | 0.3    | <b>20</b> | 0050    | 0.3   | 0.1    | <b>5</b>  | 0225    | 1.0  | 0.3    | <b>20</b> | 0215    | 0.0   | 0.0    | <b>5</b>  | 0250    | 1.0  | 0.3    | <b>20</b> | 0325    | 0.3   | 0.1    | <b>20</b> | 0920    | 6.6 | 2.0 | <b>20</b> | 0920    | 6.6 | 2.0 |
|           | 0725    | 5.2  | 1.6    |           | 0650    | 5.2   | 1.6    |           | 0825    | 5.2  | 1.6    |           | 0815    | 6.2   | 1.9    |           | 0855    | 5.6  | 1.7    |           | 0855    | 5.6   | 1.7    |           | 0855    | 5.6 | 1.7 |           |         |     |     |
|           | TU 1345 | 2.0  | 0.6    |           | WE 1255 | 1.3   | 0.4    |           | FR 1430 | 2.0  | 0.6    |           | SA 1440 | 0.7   | 0.2    |           | MO 1505 | 1.3  | 0.4    |           | TU 1605 | 0.3   | 0.1    |           | TU 1605 | 0.3 | 0.1 |           | TU 1605 | 0.3 | 0.1 |
|           | MA 1915 | 5.6  | 1.7    |           | ME 1850 | 6.6   | 2.0    |           | VE 2020 | 5.9  | 1.8    |           | SA 2025 | 6.6   | 2.0    |           | LU 2105 | 5.6  | 1.7    |           | MA 2145 | 5.9   | 1.8    |           | MA 2145 | 5.9 | 1.8 |           |         |     |     |
| <b>6</b>  | 0210    | 1.0  | 0.3    | <b>21</b> | 0145    | 0.0   | 0.0    | <b>6</b>  | 0255    | 1.0  | 0.3    | <b>21</b> | 0305    | -0.3  | -0.1   | <b>6</b>  | 0315    | 1.0  | 0.3    | <b>21</b> | 0410    | 0.7   | 0.2    | <b>21</b> | 1000    | 6.6 | 2.0 | <b>21</b> | 1000    | 6.6 | 2.0 |
|           | 0810    | 5.2  | 1.6    |           | 0740    | 5.6   | 1.7    |           | 0900    | 5.6  | 1.7    |           | 0905    | 6.6   | 2.0    |           | 0925    | 5.6  | 1.7    |           | 0925    | 5.6   | 1.7    |           | 0925    | 5.6 | 1.7 |           |         |     |     |
|           | WE 1425 | 2.0  | 0.6    |           | TH 1355 | 1.3   | 0.4    |           | SA 1500 | 2.0  | 0.6    |           | SU 1535 | 0.7   | 0.2    |           | TU 1540 | 1.3  | 0.4    |           | TU 1540 | 1.3   | 0.4    |           | WE 1655 | 0.7 | 0.2 |           | WE 1655 | 0.7 | 0.2 |
|           | ME 2000 | 5.6  | 1.7    |           | JE 1945 | 6.6   | 2.0    |           | SA 2100 | 5.9  | 1.8    |           | DI 2115 | 6.2   | 1.9    |           | MA 2140 | 5.6  | 1.7    |           | MA 2140 | 5.6   | 1.7    |           | ME 2230 | 5.6 | 1.7 |           | ME 2230 | 5.6 | 1.7 |
| <b>7</b>  | 0245    | 1.0  | 0.3    | <b>22</b> | 0235    | 0.0   | 0.0    | <b>7</b>  | 0325    | 1.0  | 0.3    | <b>22</b> | 0350    | 0.0   | 0.0    | <b>7</b>  | 0345    | 1.3  | 0.4    | <b>22</b> | 0500    | 1.3   | 0.4    | <b>22</b> | 1040    | 6.2 | 1.9 | <b>22</b> | 1040    | 6.2 | 1.9 |
|           | 0850    | 5.6  | 1.7    |           | 0835    | 5.9   | 1.8    |           | 0935    | 5.6  | 1.7    |           | 0950    | 6.6   | 2.0    |           | 1000    | 5.9  | 1.8    |           | 1000    | 5.9   | 1.8    |           | 1000    | 5.9 | 1.8 |           |         |     |     |
|           | TH 1500 | 2.3  | 0.7    |           | FR 1455 | 1.0   | 0.3    |           | SU 1530 | 2.0  | 0.6    |           | MO 1630 | 0.7   | 0.2    |           | WE 1620 | 1.3  | 0.4    |           | WE 1620 | 1.3   | 0.4    |           | TH 1745 | 1.0 | 0.3 |           | TH 1745 | 1.0 | 0.3 |
|           | JE 2040 | 5.6  | 1.7    |           | VE 2040 | 6.6   | 2.0    |           | DI 2135 | 5.9  | 1.8    |           | LU 2205 | 6.2   | 1.9    |           | ME 2220 | 5.2  | 1.6    |           | ME 2220 | 5.2   | 1.6    |           | JE 2315 | 5.2 | 1.6 |           | JE 2315 | 5.2 | 1.6 |
| <b>8</b>  | 0320    | 1.0  | 0.3    | <b>23</b> | 0330    | -0.3  | -0.1   | <b>8</b>  | 0350    | 1.0  | 0.3    | <b>23</b> | 0440    | 0.3   | 0.1    | <b>8</b>  | 0420    | 1.3  | 0.4    | <b>23</b> | 0555    | 1.6   | 0.5    | <b>23</b> | 1125    | 5.9 | 1.8 | <b>23</b> | 1125    | 5.9 | 1.8 |
|           | 0925    | 5.6  | 1.7    |           | 0925    | 6.2   | 1.9    |           | 1005    | 5.6  | 1.7    |           | 1035    | 6.6   | 2.0    |           | 1030    | 5.9  | 1.8    |           | 1030    | 5.9   | 1.8    |           | 1030    | 5.9 | 1.8 |           |         |     |     |
|           | FR 1530 | 2.3  | 0.7    |           | SA 1550 | 1.0   | 0.3    |           | MO 1605 | 2.0  | 0.6    |           | TU 1725 | 0.7   | 0.2    |           | TH 1705 | 1.3  | 0.4    |           | TH 1705 | 1.3   | 0.4    |           | FR 1840 | 1.3 | 0.4 |           | FR 1840 | 1.3 | 0.4 |
|           | VE 2120 | 5.9  | 1.8    |           | SA 2130 | 6.6   | 2.0    |           | LU 2210 | 5.6  | 1.7    |           | MA 2250 | 5.9   | 1.8    |           | JE 2255 | 5.2  | 1.6    |           | JE 2255 | 5.2   | 1.6    |           | VE      |     |     |           | VE      |     |     |
| <b>9</b>  | 0355    | 1.3  | 0.4    | <b>24</b> | 0420    | 0.0   | 0.0    | <b>9</b>  | 0420    | 1.3  | 0.4    | <b>24</b> | 0535    | 0.7   | 0.2    | <b>9</b>  | 0500    | 1.6  | 0.5    | <b>24</b> | 0000    | 4.9   | 1.5    | <b>24</b> | 0700    | 2.0 | 0.6 | <b>24</b> | 0700    | 2.0 | 0.6 |
|           | 1005    | 5.6  | 1.7    |           | 1015    | 6.2   | 1.9    |           | 1035    | 5.6  | 1.7    |           | 1115    | 6.2   | 1.9    |           | 1105    | 5.6  | 1.7    |           | 1105    | 5.6   | 1.7    |           | 1105    | 5.6 | 1.7 |           |         |     |     |
|           | SA 1600 | 2.3  | 0.7    |           | SU 1650 | 1.0   | 0.3    |           | TU 1650 | 2.0  | 0.6    |           | WE 1820 | 1.0   | 0.3    |           | FR 1755 | 1.3  | 0.4    |           | SA 1210 | 5.2   | 1.6    |           | SA 1210 | 5.2 | 1.6 |           |         |     |     |
|           | SA 2200 | 5.6  | 1.7    |           | DI 2225 | 6.2   | 1.9    |           | MA 2245 | 5.6  | 1.7    |           | ME 2340 | 5.2   | 1.6    |           | VE 2335 | 5.2  | 1.6    |           | SA 1935 | 1.6   | 0.5    |           | SA 1935 | 1.6 | 0.5 |           |         |     |     |
| <b>10</b> | 0425    | 1.3  | 0.4    | <b>25</b> | 0510    | 0.0   | 0.0    | <b>10</b> | 0455    | 1.3  | 0.4    | <b>25</b> | 0630    | 1.3   | 0.4    | <b>10</b> | 0555    | 2.0  | 0.6    | <b>25</b> | 0050    | 4.9   | 1.5    | <b>25</b> | 0800    | 2.3 | 0.7 | <b>25</b> | 0800    | 2.3 | 0.7 |
|           | 1040    | 5.6  | 1.7    |           | 1105    | 6.2   | 1.9    |           | 1110    | 5.6  | 1.7    |           | 1200    | 5.9   | 1.8    |           | 1145    | 5.6  | 1.7    |           | 1145    | 5.6   | 1.7    |           | 1145    | 5.6 | 1.7 |           |         |     |     |
|           | SU 1640 | 2.3  | 0.7    |           | MO 1755 | 1.0   | 0.3    |           | WE 1735 | 1.6  | 0.5    |           | TH 1920 | 1.0   | 0.3    |           | SA 1855 | 1.6  | 0.5    |           | SU 1305 | 4.9   | 1.5    |           | SU 1305 | 4.9 | 1.5 |           |         |     |     |
|           | DI 2235 | 5.6  | 1.7    |           | LU 2315 | 5.9   | 1.8    |           | ME 2320 | 5.2  | 1.6    |           | JE      |       |        |           | SA      |      |        |           | DI 2030 | 1.6   | 0.5    |           | DI 2030 | 1.6 | 0.5 |           |         |     |     |
| <b>11</b> | 0500    | 1.3  | 0.4    | <b>26</b> | 0605    | 0.3   | 0.1    | <b>11</b> | 0535    | 1.6  | 0.5    | <b>26</b> | 0030    | 4.9   | 1.5    | <b>11</b> | 0025    | 4.9  | 1.5    | <b>26</b> | 0155    | 4.6   | 1.4    | <b>26</b> | 0905    | 2.6 | 0.8 | <b>26</b> | 0905    | 2.6 | 0.8 |
|           | 1115    | 5.6  | 1.7    |           | 1150    | 6.2   | 1.9    |           | 1145    | 5.6  | 1.7    |           | 0730    | 1.6   | 0.5    |           | 0705    | 2.3  | 0.7    |           | 0705    | 2.3   | 0.7    |           | 0705    | 2.3 | 0.7 |           |         |     |     |
|           | MO 1725 | 2.3  | 0.7    |           | TU 1850 | 1.0   | 0.3    |           | TH 1825 | 1.6  | 0.5    |           | FR 1245 | 5.6   | 1.7    |           | SU 1235 | 5.6  | 1.7    |           | MO 1410 | 4.9   | 1.5    |           | MO 1410 | 4.9 | 1.5 |           |         |     |     |
|           | LU 2310 | 5.2  | 1.6    |           | MA      |       |        |           | JE      |      |        |           | VE 2015 | 1.3   | 0.4    |           | DI 2000 | 1.6  | 0.5    |           | LU 2130 | 2.0   | 0.6    |           | LU 2130 | 2.0 | 0.6 |           |         |     |     |
| <b>12</b> | 0535    | 1.6  | 0.5    | <b>27</b> | 0005    | 5.6   | 1.7    | <b>12</b> | 0000    | 4.9  | 1.5    | <b>27</b> | 0120    | 4.6   | 1.4    | <b>12</b> | 0120    | 4.9  | 1.5    | <b>27</b> | 0325    | 4.6   | 1.4    | <b>27</b> | 1000    | 2.6 | 0.8 | <b>27</b> | 1000    | 2.6 | 0.8 |
|           | 1150    | 5.6  | 1.7    |           | 0700    | 1.0   | 0.3    |           | 0620    | 2.0  | 0.6    |           | 0830    | 2.0   | 0.6    |           | 0815    | 2.3  | 0.7    |           | 0815    | 2.3   | 0.7    |           | 0815    | 2.3 | 0.7 |           |         |     |     |
|           | TU 1815 | 2.3  | 0.7    |           | WE 1235 | 5.9   | 1.8    |           | FR 1220 | 5.6  | 1.7    |           | SA 1340 | 5.2   | 1.6    |           | MO 1335 | 5.6  | 1.7    |           | TU 1530 | 4.6   | 1.4    |           | TU 1530 | 4.6 | 1.4 |           |         |     |     |
|           | MA 2350 | 5.2  | 1.6    |           | ME 1950 | 1.0   | 0.3    |           | VE 1925 | 1.6  | 0.5    |           | SA 2110 | 1.6   | 0.5    |           | SA 2110 | 1.6  | 0.5    |           |         |       |        |           |         |     |     |           |         |     |     |

No matter how barren the past may have been,  
'T is enough for us now that the leaves are green;  
We sit in the warm shade and feel right well  
How the sap creeps up and the blossoms swell.

We may shut our eyes, but we cannot help knowing  
That skies are clear and grass is growing;  
The breeze comes whispering in our ear,  
That dandelions are blossoming near,

The maize has sprouted, that streams are flowing,  
That the river is bluer than the sky,  
That the robin is plastering his house hard by;  
And if the breeze kept the good news back,

For other couriers, we should not lack;

We could guess it all by yon heifer's lowing, —  
And hark! How clear bold chanticleer,  
Warmed with the new wine of the year,  
Tells all in his lust crowing!

— from the prologue to  
The Vision of Sir Launfal,  
by James Russell Crowell



**! NEXT DEADLINE !**  
21 August for September Issue  
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