THE HALIFAX FIELD NATURALIST

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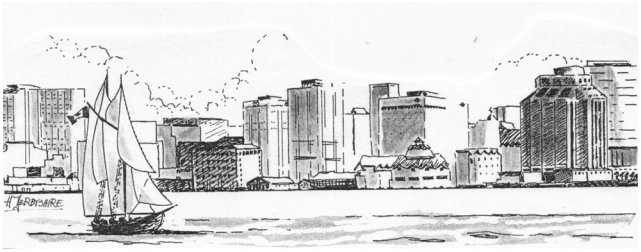
HFN is incorporated under the Nova Scotia Societies Act and holds Registered Charity status with Canada Revenue Agency. Tax-creditable receipts will be issued for individual and corporate gifts. **HFN** is an affiliate of Nature Canada and an organisational member of Nature NS (Federation of Nova Scotia 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, and 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; they are open to the public. **Field Trips** are held at least once a month; it is appreciated if those travelling in someone else's car share the cost of the gas. **Participants** in HFN activities are responsible for their own safety. Everyone, member or not, is welcome to take part in field trips. **Memberships** are open to anyone interested in the natural history of Nova Scotia. Forms are available at any meeting of the society, or by writing to: Membership Secretary, Halifax Field Naturalists, c/o N.S. Museum of Natural History. Members receive the quarterly **HFN Newsletter** and **HFN Programme**, and new memberships received from September 1st to December 31st of any year are valid until the end of the following membership year. The regular membership year is from January 1st to December 31st.



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HFN NEWS AND ANNOUNCEMENTS

EDITORIAL – *Stephanie Robertson*

The days are 'drawing in', our back deck is gathering falling leaves, and also attracting playful young city racoons. Did our bird feeders there lure them? They *were* trying to get to one by climbing up the downspout (unsuccessfully). Or perhaps it was the bread I put out for the birds below our kitchen window; I'll have to abandon that practice. However, we were highly entertained a few nights ago by watching them wrestle and play, dog-like, all over the deck, noisily knocking into garden chairs, plant pots, and our garden swing.

The Arnell Conservation Lands Biota Survey field trip report, post-fire, *(p. 6),* is wonderful to read. It's heartening to think that nature can come back so quickly after what one would think would be a lengthy time of blackened devastation. Similarly, Hurricane Juan's extensive blow-down damage to Point Pleasant Park eliminated its beloved forest canopy in many places. But this seeming catastrophe turned the former bare and shady needle-litter floor into a rich bloom of flowers and shrubs. These included asters, grasses, goldenrods, small bushes, and young deciduous trees, thereby revealing all its latent seeds (how old, I wonder?) and roots, just waiting for the right conditions to sprout and grow.

This issue contains a page dedicated to the Young Naturalists Club of Nova Scotia *(p. 11).* Be sure to read the submissions by these enthusiastic, budding naturalists. They are the future of ensuring the conservation of Nova Scotia's special green places.

CONSERVATION

NOVA SCOTIA WETLANDS

Input is requested into Nova Scotia's Wetland Conservation Policy; a draft of a new wetland conservation policy has recently been released at **http://www.gov.ns.ca/nse/wetland/docs/Nova.Scotia.Wetland.Conservation.Policy.pdf**.

This draft was developed in response to the 2007 Environmental Goals and Sustainable Prosperity Act mandate that government establish a policy to prevent the net loss of wetlands by the end of 2009. It describes a comprehensive approach that Government can use to ensure that the benefits wetlands provide are maintained for the people of Nova Scotia. Ultimately, the draft policy establishes specific goals and objectives intended to prevent the net loss of Nova Scotia's valuable wetlands.

The public consultation period runs until November 6, 2009. Comments will be received through a 7-point questionnaire online form. To access the online consultation form, go to: **http://www.gov.ns.ca/nse/wetland/conservation.policy.asp**.

For additional assistance regarding review or response, contact John Brazner, Wetland/Water Specialist, Nova Scotia Environment, 424-4936.

BLUE MOUNTAIN/ BIRCH COVE LAKES

Over the summer months, some of you may have had the opportunity to explore the newly declared Blue Mountain/Birch Cove Lakes (BMBCL) Wilderness Area with a group or on your own. The Provincial Crown Lands were protected in April 2009.

HFN members and scientists participated in a 'BioBlitz' early in June that helped the teams identify over 850 species of flora and fauna found within the area by leading hikes and discovery adventures. Back at headquarters, teams returned to their temporary 'labs' to identify and document – exciting times for all over the 24-hour period, including the public who were there to discover the area.

What may not be widely understood is that HRM, in accepting the 25-year Regional Plan in 2006, agreed to complete the BMBCL Regional Park. Part of the land within the proposed Park boundary, however, is privately owned, and includes some of its prime assets: an eight-lake canoe route; shoreline; and park entry points that that can be more easily reached by transit or foot. The area is bounded by Hwy 102 and the edge of Bayers Lake Business Park (near Kent Building Supplies), and is known as a popular swimming and boating area by long time residents – Susie's and Quarry Lakes being the most popular.

The concern by HFN and others is the delay by HRM in acquiring this privately owned land. Indeed, a study which proposes this area for development (i.e. cost of water and sewer services), has been completed for HRM to evaluate. Additional studies may go before Council soon. For more information, please contact your local HRM Councillor and let her/him know that you support the initial HRM decision to keep this as wilderness area and Regional Park. Your grandchildren will thank you for it!

– Bob McDonald

CALL FOR NOMINATIONS

The Halifax Field Naturalists are calling for nominations for the Colin Stewart Conservation Award. Established in 2004 in memory of long-time HFNer and conservationist Colin Stewart (Colin was the first recipient), it goes to a person, persons, or group who have dedicated their time to conserving Nova Scotia's green spaces.

Go to **halifaxfieldnaturalists.ca**, and click on "Conservation" for more details. The deadline for nominations is November 30th, 2009.

NEW HFN WEBSITE ADDRESS

The Halifax field Naturalists have a new website address – **halifaxfieldnaturalists.ca**. The old one, hfn.chebucto.org, will expire in October, so please update your URL lists and bookmarks. As well, we'll be notifying other naturalist associations to change our HFN link coordinates.

HFN TALKS

LABRADOR TRAVELS 4 JUNE

– Patricia L. Chalmers

Recently I found myself at a wine and cheese party, in casual conversation with several CBC journalists, a psychology professor, and a documentary film-maker. The chatter faltered until someone mentioned Labrador. Suddenly everyone became animated, interrupting one another with stories as it emerged that several of us had enjoyed wonderful trips in Labrador, and another had been a resident for nearly a year. I achieved a certain cachet as having stayed at the old island community of Battle Harbour, the most remote of any of our destinations. Everyone wanted to visit, or revisit, more of Labrador.

Why is this, and what is the allure? For Maritimers, Labrador represents the 'near North', the closest really wild northernness which, although far off, we can still visit without a huge expenditure of time, money, or effort. In fact, unlike the high Arctic, reachable only via exorbitantly expensive air travel, we can drive to Labrador, or even take a ferry. However, while many of us may think about it, few of us act on our daydreams.

Last summer Ingrid and Burkhard Plache did just that, travelling by car, coastal ferry and airplane all the way to Nain, a truly remote destination. Their journey was prompted by a casual remark made by another HFN member, Marion Sensen, who has been working as a botanist doing environmental assessments in Happy Valley/Goose Bay. Marion recommended going to see Labrador soon, before several projected industrial developments change the landscape forever.

In August of 2008 Ingrid and Burkhard drove from Nova Scotia to Quebec, along the north shore of the St. Lawrence River, and from Baie-Comeau they headed due north to Labrador City. After driving east on the Trans-Labrador Highway to Happy Valley/Goose Bay, they took the coastal boat up to Nain where they stayed for five days. Then they flew back to HV/GB to pick up their car, took the ferry to Cartwright on the south coast of Labrador, and then drove south to Blanc Sablon to take the ferry across the Strait of Belle Isle to St. Barbe on the island of Newfoundland. The last leg of their journey was more familiar, driving south to Port aux Basques, then across the Cabot Strait via Marine Atlantic ferry to Cape Breton, and thence home to Halifax.

This brief outline of their travels was followed by a fuller account of each segment, Burkhard and Ingrid taking turns relating incidents along the journey. The first part, from Halifax to Happy Valley/Goose Bay, took them three days. The roughest stretch, from Baie-Comeau to Labrador City, a distance of 600 kilometers, was driven in one day. I have heard people reminisce about taking a week to travel this long, sparsely inhabited, mostly gravel road in a camper van, fishing in the abundant lakes and picking berries. However Ingrid and Burkhard had much further to go, so put this part of the journey behind them fairly quickly. Most of the road is gravel, and passes gradually from deciduous to coniferous forest. As they moved north they also climbed higher, and in the elevated terrain the forest was less dense, with a cover of reindeer lichen between the trees. They made a memorable stop to tour Hydro-Quebec's Manic-5 Generating Station, where the immense Daniel Johnson Dam bridges the Manicouagan Valley.

JOHN CABOT LANDING ON THE SHORES OF LABRADOR.

Labrador City, the site of Canada's largest iron ore mine, is just a few kilometres over the border from Quebec. Burkhard showed an aerial photograph picturing a natural lake close beside a tailings pond; the difference in the colour of the water was dramatic. Heading east from Labrador City, on the Trans-Labrador Highway, there are no services until Churchill Falls, 240 kilometers away. This is a land of Black Spruce forest interspersed with bogs. Cotton Grass, *Eriophorum* sp., and Canada Burnet, *Sanguisorba canadensis*, were conspicuous along the road. Churchill Falls is a company town, centred on the huge generating station, 1000 feet underground. Not much is left of the Churchill River itself; the river bed was nearly dry, as so much of the water is diverted to power generation. East of Churchill Falls, the Trans-Labrador Highway continues for a further unserviced 300 kilometres. Then the road descends from the Central Labrador Plateau and the vegetation changes. In the Red Wine Mountains they saw a herd of woodland Caribou, and had the great good luck to photograph four young grey Wolves!

They spent some time at Happy Valley/Goose Bay. With a population of 7500+, this is the biggest centre in Labrador. Goose Bay was built on a low-lying plateau above the floodplain formed where the Churchill River empties into Lake Melville. The soil is sandy, with both spruce and deciduous forests. The terrain is perfect for airplanes, and Goose Bay was developed during World War II as an important military air base, while Happy Valley was built as a civilian settlement. There is a contentious proposal for another immense hydroelectric project at nearby Muskrat Falls on the Lower Churchill River. An undersea cable to take this power to the island of Newfoundland, Nova Scotia – and perhaps the United States – is planned.

At Goose Bay they boarded the MV Northern Ranger, which sailed through Hamilton Inlet out to Groswater Bay en route to Nain. This is not a tourist vessel, but a supply boat carrying freight and passengers. It is a

lifeline for the six Inuit and Innu communities along the northern Labrador coast, from Rigolet to Nain. Rigolet was established in the 18th century as a trading post by French-Canadians; Makkovik was similarly established in the 19th century by Norwegians; and Postville in the 19th century by French-Canadians. Hopedale was founded as a centre of missionary activity by German and English members of the Moravian Brethren. Davis Inlet was created by the federal government as a planned resettlement community for the Innu; the people there have recently moved to the nearby community of Natuashish. Nain, the northernmost stop, was also a Moravian mission. Beyond Nain are the now-abandoned Moravian mission communities of Nutak and Hebron.

The coastal boat operates on a weekly schedule from early June to mid-November, pending ice conditions. The arrival of the vessel is an 'event' in each community, and many locals come on board during the stopover, which lasts an hour and a half. Ingrid and Burkhard, on the other hand, got off the boat at each stop for a brief look around. They had booked a cabin but spent nearly every daylight moment out on the deck, even though it was often cold, damp, and foggy. They brought along their own food, so that they would not be dependent on the boat's cafeteria, which was only open when it was in port!

Nain is located on a headland in Unity Bay, and is sheltered from the Labrador Sea by hundreds of small islands. Ingrid and Burkhard stayed in Nain for nearly a week, living with an Inuit artist who painted scenes from her childhood. They went hiking each day, exploring the area. The land is hilly, 150-200 metres. However, some of their photos reminded me of the glaciated landscape around Peggy's Cove. At 56° north, Nain is still south of the tundra. The vegetation on the hills changes as one climbs, with boreal forest below and barrenland above. From the hilltops they could always see the bay to orient themselves – an important point, since, as I was surprised to learn, they were hiking without a compass!

Ingrid is a botanist and she was particularly interested in the wildflowers and fruits which they found. They showed lovely photos of such typically sub-Arctic and alpine species as Moss Campion, *Silene acaulis*; Greenland Sandwort, *Minuartia grœnlandica*; Blue Mountain-heath, *Phyllodoce cærulea*; the white-flowered Northern Paintbrush, *Castilleja septentrionalis*; and several of the Louseworts, *Pedicularis* sp. Shoreside plants included Harebells, *Campanula rotundifolia*; Roseroot, *Rhodiola rosea*; Scotch Lovage; *Ligusticum scoticum*; and Purple Avens, *Geum rivale*.

Tabea, their hostess, regularly drank tea made from Labrador Tea leaves, *Rhododendron grœnlandicum*, which Ingrid found interesting; however, she said she would not choose it for her daily drink. She and Burkhard were impressed by the abundant berries which they found. These included Whortleberries, *Vaccinium uliginosum*, as tasty as our own lowbush blueberries, as well as Alpine Bearberry, *Arctous alpina*; Common Bearberry, *Arctostaphylos uva-ursi*; and several species of Crowberry, *Empetrum* sp. On one of their hikes they were delighted to find a lovely iridescent sample of Labradorite, a feldspar mineral used as a gemstone which is a specialty of the area.

Voisey's Bay, the immense nickel deposit, is being developed 35 kilometres south of Nain. Its workers are flown in from elsewhere and there is no road connecting the two sites. The main industry in Nain is fishing, with some hunting and trapping. Much of the food is imported from the south; few people in the community of 1000+ could live off the land. Trees which might be used for firewood have all been cut down near inhabited areas, and wild animals are likewise pushed back. No one lives in the old ways, because, paradoxically, to do so requires cash – money to buy gasoline and the ATV's that are now needed to travel long distances from the community. This is just one example of the contradictions of Labrador which Ingrid and Burkhard told us about. It is a vast wild land, still largely unspoiled and yet at the same time the site of some of the largest industrial projects in the country.

2008 IN PICTURES 3 SEPT.

– David Patriquin

In 2008, with his partner Heidi, David Chaisson made a point of hiking, kayaking, and canoeing every single weekend of the year; 49 of those weekends were in Nova Scotia, and it was all well documented in thousands of photos.

Through the slide show, David conveyed his sense of wonder, respect, and love for our natural world. He told us that each December he compiles a photo album with the best photos from the year which he invites his friends to view. This was the first public presentation he had made, but he felt very comfortable sharing it with the HFN folks.

David said that he started to get serious about nature twenty years ago. A dear friend close to the end of his life lamented that he had spent too much of it chasing money and not doing what he was passionate about. David was determined not to do the same. "What is that passion for me?" he asked himself. "I grew up near Lawrencetown Beach; instead of being at a movie theatre, I was out watching ducks; it was obvious my passion is nature."

Over time, David found he was doing more and more weekend hikes, kayaking, and camping. In 2007, he got 'out' on 47 weekends and took 12,000 photos. "How can I ever outdo this?" he asked himself, and the idea of doing all 52 weekends in 2008 was born. It was hardly a seat-of-the-pants operation, evidenced by a spreadsheet

prepared in advance, with all 52 weekends laid out.

David showed us a NASA shot of Nova Scotia, with all of the points marked which he had visited over 20 years. "It is obvious", he said, "that I live near Halifax and am extremely biased toward the Bay of Fundy." He hiked Cape Split 12 times in one year in order to identify his favourite months there; they turned out to be March and November. "Why those months?" he was asked and he replied, "No insects, no tourists, and peaceful." David doesn't take the conventional route at Cape Split, but rather hikes its entirety at sea level. "You have to know the tides very well", he said, "but it *is* do-able".

One of the highlights for the year was to walk around Isle Haute, (but not at sea level!). The name is French for "High Island". Situated 16 km off West Advocate harbour on the Bay of Fundy, the island is 2.5 km long, 600 m wide, with 100 m cliffs all the way around except for one little area at the northeast end. There you find a gravel beach where a boat can be beached and a grassy place big enough to hold four tents.

Kayaking around Cape Chignecto is a particular passion, which he has been doing for the past 5 years. "I was scared to death the first time", he said. Some years the ocean was like glass, others quite the opposite. But he doesn't take chances. Trips are well planned and equipped, but he doesn't hesitate to abandon them at the last minute and drive home if the conditions appear very risky.

David also stressed the importance of eating well on his forays and spoke of the wonderful food they had taken, much of it grown by his wife Heidi in their home garden.

Dave is serious about nature, but not about himself, and he had us laughing through much of his introduction to the slideshow. Then the lights went off and we were transfixed for 20 minutes by hundreds of wonderful images of our natural world, accompanied by the music and songs of Loreena McKennitt.

It was a breathtaking celebration of natural history, and we couldn't have had a more appropriate event for our first meeting of the 2009/2010 year.

Many thanks, David!

FIELD TRIPS

ARNELL LANDS BIOTA; POST-FIRE

– David Patriquin

Date: Thursday, June 25th
Place: Capt. Arnell Conservation Lands, Purcell's Cove
Weather: Clear
Interpreters: Burkhard and Ingrid Plache
Participants:

The Captain Arnell Conservations Lands lie in an approximately 100-metre wide strip, which extends from Purcell's Cove Road to Flat Lake, about 1.3 km inland. They include woodlands, lakeshores, boggy wetlands, and high granite barrens. This area is currently settled only close to Purcell's Cove Road. It was donated to the Nova Scotia Nature Trust by seven grandsons of Captain Kenneth Carstairs Arnell in 2003. HFN donated funds towards the land survey and legal processing, and agreed to conduct a biological inventory of the property. A species list is being compiled through yearly or more frequent walks through the area conducted as part of our regular field trip schedule, and by individuals or small groups at other times. To date, species inventories have been conducted on June 2nd & 4th, 2006; Sept. 22nd, 2007; and May 4th, 2008.

On our June 25th, 2009 excursion we were accompanied by Sally-Jo Gallant and Shannon MacDonald of the Nova Scotia Nature Trust. They told us that an adjacent parcel belonging to the Napier family had recently been donated to the Nature Trust, thereby more than doubling the protected area. That parcel is known as the Napier Family Conservation Lands, and the combined lands as The Purcell's Cove Conservation Lands. The trail that we follow to reach Flat Lake traverses both properties (as well as other privately-owned lands).

On April 30th/May 1st, 2009, an intense forest fire "cut a swath though Spryfield, Purcell's Cove, and Ferguson's Cove" (Chronicle Herald, May 2nd). A substantial part of the combined conservation lands was affected, including most of the land from the high barrens west of Purcell's Pond to Flat Lake. The fire had moved in an eastwardly direction from beyond Flat Lake towards Purcell's Pond, but stopped abruptly at a wide gully containing wetland. On this particular walk, we focused on identifying species emerging from burnt-over land.

Luckily, our trip turned out to be scheduled on one of the few clear days we had during the latter part of June. Participants anticipated seeing signs of recovery after the fire with great interest, and they were not disappointed. Bracken Ferns, seemingly unaffected by the fire, formed a green carpet over much of the blackened soil amidst totally burnt shrubs and trees. Likewise, new shoots of Black Huckleberry had sprung up beside the blackened remnants of the old. Pink Lady's Slipper Orchids were flowering in one area, and new shoots of Red Maple and Grey Birch had come up by the base of some burnt trees. Cones of Jack Pine had opened

in response to the heat of the fire. Less common were patches of Teaberry and Blueberry. Rock Tripe Lichens on large erratics and granite outcrops were mostly well baked, except in locations which had some shelter from the fire. There were only charcoaled remains of the mats of Broom Crowberry that occur over much of the barrens. Clumps of Sphagnum Moss in wettish areas of woodland had an off-white, old cake appearance and showed no signs of fresh growth. However, at least some Pitcher Plants amongst these patches survived and were flowering.

Except in some lower lying areas within the barrens, the soil surface was uniformly charred. But, when we scratched the surface of this thin, highly organic (peaty) soil, brown, unburned organic soil lay only a few millimeters below the charred surface.

Interestingly, the soil's surface on the foot trail that we followed was largely unburned and it stood out prominently amidst the blackened landscape. Presumably it escaped because it was highly compacted and maintained more moisture than the adjacent soil.

Just as Hurricane Juan opened up new vistas of the sea from Point Pleasant Park, we were able to view Flat Lake through the now burned trees well before we got to its shores. The far (west) shore of Flat Lake had also been burned. We were not able to linger very long by Flat Lake as the sun was falling. As if to underscore the fire hazards posed to habitats around Halifax, a group of overnight campers were gathering wood for a fire as we went by Purcell's Pond on our return. Sally-Jo explained to them the dangers of fire, and asked them not to go ahead with it, noting also the Nova Scotia Nature Trust signage that clearly prohibits camping and fires. Such are the challenges to managing an area that includes traditional, if informal (and not fully legal), trails and camping sites.

Most of the barrens vegetation is adapted to fire in some way or another. In this fire, top growth of all species appeared to have been completely destroyed. However, the organic soil was burned only at the surface and thus new growth of highly rhizomatous species such as Huckleberry and Bracken Fern was already prominent. Broom Crowberry is known to recover from fire via its seed bank, with heavy germination occurring a year or two after a fire. The presence of Jack Pine is a pretty good indicator that there has been some history of fires in an area; indeed, Jack Pine seems to be more common around Halifax than anywhere else in the province. Large-tooth Aspen, Grey Birch, and Red Maple are species commonly associated with disturbance regimes, including fire. This is not to say that we need fires! Natural fires and/or other disturbances at relatively long intervals are enough to maintain the barrens vegetation, but excessive burning would reduce them to bare rock or, at best, Blueberry barrens. The more limited damage to lower-lying areas, and the cessation of fire at larger wetlands, also illustrates the importance of wet habitats in reducing fire damage and spread.

The Purcell's Cove Conservation Lands now include similar habitats in areas that were burned and not burned on April 30th. Besides being important for conservation in an urban region, this area can help us to understand more about how local vegetation responds to fire – and, hopefully, how to manage a popular 'urban wilderness' to avoid more of them!

Post-fire and some pre-fire photographs of the Purcell's Cove Conservation Lands are available at **http://halifaxfieldnaturalists.ca/arnell/index.html**.

The U.S. Fire Effects Information Service provides detailed information on the response of individual species to fire; go to **http://www.fs.fed.us/database/feis/plants/index.html**.

ARNELL PLANT SPECIES, POST-FIRE

Bracken Fern	*Pteridium aquilinum*
Grey Birch	*Betula populifolia*
Pitcher Plant	*Sarracenia purpurea*
Largetooth Aspen	*Populus grandidentata*
Teaberry	*Gaultheria procumbens*
Rhodora	*Rhododendron canadense*
Lowbush Blueberry	*Vaccinium angustifolium*
Huckleberry	*Gaylussacia baccata*
Starflower	*Trientalis borealis*
Bunchberry	*Cornus canadensis*
Canada Holly	*Ilex verticillata*
False Holly	*Nemopanthus mucronata*
Red Maple	*Acer rubrum*
Wild Sarsaparilla	*Aralia nudicaulis*
Woolrush	*Scirpus cyperinus*
Pink Lady's-slipper	*Cypripedium acaule*
Panic-grass	*Panicum lanuginosum*

BUTTERFLIES

– Peter Payzant

Date: Saturday, July 11th
Place: Uniacke Estate Museum Park/Pockwock Road
Weather: Mostly sunny, high of 25˚C
Interpreters: Peter and Linda Payzant
Participants: 9 + interpreters

We were rained out on our first date for this trip, but luckily there was a two-day break in the weather and our second date fell on a beautiful sunny day. A quick look around the Uniacke Estate before the rest of the participants arrived gave us the bad news – there were very few butterflies to be seen. This was puzzling because the day before we had seen butterflies in large numbers at another location, and so we had high hopes for Mount Uniacke.

The old 'whale' field had been recently mowed and was particularly barren, so we decided not to waste time there but instead began our trip with a leisurely walk down the entrance road. We saw a few skippers almost immediately, and eventually also caught and identified an Aphrodite Fritillary and a very late Tiger Swallowtail.

As we climbed up the drumlin hill, we saw a few Ringlets, more skippers, and one or two more fritillaries, but the numbers were really low. We decided that it might be more profitable to move on to the Pockwock Road, so we returned to the cars and drove off.

Unfortunately things were much the same along the Pockwock Road. The Knapweed was blooming well, perhaps due to all the recent rain, but there were again very few butterflies. We did get a good look at a Pink-edged Sulphur, some of the participants saw a White Admiral flying by, and we caught a brief glimpse of what might have been a Bog Copper, but unfortunately the bogs were completely flooded and apart from that one, there were no more to be seen.

We always end the walk at a bridge over a little stream, and as usual there were lots of Ebony Jewelwings (damsel-flies) patrolling the sunny spots. The males' iridescent green bodies were especially beautiful in the sunlight.

So, we got most of the usual species, but in very low numbers. Nevertheless, the trip participants did see a good variety of Nova Scotia butterflies.

BUTTERFLY SPECIES LIST

Canadian Tiger Swallowtail	*Papilio canadensis*
Pink-edged Sulphur	*Colias interior*
Summer Azure	*Celastrina neglecta*
Aphrodite Fritillary	*Speyeria aphrodite*
Northern Crescent	*Phyciodes selenis*
White Admiral	*Limenitis arthemis*
Ringlet	*Coenonympha tullia*
European Skipper	*Thymelicus lineola*
Common Branded Skipper	*Hesperia comma*
Peck's Skipper	*Polites peckius*
Tawny-edged Skipper	*Polites themistocles*
Long Dash	*Polites mystic*

RAPIDLY CHANGING LANDSCAPES

– David Patriquin

Date: Friday, July 24th
Place: Shubenacadie Canal; local travel from there.
Weather: Overcast with drizzle; warm.
Interpreters: Ralph Stea, N.S. Dept. Nat. Resources
Participants: 12

Amidst the rain and fog, a dozen or so trekkers met at the N.S. Museum of Natural History. We followed Ralph Stea's yellow jeep across the Angus L. Macdonald bridge to view the mouth of the Schubenacadie Canal system from the bridge-walkway near the bottom of Canal Street in Dartmouth.

Ralph pulled out some large posters with maps and photos and gave us an animated overview of his hypothesis (with lots of factual support) of how the Shubie Canal system is situated on a spillway for the ancient glacial Lake Schubenacadie. That lake formed when retreating or re-advancing glaciers still blocked the outlet of the Schubenacadie River on the Minas Basin; water filled the Schubenacadie Valley and drained southward via two spillways, one entering Halifax Harbour via the route we would follow, and one via what is now the Musquodoboit River system.

After our first stop we drove along a route which goes past five lakes; It began along the shore of Lake Banook, then along the Waverly Road adjacent to lakes Charles, William, Thomas, and Fletcher. These lakes, Ralph told us, are remnants of a continuous meltwater spillway that emanated from glacial Lake Schubenacadie. Along the way we saw steep rock embankments that Ralph told us were probably cut by torrents of glacial meltwater from the former glacial lake.

Finally, we settled under the cover of a picnic table enclosure at Oakfield Park on Schubenacadie-Grand Lake where Ralph continued his geological history. We peppered him with questions, many to do with the implications of his story for climatic change today.

Schubenacadie-Grand Lake is the remnant of glacial Lake Schubenacadie. The lake formed about 14,000 years ago as the glaciers retreated from the southern mainland and it lasted a few hundred years until they had retreated from the Minas Basin, allowing northward drainage into the Minas Basin. The glacial lake reformed for a period beginning about 12,900 years ago, when glaciers re-advanced during an 800-year cold snap (the Younger Dryas). Then the glaciers made their final retreat, leaving us with our present drainage patterns and the remnant Schubenacadie-Grand Lake.

The clay deposits in the Lantz area that are used for making brick were lacustrine (lake) deposits that formed in that glacial lake; the detailed story is quite a bit more complicated (see the paper cited below for some of them).

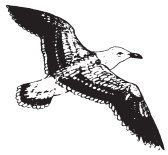
Many thanks to Ralph for sorting it out and sharing it with us!

For more, see A Virtual Field Trip of the Landscapes of Nova Scotia, Stea R. R., and Mott, R. J., 1998; Deglaciation of Nova Scotia; Stratigraphy and chronology of lake sediment cores and buried organic sections. Géog-

raphie Physique et Quaternaire, v. 41, p. 279-290 at **http://www.gov.ns.ca/NATR/MEB/field/start.asp**, and **http://www.gov.ns.ca/NATR/MEB/field/pdf/steamott.pdf**.

MARTINIQUE BEACH FLYWAY

– Jennie Medill



Date: Saturday, August 8th
Place: Boardwalk #8, Martinique Beach
Weather: Sunny and Breezy; 18˚C at the start.
Interpreter: Sue Abbott
Participants: 23

This was a beautiful morning for a hike along the beach and the 22 others were in agreement. We were introduced to Sue Abbott from Bird Studies Canada, who prefaced our walk with background information and a handout of the commonly observed shorebirds on Nova Scotia beaches during fall migration.

Martinique Beach Provincial Park is a designated Important Bird Area (IBA) that lies along a major migration corridor called the Atlantic Flyway. Martinique Beach ends at Bayer's Island and is the longest white sand beach in Nova Scotia. Bayer's Island itself is a 79-acre archipelago recently acquired by the Nature Conservancy of Canada. "It is a continuation of the beach's tidal/cobble beach/dune habitat complex. The Musquodoboit Harbour Outer Estuary totals 4,756 acres and was designated a Ramsar site in 1987. The Ramsar Convention on Wetlands is an intergovernmental treaty signed by 158 countries enlisted in a global effort to ensure the conservation of world-class wetlands" (from The Nature Conservancy of Canada press release, June 24.2009; **www.natureconservancy.ca/site/news**). The park is 150 acres in area and is also a Bird and Game Sanctuary.

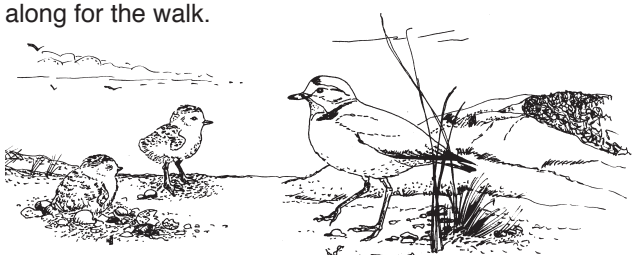
Our group set off across the dunes on the boardwalk and the first sighting was actually a lesson in using our ears and not just our eyes. We could hear a bird chirping that someone said sounds like "steak sizzling on a red-hot pan", but I'm not sure if anyone actually saw the Nelson's Sharp-tailed Sparrow, a songbird of the salt marsh. Our walk took us away from the surfers towards the end of the beach and Bayer's Island. The first sighting was of approximately 40 Semipalmated Plovers on the wet sand. The flock flew off when disturbed by walkers ahead of our group. Sue helped us to tell the difference between Plovers and Sandpipers by looking at the head-to-bill ratio (a Plover's bill is stubby). Second lesson – walk around the flock, as far away as possible, and not through it.

Accompanying us on part of our walk was Gail Geddes, taking time out from a busy day taking care of the park and its many users. In over ten years as a N.S. Natural Resources 'caretaker' of Martinique Beach she has recorded 50 different species of birds. We were all interested in learning about the Piping Plover and hoping to spot one. Two pair of Piping Plovers nested on the beach this year, down from six pair in 2007. In November 2007, tropical storm Noel washed a 50 to 60-ft wide breach through the dunes and this is still widening from wave action. Also, in late June, a storm washed through the same breach and destroyed one Piping Plover nest. One nest survived and the other pair did not rebuild a nest as it was too late in the breeding season. Two birds fledged this year from this site. Three new nesting sites for Piping Plovers have been located on the South Shore this year. The decline in numbers may be attributed to predators such as crows and foxes and interference by humans and their pets. The Piping Plover guardians regularly check for nesting sites, protecting this endangered species by putting fencing around nesting areas and posting notices to keep away from breeding areas.

At this point in the hike we'd seen Black-backed gulls and a Great Blue Heron flying over the dunes towards the bay. On the bay side of the dunes we spotted nine Double-crested Cormorants on the rocks in the bay, three terns (Artic or Common?), a swallow (probably Bank, possibly Tree), and Semipalmated Sandpipers in the flocks of Semipalmated Plovers. Further along the beach we stopped to admire a large gathering of birds which Sue estimated could be as many as 1,000 Semipalmated Plovers. We spent some time scanning the flock with our binoculars and scopes, admiring their flight patterns over the waves and back to the beach. Sue had a possible sighting of a White-rumped Sandpiper in flight and on the water's edge; later on it was positively identified. We also saw Sanderlings at the edge of the waves running in and out of the water.

By this time it was noon and some of the group returned to their cars, but a few of us carried on in hopes of seeing the Piping Plover. After twenty minutes or so we concluded that they must have migrated by now and we turned back towards the parking lot. Our walk back included sightings of more Sanderlings moulting into winter plumage, Black-bellied Plovers, Semipalmated Plovers, and sandpipers. We were lucky to see two Whimbrels with their long, curved beaks and distinct eyebrow – one of the bigger sandpipers. Reluctant to call it a day we scanned the horizon over the ocean and spotted Northern Gannets far out to sea.

It was a totally enjoyable, educational hike. Many thanks to Sue Abbott and the other knowledgeable folks along for the walk.



GAFF POINT

– Bob McDonald

Date: Sunday, September 13th
Place: Gaff Point, south shore
Weather: Cloudy with intermittent rain
Interpreter: Paul MacDonald
Participants: 7

The group met at Hirtle's Beach which is a popular south shore protected beach. We quickly realised at the start of the beach walk that the configuration of the beach, dunes, and boardwalk had suffered as a result of tropical storms Bill and Dan in recent weeks. Sections of boardwalk had been tossed aside, a picnic table was in the reeds, and beach rock had been tossed high up the shore into the row of conifers which were unlikely to survive the salty bath!

In spite of dark clouds in the distance, we set out, observed at a safe distance by a family of grey seals who bobbed about in the waves. Paul pointed out the abundance of seaweeds and Irish Moss that had been brought in by the high seas. Among these was the invasive green kelp, which is found along many south shore beaches now.

Just as we reached the wooded area of Gaff Point, the heavens opened and we all tested our waterproof gear, some more successfully than others! The interpretive panel, posted at the beginning of the trail, reminded us that the 124 acres of protected lands that comprise Gaff Point is the result of gifts from many individuals and others including the Nova Scotia Nature Trust, Nature Conservancy of Canada, and the Kingsburg Coastal Conservancy Inc. (KCC). The latter are responsible for the upgrading of the trails, now corduroy logs and bark chips, in many of the old wet patches. As well, they oversaw the removal of the old 'camp', which was a fire hazard. The trail makes a loop, and in most instances, stays away from the cliff edges on a new route that is drier than the previous boggy path. Continuous monitoring and stewardship is the responsibility of the KCC. The trail is still considered rugged, with tree roots and slippery patches requiring one's attention every step of the way.

At several places along the way, Paul showed us points of interest, including West Ironbound Island, Mosher's Island and in the distant fog, Crescent Beach. We discovered several washed up lobster traps and remnants of lobsters that would have been record-breaking size – too big for traps! A few seabirds were spotted off shore. The common fall wildflowers made an attractive display in the wind, many very short as they clung to their roots! As well, berries picked along the way were a treat. Flora species listed below were those observed in flower or fruit, but many other species were noted; clearly this would be an interesting spring field trip. Many mushrooms lined the trail as well.

On our return, we walked along the cobble dyke next to Mosher's Pond. Across the pond, we observed the newly relocated Octagonal Barn. It had been brought from Granville to be added to the property of a local architect. He plans to make this space available to the community once the upgrades are completed. (His students had a lot of fun putting the pieces back together.)

The waves were strong, with an undercurrent, and several brave souls were enjoying the surf.

All agreed that the 6.5 km hike was pleasant in spite of the rain, and we enjoyed a well-deserved lunch at the end.

Reviewing the Kingsburg Coastal Conservancy website, **www.kccns.org/index.htm**, one can see that they are a busy group, helping to save coastal and beach access areas, challenging government on questionable wetland development approvals, and generally trying to educate all on the positive outcomes that will continue to make the Kingsburg area a welcoming community.

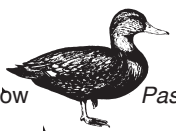
GAFF POINT SPECIES

Flora in Fruit or Flower

Common Juniper	*Juniperus communis*
Creeping Juniper	*Juniperus horizontalis*
Bayberry	*Myrica pensylvanica*
Ladies' Thumb	*Polygonum* sp.
Black Crowberry	*Empetrum nigrum*
Broom Crowberry	*Corema conradii*
Sheep Laurel	*Kalmia angustifolia*
Blueberry	*Vaccinium* sp.
Foxberry	*Vaccinium vitis-idaea*
Large Cranberry	*Vaccinium macrocarpon*
Huckleberry	*Gaylussacia baccata*
Blackberry	*Rubus* sp.
Meadowsweet	*Spiraea latifolia*
Red Clover	*Trifolium pratense*
Queen Anne's Lace	*Daucus carota*
Bindweed sp.	
Twinflower(in bloom; several places!)	*Linnaea borealis*

Rough Goldenrod	*S. puberula*
Seaside Goldenrod	*Solidago sempervirens*
Rough Goldenrod	*S. rugosa*
New York Aster	*Aster novi-belgii*
Tall White Aster	*Aster umbellatus*
Chamomile	*Matricaria chamomilla*
Black Knapweed	*Centaurea nigra*

Fauna



Grey Seal	*Halichoerus grypus*
American Black Duck	*Anas rubripes*
Ring-necked Duck	*Aythya collaris*
Common Eider	*Somateria mollissima*
Double-crested Cormorant	*Phalacrocorax auritus*
Semi-palmated Plover	*Charadrius semipalmatus*
Herring Gull	*Larus argentatus*
Black Guillemot	*Cepphus grylle*
Tern	?*Sterna* sp.
Savannah Sparrow	*Passerculus sandwichensis*
Song Sparrow	*Melospiza melodia*

SOME YNC PAST FIELD TRIPS

HFN, the N.S. Museum of Natural History, and others helped Karen McKendry establish the Young Naturalists Club of Nova Scotia. Following are some of the young participants' postings on the YNC website:

WINTER SURVIVAL TIPS 28 JAN.

– Submitted by Bronwyn

The first thing I learned was to not bring too many safety things because you may not be able to carry all of that stuff but bring things simple like a little kit like one of the leaders had.

Also we learned to make a shelter!

I learned how to make a fire, and that is all that I can think of for now.

– Submitted by Toren E. Hynes

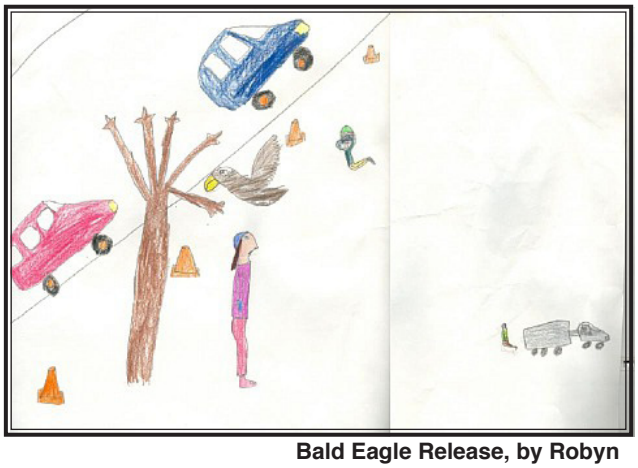
Winter Survival

Note: it is important to read both parts of this report. The first thing to do when you are lost in the woods is to calm down. This is one very important rule: you cannot make anything if you lose your cool! The next thing to do is to build a shelter: you can build a shelter out of odds and ends, out of pine and fir needles and branches, or under a tree stump and cover the front with ice. If you have rope, use it. Do not eat all your food at once: eat it slowly: this way you will have enough food to last you. Then make a fire. Start with leaves, or birchbark from a dead tree. Next add very small branches, then branches a bit bigger, bit bigger, bit bigger till you come to short lenghts of middle-age dead trees. This way you will have a good fire. Then stay put: go with anyone which comes your way: do not run away.

Summer Survival

In the summer, you can build a shelter out of the same materials as in winter. You cannot use ice. But other materials are now easier to get. You do not need a fire for warmth unless you are in a night in early to mid spring or mid to late fall. But a fire does more than give warmth: it also gives light and may give a sense of courage. Now you can fish easy without getting cold. You can make a fishook out of a paper clip. To tie it to a rod, all you would need would be a stick and some of your rope. Here again, if someone comes you should go with them.

FEBRUARY BIRDING TRIP



Bald Eagle Release, by Robyn

Bald Eagle, by Mitchell Wall

PURCELL'S POND 25 MAR.

– Submitted by Karen McKendry & all Participants

Top 10 Signs of Spring (for all the senses!)

See and hear ice melting and cracking
See and hear running water
See new buds on trees
Feels warmer (the air temperature, that is)
See rabbit fur on ground (shedding winter coat)
Feel water that is very cold running in brooks
Hear more birds
See and feel soggy moss
See ferns growing
See left over cranberries on ground

Other 'cool' things we saw

Frozen waterfall
Jack pine cones (need fire to germinate)
Bright orange rocks (slate with sulfur in it)

SALAMANDER NIGHT HIKE 26 APR.

– Submitted by Emma

We went to Hemlock Ravine to find salamanders. We mostly saw yellow-spotted salamanders, but some people found a few red-backed salamanders. Most of the salamanders came out later in the trip. John (the guide) brought a couple yellow-spotted salamanders for us to hold.

When my dad and I were pulling out of the parking lot I rescued a yellow-spotted salamander off of the road and put it to the side of the road.

NATURE NOTES

September

Karen McKendry reported a more-than-usual amount of bird activity along the shore at the Northwest Arm, including a number of **Kingfishers** and **terns**, plus **six Nighthawks**.

Arthur Morris referred to a recent trip to Scotland, where they saw many **grey seals with their pups** at the Ilse of May, in the Firth of Forth, close to Edinburgh. There were also many seabirds, including **Puffin fledglings** jumping from 100-foot high cliffs (with no help from their parents!).

Shirley McIntyre reported that on a trip to Newfoundland she saw a **moose** and **many Puffins** (one from only six feet away). She took a number of pictures – which we assume she'll share with us, perhaps at a members' slide night.

Regine Maass sighted a **14-spotted ladybug** – quite an unusual beetle. She also noted a **lack of mushrooms this yea**r in spite of lots of damp and warm weather.

David Chaisson reported a group (two male, three female) of one of his favourite ducks, **Hooded Mergansers**, near his house. He also saw a **Northern Harrier** and a **Yellow-billed Cuckoo** (brought in by cat; the bird flew away after an overnight rest in a box).

Bob McDonald reported that a Cardinal Flower, *Proylea quatuordecimpunctata*, purchased from the Irving Centre is now blooming.

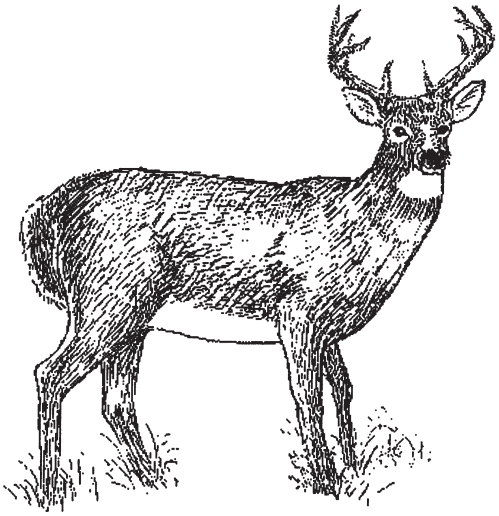
Someone reported a number of **Blue Herons** near Whimsical Lake present throughout August, as well as **Osprey** and **Kingfishers**.

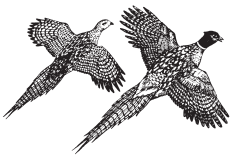
Jim Medill told us of a **plethora of Red Foxes** around the Hammond Plains Road area (no doubt due to the many rabbits present there last year).

Clarence Stevens saw **lots of Hooded Mergansers** this week. He also reported on a **mystery beetle** he found in his shoe – shaped much like a tic but four times as big, with three pairs of armoured bumps on its back. Also, he saw a **mother bear with three cubs** near Abrahams Lake. The cubs were all the same small size, so he assumed they belonged to a second, recently born, group.

Carol Klar reported on a **group of Pileated Woodpeckers** at her cottage – three at the same time.

– Allan Robertson





! HUNTING SEASON !

Black Bear	September 14th to December 5th, excluding Sundays
White-tailed Deer (Bowhunting)	September 26th to October 29th, & December 7th to Dec.12th, excluding Sundays
White-tailed Deer(General Open Season)	October 30th to December 5th, excluding Sundays
White-tailed Deer (Youth Hunters)	October 16th-24th , excluding Sundays
Moose	Sept. 28th-Oct.3rd, Oct. 5th-10th, & December 8th-10th
Ring-necked Pheasant	November 1st to December 15th, excluding Sundays in Annapolis, Kings & Hants Counties
	October 1st to December 15th, excluding Sundays in all other Counties of the province
Ruffed Grouse	October 1st to December 31st, excluding Sundays
Rabbit (Snowshoe Hare)	November 1st to the last day of February, excluding Sundays (hunting)
	November 1st to the last day of February, excluding Sundays (snaring)

! REMEMBER, IT'S HUNTING SEASON, SO DRESS TO BE SEEN IN THE WOODS !

ALMANAC

This almanac is for 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.

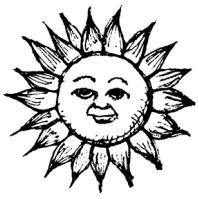
"The autumn is long, and the weather is then delicious; this is decidedly the most pleasant portion of the year. There are usually heavy rains in November; but when not wet, the weather is fine and pleasant; the rivers generally close during the latter part of this month, and in December winter fairly sets in."

– Moses H. Perley, "Course of the Seasons" in A Hand-Book of Information for Emigrants to New Brunswick (1857)

NATURAL EVENTS

4 Sept. Full Moon rises at 19:28.
22 Sept. Autumnal Equinox at 18:18 ADT: Fall begins in the Northern Hemisphere.
28 Sept. Sixth anniversary of Hurricane Juan.
30 Sept. Average date for first frost in Halifax (i.e. Env. Canada predicts a 1:10 chance of frost before this date). Look forward to 210 days of frosty weather.
4 Oct. Full Moon rises at 18:35 ADT.
1 Nov. Daylight Saving Time ends (clocks are set back one hour, from Atlantic Daylight time to Atlantic Standard Time) at 2:00 a.m.
2 Nov. Full Moon rises at 16:32 AST.
22 Nov. Daily minimum temperature goes below 0˚C.
2 Dec. Full Moon rises at 16:42 AST.
7 Dec. Daily average temperature goes below 0˚C.
5-14 Dec. Earliest sunset of the year at 16:34 AST.
13/14 Dec. Geminid Meteor Shower.
14 Dec. -5 Jan. Audubon Christmas Bird Count.
21 Dec. Winter Solstice at 13:47 AST: Winter begins in the Northern Hemisphere; but though the temperature drops, the days begin to lengthen.
27 Dec. -31 Dec. Latest sunrise of the year at 7:51 AST.

SUNRISE AND SUNSET ON AUTUMN AND EARLY WINTER SATURDAYS FOR HALIFAX: 44 39 N, 063 36 W



5	**Sept.**	6:42	19:43	**3**	**Oct.**	7:15	18:51
12	**Sept.**	6:50	19:30	**10**	**Oct.**	7:24	18:38
19	**Sept.**	6:58	19:17	**17**	**Oct.**	7:33	18:26
26	**Sept.**	7:06	19:04	**24**	**Oct.**	7:42	18:15
				31	**Oct.**	7:51	18:04
7	**Nov.**	7:01	16:55	**6**	**Dec.**	7:37	16:34
14	**Nov.**	7:10	16:47	**13**	**Dec.**	7:43	16:34
21	**Nov.**	7:19	16:41	**20**	**Dec.**	7:48	16:36
28	**Nov.**	7:28	16:37	**27**	**Dec.**	7:51	16:41

– Sources: Atmospheric Environment Service, Climate Normals 1951-80 Halifax (Shearwater A) N.S.; Blomidon Naturalists Society's 2009 Calendar; United States Naval Observatory Data Services.

ORGANISATIONAL EVENTS

Blomidon Naturalists Society: Indoor meetings are the 3rd Monday of the month, in the auditorium of The K.C. Irving Environmental Science Centre, University Avenue, Wolfville, 7:30 p.m. Field trips usually depart from the Wolfville Waterfront, Front Street, Wolfville. **http://www.blomidonnaturalists.ca/**.

Each Tues. In the evening, "Acadia University Woodland Trail Biodiversity List", with leader Melanie, 585-1916.
19 Oct. "Cultural and Natural History of Brier Island", with speaker June Swift.
16 Nov. "Sharing Our Environment with Bears", with speaker Tony Nette of DNR in Kentville.
14 Dec. "Galileo, the IYA, and Our Place in the Universe", with speaker Roy Bishop.

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 1st and March 30th, and at either 9:00 p.m. or 10:00 p.m. (depending on when it gets dark) between April 1st and October 31st. For more information, 496-8257; or go to **http://www.smu.ca/academic/science/ap/**.

Friends of McNab's Island: For more information, go to **http://www.mcnabsisland.ca/**

18 Oct. "Fall Foliage Tours"

Maritime Museum of the Atlantic: For more information, 424-7490; or go to **http://museum.gov.ns.ca/mma/index.html**.

3 Nov. "Facing the Atlantic; How Marine Sciences began on Canada's East Coast", with speaker Eric Mills, Professor of Oceanography, Dalhousie University.

1**0 Nov.** "Mapping Halifax Harbour; What Have We Learned?", with speaker Gordon Fader, Atlantic Marine Geological Consulting Ltd.

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, phone Suzanne Borkowski, 445-2922; or go to **http://nsbs.chebucto.org/**.

24 Sept. "Piping Plovers in Nova Scotia; What we Know and Don't Know, and Why there's Hope for Recovery.", with speaker Sue Abbott, Piping Plover Conservation Programme, & Important Bird Area Programme, Nova Scotia.

26 Sept. "Editor's Field Trip, Peggy's Cove Loop", with leader Blake Maybank, 852-2077; **maybank@ns.sympatico.ca**.

3 Oct. "New Birders' Walk, Point Pleasant Park", with leader: Bonnie Carmichael; **bonniecarmichael@hotmail.com**.

22 Oct. "Adventures in Bird Banding from Manitoba to Central America", with speaker Becky Stewart, Maritimes Breeding Bird Atlas.

7 Nov. "New Birders' Walk, Point Pleasant Park", with leader Patricia Chalmers; **plchalmers@ns.sympatico.ca.**

27 Nov. "NSBS Annual General Meeting", followed by a wine and cheese reception.

28 Nov. "Canso and Area", with leaders Tom Kavanaugh, 366-3476; **terri.crane@ns.sympatico.ca**; and Steve Bushell, 366-2527.

29 Nov. "Antigonish Coastal Waters", with leader Randy Lauff, 867-2471; **rlauff@stfx.ca**.

Nova Scotia Museum of Natural History: The Museum of Natural History galleries are closed for renovations until the new year. The auitorium will continue to be open for society meetings. For more information, phone 424-6099, 424-7353; or go to **http://m useum.gov.ns.ca/mnh/**.

Nova Scotia Nature Trust: For more information, 425-5263; or go to **http://www.nsnt.ca/**.

15 Oct. Annual Dinner and Silent Auction, with guest speaker Maude Barlow.

Nova Scotia Wild Flora Society: Meets 4th Monday of the month, September to May, at the Nova Scotia Museum of Natural History, 7:30 p.m. For more information, phone Heather Drope, 423-7032, or go to **http://www.nswildflora.ca/**.

28 Sept. "Plants and Butterflies, the Chemistry of Relationships", with speaker Dr. Phil Schappert.

4 Oct. "Mosses 101 Field Trip at Long Lake Provincial Park", with leader Anne Mills.

26 Oct. "The Wild Flora of Turkey", with speaker Blake Maybank.

23 Nov. "Native Orchids of Nova Scotia", with speaker Heather Drope.

Nova Scotian Institute of Science: Meets 1st Monday of the month, September to April, usually at the Nova Scotia Museum of Natural History, 7:30 p.m. For more information, got to **http://www.chebucto.ns.ca/Science/NSIS/index.html**.

5 Oct. "Feel the force: Mechanoreceptors and Mechanoreception in Spiders", with speaker Ulli Hoeger, Department of Physiology & Biophysics, Dalhousie University.

7 Dec. "Is the Forest Moving North? Consequences for Northern Communities", with speaker: Karen Harper, School of Resource and Environmental Studies, Dalhousie University.

4 Jan. Panel Discussion – "Land protection in Nova Scotia - How do we get to 12%?".

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

Young Naturalists' Club: A fun, free nature club for children eight and over. Meetings take place every 3rd Saturday of the month at the NSMNH at 10:00 a.m.. Field trips are every 4th Sunday, 1:00 p.m. For more information, Karen McKendry, 404-9902; or go to **ync.nature1st.net**.

27 Sept. "All-day Tour of McNabs Island", with leaders Eve and Leopold. **Pre-registration is necessary!**

17 Oct. "Keji Species at Risk",with speaker Heather Read, species-at-risk specialist.

24 Oct. -25 Oct. "Camping in Keji", **at 8:30 a.m**. **This requires at least one parent/guardian per YNC member.**

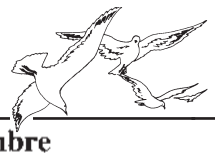
14 Nov. "Book Reading", with ecologist, bear biologist, and award-winning author Jamie Bastedo.

22 Nov. TBA

19 Dec. TBA

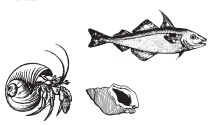
– compiled by Patricia L. Chalmers

HALIFAX TIDE TABLE



October-octobre

Day	Time	Feet	Metres	jour	heure	pieds	mètres
1	0602	**5.2**	1.6	**16**	0002	**1.0**	0.3
	1210	**2.0**	0.6		0600	**6.2**	1.9
TH	1809	**5.2**	1.6	FR	1240	**0.7**	0.2
JE				VE	1825	**5.9**	1.8
2	0024	**1.3**	0.4	**17**	0054	**0.7**	0.2
	0636	**5.6**	1.7		0645	**6.2**	1.9
FR	1248	**1.6**	0.5	SA	1330	**0.3**	0.1
VE	1848	**5.6**	1.7	SA	1913	**5.9**	1.8
3	0101	**1.3**	0.4	**18**	0142	**1.0**	0.3
	0707	**5.6**	1.7		0727	**6.2**	1.9
SA	1326	**1.0**	0.3	SU	1417	**0.3**	0.1
SA	1926	**5.6**	1.7	DI	1959	**5.9**	1.8
4	0136	**1.0**	0.3	**19**	0228	**1.0**	0.3
	0739	**5.9**	1.8		0809	**6.2**	1.9
SU	1405	**0.7**	0.2	MO	1501	**0.3**	0.1
DI	2005	**5.6**	1.7	LU	2045	**5.9**	1.8
5	0211	**1.0**	0.3	**20**	0312	**1.3**	0.4
	0813	**5.9**	1.8		0851	**6.2**	1.9
MO	1444	**0.7**	0.2	TU	1543	**0.7**	0.2
LU	2043	**5.6**	1.7	MA	2129	**5.6**	1.7
6	0248	**1.0**	0.3	**21**	0354	**1.6**	0.5
	0849	**5.9**	1.8		0932	**5.9**	1.8
TU	1526	**0.7**	0.2	WE	1626	**1.0**	0.3
MA	2123	**5.6**	1.7	ME	2212	**5.6**	1.7
7	0328	**1.3**	0.4	**22**	0439	**2.0**	0.6
	0927	**5.9**	1.8		1015	**5.9**	1.8
WE	1611	**0.7**	0.2	TH	1710	**1.3**	0.4
ME	2203	**5.6**	1.7	JE	2255	**5.2**	1.6
8	0415	**1.6**	0.5	**23**	0528	**2.3**	0.7
	1009	**5.9**	1.8		1059	**5.6**	1.7
TH	1704	**0.7**	0.2	FR	1756	**1.6**	0.5
JE	2247	**5.2**	1.6	VE	2339	**5.2**	1.6
9	0512	**2.0**	0.6	**24**	0625	**2.6**	0.8
	1054	**5.9**	1.8		1145	**5.2**	1.6
FR	1803	**1.0**	0.3	SA	1845	**2.0**	0.6
VE	2335	**5.2**	1.6	SA			
10	0622	**2.0**	0.6	**25**	0027	**5.2**	1.6
	1143	**5.6**	1.7		0723	**2.6**	0.8
SA	1907	**1.0**	0.3	SU	1236	**4.9**	1.5
SA				DI	1935	**2.0**	0.6
11	0031	**4.9**	1.5	**26**	0124	**4.9**	1.5
	0732	**2.0**	0.6		0819	**2.6**	0.8
SU	1240	**5.6**	1.7	MO	1334	**4.9**	1.5
DI	2010	**1.0**	0.3	LU	2024	**2.0**	0.6
12	0137	**4.9**	1.5	**27**	0232	**4.9**	1.5
	0839	**2.0**	0.6		0912	**2.6**	0.8
MO	1349	**5.6**	1.7	TU	1442	**4.6**	1.4
LU	2111	**1.0**	0.3	MA	2113	**2.0**	0.6
13	0259	**5.2**	1.6	**28**	0340	**5.2**	1.6
	0943	**2.0**	0.6		1001	**2.3**	0.7
TU	1511	**5.2**	1.6	WE	1549	**4.9**	1.5
MA	2210	**1.0**	0.3	ME	2202	**2.0**	0.6
14	0415	**5.6**	1.7	**29**	0432	**5.2**	1.6
	1045	**1.6**	0.5		1048	**2.0**	0.6
WE	1629	**5.6**	1.7	TH	1645	**4.9**	1.5
ME	2307	**1.0**	0.3	JE	2249	**1.6**	0.5
15	0512	**5.9**	1.8	**30**	0513	**5.6**	1.7
	1145	**1.0**	0.3		1132	**1.6**	0.5
TH	1732	**5.6**	1.7	FR	1733	**4.9**	1.5
JE				VE	2334	**1.6**	0.5
				31	0549	**5.6**	1.7
					1215	**1.3**	0.4
				SA	1817	**5.2**	1.6
				SA			



November-novembre

Day	Time	Feet	Metres	jour	heure	pieds	mètres
1	0017	**1.3**	0.4	**16**	0124	**1.3**	0.4
	0624	**5.9**	1.8		0659	**5.9**	1.8
SU	1258	**0.7**	0.2	MO	1356	**0.3**	0.1
DI	1858	**5.2**	1.6	LU	1942	**5.6**	1.7
2	0059	**1.3**	0.4	**17**	0210	**1.6**	0.5
	0700	**5.9**	1.8		0743	**5.9**	1.8
MO	1340	**0.3**	0.1	TU	1438	**0.7**	0.2
LU	1940	**5.2**	1.6	MA	2027	**5.6**	1.7
3	0142	**1.3**	0.4	**18**	0253	**1.6**	0.5
	0739	**6.2**	1.9		0825	**5.9**	1.8
TU	1424	**0.3**	0.1	WE	1518	**0.7**	0.2
MA	2022	**5.6**	1.7	ME	2111	**5.6**	1.7
4	0227	**1.3**	0.4	**19**	0334	**2.0**	0.6
	0822	**6.2**	1.9		0908	**5.9**	1.8
WE	1511	**0.3**	0.1	TH	1557	**1.0**	0.3
ME	2105	**5.6**	1.7	JE	2153	**5.6**	1.7
5	0315	**1.3**	0.4	**20**	0414	**2.3**	0.7
	0907	**6.2**	1.9		0952	**5.6**	1.7
TH	1600	**0.3**	0.1	FR	1636	**1.3**	0.4
JE	2151	**5.6**	1.7	VE	2235	**5.6**	1.7
6	0410	**1.6**	0.5	**21**	0456	**2.3**	0.7
	0954	**5.9**	1.8		1035	**5.6**	1.7
FR	1655	**0.3**	0.1	SA	1716	**1.6**	0.5
VE	2240	**5.6**	1.7	SA	2316	**5.6**	1.7
7	0514	**1.6**	0.5	**22**	0545	**2.6**	0.8
	1043	**5.9**	1.8		1118	**5.2**	1.6
SA	1754	**0.7**	0.2	SU	1757	**2.0**	0.6
SA	2332	**5.2**	1.6	DI	2359	**5.2**	1.6
8	0623	**2.0**	0.6	**23**	0637	**2.6**	0.8
	1136	**5.9**	1.8		1203	**5.2**	1.6
SU	1854	**0.7**	0.2	MO	1841	**2.0**	0.6
DI				LU			
9	0028	**5.2**	1.6	**24**	0047	**5.2**	1.6
	0730	**2.0**	0.6		0731	**2.6**	0.8
MO	1235	**5.6**	1.7	TU	1251	**4.9**	1.5
LU	1954	**1.0**	0.3	MA	1927	**2.0**	0.6
10	0131	**5.2**	1.6	**25**	0139	**5.2**	1.6
	0833	**1.6**	0.5		0823	**2.6**	0.8
TU	1342	**5.2**	1.6	WE	1346	**4.9**	1.5
MA	2052	**1.0**	0.3	ME	2015	**2.0**	0.6
11	0241	**5.6**	1.7	**26**	0235	**5.2**	1.6
	0935	**1.6**	0.5		0913	**2.3**	0.7
WE	1459	**5.2**	1.6	TH	1449	**4.6**	1.4
ME	2149	**1.0**	0.3	JE	2104	**2.0**	0.6
12	0347	**5.6**	1.7	**27**	0328	**5.2**	1.6
	1034	**1.3**	0.4		1003	**2.0**	0.6
TH	1613	**5.2**	1.6	FR	1554	**4.6**	1.4
JE	2246	**1.3**	0.4	VE	2155	**2.0**	0.6
13	0442	**5.9**	1.8	**28**	0415	**5.6**	1.7
	1130	**1.0**	0.3		1051	**1.6**	0.5
FR	1715	**5.2**	1.6	SA	1652	**4.9**	1.5
VE	2342	**1.3**	0.4	SA	2246	**2.0**	0.6
14	0531	**5.9**	1.8	**29**	0458	**5.6**	1.7
	1222	**0.7**	0.2		1140	**1.0**	0.3
SA	1808	**5.6**	1.7	SU	1743	**4.9**	1.5
SA				DI	2337	**1.6**	0.5
15	0035	**1.3**	0.4	**30**	0541	**5.9**	1.8
	0616	**5.9**	1.8		1229	**0.7**	0.2
SU	1311	**0.7**	0.2	MO	1830	**5.2**	1.6
DI	1856	**5.6**	1.7	LU			

ALL TIMES ARE AST

December-décembre

Day	Time	Feet	Metres	jour	heure	pieds	mètres
1	0028	**1.6**	0.5	**16**	0154	**2.0**	0.6
	0626	**5.9**	1.8		0723	**5.9**	1.8
TU	1317	**0.3**	0.1	WE	1418	**0.7**	0.2
MA	1916	**5.2**	1.6	ME	2012	**5.6**	1.7
2	0119	**1.3**	0.4	**17**	0235	**2.0**	0.6
	0713	**6.2**	1.9		0807	**5.9**	1.8
WE	1406	**0.0**	0.0	TH	1456	**1.0**	0.3
ME	2003	**5.6**	1.7	JE	2054	**5.6**	1.7
3	0211	**1.3**	0.4	**18**	0311	**2.0**	0.6
	0802	**6.2**	1.9		0850	**5.9**	1.8
TH	1456	**0.0**	0.0	FR	1533	**1.0**	0.3
JE	2052	**5.6**	1.7	VE	2134	**5.6**	1.7
4	0306	**1.3**	0.4	**19**	0346	**2.3**	0.7
	0853	**6.2**	1.9		0932	**5.9**	1.8
FR	1548	**0.0**	0.0	SA	1607	**1.3**	0.4
VE	2142	**5.9**	1.8	SA	2212	**5.6**	1.7
5	0405	**1.3**	0.4	**20**	0422	**2.3**	0.7
	0944	**6.2**	1.9		1012	**5.6**	1.7
SA	1642	**0.0**	0.0	SU	1640	**1.3**	0.4
SA	2234	**5.9**	1.8	DI	2250	**5.6**	1.7
6	0509	**1.6**	0.5	**21**	0502	**2.3**	0.7
	1036	**6.2**	1.9		1051	**5.6**	1.7
SU	1738	**0.3**	0.1	MO	1714	**1.6**	0.5
DI	2325	**5.9**	1.8	LU	2328	**5.6**	1.7
7	0615	**1.6**	0.5	**22**	0549	**2.3**	0.7
	1130	**5.9**	1.8		1130	**5.2**	1.6
MO	1836	**0.7**	0.2	TU	1752	**1.6**	0.5
LU				MA			
8	0018	**5.9**	1.8	**23**	0007	**5.6**	1.7
	0718	**1.6**	0.5		0640	**2.3**	0.7
TU	1226	**5.6**	1.7	WE	1211	**4.9**	1.5
MA	1933	**0.7**	0.2	ME	1835	**2.0**	0.6
9	0112	**5.6**	1.7	**24**	0047	**5.6**	1.7
	0819	**1.3**	0.4		0733	**2.3**	0.7
WE	1328	**5.2**	1.6	TH	1257	**4.9**	1.5
ME	2030	**1.0**	0.3	JE	1923	**2.0**	0.6
10	0210	**5.6**	1.7	**25**	0131	**5.6**	1.7
	0918	**1.3**	0.4		0825	**2.0**	0.6
TH	1437	**4.9**	1.5	FR	1352	**4.6**	1.4
JE	2128	**1.3**	0.4	VE	2014	**2.0**	0.6
11	0310	**5.6**	1.7	**26**	0220	**5.2**	1.6
	1015	**1.0**	0.3		0917	**2.0**	0.6
FR	1549	**4.9**	1.5	SA	1457	**4.6**	1.4
VE	2225	**1.3**	0.4	SA	2109	**2.0**	0.6
12	0409	**5.6**	1.7	**27**	0313	**5.6**	1.7
	1110	**1.0**	0.3		1011	**1.3**	0.4
SA	1654	**4.9**	1.5	SU	1605	**4.6**	1.4
SA	2323	**1.6**	0.5	DI	2206	**2.0**	0.6
13	0502	**5.6**	1.7	**28**	0408	**5.6**	1.7
	1202	**0.7**	0.2		1106	**1.0**	0.3
SU	1750	**5.2**	1.6	MO	1707	**4.9**	1.5
DI				LU	2305	**2.0**	0.6
14	0018	**1.6**	0.5	**29**	0504	**5.9**	1.8
	0552	**5.6**	1.7		1201	**0.7**	0.2
MO	1251	**0.7**	0.2	TU	1802	**4.9**	1.5
LU	1840	**5.2**	1.6	MA			
15	0108	**1.6**	0.5	**30**	0003	**1.6**	0.5
	0638	**5.6**	1.7		0559	**6.2**	1.9
TU	1336	**0.7**	0.2	WE	1255	**0.3**	0.1
MA	1928	**5.2**	1.6	ME	1854	**5.2**	1.6
				31	0059	**1.3**	0.4
					0654	**6.2**	1.9
				TH	1348	**0.0**	0.0
				JE	1946	**5.6**	1.7

NEXT DEADLINE

21st of November for the December Issue
Send contributions to 'Newsletter', c/o NS Museum of Natural History,
or email submissions to sdhaythorn@ns.sympatico.ca

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