

# THE HALIFAX FIELD NATURALIST



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September to November, 2012



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

**HFN** is incorporated under the Nova Scotia Societies Act and holds Registered Charity status with 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 Nova Scotia, 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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<b>Vice-President</b>	Clarence Stevens .....
<b>Treasurer</b>	Doris Balch .....
<b>Secretary</b>	Richard Beazley .....
<b>Past President</b>	Allan Robertson .....
<b>Directors</b>	Grace Beazley, Elliott Hayes, Burkhard Plache, Ingrid Plache, Lillian Risley, Stephanie Robertson.

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	Janet Dalton .....
	Elliott Hayes .....
	James Medill .....
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	Stephanie Robertson .....

### Design

### Newsletter

Editor & Design	Stephanie Robertson .....
Almanac	Patricia Chalmers .....
Taxonomy	Ursula Grigg .....
Distribution	Bernice Moores .....
Labels	Doug Linzey .....

### Tea Break

Regine Maass .....	
<b>Conservation</b>	Bob McDonald .....
<b>NNS Rep.</b>	Burkhard Plache .....
<b>YNC Rep.</b>	David Patriquin .....
<b>PSAs</b>	Jim Medill .....
<b>Web Design</b>	David Patriquin .....

### FEES 2010/2011

<b>Student</b> .....	\$15.00 per year
<b>Individual</b> .....	\$20.00 per year
<b>Family</b> .....	\$25.00 per year
<b>Supporting</b> .....	\$30.00 per year
<b>NNS (opt.)</b> .....	\$5.00 per year

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# HFN NEWS AND ANNOUNCEMENTS

## FROM THE EDITOR

– *Stephanie Robertson*

September 21st, 9:00 a.m.: – a Great Blue Heron – at a very low tide and in a light rain at Black Rock Beach, Point Pleasant Park! What a treat; several of us dog walkers stayed to admire as it unconcernedly watched *us*. The usual cormorants were not impressed by this rare visitor as it posed majestically amongst the exposed seaweeds on its watery rock near the main outcrop. No young ring-necked snake sightings there this year as I was at Melmerby Beach during snake hatching time – mid- to late August.

There were many early a.m. Great Blue sightings at Melmerby as expected; along with lots of the usual birds at our feeders (plus chipmunks and squirrels, quite tame). A beautiful summer for nature watching; let's hope it continues into autumn!

## CALL FOR NOMINATIONS

The Halifax Field Naturalists are once again calling for nominations for our annual Colin Stewart Conservation Award. Established in 2004 in memory of long-time HFNER and conservationist Colin Stewart, who was the first recipient, it goes to a person, persons, or group who have dedicated their time to conserving Nova Scotia's green spaces. Colin served on our Board for over twenty years and was essentially our one-person Conservation Committee, instrumental in getting The Halifax Public Gardens' 'significant trees' identified and then signed, establishing the Piping Plover Guardian Program, the Nova Scotia Trails Federation, and the Federation of Nova Scotia Naturalists (now Nature Nova Scotia). Colin was also the WWF Endangered Spaces Coordinator for the Province, and helped to set aside 31 new 'Protected Areas' in Nova Scotia. He developed management plans for several parks and other natural areas, and was a founding member of the Nova Scotia Nature Trust. Colin was a very effective and passionate spokesperson for the naturalist community, especially when required to 'get onside and on board' the various levels of government necessary for effective change.

Go to [halifaxfieldnaturalists.ca](http://halifaxfieldnaturalists.ca), and click on 'Conservation' for more details, an outline of the criteria for eligibility, and a nomination form. The deadline for nominations is November 30th, 2012.

## A THANK YOU TO HFN

This past January Bob McDonald wrote a letter of support on behalf of HFN so that the Musquodoboit Trailways Association (MTA) might have a chance to win one of 30 grants offered by the Provincial Government:

"To whom it may concern,

I am writing in support of the MTA and their application for funding to enhance and improve their extensive trail system. These are popular trails within the Halifax Regional Municipality that are used regularly by residents and visitors to explore nature within close proximity to the city. Sections of the trail are accessible year round so can add to the nature experience with animal tracks in winter or bird song in spring. The colourful autumn leaves are a sight to behold.

As it is within easy access to two of Nova Scotia's Wilderness Areas, White Lake Wilderness Area and Ship Harbour Long Lake Wilderness Area, the trails attract both the wilderness hiker, those on skis or snowshoes as well as the trail walker and cyclists – truly multi-purpose. Local residents regularly use it for active recreation and to maintain a healthy lifestyle.

Improving the trail base will make this a much better and safer experience. And the fact that there are outhouses makes it almost unique! Michael Haynes describes the wilderness trails as, "only for the fit, but you are rewarded with magnificent views" – this would be views of the Harbour in the distance or circling eagles, as well as the rich green habitat below the ridge and along the adjacent river, or the wildflowers at your feet.

The Halifax Field Naturalists regularly make use of trails such as these for their interpretive walks and hikes. We look forward to our next visit to the MTA trail system.

Sincerely,

Bob McDonald,

Director and member of Conservation Committee, HFN

In reply, Bob has recently received this from the MTA:

"On behalf of our Board, trail members, sponsors and our many users, I would like to take this opportunity to thank you for your organisation's letter of support of our recreational facility development grant application.

At this time I would like to pass on the good news that the Musquodoboit Trailways Association was the recipient of one of 30 grants in the Central Region and one of seven trail groups sharing in \$122,000 for development, upgrading, and restoration of trails. The \$35,000 Musquodoboit Trailway grant will supplement a Capital Grant of \$100,000 from the Halifax Regional Municipality. The funds will be used to upgrade the Rail Trail between Kilometre 9.75 (2.25 km north of the Kelly Meadow Bridge) and the Gibraltar Parking lot on Highway 357. This project is the first phase of a three-phase program to bring the entire trail up to the matchless standards that our users expect.

So, again, many thanks. In the meantime, I do hope that you can get out and enjoy the trail. Till next year when we will be asking for your support for Phase 2, remember that the trail starts with you, the supporters of the trail.

Sincerely

Stanley Van Dyke, Chair, MTA"

## NNS 2012 AGM

– *Stephanie Robertson*

We did not attend the 2012 Nature Nova Scotia AGM this year, as we chose to attend only one major annual naturalist trip – to Bon Portage – for which we had successfully bid, along with two other couples, during last year's annual Nova Scotia Nature Trust dinner. However, Bob and Wendy McDonald did attend the NNS AGM, and Bob gave a short report at June's monthly HFN meeting. About 30 to 35 people attended, this year held in Tatamagouche, from May 25th to May 27th. It was rather a disappointing turnout, but this was offset by the fact that quite a few young naturalists from YNC attended, with their parents, and their enthusiasm and energy livened up the weekend immensely.

# HFN TALKS

## TIDAL POWER

6 SEPT.

– Lillian Risley

The tidal power story is not a new one. The oldest recorded use of it in Europe was in a 7th century monastery in Northern Ireland. Locals there found a barrier structure and a channel which had been dug right through a neck of land where tidal water runs in and out. When the tide dropped, some of the outflowing water was trapped behind the barrier and diverted through the channel which then powered a grain mill. In 1616, London Bridge had four tidal wheels to pump water in and out of the city, and in other parts of Europe remnants have been found that indicate use of tidal flows to grind grain. For the last 110 years, there have been barrages built to create opportunities for creation of power. France has one that has been in use for the last 50 years, New England tidal flows are used for the milling of lumber, and here in Annapolis, since 1985, a barrage produces power and also serves to mitigate damage to agriculture land at times of extreme tides.

Nova Scotia's Bay of Fundy is an environment of extremes. The tides can be up to 16 metres in height and the speed of the water can be as high as eight km/hour. More water comes into the Bay of Fundy in a six-hour flood tide than flows out of all the rivers of the world; these characteristics make it a high potential energy source. But – there are important competing demands: Fundy is home to important fisheries; its aggregate is used for construction; and tourism and transportation are important to the area, as are considerations for species at risk. Fundy also has a complex make-up; the Outer Bay has clear water with a bottom of rocks and seaweed, while the Inner Bay is turbid with mudflats and salt marshes. Visibility during the rising tide is less than an inch in the Cornwallis River (but fish, somehow, still find their way in).

The (new) Windsor salt marsh is the richest, most productive one in North America, and the Bay of Fundy mud flats are extremely important to migrating birds. Seabirds travelling south from the Arctic stop for two weeks on these flats and will double their weight in that time. Then they fly non-stop to central and northern South America. Tagged shad come to the Bay of Fundy from all of the eastern American bays, and, as well, salmon, tuna, and eels are regular residents. Right Whales calve in the Caribbean but come to Fundy to feed; in all, fifteen species of mammals come to the Bay and a dozen of them feed there.

We can get energy from tides by using the potential energy of stored water (trapped behind an artificial barrier when tides flow in) to turn turbines; or by using the kinetic energy of tidal flow by placing a turbine directly in its path. The first way generates much more power than the second, but is very expensive (constructing causeways, blocking natural tides during construction, installing large turbines, etc.). The second generates much less power but is relatively inexpensive as it only involves turbines anchored to the ocean floor.

In 2006 a survey was taken of Canadian locations where energy could be generated by flowing water. B.C. has many sites but each has only small water flows. The far north has huge flows with enormous power potential if a device could be made which would survive those flows' great forces. The same situation occurs in the Bay of Fundy at Minas Basin, Digby Gut, Passamaquoddy Bay, and Chignecto Bay. Many designs are being considered, but no clear leader is evident yet. An experimental turbine for the kinetic energy approach was installed in Minas Basin (with the greatest flow of water in the Bay of Fundy); if a turbine anchored to the ocean floor were successful there, other locations would be even easier. However, it was soon destroyed by the Basin's extreme water flows, showing just how challenging the kinetic approach will be.

There is also a proposal for a lagoon in Cobequid Bay, storing incoming water for its subsequent release to create power at low tide. It has many opponents but its proponents have been seeking international interest. A number of environmental issues are being examined: tides; sediments; ice and debris; benthic studies; electric grid connections; fish migration; noise and debris effects; bio-fouling; and the present lack of monitoring technologies (for example, we cannot yet measure fish migratory behaviour). Work has begun to gather the needed information, but the extreme conditions of water speed and ice and debris make research and monitoring difficult. Last summer, 65 monitoring devices were deployed in the Bay; only 34 were recovered—battery failures had prevented many of these devices from being released. It has been difficult to convince designers that the severe conditions necessitate 'over-engineering', but there has been recent interest from large industrial leaders such as Siemens and Rolls Royce that may have a positive effect. Also, the communities that border the Bay of Fundy have been working to identify ways in which they can interact with the developers to create local opportunities and minimise negative impacts.

## FIELD TRIPS

### CAPE SPLIT



– Patrick Kelly

**Date:** Saturday, May 19th

**Place:** Cape Split, Bay of Fundy

**Weather:** Wonderful; sunny, 23°C, slight breezes

**Interpreter:** Richard Beazley

**Participants:** ±12



This was a joint trip with the Blomidon Naturalists Society and the Halifax Field Naturalists, and we had about a dozen people with roughly equal numbers from both organisations.

As with the previous week's trip on Saturday, May 12th, the weather was near perfect and we saw many of the same plants and birds.

I don't recall seeing or hearing any chipmunks on this trip, but the Purple Finches were singing at the start of the trail, and the Winter Wren was heard at the same location, and even though it sounded quite close to the trail and well off the forest floor, none of us was able to spot it.

At the site of the old clear-cut, we were all treated to the song, and great views, of a pair of American Redstarts.

Once we were well into the Sugar Maple/Yellow Birch part of the trail, we heard a very vocal Least Flycatcher, and the Black-throated Green Warblers were frequent. The Spring Beauty was again in full bloom, which was a nice treat, as the weather and peak blossoming of this plant rarely allows for great displays on both trips.

At the tip of Cape Split, we had lunch, with people breaking up into groups. Larry Bogan and I spent some time watching a group of about 40 birds out on the water. They had been there the previous week, but too far out to see well enough to identify, other than that they were black and therefore not the eiders sometimes seen off the Cape. This time they were closer, and we eventually determined that they were Black Scoters.

Different groups returned at their leisure and by different routes. Some of us took the lower path that runs along the south side of the Split to the small cove where you can descend a steep path (with the help of a rope). The way from there back to the main trail is now well marked with coloured tape. The one drawback of this route is that you lose most (or all – if you go the beach way) of the elevation you gained on the inward trip, so you end up ‘climbing’ Cape Split twice.

Larry and I came back this way, rediscovering the patch of variant Tooth-wort on the main trail.



## OLD ANNAPOLIS ROAD HIKING TRAIL

— *Richard Beazley*

**Date:** Saturday, July 28th

**Place:** near Exit 5, Hwy #103, Bowater Mersey lands

**Weather:** ±22°C, mostly sunny

**Interpreter:** Richard Beazley

**Participants:** 9

At 9:30 a.m. on a very beautiful July day, an eager group of nine Halifax Field Naturalists met in the parking lot of the mostly shaded, two-loop, 4.2 km Old Annapolis Road (OAR) Hiking Trail. Until late this spring there was a kiosk there, often with trail maps, and also a pit toilet with garbage bins nearby. No more!

At present the ‘use-at-your-own-risk’ sign at the parking lot indicates that the trail is no longer being maintained. Resolute Forest Products, owners of the recently closed Bowater Mersey Paper Company Ltd., owns the land on which lies this pocket wilderness and trail system. This ‘Bowater-Mersey St. Margaret’s Bay District’ comprises approximately 400 sq km – or – 40,000 ha.

Starting near the southwest edge of the parking lot, the trail’s Island Lake Loop goes downhill through a mixed forest. About 200 m along, it joins a portion of the OAR at the north end of Rees Lake. Here, where the trail’s bridge crosses Rees Brook, we saw remnants of a dam from years gone by when lakes and rivers in the area were used extensively to transport logs. In the early 1800s, the prosperous logging communities of Wellington and Kempton were established along this road, which was intended to stretch from Halifax through New Ross to Annapolis Royal – a

road never completed because of the granite bedrock and huge bogs between New Ross and Halifax. In the late 1860s, a large fire destroyed much of this area, and the communities slowly dwindled away; by the early 1900s they were finally abandoned.

In short order the trail leaves the OAR and goes along the entire west side of Rees Lake while brushing the east side of Island Lake. First, through more mixed forest and then along the lakes’ shores, we had good views of wetlands, small bogs, and lake edges, especially when crossing a substantial wooden bridge and some deteriorating boardwalks.

Moving away from the lakes, we proceeded uphill through a mostly coniferous forest with moss-laden granite floor and lichen-adorned trees. This stretch of the trail exhibits narrow bands of what looks like wind-damaged trees. Besides being home to a variety of wildlife, of which we observed very little, this area offers relics of human activity as well. On the trail is a clearing with an information panel about an old logging camp; there were rusty pieces of an old woodstove, a tin bucket, and tin cans in the nearby forest edge. It said “From 1929, when the Mersey Paper Company began making newsprint, until the 1960s, logging camps were the centre of woodland operations. Men went to the camps late in the fall and, except for an occasional trip home, they stayed until spring.” Difficult for us to comprehend! In a boggy area we saw a dark pool of thick, muddy water, which some thought could be a bear wallow.

Shortly thereafter the Island Lake Loop heads back to the parking lot, and here the Hay Shed Hill Loop begins. Along this loop are opportunities to see old forest, managed forest, and, of course, a no-forest area recovering from clear-cutting. An information panel in the old forest indicates that the impressively large Red Spruce trees are over 125 years old. They serve to remind us of the even grander nature of pre-European forests in Nova Scotia, very little of which remains today. In 1987 the Red Spruce was proclaimed the Nova Scotia Provincial Tree in recognition of its importance to the forest products industry, reforestation, and its ‘spiritual’ value to settlers who “used its needles to brew beer.”

After lunch in the old forest we crossed the gravel entrance road and walked into the managed forest, with its more than 85-year-old Red Spruce, Balsam Fir, and Red Maple trees. This area has undergone periodic pre-commercial and commercial thinning and consequently its remaining trees are impressively tall and straight. Juxtaposed is a clear-cut area with its tangle of bushes, brambles, and crowded deciduous trees. The edge of the forest bordering the clear-cut, as one might expect, has its share of blown-down trees. After another kilometre along the trail, through a very narrow part (soon to be overgrown because of no maintenance), and across a boardwalk over an underground brook, we arrived back at the parking lot. So ended a very interesting four-hour hike!

The future of this recreational trail, possibly the oldest ‘official’ trail in HRM outside of a park, is in peril. The St. Margaret’s Bay land which includes it was on the preliminary list of properties considered recently for purchase by the Province of Nova Scotia as part of the \$50 million bailout of Bowater Mersey Paper Company Ltd., but – it didn’t make the final list. At an open-house meeting, held the day before the announcement of its closure and impending dismantling, it was mentioned that they would consider having a volunteer group take over maintenance of the trails.



More recently, a 'Buy Back the Mersey' campaign has gotten underway to have the Government of Nova Scotia buy the land that includes the OAR Hiking Trail. (Go to <http://www.heartofthebay.ca/Issues/BuyBackTheMersey/tabid/145/Default.aspx>.) As well as being important for forestry and recreation, the lake system supports two hydroelectric generators, and the land itself provides important wildlife connectivity between areas on, and adjacent to, the Chebucto Peninsula as well as the broader Nova Scotia mainland.

Let's hope this land is procured by the Government and designated for protection, good managed-forest practices, and recreation.

### Acknowledgement

Thanks to David Patriquin, Charles Cron, Jim Medill, Dusan Soudek, and [www.peggyscoveboattours.com](http://www.peggyscoveboattours.com) for flora identification, background information, and/or details about the current state of affairs at the Old Annapolis Road Hiking Trail.

### OAR SPECIES

(It is fair to say that the hikers on this HFN field trip were mainly interested in flora, to the near exclusion of fauna and birds. This was due to the proclivities of the hikers themselves and to the great variety of flora along the trail's loops.)

#### Fauna

Springtime Bluet	<i>Enallagma cyathigerum cyathigerum</i>
Bullfrog	<i>Rana catesbeiana</i>
American Toad	<i>Bufo americanus</i>
Red Squirrel	<i>Tamiasciurus hudsonicus</i>



#### Flora

Fly Agaric	<i>Amanita muscaria</i>
Lungwort (a lichen)	<i>Pulmonaria officinalis</i>
Reindeer Moss (a lichen)	<i>Cladonia</i> sp.
Stair-step Moss (a moss)	<i>Hylocomium splendens</i>
Three-lobed Bazzania (a liverwort)	<i>Bazzania trilobata</i>
Cinnamon Fern	<i>Osmunda cinnamomea</i>
Bracken	<i>Pteridium aquilinum</i>
Hay-scented Fern	<i>Dennstaedtia punctilobula</i>
New York Fern	<i>Trelypteris noveboracensis</i>
Spinulose Wood Fern	<i>Dryopteris carthusiana</i>
Common Oak Fern	<i>Gymnocarpium dryopteris</i>
Rock Polypody	<i>Polypodium virginianum</i>
Balsam Fir	<i>Abies balsamea</i>
Red Spruce	<i>Picea rubens</i>
White Pine	<i>Pinus strobus</i>
Gold-thread	<i>Coptis trifolia</i>
Yellow Birch	<i>Betula alleghaniensis</i>
White Birch	<i>Betula papyrifera</i>
St. John's Wort	<i>Hypericum perforatum</i>
Pitcher-plant	<i>Sarracenia purpurea</i>
Thread-leaved Sundew	<i>Drosera filiformis</i>
Creeping Snowberry	<i>Gaultheria hispidula</i>
Rhodora	<i>Rhododendron canadense</i>
Mayflower/Trailing Arbutus	<i>Epigaea repens</i>
Blueberry	<i>Vaccinium angustifolium</i>
Huckleberry	<i>Gaylussacia baccata</i>
One-sided Wintergreen	<i>Pyrola secunda</i>
Indian Pipe	<i>Monotropa uniflora</i>
Blackberry	<i>Rubus</i> sp.
Indian Pear/Shadbush	<i>Amelanchier</i> sp.
Black Chokeberry	<i>Aronia melanocarpa</i>
Wood-sorrel	<i>Oxalis</i> sp.
Bunchberry	<i>Cornus Canadensis</i>
Red Maple	<i>Acer rubrum</i>
Heal-all	<i>Prunella vulgaris</i>
Broom Sedge	<i>Carex scoparia</i>
Tawny Cotton Grass	<i>Eriophorum virginicum</i>



White Beak-rush  
Bur-reed  
Pickerel-weed  
Clintonia Lily  
Painted Trillium  
Coral-root  
Indian Cucumber-root

*Rhyncospora alba*  
*Sparganium americanum*  
*Pontederia cordata*  
*Clintonia borealis*  
*Trillium undulatum*  
*Corallorhiza* sp.  
*Medeola virginiana*

## A TALE OF TWO TRAILS

— David Patriquin

### PCCL'S FLORA AND FAUNA

**Date:** Saturday, August 18th

**Place:** Purcell's Cove Conservation Lands

**Weather:** Sun and cloud, approx. 24°C

**Leaders:** Alice Morgan (NSNT); David Patriquin (HFN)

**Participants:** 14



### COLPITT LAKE BACK COUNTRY

**Date:** Saturday, August 25th

**Place:** Colpitt/Williams Lake area

**Weather:** Sun and cloud, approx. 25°C

**Leader:** Burkhard Plache

**Participants:** 5



On two successive weekends in August, HFN hikes took us over two trails into 'The Backlands' on the Halifax south mainland. This large block of undeveloped land lies between Williams Lake Road and Powers Pond (near Herring Cove) six km to the SE. It is bounded by Purcell's and Herring Cove Roads to the NE and SW. Approximately 16 km<sup>2</sup> in area, it is rough glacial terrain of mostly exposed bedrock, with the dark Meguma rocks prominent near Williams Lake, and granitic rock over the remainder. There are only pockets of alluvial and lacustrine deposits or till, but the till cover is extensive towards Herring Cove; Macintosh Run flows across part of it. Although commonly described as 'undeveloped land', it is better described as a wilderness — there are no roads across it, (currently, only a few residential streets penetrate at the margins) and exotic species are rare in the vegetation. A relatively short walk into the area leaves the sounds of urban life behind, and, unless one of the few well marked trails is followed, hikers may have to do some bushwhacking!

**For the first walk**, on Aug. 12th, we followed Nova Scotia Nature Trust's (NSNT) Alice Morgan over a trail that traverses the only formally protected land in The Backlands — the Purcell's Cove Conservation Lands (PCCL). They occupy a long strip, approx 260 m wide, extending from Purcell's Cove Road, and over Purcell's Pond, to Flat Lake — approximately 1.4 km inland. These lands were donated to the Nova Scotia Nature Trust (NSNT) by members of the Field and Napier families in 2003 and 2009 respectively. HFN contributed towards the initial legal costs and conducts annual species inventories there for the NSNT.

Initially, the trail crosses land outside of the PCCL; later it enters it near Purcell's Pond. In the past, our annual inventories covered species encountered over the entire trail. This year, we restricted the inventory to the portion of the trail that lies only within the PCCL. Furthermore, we documented species in burnt and unburnt areas separately. The 2009 'Spryfield Fire' moved from beyond Flat Lake towards Purcell's Pond, stopping at a large wetland between the two lakes. Mostly what burned were barrens with Jack Pine, ericaceous bushes, and some mixed forest (mainly Black Spruce, Red Maple, birch, and Big Tooth Aspen) on shallow

soil over granitic bedrock. This landscape dries quickly and so is prone to recurrent fires; HFNers have watched with interest the recovery of vegetation at this and other barrens sites after the Spryfield fire.

In our 2012 inventory, 30 species of vascular plants were observed only in the unburnt sections of the trail, ten only in burnt sections, while 21 occurred in both sections. Of the ten species observed only in burnt sections, Bristly Sarsparilla is typically a transient, early successional, post-disturbance species and could well be restricted to the burnt sections; possibly the same is true for Pinweed, but it is likely that the others occur also in unburnt areas. Many of the total of 31 species observed in the burnt sections are in some way adapted to fire, e.g. the Jack Pine, whose cones require high temperatures to open; Black Huckleberry, which sprouts new shoots from below-ground rhizomes; and Broom Crowberry, which re-establishes from buried seed after a fire.

On the other hand, many or most of the 30 species observed only in unburnt sections of the trail are wetland species (e.g., Round-leaved Sundew, Tawny Cotton Grass) or species not generally associated with landscapes where there are frequent fires (e.g., Hobblebush, Wych Hazel).

Missing in our 2012 inventory are a number of species previously encountered only between the trailhead and Purcell's Pond. That section of the trail, which is not in the PCCL, goes alongside, across, or close to the stream draining Purcell's Pond. Also, it goes through areas where there is some accumulation of till, and through steep embankments leading down to the stream. Moisture-loving species and species characteristic of older forests such as Hobblebush, Striped Maple, and Yellow Birch are common in that area, but are largely absent from the trail beyond the bottom of Purcell's Pond. In future efforts, we'll need to examine the area that lies within the PCCL between Purcell's Cove Road and Purcell's Pond, as well as to give more attention to wetlands and some groups which we have not documented at all (e.g., mosses), or not very thoroughly (e.g. sedges).

As always, newcomers to this annual HFN/NSNT walk and to the PCCL marvel at the rugged beauty of the landscape we traverse. Even the burnt forest now offers its own splendor in the striking contrast between the dark, burnt trees and the bright, colourful regenerating deciduous vegetation, now covering 100% of the burnt ground after only three years. And there was an extra special treat this year – ripe Blueberries and Huckleberries in abundance!

**The second walk**, a week later, took us over a less well-trodden trail between Williams Lake and Colpitt Lake. It was led by HFN member Burkhard Plache, who knows The Backlands intimately. Located less than two km away from the PCCL, the landscape is broadly similar to it, with an undulating topography, high barrens, mixed forest, and low-lying wetlands. In spite of the many efforts by the Williams Lake Conservation Company and others to restrain development of private lands adjacent to these lakes, new developments are ongoing, and the route we took will be most likely completely transformed to residential landscapes within the next decade.

We began at a popular swimming spot by the dam at Williams Lake, proceeded south through lush mixed forest, skirted the high barrens (most of which had burnt on May 23rd of this year), and then descended again through mixed woods to the western tip of Colpitt Lake. The exposed rock

here consisted mostly of black slates and siltstones of the Meguma group (Cambo-Ordovician) close to Williams Lake, with fairly abrupt transitions to Devonian-Carboniferous granites well away from it. (Exposed rock at PCCL is granitic except close to the trailhead.)

As for the PCCL, there is a history of recurrent fires in the Williams and Colpitt lakes area, with large areas last burnt in the 1960s. The tall and massive pines around the eastern side of Williams Lake are apparently survivors of those fires, perhaps approaching a century in age. Otherwise, the oldest trees likely date back only to the 1960s. As at PCCL, Jack Pines abound on the high barrens, a sure indicator of a long history of recurrent fires.

As we walked, we took particular note of streams and wetlands, speculating on how development might affect the area's hydrological regimes and the water quality of Williams Lake. At a lush gully just east of the lake, we could hear water moving below massive boulders; surface flows occur there only in the spring and during heavy rainfalls. The vegetation in the gully was much like that along the stream draining Purcell's Pond, with a beautiful subcanopy of Striped Maple.

We noted one area which held no water on that day but was muddy from runoff at other times, and we wondered if it would qualify as a wetland to be protected when construction starts in the area. Similarly we wondered about the fate of a small picturesque wetland dominated by graminoids. We then passed by two relatively larger wetlands which we assumed would not be developed, but we speculated that new roads and developments on higher land would affect their integrity nonetheless.

Then we took a small side-trip to reach a high point on the recently burnt barrens. One could turn 360 degrees and see buildings at only a few points on the far horizon. Lower down, they're not visible at all; it is largely bush-whacking territory, and all urban noise is blocked out. This is remarkable, given the presence of the fully urban landscapes and its traffic only a kilometre or so away. These burnt barrens shared the vegetation and visual aspects of the PCCL burnt lands during the first summer after the spring fire of 2009. Cones of burnt Jack Pine had opened to spread their seed, and already there was substantive regeneration of Huckleberry, and sprouts from birch and Red Maple. Interestingly, Pinweed, which we had seen at only one small site on PCCL burnt barrens, was quite abundant here.

At one point on the high barrens we encountered a gleaming boulder perched on a granitic outcrop. Two artists amongst us immediately recognised it as 'Michael's Rock' and were quite excited to see this fabled artwork. It consisted of a large boulder covered with tin (or aluminum) foil. It had been constructed four or five years previously and Michael had apparently maintained it, even after the most recent fire. It was interesting to think about a piece of art to be so situated, with no plaques to indicate the artist or the purpose, and few to observe it. I saw it as an acknowledgement of the wilderness as its own world.

Also intriguing were several lower lying areas where there were massive accumulations of large, angular boulders, most of them composed of the dark Meguma rock. I sent photos to two geologist friends and was referred to John Gosse of the Dalhousie Department of Earth Sciences. He commented, "They do look like small, localised felsenmeer (sea-of-rocks) fields, but the slope suggests that



there may be a different genesis. Without being there it is difficult to be certain, but these kinds of boulder zones are common in glaciated regions. They form either subglacially or, more commonly, along the sides of retreating ice margins. Specifically this looks like a lateral meltwater channel, formed along the side of an ice lobe, with the water flowing downslope. The meltwater stream would have removed the finer sediment and left the larger boulders alone. The angularity of the boulders is also interesting. This is typical in these situations, where the stream was short lived and did not have the energy to round the boulders' edges. On the other hand, boulders that are transported some distance by glaciers will also lose their angularity (depending on hardness and distance of course). That these boulders appear so angular suggests to me that they may not have been transported very far subglacially (though they were certainly covered by ice during the last major glaciation), and therefore may indicate a zone of the ice sheet that was cold-based (stuck to the substrate for most of its history, instead of sliding and transporting the boulders a long way)".

As we descended towards Colpitt Lake, we again entered some pleasantly cool, mixed forest. We lunched at the western end where a stream flows out, and eventually into, Williams Lake. Amongst us was Geoffrey Grantham, a local landscape artist who lives on Purcell's Cove Road and paints wonderful impressions of the Purcell's Backlands 'en plein air'. He told us about one of his favourite spots, just up the lake a bit and we asked him to take us there. We passed by a solitary fly fisher on the way, then sat on the shore of a small cove. It was a nice setting to pause before our return hike. Geoffrey talked about the scene and how it changed through the day and the seasons. Not far away, heavy machinery was at work bashing up more barrens to further extend a new development above Colpitt Lake. Soon, these mechanical dinosaurs would be devouring most of the area over which we had walked. I felt compelled to take lots of photographs. A few weeks later I went to the opening of Geoffrey's "In The Middle of Somewhere: Images from the Purcell's Cove Backlands" at the Swoon Gallery. I was grateful that Geoffrey had captured so well a sense of these places before they are lost, and to the NS Nature Trust for conserving a few of them.

See <http://halifaxfieldnaturalists.ca/backlands> for links to photos from these walks as well as to the full 2012 PCCL inventory.

## PCCL SPECIES

(\* = new records)

### Fauna

#### Lepidoptera

Spring Azure

#### Odonata

Emerald sp.

Meadowhawk

#### Birds

American Black Duck

Osprey

Mourning Dove

American Crow

Common Raven

Black-capped Chickadee

American Robin

Common Yellowthroat

Dark-eyed Junco

White-throated Sparrow



*Celastrina argiolus*

?

*Sympetrum* sp.



*Anas rubripes*

*Pandion haliaetus*

*Zenaidura macroura*

*Corvus brachyrhynchos*

*Corvus corax*

*Parus atricapillus*

*Turdus migratorius*

*Geothlypis trichas*

*Junco hyemalis*

*Zonotrichia albicollis*

## Other Vertebrates

Garter snake

Coyote (scat)

*Thamnophis sirtalis*

*Canis latrans*

## Flora

### Only in unburnt sections of the trail

\*Tree Clubmoss

Cinnamon Fern

\*Hay-scented Fern

Balsam Fir

White Spruce

Red Spruce

Hemlock

Eastern Larch/Tamarack

White Pine

Gold-thread

Witch-hazel

Sweet Gale

Pitcher Plant

Round-leaved Sundew

Leatherleaf

Starflower

Dewberry

Shadbush/Indian Pear

Inkberry

\*Canada Holly

Cow-wheat

Partridgeberry

\*Oldfield Goldenrod

Whorled Wood Aster

Bog Aster

Blue-bead Lily

Tawny Cotton Grass

Wild Lily of the Valley

Pink Lady's Slipper

*Lycopodium obscurum*

*Osmunda cinnamomea*

*Dennstaedtia punctilobula*

*Abies balsamea*

*Picea glauca*

*Picea rubens*

*Tsuga canadensis*

*Larix laricina*

*Pinus strobus*

*Coptis trifolia*

*Hamamelis virginiana*

*Myrica gale*

*Sarracenia purpurea*

*Drosera rotundifolia*

*Chamaedaphne calyculata*

*Trientalis borealis*

*Rubus hispida*

*Amelanchier* sp.

*Ilex glabra*

*I. verticillata*

*Melampyrum lineare*

*Mitchella repens*

*Solidago nemoralis*

*Aster acuminatus*

*Aster nemoralis*

*Clintonia borealis*

*Eriophorum virginicum*

*Maianthemum canadense*

*Cypripedium acaule*

### Only in burnt sections

Red Oak

White Birch

\*Green/Downy Alder

Mountain Sandwort

\*Pinweed

Large-toothed Aspen

Velvet-leaf Blueberry

\*Black Chokeberry

Three-toothed Cinquefoil

Bristly Sarsaparilla

*Quercus rubra*

*Betula papyrifera*

*Alnus viridis*

*Arenaria groenlandica*

*Lechea intermedia*

*Populus grandidentata*

*Vaccinium myrtilloides*

*Aronia melanocarpa*

*Potentilla tridentata*

*Aralia hispida*

### In both unburnt and burnt sections

Bracken

Black Spruce

Jack Pine

Bayberry

Wire Birch

Hudsonia

Broom-crowberry

Wintergreen/Teaberry

Labrador-tea

Rhodora

Sheep Laurel/Lambkill

Mayflower

Lowbush Blueberry

Huckleberry

Bunchberry

Mountain Holly

Red Maple

Wild Sarsaparilla

Witherod

Rough Goldenrod

*Pteridium aquilinum*

*Picea mariana*

*Pinus banksiana*

*Myrica pensylvanica*

*Betula populifolia*

*Hudsonia ericoides*

*Corema conradii*

*Gaultheria procumbens*

*Ledum groenlandicum*

*Rhododendron canadense*

*Kalmia angustifolia*

*Epigaea repens*

*Vaccinium angustifolium*

*Gaylussacia baccata*

*Cornus Canadensis*

*Nemopanthus mucronata*

*Acer rubrum*

*Aralia nudicaulis*

*Viburnum cassinoides*

*Solidago puberula*





# 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 end of summer is the beginning of gourds. How you love that word, gourds. Said so rarely except this time of year. Heavy with promise and gravitas ... The pumpkin is one of the species, largest and most numinous. It begins to rise like an underground moon from its vines, where it has grown in secret all July and August. If you rap your knuckles on the rind, it makes you want to tell a joke: knock, knock.

– from “The End of Summer” by Lorna Crozier (2012)

## NATURAL EVENTS

- 22 Sept.** Autumnal Equinox at 11:49 ADT: Fall begins in the Northern Hemisphere.
- 28 Sept.** Ninth anniversary of Hurricane Juan.
- 30 Sept.** Full Moon. Moonrise of ‘the Harvest Moon’ at 18:53 ADT.
- 30 Sept.** Average date for first frost in Halifax: Environment Canada says there is only a 1:10 chance we’ll have frost before this date. Look forward to 210 days of frosty weather.
- 12 Oct.** Moon and Venus in dawn.
- 29 Oct.** Full Moon. Moonrise at 17:54 ADT.
- 4 Nov.** Daylight Saving Time ends (clocks are set back one hour) and Atlantic Savings time begins at 2:00 a.m.
- 11 Nov.** Moon and Venus in dawn.
- 22 Nov.** Daily minimum temperature goes below 0°C.
- 26 Nov.** -**27 Nov.** Saturn beside Venus in dawn.
- 28 Nov.** Full Moon: Moonrise at 16:48 AST: Jupiter above Moon.
- 7 Dec.** Daily average temperature goes below 0°C.
- 5 Dec.** -**13 Dec.** Earliest Sunset of the year at 16:34 AST.
- 11 Dec.** Moon and Venus in dawn.
- 13/14 Dec.** Geminid Meteor Shower.
- 14 Dec.** -**5 Jan.** Audubon Christmas Bird Count Period.
- 21 Dec.** Winter Solstice at 7:12 AST: Winter begins in the Northern Hemisphere: But though the temperature drops, the days begin to lengthen.
- 25 Dec.** Jupiter above Moon.
- 27 Dec.** -**31 Dec.** Latest Sunrise of the year at 7:51 AST.
- 28 Dec.** Full Moon. Moonrise at 17:17 AST.

– Sources: Atmospheric Environment Service, Climate Normals 1951-80 Halifax (Shearwater A) N.S.; United States Naval Observatory Data Services.

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



<b>1 Sept.</b>	6:37	19:50	<b>6 Oct.</b>	7:19	18:45
<b>8 Sept.</b>	6:46	19:37	<b>13 Oct.</b>	7:28	18:33
<b>15 Sept.</b>	6:54	19:24	<b>20 Oct.</b>	7:37	18:21
<b>22 Sept.</b>	7:02	19:11	<b>27 Oct.</b>	7:46	18:10
<b>29 Sept.</b>	7:10	18:56			
<b>3 Nov.</b>	7:55	18:00	<b>1 Dec.</b>	7:32	16:35
<b>10 Nov.</b>	7:05	16:51	<b>8 Dec.</b>	7:39	16:34
<b>17 Nov.</b>	7:14	16:44	<b>15 Dec.</b>	7:45	16:35
<b>24 Nov.</b>	7:23	16:39	<b>22 Dec.</b>	7:49	16:38
			<b>29 Dec.</b>	7:51	16:42

## ORGANISATIONAL EVENTS

**Blomidon Naturalists Society:** Indoor meetings are held on the 3rd Monday of the month, in Room BAC241 of the Beveridge Arts Centre of Acadia University, Wolfville, at 7:30 p.m. Field trips usually depart from the Wolfville Waterfront, Front Street, Wolfville. For more information, go to <http://www.blomidonnaturalists.ca/>.

- 17 Sept.** “Set Course for Ceti Alpha V”, with speaker Patrick Kelly, Dalhousie University.
- 13 Oct.** **Rain date 14 Oct.** “Invasive Tree and Shrub Species”, with leader George Alliston, 542-3651, [alliston@xcountry.tv](mailto:alliston@xcountry.tv).
- 15 Oct.** “A Vicarious Trip to Bon Portage Island”, with speaker Claire Diggins.
- 21 Oct.** “Learning to Identify Common Tree/Shrub Species Without ...” “...Leaves & Blossoms”, with leader George Forsyth.
- 19 Nov.** “Looking for a White Needle in a Snow-covered Haystack” (Ivory Gulls), with speaker Dr. Mark Mallory, of Acadia U.
- 10 Dec.** “Tracking Nova Scotia’s Most Elusive Shrews”, with speaker Dr. Donald Stewart, Acadia University.
- 21 Dec.** “Winter Solstice Family Frolic”, with leaders Charlane Bishop, 542-2217, and Harold Forsyth, 542-5983.

**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:** <http://www.mcnabsisland.ca/>, or contact Carolyn, 477-0187, or Cathy, 434-2254.

**14 Oct. Rain date 21 Oct.** "McNabs Island Fall Foliage Tours".

**Nova Scotia Bird Society:** Indoor meetings usually take place on the 4th Thursday of the month, September to April, at the Nova Scotia Museum of Natural History, 7:30 p.m. For more information phone Chris Pepper, 829-3478, [cpepper@ymail.com](mailto:cpepper@ymail.com), or email the trip leader, or <http://nsbs.chebucto.org/>.

**19 Sept.** "Big Tancook Island, Lunenburg Co.", with leader Blake Maybank, 852-2077, [bmaybank@gmail.com](mailto:bmaybank@gmail.com).

**21 Sept. -23 Sept.** "Brier Island Weekend, Digby Co.", with leader James Hirtle, 530-2101, [jrhbirder@hotmail.com](mailto:jrhbirder@hotmail.com).

**23 Sept.** "New Birders' Walk, Lawrencetown, HRM", with leaders Chris Pepper, 483-6693, [cpepper@ymail.com](mailto:cpepper@ymail.com); and Kate Steele, 476-2883.

**27 Sept.** "Presentation of ABA's Ludlow Griscom Award to Ian McLaren, and launch of his new book *All The Birds of Nova Scotia*".

**14 Oct.** "Migrants; Taylor Head Prov. Park, HRM", with leaders Jim Cameron, 885-2970, [jim.cameron@ns.sympatico.ca](mailto:jim.cameron@ns.sympatico.ca); and Warren Parsons, 772-2207, [rosalieeast@ns.sympatico.ca](mailto:rosalieeast@ns.sympatico.ca).

**25 Oct.** "Members' Photo Night".

**22 Nov.** "Annual General Meeting", followed by a wine and cheese reception.

**25 Nov.** "Winter Birds at Taylor Head Provincial Park, HRM", with leaders Jim Cameron, 885-2970, [jim.cameron@ns.sympatico.ca](mailto:jim.cameron@ns.sympatico.ca); and Warren Parsons, 772-2207, [rosalieeast@ns.sympatico.ca](mailto:rosalieeast@ns.sympatico.ca).

**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 at museums, parks, and tourist bureaus, and on the web at <http://www.novascotiaparks.ca/>.

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

**15 Sept. -13 Jan.** "Illegal Killer Trade: the Illegal Trade of Animals Throughout the World".

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

**24 Sept.** "Plant Communities/Rare Species on Coastal Barrens in NS", with speaker Katie Porter, St. Mary's University.

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

**5 Nov.** "Dying to Live:" "... Programmed Cell Death in Plant Development" with speaker Dr. Gunawardena, Dalhousie.

**21 Nov.** "The Natural History of a Sustainable Institution: The Nova Scotian Institute of (Natural) Science since 1862", with speaker Dr. Suzanne Zeller, Wilfrid Laurier U., at the Potter Auditorium, Rowe Bldg., Dalhousie.

**3 Dec.** "Canadian Marine Science from the Titanic to BIO", with speaker Dr. Eric Mills, Dalhousie.

**7 Jan.** "Seachange in the Ocean: What do We Know? How do We Know It?", with speaker Dr. Doug Wallace, Dalhousie.

**Royal Astronomical Society of Canada (Halifax Chapter):** Meets the third 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/>.

**17 Aug. -19 Aug.** "NOVA EAST 2012", Atlantic Canada's longest-running star party, will be held at Smiley's Provincial Park near Brooklyn in Hants County. This year's guest speaker is David Levy.

**Young Naturalists' Club:** A fun, free nature club for children eight and older. Meetings take place every third Saturday of the month (excepting July and August), at the Maritime Museum of the Atlantic, 1675 Lower Water St., at 10:00 a.m. Field trips take place every fourth Sunday, at 1:00 p.m. For more info, Robin Musselman, 455-5643, [yncns@yahoo.ca](mailto:yncns@yahoo.ca); <http://nature1st.net/ync>.

**15 Sept. Sat., MNH, 10:30-11:30 a.m.** "Trees, Shrubs, Berries", with Karen Harper, Plant Community Ecologist, Dalhousie.

**23 Sept. Sun., 1:00 p.m.** "Urban nature Walk", with Jeremy Lundholme, ecologist, SMU. **Please contact YNC to register.**

**20 Oct. Sat., MNH, 10:30-11:30 a.m.** "The Fascinating World of Insects", with Andrew Hebda, Biology Curator, MNH.

**28 Oct. Sun., 1:00 p.m.,** "Watershed Walk/Pond Dipping at Shubie". with Valerie Francella. Please contact YNC to register.

**17 Nov. Sat., MNH, 10:30-11:30am,** "Seabirds of our Coast", with biologist Carina Gjerdrum, Canadian Wildlife Service.

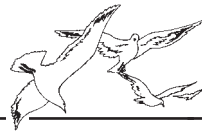
**25 Nov. Sun.,** "Hike, Five Bridge Lakes Wilderness Area", with Dave Patriquin, HFN. **Please contact YNC to register.**

– compiled by Patricia L. Chalmers





# HALIFAX TIDE TABLE



## October-octobre

## November-novembre

## December-décembre

Day	Time	Feet	Metres	jour	heure	pieds	mètres	Day	Time	Feet	Metres	jour	heure	pieds	mètres	Day	Time	Feet	Metres	jour	heure	pieds	mètres
<b>1</b>	0240	<b>1.0</b>	0.3	<b>16</b>	0157	<b>0.7</b>	0.2	<b>1</b>	0315	<b>2.0</b>	0.6	<b>16</b>	0333	<b>1.0</b>	0.3	<b>1</b>	0324	<b>2.3</b>	0.7	<b>16</b>	0422	<b>1.0</b>	0.3
MO	0823	<b>5.9</b>	1.8		0756	<b>6.6</b>	2.0		0906	<b>5.6</b>	1.7		0915	<b>6.6</b>	2.0		0919	<b>5.6</b>	1.7		0953	<b>6.2</b>	1.9
LU	1503	<b>1.0</b>	0.3	TU	1440	<b>0.0</b>	0.0	TH	1541	<b>1.0</b>	0.3	FR	1612	<b>0.0</b>	0.0	SA	1551	<b>1.0</b>	0.3	SU	1649	<b>0.0</b>	0.0
	2050	<b>5.9</b>	1.8	MA	2029	<b>5.9</b>	1.8	JE	2146	<b>5.6</b>	1.7	VE	2159	<b>5.9</b>	1.8	SA	2201	<b>5.6</b>	1.7	DI	2236	<b>6.2</b>	1.9
<b>2</b>	0313	<b>1.3</b>	0.4	<b>17</b>	0248	<b>0.7</b>	0.2	<b>2</b>	0345	<b>2.3</b>	0.7	<b>17</b>	0436	<b>1.0</b>	0.3	<b>2</b>	0401	<b>2.3</b>	0.7	<b>17</b>	0523	<b>1.3</b>	0.4
	0859	<b>5.9</b>	1.8		0843	<b>6.6</b>	2.0		0943	<b>5.6</b>	1.7		1007	<b>6.2</b>	1.9		0957	<b>5.6</b>	1.7		1044	<b>6.2</b>	1.9
TU	1538	<b>1.0</b>	0.3	WE	1532	<b>0.0</b>	0.0	FR	1615	<b>1.3</b>	0.4	SA	1709	<b>0.0</b>	0.0	SU	1629	<b>1.3</b>	0.4	MO	1743	<b>0.3</b>	0.1
MA	2130	<b>5.6</b>	1.7	ME	2119	<b>5.9</b>	1.8	VE	2223	<b>5.2</b>	1.6	SA	2251	<b>5.9</b>	1.8	DI	2238	<b>5.6</b>	1.7	LU	2325	<b>6.2</b>	1.9
<b>3</b>	0342	<b>1.6</b>	0.5	<b>18</b>	0343	<b>0.7</b>	0.2	<b>3</b>	0422	<b>2.3</b>	0.7	<b>18</b>	0541	<b>1.3</b>	0.4	<b>3</b>	0445	<b>2.3</b>	0.7	<b>18</b>	0624	<b>1.3</b>	0.4
	0936	<b>5.9</b>	1.8		0931	<b>6.6</b>	2.0		1021	<b>5.6</b>	1.7		1059	<b>5.9</b>	1.8		1034	<b>5.6</b>	1.7		1135	<b>5.9</b>	1.8
WE	1611	<b>1.3</b>	0.4	TH	1627	<b>0.0</b>	0.0	SA	1654	<b>1.6</b>	0.5	SU	1808	<b>0.3</b>	0.1	MO	1710	<b>1.3</b>	0.4	TU	1838	<b>1.0</b>	0.3
ME	2208	<b>5.6</b>	1.7	JE	2209	<b>5.9</b>	1.8	SA	2300	<b>5.2</b>	1.6	DI	2344	<b>5.9</b>	1.8	LU	2316	<b>5.6</b>	1.7	MA			
<b>4</b>	0412	<b>2.0</b>	0.6	<b>19</b>	0445	<b>1.0</b>	0.3	<b>4</b>	0508	<b>2.6</b>	0.8	<b>19</b>	0646	<b>1.6</b>	0.5	<b>4</b>	0537	<b>2.3</b>	0.7	<b>19</b>	0013	<b>5.9</b>	1.8
	1013	<b>5.6</b>	1.7		1021	<b>6.2</b>	1.9		1059	<b>5.6</b>	1.7		1153	<b>5.6</b>	1.7		1114	<b>5.6</b>	1.7		0723	<b>1.6</b>	0.5
TH	1647	<b>1.3</b>	0.4	FR	1726	<b>0.3</b>	0.1	SU	1738	<b>1.6</b>	0.5	MO	1906	<b>0.7</b>	0.2	TU	1756	<b>1.6</b>	0.5	WE	1227	<b>5.2</b>	1.6
JE	2246	<b>5.2</b>	1.6	VE	2301	<b>5.6</b>	1.7	DI	2340	<b>5.2</b>	1.6	LU				MA	2356	<b>5.6</b>	1.7	ME	1932	<b>1.3</b>	0.4
<b>5</b>	0448	<b>2.3</b>	0.7	<b>20</b>	0552	<b>1.3</b>	0.4	<b>5</b>	0605	<b>2.6</b>	0.8	<b>20</b>	0038	<b>5.6</b>	1.7	<b>5</b>	0633	<b>2.3</b>	0.7	<b>20</b>	0103	<b>5.6</b>	1.7
	1051	<b>5.6</b>	1.7		1112	<b>5.9</b>	1.8		1140	<b>5.2</b>	1.6		0748	<b>1.6</b>	0.5		1157	<b>5.2</b>	1.6		0820	<b>1.6</b>	0.5
FR	1728	<b>1.6</b>	0.5	SA	1827	<b>0.7</b>	0.2	MO	1828	<b>2.0</b>	0.6	TU	1251	<b>5.2</b>	1.6	WE	1845	<b>1.6</b>	0.5	TH	1323	<b>4.9</b>	1.5
VE	2325	<b>5.2</b>	1.6	SA	2355	<b>5.6</b>	1.7	LU				MA	2004	<b>1.0</b>	0.3	ME				JE	2026	<b>1.3</b>	0.4
<b>6</b>	0536	<b>2.3</b>	0.7	<b>21</b>	0659	<b>1.6</b>	0.5	<b>6</b>	0024	<b>5.2</b>	1.6	<b>21</b>	0137	<b>5.6</b>	1.7	<b>6</b>	0039	<b>5.6</b>	1.7	<b>21</b>	0158	<b>5.6</b>	1.7
	1130	<b>5.2</b>	1.6		1206	<b>5.6</b>	1.7		0704	<b>2.6</b>	0.8		0848	<b>1.6</b>	0.5		0730	<b>2.3</b>	0.7		0914	<b>1.6</b>	0.5
SA	1815	<b>2.0</b>	0.6	SU	1929	<b>0.7</b>	0.2	TU	1225	<b>5.2</b>	1.6	WE	1355	<b>4.9</b>	1.5	TH	1247	<b>5.2</b>	1.6	FR	1426	<b>4.9</b>	1.5
SA				DI				MA	1921	<b>2.0</b>	0.6	ME	2059	<b>1.3</b>	0.4	JE	1936	<b>1.6</b>	0.5	VE	2120	<b>1.6</b>	0.5
<b>7</b>	0007	<b>4.9</b>	1.5	<b>22</b>	0053	<b>5.2</b>	1.6	<b>7</b>	0115	<b>5.2</b>	1.6	<b>22</b>	0241	<b>5.6</b>	1.7	<b>7</b>	0129	<b>5.6</b>	1.7	<b>22</b>	0256	<b>5.2</b>	1.6
	0636	<b>2.6</b>	0.8		0804	<b>1.6</b>	0.5		0801	<b>2.6</b>	0.8		0945	<b>1.6</b>	0.5		0826	<b>2.0</b>	0.6		1008	<b>1.3</b>	0.4
SU	1213	<b>5.2</b>	1.6	MO	1307	<b>5.2</b>	1.6	WE	1319	<b>5.2</b>	1.6	TH	1507	<b>4.9</b>	1.5	FR	1346	<b>4.9</b>	1.5	SA	1535	<b>4.6</b>	1.4
DI	1908	<b>2.0</b>	0.6	LU	2029	<b>1.0</b>	0.3	ME	2014	<b>1.6</b>	0.5	JE	2155	<b>1.3</b>	0.4	VE	2029	<b>1.6</b>	0.5	SA	2215	<b>1.6</b>	0.5
<b>8</b>	0056	<b>4.9</b>	1.5	<b>23</b>	0201	<b>5.2</b>	1.6	<b>8</b>	0214	<b>5.2</b>	1.6	<b>23</b>	0343	<b>5.6</b>	1.7	<b>8</b>	0224	<b>5.6</b>	1.7	<b>23</b>	0355	<b>5.2</b>	1.6
	0737	<b>2.6</b>	0.8		0907	<b>1.6</b>	0.5		0857	<b>2.3</b>	0.7		1039	<b>1.3</b>	0.4		0923	<b>1.6</b>	0.5		1058	<b>1.3</b>	0.4
MO	1302	<b>4.9</b>	1.5	TU	1419	<b>5.2</b>	1.6	TH	1424	<b>4.9</b>	1.5	FR	1615	<b>4.9</b>	1.5	SA	1454	<b>4.9</b>	1.5	SU	1640	<b>4.9</b>	1.5
LU	2003	<b>2.0</b>	0.6	MA	2127	<b>1.0</b>	0.3	JE	2106	<b>1.6</b>	0.5	VE	2249	<b>1.6</b>	0.5	SA	2124	<b>1.6</b>	0.5	DI	2309	<b>2.0</b>	0.6
<b>9</b>	0156	<b>4.9</b>	1.5	<b>24</b>	0318	<b>5.2</b>	1.6	<b>9</b>	0315	<b>5.6</b>	1.7	<b>24</b>	0437	<b>5.6</b>	1.7	<b>9</b>	0324	<b>5.9</b>	1.8	<b>24</b>	0449	<b>5.2</b>	1.6
	0835	<b>2.6</b>	0.8		1006	<b>1.6</b>	0.5		0953	<b>2.0</b>	0.6		1130	<b>1.3</b>	0.4		1020	<b>1.0</b>	0.3		1146	<b>1.3</b>	0.4
TU	1402	<b>4.9</b>	1.5	WE	1538	<b>5.2</b>	1.6	FR	1535	<b>4.9</b>	1.5	SA	1712	<b>4.9</b>	1.5	SU	1605	<b>5.2</b>	1.6	MO	1736	<b>4.9</b>	1.5
MA	2057	<b>2.0</b>	0.6	ME	2224	<b>1.3</b>	0.4	VE	2159	<b>1.6</b>	0.5	SA	2342	<b>1.6</b>	0.5	DI	2222	<b>1.3</b>	0.4	LU	2359	<b>2.0</b>	0.6
<b>10</b>	0309	<b>4.9</b>	1.5	<b>25</b>	0423	<b>5.6</b>	1.7	<b>10</b>	0411	<b>5.6</b>	1.7	<b>25</b>	0524	<b>5.6</b>	1.7	<b>10</b>	0423	<b>6.2</b>	1.9	<b>25</b>	0537	<b>5.2</b>	1.6
	0930	<b>2.3</b>	0.7		1102	<b>1.3</b>	0.4		1048	<b>1.3</b>	0.4		1217	<b>1.0</b>	0.3		1118	<b>0.7</b>	0.2		1229	<b>1.0</b>	0.3
WE	1513	<b>4.9</b>	1.5	TH	1645	<b>5.2</b>	1.6	SA	1640	<b>5.2</b>	1.6	SU	1802	<b>5.2</b>	1.6	MO	1709	<b>5.2</b>	1.6	TU	1825	<b>4.9</b>	1.5
ME	2150	<b>1.6</b>	0.5	JE	2319	<b>1.3</b>	0.4	SA	2252	<b>1.3</b>	0.4	DI				LU	2322	<b>1.3</b>	0.4	MA			
<b>11</b>	0412	<b>5.2</b>	1.6	<b>26</b>	0514	<b>5.6</b>	1.7	<b>11</b>	0502	<b>5.9</b>	1.8	<b>26</b>	0030	<b>1.6</b>	0.5	<b>11</b>	0521	<b>6.2</b>	1.9	<b>26</b>	0044	<b>2.0</b>	0.6
	1024	<b>2.0</b>	0.6		1155	<b>1.3</b>	0.4		1142	<b>0.7</b>	0.2		0606	<b>5.6</b>	1.7		1216	<b>0.3</b>	0.1		0621	<b>5.6</b>	1.7
TH	1620	<b>5.2</b>	1.6	FR	1738	<b>5.2</b>	1.6	SU	1737	<b>5.6</b>	1.7	MO	1259	<b>1.0</b>	0.3	TU	1808	<b>5.6</b>	1.7	WE	1309	<b>1.0</b>	0.3
JE	2242	<b>1.3</b>	0.4	VE				DI	2347	<b>1.0</b>	0.3	LU	1847	<b>5.2</b>	1.6	MA				ME	1908	<b>5.2</b>	1.6
<b>12</b>	0502	<b>5.6</b>	1.7	<b>27</b>	0010	<b>1.3</b>	0.4	<b>12</b>	0551	<b>6.2</b>	1.9	<b>27</b>	0113	<b>1.6</b>	0.5	<b>12</b>	0023	<b>1.0</b>	0.3	<b>27</b>	0121	<b>2.0</b>	0.6
	1117	<b>1.6</b>	0.5		0557	<b>5.6</b>	1.7		1236	<b>0.3</b>	0.1		0646	<b>5.6</b>	1.7		0617	<b>6.6</b>	2.0		0702	<b>5.6</b>	1.7
FR	1716	<b>5.6</b>	1.7	SA	1242	<b>1.0</b>	0.3	MO	1829	<b>5.6</b>	1.7	TU	1337	<b>1.0</b>	0.3	WE	1312	<b>0.0</b>	0.0	TH	1345	<b>1.0</b>	0.3
VE	2332	<b>1.0</b>	0.3	SA	1824	<b>5.6</b>	1.7	LU				MA	1929	<b>5.2</b>	1.6	ME	1905	<b>5.9</b>	1.8	JE	1949	<b>5.2</b>	1.6
<b>13</b>	0545	<b>5.9</b>	1.8	<b>28</b>	0057	<b>1.3</b>	0.4	<b>13</b>	0041	<b>1.0</b>	0.3	<b>28</b>	0150	<b>2.0</b>	0.6	<b>13</b>	0123	<b>1.0</b>	0.3	<b>28</b>	0155	<b>2.0</b>	0.6
	1209	<b>1.0</b>	0.3		0637	<b>5.9</b>	1.8		0640	<b>6.6</b>	2.0		0725	<b>5.6</b>	1.7		0712	<b>6.6</b>	2.0		0741	<b>5.6</b>	1.7
SA	1806	<b>5.6</b>	1.7	SU	1324	<b>1.0</b>	0.3	TU	1330	<b>0.0</b>	0.0	WE	1411	<b>1.0</b>	0.3	TH	1407	<b>-0.3</b>	-0.1	FR	1420	<b>1.0</b>	0.3
SA				DI	1907	<b>5.6</b>	1.7	MA	1921	<b>5.9</b>	1.8	ME	2010	<b>5.2</b>	1.6	JE	1959	<b>5.9</b>	1.8	VE	2026	<b>5.2</b>	1.6
<b>14</b>	0020	<b>1.0</b>	0.3	<b>29</b>	0139	<b>1.3</b>	0.4	<b>14</b>	0137	<b>0.7</b>	0.2	<b>29</b>	0222	<b>2.0</b>	0.6	<b>14</b>	0222	<b>1.0</b>	0.3	<b>29</b>	0227	<b>2.0</b>	0.6
	0627	<b>6.2</b>	1.9		0715	<b>5.9</b>	1.8		0731	<b>6.6</b>	2.0		0803	<b>5.6</b>	1.7		0807	<b>6.6</b>	2.0		0820	<b>5.9</b>	1.8
SU	1259	<b>0.7</b>	0.2	MO	1402	<b>0.7</b>	0.2	WE	1423	<b>-0.3</b>	-0.1	TH	1444	<b>1.0</b>	0.3	FR	1501	<b>-0.3</b>	-0.1	SA	1454	<b>1.0</b>	0.3
DI	1853	<b>5.9</b>	1.8	LU	1949	<b>5.6</b>	1.7																

## NATURE NOTES

### September

– Lillian Risley

Peter Payzant reported that it had been an incredible summer for butterflies. Special ones were **Painted Ladies, American Ladies, and Red Admirals** – some of which are more commonly found farther south. Bobby Wilson of Hope for Wildlife reported that **a young seal** in difficulty was seen near the Dingle. It was captured and transferred to a lake with fish in it. It appeared to be recovering and it was hoped that it could be returned to the ocean. But, it was shot by a fisherman – much to the disappointment of the rescuers. Shirley McIntyre also reported seeing **a seal** – in the Bedford Basin.

Regine Maas had seen a number of **garter snakes**. She also saw **a Titmouse** and **Painted Ladies** in the Valley. David Patriquin had seen a lot of **Monarch Butterflies** and wondered if there were more present than usual. He also found **Wych Hazel** flowering in August, which is very early.

Leslie Jane Butters saw **a dragonfly** emerge from its nymph form – its legs appearing first and then the rest of the body. She also observed a fight between **two Hummingbirds** (female or young) at close range. The altercation ended with them spiralling upward.

Nelson Poirier had also observed **a lot of butterflies**, including **two Giant Swallowtails** which he managed to photograph; he estimated that they were more than 113 mm in size! Someone described the efforts to capture **a flightless duck** that has been seen in Halifax. If it could be caught, Hope for Wildlife might take it. Michael Downey had visited Algonquin Park for the first time since his childhood. He saw **a mother Turkey with five young**. He had been surprised, but learned that wild Turkeys are common now in Ontario. Also in Ontario, Bev Wiles had seen **an opossum**.



### NEXT DEADLINE

21st of November for the December 2012 Issue

Send contributions to 'Newsletter', c/o NS Museum of Natural History, or  
email submissions to [sdhaythorn@ns.sympatico.ca](mailto:sdhaythorn@ns.sympatico.ca)