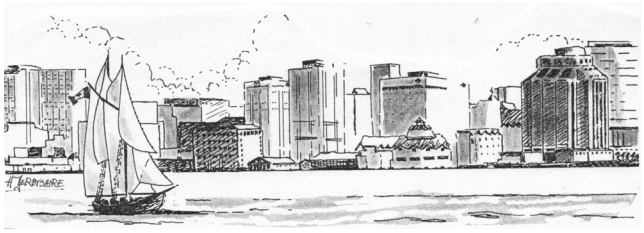
THE HALIFAX FIELD NATURALIST

No. 151
June to July, 2013

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. **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 Halifax Field Naturalist**, along with its included **Programme**, quarterly. Our membership year is from January 1st to December 31st, and new memberships received from September 1st to December 31st of any year are valid until the end of the following membership year.



HFN ADDRESS
Halifax Field Naturalists, c/o N.S. Museum of Natural History, 1747 Summer St., Hfx, N.S., B3H 3A6 **Email: hfninfo@yahoo.ca**
Website: halifaxfieldnaturalists.ca

NNS ADDRESS
Nature Nova Scotia, c/o N.S. Museum of Natural History, 1747 Summer St., Halifax, N.S., B3H 3A6
Email: doug@fundymud.com (Doug Linzey, NNS Secretary and Newsletter Editor) **Website: naturens.ca**

EXECUTIVE	**2013/2014**	
President	Janet Dalton	443-7617
Vice-President	Clarence Stevens	864-0802
Treasurer	Ingrid Plache	475-1129
Secretary	Michael Bradfield	423-7706
Past President	Allan Robertson	422-6326
Directors	Elliott Hayes, Burkhard Plache, Lillian Risley, Stephanie Robertson	
COMMITTEES	**2013/2014**	
Membership	Lillian Risley	422-8652
Programme		
Talks/Trips	Richard & Grace Beazley	429-6626
	Sharon Berkinshaw	444-9241
	Elliott Hayes	835-9819
	Burkhard Plache	475-1129
	Gillian Webster	453-9244
Design	Stephanie Robertson	422-6326
Newsletter		
Editor & Design	Stephanie Robertson	422-6326
Almanac	Patricia Chalmers	422-3970
Taxonomy	Ursula Grigg	681-1264
Distribution	Bernice Moores	422-5292
Labels	Doug Linzey	582-7176
Refreshments	Regine Maass	
Conservation	Bob McDonald	443-5051
	David Patriquin	423-5716
	Clare Robinson	446-6603
NNS Rep.	Burkhard Plache	475-1129
YNC Rep.	David Patriquin	423-5716
PSAs	Gillian webster	453-9244
Webmaster	David Patriquin	423-5716
CSC Award	Doug Linzey	582-7176
	David Patriquin	423-5716

FEES	**2013/2014**
Student	$15.00 per year
Individual	$20.00 per year
Family	$25.00 per year
Supporting	$30.00 per year

IN THIS ISSUE

GRAPHICS All uncredited illustrations are by H. Derbyshire or from copyright-free sources. **Front Cover** - Red Trillium and Trout Lillies, Nancy Covington; **Back Cover** - Colchester Co. waterfall, Nancy Covington; **Tide Table** - Canadian Hydrographic Service, Fisheries & Oceans Canada.

HFN NEWS AND ANNOUNCEMENTS

EDITORIAL

After our cold, grey, and rainy spring lingering too long into the time when all expect more warmth and sun, finally – a bright spot. I was just about to toss a some handfuls of bird peanuts out my kitchen window when the doorbell rang – our gardening help and muscle. Leaving the open container on the kitchen counter, off I went to the garden, front and back, to discuss the heavier jobs that needed doing, and the possiblility of landscaping changes. We were there for about an hour.

I came back in and puttered around in the kitchen. Approaching the pantry by the open back door to the deck, I suddenly spotted 'it'. Cowering behind a spider plant in one of many plant pots, was an absolutely still Blue Jay. Its beak was partially open; was it panting, stressed? A closer look revealed it held a peanut there. The cat was curled up just outside that open back door; how to rescue? A quick call to Allan who had just left on errands; "Come back right away, I need you to 'loom' in a doorway immediately!" Back he came. We stood in front of the still absolutely motionless and beautiful jay peering at us, Allan blocking the doorway back into the kitchen. Nothing ventured, nothing gained. I lifted the plant pot slowly and carefully, approached the open door to the outside world, lifted it slowly up high, and off the jay flew.

Later in the day, we found evidence of its frightened flights wihin the house, revealed by streaks of bird droppings: in the front porch on the wall and on a picture hanging there; upstairs in the bathroom on the mirror and in the sink; and in the front hall along the cobbler's bench and the floor beside it. I had never seen a more graphic illustration of a very common, off-colour phrase.

The cat, still lazily asleep, showed absolutely no interest in the whole affair. Nor the dog. I had never been so close to a living Blue Jay before; what a privilege it was to see its bright eyes and lovely blue feathers!

We have many interesting field trip and talk write-ups in this issue; especially see p. 9, the Waterfall Trip report – it seemed the ideal trip for naturalists, and with glorious weather!

SABLE ISLAND – *NOT* 'PROTECTED'

– condensed from the Globe & Mail, June 20th

Time was running out, and Elizabeth May was standing in the way by objecting to the fast-tracking of a bill to create a national park in Nova Scotia – an unusual position for a Green Party leader. All other parties supported the motion, but Ms. May says Bill S-1 (designating Sable Island as a National Park), sets a dangerous precedent by opening the door to drilling in other national parks.

Only unanimous consent would allow the bill to be fast-tracked to third reading, hours before the house would ultimately adjourn for the summer. Ms. May was the sole MP to block it; her stand-off threatened to stall the bill altogether. Months would pass before an attempt could be made to push it through again.

NDP Environment critic Megan Leslie (whose riding includes Sable Island) had pleaded with Ms. May to no avail, arguing any protection was better than none at all. But Ms. May stuck to her guns.

Conservative MP Michelle Rempel, parliamentary secretary to the Environment Minister, said "For once, you had this rare show of the way things can go in this place, and she blocks it." But to pass the bill, they simply needed the Green Party leader to leave the chamber, and Elizabeth had a meeting to go to. However, she had an ally – Bloc Quebecois MP Louis Plamondon, who had agreed to cover for Ms. May while she attended her meeting. (As long as one of them was in the house and could object, there could be no unanimous consent; the bill couldn't be fast-tracked and it would either jeopardise a looming deal to adjourn or simply not pass in time.)

Debate continued on another bill. Mr. Plamondon stood up. "Poor Louis Plamondon turned his back and went into the opposition lobby for just a minute," says Ms. May. The Conservatives pounced. MP Mike Wallace proposed Bill S-15 be fast-tracked; by the time Mr. Plamondon had returned, the unanimous consent motion had been passed.

"Unanimous consent isn't like a vote, there's no notice given. If you can pull a fast one, and you're prepared to be ruthless, you do it. That's what they did.", Ms. May said. Ms. Rempel said "It was just old fashioned parliamentary procedure, and it worked."

Ms. May opposes the bill because it creates an "outrageous precedent" for industrial activity inside national parks. (ExxonMobil holds to a gas field there, and the bill gives the Canada-Nova Scotia Offshore Petroleum Board continued regulatory authority, requiring nothing more than token consultation with Parks Canada.) Bill S-1 also allows low-impact seismic surveying and directional drilling; i.e. a company could drill under the island from offshore and it would be entirely legal.

"What they've now done is to accept national park status, call it a national park reserve, and within it enshrine the rights of a body whose mandate is to expand oil and gas development and give that body jurisdiction over drilling and seismic exploratory activities within it.", Ms. May said, later adding: "My larger concern is that we have now degraded the gold standard of protection for the designation 'national park'."

Having passed third reading later on, it then received 'royal assent'. It is now law.

Sable Island is Canada's 43rd 'national park'.

NEW AND RETURNING

Bernadette and Joeri Coppens

HFN TALKS

MEMBERS' PHOTO NIGHT 7 MAR.

– Stephanie Robertson

The following reports from our Members' Slide Night were not able to be fitted into the last newsletter, Spring 2013, #150. Here they are:

BEACHCOMBING

Dennis Hippern presented some very interesting beachside images. An artistically arranged shot of a fish skeleton, about eight inches long, was the first image presented, then a convoluted rock formation at Beech Meadows beach, Brooklyn. There was Seaside Goldenrod, then a good close-up of a Pelecinid Wasp which prey upon leatherjackets. We saw a Meadowhawk Dragonfly, a small, post-larval Moonfish about the size of a quarter, and a Black-bellied Plover. There were beautiful pictures of salps, those funny little jelly-like animals that are brought up by the Gulf Stream, a blue-backed beetle of some kind, and a Mustard White butterfly. As did Allan and I, Dennis had taken some good shots of Great Black-backed Gull eggs from Bon Portage Island. A Garter Snake, beautiful driftwood, rocks veined with sparkling quartz, Clintonia, wild strawberries, a Dreamy Duskywing, and a shot of Rainbow Haven beach followed. There were also periwinkles, a Rosy Maple Moth, and some lovely yellow flowers (unidentified). Dennis had noticed such interesting and beautiful things to photograph; more – a caterpillar close-up, kelp and glistening seaweeds, a sailboarder, and Clintonia showing its bright red berries.

COASTAL PLAIN FLORA

Charles Cron had pictures of the native invasive Purple-stemmed Angelica at L'Ardoises; one of three three species of angelica. At a bog near Gracieville, he discovered and photographed a monocot, Juncus, a hard-to-find plant of the rush family, specifically – *Juncus casariensis*; another picture was shown of it with its seed capsule as well. More of this plant was found near Pt. Michaud, and still more was found in September when he returned to see them sporting their black berries. His last slide was a beauty – of a misty bog in the rain.

A GARDEN POND

Jim Medill had compiled a marvellous video, complete with appropriate music, of the making of a 'natural' garden pond on his property. From the digging, lining with waterproof material, bringing in the water, setting up rocks and plants – we watched it grow before our eyes on the screen! Over time, after the pond and plants became established, we saw the aqautic wildlife which had moved into the area.

MORE COASTAL PLAIN FLORA

Bob McDonald reported that Charles Cron had invited members of the Wildflower Society of Newfoundland and Labrador, plus ten people from Halifax (Bob was one ot those) to meet in Bridgewater in early August to look at the coastal plain flora of southwest Nova Scotia.

On the first day of the trip, they went to Fancy Lake to see the rare Goldencrest; they also saw Button Bush, with its white balls of flower clusters. At another lake Bob captured Virginia Meadow Beauty, Purple Bladder Wort, and Pepperbush. A bonus for them while there – there were lots and lots of butterflies. We saw the pink Waterwillow that Bob had photographed at the Roseway River – a very beautiful shot. There was also Virginia Chain Fern, a Pinesap, and the Marsh St. John's Wort, which is different from the dry-land variety. Along the shoreline at Wilson's lake a Plymouth Gentian was found. Bob finished up with shots of a Goldencrest and a small Joe-Pye-Weed.

Thanks to all for their interesting, and sometimes stunning, photos.

BROKEN RIVERS 4 APR.

– Lillian Risley

Bob Bancroft opened his talk by telling us that our rivers need a united voice if we are to preserve our forests and make them healthy again. A lot of things have happened to our forests in the past few hundred years, and they face many threats.

Nova Scotia's rivers start in our Acadian forests. In these natural forests the waters are quiet and clear. Fifty-five percent of the nutrients rivers need to support healthy ecosystems enter the feeder streams from these forests.

People who had been studying the forests could see that things were not proceeding in a healthy, sustainable way. In past times, a tree would fall into a stream, make a small dam, and a pool would be created; the roots of hardwood trees would hold sloped banks in place; in valleys, water ran out over the flood plains, slowed by trees and vegetation; and plant materials naturally falling into streams would make deep spots which fish need. Healthy rivers need to move, to flood, and then trickle back in dry times.

Formerly in Nova Scotia, fish could live all their lives in streams. Occasionally when the streams would become too crowded, the fish would go out to sea to feed, grow, and then later return to spawn. Wagonloads of fish were harvested during these large migrations.

Pools are necessary habitats where fish like to lie behind rocks and catch food as it passes. For instance, among other pool-life, there are Caddis, which live on the bottom of pools, emerge, breed, and then die. The fish will take advantage of their presence for food when it occurs.

Pools in streams also create a muffling of its current. Ideally, a pool should be five to seven channel-widths wide to do this effectively. A good formation for a stream has a recurring pattern: a flat/a riffle/a pool (which is deep and slow)/then a 'run' (which is deep and fast).

In the 1800's the forestry industry peaked, with huge

quantities of lumber being harvested for shipbuilding, export, and other uses. Loggers felled the trees, rode the logs down the rivers, (breaking up log jams when they occurred), then walked back up-river to repeat the process. Many river stretches were 'improved' by straightening them and modifying the riverbeds. There were rules in place regarding the building of dams, but these were largely ignored. And mill waste? – it went straight into rivers themselves. This only eased when the wood finally began to run out.

Agriculture also often contributed, and still contributes, a lot of damage to rivers and streams. Clearing the land right to the river's edge causes erosion and that leads to widening of the river. And, subsidiary streams are often damaged by the presence of cattle, which trample the banks and defecate in, or beside, the streams. But, leaving a few trees can stop this erosion. In some rivers, such as the Musquodoboit, farmers drained the flood plain so that they could get on the land earlier. Then the land dried out earlier in the season, requiring irrigation. In all parts of the province, sewers were often allowed to drain into the rivers – one river now consists of 50% natural water and 50% treated sewage. Also, rivers were often shortened by straightening the meanders; this results in faster currents and more flooding. Also, flood plains should be used for farming or leisure activities but not for buildings.

The scale and enormity of forestry activities has stripped much of the land of its vegetation, resulting in mud slides. Bob mentioned one area where tree harvesting stopped nine metres away from the river's edge, but the result was still a mudslide, eroding away the buffer area. The result of these excess materials falling into streams is silt which covers its bottom, leaving no place for fish and bottom dwellers to hide, nor for food to form. When leaves fall into a stream in the autumn, they need rough surfaces to hold them while bacterial activity takes place, making food for the fish and other forms of stream life. When that condition is not there, the leaves just wash downstream and food development is lost.

Bob outlined some of the general problems relating to the supply of water in Nova Scotia's streams and rivers. About a decade ago, farmers along a river were given a quota of water for their agricultural land – unbelievably, it was 120% of the water available in the streams! Irrigation activities drain rivers down, making streams much shallower – often allowing temperatures to reach 30°C (at 25°C fish begin to suffocate). Also, if a stream is wide and shallow, ice forms sooner, sometimes reaching all the way to the bottom. Then, in the spring, the water often flows on top of the ice; as the melt progresses, the ice, with its attached gravel, breaks free and sweeps downriver scouring and damaging the riverbed. Similarly, trees along the river will be bashed and injured by the passing ice flows. This is all very bad for stream organisms.

There are things that we can do that will help restore streams and rivers to a better, more natural state: planting trees on the sides of streams will stabilise the earthen banks and hold water (this is also beneficial for beavers and deer); creating an imitation log in a stream bottom will encourage the formation of pools – for instance, a log with a rock slope will deepen the stream bed, and a pool will form; and sometimes a rock sill can be built to stop unnatural movement – but this can be tricky to do.

There *are* rules designed to protect rivers. Clearcutting is restricted to 20 metres from a river's edge (a better rule would be no clearcutting anywhere), and agricultural activity is prohibited within 50 feet of a river. Yes, there *are* laws, but very often – they are not enforced.

Our rivers and forests should be treasured. We should all work together to preserve and improve them.

VERNAL POOLS MAY 2

– Gillian Webster

"Wetland Policy, Vernal Pools, and You: An Update and a Call For Help" Approximately 40 people attended this interesting talk by John Brazner on wetlands in Nova Scotia. John previously worked at the Bedford Institute of Oceanography developing habitat fingerprints for coastal wetland fish and the Atlantic salmon population recovery assessment. Before moving to Nova Scotia in 2004, he worked as a research biologist with the U.S. Environmental Protection Agency on Lake Superior, studying the effects of human activities on Great Lakes wetlands, and identifying 'tipping points' in land use changes for Lake Superior watersheds. He has been a Wetland Specialist with Nova Scotia Environment in Halifax since 2008, and is now their Wetland Program Coordinator.

John helped to develop the Nova Scotia Wetland Conservation Policy, which was approved in September, 2011. He came to HFN to give an update on what the final policy looks like, how implementation has been going over the last year and a half, and to provide details on some new initiatives related to wetland conservation in Nova Scotia. The *Environmental Goals and Sustainable Prosperity Act* (EGSPA) was established in 2007. Nova Scotia Environment is responsible for the act and for developing its goals, some of which relate to John's work in Wetland Conservation. For more information on the policy, see **http://www.gov.ns.ca/nse/wetland/conservation.policy.asp**.

The definition for wetlands in Nova Scotia (taken from the Environment Act, as amended in 2006) is: "Land commonly referred to as marsh, swamp, fen, or bog that either periodically or permanently has a water table at, near, or above the land's surface, or that is saturated with water, and sustains aquatic processes as indicated by the presence of poorly drained soils, hydrophytic vegetation, and biological activities adapted to wet conditions." For more information, go to **http://www.gov.ns.ca/nse/wetland**.

John explained that most wetlands are at least soggy, if not brimming, with standing water for much of the year. Some wetlands, like vernal pools and ephemeral woodland ponds (where many salamanders, frogs, and turtles

spend a good portion of the spring), typically dry out in summer and may or may not fill up again in the fall. Many of our forested wetlands and floodplain swamps are relatively dry for much of the year as well. But wetlands can be characterised generally as habitats with water at or near the surface (< 2m deep); with little or no current (water flow); having plants and animals that thrive in wet conditions; and having places with typically rich soils that develop where water saturates or floods the surface at least seasonally.

Wetlands perform many important functions such as controlling floods, protecting coastal infrastructure, and providing critical habitat for rare and endangered species. Wetlands are also among the most productive and diverse of all the ecosystems on earth, so the loss of wetlands can mean the loss of species or local populations of fish, wildlife and plants which depend on them for habitat or food. Because many of Nova Scotia's wetlands have already been lost due to various human activities (e.g., over half of all original salt marsh habitat has been converted to other uses), wetlands that remain take on a heightened level of importance.

Over six percent of Nova Scotia's land mass consists of wetlands. 20% of those are classified as being of Special Significance; John has been working to raise that percentage. His role is something of a balancing act between the perceived economic value of land and the areas identified for critical wetland restoration.

Despite the great number of wetlands which have been lost, our salt marshes are still a particularly important wetland type in Nova Scotia. They support a diverse array of plants and animals; sequester carbon efficiently (potentially reducing greenhouse gas impacts); protect coastlines, coastal roads, and buildings from the potentially devastating effects of storm surges; and can play an important role in supporting coastal fisheries. Some areas of difficulty still remain in Nova Scotia. For example, P.E.I. and and New Brunswick governments have regulations on the use of wetland buffers, but whereas HRM has protective rules, the Nova Scotia government only offers encouragement to developers.

Historic loss of wetlands was dramatically exemplified by John's slides of an 18th century map of the Halifax Peninsula, which was quite different 100 years ago from today. 18% was wetland, and there were 78 kilometres of streams running through it. Commercial and residential changes in HRM in areas that were once wetland has had implications for development. There used to be a freshwater river at Inglis and Barrington Streets. John showed slides of how the indoor parking garage of a new urban housing development there sometimes gets flooded after heavy rains. The resulting mud, water, and sewage overflow can be very expensive, but are predictable. Also, aerial photos of land development at Dartmouth Crossing as it was in 2004, 2007, and 2011, show how we can lose canopy cover very quickly – and one of the important elements that protect wetlands are trees and tree cover. The photos showed a natural wooded area totally remodeled into housing a shopping precinct. Huge environmental changes were noticed as the wetlands there were converted.

In the Truro area, there are two major floodplains. They were wetlands at one time and have since been developed; they also periodically flood after heavy rain, such as seen in Truro in 2012.

John showed outstanding slides depicting the Salt Marsh Restoration Project of the Walton River, which is one of the most innovative restoration projects of its kind anywhere in the world. About 100 hectares have been restored since 2005 and the project is ongoing. Government doesn't have the resources to restore wetlands on its own, so volunteers are recruited, and university students are encouraged to get involved through focusing their theses on wetland research topics. John supervises many students and showed us slides of their areas of interest. Another sequence of slides depicted seasonal visits to a wetland where one can observe many of the different 'personality traits' which make up its overall character.

All this led into one of John's main tasks – a Vernal Pool Mapping and Monitoring Project launched in the spring of 2011 by Nova Scotia Environment, where the goal is to develop a database of vernal pools around the province in order to improve both the conservation and the understanding of the status of these fragile and important habitats. Vernal pools are small, shallow wetlands that lack permanent inlet or outlet streams and often dry out in the summer. They provide critical breeding habitat for frogs, salamanders, insects, and fairy shrimp, and feeding and drinking sites for birds, mammals, turtles, and other wildlife. (So far, in Nova Scotia, only two pools have been found that contain fairy shrimp.)

Here follows a summarised definition of vernal pools:

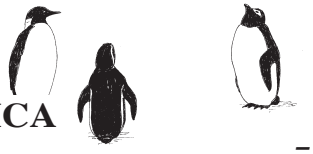
- they have a short 'hydro-period' (the number of days per year the pool is filled with water); vernal pools fill, dry and sometimes refill seasonally; they dry out completely at least every few years
- they occur next to forests and wooded areas
- they do not have permanent streams flowing in or out of them
- they are usually small (< 0.5ha) and shallow (< 1m deep)
- they are usually deepest in the spring and some times again in late fall
- they lack fish and are occupied by animals adapted to vernal conditions (i.e. wood frogs, spotted salamanders, fairy shrimp)

John is actively recruiting citizen scientists to help with the monitoring of vernal pools in people's favourite stomping grounds, as there have been no Nova Scotian studies exclusively focused on vernal pools. Little is known about the overall distribution of vernal pools, the range of types present here, how many we have, how many are being lost to development, or what hydro periods are typical. To help with this project, you can monitor your favourite wetland areas and fill in the data on a Vernal Pool Data Sheet at **http://www.gov.ns.ca/nse/wetland/vernal.pool.mapping.project.asp**.

Another major initiative is The Environment Act, **http://nslegislature.ca/legc/statutes/envromnt.htm**, which

also helps conserve wetlands, by requiring land developers to apply for an approval for certain activities which impact wetlands, by compensating the province. As the Department Wetland Specialist, John works with applicants on these 'alterations', which involve plans describing how the applicant will ensure the compensation project identified is aligned with government priorities for wetland restoration, enhancement, or creation. The preferred method of compensation is restoration of highly degraded wetland habitats, or wetlands previously lost to historic conversion.

John suggested he could help organise an HFN salt marsh restoration tour either at Walton or nearby Cheverie. For more information on these projects and more, you can contact John Brazner, N.S. Wetland Program Coordinator, Protected Areas and Wetlands Branch, Nova Scotia Environment. Phone 424-4936, or email **braznejc@gov.ns.ca**.



ANTARCTICA JUN. 3

– Pat Leader

– "Antarcitca for an Hour or a Month" David MacKenzie's parents left Nova Scotia for Cuba in the early 1920's. Born in Cuba, David spent his early life there and in Costa Rica. In 1950 he returned to Truro for high school, attended Dal, then went to Guatemala where he learned to fly. He completed pilot's and aircraft maintenance training, obtaining his FAA license, in California. Cessna sent him to Panama to be the aircraft service technician for the Carribean and South America; later transferred to Sales and Marketing, and had assignments in Africa and the Middle East. In 1974 he went with DeHaviland; he finally retired, as Director of Sales International, from Bombardier.

My father was a buyer of stationery and office furniture for a large chain of men's clothing stores in Regent St., London. He retired after 50 year's service so I guess by then he had a great list of wholesalers he could trust to deliver. Imagine into this mix that the goods were being shipped to far away places and he had to contend with political squabbles between the seller and the ultimate purchaser. Well, this was the lot of our guest speaker, David MacKenzie, who was asked to provide the Chilean Government with a suitable plane to provide cargo and personnel to the Antarctic Peninsula. David, I was told, had many stories to tell about his career, but this particular one required, and demonstrated, all the skills one would need to get the job done in a challenging environment.

David learned along the way. For instance, who knew that landing a plane on a snow-covered Antarctic glacier was more tricky than on Arctic ice because the Antarctic glacier bears less weight? And, did Chile want planes with wheels, or skiis? (They chose wheels.)

Then began the planning – what components would be fitted into the plane; which countries could best supply them; and which of those countries were Chilean-friendly; dealing with the reams of paperwork it all engendered; and then obtaining all the various permissions the project needed. Also, there were many points during the process when the whole design had to be completely reconfigured and/or readjusted. Then came the final stage, when the landing places on the Peninsula had to be planned in order to fit into the Antarctic's ever-changing weather patterns.

The Antarctic is a unique place in many ways. For one, it is not owned by any one country. The Antarctic Treaty, formulated to protect an area twice the size of Australia, was signed by 12 countries in 1959. Now, 49 countries have signed on! There are no permanent settlers and some 4,000 scientists from those 49 countries have carried on and are still carrying on research there. The highest concentration of research centres are on the Antarctic Peninsula on the northwest of the continent mass. All the small scientific settlements there are far apart. I personally have visited the Polish and British stations and they are 'basic' habitations with several buildings able to house both people and essential equipment. Isolation plays an anxious part when help is needed. Nova Scotians know only too well the perils of trying to rescue people in the North Atlantic when crew and their planes take precious hours to assemble, and then even more to find the location. Now Imagine the time lapse when weather or fire could cause serious loss in a scientific settlement miles from civilisation.

Everyone who has sailed Arctic waters know that there are many days when no ships are sighted at all. In Antarctic seas even fewer ships are sighted. Thirty years ago (when this story unfolds), even the number of tourist ships was limited. Such was the situation when David prepared to construct and transport a new plane to the Chilean Antarctic base – a plane that would be instrumental in delivering essential stores safely. The route planned was to fly into the Antarctica Peninsula using short stops at various international bases, including the American one. Luckily, the oldest weather station in the Antarctic belonged to Chile, and it was they who would be assessing the weather between bases. But, weather forced a change in the planned flight pattern and the original southern base had to be omitted.

The assignment's first setback was not weather but a man-made hitch. In Santiago, Chile, David discovered there was far more cargo to be loaded than had been planned. The weight of the passengers had been calculated at an average of 180 lbs plus 60 lbs for baggage (Air Canada take note!) and these were in addition to two pilots and two mechanics. The Chilean Government had added some top brass, bringing the number of passengers to 16, so when the plane took off it was carrying 43,00 lbs – some 3,000 lbs over limit! The weather had been scanned often, and the plan was to use a window of opportunity to fly in, land, unload the cargo, then make the return trip. Once the plane had landed, there was a debate over whether or not to turn the plane into the take-off direction in order to save time if the weather turned sour. But in readying the aircraft, it hit a lump of ice, spilled oil, and the plan went badly astray.

The population of Chile's base had now been suddenly doubled, as the damage prevented the return to

Chile or in fact anywhere. A sudden influx of 16 extra guests would be a challenge for most people, but in the Antarctic, at these tightly planned stations, it was an even larger problem. Meanwhile, the plane was secured by lashing it to drums of frozen water, reducing the water supply for the resident community.

That night David slept on the floor and another passenger took the pool table above him. Others, all luckily with sleeping bags, slept in the common area. By the end of the stay the high ranking officials had commandeered the bedrooms of the permanent staff. Meanwhile, via the radio, the crew had learned that the outside world had heard that the plane had crashed with all lives lost. The plane carried a satellite phone but the satellite only passed over the base every ninety minutes; any connection lasted from only forty-five seconds to one minute. Unlike a James Bond movie, when everyone seems to be at home or at the office, just waiting to respond to emergency calls, this was not the case here. Once connected, the communication had to be extremely concise to avail of the limited time. You can imagine "you are calling from where?" wasting precious minutes. I'm sure there were other typical annoyances, equivalent to today's 'improved communications' where we are put on hold, told to listen to choices, to press numerous buttons, then finally hearing "your call is important to us please hold for the next available…". Eventually, one call did lock into Moscow where the person at the other end spoke English – but wanted to discuss her family! She herself eventually called Montreal on their behalf and got through to someone who could at least assure the anxious families back home that their folk were alive.

Communication was vital if the men were to get off base, to assure the world that they were still alive, and to contact the insurers, Lloyds, in London. Over the next few days London agreed that the plane would be considered a write-off. (Luckily for David, his two engineers, one a Newfoundlander and one who had worked in Siberian conditions, accepted the personal challenge and were able to repair the plane and fly out.)

At the base, the leader told everybody that the increased population meant that, regardless of rank, they had to be assigned duties to keep the base running smoothly and safely. Jobs included kitchen work, making water by chopping ice and heating it, and carrying out fire checks. These three-hourly fire checks are done every day throughout the year. Each room on the base had to be inspected and declared safe. That task alone took one hour to complete. The Rear Admiral and two top ranking Chilean geologists buckled down to their chores. However, it was not all work, as there were opportunities to explore the surrounding area and even see some wildlife. In addition, the scientists shared their research. At one point, the visitors were treated to a plastic cup of Johnnie Walker with ice from a period well before 200/300 B.C.!

Finally, the party was able to fly out. David was met at the airport by the Chilean President who said "David, we want to buy two of those planes". The repaired aircraft was put into service but only lasted another eighteen months!

Thank you David for sharing this one exciting story out of many in your unique career. We hope you can return one day to HFN with more adventures.

FIELD TRIPS

BIRCH COVE LAKES: A NEAR-URBAN GEM

– Jennifer Smith, with contributions from Bob McDonald

Date: Saturday, March 23rd
Place: Birch Cove Lakes, Halifax
Weather: ±2˚C, mostly cloudy with a few sunny breaks
Leaders: Bob McDonald (HFN), and Jennifer Smith and Chris Miller (CPAWS)
Participants: 19

The day started out like many Saturday mornings seem to do for increasing numbers of Halifax residents – in Bayer's Lake Business Park. At 10:00 a.m., parking lots were just starting to fill up with shoppers running from one big box store to another. But our goal was to escape this, and we didn't have far to go. Tucked in just behind the concrete and fast-food restaurants, our group of hikers met to take a late-winter walk in Birch Cove Lakes.

HFN's Bob McDonald greeted us at the trailhead and gave a brief introduction to the area. The Birch Cove Lakes is a spectacular wilderness that contains over a dozen pristine headwater lakes, vast tracts of forest, and lots of wildlife, including over 150 species of birds and good habitat for endangered mainland moose – and, it's only minutes from downtown Halifax!

Chris Miller of the Canadian Parks and Wilderness Society (CPAWS) spoke about the huge potential for recreation opportunity here, an area accessible to Haligonians by public transit. Residents can disappear into the back-country to enjoy a full day of paddling, swimming, hiking, skating, or snowshoeing, all within a stone's throw of the city. The lakes make up a perfect canoe loop that can be paddled in a day, and all this in our 'own backyards'.

This area is half protected – with the Nova Scotia government overseeing the back-country in the Blue Mountain /Birch Cove Lakes Wilderness Area, with an

expansion proposed this year. Also, Halifax Regional Municipality has a long-standing commitment to acquire the lands of the front-country and protect it as a regional park.

Bob led us through the meandering and aptly named Whopper Drop trail. This trail is located directly behind the Bayer's Lake Burger King and is known for the topographical 'drops' enjoyed by mountain bikers. We passed a few structures created for these mountain bikes. As we walked through the snow-covered granite barrens at a leisurely pace, we took in nature in one of the first hikes of the season. The landscape was dotted by erratics covered in lichens – giant boulders left here by the retreating of the glaciers. Much of this area will soon be part of the business park.

As we traversed into the protected wilderness, the granite barrens transitioned into mixed-hardwood forest, and we almost forgot that we were on the doorstep of suburbia. Any thoughts of the city vanished completely as we approached Susie's Lake. Susie's Lake is the largest lake in the Birch Cove Lakes watershed and is spectacular – even when the landscape is covered in snow, all plants are dormant, and all animals silent.

Our view could only contain a small portion of the Birch Cove Lakes wilderness, and this view, combined with a city map of the proposed regional park, brought home to us the vastness of this wilderness right in the backyard of Halifax. We could just see the summit of Blue Mountain in the distance. We stopped here for lunch and took in the panorama.

Being late winter, it was not the best time to be doing an extensive list of flora and fauna, especially since there was still nearly a foot of snow in the woods! Nevertheless, trees we noted included Jack and White Pine, Black and Red Spruce, Balsam Fir, and Red Maple. Bob pointed out one Red Maple that was festooned with Lungwort lichen, *Lobaria pulmonaria*. Lichens are good indicators of air quality and will not grow where the air is polluted.

Shrubs included Black Huckleberry (with no leaves), and Sheep Laurel or Lambskill (with leaves). The barrens' plant Broom Crowberry, a Nova Scotia specialty, was also noted. We'll have to wait for a spring or summer field trip to check out the rare Mountain Sandwort, which also grows here!

Bird life was also sparse; we saw or heard Common Raven, Black-capped Chickadee, Mourning Dove, a woodpecker drumming, as well as Herring Gulls, as we neared the business park.

As we ended a pleasant hike, Chris let us know what we could do to encourage more protection for this near-urban gem. For more information, check out **cpawsns.org/birchcovelakes**. Reluctantly, we then parted ways and rejoined civilisation, and the traffic, in the business park.

You can view photos from the walk **at http://www.flickr.com/groups/2201311@N23/pool/Map of the proposed Birch Cove Lake Regional Park:https://www.halifax.ca/RealPropertyPlanning/documents/BirchcoveParkBoundaryMap1.pdf**.

BLUFF TRAIL PADDLE & HIKE

Unfortunately, our annual canoe trip, which was to have taken place on Saturday, April 13th, had to be cancelled because of day-long downpours accompanied by very cold temperatures. Let's hope for better weather next year!

WATERFALLING, CUMBERLAND COUNTY

Richard Beazley

Dates: Saturday and Sunday, May 4th and 5th
Place: Between Economy and Diligent River
Weather: Sunny and warm, 7 to 14˚C
Leaders: Richard and Grace Beazley
Participants: 12

This was HFN's seventh annual waterfall trip, and the first one along Highways #2 and #209, which run between the Cobequid Mountains and Cumberland County's Minas Shore. The weekend trip could well be summed up by sentiments like those in Louis Armstrong's hit song "What a Wonderful World": trees of green; flowers in bloom; skies of blue; subtle colours of spring; sights and sounds of flowing water; the feel of gentle winds; and friends and acquaintances enjoying one another's company.

On May 4th, we visited five waterfalls in the following order. First – Economy Falls, 8 km inland from Economy, is situated in a deep ravine, surrounded by maple and beech trees, where there is a cleft in the basalt rock face of the Cobequid Fault. Tons of rock collapsed into the base of this falls about 15 years ago, altering its shape and water course, but not detracting from its beauty.

Second – at Lower Five Islands, about 100 m off the highway, the wider (8 m) than tall (4 m) North River Sandstone Falls is completely different than all the others we visited in that it is located where the tidal part of the North River meets the fresh water flowing down from the mountains. Its sedimentary red sandstone is strikingly appealing when covered with white flowing water.

Then, within 1.2 km from each other, between Moose River and New Prospect, we visited three more waterfalls: Bumper's Brook Falls; Wasson Brook Falls; and Hidden Falls which is on private property. All three falls are about 200 m from Highway #2; all are surrounded by a mixed forest of mostly Red and Black Spruce, Balsam Fir, maple, and beech; all are between 25 and 35 m high; all are multi-level and rock strewn; and all are located on very steep sedimentary shale and conglomerate rock faces. Yet – each is strikingly different from the other two.

On May 5th, after staying overnight at the Sunshine Inn outside Parrsboro, we visited three additional waterfalls, with permission and encouragement from property owners. Jeffers' Brook Falls sits on the Cobequid Fault's basalt and sedimentary conglomerate bedrock, and has done so for 350 to 400 million years. Situated 250 m off

Lakelands Road, this two-part, 15-m-high falls, is beautiful – but dangerous; dangerous because of the large area of scree that crosses the trail on its descent to the brook's edge, very close to the falls.

Henry Brook Falls, about 400 m further north on Lakelands Road, is only 75 m upstream from the road. Its basalt and sedimentary conglomerate rock face is rounded slightly, 18 m high and 8 m wide, giving the falls an attractive bridal veil appearance. The surrounding forest is mixed overall but has a large number of mature Yellow Birch trees.

Finally, we visited Ward's Falls, 3.5 km up the Northeast Branch of the Diligent River off Highway #209, west of Parrsboro. A well-maintained and relatively flat trail, with about 16 bridges, crisscrosses the pristine river through a majestic mixed forest to its rather abrupt, steep, and spectacular end. The 5-m-high waterfall exits from the mouth of a small looking but very large cave in the 35-m-high sedimentary shale and conglomerate rock face.

This trip was scheduled to take place "rain or shine". Even though cloudy, rainy weather enhances the beauty of waterfalls, and especially improves the quality of photos. Trudging through wet woods can be unappealing; so what would possess 12 people to sign up for this trip? Perhaps they anticipated rewards such as the following: Rachelle Watts, Lesley Jane Butters and Nancy Covington, commented – "Boy, did the weather turn out to be incredible… look at it out there today! What a glorious weekend, we were blessed.", and – "The perfect weather was a bonus."

Rachelle, Lesley Jane, Betty Hodgson, Ginny Guthrie, and Suellen Bradfield similarly were impressed by things such as streams of perfectly clear water with pale variations of reflective green; blooming Trout Lily, Purple Trillium, and Strawberry; Elderberry with its blossoms unfolding; and Lily-of-the-valley awaiting their first blossoms. They sensed the quiet awakening of spring all around them. Ginny commented, "The pools below a couple of the waterfalls invited one back in the hot part of the summer – with a bathing suit!"

Mike Bradfield observed a few Grouse and a Pheasant, but noted that "overall the woods were pretty quiet." Rachelle noted "a sudden shattering of air, a pair of Grouse, wings in flight, startling us!" Mike, Lesley Jane, and Judy Davies observed gelly-like masses of frog's eggs, but no tadpoles, in a slimy stagnant puddle beside the river.

Ward's Falls seemed to have captured a number of hearts. Betty – "The walk was idyllic; I can't imagine a better way to spend a lovely spring afternoon than strolling along that beautiful river with some very pleasant companions." Lesley Jane – "The walk into Ward's Falls was really very beautiful and tranquil and nothing is nicer while walking along than to hear the constant sounds of running river waters so very pure and clear." Mike – "Ward's Falls was spectacular because of the massiveness of the rock face." Betty – "The falls itself is lovely, but the deep cut through the rock face is truly amazing. To look up at a fallen tree spanning the top of the cut and realise that at one time the river ran at that height is awesome."

Taking satisfying pictures of waterfalls is challenging. Nevertheless, pictures are taken, put on computers, modified, and shared. Here are the comments of two participants. Jon Davies – "Looking at these pictures, I have concluded that a camera, even a good one, is not up to the task of recording a waterfall. What is missing is the experience of discovery and the comradeship of friends on an adventure. The camera doesn't record the excitement of anticipation; the preparation of boots, walking sticks, and packs; the scramble through water and woods; the smell of damp soil; the scrape through brush; the first sound and sight of the waterfall; and, finally, the full view. We pause, linger, view with reverence, scramble about, take pictures, and eat lunch or snacks. Each picture serves to help us remember the experience, but it is only a souvenir, not the real deal." Lesley Jane said, "I believe my camera is getting old and cranky as most of my pictures turned out blurry, which was a bit disappointing, but, despite wonky photos, I captured nature in my own special way."

Curiosity is tweaked, puzzles confronted. Nancy – "I still don't really know what the fern is, but my book says there is an evergreen Spinulose Wood Fern which is common." Nancy again – "As far as that controversial skull goes, Avery Bain and I looked up deer skulls and the teeth seem to match those of a young deer. As a deer gets older the jagged points on the molars wear off." Leaders and participants alike wondered aloud about what makes the quality of the air so amazingly fresh and exhilarating at waterfalls, but did not solve the puzzle.

On this beautiful weekend, in eight wild places in Nova Scotia, we immersed ourselves in the beauty of nature, and we paused to celebrate, with cupcakes made by Grace, the birthdays of those among us who were born in May. Suellen said, "the icing on the cake was the *cupcakes*!" I'll conclude with a philosophical thought from an unknown author – "The human spirit needs places where nature has not been rearranged by the hands of man." Wilderness waterfalls are such places.

References for this article: Allan Billard, Waterfalls of Nova Scotia, 1997; Donna Barnett and Allan Billard, Waterfalls, Nova Scotia's Masterpieces, 2007; and **www.trailpeak.com (Hiking)**.

TREE SCAVENGER HUNT

– Burkhard Plache

Dates: Thursday, June 13th
Place: Dingle Park, Purcell's Cove Road
Weather: Overcast and chilly, especially by the water
Leaders: Burkhard Plache
Participants: 8

A total of eight tree hunters met on this Thursday evening at the foot of the Dingle Tower. The overcast and windy conditions made it feel like a day in April, even though it was getting close to the beginning of Summer.

We used an easy identification key, which was based on leaf arrangement, leaf shape, leaf margin, and leaf veins for a rough identification of the trees we saw. From there, we used the Trees of Nova Scotia, by Gary Saunders, to more fully determine the respective species in front of us.

Our route led us from the Dingle parking lot to the walk along the shore of the Northwest Arm. Here we could compare a number native and introduced species from the same genus: White, Red, and Scots Pine – *Pinus strobus, P. resinosa,* and *P. sylvestris;* Bigtooth Aspen and White Poplar – *Populus grandidentata* and *P. alba;* Red and English Oak, *Quercus rubra* and *Q. robur;* American and European Mountain Ash – *Sorbus americana* and *S. aucuparia*; and both Red and Norway Maple – *Acer rubrum* and *A. plantanoides*.

Leaving the shore, we ascended to the Loop Trail through a hardwood forest where we encountered three native maples side by side: Red, Striped, and Mountain Maple – *Acer rubrum, A. pensylvanicum,* and *A. spicatum*. Mountain Maple is unique among our maples with its upright flowers, and the Striped Maple was easily recognised by its bark.

A little further on we encountered a number of American Beech, *Fagus grandifolia*. This tree, which already had been decimated by beech bark disease, now suffers from another introduced species, the Beech Leaf Mining Weevil.

Proceeding further uphill, we reached the Loop Trail, which leads around a hill that was burned over some 40 years ago. It is home to a scattering of Jack Pine – *Pinus banksiana*, that grow on top of the hill, and is accessed via an informal path.

Downhill, we followed the Dingle Road to the stream that drains the Frog Pond. The cold and wet conditions along the stream provide ideal conditions for Hemlock – *Tsuga canadensis*; we saw numerous large specimens. A small area on the Crossland Ice Trail here had suffered hurricane blowdown. The clearing is now filled by a succession of shrubs as well as Pin Cherry and birches.

Getting closer to the Pond, we found a single, young White Ash – *Fraxinus americana*. Unfortunately, we suddenly noticed that daylight would soon be fading; the trail around the Frog Pond would have to wait for another time.

Nevertheless, we saw and identified 26 of the approximately 40 trees and large shrub species found in the park.

SCAVENGER HUNT SPECIES

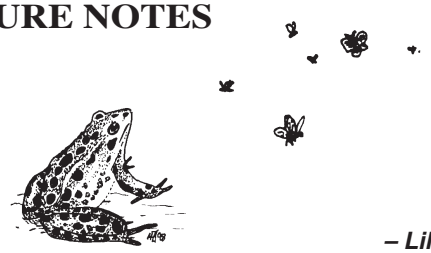
Identified:

White Pine	*Pinus strobus*
Red Pine	*P. resinosa*
Jack Pine	*P. banksiana*
Scotch Pine (introduced)	*P. sylvestris*
Hemlock	*Tsuga canadensis*
Balsam Fir	*Abies balsamea*
White Cedar	*Thuja occidentalis*
Bigtooth Aspen (introduced)	*Populus grandidentata*
White Poplar	*P. alba*
Paper Birch	*Betula papyrifera*
Yellow Birch	*B. alleghaniensis*
American Beech	*Fagus grandifolia*
Red Oak	*Quercus rubra*
English Oak	*Q. robur*
Pin Oak (introduced)	*Q. palustris*
Wych Elm (introduced)	*Ulnus glabra*
Witch Hazel	*Hamamelis virginiana*
Pin Cherry	*Prunus pensylvanica*
Mountain Ash	*Sorbus americana*
Eur. Mountain Ash (introduced)	*S. aucuparia*
Red Maple	*Acer rubrum*
Striped Maple	*A. pensylvanicum*
Mountain Maple	*A. spicatum*
Norway Maple (introduced)	*A. platanoides*
White Ash	*Fraxinus americana*
Horse chestnut (introduced)	*Aesculus hippocastanum*

Not identified (but known to occur in the park):

Tamarack	*Larix laricina*
Red Spruce	*Picea rubens*
White Spruce	*P. glauca*
Black Spruce	*P. mariana*
Norway Spruce (introduced)	*P. abies*
Quaking Aspen	*Populus tremuloides*
Willow	*Salix* sp.
Speckled Elder	*Alnus rugosa*
Grey Birch	*Betula populifolia*
European Beech	*Fagus sylvatica*
Shadbush (two species in park)	*Amelanchier* sp.
Hawthorn	*Crataegus* sp.
Staghorn Sumac	*Rhus typhina*

NATURE NOTES



APRIL ***– Lillian Risley***

Clarence Stevens had observed several signs of spring. During a visit to the Shelburne County area, he **heard Wood Frogs and Spring Peepers**—and saw what appeared to be **a butterfly**, but it couldn't be definitely identified. He said also that a friend had seen **a June Bug** already. At Lawrencetown Beach, he'd seen **the Crested Caracara**. It is more commonly seen in Mexico, Texas, and Florida where it is primarily a carrion eater, but it sometimes turns up in New England, New Brunswick, and Nova Scotia.

Suellen Bradfield had seen the preview of "Revolution" – a film on ocean acidification and the damage it causes to coral. She let members know that it would be playing at the Empire theatre on April 12th.

Lesley Jane Butters had seen her first **Coltsfoot** on Easter Sunday at Point Pleasant Park. She had also seen a first **group of Grackles** in the Gaspereau Valley. Closer to home, **Black Ants** had come into the house after honey. She'd also witnessed **a Barred Owl** harassed by crows in Point Pleasant Park – something which she sees every year.

Janet Dalton had seen **a small hawk attack and kill a Mourning Dove** under her bird feeder. It proceeded to eat part of the Dove, then carried off the carcass. Janet also let members know that compost bins would be selling for $25.00 at MicMac Mall on April 20th.

MAY ***– Allan Robertson***

Bob and Wendy McDonald saw **Mayflowers in bloom** in Point Pleasant Park very recently. They also saw **a Bald Eagle** at Belcher's Marsh, along with **a Belted Kingfisher**, **a Tree Swallow**, and **an Osprey nest**. (The museum osprey nest webcam is at **http://museum.gov.ns.ca/osprey**. The pair that has been seen may be nest building; but it is likely not the same pair as in previous years.)

Leslie Jane Butters saw **purple violets in bloom** a few days ago. She also watched **the arrival of Tree Swallows**. At 10.30 a.m. there were two, and at 5:00 p.m. some more arrived; there were **20 Tree Swallows in total** by Monday, April 29th. She also saw **two Turkey Vultures** near Annapolis Royal.

Bob McDonald added that Turkey Vultures are common in Yarmouth, Digby, and Shelburne counties.

John Brazner said he saw, ten days ago, **Yellow-spotted Salamanders laying eggs** in vernal ponds; he also saw **Wood Frogs**. He had heard **Spring Peepers** going strong in many places, and added that he had seen **a White-throated Sparrow**. He also noted that he had seen both **willow and Red Maple in flower**.

JUNE ***– Patricia Leader***

At Meadow Pond in the Windsor area Grace and Richard Beazley saw **Ram's-head Lady's-slippers and also Yellow Lady's-slippers**. Ram's Head Lady's-slippers are about six inches high with a 1/2 inch flower. Rachelle Watts also saw **Yellow Lady's-slippers** in the gypsum area.

Sharon Russel watched **a very young Grackle** being chased by its parent through the grass.

Bob McDonald reported seeing **Trilliums, Starflowers, Pink Lady's-slippers, and chokeberry bushes**.

Arthur Morris reported on a piece in the Scots Magazine about **an Osprey** which had been seen and recorded for 27 years running. By email later, Arthur said that this particular Osprey is called 'Lady of the Lowes'. (This magazine is the oldest continuously published magazine in the world, being first published in 1739!) Lady's present mate is called Laddie, and resides in The Scottish Wildlife Trust's Loch of the Lowes reserve near Dunkeld, Perthshire, Scotland. She is about 27 years old and for the last 23 years has been resident in the same Loch every spring and summer. (The average age of Osprey in Scotland is seven years.) This year she laid eggs number 65, 66, 67, and 68. Every winter the Osprey migrate south, flying about 2,500 miles one way. If you Google 'Lady of the Lowes' you will find lots of information about this Osprey.

Lesley Jane sighted **an eagle with two young**; the nest she observed had been empty in 2012 but there were three young in it in 2011.

Pat Leader had seen (but had forgotten to report at the meeting) that after taking Exit 5 to Windsor she saw **a hawk** perched on a sign at the end of the ramp. Flowers seen at her Fall's Lake cottage were **Trilliums, Starflowers, Pink Lady's-slippers, Painted Trilliums, Crackerberry, and Rhodora**.

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.

"There are so many insects in these woods it is almost impossible to go there in summer. They are full of black flies (called gnats in France) also mosquitoes and fireflies which are so small they scarcely can be seen, also houseflies and wasps. These insects by their biting try the patience of those who go there and one must have especially tough skin to be able to put up with them."

– Father Antoine Silvy, S.J., writing from Quebec in 1709, in Letters from North America, trans. Ivy Dickson, 1980.

NATURAL EVENTS

21 Jun. Summer Solstice at 05:04 GMT. Summer begins in the Northern hemisphere. The longest day of the year, with 15 hours and 34 minutes of daylight at Halifax.

22 Jun. -29 Jun. The latest evenings of the year: Sun sets at 21:04 ADT.

23 Jun. Full Moon. Moonrise at 21:08 ADT.

23 Jun. Moon at close Perigee; large tides for several days.

20 Jul. Canada's "Parks Day" - look for events at local parks.

22 Jul. Full Moon. Moonrise at 20:30 ADT.

5 Aug. -12 Aug. Average dates of the hottest days of summer (average daily maximum is 22.5 C.).

11 Aug. & 12 Aug. Perseid Meteor showers peak.

13 Aug. Average date for temperatures to start decreasing.

21 Aug. Full Moon. Moonrise at 20:11 ADT.

19 Sept. Full Moon. Moonrise at 19:10 ADT.

22 Sept. Autumnal Equinox at 17:44 ADT: Fall begins in the Northern Hemisphere.

28 Sept. Tenth anniversary of "Hurricane Juan".

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

– Sources: Atmospheric Environment Service, Climate Normals 1951-80 Halifax (Shearwater A) N.S.; Blomidon Naturalists Society Calendar, 2013; United States Naval Observatory Data Services.

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

1	**Jun.**	5:32	20:53	**6**	**Jul.**	5:36	21:02
8	**Jun.**	5:29	20:58	**13**	**Jul.**	5:42	20:58
15	**Jun.**	5:28	21:02	**20**	**Jul.**	5:48	20:53
22	**Jun.**	5:29	21:04	**27**	**Jul.**	5:55	20:46
29	**Jun.**	5:32	21:04				
3	**Aug.**	6:03	20:37	**7**	**Sept.**	6:44	19:40
10	**Aug.**	6:11	20:27	**14**	**Sept.**	6:52	19:27
17	**Aug.**	6:19	20:16	**21**	**Sept.**	7:01	19:13
24	**Aug.**	6:28	20:05	**28**	**Sept.**	7:09	19:00
31	**Aug.**	6:36	19:52				

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 Jun. "Is it Hot Enough for You? Facts and Lore about Weather in Canada", with speaker Dr. Rob Raeside, Dept.of Earth and Environmental Science, Acadia University.

27 Jul. "Minas Basin Shorebirds" with leaders Rick Whitman, 542-2917, **rick.whitman@ns.sympatico.ca** and Ber nard Forsythe, 542-2427.

17 Aug. "Blomidon Red Sandstone and Beach Rocks", with leader Ron Buckley, 542-1815.

24 Aug. "Kejimkujik Seaside Adjunct Botany and Birding", with leaders Reg and Ruth Newell, 542-2095, **ruth.newell@acadiau.ca.**

7 Sept. "Big Trees in Nova Scotia", with leader Ed Sulis, 678-4609, **edmasulis@ns.sympatico.ca**, Larry Bogan, and Doug Twohig.

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/**.

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. Contact Chris Pepper, 829-3478, **cpepper@ymail.com**; **or** email the trip leader; **or** go to **http://nsbs.chebucto.org/**.

16 Jun. "New Birders' Walk, Windsor, Hants Co.", with leader Patrick Kelly, 494-3294, 472-2322; **patrick.kelly@dal.ca. Pre-registration is required!**

21 Jun. -23 Jun. "Tern Festival, West Pubnico, Yarmouth County"; for information contact Musée des Acadiens des Pubnicos, 762-3380; **musee.acadien@ns.sympatico.ca**, or go to **http://www.museeacadien.ca**.

23 Jun. "Abraham's Lake, Sheet Harbour Area", with leaders Jim Cameron, 885-2970; **jim.cameron@ns.sympatico.ca** and Warren Parsons, 772-2207; **rosalieeast@ns.sympatico.ca**.

29 Jun. "Shubenacadie, Hfx/Colchester Co.", with leader Kathleen MacAulay, 758-3364, 213-2656; **roughlegged_hawk@yahoo.ca**. **Pre-registration is necessary!**

6 Jul. "New Birders' Walk, Taylor Head Prov. Park" with leaders Jim Cameron, 885-2970; **jim.cameron@ns.sympatico.ca** and Warren Parsons, 772-2207; **rosalieeast@ns.sympatico.ca**.

3 Aug. "Taylor Head Provincial Park" with leaders Jim Cameron, 885-2970; **jim.cameron@ns.sympatico.ca** and Warren Parsons, 772-2207; **rosalieeast@ns.sympatico.ca**.

24 Aug. "Pelagic Birds Boat Trip, Sambro" with leader David Currie, 476-6616, 876-8745; **David_currie@ns.sympatico.ca**.

30 Aug. -2 Sept. "Bon Portage Island", with leader Claire Diggins, 825-6152; **claire_diggins@hotmail.com**. **Pre-registration is necessary!**

8 Sept. "Taylor Head Provincial Park; Early Fall Migrants", with leaders Jim Cameron, 885-2970; **jim.cameron@ns.sympatico.ca** and George Child.

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/mnhnew/**.

8 Jun. -Sept. "ECHOES IN THE ICE: History, Mystery, & Frozen Corpses"; an exhibit on Arctic exploration, the Northwest Passage, and the Franklin Expedition.

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

20 Jun. "Conservation Showcase, Celebration/Appreciation Night, AGM", George Wright House. **RSVP to Nicole@nsnt.ca**.

23 Jun. "Herbert River Canoe Trip", near Rawdon. **Register with alice@nsnt.ca**.

20 Jul. "Shelter Cove Canoe Trip", near Tangier with Canoe Kayak Nova Scotia. **Register with peter@nsnt.ca**.

27 Jul. "McGowan Lake Turtle Sanctuary Property Celebration". **RSVP to cristi@nsnt.ca**.

11 Aug. "Crow Neck South Shore Bird Walk". **Register with manny@nsnt.ca**.

7 Sept. "Hemeon's Head Property Celebration". **RSVP 425-5263 or to cristi@nsnt.ca**.

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; or go to **http://www.nswildflora.ca/**.

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/**.

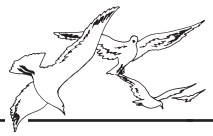
6 Sept. -8 Sept. "NOVA EAST 2013", Atlantic Canada's longest-running star party, Smiley's Provincial Park.

Young Naturalists' Club: A fun, free nature club for children seven to 12 years. Meetings take place every third Saturday of the month (excepting July and August), at the Museum of Natural History, 1747 Summer St., from 10:30 - 12:00 a.m. Field trips take place every fourth Sunday, at 1:00 p.m. For more information – Zoë Nudell, 209-2531, **yncns@yahoo.ca**; or, go to **http://nature1st.net/ync**.

Summer Contact the above coordinates for the upcoming Summer, 2013 programme of events.

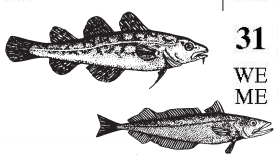
– compiled by Patricia L. Chalmers

HALIFAX TIDE TABLE



July-juillet

Day	Time	Feet	Metres	jour	heure	pieds	mètres
1	0156	**4.9**	1.5	**16**	0049	**5.2**	1.6
	0858	**1.3**	0.4		0730	**1.6**	0.5
MO	1427	**5.6**	1.7	TU	1316	**5.6**	1.7
LU	2144	**1.3**	0.4	MA	2026	**1.6**	0.5
2	0304	**4.6**	1.4	**17**	0147	**4.9**	1.5
	0954	**1.6**	0.5		0828	**1.6**	0.5
TU	1528	**5.2**	1.6	WE	1413	**5.6**	1.7
MA	2237	**1.3**	0.4	ME	2126	**1.3**	0.4
3	0414	**4.6**	1.4	**18**	0256	**4.9**	1.5
	1050	**1.6**	0.5		0930	**1.6**	0.5
WE	1627	**5.2**	1.6	TH	1518	**5.9**	1.8
ME	2328	**1.3**	0.4	JE	2226	**1.0**	0.3
4	0515	**4.9**	1.5	**19**	0411	**4.9**	1.5
	1143	**2.0**	0.6		1033	**1.6**	0.5
TH	1720	**5.2**	1.6	FR	1625	**5.9**	1.8
JE				VE	2327	**0.7**	0.2
5	0015	**1.0**	0.3	**20**	0520	**5.2**	1.6
	0608	**4.9**	1.5		1137	**1.3**	0.4
FR	1231	**2.0**	0.6	SA	1730	**6.2**	1.9
VE	1807	**5.6**	1.7	SA			
6	0058	**1.0**	0.3	**21**	0026	**0.3**	0.1
	0653	**5.2**	1.6		0621	**5.6**	1.7
SA	1313	**2.0**	0.6	SU	1240	**1.0**	0.3
SA	1850	**5.6**	1.7	DI	1830	**6.6**	2.0
7	0136	**1.0**	0.3	**22**	0122	**0.0**	0.0
	0735	**5.2**	1.6		0718	**5.9**	1.8
SU	1348	**2.0**	0.6	MO	1340	**1.0**	0.3
DI	1930	**5.6**	1.7	LU	1927	**6.6**	2.0
8	0211	**1.0**	0.3	**23**	0216	**0.0**	0.0
	0814	**5.6**	1.7		0811	**6.2**	1.9
MO	1420	**2.0**	0.6	TU	1438	**0.7**	0.2
LU	2010	**5.9**	1.8	MA	2021	**6.6**	2.0
9	0244	**1.0**	0.3	**24**	0307	**0.0**	0.0
	0850	**5.6**	1.7		0902	**6.6**	2.0
TU	1451	**2.0**	0.6	WE	1535	**0.7**	0.2
MA	2047	**5.9**	1.8	ME	2113	**6.6**	2.0
10	0316	**1.0**	0.3	**25**	0358	**0.0**	0.0
	0925	**5.6**	1.7		0950	**6.6**	2.0
WE	1526	**2.0**	0.6	TH	1631	**1.0**	0.3
ME	2124	**5.9**	1.8	JE	2202	**6.2**	1.9
11	0349	**1.0**	0.3	**26**	0449	**0.3**	0.1
	0959	**5.6**	1.7		1036	**6.6**	2.0
TH	1604	**2.0**	0.6	FR	1728	**1.0**	0.3
JE	2201	**5.9**	1.8	VE	2250	**5.9**	1.8
12	0424	**1.3**	0.4	**27**	0541	**0.7**	0.2
	1034	**5.6**	1.7		1120	**6.2**	1.9
FR	1648	**2.0**	0.6	SA	1824	**1.0**	0.3
VE	2237	**5.6**	1.7	SA	2337	**5.6**	1.7
13	0503	**1.3**	0.4	**28**	0634	**1.0**	0.3
	1110	**5.6**	1.7		1205	**5.9**	1.8
SA	1738	**2.0**	0.6	SU	1920	**1.3**	0.4
SA	2316	**5.6**	1.7	DI			
14	0546	**1.3**	0.4	**29**	0026	**5.2**	1.6
	1147	**5.6**	1.7		0729	**1.3**	0.4
SU	1831	**2.0**	0.6	MO	1252	**5.6**	1.7
DI	2359	**5.2**	1.6	LU	2014	**1.3**	0.4
15	0636	**1.6**	0.5	**30**	0119	**4.9**	1.5
	1229	**5.6**	1.7		0824	**1.6**	0.5
MO	1928	**1.6**	0.5	TU	1345	**5.2**	1.6
LU				MA	2109	**1.6**	0.5
				31	0221	**4.6**	1.4
					0920	**2.0**	0.6
				WE	1445	**5.2**	1.6
				ME	2202	**1.6**	0.5



August-août

Day	Time	Feet	Metres	jour	heure	pieds	mètres
1	0334	**4.6**	1.4	**16**	0229	**4.9**	1.5
	1017	**2.0**	0.6		0918	**1.6**	0.5
TH	1552	**5.2**	1.6	FR	1452	**5.6**	1.7
JE	2253	**1.6**	0.5	VE	2208	**1.0**	0.3
2	0446	**4.6**	1.4	**17**	0349	**4.9**	1.5
	1111	**2.0**	0.6		1023	**1.6**	0.5
FR	1652	**5.2**	1.6	SA	1607	**5.9**	1.8
VE	2342	**1.3**	0.4	SA	2310	**0.7**	0.2
3	0543	**4.9**	1.5	**18**	0505	**5.2**	1.6
	1159	**2.0**	0.6		1128	**1.3**	0.4
SA	1744	**5.2**	1.6	SU	1718	**6.2**	1.9
SA				DI			
4	0027	**1.3**	0.4	**19**	0009	**0.3**	0.1
	0629	**5.2**	1.6		0607	**5.9**	1.8
SU	1241	**2.0**	0.6	MO	1230	**1.0**	0.3
DI	1828	**5.6**	1.7	LU	1819	**6.2**	1.9
5	0106	**1.0**	0.3	**20**	0105	**0.3**	0.1
	0710	**5.2**	1.6		0701	**6.2**	1.9
MO	1317	**2.0**	0.6	TU	1328	**1.0**	0.3
LU	1908	**5.6**	1.7	MA	1914	**6.6**	2.0
6	0142	**1.0**	0.3	**21**	0157	**0.0**	0.0
	0747	**5.6**	1.7		0751	**6.6**	2.0
TU	1350	**1.6**	0.5	WE	1423	**0.7**	0.2
MA	1947	**5.9**	1.8	ME	2005	**6.6**	2.0
7	0216	**1.0**	0.3	**22**	0246	**0.0**	0.0
	0822	**5.6**	1.7		0838	**6.6**	2.0
WE	1424	**1.6**	0.5	TH	1516	**0.7**	0.2
ME	2024	**5.9**	1.8	JE	2054	**6.6**	2.0
8	0248	**1.0**	0.3	**23**	0334	**0.3**	0.1
	0856	**5.6**	1.7		0923	**6.6**	2.0
TH	1501	**1.6**	0.5	FR	1607	**0.7**	0.2
JE	2100	**5.9**	1.8	VE	2141	**6.2**	1.9
9	0322	**1.0**	0.3	**24**	0421	**0.7**	0.2
	0929	**5.9**	1.8		1006	**6.2**	1.9
FR	1540	**1.3**	0.4	SA	1657	**1.0**	0.3
VE	2137	**5.9**	1.8	SA	2226	**5.9**	1.8
10	0357	**1.0**	0.3	**25**	0508	**1.0**	0.3
	1004	**5.9**	1.8		1048	**6.2**	1.9
SA	1623	**1.3**	0.4	SU	1748	**1.0**	0.3
SA	2214	**5.6**	1.7	DI	2311	**5.6**	1.7
11	0435	**1.0**	0.3	**26**	0558	**1.3**	0.4
	1039	**5.9**	1.8		1131	**5.9**	1.8
SU	1710	**1.3**	0.4	MO	1840	**1.3**	0.4
DI	2253	**5.6**	1.7	LU	2356	**5.2**	1.6
12	0519	**1.3**	0.4	**27**	0651	**1.6**	0.5
	1117	**5.9**	1.8		1215	**5.6**	1.7
MO	1804	**1.3**	0.4	TU	1933	**1.6**	0.5
LU	2336	**5.2**	1.6	MA			
13	0610	**1.6**	0.5	**28**	0044	**4.9**	1.5
	1158	**5.6**	1.7		0746	**2.0**	0.6
TU	1902	**1.3**	0.4	WE	1304	**5.2**	1.6
MA				ME	2026	**1.6**	0.5
14	0024	**5.2**	1.6	**29**	0141	**4.6**	1.4
	0709	**1.6**	0.5		0843	**2.3**	0.7
WE	1247	**5.6**	1.7	TH	1402	**4.9**	1.5
ME	2003	**1.3**	0.4	JE	2118	**2.0**	0.6
15	0121	**4.9**	1.5	**30**	0251	**4.6**	1.4
	0813	**1.6**	0.5		0940	**2.3**	0.7
TH	1344	**5.6**	1.7	FR	1511	**4.9**	1.5
JE	2106	**1.3**	0.4	VE	2210	**2.0**	0.6
				31	0409	**4.6**	1.4
					1033	**2.3**	0.7
				SA	1620	**4.9**	1.5
				SA	2259	**1.6**	0.5

September-septembre

Day	Time	Feet	Metres	jour	heure	pieds	mètres
1	0511	**4.9**	1.5	**16**	0453	**5.6**	1.7
	1122	**2.3**	0.7		1121	**1.3**	0.4
SU	1715	**5.2**	1.6	MO	1708	**5.9**	1.8
DI	2346	**1.6**	0.5	LU	2352	**0.7**	0.2
2	0558	**5.2**	1.6	**17**	0551	**5.9**	1.8
	1204	**2.0**	0.6		1220	**1.0**	0.3
MO	1800	**5.6**	1.7	TU	1807	**6.2**	1.9
LU				MA			
3	0028	**1.3**	0.4	**18**	0046	**0.7**	0.2
	0638	**5.2**	1.6		0641	**6.2**	1.9
TU	1243	**1.6**	0.5	WE	1315	**0.7**	0.2
MA	1841	**5.6**	1.7	ME	1859	**6.2**	1.9
4	0106	**1.0**	0.3	**19**	0137	**0.3**	0.1
	0714	**5.6**	1.7		0727	**6.2**	1.9
WE	1320	**1.6**	0.5	TH	1406	**0.7**	0.2
ME	1920	**5.9**	1.8	JE	1948	**6.2**	1.9
5	0142	**1.0**	0.3	**20**	0224	**0.3**	0.1
	0748	**5.6**	1.7		0811	**6.6**	2.0
TH	1358	**1.3**	0.4	FR	1454	**0.7**	0.2
JE	1958	**5.9**	1.8	VE	2034	**6.2**	1.9
6	0217	**0.7**	0.2	**21**	0309	**0.7**	0.2
	0822	**5.9**	1.8		0854	**6.2**	1.9
FR	1437	**1.0**	0.3	SA	1540	**0.7**	0.2
VE	2035	**5.9**	1.8	SA	2119	**5.9**	1.8
7	0252	**0.7**	0.2	**22**	0352	**1.0**	0.3
	0856	**5.9**	1.8		0935	**6.2**	1.9
SA	1518	**1.0**	0.3	SU	1625	**0.7**	0.2
SA	2114	**5.9**	1.8	DI	2202	**5.9**	1.8
8	0330	**0.7**	0.2	**23**	0435	**1.3**	0.4
	0933	**5.9**	1.8		1016	**5.9**	1.8
SU	1602	**1.0**	0.3	MO	1710	**1.0**	0.3
DI	2153	**5.6**	1.7	LU	2245	**5.6**	1.7
9	0411	**1.0**	0.3	**24**	0520	**1.6**	0.5
	1010	**5.9**	1.8		1057	**5.9**	1.8
MO	1650	**1.0**	0.3	TU	1756	**1.3**	0.4
LU	2235	**5.6**	1.7	MA	2328	**5.2**	1.6
10	0459	**1.3**	0.4	**25**	0610	**2.0**	0.6
	1051	**5.9**	1.8		1140	**5.6**	1.7
TU	1745	**1.0**	0.3	WE	1845	**1.6**	0.5
MA	2319	**5.6**	1.7	ME			
11	0556	**1.6**	0.5	**26**	0013	**5.2**	1.6
	1135	**5.9**	1.8		0705	**2.3**	0.7
WE	1846	**1.0**	0.3	TH	1227	**5.2**	1.6
ME				JE	1935	**2.0**	0.6
12	0008	**5.2**	1.6	**27**	0105	**4.9**	1.5
	0702	**1.6**	0.5		0802	**2.6**	0.8
TH	1226	**5.6**	1.7	FR	1320	**4.9**	1.5
JE	1949	**1.0**	0.3	VE	2026	**2.0**	0.6
13	0105	**4.9**	1.5	**28**	0208	**4.9**	1.5
	0808	**2.0**	0.6		0858	**2.6**	0.8
FR	1325	**5.6**	1.7	SA	1424	**4.9**	1.5
VE	2051	**1.0**	0.3	SA	2116	**2.0**	0.6
14	0214	**4.9**	1.5	**29**	0323	**4.9**	1.5
	0914	**1.6**	0.5		0951	**2.6**	0.8
SA	1436	**5.6**	1.7	SU	1535	**4.9**	1.5
SA	2153	**1.0**	0.3	DI	2206	**2.0**	0.6
15	0338	**5.2**	1.6	**30**	0429	**4.9**	1.5
	1018	**1.6**	0.5		1040	**2.3**	0.7
SU	1556	**5.6**	1.7	MO	1637	**4.9**	1.5
DI	2254	**1.0**	0.3	LU	2255	**1.6**	0.5

ALL TIMES ARE AST

NEXT DEADLINE

21st of August for the September, 2013 Issue
Send submissions to 'Newsletter', c/o NS Museum of Natural History,
or by email to sdhaythorn@ns.sympatico.ca