

THE HALIFAX FIELD NATURALIST



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June to August, 2017



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

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HFN ADDRESS

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2017

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SPECIAL ARTICLES

MORAR TALES

– Gareth Harding, Renée Lyons,
and Millie Harding/Lyons

GRAPE PIPS AND OTHER TALES

Decades ago I planted four grape vines which had been specially developed in the Annapolis Valley to be resilient to our cool, damp Nova Scotian winters.

Well, the rabbits, otherwise known as Snowshoe Hares, were very partial to this new delicacy which had appeared as manna out of the sky, and my newly-planted vines were heavily pruned that first winter. So the following spring, I hastily completed a picket fence around my garden, encompassing the row of vines. They barely survived the next couple of years, with only one gradually establishing itself on the picket fence.

Twenty or so years later, this vine has developed an amazing vitality and started shading my other climbers, such as various varieties of clematis, scarlet runners, trumpet flowers, and rambler rose root stock, and in the process running great distances along the fence. I was now clipping back this amazing vine several times each summer. It even started creeping onto my nearby black currant bushes and runner bean teepees. A further decade on, this vine had started producing lovely big green grapes and rapidly developed a following of Ruffed Grouse (known locally as 'paartridge'), Chipmunks, Squirrels, and Blue Jays.

Enter Renée Lyons into our lives. She was undaunted by our primitive living conditions and happened to be a lapsed gardener. She has turned out to be one dynamo of a harvester (not so much of a sower of seeds). Renée came across the developing grapes late one summer and kept such a hawk eye on them that she succeeded in beating all her competitors to the produce, which now had the opportunity to fully ripen and turn red, much to my surprise! Previously of course, there had been an all too brief window-in-time between 'green' and 'gone'! The vine and Renée were so productive that I had to extend my jam making to include grapes, which turns out to be similar in taste and texture to plum jam.

We found there is good reason why grape jelly is readily available on the supermarket shelf, whereas grape jam is not. The two to three little pips in each grape make for tedious jam preparations. However, we discovered that a half slit with a sharp knife made for rapid pinging of pips into the compost container. After an hour or so and a stiff back, we had enough grapes for two flats of preserve jars. Our jam making is usually done back in Halifax, nevertheless, the compost is religiously brought back to Morar, where it is dumped on the compost heap in the apple orchard.

The following spring, while cleaning the farmhouse, we found that the apple creel basket* hanging on the coat rack in the kitchen was filled with grape seed shells! The Deer Mice which share our farmhouse had evidently made excursions to the compost (some kilometres in mouse distance from the house), to recover all our discarded grape pips! The pips had been then leisurely consumed over the long winter months.

*This basket is the type of wooden woven basket creel you cross strap around your neck so that it rests on your stomach, ready to receive apples, while you are precariously high up the tree on an apple ladder.



EAC HONOURS HEALTHY FOREST COALITION

The Nova Scotia Healthy Forest Coalition is an alliance of organisations and individuals united to raise public awareness of the critical state of our forests and the need for fundamental reform of forest policy. They want to make the public aware that generations of mismanagement have depleted our soils, thereby seriously compromising our forests' capacity to regenerate. Current practices are making things worse at an alarming rate – indigenous species are threatened, habitats are disappearing, natural ecosystem functions are being destroyed, and our forest economy is collapsing.

Selection management is a viable alternative to the type of industrial forestry that culminates in clearcutting, and it operates on two principles. **First** – that the best trees should not be harvested, but left as seed trees that will ensure the long-term improvement of forest stands. **Second** – that harvesting will leave intact a canopy which protects shade-tolerant trees as they grow. The result is not a wild forest, but it is one that provides habitat for wildlife, sequesters carbon, conserves water, and allows for a variety of human uses, including conservative timber production. Furthermore, woodlands under selection management can provide more direct employment to woods workers, and, as our forests come to produce higher-value timber and greater biodiversity, it can also generate more indirect jobs – in non-timber uses and in manufacturing of timber products. For all of these reasons the Healthy Forest Coalition is urging government to adopt selection management as the principal regime on Crown lands and the recommended regime on private lands.

Some 15 years ago the Province established a programme which could be used to encourage selection management. But, this 'Sustainable Forestry Fund', which was intended to encourage silviculture, instead has benefitted industrial forestry more than ecologically sensitive forestry. For example, in 2014, the fund assisted selection management on only 53 ha!

What should the Province do? It could encourage selection management by enriching this fund and insisting that a larger proportion of support should be directed to it. Also, on Crown lands, it could essentially ban clearcutting and insist upon selection management. It could also require the NSCC to offer courses to harvester operators; this would give them the skills needed to work in selection management. It could also dedicate special funds for training or re-training forest workers as tree markers and woodland planners (skilled tree markers and management planners will be in demand under a selection management regime). These initiatives could be paid for by ending or reducing subsidies for logging roads, and by diverting those funds to support selection management and reforestation.

Finally, the Province could do more to help forest industries adjust to the decline of the pulp and paper industry. Like any resource industry, the forest economy is a complex interlocking system. For over 50 years the needs of the pulp and paper industry dominated demand for wood and virtually dictated forest policy. Its decline has left our forest economy in disarray. The broad plan developed through public consultation on Natural Resource Strategy gave us direction for restoring bio-diversity, but its assumptions con-

cerning the forest economy could not take into account the plant closure at Liverpool and the scaling back of the plant at Port Hawkesbury. Now that we are living with the economic consequences of those events, we need a discussion, led by government, on how to create a forest economy that will build on biodiversity rather than destroying it.

The Ecology Action Centre has honoured the Nova Scotia Healthy Forest Coalition by nominating them for their Tooker Gomborg award, an award which goes to the person or event that most creatively and brilliantly made the news in the past year. Tooker Gomborg was a Canadian political and environmental activist, known across Canada for his clever and effective advocacy towards environmental justice, and also his media charisma. From 'Golden Turkey Awards', to 'Burying a Car', to 'Robin Hood at the Toronto Stock Exchange', Tooker knew how to garner media atten-

tion. A truly inspiring individual.

The award ceremony took place on Monday, June 19th, at EAC's AGM at the Alderney Gate Public Library, Dartmouth. It was accepted by arborist and forester Mike Lancaster, co-ordinator for the St. Margaret's Bay Stewardship Association. Stalwart HFN working members of the Nova Scotia Healthy Forest Coalition are HFN's Conservation Committee comprised of Richard Beazley, David Patriquin, Clare Robinson, and Bob McDonald.



HFN TALKS

ANTARCTIC VOYAGE

6 APR.

– Gillian Webster

Long-time HFN member Peter Webster shared experiences and images from his December 2015/January 2016 trip to the Antarctic in an image-packed multi-media presentation.

His 11-day voyage of discovery on the MV Sea Spirit travelled south from Ushuaia in Argentina, crossed the Drake Passage, visited the South Shetland Islands, and explored the Antarctic Peninsula. The trip featured encounters with Gentoo and Chinstrap Penguins, along with a variety of seals and whales. It also included zodiac tours of ice floes and the stunning Antarctic coastline, and an attempt at snow-hole camping. Peter discussed his experience of the polar tourism industry, and some important issues and opportunities presented by tourism to earth's most remote places.

The 110-passenger ship had a crew of 70. It included naturalists who made presentations during the journey and crew who maintained the equipment and ran the ship. There was a list of safety measures for participants to follow, and one of them was the necessity of stepping into antiseptic foot soaks when getting back on to the ship from a field trip, so as to not contaminate anything. When the MV Sea Spirit is not voyaging to the Antarctic, it is in use as an Arctic cruise vessel. Many of the experts and other crew work in both the Arctic and the Antarctic.

The Drake Passage can be a notoriously bad experience, as it spans the seas between the tip of South America and the Antarctic Peninsula. On the third day of the passage down, the water was fairly calm and smooth and passengers enjoyed what is called 'the Drake Lake experience', while a festive Christmas tree and banquet made for a great holiday atmosphere. But, on the return trip, it was extremely rough. The 'Drake Shakes' caused sea sickness and kept many passengers in their bunks for three days. Even though the ship was equipped with stabiliser fins to keep it from pitching too much; some of the seasoned crew didn't seem to materialise very often, either!

Peter was lucky enough to bunk in a small room with two others, both from Russia. Dmitri spoke Russian and English, while Michael spoke Russian and German. They all had to be very organised (especially within such a small



space), hanging up their wet gear immediately after coming in from zodiac trips, in order to get them dry again for the next trip ashore. Every day the decks were filled with people from many countries – such as Australia, North America, and Europe. They all had in common a love of nature, and enjoyed watching the pelagic Storm Petrels and Wandering Albatross, which glided behind the ship's wake, cruising the thermals. The midnight sun shone most of the time and the passengers, having full access to the ship, had lots of time to view the fantastic icebergs; Peter's slide of one particularly huge one was amazing. On some of the bergs penguins could be seen jumping in and out of the water.

After two days of sailing, Smith Island in the South Shetlands came into view. The first of these visited was Deception Island which is fully volcanic. The Sea Spirit sailed into its caldera, and Waddell Seals lay about on the volcanic shore. New Year's Eve was spent here and some adventurous passengers, including Peter, made a dash into the icy waters for a polar plunge!

Next up came a visit to a Gentoo Penguin rookery, which lay next to an unoccupied Argentinian station. The Antarctic spring starts in November and summer comes in March. January is when the hatchlings are very young and their parents are still nest-building in some cases. Peter played video clips of all the excitement. Passengers had to keep a safe fifteen-foot perimeter from the colony, and the ship's crew cordoned off areas to guide passengers where they could make their way to the best viewing sites.

Twenty five to thirty people at a time went ashore to watch the animals. The penguins wear down narrow corridors in the snow, packing down their paths. Parents collect pebbles to make porous nests, just big enough to accommodate a brooding parent; the resulting natural aeration means the nest doesn't freeze and is also high enough off the ground so that the egg area stays clean and dry. It was amazing to hear the parents cooing, and to see them standing protectively close to their newborns. The penguins seemed very human, chirping and flapping, hopping about, always on the look-out to collect or steal rocks, all the while constantly socialising in the crowded environment. Of course, when being filmed diving for fish it's another matter – the penguins look very sleek and self-confident.

There are a lot of conservation and safety measures which are adhered to and these precautions allow the penguins to ignore the visitors. There are natural predators of course such as Skuas and Leopard Seals which take what they can get, and both animals are fearsome to watch as they dash upon their prey of baby penguins on land and adult penguins at sea.

Peter told us something about the colour shifts in the light which play around and on the icebergs; having the mid-night sun meant that any time he went on deck there were fascinating light displays. The zodiacs were taken out to visit the massive ice features and in some cases, kayakers could get nearer for spectacular views of icebergs close up. There were large outflows of water from the bases of many glaciers which the ship passed. The slides Peter showed gave a sense of the pent-up power of melting glaciers, and of course there are some avalanches when pieces crack off the main bergs and cliffs. Scientists are alarmed at the rate of glacial melting which is a sign of global warming. This is taking place at a faster rate at the poles than elsewhere.

The panoramic shots of Paradise Bay showed some of the wild beauty of the Antarctic Peninsula. The passengers climbing the icy hills to get better photos of the whole bay shared their wonderful efforts back on the ship after yet another exciting zodiac trip. Peter showed a slide of one of the passengers taking a magnificent visual from a steep outcrop. I don't think I was the only audience member who held my breath. This is the kind of skilful photography taken for television exploration shows, and Peter's well-focused narration was helped immensely by the stark beauty and keen joy of what they saw and which he, in turn, conveyed to the audience. Of course the excitement and exertion of walking around the steep slopes helped work up hearty appetites and the ship's meals were delicious. The visit to Brown Station had been interesting, and so was the story of the reluctant soldier who had been ordered to stay a second winter some years ago. In the face of such a daunting prospect, it is claimed that he burned down one of the station buildings and was thus whisked to a warmer, less lonely place!

Back on board, passengers had opportunities every day to hear naturalists talk about their expertise and the types of wildlife viewing available. To Peter's chagrin, the climate-change expert had her talk interrupted by the sudden sighting of a Humpback Whale, so Peter did not get to hear more of this area of concern. However, on a tourist voyage, it does not seem unusual to by-pass some of the recent sobering activities in the Antarctic due to global warming. After a recent polar voyage by the giant cruise ship *Crystal Serenity*, there has been much consideration in Canada about instituting new rules respecting both ship-size limits and number of cruises taken. This will help manage areas where large numbers of tourists have not been seen before. Local people find the influx overwhelming and fragile eco-systems need to be treated with the utmost respect.

Peter showed us slides of Giant Petrels and Antarctic Cormorants, which have piercing blue eyes. He was a bit disappointed that he got to see relatively few Adelie Penguins; he showed only one picture of this bird, which seemed to be living happily among a colony of other species. It was taken at the Chilean Station, which has a research team based there. There was a slide of a Snowy Sheathbill – a beautiful, feathery white bird that eats just about anything it can get, including unattended eggs. It was strange to see the contrast between this sweet-looking,

keen-eyed bird and the penguin slush it moved about in. We were told that penguin colonies are smelly, squishy places, so I guess everyone and everything gets used to it.

Travelling between island destinations, Peter said it was awesome to see Minke Whales and Orcas swimming close beside the ship. He showed slides of Humpback Whales – so close that you could almost count the barnacles and could also see its cavernous mouth filtering gallons of water for krill.

One evening after supper a self-selected group went out on a few zodiacs to set up camp on shore for the night. Each person shovelled out their own snow hole, and were ready to climb inside their lined bivvy bags. After a rain cloud came onto the horizon, there was much debate among the crew as to possible evacuation. When the rain came down hard, the ship was radioed and zodiacs set out to collect the soaked adventurers. Once the dark and tortuous trip successfully deposited all the disappointed passengers back on board, the bivvy bags along with the other soaked materials were laid out in the lecture hall to dry. Hosting this kind of event in rough seas, with only flash-lights, is one of the hazards that passengers and crew have to be aware of. Sometimes the planned events don't work out, but in this case, to be rained out was very unusual. It rarely rains in the Antarctic and most of the audience was very surprised to hear that this camping trip got rained out. It may well be a sign of global climate change.

The return to Argentina was a long voyage, starting via Lewis Island. Chinstrap Penguins were seen, among whose colony was spotted a lone Macaroni Penguin, which looked to be quite at home. Also in the South Shetlands, passengers visited an Elephant Seal colony. These large animals slithered heavily along the beach, and yawned widely. Young males were in molt and the videos showed a lethargic group learning how to get along and also how to fight. Mostly they looked fearsome in size, but at home of course in their own environment with no humans or predators to bother them, the seals looked very natural.

Peter showed us the International Association of Antarctica Tour Operators' (IAATO) rules. This is an international group, comprised of more than 100 respected companies and organisations, founded in 1991 by seven large private tour operators. Their conservation mission is to protect Antarctic wildlife, and to respect scientific research and protected areas. Their main concern is to keep Antarctica pristine. Peter also showed the Association of Arctic Expedition Cruise Operators (AECO) rules, which are as follows:

1. Leave no lasting signs of your visit
2. Do not pick flowers
3. Do not take anything with you
4. Do not disturb animals and birds
5. Leave cultural remains alone
6. Take the polar bear danger seriously
7. Respect local culture and local people
8. Be safe



Lastly, Peter gave an overview of some of the lectures occurring during the Drake Passage sea journeys, and there was more time to talk to some of the Poseidon Expeditions experts who also gave lectures on board. The Poseidon Expeditions is the organisation behind tourist voyages to the Arctic and Antarctica and they oversee all the logistics and expert staff. Among the latter was Birgit Lutz, who has studied and worked in the Arctic for ten years. She has academic qualifications from the Canadian Univer-

sity of the Arctic and has stood at the geographical North Pole many times. She speaks five languages and currently works as a freelance author and speaker. Last, but not least, she is working on a third book about her polar travels.

Another expert on board was Boris Solovev, a biogeographer who spent his childhood in the Russia's Ural Mountains. He studied oceanic ecosystems and now has a PhD in specialised studies of the Beluga Whale. He currently works in Russia for the global conservation organisation the World Wildlife Federation – WWF. His many interests include working on the planning project for Russian Arctic Marine Protected Areas.



JELLYFISH



4 MAY

– Clarence Stevens Jr.

MSc Biology Student and HFN member Bethany Nordstrom, who is presently working in the Boris Worm Lab at Dalhousie University, spoke on jellyfish and the Leatherback Sea Turtle, *Dermochelys coriacea*. Her presentation began with what is known about Leatherbacks present in Nova Scotia, as well as their current global status.

In Canada Leatherbacks are classified as an Endangered Species. Each year large numbers of them gather in Nova Scotia waters. In June individuals begin arriving in the province for this seasonal aggregation and many are still present into October. It is said that Nova Scotia is home to one of the largest and most successful aggregations in the Atlantic Ocean. Studies show that many of the Leatherbacks found in Nova Scotia travel from their southern breeding grounds in Trinidad; the northward draw is the more productive waters here, where many and various species of jellyfish can be found.

Unlike other sea turtles, Leatherbacks prefer feeding in colder waters, where their favourite food, jellyfish, are more abundant. While the Leatherbacks' diet consists mainly of jellyfish, they will also feed on other soft-bodied organisms, such as salps, cephalopods, and tunicates. Leatherbacks are able to take advantage of these cold water food sources as they are unique among our North American reptiles for their ability to maintain high body temperatures using metabolically generated heat. Body fat and their large size also aid them in withstanding the rigours of cold water feeding.

The Leatherback Sea Turtle is the largest turtle species in the world, and after a summer of feeding here, they are 33 percent heavier when they once again leave to journey south to their breeding grounds.

Unlike other species of sea turtles, they lack a bony shell; instead, their carapace is comprised of skin and oily flesh. Their mouths are full of hundreds of backwards pointing spines which aid in their consumption of 300 kilograms of jellyfish a day! Leatherbacks follow their jellyfish prey throughout the day, resulting in turtles 'preferring' deeper water in the daytime, and shallower water at night (when the jellyfish rise up through the sea water column).

Jellyfish themselves are composed of about 95 percent water. Throughout their lifecycle, jellyfish take on two different body forms called medusa and polyps. A medusa is the free swimming form we think of as a jellyfish. Medusae spawn eggs and sperm to reproduce sexually. However, jellyfish also have a second way to reproduce – asexually, by using polyps and buds. Jellyfish can continue to

sting even after they are dead and their stingers stay active even when torn up into those tiny shreds floating around in coastal waters or when washed up onto beaches. Another natural enemy of the jellyfish is the Ocean Sunfish, *Mola mola*, the heaviest known bony fish in the world.

As a researcher studying the endangered Leatherback Sea Turtle, Nordstrom wants to know where the jellyfish go and how numerous they may be, and she's calling on 'citizen scientists' to help out. Nordstrom already has a network of about 55 citizen scientists who monitor the coastline of Nova Scotia about once a week.

"At this point, I'm just looking for any observations of people who happen just to be out," she said.

If you are unable to participate in a regular survey, jellyfish observations are also welcomed and can be reported to Nordstrom by email at jellyfish@dal.ca; or, you can forward your sightings via this form found online at <https://jellyfish.bigelow.org/jellyfish#cor>, also on Facebook at <https://www.facebook.com/dalhousiejellyfish/>.

Any info should include a quick description, and also:

1. Where you saw it.
2. The date and time you saw it.
3. The identity of the species, if known. If you're not up on jellyfish species, take a photo or provide a description of what it looked like, including shape and size.

Recent statistics gathered from turtle survey volunteers provided data on 3,500 stranded jellyfish. In addition, jellyfish reported through emails totalled 3,359 Lion's Mane, *Cyanea capillata*; 168 Moon Jellyfish, *Aurelia aurita*; 183 Comb Jellyfish, *Ctenophora* spp.; and 47 unknown species. Reports also showed that Lion's Mane Jellyfish numbers peak in the second half of July, especially along the Northumberland Strait.

Last summer, Nordstrom also worked with the Canadian Sea Turtle Network using underwater cameras to take peeks at what is happening within the thermocline. Unfortunately, they were unable to get the results they wanted due to visibility, lighting, and depth issues. So, this summer they will be trying another approach – acoustic monitoring. The emissions from this equipment will bounce sound waves off organisms, providing data on which creatures are lurking beneath the ocean's surface. The hope is to learn more about Leatherbacks which are feeding on jellyfish below the surface.

The Canadian Sea Turtle Network is located in Halifax at 2070 Oxford Street, Suite 110. They can be reached via phone, 423-6224, or email, info@seaturtle.ca, or go to their web page at <http://seaturtle.ca/>.

Nordstrom's information-packed presentation ended with this parting tip, if you get a jellyfish sting, vinegar is the best way to relieve the pain.



FORESTRY IN NS ...

1 JUNE

– Gillian Webster

... and unrestrained, government-sanctioned forest liquidation.

The current president of Nature Nova Scotia, Bob Bancroft, is known to many as a regularly featured guest on CBC Maritime Noon, where he comments on various wildlife topics and responds to questions about wildlife in

the Maritimes. For 42 years in Pomquet Harbour, he has been restoring his own property (from the results of past agricultural practices) back to a more balanced and healthy forest ecology.

In February of 2010, Bob co-authored with Donna Crossland Restoring the Health of Nova Scotia's Forests, a report about the state of Nova Scotia's woodlands by a 'Forest Panel of Expertise' as part of the Nova Scotia Natural Resources Strategy 2010 process. Panel members included Bob Bancroft, BSc, MSc; Donna Crossland, BSc, BEd, MScF; and liaison Kevin Pentz, BScF. (See <http://novascotia.ca/natr/strategy/pdf/phase2-reports/Forests-Health.pdf>).

Subsequently, both the NDP and the then Liberal governments backed off on the commitments coming out of that process which, most importantly, included a 50% reduction in clear-cutting. Moreover, even in the recent 2017 provincial election, the Green Party was the only one which declared as a major issue the problem (and problems) of clear-cutting.

Bob's presentation on this Thursday evening, (two days post-election), included ample time for discussion about this important and irreparable deleterious practice. Overall, it now seems that the status quo has been preserved with the re-election of the Liberal Party.

Bob and many, many others have worked for many years to co-operate with and inform the provincial government. He began his talk by sketching out the dismissal and even falsification of his work in the public consultation process re forest management in Nova Scotia. He began with the final report of the Natural Resources Citizen Engagement Committee, which came out in March, 2009. The message there was that there should be less clear-cutting and herbicide use. In 2010, A Natural Balance: Working Toward Nova Scotia's Natural Resources Strategy was released. It contained urgent recommendations of a similar nature regarding clear-cutting and herbicide use from Bob and like-minded colleagues. He and forestry colleague Donna Crossland (who has a Master's degree in Forest Ecology) spent 18 months documenting their data. Their co-authored work was quickly discredited by a forest-industry scientist who said their Natural Resources Strategy document did not show "sound forest strategy", and this 'official' discreditation was an immediate green light for the industry to continue in their drastic and irreparable clear-cutting practices.

Bob's message to the audience is that his experience with government and industry has been one of extreme frustration. Big business interests are put front and centre, and the results of public consultations and sound forest science has been consistently postponed and ignored. In the end, the three main Nova Scotia political parties have given precedence to the voices and practices of government and industry.

Between 1962 and 1995, the giant Norwegian forestry company STORA planted 100 million trees in their clear-cuts and they have erected a large plaque to boast of this fact. However, they have planted only two species – and moreover, these are susceptible to both blow down and insects. To push home his point about ignored public consultations, Bob described how he consulted on Liscomb Sanctuary in 2000, and worked hard to make sustainable forestry practices there successful. However, he soon became aware that his input was not being applied and he felt

forced to resign. Healthy practices were, and are, continuously being ignored and not implemented, despite industry and government 'party lines'. Also, he made the point that herbicides are being used to kill hardwoods, which are then being cut for companies' profits, but – it's the taxpayers who are footing the bill for the herbicides!

On the plus side for maintaining a healthy forestry balance in Nova Scotia, 65% of its land base is still in private hands, of which the industrial component is 10% while the small private woodlots make up the remaining 55%. (Crown Lands comprise 35%, of which Provincial public lands are 30% while Federal public lands are 5%.)

Bob said that Newfoundland and Nova Scotia are the worst places in the country for forest re-growth. He showed us information put together by Dalhousie University scientist David Patriquin on a slide called "Map of Forest Sensitivity to Atmospheric Acid Deposition." It demonstrated how naturally acidic our soils are. And, even worse, they are also naturally poor in nutrients, so the use of drastic clear-cutting practices results in our soils suffering even more, because the only nutrients our soils get is from recyclable natural material. Of course now, the trees are not receiving this vital ingredient to their health, because severe clear-cutting takes every bit of material away from these lands which are already highly susceptible to atmospheric acid deposition. Given the trends towards more impoverishment of the soils by industry logging practices, Bob indicated that in some future time, our provincial forests would fit the description of savannah or desert!

Bob showed how a forest grows from being a young, shade-intolerant forest into a shade-tolerant one, and he put up a chart which indicated that it takes about 165 years to create a sturdy 50% hardwood and 50% softwood forest. But, forestry industry harvests are being carried out anywhere from 20- to 55-year cycles.

Wildlife populations and nature have deteriorated along with these degraded NS forests. Bob's talk was illustrated with satellite images giving examples of this. To push home his point about ignored public consultations, once again he talked about his work for Liscomb Sanctuary in 2000. Here, he felt his work was 'window dressing' in order to make the process look fair, while in reality it wasn't. He showed satellite images of the forest in the Liscomb Sanctuary in 2000 and again recently and the change, shown so graphically, was shocking. The audience heard many times during the evening about how our natural world in Nova Scotia is out of balance because of the kind of greed that will not permit mature forests to develop. Native animals and birds have had their habitats decimated to the extent that some will not survive in Nova Scotia if the current systematic destruction of forest habitat continues.

Another particular problem for forest health is the industry's practice of ignoring standard preservation methods in respect to streams and wildlife habitat. For example, the US Army Corps' buffer standards call for a 20-metre set-back safety zone. Our standard riparian zones for birds were shown, and then Bob indicated how industry in Nova Scotia is allowed, in some cases without charges or penalties, to violate these zone limits – to the extent that penalties are not being levied at all where some companies blatantly disregard the limits and strip the forest to within nine metres. Corridors this narrow mean that streams silt up and disappear, taking with them the health of the impacted areas.



Bob described how – in Peter Wohlleben's The Hidden Life of Trees: What They Feel, How They Communicate – Discoveries From a Secret World – trees help one another if they can. For example, through their root systems, they can pass nutrients down the line to trees suffering from a lack of them. Bob calls these trees our elders and pleaded that the public learn to recognise, respect, and protect these natural wonders and the life they sustain.

Surprisingly, despite repeated setbacks, Bob said that he still has optimism. Nature Nova Scotia is trying to protect 17 % of the province, up from the current recommendation of 13%. However, there is a hold-up towards even reaching the 13%, since the Department of Natural Resources is delaying approval of the larger patches – perhaps because these hold potential profit from forest industry revenue. Still, there is hope that this wider protection recommendation will be effected. Bob shared his horror that in the past 20 years up to 2014, 42% of the operable wood in the province has gone. But, Bob said he can't afford to give up hope and neither can concerned citizens.

Discussion followed Bob's impassioned talk, some of which focused on 20 years of public protest over provincial policies and actions on clear-cutting. Bob argued for continued action in the face of broken promises and his passion was reflected in some of the hard work and passion of many members of the Halifax Field Naturalists over many years.

With the aim of impacting the direction of the Liberal Government, the recently formed Conservation Committee of the Halifax Field Naturalists prepared a document commenting on the impacts of forestry in Nova Scotia on conservation of biodiversity and asking questions about the underlying science. A committee has been formed which is looking into the "Impacts of forestry in Nova Scotia on conservation of biodiversity: Concerns and Questions". Richard Beazley and David Patriquin represented this committee in actively engaging the electoral platform of the liberal government by meetings over a period of six months with Liberal MLA Mr. Kousoulis. The report was presented to the Nova Scotia Department of Natural Resources in April, 2017 (see the full report at <http://halifaxfieldnaturalists.ca/hfnWP/wpcontent/uploads/2017/04/HFNdocNSD-NR26Apr2017.pdf>). This document's concerns and questions focused on three areas: landscape-level impacts of forestry practices on biodiversity; mitigation and adaption to climate change; and soil acidification and losses of calcium. Beazley and Patriquin were invited in late April to meet at Province House to further discuss the document with Natural Resources Minister Lloyd Hines, Labi Kousoulis, Joachim Stroink (MLA for Halifax Chebucto), and Executive Assistants for Minister Hines and for Premier McNeil.

Updates following this series of actions can be followed through the recently formed Nova Scotia Healthy Forest Coalition. It is an alliance of organisations, including the Halifax Field Naturalists, which has many aims, one of which is to raise public awareness of the critical state of our forests and the need for fundamental reform of forest policy. For more information, visit <http://www.healthyforestcoalition.ca>. If one party can be encouraged to respect forest sustainability practices, for example, voter apathy is one target which could be addressed and overcome. The Nova Scotia Healthy Forest Coalition is pressing for more public awareness and activism. Richard Beazley and David Patriquin addressed the audience on how to engage with

this process.

In conclusion, there was general agreement to persist in efforts to protect some of our last public natural resources. Bob stressed there is not much time left for action, and that we could still achieve a healthy balance if we changed our practices now. He said the province can remove trees and maintain a multi-age partial cut (where industry can take a product) and still maintain healthy soil, and healthy light and moisture levels.



NS NATIVE BEES

4 JUNE

– Keith Vaughan, edited by Emily Walker

Emily Walker is a Ph.D. student (Applied Science) in the Biology Department at SMU. Her supervisor is Dr. Jeremy Lundholm who is well known to HFN members. Emily's research project is to study various aspects of the behaviour and occurrence of native bees in Nova Scotia.

In the McNally Main Room 201, Saint Mary's University, she began her talk with some background information on bee habitat in Nova Scotia, often referred to as the 'heathland' or more colloquially as the 'barrens'. Heathland plants which bees frequent include those plants that bear fruit, i.e. berries, such as blueberries, cranberries, etc., which experience increased fruit quantity and quality as a benefit of bee visits. In the course of her search for bee varieties, she has become familiar with the flora of the heathland, and on one occasion in Cape Breton she found a rare arctic plant, *Diappensia lapponica*, which is critically imperilled in Nova Scotia.

The variety of wild native bees in Nova Scotia is astounding. There are over 230 individual species of bee in the Province, and in Canada there are more than 800 species. Emily has a personal collection of bees of which she brought a small sample for viewing in a glass case. Some of the bee types which Emily described included the solitary bees that nest in the ground; mining bees (*Adrena*); sweat bees (*Lassioglossum*) which are attracted to the salt in human sweat; metallic sweat bees (*Augochlorella*) which have a characteristic green/blue metallic appearance; social ground nesting bees (*Halictus*); cavity nesting bees; and leaf cutter bees.

Blue Orchard Bees (*Osmia lignaria*) fulfill a specific function in pollinating fruit blossoms. This phenomenon has been exploited commercially by orchard operators by breeding the bees on site. Small carpenter bees (*Ceratina*) burrow into plant material such as dead plant stems or bamboo, and have been found to nest in raspberry canes.

The European Wool-carder Bee (*Anthidium manicatum*) is an exotic European bee species that derives its common name from a preference for lining nests with plant hairs, or 'wool'. The males of this bee species will aggressively defend hairy plants from other insects, often attacking invaders with their abdominal spines and leaving a small pile of corpses below the plants.

Emily told the fascinating story of the Cuckoo Bee, which is a type of cleptoparasite (literally, parasitic thief). Cleptoparasitism is a form of feeding in which one animal takes



prey or other food from another that has caught, collected, or otherwise prepared the food, including stored food (as in the case of cuckoo bees, which lay their eggs on the pollen masses made by other bees, reminiscent of the behavior of cuckoo birds).

Bumblebees live in a world of their own. Some have developed a practice of occupying disgustingly smelly rodent burrows. Bumblebee varieties found in Nova Scotia include the Half-black Bumblebee (*Bombus vagans*) which has a range extending from Nova Scotia west to Ontario and south to Georgia.

Bombus ternarius, commonly known as the Orange-belted Bumblebee or Tricoloured Bumblebee, is a yellow, orange, and black bumblebee. It is a ground-nesting social insect whose colony cycle lasts only one season. It is common throughout the northeastern United States and parts of Canada. The Orange-belted Bumblebee can be found foraging on the flowers of many different plant species. A frequently encountered bumblebee in Nova Scotia is the



common Eastern Bumblebee (*Bombus impatiens*), which has great adaptability to living in country, suburbs, and urban cities. This adaptability makes them an excellent pollinator species, which has been exploited commercially by the greenhouse industry.

Emily ended her fascinating talk with reference to bee species of conservation concern. The Yellow-banded Bumblebee (*Bombus terricola*) is of special concern in Eastern Canada and is vulnerable globally. Emily has observed the Yellow-banded Bumblebee in Nova Scotia, including in heathlands on the Chebucto peninsula and in the Cape Breton highlands; she even found one foraging on a 'green roof' in Halifax. Other species on the critical list include the Sable Island Sweat Bee (*Lasioglossum sablense*) and the Macropis Cuckoo Bee (*Epeoloides pilosulus*), once thought to be extinct.



HFN FIELD TRIPS

COLE HARBOUR FARM

– Susan Moxon and Denyse Contrasty

Date: Saturday, April 29th

Place: Cole Harbour Farm Museum

Weather: Cloudy but warm

Leaders: Liz Corser

Participants: 9



On a calm but cloudy Saturday afternoon, nine participants gathered at the Cole Harbour Farm Museum. This heritage farm is located amidst the Cole Harbour suburban sprawl. Our guide Liz Corser commented that many folks feel the farm to be an 'oasis'. Certainly, it is a quiet retreat except for the crowing off the rooster, one of the farm's inhabitants.

Liz started off telling us how the main garden here was selected as one of the 150 Canadian gardens chosen by the government to represent Canada's 150th birthday. In addition the Museum was ranked second in the list of Community-run Museums. Between 17,000 and 18,000 tourists visit the farm each year!

There are several volunteer gardens scattered around the property. One of the first is a 'four-square' garden. It is made up of four blocks, each block measuring four ft square and bordered with bricks which were once used for sidewalks in downtown Dartmouth. In the beginning the society only wanted heritage plants, and in one of these blocks peonies would grow. However, with the farm open to the public, other varieties were soon introduced. (Liz mentioned that on May 21st, in the Annapolis Royal market, there would be heritage plants for sale. Some of the heritage plants include daylilies, phlox, and poppies.) The larger, main Farm garden was in the process of being tilled.

Liz pointed out some apple trees – one being a Bishop Pippin, the other an Astrachan; both are old varieties dating from the early 20th century. We saw a wire

teepee structure which is used for supporting climbing beans. It was large enough that children would be able to enter in order to view the growing beans from inside. Other enclosed wire cages were for high bush blueberries. Not far from the garden there were two honeybee hives which have now wintered over at the Farm for the last two years. The Mason bee, a hardier and more productive pollinator, can also be found at the farm; these nest alone in solitary spaces with walls made from mud.

In the garden plot the rhubarb was coming up as well as the hops which resembled asparagus. The latter had a 15-ft tall wooden structure on which to grow. We were told the hops would eventually exceed the length of these poles! Milkweed is grown for the butterflies and a perennial garden stretched along one side. The chive plants were thriving and participants were encouraged to take some which the tiller had uprooted. Another heritage plant growing was the double daffodil.

The centrepiece of the farm is the Giles' house which dates from the 1780s. It was moved here from another farm about a kilometre away. The first owner was a Mr. Hartshorne who grew grain here for his gristmill in Dartmouth (near the mouth of the Shubenacadie Canal). Several different families lived in the house in succession. The first owners were several generations of Giles, the next were the Settles (Settles Lake is nearby), followed by others that Liz couldn't quite remember. However, Stewart Harris was the last farmer who worked the farm. He lived in the Harris house which is the tea-room/gift store opened in the summer.

When we explored the Giles' house, we could see how it was originally constructed of logs. The two fireplaces were rebuilt by a man who had worked at the restoration of Louisburg. Renovations over the years have left their mark on the house but one can still feel the ambiance of a very old homestead.

We visited the blacksmith shop where Kevin Thomas hones his blacksmith skills. He sells all he produces at the forge and the proceeds go to the Cole Harbour Farm Museum Society. The floor is also made from the bricks which were once used for downtown Dartmouth's sidewalks. Unfortunately, Kevin was not present to demonstrate his talents.

The huge barn on site is the original barn and is in very good condition. There is a display case showing lightning rods which were used extensively on barns back then. Liz then pointed out the two lightning rods on the Harris house where the tearoom is in the summer. Also in the barn are examples of pulleys used for demonstrations to school children. The hay wagon would be backed into the barn, and as the horse was led out, grappling arms would lift the hay up into the loft using a series of pulleys. There were also collections of hay forks, a hay wagon, sleighs, and ploughs. Many artifact donations came from farms nearby, before developers built the present-day subdivisions.

We then saw where the pig, sheep, and calves would be housed for the summer months. At one time the farm had larger animals such as cows. However the public would pester them and it took the caretaker too much time to care for them. Now they have only smaller farm animals. The pasture fences include wire to keep out local dogs which tend to go after the sheep. The smell of hay was so prevalent in the barn and such a welcome and nostalgic scent.

The market barn was set up with a cold storage compartment for fresh vegetables which would be sold at markets in Halifax. It was also used for crate storage. There was talk of a possible Wednesday night Farmers' Market in the future. Built onto the side of the market barn was a chicken coop and two pens. In each pen there was one rooster and his harem of chickens. The first pen housed the older birds while the second pen were last year's chicks grown now into chickens and one rooster. They always have chicks but they often have difficulty finding homes for the roosters as two roosters will fight to become the 'cock-of-the-walk'.

Next we visited the crib barn that had cribwork which allowed for better air circulation. It was built with unchinked boards and was used for storage. Last year was the 100th anniversary of the Musquodoboit Railway line, and a model of the line which shows a train crossing the Salt Marsh was set up across the back of this crib barn. There was an old sleigh, which has been waiting for restoration for a long time, on one side of the barn there as well.

In the courtyard outside the barns there was a playground for children with horseshoe pits, an ox yoke swing, and hopscotch. Once open for the summer, there would be stilts and hoops from barrels to play with as well.

We finished our visit with a walk around the back perimeter of the farm property which borders the pond. Liz told us that in spite of heavy urban development in the early 1970's the pond was fortunately not touched and nature is reclaiming itself! There were Song Sparrows in the large tree near the pond.

It is very fortunate that the Cole Harbour Farm Museum Society was formed; they had the foresight to establish this gem in a growing city. Liz Corser, one of the founding members, was a most gracious host. We left feeling very acquainted indeed with this special 'oasis' in the heart of busy Cole Harbour. Many of the participants planned to return in the summer to view the flowering gardens and have a spot of tea after the teahouse opens on May 15th.



HORSE PASTURE BROOK FALLS

– Peter Webster

Date: Saturday, May 6th

Place: Wentworth Provincial Park

Weather: Damp and wet, with mosquitoes!

Leader: Barry Burgess

Participants: 6, plus Larry

After the previous week's rain, the Wentworth valley was still wet. This would mean lots of water in the waterfalls we were coming to see, (and in the stream we would have to cross).

After our Wentworth Provincial Park rendezvous, we were led to an unmarked side road east of the Wentworth ski hill. Our route began on a well-used jeep road, with lots of deep puddles. Groups of mud-spattered, off-road vehicles were forming up in our parking area, ready to set out on their own adventure.

Photographer Barry Burgess is well known for his nature photographs, and he had agreed to show us one of his favourite waterfall sites. Six intrepid 'waterfallers' joined Barry, and as we donned our recommended rubber boots, the mosquitoes made their presence known; thankfully, there was no sign of blackflies. Several of us came equipped with mesh-hooded bug jackets, but mostly, the mosquitoes were tolerable as long as we kept moving.

We set off along the fairly dry dirt track, climbing diagonally up the side of the Wentworth valley and enjoying the walk through its mixed forest of mostly Spruce, Hemlock, and Birch. Few flowers were yet in bloom, except for occasional Trout Lilies.

After a 20-minute walk we came to Hart Lake Creek, fast-flowing and more than two feet deep in spots. We each chose our own approach to crossing, with varying success. Slippery rocks, strong currents, and/or low boot tops led to wet feet, trousers, and bottoms for a couple of us – others managed to cross dry and unscathed. The smart ones with hiking poles had a distinct advantage. But we all dried out quickly and now we knew where the deep spots were, to keep in mind for the return crossing.

Having crossed this first creek we climbed the steep moss-covered slope, following it upstream. Hemlocks dominated this steep terrain, and we gained handholds where we could to reach a small ledge overlooking a deep cut in the creek bed which held a series of 10- and 20-ft waterfalls in full rush. We took turns at the small look-off, and snapped a few excellent pictures, before making our way carefully back down the slope.

We carried on, following the jeep road higher for another while, before branching off into the moss-covered forest. Here we came to the steep, winding ravine which is Horse Pasture Brook. We spread out and worked our way steeply downward along its side. It is only two to three metres wide in most places, and there are many chutes, rapids, and waterfalls along its downward course. There are spots where the water has carved a 20-ft deep slot less than two metres



wide into the soft sedimentary rock below.

Finding a good viewing site for each lovely waterfall was the trick. The more intrepid, and best rubber-booted, found their way into the course of the stream, to walk through shallow spots almost to the faces of waterfalls. We found locations to set up for photographs, and marvelled at the deep crevass this brook has cut into the rocky hillside.

We explored the moss-covered forest edges of the brook for over an hour. Getting ever further downhill, we arrived at increasingly difficult cliffs traversed by the rushing water, and had seen nearly a dozen separate chutes and waterfalls. The contrast of rock formations, many hues of lush green trees, ferns, and a deep carpet of moss, offset by the noisy rush of sparkling silver cascades, was well worth the trip. But, it was now time to turn around, and we made the climb back up the brookside slopes. After catching our breath, we proceeded back along the jeep road, recrossing Hart Lake Creek with only a modest amount of drama! Returning to our cars, we thanked Barry for showing us these terrific spots, and also gave a big thank you to Susan Moxon for ably organising the trip.

It turned out that several members of our group had not had enough of waterfalls for the day. So while some of us had to return to the city, several others carried on to explore other waterfalls in the area for the rest of the afternoon.



BAYER'S LAKE WOODLAND TRAIL

— Jon Davies, Judy Davies, and Carol Klar

Date: Tuesday, June 6th

Place: Bayer's Lake, Horseshoe Lake Drive

Weather: Breezy and cool; 13°C

Leader: Heather Marchione

Duration: 1½ hours

Participants: 10

This trail is set on a five-acre area bordering Horseshoe Lake. It is quite hidden from the heavily trafficked road above, so knowing how to find it in this industrial centre was magic for most of us who did not know of its existence.

The afternoon's hike at 2:00 p.m. started off as breezy and cool, but the sun was peeking out from behind the clouds, and shortly before we began our trek into the woods the skies cleared as we focused outward and downward on the prolific greenery all around us. As we discovered from our introductions to one another, we had birders (with binoculars poised) in our midst and their glances went upwards as well in hopes of detecting a warbler or two or any other species hidden in the trees. Many botany and birding field guides were in hand.

Very soon after commencing our walk we caught sight of the lake (not visible from Horseshoe Lake Drive) tucked into this highly industrialised area of HRM.

Heather Marchione, along with her NS Wild Flora counterpart Bob Kennedy (armed with a superior camera), began identifying numerous plants, shrubs, trees, and ferns for us. Even before entering the trail lovely displays of Wild Sarsaparilla delighted us with their early rusty coloured leaves and creamy-coloured blooms; many more were spot-

ted along the trail, some with leaves having turned into their summer green where they had caught more sun.

Of course we all recognised Wild Strawberry in bloom as well as Bunchberry, but many of us puzzled over what a cluster of small shiny leaves might be. Were they Partridge Berry leaves or something else? Later it was confirmed they were just that. We delighted to see the distinctive blossoms of both the Wild Lily of the Valley as well as many beautiful snowy-white Starflowers. Then we spotted an orange Hawkweed in bloom and some Coltsfoot which had gone to seed. An occasional Forget-me-not was sighted but of even greater interest were the Clintonia in bloom, even one growing out of a tree (*see back cover - ed.*). And then, not just Pink Lady's Slippers in bloom, but also a white Moccasin flower was photographed beautifully by Bob. There were finished blooms of Dandelion and it was suggested by one participant that every portion of the Dandelion was useful as food – the stem, the root, and the flower. I'm not sure if we were quite ready to try that one out in our kitchens although probably it would offer much better nutrition than some items found in grocery stores. Other plants such as Goldenrod and Pearly Everlasting were recognised and which would be in bloom later in the summer.

The shrubs we found included Spirea, Choke Berry, Serviceberry, and Bayberry, as well as Raspberry, Blueberry, Huckleberry, Labrador Tea, Alder, and Rhodora with its beautiful blooms of rose purple. We identified Witherod, Wych Hazel, and Moose or Striped Maple as well. Early into the walk we saw Wild Rose while at the very end of the trail were several Hobblebush. Many varieties were in full bloom, a few were past their prime, and others were promising to show their true colours later in the season.

The ferns were at their 'springy best' and we made attempts to try to identify as many as possible. The Cinnamon and Interrupted Ferns showed beautifully along with Bracken, Sensitive, Lady, and New York Ferns. Without fern experts in our midst we did our best to locate and admire the different shapes and forms of these lovely plants which grow so prolifically here in Nova Scotia.

Ground vegetation consisted of humus/moss plant associations, where Schreber's moss and Broom Moss dominated. Sphagnum Moss was identified by participants, and pictures were taken in hopes of identifying some of the others.

The woodland is mainly covered in trees which grow best from burned or logged areas of forest. Red Maple, Red Oak, and White Birch are prominent as these species grow vigorously following a disturbance. As well, there were White Pine and Red Spruce which may have escaped the disturbance's destructive force. Bob was able to locate and identify other species including Yellow Birch and Beech, as well as Hemlock, Sugar Maple, Black Spruce, and Balsam Fir.

The birders among us were delighted to identify both male and female American Redstart, a male Hairy Woodpecker, a Song Sparrow, and the most thrilling discovery of a Flicker's nest.

It truly was a hidden gem as aforementioned by Heather, and having spent almost two hours to cover this short trail, it revealed many delights for us all. The afternoon provided much more than we bargained for and we've added another lovely nature walk to our repertoire.



NATURE NOTES



– Janet Dalton

APRIL

Arthur Morris mentioned that on February 6th, he had seen a **Merlin** in his back garden which was feasting on his catch of a **Mourning Dove**! Clarence Stevens Sr. sighted a **Rusty Blackbird** in his yard.

Elliott and Judi Hayes were vacationing in Mexico, and in a tree where they were staying he and his wife Judi could see a **pair Mynahs and their nest**. One morning there was a lot of noise from the tree and they realised there was a raptor nearby, and other Mynahs had come to help drive it away. The noisy din continued for about 15 minutes, and unfortunately the raptor did get one of them for his meal. The successful hunter returned again the next day, but this time the flock was successful chasing it off.

Christine Wysmyk saw a **Snow Goose** on April 4th at the Chester Golf Club, and Ray Provencher saw **12 Cedar Waxwings**.

Leslie Jane Butters was out skiing on Sunday, the 2nd of April. She said the ice on black River Lake was still at least 35cm thick! On Sunday she was on Ridge Road in Albany New and saw both **male and female Cardinals**. On Monday, March 3rd at Little River Lake, King's County, she witnessed **two Ravens** mating in the air!

Keith Vaughan saw a **Sharp-shinned Hawk pick off a Mourning Dove**. He also saw **two Cardinals** in a Norway Maple.

Bob McDonald was at Sullivan's Pond on Tuesday, April 4th and saw a **Tufted Duck** and an **American Coot**.

Clarence Stevens Jr. mentioned that the first turtle has hatched out at the sites he is keeping watch over. Also, he saw **seven Rusty Blackbirds**, and mentioned that May was the best month to see them. He's seen **Robins, Red-winged Blackbirds, Killdeer, and Wood Ducks**. At Hartlen Point he saw at least **1,000 Scoters**, mostly the Blacks, and a **King Eider** as well.

Gareth Harding spotted a **lot of waterfowl** in the North West Arm off point Pleasant Park, including **Black Scoters** and one **White Scoter**, also **Mergansers, Loons, and 30 Scaup**.

April E-Nature Notes – On Saturday, April 22nd, at about 3:00 in the afternoon, Phyllis Bryson, who lives on Beaufort Avenue, observed **three Deer – two adults and what appeared to be a yearling** – in her back garden contentedly browsing on tulip and other various bulbs. In all the 66 years that Phyllis has lived there, she has never before seen deer in the area. We surmised they must have arrived via the railway cut, as they were not wet from swimming.



MAY

Lesley Jane Butters was walking across her garden and it was a warm wet night. She suddenly felt the grass moving under her feet; upon closer inspection she found it to be **many, many night crawlers**, mating!

Clarence Steven Jr. was able to gather up **many earthworms** to put in his garden beds.

Bob McDonald saw **Spring Azures** at Long Lake on May 4th, and John Brownlie reported seeing **Bloodroot blooming** near Parrsboro.

Leslie Jane Butters saw a **Mourning Cloak Butterfly**.

Clarence Stevens Jr. mentioned that he had seen an **American Lady Butterfly, a Tortoiseshell Butterfly, and Spring Azures** as well.

Judy Keating saw a **black Fox** near her home in Indian Harbour, and a **Mink** on her wharf which looked to be pregnant. She also saw a **Yellow-spotted Salamander and clusters of its eggs** as well as **Wood Frogs' egg clusters** too.

Clarence Stevens Jr. saw **three Green Frogs, a Pickerel Frog, and a Leopard Frog** but no Mink Frogs.

Regina Mass had a **Painted Lady Butterfly** in her garden on April 11th. On May 3rd she saw a **Bumblebee**, and at Frog Pond a **Wood Duck**. Also, **Crows** are ripping up the lawns in her neighbourhood. Her **Magnolia started to bloom on April 29th**, three days later than normal.

Gareth Harding saw **two Pileated Woodpeckers and three Pink Lady's- Slippers**, while Suzanne Gauthier saw **Japanese Knot Weed** growing.

Christine Wysmyk saw a **Green Winged Teal** at Frog Pond, both male and female, as well as a **male Rose-breasted Grosbeak**.

May E-Nature Notes

Christine Wysmyk saw a **Prothonotary Warbler** at Ketch Harbour; a **Painted Lady Butterfly** also at Ketch Harbour; and **Amygdaloida Basalt** at Hirtle's Beach, Kingsburg.

Renée Lyons and Gareth Harding had a **'ghost' Coyote** cross the road in front of them while driving through the Liscombe Game Reserve on the afternoon of April 16th. They looked up 'ghost' Coyotes on Google and found that there were many reports of a pale (white) variety of Coyote in Newfoundland, but Nova Scotia wasn't mentioned. They left a note for biologist and curator Andrew Hebda at the Museum of Natural History, but had not yet received a reply.



JUNE

Lesley Jane Butters saw a **pair of Wood Ducks** in the Medway River, and **shrimp** in a pond. At Kejimikujik she saw a **Great Horned Owl**.

Burkhart mentioned on behalf of Clarence Stevens Jr. that Clarence had seen both a **Great Horned Owl** and a little **Saw-whet Owl**.

David Patriquin was looking for frog's eggs to replace some that were shipped to him but had arrived dead. He looked in several places including Point Pleasant Park but could not find any. He thinks birds may have got them or that they didn't survive the winter this year. He also mentioned he had discovered a wetland area in Dartmouth near Fenwick Street. It was about 800 metres long at one point. The water disappears and goes underground near Prince Arthur Street.

Judy Keating was looking for jellyfish along the shore near Indian Point and saw a **Great White Egret**.

Regine Maass mentioned that there was a new, extremely bright street light near her home which went out after three days. It was mentioned that these new bright street lights are not strong enough to do anything in terms of growth in plants etc. – they are just not bright enough to act like grow lights.

When Richard Beazley was at the NNS AGM he saw a **mosquito** on a wall (but let it live!). When they went into the woods there were **a lot of Blackflies** (someone commented that walking in the woods at this time of the year is like “being on your way to a Blood Clinic”). Richard also picked up a **Blacklegged Tick** on his ear.

Ron Cosper said he found **a lot of Blackflies** as well.

Pat Leader was in Scotland for a visit and for the first time saw **Woolly Bears, the larva of the Isabella Tiger moth, *Pyrrharctia isabella***, in the Highlands area there.

June E-Nature Notes – Stephanie Robertson has a resident Male Cardinal in her neighbourhood; it has been spotted in a street tree in front of her home, and can be heard calling regularly in the morning and at other times as well, both in her back garden and very nearby.

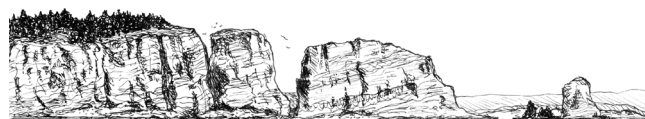


HFN'S BOOK CLUB

The Book Club meetings take place on the second Wednesdays of November, March, and May. New members are invited to join any time! One book is discussed at each meeting and notice of each choice is sent out in advance. At the May meeting, we start to discuss choices for the following fall. We have a regularly updated spreadsheet of HFN Book Club Suggestions, where members can vote on upcoming reads. If you'd like to become a member, we ask that you belong to HFN.

As of last fall, our club entered its fifth year of readings. This past November (2016), we discussed Ravens in Winter by Bernd Heinrich, which has been called a biological detective investigation of Raven behaviour over the course of a winter in Maine. At the February 2017 meeting, we discussed Seeds of Hope by renowned naturalist Jane Goodall. At the May 2017 meeting, we discussed Throwim Way Leg written by Australian zoologist and climate change activist Tim Flannery. It documents Flannery's experiences conducting scientific research in the highlands of Papua New Guinea and Indonesian Western New Guinea. It's an engaging true adventure, based on his Ph.D thesis, Tree Kangaroos of Australia and New Guinea.

For more information, please contact Gillian Webster, 902-453-9244, gillian.webster@eastlink.ca. Next meeting date –TBA; place TBA; time 7:00 – 9.00 p.m.



NEW & RETURNING

John Brownlie

2017 HFN SEWER STROLL

HFN's Annual Sewer Stroll took place on Saurday, January 24th. A total of 53 species were sighted, all seen by more than one person. Here they are:

SEWER STROLL SPECIES

Common Loon
Red-necked Grebe
Black Guillemot
Dovekie
Double-crested Cormorant
Great Cormorant
Canada Goose
American Black Duck
Common Eider
Common Goldeneye
Mallard
Long-tailed Duck
Greater Scaup
Lesser Scaup
Black Scoter
Surf Scoter
White-winged Scoter
American Wigeon
Eurasian Wigeon
Hooded Merganser
Red-breasted Merganser
American Coot
Black-headed Gull
Great Black-backed Gull
Herring Gull
Iceland Gull
Lesser Black-backed Gull
Ring-billed Gull
Purple Sandpiper
American Pipit
Cooper's Hawk
Rough-legged Hawk
Bald Eagle
American Crow
Blue Jay
Common Raven
Black-capped Chickadee
Golden Crowned Kinglet
Brown Creeper
Red-breasted Nuthatch
White-breasted Nuthatch
Downy Woodpecker
Hairy Woodpecker
Red-bellied Woodpecker
Mourning Dove
Rock Dove
Bohemian Waxwing
Pine Warbler
European Starling
Northern Cardinal
American Goldfinch
House Sparrow
Song Sparrow



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.

"We are now driving south with the sky showing overcast ahead of us and the roadside a rich potpourri of wildflowers: daisies, alizarin fireweed, red and white clover, purple vetch ... On the higher slopes of the Long Range Mountains, small patches of snow still linger in the hollows, looking like wild creatures facing extinction that have withdrawn to a distant, inaccessible shelter of their own."

– Christopher Pratt, from the entry for the year 2000 in *Ordinary Things: A Different Kind of Voyage* (2009)

NATURAL EVENTS

- 22 Jun. -30 Jun.** The latest evenings of the year: sun sets at 21:04 ADT.
9 Jul. Full Moon. Moonrise at 21:15 ADT.
15 Jul. Canada's "Parks Day" – look for events at local parks.
5 Aug. -12 Aug. Average dates of the hottest days of summer (average daily maximum is 22.5 C.)
7 Aug. Full Moon. Moonrise at 20:31 ADT.
12 Aug. -13 Aug. Perseid Meteor showers peak.
13 Aug. Average date for temperatures to start decreasing.
6 Sept. Full Moon. Moonrise at 20:08 ADT.
22 Sept. Autumnal Equinox at 17:02 ADT: Fall begins in the Northern Hemisphere.
28/29 Sept. Fourteenth 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's 2017 Calendar; United States Naval Observatory Data Services.

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

3 Jun.	05:31	20:54	1 Jul.	05:33	21:03
10 Jun.	05:29	20:59	8 Jul.	05:38	21:01
17 Jun.	05:29	21:02	15 Jul.	05:44	20:57
24 Jun.	05:30	21:04	22 Jul.	05:50	20:51
			29 Jul.	05:58	20:43
5 Aug.	06:06	20:34	2 Sept.	06:38	19:49
12 Aug.	06:14	20:24	9 Sept.	06:46	19:36
19 Aug.	06:22	20:13	16 Sept.	06:55	19:23
26 Aug.	06:30	20:01	23 Sept.	07:02	19:10
			30 Sept.	07:11	18:56



ORGANISATIONAL EVENTS

Blomidon Naturalists Society: Indoor meetings are held on the 3rd Monday of the month, in the auditorium of the K.C. Irving Centre, University Avenue, Wolfville. Field trips usually depart from the Wolfville Waterfront, Front Street, Wolfville. For more information, go to <http://www.blomidonnaturalists.ca/>.

- 17 Jun.** "Tour of South Canoe Wind Farm", with Ed Sulis, 678-4609, edmasulis@ns.sympatico.ca.
28 Jun. "Moth Event at Kentville Ravine", with leader Jim Edsall.
15 Jul. "Mushroom Walk at Kentville Ravine", with leaders Ken Harrison and Nancy Nickerson.

Nova Scotia Bird Society: Indoor meetings usually take place on the 4th Thursday of the month, Sept. to April, at the Nova Scotia Museum of Natural History, 7:30 p.m. For more information email fieldtripcoordinator@nsbirdociety.ca; you will need JavaScript enabled in order to view it. You can also email the trip leader, or go to <http://www.nsbirdociety.ca/>.

- 25 Jun.** "Abraham's Lake, Liscomb Game Sanctuary", with leader Jim Cameron, 902-885-2970, jim.cameron@ns.sympatico.ca.

Royal Astronomical Society of Canada (Halifax Chapter): Meets the third Friday of each month (except July and August) in Room AT101 of the Atrium Building at Saint Mary's University, 8:00 p.m. For more information go to <http://halifax.rasc.ca/>.

- 28 Jul. -30 Jul.** "Nova East 2017", Atlantic Canada's longest-running star party, at 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 a.m. - 11:30 a.m. Field trips take place every fourth Sunday, at 1:00 p.m. For more information, phone Karen McKendry, 404-9902, or email ynchalifax@yahoo.ca, or go to <http://nature1st.net/ync>.

HALIFAX TIDE TABLE



July-juillet

August-août

September-septembre

Day	Time	Metres	Feet	jour	heure	mètres	pieds	Day	Time	Metres	Feet	jour	heure	mètres	pieds	Day	Time	Metres	Feet	jour	heure	mètres	pieds
1	0116	1.5	4.9	16	0016	1.6	5.2	1	0238	1.4	4.6	16	0152	1.5	4.9	1	0418	1.4	4.6	16	0418	1.6	5.2
SA	0822	0.4	1.3	SU	0707	0.4	1.3	TU	0926	0.6	2.0	WE	0848	0.5	1.6	FR	1031	0.7	2.3	SA	1053	0.5	1.6
SA	1354	1.7	5.6	DI	1252	1.7	5.6	MA	1505	1.6	5.2	WE	1418	1.7	5.6	FR	1626	1.5	4.9	SA	1634	1.7	5.6
	2110	0.5	1.6		1954	0.5	1.6		2212	0.5	1.6	ME	2137	0.3	1.0	VE	2302	0.5	1.6	SA	2326	0.2	0.7
2	0218	1.5	4.9	17	0110	1.6	5.2	2	0349	1.4	4.6	17	0305	1.5	4.9	2	0518	1.5	4.9	17	0526	1.7	5.6
SU	0915	0.5	1.6	MO	0802	0.4	1.3	WE	1021	0.6	2.0	TH	0952	0.5	1.6	SA	1121	0.7	2.3	SU	1153	0.4	1.3
DI	1453	1.6	5.2	LU	1344	1.7	5.6	ME	1607	1.6	5.2	JE	1529	1.8	5.9	SA	1720	1.6	5.2	SU	1739	1.8	5.9
	2203	0.5	1.6		2052	0.4	1.3		2301	0.5	1.6		2239	0.3	1.0	SA	2349	0.4	1.3	DI			
3	0325	1.4	4.6	18	0214	1.6	5.2	3	0455	1.4	4.6	18	0425	1.6	5.2	3	0604	1.6	5.2	18	0022	0.2	0.7
MO	1009	0.5	1.6	TU	0859	0.5	1.6	TH	1113	0.6	2.0	FR	1057	0.4	1.3	SU	1205	0.6	2.0	MO	0620	1.8	5.9
LU	1552	1.6	5.2	MA	1444	1.8	5.9	JE	1702	1.6	5.2	VE	1641	1.8	5.9	DI	1805	1.7	5.6	MO	1250	0.3	1.0
	2253	0.4	1.3		2153	0.3	1.0		2347	0.4	1.3		2340	0.2	0.7					LU	1833	1.8	5.9
4	0431	1.4	4.6	19	0326	1.6	5.2	4	0550	1.5	4.9	19	0535	1.7	5.6	4	0033	0.3	1.0	19	0114	0.2	0.7
TU	1101	0.6	2.0	WE	1001	0.4	1.3	FR	1200	0.6	2.0	SA	1200	0.4	1.3	MO	0645	1.6	5.2	TU	0706	1.9	6.2
MA	1646	1.6	5.2	ME	1550	1.8	5.9	VE	1750	1.6	5.2	SA	1747	1.9	6.2	LU	1247	0.5	1.6	MA	1341	0.3	1.0
	2341	0.4	1.3		2254	0.2	0.7										1847	1.8	5.9		1922	1.9	6.2
5	0527	1.5	4.9	20	0440	1.6	5.2	5	0029	0.4	1.3	20	0038	0.1	0.3	5	0114	0.2	0.7	20	0202	0.2	0.7
WE	1151	0.6	2.0	TH	1104	0.4	1.3	SA	0635	1.6	5.2	SU	0634	1.8	5.9	TU	0722	1.7	5.6	WE	0750	1.9	6.2
ME	1734	1.7	5.6	JE	1655	1.9	6.2	SA	1241	0.6	2.0	DI	1259	0.3	1.0	MA	1327	0.4	1.3	WE	1428	0.3	1.0
					2354	0.1	0.3	SA	1833	1.7	5.6		1845	1.9	6.2		1927	1.8	5.9	ME	2007	1.9	6.2
6	0024	0.4	1.3	21	0546	1.7	5.6	6	0109	0.3	1.0	21	0132	0.1	0.3	6	0154	0.2	0.7	21	0245	0.2	0.7
TH	0617	1.5	4.9	FR	1207	0.4	1.3	SU	0716	1.6	5.2	MO	0726	1.9	6.2	WE	0758	1.7	5.6	TH	0831	1.9	6.2
JE	1236	0.6	2.0	VE	1757	2.0	6.6	DI	1318	0.6	2.0	LU	1355	0.3	1.0	ME	1409	0.3	1.0	TH	1512	0.3	1.0
	1817	1.7	5.6						1914	1.8	5.9		1937	2.0	6.6		2006	1.8	5.9	JE	2051	1.8	5.9
7	0103	0.3	1.0	22	0053	0.1	0.3	7	0147	0.3	1.0	22	0223	0.1	0.3	7	0232	0.1	0.3	22	0325	0.3	1.0
FR	0701	1.6	5.2	SA	0645	1.8	5.9	MO	0754	1.7	5.6	TH	0814	1.9	6.2	TH	0835	1.8	5.9	FR	0911	1.9	6.2
VE	1315	0.6	2.0	SA	1308	0.3	1.0	LU	1355	0.5	1.6	MA	1447	0.3	1.0	JE	1451	0.3	1.0	FR	1553	0.3	1.0
	1857	1.7	5.6	SA	1855	2.0	6.6		1953	1.8	5.9		2026	1.9	6.2		2046	1.8	5.9	VE	2133	1.8	5.9
8	0139	0.3	1.0	23	0148	0.0	0.0	8	0225	0.2	0.7	23	0309	0.1	0.3	8	0311	0.1	0.3	23	0402	0.4	1.3
SA	0742	1.6	5.2	SU	0741	1.9	6.2	TU	0830	1.7	5.6	WE	0859	1.9	6.2	FR	0912	1.8	5.9	SA	0949	1.9	6.2
SA	1349	0.6	2.0	DI	1407	0.3	1.0	MA	1433	0.5	1.6	ME	1537	0.3	1.0	VE	1536	0.2	0.7	SA	1634	0.3	1.0
	1937	1.7	5.6		1950	2.0	6.6		2031	1.8	5.9		2112	1.9	6.2		2127	1.8	5.9	SA	2214	1.7	5.6
9	0215	0.3	1.0	24	0241	0.0	0.0	9	0302	0.2	0.7	24	0354	0.1	0.3	9	0352	0.2	0.7	24	0438	0.5	1.6
SU	0820	1.7	5.6	MO	0834	1.9	6.2	WE	0907	1.7	5.6	TH	0942	1.9	6.2	SA	0951	1.8	5.9	SU	1028	1.8	5.9
DI	1422	0.6	2.0	LU	1504	0.3	1.0	ME	1513	0.4	1.3	JE	1625	0.3	1.0	SA	1624	0.2	0.7	SU	1715	0.4	1.3
	2015	1.8	5.9		2043	2.0	6.6		2109	1.8	5.9		2157	1.8	5.9		2210	1.8	5.9	DI	2255	1.7	5.6
10	0250	0.3	1.0	25	0332	0.0	0.0	10	0339	0.2	0.7	25	0437	0.2	0.7	10	0438	0.2	0.7	25	0516	0.6	2.0
MO	0857	1.7	5.6	TU	0923	1.9	6.2	TH	0943	1.7	5.6	FR	1023	1.9	6.2	SU	1032	1.8	5.9	MO	1107	1.7	5.6
LU	1457	0.6	2.0	MA	1559	0.3	1.0	JE	1556	0.4	1.3	VE	1713	0.4	1.3	DI	1718	0.3	1.0	MO	1759	0.5	1.6
	2053	1.8	5.9		2132	2.0	6.6		2148	1.8	5.9		2240	1.8	5.9		2254	1.7	5.6	LU	2337	1.6	5.2
11	0326	0.3	1.0	26	0422	0.1	0.3	11	0419	0.2	0.7	26	0520	0.4	1.3	11	0531	0.3	1.0	26	0601	0.7	2.3
TU	0933	1.7	5.6	WE	1010	1.9	6.2	FR	1020	1.8	5.9	SA	1103	1.8	5.9	MO	1115	1.8	5.9	TU	1149	1.7	5.6
MA	1535	0.6	2.0	ME	1654	0.4	1.3	VE	1644	0.4	1.3	SA	1801	0.4	1.3	LU	1816	0.3	1.0	MA	1846	0.6	2.0
	2131	1.8	5.9		2220	1.9	6.2		2228	1.8	5.9		2323	1.7	5.6		2342	1.7	5.6				
12	0404	0.3	1.0	27	0511	0.2	0.7	12	0502	0.3	1.0	27	0604	0.5	1.6	12	0633	0.4	1.3	27	0021	1.5	4.9
WE	1010	1.7	5.6	TH	1055	1.9	6.2	SA	1058	1.8	5.9	SU	1145	1.8	5.9	TU	1202	1.8	5.9	WE	0657	0.7	2.3
ME	1618	0.6	2.0	JE	1749	0.4	1.3	SA	1736	0.4	1.3	DI	1850	0.5	1.6	MA	1918	0.3	1.0	WE	1234	1.6	5.2
	2209	1.8	5.9		2306	1.8	5.9		2311	1.7	5.6									ME	1936	0.6	2.0
13	0444	0.3	1.0	28	0600	0.3	1.0	13	0550	0.3	1.0	28	0007	1.6	5.2	13	0036	1.6	5.2	28	0112	1.5	4.9
TH	1046	1.7	5.6	FR	1138	1.8	5.9	SU	1139	1.8	5.9	MO	0652	0.6	2.0	WE	0739	0.5	1.6	TH	0757	0.8	2.6
JE	1706	0.6	2.0	VE	1843	0.5	1.6	DI	1833	0.4	1.3	LU	1228	1.7	5.6	ME	1256	1.7	5.6	TH	1326	1.5	4.9
	2248	1.7	5.6		2353	1.7	5.6		2357	1.7	5.6		1941	0.5	1.6		2021	0.3	1.0	JE	2027	0.6	2.0
14	0528	0.3	1.0	29	0650	0.4	1.3	14	0645	0.4	1.3	29	0056	1.5	4.9	14	0138	1.6	5.2	29	0216	1.5	4.9
FR	1125	1.7	5.6	SA	1223	1.7	5.6	MO	1224	1.7	5.6	TH	0745	0.7	2.3	TH	0844	0.5	1.6	FR	0855	0.8	2.6
VE	1759	0.6	2.0	SA	1937	0.5	1.6	LU	1933	0.4	1.3	MA	1318	1.6	5.2	JE	1359	1.7	5.6	FR	1429		



NEXT DEADLINE

21st of August for the September 2017 Issue

**Send submissions to 'Newsletter', c/o NS Museum of Natural History,
or by email to sdhaythorn@ns.sympatico.ca**