

# Blomidon Naturalists Society



WINTER 2014 NEWSLETTER

Volume 41 · Number 4

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# ❖ THE BLOMIDON NATURALISTS SOCIETY ❖

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*The primary objective of the Society shall be to encourage and develop in its members an understanding and appreciation of nature. For the purpose of the Society, the word "nature" will be interpreted broadly and shall include the rocks, plants, animals, water, air, and stars. – FROM THE BNS CONSTITUTION*

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The Blomidon Naturalists Society is a member of the Sable Island Preservation Trust and the Federation of Nova Scotia Naturalists (Nature Nova Scotia) and is an affiliate member of the Canadian Nature Federation (Nature Canada). The Blomidon Naturalists Society is a registered charity. Receipts (for income-tax purposes) will be issued for all donations. (Registration number: 118811686RR0001)

THE BLOMIDON NATURALISTS SOCIETY

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## **BNS Newsletter**

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## **Editorial Board**

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BLOMIDON NATURALISTS SOCIETY  
members are encouraged to share unusual or  
pleasurable nature stories through the pages  
of the *BNS Newsletter*. If you have a particular  
area of interest, relevant articles and stories  
are always welcome. Send them to Jean Timpa:

1 – 25 GASPEREAU AVENUE  
WOLFVILLE, NS B4P 2C5  
*jtimpa@ns.sympatico.ca*

Digital photographs should be submitted to  
*doug@fundymud.com*

**Submission deadline for Spring:  
February 28, 2015**

## *Out & About*

Jean Timpa, editor

**T**WO-THOUSAND-FOURTEEN has been a very special year for the Blomidon Naturalists Society, as it is already our 40th anniversary as a cohesive natural history group here mostly in Kings County but also extended into far corners of the Earth by the wonders of modern communications. Accolades to all who have gone beyond our usual efforts to contribute to programs, field trips, written words for our Newsletter, and all other associated efforts to make this a grand party year!

After 10 years, the Rosetta spacecraft finally reached its comet (67P/Churyumov-Gerasimenko) and released its capsule (the Philae Lander) full of recording instruments. The landing did not go as well as hoped, but despite being bounced around, the capsule landed right side up, but in a shady spot. It recorded everything it could before the batteries ran out. However, the scientists say they already have enough information to study for years to come and feel fairly certain that the batteries will gain enough sunlight power in our spring, as it travels much closer to the Sun, to restart the experiments. While not everything went according to plan, astronomers are just thrilled with its accomplishments and deem it a tremendous success. Congratulations to those who made it possible.

There is other good news, which would be perfect if were happening here too. Germany has cut its carbon-fired emissions by 22 million tonnes this past year, or the equivalent of what eight coal-fired power plants would have put out. Worldwide, the ozone hole is healing over quite nicely. In Ontario, environmentalists have put enough pressure on the provincial government that legislation will be brought in to ban the neonicotinoids that are so deadly to

our bees, wasps, and hornets, a group of insects absolutely necessary for thorough and widespread pollination. These pesticides are commonly used on corn, of which we grow a great deal here in the Annapolis Valley. We need to ban them here in Nova Scotia, too. It is time for some serious letter writing to educate our MLAs, who can be found in the blue (or grey) pages of your phone book and in the Nova Scotia Legislature website. Give our Hymenoptera a big Christmas present! Again, congratulations to those people who have made positive changes in our environment possible.

Possible interesting signs of climate change in my yard: the much hated and dreaded *Polygonum cuspidatum* in my yard here in Wolfville was not frosted until about November 11, so it actually had a chance to turn colour like other tree and shrub leaves. When it is frosted earlier it just turns a crispy brown. There were various shades of deep orange to gold to pale yellow, so while I was admiring these new foliage colours, I also spied some leaves that had been well chewed by what must have been caterpillars. Japanese Knotweed or bamboo (a misnomer) actually does have a natural enemy! I will try to find some of the caterpillars next September and raise them through to adulthood, but I think it may be *Apatela oblongata*, the Smear-dagger. Probably it is the commonest species of its genus and is small and inconspicuous, but it is fond of various species of smartweeds and in the fall is very abundant in places where such plants grow – “bamboo” being one of them, a very invasive plant introduced from Asia.

But here’s my best news. I have two new assistants: Rachel Cooper, who has had several photos in our calendars, and Stan Moeller. They are both professional editors. Perhaps this time next year one or both of them will want to take over the BNS Newsletter. So if they call you, instead of me, please say “yes” to their request for material to publish.

You are so good about describing interesting observations at meetings, but we would love to have them in writing, too, for those people who sometimes cannot attend. Don’t be scared; we don’t bite, only plead!

Last, but hardly least, the three lads – Patrick, Roy, and Sherman – have totally outdone themselves this year with planning and editing the 2015 BNS Calendar. We always ooh and aah and say this about every new one as it comes along, but I have already had more compliments about this effort than ever. The calendars would not turn out the same without this trio, so make sure they hear the good vibes, too. Our photographers deserve special thanks too for recording the fascinating beauty on Mother Earth.

CONGRATULATIONS, JIM WOLFORD

At the November BNS meeting, Jim Wolford was presented with the Nova Scotia Bird Society's Puffin of the Year award. Since 1972 NSBS has been awarding the prestigious Puffin in acknowledgement of substantial contribution to the betterment of the society.



*Jim Wolford, the Puffin, and NSBS president David Currie*

RICHARD STERN

## *2015 BNS Natural History Calendar*

THE 2015 Blomidon Naturalists Society natural history calendar is still available. This is the 18th year of publication for this unique calendar, and as always it contains exceptional pictures by local photographers, daily tide times for the entire year, current and historical events, and lots of fascinating natural history information.

Calendars are available at the following retail outlets:

*Wolfville:* Herbin Jewellers, EOS Fine Foods, and Blomidon Inn

*Greenwich:* Hennigar's Farm Market, Elderkin's Farm Market, and Noggins Corner Farm

*Port Williams:* Shur Gain Feeds & Needs

*Hants Border:* R&G Family Restaurant

These outlets sell the calendar for our benefit at no profit for themselves, and we thank them for that and encourage you to patronize these fine establishments.

Calendars will also be available at BNS monthly meetings and from our treasurer, Ed, at [edmasulis@ns.sympatico.ca](mailto:edmasulis@ns.sympatico.ca). The price is still only \$15 each.

## *Board of Directors Report*

by John Owen, BNS president

**Y**OUR board had a regular meeting on November 20, 2014. The following is a summary of the meeting and discussions.

*BNS Award:* The candidate for the BNS Award is Brandon Landry, 3rd-year student at Acadia.

*Finance & Membership:* Membership renewals for 2015 are slow. Financial report is being prepared for submission to the Canada Revenue Agency by mid-January. Financial position is good, with all bills to date paid.

*Programs:* All programs and trips are scheduled and can be seen on the BNS website.

*AGM:* Your new board members for 2015 are as follows. **EXECUTIVE:** Kent Williams (president), John Owen (past president), Murray Colbo (co-VP), Jean Gibson Collins (co-VP), Patrick Kelly (secretary), and Ed Sulis (treasurer). **DIRECTORS:** George Alliston, James Churchill (program chair), Ken Harrison, Marina Myra, Jean Timpa (Newsletter editor), and Barry Yoell. Many thanks to retiring board members: Helen Archibald (secretary), Denyse Kyle, and Rick Whitman (past president).

As this is my last board report, I would like to thank all present and retiring board members for their assistance during my term.

Special thanks to Helen Archibald, who as secretary patiently deciphered many discussions during board meetings. Helen was secretary to five BNS presidents.

The next BNS board meeting is scheduled for February 19, 2015.

## Upcoming Events

### MEETINGS

*Unless otherwise noted, all meetings are held at 7:30 p.m., usually on the third Monday of each month, in Room BAC241 of the Beveridge Arts Centre of Acadia University on the corner of Main Street and Highland Avenue, Wolfville. Parking is available off Highland Avenue, on Acadia Street, and at the parking area around the Robie Tufts Nature Centre. Everyone is welcome.*

**Monday, January 19, 2015** – *Atlantic Bluefin Tuna Stock Structure, Migration, and a Changing Canadian Fishery*, with Michael Stokesbury. Atlantic Bluefin Tuna are large, highly migratory fishes that are fished commercially and by charter in Atlantic Canada. In the talk I will discuss how we have worked with the Tag-A-Giant program and DFO to help define the stock structure, migration pathways, and post-capture and release survival rate of Atlantic Bluefin Tuna in the North Atlantic Ocean.

Mike is Assistant Professor, Tier II Canada Research Chair in the Ecology of Coastal Environments, and Director of the Weston Animal Care Facility at Acadia University. The focus of Mike's research program is to quantify how human activities in the coastal zone may affect the spatial behaviour of fishes and mortality. The results of the program can be used to mitigate the negative effects of human activities on fish populations.

**Monday, February 16, 2015** – *Annual Show and Tell Night*. Come to view or bring along slides, pictures, specimens, collections, fossils, videos, computer stuff, favourite books and magazines, or anything that might be of interest to fellow naturalists. If you have digital, or

pre-digital, content and would like to submit it in advance, contact James Churchill (jamesLchurchill@gmail.com).

**Monday, March 16, 2015** – *Marine Tracking Studies at the Minas Passage Tidal Energy Test Site*, with Anna Redden.

Anna is a marine ecologist, Associate Professor, Director of the Acadia Centre for Estuarine Research (ACER; the only estuarine centre in Canada!), and Director of the Acadia Tidal Energy Institute. Anna has more than 30 years of experience working on a broad range of environmental issues and monitoring in coastal waters. This includes research with tidal energy project developers at the FORCE tidal energy demonstration facility in Minas Passage. Her primary research activities with partner organizations, colleagues, and students involve acoustic detection of marine mammal activities and the tracking of coastal fishes and lobsters in the Minas Passage.

**Monday, April 20, 2015** – *Deep Woods Tales: Tall and True*, with Mike Parker, one of the greatest, and most prolific, storytellers of Nova Scotia wilderness and woodsmanship of our time.

Mike was born and raised in Bear River, a village steeped in guiding lore. He has been researching, writing, and talking about his native province for more than 25 years, during which time he has earned many accolades, including being known as Nova Scotia's storyteller. His three most recent books were bestsellers: *Gold Rush Ghost Towns of Nova Scotia*, *Buried in the Woods: Sawmill Ghost Towns of Nova Scotia*, and *Ghost Islands of Nova Scotia*. A graduate of Acadia University, Mike is a research associate with the Gorsebrook Research Institute for Atlantic Canada Studies at Saint Mary's University. He will have a selection of his books on hand for sale (\$25 range).



## FIELD TRIPS AND OTHER NATURE EVENTS

👉 A NEW FEATURE 👈

*Visit the BNS website for field trip maps and directions*

**Saturday, January 17, 2015** – *Winter on Snowshoes*. Snow transforms the landscape into stories that unfold as we follow tracks of foxes, mice, and other mammals. A Snowshoe Hare hops along and is pounced on by a Great Horned Owl. Without snow to show us the tracks, wing marks, and perhaps a drop of blood, we would not have known the drama took place. Soren Bondrup-Nielsen (902-582-3971) will lead this hike on snowshoes or skis, and we will explore the properties of snow (its insulative value, for example). By studying the characteristic imprints made by different organisms we will interpret the various stories that have unfolded. Meet at the Wolfville waterfront at 10 a.m. for a two-hour, non-strenuous hike at a nearby location to be determined by weather and snow conditions.

**Saturday and Sunday, January 31 and February 1, 2015** – *Eagle Watch Weekend 1*. The Sheffield Mills Community Hall will host its annual pancake and sausage breakfast with naturalist displays, videos, crafts, and art show. A short drive around the area in the morning will possibly offer a sight of more than 100 Bald Eagles and many hawks. Maps and directions can be obtained at the hall or any time at the information post on Middle Dyke Road. For more information, check the website [www.eagles.ca](http://www.eagles.ca) or contact Richard Hennigar at 902-582-3044 or [hennigar@xcountry.tv](mailto:hennigar@xcountry.tv).

**Saturday and Sunday, February 7 and 8, 2015** – *Eagle Watch Weekend 2*. A repeat at the Sheffield Mills Community Hall.

**Saturday, February 21, 2015** (10:30 a.m.–4:00 p.m.) – *Orchid Display and Sale*. The Valley Orchid Group's annual display of orchids in the conservatory of the KC Irving Environmental Science Centre, Acadia University. Orchids will be available for purchase, with spe-

cialized materials and instructions on how to help them grow well. This is a sure cure for the winter blahs, with only the very best of the best orchids brought for this occasion. You will see plants that you will not believe are real – they are so beautiful, perfect, and structurally complex. Photography is encouraged.

**Sunday, March 8, 2015** – *Valley Birding*. Leader: Patrick Kelly (902-472-2322, patrick.kelly@dal.ca). This will be a joint trip with the Nova Scotia Bird Society. Meet at 9 a.m. at the Wolfville waterfront. We will be looking for nesting raptors (they like to get an early start), lingering winter visitors, and rarities in and around Grand Pre and Canning. We will end the day at Miner’s Marsh in Kentville. If you have never been there, now is a great time to learn where it is, as it’s a very active birding spot during the breeding season. Dress warmly and bring a lunch.

**Saturday, April 11, 2015** – *Avon River Canoe Trip*. Leader: Patrick Kelly (902-472-2322, patrick.kelly@dal.ca). The Avon River offers a few advantages over the Herbert River: it is closer to most BNS members; you start and stop at the same location, so no time is needed to get cars to the other end; and on the way back you are going downstream – you can turn around whenever you like! The trip will be four to five hours long, depending on our pace. Bring life jackets, canoe or kayak, and paddles, and you many need rubber boots to get into the river. If you have access to a life jacket but not a canoe, there will likely be extra room in one of the canoes. Check with the leader to be sure. **LIFEJACKETS MUST BE WORN ON THIS TRIP.** Meet on the connector road between Exit 7 (Falmouth) and Highway 1 at 9 a.m. The plan will be to put in at Sangster’s Bridge in Upper Falmouth and proceed upstream. Participants should register with the trip leader so they can be notified if there is a change of plans.

**Saturday, April 18, 2015** – *Great Nova Scotia Pick-Me-Up*. Last year BNS, the Eco-Kings Action Team, members of the County of Kings, the Town of Kentville, and the Friends of the Kentville Ravine joined

forces to clean up tributaries of Elderkin Brook (which flows into the Kentville Ravine). This year BNS will be registering another team, and we hope to join forces again with local garbage enthusiasts . . . or at least those interested in helping beautify our local landscapes. Please let us know if you have a good location in mind or are interested in participating (James Churchill, jamesLchurchill@gmail.com).

**Saturday, April 25, 2015** – *Amethyst Cove Rockhounding and Photography*, with Fundy Rocks members David and Chris Sheppard. Our last attempt to explore Amethyst Cove with Fundy Rocks was thwarted by damage caused by Hurricane Arthur. This year we will give it another shot. David and Chris will accompany us on the trip, which includes a descent into Amethyst Cove and a trek along the shore. The descent to the cove is not for the faint of heart, and the trip will proceed only if the slope and the ropes are ice-free. Meet at the entrance to the Cape Split trail at 9 a.m. Fundy Rocks will check conditions prior to the trip, and we will use social media (BNS website, email, Fundy Rocks Facebook page, BNS Twitter) to advertise trip postponement or cancellation). A rain date is set for Sunday, April 26, but if conditions are still not good, the trip will be postponed until May or June.

**Sunday, April 26, 2015** – *Citizen Science Expo*. Wolfville Farmers' Market, 2 p.m. *Have you caught the buzz about citizen science?* Citizen scientists are dark-sky mappers, supernova hunters, butterfly chasers, Chimney Swift counters, bird-feeder watchers, milkweed planters, bat reporters, water-quality monitors, phenology trackers, GPS mappers, big-data crunchers, and DIY nature nerds. There are now hundreds of ways the average Maritimer can contribute to exciting and important scientific research while on a computer, in a workshop, or in the field. To find out what projects you or your family could get involved in and who (or what) could benefit most from your passion, time, and observations, join us at the inaugural BNS Citizen Science Expo for an afternoon of displays and presentations by organizations leading citizen science projects. This is a great

opportunity for people of all ages to find a niche for their passions, and for organizations to promote their projects and recruit volunteers. If your organization would like to set up a display or give a presentation at the event, please contact the BNS program coordinator, James Churchill (jamesLchurchill@gmail.com).

**May 20, 24, 28; June 1, 5, 2015** – *Maritimes SwiftWatch Spring Migration Roost Counts*. Individuals are encouraged to count Chimney Swifts at roost sites during spring migration on the above dates. These counts are part of a national monitoring effort to understand Chimney Swift population trends (the June 5 date is optional, but encouraged, to increase knowledge of regional activity). Nova Scotians are asked to continue searching for, and reporting, active nests and roosts in both anthropogenic sites (such as chimneys) and natural areas.

To share a Chimney Swift sighting, report a new roost or nest site, or help monitor an existing site, please contact Maritimes SwiftWatch (1-506-364-5196, marswifts@birdscanada.org), or consider sharing your sightings and roost counts on their Facebook page ([www.facebook.com/Maritimes.Swifts](http://www.facebook.com/Maritimes.Swifts); omit specific address information if posting here), on NatureCounts ([http://www.birdscanada.org/birdmon/mar\\_swift/](http://www.birdscanada.org/birdmon/mar_swift/)), or via eBird. For more information, see <http://www.birdscanada.org/volunteer/acswifts/>.

#### OTHER EVENTS TO WATCH FOR IN 2015

*National Moth Week ... Marsh Madness II ... Tree Swallow Nest Monitoring ... Swift Night Out III ... Results of the Maritimes Butterfly and Breeding Bird Atlases ... Life in the Sand Barrens ... New Monarch and Milkweed Initiatives ... Identification of Raptors in Flight*



## *Peeks into the Past*

by Patrick Kelly

MANY of you who were at recent meetings will be aware that there was a clearance of back issues of the BNS Newsletter. While there were not complete sets, I did manage to pick up quite a few of the older issues, which have allowed me to glimpse the society's earlier days. I thought that you might like to see how things have changed since those earlier times, and how in some ways they have stayed the same.

VOL. 1, NO. 1: AUGUST 1974

Roy Bishop hosted the first (?) official BNS astronomy observing session March 29, and it is reported that about 60 people were in attendance at his home in Avonport with four telescopes put to good use. (That is quite a contrast to the last joint BNS / Minas Astronomy Group observing session, when the weather was perfect and no one showed up!)

Attendance was also high for the Cape Split hike on June 8 – with 47 participants! The report says that that with the nice weather there were so many groups that at times the trail resembled Highway 1 (clearly pre-101 days).

An exceptionally low tide on June 23 led 21 people to Black Rock (I'm assuming the one by Canada Creek), where Millie Evans conducted a field trip to an area of the Bay of Fundy bottom that is rarely exposed. This type of trip is still popular, as anyone who has been on one of Jim WOLFORD's "yummy muds of Fundy" walks will know.

A geology/biology shore walk along the Horton Bluffs had about

50 participants. My surprise was that the leader was Roy Bishop! I say surprise, as I have known Roy since the late 1980s, and while I am a relative newcomer to the BNS, I have never known him to lead trips that were not astronomical in nature. I suspect that I would have enjoyed such a trip.

1974 was a good year to see a Glossy Ibis in Nova Scotia, as that spring a number of them were spotted feeding in the ponds and wet areas in Canard, Port Williams, Grand Pre, and Gaspereau. The largest single sighting was made by Cyril Coldwell, who saw a flock of 37 in flight over Starrs Point.

The last item of note from that issue was a report that, with regrets, Larry Bogan had to step down as secretary-treasurer, as he was taking up a new position at the University of Connecticut. I had no idea that he had left, but I'm really glad that he was able to come back!

VOL. 2, NO. 4: DECEMBER 1975

This issue contains an urgent notice that there are not enough articles coming in for the Newsletter; it includes a cartoon of a headstone that reads, "B.N.S Newsletter, Born 1974, Died 1976." I'm glad to see that that didn't happen, and I think it's safe to say that anyone who edits a newsletter is always looking for material, and that was one of the motivating factors in my deciding to pen this column.

Two pages are devoted to a wonderful story by Robie Tufts of a fledged sparrow hawk (kestrel) that was brought to him in July 1939 after it fell out of its nest and was being ignored by the parents. That autumn, despite his 8-year-old grandson's being quite attached to the bird, he tagged it and released it on Wolfville Ridge in mid-September during the usual migration period for that species. It was still there the next day, but then disappeared. Sadly, the bird was shot in Florida in January of the following year by someone thinking it was trying to enter a dovecote for a meal. He noted that at least it had learned to fend for itself and to migrate or it never would have gotten that far south.

There is a congratulatory note announcing the formation of the Halifax Field Naturalists and inviting interested BNS members to join.

The results of the 1975 Wolfville Christmas Bird Count were reported in this issue. It is interesting to note that Mourning Doves and American Robins are listed as “considered to be unusual at this time of year.” In fact, no Mourning Doves were reported in 1975, with only two reported the previous year – quite a contrast with the 678 reported in 2011! Northern Cardinal (1 was reported) is noted as “generally unexpected in the Wolfville area.” Only 10 Bald Eagles were seen. One species, not considered rare at that time, is Gray Partridge, of which 19 were reported. Even more interesting is that in 1974 only 11 were seen, but the number of Ring-necked Pheasants reported was not much higher, at 21. There is also a separate listing, provided by Rachel Erskine, of reports from even older counts. In 1962 there were only seven field observers and three feeder watchers! A Northern Flicker, reported in 1972, was listed as one of the rarities; in 2011 the number reported was 44. In fact, I usually get worried on the count now if I haven’t seen one before lunch.

VOL. 3, NO. 1: MARCH 1976

An 18th-century recipe for cowslip tea is included. According to county folk it will prevent rheumatism. There is a note that English Cowslip (*Primula veris*) should not be confused with American cowslip (*Caltha palustris*), commonly called Marsh Marigold, because it contains a poisonous glucoside. I think I’ll stick to a safer type of natural tea – Red Rose.

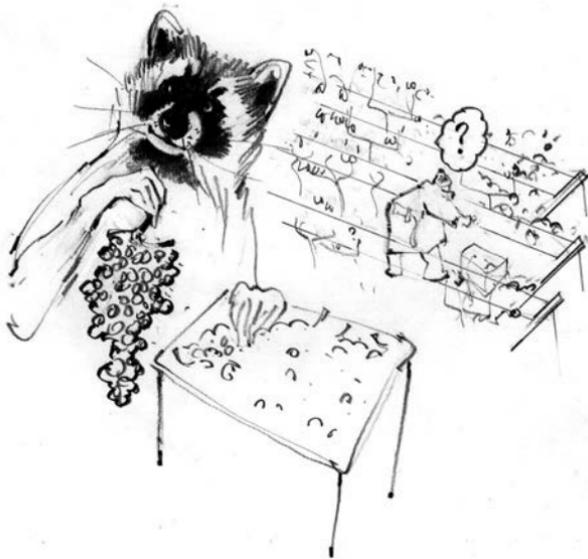
Sherman Bleakney has an interesting article on the spring chorus of various frogs, including a guide to the types of water habitats the different species prefer and the time of year that they sing.

Cyril Coldwell and helpers reported on a count made of Bald Eagles in the Gaspereau Valley, where they typically overwinter. A total of 11 mature and 13 immature were counted. Who would have thought then that there would now be hundreds of them and that

people would have a festival to celebrate? My copy of this Newsletter, eight pages of legal paper folded in thirds, still has the postage that was used to mail it – a 6¢ stamp!

VOL. 3, NO. 3: SEPTEMBER 1976

A two-page article was submitted by Bernard Forsythe outlining his second year of reporting bird nests. (An editor's note says that the report from his first year is in vol. 2, no. 3, which I do not have.) He filled out 125 record cards on 38 species. Nests he discovered included a Long-eared Owl nest (which successfully fledged three of four young), and in one dead spruce stump he found a flicker nest, and two metres above it a kestrel nest! He noted that the two species did not interact, and both were successful at raising their broods. One species reported, Traill's Flycatcher, was new to me. Apparently it has since been split into the Alder and Willow Flycatchers. Since he started reporting nests, Bernard passed the 3000-record mark several years ago and is still going strong! [See Bernard's 2014 report in this issue: another 136 records.]



BRIAN MCKIBBIN

## *Wallbrook Fall Colours*

by George Forsyth

**O**CTOBER 19, 2014 – A wonderful Sunday afternoon stroll in late autumn was enjoyed by about 20 participants. We met at Ralph and Kay Stirling’s on Gaspereau River Rd in Wallbrook, Kings County. The Stirlings were very gracious and welcomed the BNS crew to walk through the small park-like area south of their home. Beside an apple orchard with the newer Honeycrisp variety, we strolled up the hill through an arbour of Sugar Maple that has lined the road for many years; their leaves were in fine autumn colour and crunched beneath our feet.

At the top of the steep incline we were able to walk among the stones in the Mitchell-Stirling cemetery. Ralph showed the pride in his family as he spoke about his parents and brothers who are buried here – and the extended family who are or will be interred in this setting that he has lovingly maintained for so many years. The view from the hill is both beautiful and soothing, Blomidon in the distance, his farm and others in the foreground, all tinted with the fall palette. It is no wonder that Ralph spends his retirement years tending his “park.”

An example of a Victorian folly is the centrepiece of the park. The tower that catches your attention as you drive the River Road was constructed many years before the Stirlings acquired the property and has been maintained by them. A place for quiet contemplation, or romantic escape. Until recently, it was left unlocked, but since vandalism and graffiti have become a problem the Stirlings keep it locked, but provided us a key.

One member of our group came because she had last climbed the three-storey tower when she was ten years old, back when the Beatles

were all the rage! Another member had visited the tower by chance in the '80s; she walked the steps this year and experienced the flies all over again. This tower has glass windows that keep the inside warm during the cool fall days and attract large numbers of cluster flies. When the windows were opened, the flies escaped, and the seat at the apex offered a wonderful panoramic view of the Gaspereau Valley and the Minas Basin, enjoyed by everyone who climbed the worn stairs enclosed by the wide pine boards of yesteryear's craftsmen.

As we walked the paths to return to our cars, we noted the difference in the "forest" that was planted by Ralph, mostly Norway Spruce with some Scotch Pine. The forest floor under the spruce was barren of undergrowth. The forest that was more varied and of native species had abundant undergrowth, now being invaded by buckthorn. The "paths" are actually the fairways of a small golf course that was used by the Stirling family as a recreational activity in the fairer seasons. In the cold of winter, the hill was both a coasting and a skiing hill, with a farm tractor as the ski lift!

This was a beautiful day. A small group enjoyed each other's company, the beauty of the valley (the Gaspereau Valley, in this connotation), a fresh-from-the-tree Honeycrisp apple, and the hospitality of Ralph Stirling, who welcomed us into his park to enjoy what he has lovingly tended for so many years.

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FIELD TRIP

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## *Starry Night – Observing Session*

by Larry Bogan

**O**CTOBER 12, 2014 – This field trip started in the twilight in the old parking lot at Grand Pre National Historic Site. Many different telescopes had been set up by members of the Minas Astron-

omy Group (MAG). The sky was crystal clear and the temperature varied from 5 to 8°C, making it ideal for observing. An estimated crowd of 50–60 for this event came from the public, Blomidon Naturalists, MAG, and Valley Family Fun. Many children had come with parents. This was the rain date for the meeting to have taken place on the previous but cloudy night.

The Moon was four days past full and would not rise until much later. Mars was low in the southwest, but Saturn was lost in the glow of the twilight. Initially, only Mars and the brighter stars were visible. Roy Bishop took the lead and gave a tour of the asterisms, constellations, and bright stars, as they slowly became more visible in the darkening sky. Using his green laser as a pointer, Roy highlighted the Summer Triangle (the stars Deneb, Vega, and Altair), the Milky Constellations of Aquila, Cygnus, Cassiopeia, and Perseus, and then many others, including Ursa Major and Ursa Minor.

Views through telescopes included the double cluster in Perseus, the Andromeda Galaxy, the Hercules globular cluster, Uranus, Neptune, and many other celestial objects. All this with miscellaneous facts about the bodies being observed. The International Space Station made its show and majestically drifted from West to East across the sky for all to see. Ninety minutes later it came back for a much shorter appearance.

Everyone seemed to enjoy the evening. Those with children had to leave after about an hour, but many stayed to 10 p.m. and watched the Moon rise. James Churchill volunteered a personal highlight: his five-year-old daughter saw her first shooting stars and commented, “Daddy, I didn’t know it was going to look like this, I’m really having a good time!”



## *Cattle Egrets*

by John Belbin

CATTLE EGRETS have been expected in Nova Scotia for some time. Their rapid expansion up the east coast of North America made that a near certainty, and they routinely show up in Maine. However, when a significant number arrived in November 2012, it was the timing as much as the appearance that caused a lot of interest. In November of this year (2014) the pattern was repeated, with widely spaced observations including here in the Valley. Cattle Egrets are not hard to see – following the tractor as it plows or in fields with grazing animals.

These are “wrong-way birds” – in November, all other predominantly insect-eating birds should be heading south. I have seen no real explanation for this apparently weird behaviour, but as these enterprising birds embarked on their world conquest only some 100 years ago, perhaps their lack of real migration patterns in this region leaves the younger ones to find their own way to more suitable climes. With fall storms and stiff winds raging up the east coast, maybe the less-experienced birds simply take the path of least resistance until they are forced to put down here. Then a few days of rest, plus lean rations, and they are off again.

The Cattle Egret is essentially a highly flexible African dry-land heron that has become something else entirely. It has adapted to and expanded over a huge portion of the globe at a rate that leaves humans in the dust. Cattle Egrets are the best colonists by far. In Nova Scotia we seem to be their latest acquisition. They are one of the few species to have benefited from the destruction of the natural environment by humans.

These egrets long ago developed a taste for insects and similar

prey, rather than the water-based fauna favoured by other herons. Intelligent hunters, they found life was much easier if they followed large browsing animals as they disturbed the vegetation. In fact, studies have shown that their feeding success is tripled when they allow herbivores to expose their targets. For years, the classical African wildlife photo showed an egret perched on the back of an elephant, zebra, hippo, or buffalo, where it was sometimes called “tick bird” in error. One of their favourite foods is the biting horseflies that swarm about animals’ heads and tails, so they are welcome companions. Elephants, wildebeest, and several other species undertake long-distance migrations, and the egret stays right with them, feeding all the way.

In the later part of the 1800s, land clearing and cattle farming transformed much of tropical Africa. Cattle Egrets found life easier when following cattle about a limited range, and when agriculture developed, even more prey was exposed to these canny birds. The population greatly expanded, and they rapidly took over South Africa. To the north, the Sahel and Sahara regions presented a formidable barrier to a heron that still liked to roost and nest near water. However, like man before it, the egret soon found a way out of Africa!

There are at least two egret highways to avoid the great sand barrier. On the east there is a series of lakes along the Great Rift Valley. Following them leads to the upper reaches of the Nile, and once through the huge swamp called the Sudd at the junction of the Blue and White Niles, it is an agricultural smorgasbord all the way to the Mediterranean. Egypt is still a Cattle Egret hotbed. From there, North Africa, eastern Europe, and Asia are all wide open.

In western Africa the Sahel region runs right down to a bleak and hostile coast. Offshore, however, a whole series of islands are far more hospitable. The largest of these are the Canaries, which explains how the first European appearance of the Cattle Egret was in Spain. This West Africa route is the source of all the egrets that now range from Canada to Argentina.

By the time they reach the Cape Verde Islands some 500 km west of Senegal, they are heading into the northeast trade winds, which



RICHARD STERN

*Cattle Egret*

become a real problem. The winds blow steadily at about 11–15 mph and were the vehicles by which Europeans found their way to the Caribbean and the Americas. They are so strong and so constant that the huge volumes of Sahara dust they carry are now known to be a major source of nutrients for the Amazon rain forest. An egret could cross the Atlantic in about 40 hours using this boost alone. The northeast trades are also the steering mechanism for most of our tropical storms and hurricanes, which have their origin near the Cape Verdes. A Cattle Egret being swept up in a storm would be most of the way across the Atlantic before it regained control over its flying direction.

Cattle Egrets first appeared on the northeast coast of South America in the 1870s. According to the famous birdwatcher James Bond, they probably island-hopped there from the Caribbean. By the 1930s they were well established and moved north and south. Florida now has a major population, which began in the 1950s. This rapid spread is aided by the egret's habits of flocking, feeding, and roosting with similar local birds such as herons and storks. When they migrate, the egret goes with them, thus expanding their territory years before they experience population pressures to do so.

Cattle Egrets have now reached Argentina and Nova Scotia. The other stream out of Africa has reached Japan and both Australia and New Zealand. In 1985 the Argentine icebreaker *Almirante Irizar* reported 12 Cattle Egrets in the South Atlantic 160 miles from the Argentine coast. They have been reported from the Falkland Islands and even from the South Shetland Islands. They may even make an appearance in Antarctica in the near future.

Cattle Egrets are considered to be a real friend to local farmers, controlling many insect pests and nuisances. A flock of 40,000 birds was once seen in Tanzania feeding on a swarm of grasshoppers. They have been introduced for that purpose in several regions about the world.

Several detailed studies of their feeding habits show that they have paid a price for their flexibility. They concentrate on whatever prey is available in the area and have wide-ranging tastes. However, unlike all other herons they are almost never found to have eaten fish. Their concentration on a land-based diet has resulted in their inability to allow for light refraction in water. The Cattle Egret is the only heron that is a poor fisherman.

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YOUTH

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## *Young Naturalists Clubs Get Around*

by Marina Myra, Biologist / Nature Educator

THE Berwick Young Naturalists Club is a chapter of the Nova Scotia Young Naturalists Club (YNC) not-for-profit and charitable organization. YNC is guided by a board of directors and managed by a provincial coordinator. Each of the six chapters is led by one or more local volunteer leaders, and oftentimes we have additional volunteers helping at local events. YNC is grateful for financial support

from individual donors, Nova Scotia Habitat Conservation Fund, Nurtured, TD Friends of the Environment Fund, Wildlands Writers, Western Kings Active Kids, Healthy Kids Program, McInnes Cooper, Nature Nova Scotia, and in-kind/volunteer support from the Nova Scotia Museum of Natural History, Halifax Field Naturalists, Blomidon Naturalists Society members, Nova Scotia Bird Society, Nova Scotia Wild Flora Society, Royal Astronomical Society of Canada – Halifax Centre, Atlantic Geoscience Society, KC Irving Environmental Science Centre, and NSCC Pictou Campus.

If you would like to support our events by donation or volunteering, contact our coordinator by visiting the YNC website at [www.nature1st.net/ync/](http://www.nature1st.net/ync/).

Young Naturalists Club offers Nova Scotia communities free outdoor programs once or twice a month on various natural history topics. Our motto is to “Observe and Conserve” Nova Scotia’s natural spaces and species. The outings are usually on Saturday mornings throughout the year, often with a break in the summer when families are away. YNC events are geared to young people aged 7 to 14, though we are happy to have whole families participate with younger or older members.

#### OUR MOST RECENT ADVENTURES

*September 13, 2014* – On this warm and sunny day, the Berwick and Annapolis Valley YNC Chapters teamed up with the Blomidon Naturalists Society to build and launch nestboxes for Tree Swallows in Miner’s Marsh. About 15 eager young people and their parents attended this event armed with hammers and nails, drills, and screws. James Churchill organized the event and George Forsyth and Ed Sulis instructed the workers as to how assembly should progress. The kids worked happily and efficiently in Ed’s workshop and driveway all morning long. Hammers rang, drills whirred, and people laughed while nestboxes were assembled. We then headed down to the marsh, where pipes were fitted in the ground at various key locations around and in the marsh for the boxes to sit on. The plan is to

monitor the boxes for nesting activity each year. Welcome to your new homes, Tree Swallows; we hope you like them!

*September 20, 2014* – We explored the multi-use rail trail to the west of Berwick. It was a beautiful, brisk late-summer day, and we had about 18 kids and their families from the Valley area show up for this event. We used Environment Canada BioKits to explore nature with all of our senses. BioKits are booklets for kids that can be ordered online and help to guide us through nature with facts and questions. We had a lot of fun learning about plants and ecology with Nick Hill, a local botanist. Poison Ivy lined much of the old railway bed, and we were able to distinguish between it and the blackberry. Now that everyone knows what poison ivy looks like, we can avoid getting stung in the future. The Canada Holly was in berry and very beautiful, and the kids even got to play with the Spotted Touch-Me-Not for a while. Other plants we saw were the prickly Wild Cucumber, Milkweed, Wild Raisin, Wild Rose, and Witch Hazel. We used our sense of hearing to explore the adjacent forest paths by sitting silently for a few minutes. Most of us found the silent sit relaxing, but a few found it challenging to sit still for three minutes. While sitting we heard the Trembling Aspen above and the rustling of dry leaves below. It was surprising to see the amount of colour we found in the woods. Each child chose a gem of their favourite colour out of a pile of possibilities and ran around the forest looking for that colour in the leaves, berries, fungi, etc. that they encountered. One excited young boy matched the blue gem with a chunk of wood infected with the cyan mycelium of the fungus *Chlorociboria aeruginascens*. Once they found a coloured specimen, they brought it back to a white cloth and placed the gem and article onto the cloth together. The resulting colours on the cloth were very beautiful.

*October 4, 2014* – On this cloudy and drizzly day the Berwick and the Annapolis YNC Chapters joined Sarah Walton, a biologist from the Clean Annapolis River Project Wood Turtle Monitoring Project on a search for travelling Wood Turtles. Although we spent two hours searching for the little Wood Turtles and did not find any along a tributary of the Annapolis River by the Oaklawn Farm Zoo, we still



RICHARD STERN

*Pied-billed Grebe, Miner's Marsh*

had a great time exploring the area. The turtles migrate from the forest to the muddy river bottoms this time of year to find a good squishy place to bury themselves for the winter. According to Sarah, the Annapolis River and its tributary brooks and streams are ideal habitat for Wood Turtles. She also told us that when they are hibernating in the mud, they allow their bottoms to stick out into the water to absorb oxygen – so . . . they breathe with their bums! After our survey, Sarah was able to track down a large male Wood Turtle named Hanley. He was fitted with a radio transmitter that allowed Sarah to use an antenna to track him down. It took her a while fishing around under alder branches where he was hiding underwater in the river. He was beautiful, with a dark carapace, yellow-striped plastron, and bright orange skin on his neck, chin, and legs. We all got to pat him despite his protesting.

*October 11, 2014* – The Berwick and Annapolis Valley Young Naturalists went mushrooming in the Kentville Ravine on a beautiful sunny Saturday morning with local mushroom enthusiasts Ken Harrison Jr. and Bill Shaw. Since we had a very large group – 30 attendees, our largest number yet – Nick Hill came along as well to add his mushroom knowledge to the group. Even though it had been a very

dry summer, we did find many mushroom species that kept Ken and Bill hopping. The young naturalists were excited to look for mushrooms, and the older kids ran up ahead to search with Bill and Nick while Ken and I stayed back with the younger and more thorough investigators.

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BNS MEMBER PROFILE

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## *Kristiina Lehtonen*

**P**RINTMAKER Kristiina Lehtonen moved from Finland to Nova Scotia in August 2010. She has been working as a printmaker for over 20 years. Kristiina loves nature and marvels at its beauty and all the creatures there. From her field trips, many things have found their place in her pictures. Her whimsical art has been exhibited and awarded all over the world. In her artwork there is both humour and insight that touches people everywhere.

Now she has settled in Annapolis Valley and has started to exhibit her art in local art galleries and exhibitions.

Kristiina's technique is primarily etching and aquatint. The original picture is made into a copperplate in a long process, involving a lot of varnishing and corroding. Using a heavy press, the end result is a multi-coloured handmade print. The whole process is pure handcraft, and the method is basically the same as was used 500 years ago.

Kristiina has her studio in Grand Pre, but from this fall on she is going to invest more time in her English language skills and will take adult high school classes. That means there will be a year or two break in her artwork.

You'll find more information and all her works in [www.kristiina-lehtonen.com](http://www.kristiina-lehtonen.com).



Q: (BNS) As a print maker specializing in etching and aquatint, how did you become interested in such a complex and time consuming art form?

A: (Kristiina): After we got married ('87), my husband continued his studies in evening high school classes, and I needed something to do also. I enrolled to art school, just for fun. There we had a course on printmaking, and I found it really suitable for my personality and expression. I like to draw more than paint, and that's exactly what printmaking takes: drawing skills.

Q: What would you hope your art will teach or inspire the people who view it?

A: Unlike many my contemporaries, I decided *not* to go with the flow in my art and do something I don't truly feel like, despite the risk I'll lose public recognition or funding as an artist. I found my own style and voice, and ordinary people just loved it! I guess it communicates something that is personal and deep, and I have decided not to explain my art, because this way everyone can find her own interpretation.

Q: When you were a child were your talents recognized then, and did you have a mentor to encourage you at an early age? Perhaps it was a family member?

A: When I was small some of my relatives gave encouraging feedback for my drawings, and later I was asked to do illustrations for brochures and newspaper articles. That's how it started.

Q: While you are in school for the next several years will it still be possible to buy your art by appointment, perhaps Friday evenings or Saturdays? If so, I think a contact phone number should be published with this to help out your sales!

A: Yes, I still have many of my old prints available! I just need an email ([kristiina@galleriaf.com](mailto:kristiina@galleriaf.com)) or phone call (902-692-2058) in advance.

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NATURAL HISTORY

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## *Acadian Forests: History, Evolution, and Succession*

by Bob Bancroft

**R**OUGHLY 12,000 years have passed since vast, kilometre-thick ice sheets retreated off the land at rates of up to 92 metres (100 yards) per year. Tundra grew in over the newly exposed ground; then taiga, a form of sparse evergreen or conifer growth, migrated northward across a land bridge (now covered by sea) connecting Massachusetts and Nova Scotia. Black Spruce was probably the first pioneer forest species. It was followed by Tamarack, Balsam Fir, White Spruce, and aspens. Most native species found in Maritime Canada moved in about 10,000 years ago, although their distribution at that time was markedly different. By AD 1600, forests of eastern North America were well developed, primeval, and only lightly touched by human alteration. Geological and plant studies suggest that the Cape Breton Highlands may have escaped glaciation.

The term “Acadian Forest Region” dates at least to 1937, when W.E.D. Halliday published *A Forest Classification for Canada*. Subsequent classifications of our forests include *Deciduous Forests of Eastern North America* (Lucy Braun, 1950), *Forest Regions of Canada* (J.S. Rowe, 1959), and “A Forest Classification for the Maritime Provinces” (O.L. Loucks, 1962, reprinted from *The Proceedings of the Nova Scotian Institute of Science* 25(2)). More recently, provinces have been developing ecological land classification systems, where the term Acadian Forest is applied to portions of the Maritimes and New England. Its definition is as diverse as the forest.

Old woods of eastern Canada can be likened to a motley cast of movie characters. Each species is best adapted to particular scenes: a range of climate, soils, water tables, elevations, and a host of other environmental realities and influences. Some, like Tamarack, compete poorly with other trees for space. Trees can be classified in many ways. Two essential contrasting groups are 1) trees that germinate and grow best in direct sunlight, and 2) those that can take root, flourish, and wait in the shade of a full forest until a canopy opening offers smaller individuals a chance to grow in sunlight.

Original woodlands were varied, but the scene could change abruptly when fires produced by lightning strikes ran unfettered to the sea. Severe windstorms sometimes flattened acres of trees on exposed sites. Other forest stands suffered regular insect epidemics. Fire, wind, and insects are examples of natural environmental forces that often combine to set the stage for the growth of even-aged forests. These are the trees that germinate and grow in direct sunlight. Species suited to sunlit sites include poplar, aspen, White and Wire Birch, Red Maple, willows, Black Ash and American Mountain Ash, Balsam Fir, White and Black Spruce, Tamarack (Eastern Larch), Eastern Cedar, and Jack Pine. Red Oak may join aspen, White Birch, or Red Maple on poor rocky or sandy soils.

In parts of eastern Nova Scotia, wildfire often bypasses Black Spruce swamps. In its aftermath, Black Spruce is an immediate, local seed source. Its cones open with heat. As time passes, Black Spruce populations “march” out of wetland strongholds to colonize

higher, drier ground. Eventually, other tree species regain a foothold on lands already dotted with a matrix of Black Spruce. This story changes in parts of New Brunswick, where Eastern Cedar dominates swampy areas.

Plants, shrubs, and trees have unique travel methods. Winged seeds of White Ash may “fly” up to 140 m (460 ft.) from the female parent tree. Wildlife may carry other seeds to open ground in the wake of fire, windthrow, or insects. Animals like Blue Jays, chickadees, squirrels, and mice transport seeds, nuts, and acorns for storage. Some birds can remember up to 30,000 cache locations, but they usually forget a few! Many birds, and mammals like Black Bears, consume fruits, seeds, and nuts, leaving a trail of manure “packets.” This natural fertilizer enhances seed germination in new locations. Substantial browsing by occasional overpopulations of rabbit, deer, moose, porcupine, and mice can hinder the spread of some trees and plants. This inadvertently favours other species. Beavers influence the mix of forests along many low-gradient waterways, creating wood-pond-meadow cycles over the course of centuries.

Early pioneer trees on open sites tend to be a grow-fast, die-fast bunch whose roots extend into the soil, acting as mineral pumps to the surface, dropping the leaves and needles that improve soils. In time, sun-loving trees that take hold on open areas shade their own ground. This fosters an environment for longer-living tree species whose seedlings can tolerate shade. Depending on the exposure, soils, climate, latitude, and other environmental variables, associations of long-living trees capable of starting life in the shade will also change and evolve over succeeding generations. This process is called *forest succession*. It takes place until the rate of change slows down on specific sites, with the development of a regular cast of tree characters. Once that state is achieved, change occurs only in minor ways, and the forest has reached a *climax*, or steady, state.

Original Acadian forests unfettered by recent natural catastrophic events like fire, windthrow, and insects, or those that have escaped forest cutting, tend to be uneven-aged. They often develop and maintain a rich variety of hardwood and softwood species over large

areas, with young saplings and other age classes of many species scattered over the forest floor, waiting for a window of opportunity. Old-timers fall down gradually, one at a time. When a giant finally topples, seedlings and saplings that rooted years ago in its shadow are suddenly exposed to sunlight. A race commences between established juveniles to fill the gap in the forest canopy. The mouldering trunks of old trees on the ground gradually become nursery sites and a source of nutrients for a new generation of trees. Species that often play a prominent role in Acadian forests include Yellow Birch, Sugar Maple, American Beech, White Ash, Red Oak, White and Red Pine, Red Spruce, Balsam Fir, and Eastern Hemlock. Balsam Fir grows in the shade and dampness of these forests, but most young firs succumb before an opening offers an opportunity to mature.

A diverse number of natural forests are found in Maritime Canada. Depending on the forest classification system, many are considered Acadian Forest. Loucks (1962) described a number of ecoregions in New Brunswick, Prince Edward Island, and Nova Scotia. The first was a shade-tolerant hardwood zone along the Saint John River dominated by Sugar Maple and American Beech, with smaller representations of White Ash, Butternut, Ironwood, and Basswood. Another region was a Sugar Maple–hemlock-pine zone in portions of the upper Saint John River Valley and the Bras d'Or lowlands in Cape Breton. He identified a Sugar Maple–Yellow Birch–fir zone in areas of high elevation in the three Maritime provinces and noted that they were remarkably similar considering the distances separating them. Loucks also recognized a Red Spruce–hemlock–pine zone in the interior of western Nova Scotia, where Red Oak was a common associate, and in a region that occupies much of the lowland of central Nova Scotia, the northern shores of Prince Edward Island, and eastern New Brunswick. Obvious to casual observers is a spruce-fir coastal zone that flourishes along the Fundy and Atlantic shores. Forests influenced by the sea are often windswept, salt-sprayed, and stunted. A fir-pine-birch zone is located in the New Brunswick Highlands, and in high elevations of the Gaspé and Cape Breton. Finally, Loucks identified a White and Black Spruce taiga zone in a flat cen-

tral portion of the Cape Breton plateau, where short, dense spruce and fir alternates with shrub barrens and peat bogs.

This last zone is similar to non-alpine forests of Newfoundland. Forests of Newfoundland are a fascinating study in themselves. Much early research was undertaken by Dr. A.W.H. Damman, who worked with the Canadian Forestry Service from 1956 to 1967. Using his approach, the federal and provincial governments have produced the excellent *Forest Site Classification Manual: A Field Guide to the Damman Forest Types of Newfoundland*. The manual includes a vegetation and soil key to 33 forest types.

The woods of our ancestors 400 years ago were a stark contrast to their present state. Waterways were healthier, for example. Aquatic life depends on the forest ecosystem for nutrients. Large, old trees along banks kept channels deep and narrow. When timber finally tumbled off the bank into the water, large trunks in channels redirected high-water flows to create aquatic habitats: flats, riffles, pools, and runs. The forest's air and shade kept waters cool in summer. Rivers hosted tremendous seasonal runs of salmon, trout, striped bass, shad, alewives, eels, and smelt in rivers and estuaries. Two sturgeon species nosed into our rivers, the larger attaining lengths of 3.6 metres (12 ft). Acadian forests were largely responsible for these hearty fish populations.

Many wildlife species were adapted to live in this mix of even- and uneven-aged forest habitats. Nicolas Denys was Governor of Cape Breton Island, Prince Edward Island, and the coast from Canso to Gaspé from 1654 until his death in 1688. Denys explored much of the coast of Nova Scotia, as well as inland areas, offering descriptions of the forests and wildlife he encountered. Trees were much bigger then. He described the large animal life in some detail. Walrus were seen along the Gulf of St. Lawrence and Atlantic coasts of Nova Scotia. Inland, wildlife included wolf, Woodland Caribou, wolverine, martin, otter, moose, Black Bear, porcupine, Red and Flying Squirrels, chipmunk, weasel, mink, rabbit (Snowshoe Hare), fox, and Canadian Lynx. Snakes were plentiful. Bald Eagle, Ruffed Grouse, crow, nighthawk, Barred Owl, robin, hummingbird, swallow, and

several woodpecker species were numerous. Many of these wild animals used holes or cavities that were abundant in old trees, standing dead trees, and fallen trees for feeding, shelter, denning, or nesting. The forests were rich in wildlife.

Passenger Pigeons were common in Denys's time, frequenting land that grew back in raspberry canes after forests were burned or cleared. Numbering between three and five billion across North America by the beginning of the 19th century, the Passenger Pigeon was hunted to extinction as original Acadian forests fell to the axe and saw. Humans have drastically altered the natural evolution of these forest ecosystems. Wisdom, experience, and foresight will be required if our great-grandchildren are to walk under the canopy of Acadian forests.

[This article was originally published in *Eastern Woods and Waters*]

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NATURAL HISTORY

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## *Nesting Season 2014*

by Bernard Forsythe

As reported in the 2014 Summer BNS Newsletter, Raccoon problems forced one of the three Barred Owl families nesting south of White Rock Pond to squeeze into a too-small-for-owls duck nestbox. This noteworthy nesting attempt was in vain, as the three eggs were lost to an unknown predator. The remaining two Barred Owl families plus the pair of Goshawks within the 1.08 km line south of the pond all fledged young successfully. As in recent years, young owls in nestboxes in the Kingston and North Mountain areas were also banded. The total of 28 young owls banded was down from last year mainly due to a harder winter plus predation from their arch enemy, the Raccoon.

Twelve baby ducklings, coaxed by mother Wood Duck, jumped from my duck box in Black River. Nine Hooded Merganser eggs in a Greenfield nestbox hatched; however, one unlucky duckling died in the nest. Nothing in nature is a total loss, though – my backyard Barred Owls enjoyed duck for supper. Two of the four nestboxes occupied by Hooded Mergansers on Black River Lake – which my brother Arnold and I monitor – fledged young. One of the failed nests was a “dump” nest containing four Hooded Merganser plus two Wood Duck eggs.

Nests of Peregrine Falcon, Spotted Sandpiper, Great Horned Owl, Alder Flycatcher, two broods in a Phoebe nest, Tree, Cliff and Bank Swallow, Yellow Warbler, Song Sparrow, and a predated Cardinal nest were included in the total of 26 species recorded this year. As usual, late summer into mid-September kept me busy recording nests of Cedar Waxwing and American Goldfinch along the wide ditches of Highway 101. Predation was high in the 11 Cedar Waxwing nests located; three nests fledged young, seven were lost to predators, and in one nest outcome was inconclusive. Now that three years have passed since bushes along Highway 101 were mowed, regrowth has resulted in perfect nesting habitat for goldfinches, resulting in a total of 48 nests found. Compared with the waxwings, goldfinch nest success was higher, as 27 of their nests fledged young.

This is the third breeding season of my second five-year study of the fledging success of American Goldfinches nesting along Highway 101 ditches. Just after the young goldfinches left my last nest of 2014, the bushes on both sides of 101 were again mowed, as they had been at the end of the 2007–2011 study. One reason for mowing could be to make the deer regularly crossing the highway more visible to motorists. Time will tell if I will be able to find enough nests nearby to complete a second five-year study.

Years ago, after visiting Harry Brennan in Pictou County to see Saw-whet Owls nesting in his boxes, I began erecting suitable boxes in Kings County. Although I have seen this little owl in my boxes as well as woodpecker holes, so far none have laid eggs. In recent years Donna Crossland has put up Barred Owl nestboxes near her

home in Tupperville, Annapolis County. This year a pair of Saw-whets laid four eggs in a back corner of one of her large boxes. It was a joy to be able to band the quiet, colourful young with large yellow eyes while mother owl perched nearby patiently watching. Young dark-eyed Barred Owls can be very scrappy, while the parents often attack when the young are handled. Some people have all the luck.



RICHARD STERN

*Common Yellowthroat, Miner's Marsh*

After the long season of countless hours finding, revisiting, recording, and filling out nest cards, 136 completed cards were submitted to the Maritime Nest Records Scheme.

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NATURAL HISTORY

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## *Acadian Forest Seed Bank*

by Melanie Priesnitz, Conservation Horticulturist,  
Harriet Irving Botanical Gardens

THE dream of having a seed bank at the KC Irving Environmental Science Centre and Harriet Irving Botanical Gardens started to become more of a reality this past summer. The vision of the seed bank is to be a centre of excellence for long-term storage of seeds from native plants of the Acadian Forest region. Although a range of species is currently being tested, the main focus over the long term is envisioned to be on rare and endangered species, as a means to

augment existing conservation strategies. This objective is consistent with the mandate of the Irving Centre and fulfills the expected function of botanic gardens worldwide to secure plants species at risk and contribute to the protection of biodiversity.

There are no formal sources of seed for many of the native plants of the Acadian Forest. It's important to have a seed bank in place to support species conservation, including research, education, and restoration activities.

The planning for the seed bank has long been in the works. Seed has been collected over the years and distributed or stored temporarily. In 2013, funding support from TD Friends of the Environment and the Nova Scotia Habitat Conservation Fund enabled preliminary trials to begin to develop a dedicated long-term seed bank program. This past summer, thanks to funding from Environment Canada's Science Horizons Youth Internship program, we were able to dedicate more human resources to the project. Seed bank intern and recent Nova Scotia Community College Horticulture graduate Nicole Lee White has been working under the direction of Dr. Robin Browne and Ruth Newell to collect seed, conduct viability and germination tests, and develop protocols for proper handling and storage.

The internship has been a great experience for both the Irving Centre and Nicole. It has allowed the centre to further develop the seed bank research program while giving a recent graduate the opportunity to further her education and work experience.

Nicole has had the opportunity to learn a wide range of new research skills, including field collection strategies, preparation and treatment of samples, sterile lab techniques, observation of experiments, and data management and record keeping. Nicole has also gained experience with specialized equipment related to development of seed bank technology, including GPS devices, data loggers, aseptic flow benches, autoclaves, analytical balances, pH meter, desiccators, freezers, growth rooms, and phytotrons. She also gained a greater understanding of plant taxonomy, physiology, and development.

When asked to reflect on her internship, Nicole stated that it “has been a wonderful contribution to my education and great stepping stone toward my future career goals. As a recent graduate, it provided me with opportunities I may not have had access to otherwise, giving me skills and confidence to pursue my career.”

Now that our seed bank is operational and we’ve progressed from a few jars of seed in Tupperware containers, we know it will continue to grow and help to ensure a biologically diverse future for the Acadian Forest.

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NATURAL HISTORY

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## *Common Lichens of Northeastern North America: A Field Guide*

By Troy McMullin & Frances Anderson

2014 | spiral | 192 pp. | 138 color photos  
138 b/w illustrations | ISBN 9780893275112 | US \$39

RELEASE DATE: FEBRUARY 2015

“At last, a light and easy-to-use field guide to the rich lichen flora of Northeastern North America. The authors have designed this user-friendly guide for amateur naturalists, nature interpreters, forestry workers, land surveyors, researchers, and the general public. Meant to fit in a pocket or backpack, it requires no previous botanical experience and is written in non-technical language.

“The 138 lichens in this guide are seen mostly in the Canadian Atlantic provinces, New England, Québec, and eastern Ontario. The guide is formatted so that each page is arranged by the surface each lichen grows on in the field, its shape or growth form, then by its color. Full color photographs and black and white drawings for each species also aid in identification.

“Use this guide to get tuned into the ancient, fascinating, and beautiful world of lichens—you can start in your own backyard!”  
New York Botanical Garden Press

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[Our congratulations to Frances – it’s been a long journey –ed.]

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TRAVEL

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## *A Visit to The Burren in Western Ireland*

by Martin L. H. Thomas

**I**N an unusual choice for an October visit, my wife and I decided to go to the Galway Bay area on the west coast of Ireland, well known for its high autumn rainfall. This area has several regions of great geological and natural history interest as well as a rich historical and pre-historical content. Some areas outside Galway City are largely Gaelic speaking, and rural road signs are often just in Gaelic.

The area to the north of Galway Bay is the Connemara region, with impressive mountains, a wonderful coastline, and the only true fjord in Ireland. This area also yields Connemara marble, a magnificent fossil-rich stone much used in buildings and pavements. Often, looking down as you walk, you are rewarded by an array of perfectly preserved fossils.

To the south of Galway Bay in County Clare lies the geological and biological treasure of the Burren. The Burren is a huge area (1% of Ireland) largely composed of light-coloured Lower Carboniferous



*Burren mountains rising from coastal lowlands. The dark line snaking over the mountain-top is a famine wall, built by hand as a make-work project to create employment during the great famine.*

limestone with some areas of slightly later darker sedimentary rocks composed of siltstones and sandstones. These more recent deposits buried older areas of the limestone and formed other very impressive landforms just to the west of the Burren, including the Cliffs of Moher (seen in movies, including the Harry Potter series and *The Princess Bride*). The cliffs, 300 ft. (100 m) high, are truly impressive and the most visited tourist attraction in Ireland. The Burren and Cliffs of Moher together were awarded Global Geopark status by UNESCO in 2011.

From a natural history point of view, the most interesting part of the Burren is the huge area of limestone mostly characterized by almost-horizontal beds of rock with numerous cracks and fissures. In Burren National Park, situated in the southeast part of the area, there is some folding. These rocks were laid down 340–315 million years ago in warm tropical seas, in a climate much like that of the Bahamas today. The fossils found in this limestone show its tropical origin and include corals, sea lilies, sea urchins, ammonites, and brachiopods.



*Rough limestone pavement at Poul nabrone.*



*Harts Tongue Fern (*Phyllitis scolopendrium*).*

The resultant huge mass of limestone, one of the largest on Earth, was carried to its present location in continental drift.

About 1.8 million years ago, the events of the Ice Age greatly modified the surface limestones. First, a huge mass of ice scoured the surface, ripping away soil and soft rocks and leaving the valleys and mountains. Then limestone at the surface, above sea level, was grossly affected by freshwater erosion. Rainwater followed cracks and crevices, dissolving the surface limestone, to form deep grooves seen today as the prominent *grykes*, which divide the surface into blocks, creating limestone pavement. Burren mountainsides are often quite steep and covered with a surface layer of broken rock. More-gentle mountain slopes show the effect of ice and water erosion in a characteristic stepped profile.

The intense glacial scouring, followed by water erosion, carried away most of the soil and gravel from all but more-sheltered low-lying areas, leaving a bare landscape supporting very sparse vegetation. Where some shelter occurred, hardy shrubs, notably Hazel (*Corylus avellana*) were able to gain a hold. However, once erosion deepened the grykes, they tended to collect a layer of rich soil, which in turn was colonized by a wide diversity of plants and small animals in a very damp and sheltered habitat. The plants found there originated from a variety of areas ranging from the Mediterranean to the Arctic.

Since the gryke habitat is so extensive, and individual grykes have grown so large over time, this habitat is really very important, though at first sight it seems insignificant. The Burren is renowned for its remarkable assemblage of plants and animals. The region supports many rare Irish species, some of which are only found in this area. Notable insects present in the Burren include several rare butterflies, and the Ochthebius Water-beetle (*Ochthebius nilssoni*). This last species is known from just five sites in the world: four in the Burren and one in Sweden. About 75 percent of the plant species found in Ireland are represented in the flora of the Burren. Among the many varied and beautiful flowers that have come to symbolize the Burren are Spring Gentian (*Gentiana verna*), Mountain Avens (*Dryas octop-*



*Limestone walls creating tiny fields on Inis Iorr island.*



*The huge stalactite in Doolin Cave.*

*etala*), Shrubby Cinquefoil (*Potentilla fruticosa*), Bloody Cranesbill (*Geranium sanguinum*), and the Hoary Rock Rose (*Helianthemum oelandicum*). At least 23 species of orchid are found in the Burren, including four species of helleborine, of which the rare Sword-leaved Helleborine (*Cephalanthera longifolia*) is the most notable.

Our visit was a bit late for most of the flowering plants, but we still observed some, as well as ferns and small shrubs.

There is some agriculture and woodland in lower-lying and more-sheltered areas of limestone pavement, but even there the soil is often shallow and farming marginal. To create shelter and clear the ground, loose limestone blocks have been gathered and built into walls, which in some places have created mosaics of very small fields.

Limestone is very porous, and rainwater is absorbed very quickly. This results in interesting features such as disappearing streams, ponds, and lakes. In the limestone-dominated part of the Burren there is only a single stream reaching the sea, and it has formed in a valley where a significant soil layer has accumulated, sealing off the limestone below. Water underground often forms large streams, some of which have dissolved enough limestone to create large caves.



*Poul nabrone Dolmen in central Burren*

One of these caves at Doolin contains the largest stalactite in the world accessible to the public. This monster is over 23 ft. (7.3 m) long.

The Burren is also rich in history, going back at least four centuries, and has many castles, abbeys, monasteries, very-old ring forts and wedge tombs. Together with the Cliffs of Moher, this area makes a fascinating destination.

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WEATHER

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## *Autumn Weather 2014, Eastern Annapolis Valley*

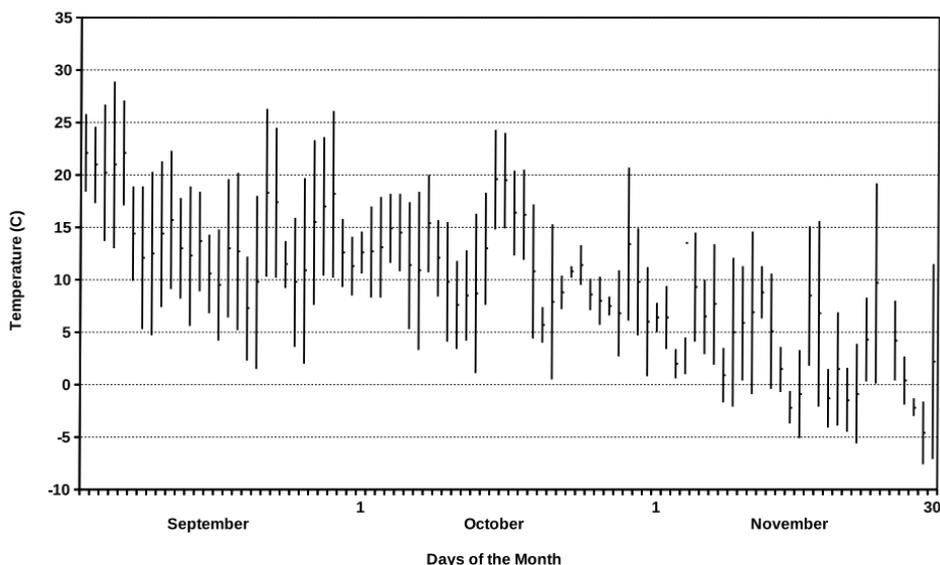
Larry Bogan, Cambridge Station

	Temperature			Precipitation	
	Max (°C)	Min (°C)	Mean (°C)	(mm)	(No. of days)
<b>September 2014</b>	20.6	8.9	14.7	85.0	8
(30 yr. average)	(19.5)	(9.5)	(14.5)	(84.0)	(11)
<b>October 2014</b>	15.6	7.1	11.4	141.0	15
(30 yr. average)	(13.7)	(4.9)	(9.4)	(89.0)	(14)
<b>November 2014</b>	7.9	-0.4	3.5	208.0	16
(30 yr. average)	(7.8)	(0.3)	(4.1)	(109.0)	(16)
<b>Season</b>	14.7	5.2	9.9	434.0	39
(30 yr. average)	(13.7)	(4.9)	(9.3)	(282.0)	(41)

*Source: Environment Canada data for Kentville, NS (<http://weatheroffice.gc.ca>) and Canadian Climate Normals and Averages (Kentville).*

### Daily Temperatures (Min, Max, Mean)

Kentville, N.S. - Sept, Oct, Nov 2014

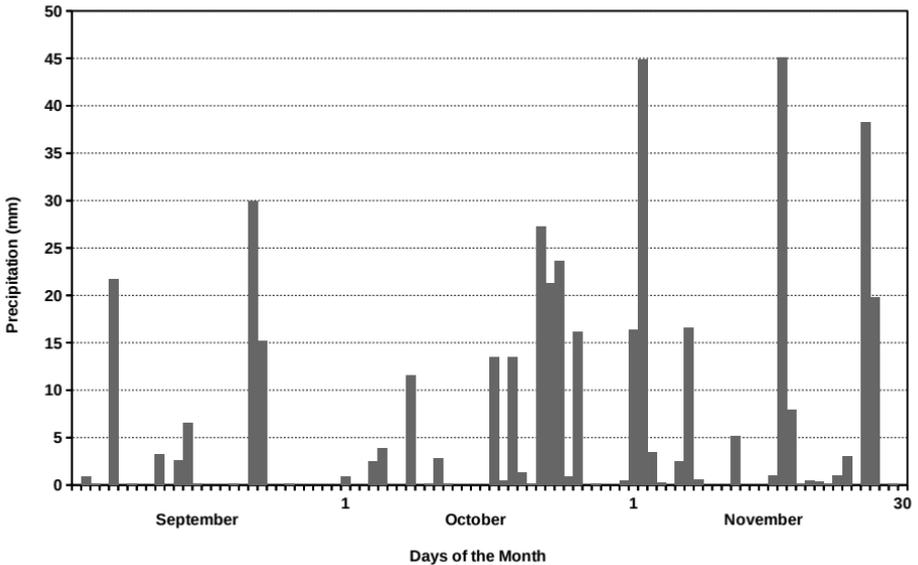


### TEMPERATURE

Autumn is a pleasant time of the year in the Annapolis Valley because the warm temperatures tend to extend well into the season. This year is no exception, as shown by the date of the first hard frost, which occurred in mid-November, and no frost at all until the second week of that month. There were days with highs of 24–25°C as late as mid-October, and November 24 warmed to 19°C. Overall, the autumn was slightly warmer than the 30-year average, mainly because October was a full 2°C warmer than the average. September was about average, and November was cooler by 0.6°C.

## Daily Total Precipitation

Kentville, N.S. Sept, Oct, Nov 2014



## PRECIPITATION

Coming into autumn, the land was dry, and September had average rainfall. The last half of the season was very wet and increased the standing water. The first six weeks had 107 mm, or only 25 percent of the season's rainfall. The last half of the season got 327 mm – 15 percent more than a whole season usually gets.. Much of it came down in heavy rain during three days in November, with rainfalls more than 35 mm. The wettest period was five days of rain in late October when 80 mm fell. Overall, the 2014 fall precipitation was 54 percent above average. Despite the large rainfall, the season had a normal number of rainy days.

September and early October were sunny, pleasant, and relatively uniform, but by mid-October the jet stream had shifted to bring moisture and winds from the south. Frequent weather systems moved along the jet stream and gave frequent weather changes. November was dramatically more cloudy than the previous two months.

## *What's in the Sky?*

by Roy Bishop

### HIGHLIGHTS FOR JANUARY THROUGH MARCH 2015

**January 2:** Latest sunrise of the year (07:56)

**January 3:** Quadrantid meteor shower

**January 4:** Full Moon, Earth at perihelion

**January 20:** New Moon

**February 3:** Full Moon

**February 6:** Jupiter at opposition

**February 18:** New Moon & at close perigee on 19th

**February 19–22:** Very large tides (see below)

**March 4:** Uranus immediately below Venus in the west (7–8 p.m., use binoculars)

**March 5:** Moon full and at apogee, smallest Full Moon of 2015

**March 8:** Daylight saving time begins

**March 20:** Vernal equinox 19:45 ADT

**March 20:** New Moon & at close perigee on 19th

**March 20–22:** Very large tides (see below)

Those of you who use the Society's Natural History Calendar will be somewhat familiar with the terms perigee, apogee, and perigean spring tides. Also, anyone familiar with Fundy tides knows that all tides are not equal. In particular, the height of a high tide varies as the days go by. In Minas Basin, site of the world's largest tides, the variation in high tide level exceeds the entire low-to-high vertical tide range on many other shorelines around the world! The causes of the varying high tide-level include the following:

1. The lunar tide and the solar tide get in and out of step with a two-week (actually 14.77-day) period: in step at full and new Moon (spring tide); out of step at first- and last-quarter Moon (neap tide).

2. The Moon's distance from Earth varies with a 27.55-day period, its tidal effect being greatest when closest to Earth (perigee), and least when furthest (apogee). Tides enhanced in this manner are termed perigean tides. The Bay of Fundy is unique in that its tides respond more to the perigee/apogee influence than to the spring/neap influence.

3. Causes no. 1 and no. 2 get in and out of step with a 206-day period, creating extra-large perigean spring tides when in step. Such tides are particularly enhanced because at such times the Sun's gravity makes the Moon's perigee distance smaller than average.

4. Solar and lunar tides are also enhanced when the Sun and Moon lie approximately above Earth's equator, an aspect of celestial geometry that occurs when a new or full Moon occurs near the time of an equinox (vernal or autumnal), producing equinoctual spring tides.

5. The 206-day cycle of perigean spring tides (no. 3) coincides with equinoctual spring tides (no. 4) at 4.43-year intervals, producing extra-large perigean-spring-equinoctual tides.

6. The plane of the Moon's orbit is tilted a small amount (about 5 degrees) to the plane of Earth's orbit. The tidal effect of the Sun on the Moon exerts a twist on the tilted lunar orbit, trying to align it with Earth's orbit. Like a child's spinning toy top, the lunar orbit responds by precessing. That is, it maintains its tilt but wobbles, just like a tilt-

ed, spinning top. The period of the precessional wobble is long, 18.6 years. As a consequence, every 18.6 years the Moon's orbit lies closest to Earth's tilted equatorial plane, resulting in an additional small enhancement of the tides on Earth.

The year 2015 is a remarkable one for Earth's tides because the next peak in the perigean-spring-equinoctial 4.43-year tidal cycle occurs in 2015, and the next peak in the precessional 18.6-year tidal cycle also occurs in 2015. These two cycles are nearly in step in the third week of both February and March, and they coincide in late September. An encore occurs in early April 2016, but after that the extreme tide range subsides, not to peak again until the year 2034.

During 2015 the predicted vertical low-to-high tide range in Minas Basin equals or exceeds 16.5 metres (54 feet) on the following dates:

February 20 – 16.7 m

February 21 – 16.5 m

March 21 – 16.5 m

September 29 – 16.8 m

September 30 – 16.6 m

October 28 – 16.5 m

The astronomical influences on the tides are known and predictable. The wild card in this story is the weather. Tide levels are affected not only by the Moon and Sun, but also by wind, and by barometric pressure. It is unlikely, but if a hurricane were to sweep northward across the Gulf of Maine and into New Brunswick in step with the rising tide on a day in late September or late October 2015, many dykes in the Fundy region would be topped. The historical record indicates that such an event occurs, on average, perhaps once per century.



## *Dan's Bugs*

by Jim Harrison

I felt a little bad about the nasty earwig  
that drowned in my nighttime glass of water,  
lying prone at the bottom like a shipwrecked mariner.  
There was guilt about the moth who died  
when she showered with me, possibly a female.  
They communicate through wing vibrations.  
I was careful when sticking a letter  
in our rural mailbox, waiting for a fly to escape,  
not wanting her to be trapped there in the darkness.  
Out here in the country many insects invade our lives  
and many die in my nightcap, floating and deranged.  
On the way to town to buy wine and a chicken  
I stopped from 70 mph to pick up  
a wounded dragonfly fluttering on the yellow line.  
I've read that some insects live only for minutes,  
as we do in our implacable geologic time.

From Jim Harrison, *Songs of Unreason* (2012),  
used by permission of Copper Canyon Press:  
<https://www.coppercanyonpress.org/>

# BLOMIDON NATURALISTS SOCIETY

## 2015 Membership Fees & Order Form

Members receive four issues of the BNS newsletter annually.

As a registered charity, BNS issues receipts for all donations.

Members may also join Nature Nova Scotia through BNS.

(Neither BNS nor NNS membership is tax deductible.)

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ADDRESS

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*In signing this membership application, I/we hereby waive & release the Blomidon Naturalists Society, its executive committee and members, from all claims for injury and/or damage suffered at any function or field trip organized by the Blomidon Naturalists Society.*

SIGNATURE

DATE

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No.	Description	Price	Total
_____	Individual/ Family Membership	\$20.00	\$ _____
_____	Junior (under 16 years) Membership	\$1.00	\$ _____
_____	Nature Nova Scotia Membership	\$5.00	\$ _____
_____	2015 BNS Calendar	\$15.00	\$ _____
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_____	Blomidon Naturalist crest	\$5.00	\$ _____
_____	Blomidon Naturalist hat	\$15.00	\$ _____
_____	BNS Calendar Photos (Screensaver)	\$10.00	\$ _____
	Postage: (calendar \$2) (parcel \$6)		\$ _____
	Tax-deductible Donation		\$ _____

(Registration number: 118811686RR0001)

**TOTAL** \$ \_\_\_\_\_

Address cheques or money orders to Blomidon Naturalists Society for membership and other purchases to: **Ed Sulis, 107 Canaan Avenue, Kentville, NS B4N 2A7.** Due date is January 1 of current year.



# SOURCES OF LOCAL NATURAL HISTORY

Compiled by the Blomidon Naturalists Society

TOPIC	SOURCE	OFFICE OR HOME TELEPHONE
<b>Amphibians &amp; Reptiles</b>	Sherman Bleakney	H: 542-3604
	Jim Wolford	H: 542-9204
<b>Astronomy</b>	Roy Bishop	H: 542-3992
	Sherman Williams	H: 542-5104
	Larry Bogan	H: 678-0446
<b>Birds – General</b>	Bernard Forsythe	H: 542-2427
	Richard Stern	O: 678-4742 H: 678-1975
	Gordon & Judy Tufts	H: 542-7800
	Jim Wolford	H: 542-9204
	Jean Timpa	H: 542-5678
<b>Butterflies &amp; Moths</b>	Jean Timpa	H: 542-5678
<b>Fish &amp; Wildlife</b>	NS Department of Natural Resources	O: 679-6091
<b>Flora:</b>	Ruth Newell	O: 585-1355 H: 542-2095
<b>Fungi:</b>	Nancy Nickerson	H: 542-9332
<b>Hawks &amp; Owls</b>	Bernard Forsythe	H: 542-2427
<b>Indian Prehistory &amp; Archeology</b>	James Legge	H: 542-3530
<b>Mosses &amp; Ferns</b>	Ruth Newell	O: 585-1355 H: 542-2095
<b>Mammals</b>	Tom Herman	O: 585-1358 H: 678-0383
<b>Rocks &amp; Fossils</b>	Geology Dept., Acadia University	O: 585-2201
<b>Seashore &amp; Marine Life</b>	Sherman Bleakney	H: 542-3604
	Jim Wolford	H: 542-9204
	Michael Brylinsky	O: 585-1509 H: 582-7954