

*Blomidon
Naturalists
Society*



SUMMER 2018 NEWSLETTER
VOLUME 45 · NUMBER 2



THE BLOMIDON NATURALISTS SOCIETY



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

BNS EXECUTIVE

Past president

Kent Williams 902-719-5323

President

Soren Bondrup-Nielsen 902-582-3971

Vice-president

Jean Gibson Collins 902-678-4725

Treasurer

Ed Sulis 902-678-4609

Secretary

Patrick Kelly 902-472-2322

DIRECTORS

George Alliston 902-542-3651

Nick Hill 902-698-0416

Rielle Hoeg 902-899-9778

Ian Manning 902-300-4328

Marina Myra 902-538-1654

Shelley Porter 902-300-7093

Jean Timpa 902-542-5678

Jake Walker 902-791-0797

Howard Williams 519-301-5303

The Blomidon Naturalists Society is a member of the Federation of Nova Scotia Naturalists (Nature Nova Scotia). The Blomidon Naturalists Society is a registered charity. Receipts (for income-tax purposes) will be issued for all donations. (Registration number: 118811686R0001)

BNS NEWSLETTER

The Blomidon Naturalists Society Newsletter is published quarterly (March, June, October, & December) by The Blomidon Naturalists Society. Contributions to the BNS newsletter are always welcome. Articles may be reprinted with permission of the author or the editor. Credit the Blomidon Naturalists Society Newsletter. Unless otherwise stated, opinions are those of authors, not necessarily the Blomidon Naturalists Society. For subscription information, see the membership fees form at the back of this newsletter. If you change your address, please notify us at the address below.

EDITORIAL BOARD

Interim chair: Howard Williams
519-301-5303

gruncle.howard@gmail.com

Production: Doug Linzey, Gary Dunfield, Andrew Steeves

Distribution: Ed Sulis, Mary Anne Sulis

Typeset in Caslon types by Andrew Steeves. Printed offset & bound at Gaspereau Press, Kentville, NS.

THE BLOMIDON NATURALISTS SOCIETY

P.O. Box 2350, Wolfville, NS B4P 2N5

www.blomidonnaturalists.ca

Contents

VOLUME 45  NUMBER 2

CLUB NOTES & NOTICES

- 5 Editorial *by Howard Williams*
6 BNS Natural History Calendar
8 Call for Membership Chair
8 From the President *by Soren Bondrup-Nielsen*
12 Upcoming Events

CITIZEN SCIENCE & CONSERVATION

- 13 Citizen Science Expo 2018 *by Ian Manning*
20 Space to Roost *by Jaya Fabey, Bird Studies Canada*

FIELD TRIP

- 15 Early Valley Birding *by Howard Williams*
16 Cape Split *by Patrick Kelly*
19 Kentville Ravine *by Howard Williams*

YOUTH

- 22 Flying Squirrel Adventures Program Takes Flight
by Judy Lipp and Emily LeGrand
27 Wild Spirits at the Harriet Irving Botanical Gardens
by Melanie Priesnitz

NATURAL HISTORY

- 28 Men So Hungry They “Ate Da Funks” *by B.D. Fardy*

BOOK REVIEW

- 37 Inheritors of the Earth *reviewed by Howard Williams*

NATURE COUNTS

- 39 Kings County Migration Bird Count *by Larry Bogan*

SEEN IN THE WILD

- 43 A Very Strange Tapping! *by Patrick Kelly*

WEATHER & ASTRONOMY

- 46 Spring Weather 2018, Eastern Annapolis Valley *by Larry Bogan*
49 What’s in the Sky? *by Patrick Kelly*

POEM

- 53 The Mushroom *by Emily Dickinson*

BLOMIDON NATURALISTS SOCIETY
members are encouraged to share
unusual or pleasurable nature sto-
ries through the pages of the BNS
Newsletter. If you have a particular
area of interest, relevant articles and
stories are always welcome. Please
note that Shelley Porter is taking
a leave of absence from her post as
BNS Newsletter editor and chair of
the editorial board. All articles and
queries should be directed to Howard
Williams, interim newsletter editor.

gruncle.howard@gmail.com

Digital photographs should be
submitted to

doug@fundymud.com

Next submission deadline:

August 31, 2018

Editorial

Howard Williams

✂ In the preceding issue of the Newsletter I described a number of ways in which members and others could use some of their time volunteering. Now, I feel the need to draw your attention to a weed that is quickly making its presence felt in this area, indeed in much of this province: Japanese Knotweed (*Fallopia japonica*).

This plant came to Canada in the 1800s as an ornamental species and has spread to Nova Scotia through the moving of plants, soil, a spreading vigorous rhizome root system, and efficient seed dispersal. Knotweed can easily be seen in Wolfville and Kentville. I have recently seen it in provincial and national parks; its presence there is an environmental disgrace.

Japanese Knotweed is highly invasive and it spreads quickly, especially in disturbed areas such as roadsides, trails, and streams. Although small birds happily use it for cover, the plant squeezes out all other plants by reducing available nutrients and sunlight, reducing local biodiversity and bird-useful habitat.

The United Kingdom and British Columbia have put the plant on their noxious weeds list. As I understand it, Nova Scotia has yet to do this, despite knowing of the problem for over eight years. Japanese Knotweed is destructive of pavement, even house foundations. There are cases in the UK where property values have been affected by its presence, and in the UK, it may compromise ability to obtain standard house insurance. Indeed, in the UK it is an offence to allow its spread, as it is also in Ontario (Invasive Species Act). Furthermore, Japanese Knotweed is very hard to eradicate, requiring repeated uses of herbicides, over a period of 5 to 10 years.

According to the Ontario invasive plants website—http://www.ontarioinvasiveplants.ca/wp-content/uploads/2016/06/OIPC_BMP_JapaneseKnotweed.pdf—a municipality may be able to pass a property standards bylaw under their provincial building code act to address the presence of weeds deemed noxious or a threat to the environment or human health and safety. A municipality may also be able to regulate Japanese Knotweed due to concerns for flooding and infrastructure damage.

Nova Scotia needs to get ahead of Japanese Knotweed sooner rather than later, else it becomes yet another environmental hazard we leave to our descendants. In the interests of expediency, the Town of Wolfville, our provincial MLA (Keith Irving), and our federal MP (Scott Brison) have been made aware of contents of this editorial. Provincial and local bodies have been aware of the situation, and it seems that in this instance there is a need for a more forceful approach to gain momentum toward the control of this pest. Furthermore, a good deal of community support will be required to obtain reliable data on the distribution of the weed and help in its eventual destruction, such as was undertaken by the Clean Annapolis River Project. I am willing to coordinate assistance by the community on this matter. Please feel free to get in touch.

CLUB NOTES

BNS Natural History Calendar

📷 Photo submissions are invited for possible use in the 22nd edition of our society's Natural History Calendar. Submissions should be in electronic form: JPEG format, with file size between 300 KB and 3 MB.

Photos should be of natural history interest, preferably taken in Nova Scotia. Please submit no more than 10 of what you consider to be your most suitable photos.

Suitability involves technical quality (sharp focus, not under- or over-exposed), composition (object of interest nicely positioned, no distracting background), content (a photo that calendar users will enjoy looking at for a month). We try to match images to the months, so pictures from “not summer” are appreciated!

We usually try not to reuse topics that have appeared in the past several years of calendars. To that end, here is a listing of the images used in the calendars from 2016 to 2018:

- * 2016: Bald Eagle, Hoarfrost and Spider Web, Horned Lark, Ring-necked Duck, White Admiral Butterfly, American Woodcock with young, Painted Turtle, Northern Goshawk, Cape Split from the air, Cherry-faced Meadowhawk (dragonfly), Gaspereau Valley in mist, Northern Flying Squirrel, Rose hips and icicles.
- * 2017: Green-eyed Damselfly, Woods with snow, Blomidon beach, Young Bald Eagle, Pussy Willow, Yellow Warbler, Willet, Black Swallowtail (butterfly), Star clouds of Sagittarius, Blomidon Provincial Park from the air, Hermit Thrush, Purple Sandpipers, Common Redpoll
- * 2018: Eastern Bluebird, Cedar Waxwing, Red-winged Blackbird, Barred Owl, Hobble-bush, Lupins and seaside, Baltimore Oriole, Green Frog, Solar eclipse, Snapping Turtle, Trees in snow, Northern Cardinal.

Send submissions to Patrick Kelly:
patrick.kelly@dal.ca
902-472-2322

DEADLINE FOR SUBMISSIONS: Monday, September 11, 2018

Call for Membership Chair

✚ If you are looking for a worthwhile volunteer activity and have some basic computer skills and like to get things just right, this could be the perfect opportunity for you.

BNS has a total membership of about 200, some 130 of whom pay dues every year, and an annual turnover of about 20. The membership chair keeps a database of members, collects membership dues, prints mailing labels, posts annual reminders, and liaises regularly with the treasurer, the club secretary, the Newsletter distribution chair, and the Nature Nova Scotia board.

If you are interested in this important volunteer position with BNS, Ed Sulis, who has been doing the job for a long time, would be happy to discuss details with you. You may also feel free to talk to BNS president Soren Bondrup-Nielsen (see their contact details opposite the Contents page of this Newsletter).

From the President

by Soren Bondrup-Nielsen

✚ It is the first of June, 6 a.m., the Sun is shining, and I was just out opening the gate to a new pasture for my sheep. They came running, tore into the new pasture with lush tall grass, and they hardly knew where to start feeding first. Now it is time to write my president's report for the summer issue of the BNS Newsletter.

The first thing I do when I have to write anything is to get a piece of paper and write down all the points I want to touch on. These come to me in random fashion. Then I organize them into groupings I feel make sense. Along the way I remember points I've forgotten and then squeeze them in to the list where they belong. When I am happy with the organization I start to write. I do this best in the morning when my mind is calm and focused. Later, it gets scattered and I am too easily distracted.

First of all, I would like to thank our editors Doug Linzey and Howard Williams and also Andrew Steeves and Gary Dunfield of Gaspereau Press for getting the spring Newsletter out on schedule. This has set a wonderful precedent, and the onus is now on us who supply the articles to meet the deadline.

Since the last issue, we have had two board meetings where we discussed programming and field trips, we are having ongoing discussions with input from Roy Bishop on what to do with our substantial amount of funds, we are talking about the structure of the board and how to delegate various roles, we are concerned about our dwindling membership and are thinking of ways to attract new members, and we have sent out an announcement to NGOs in Kings County and beyond, soliciting applications for donations to support activities congruent with our mission of promoting nature conservation.

We have had some wonderful presentations at our monthly meetings. Twila Robar-DeCoste gave an illustrated talk on March 19 on the nature of and importance of botanical art. She highlighted the difference between an artistic representation of a plant versus a botanically accurate illustration. Both are important, but they serve different purposes. On April 16 Paul Manning gave us a presentation on his studies of dung beetles and their importance in agriculture. Paul spoke about a study showing that farms under organic management support more arthropods than farms under conventional management. Many of these arthropods perform beneficial functions to farming. Dung beetles are important in cycling nutrients from animal

dung back to the soil. Ivermectin, administered to many farm animals to control parasites, may negatively affect dung beetles, as residues can be found in the excrements. Paul's talk was highly engaging.

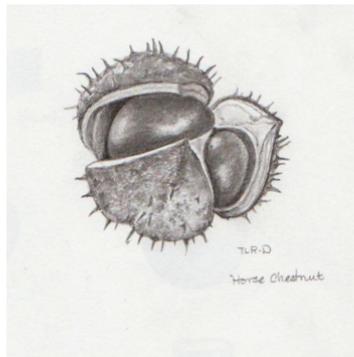
On May 21 we had a members evening at the Wolfville Farmers' Market. We had rented this venue so we could have a social gathering with treats supplied by Deb's Gluten Free and apple cider supplied by Richard Hennigar. This event turned out to be popular, with 65 people there. A variety of illustrated topics were covered by eight of our members. I started out showing a few slides of some of the wildlife, a puffin and a sunfish, that I may see when I sail in the waters off the South Shore. Ed Sulis spoke about his woodlot, and we saw pictures of trees. Richard Stern showed us pictures from his recent trip to England, with some birds that may have become established in North America. Bill Shaw showed pictures from a trip to the south seas, Howard Williams talked about pasturing and irrigation in New Zealand, Roy Bishop showed pictures of wildlife eying the photographer, and Larry Bogan talked about his discovery and passion for geocaching and how this has made him go to locations he would never otherwise have seen. Finally, Ian Manning talked about the recent citizen science event he put on (see his article in this issue). I would say the evening at the market was very successful. All the treats were eaten, and most of the apple cider was gone by the end of the evening.

I am pleased to mention that my application to Canada Summer Jobs was successful, and we now have a student, Hilary Rogers, working for us. She is compiling all the natural history studies done in Kings County and will produce an annotated list. She is also researching the Hemlock Woolly Adelgid, an insect now present in the southwestern counties of Nova Scotia and making its way up the province. She will develop a map of hemlock stands in Kings County and will outline a survey protocol that I hope members of BNS will adopt to track the advance of this pest.

In early spring I sent a message to members that the Town of Wolfville wants to build a community oven near the Robie Tufts Centre. I received lots of concerns, which I collated and sent to Adam Barnet and Duncan Ebata, who are spearheading the oven initiative. I subsequently had a meeting with Adam and Duncan, and we discussed the concerns. One suggestion from members was that the oven be placed in Willow Park, but this was apparently not an option. However, they were amenable to doing everything to minimize any impact on the Chimney Swifts. We came up with a solution that the oven will NOT be operating in the early evening when the swifts return to and enter the chimney at the Robie Tufts Centre. I also met with Allison Manthorne, who is heading the SwiftWatch program with Bird Studies Canada. She was pleased with the arrangement that we have come up with. So, when the oven is built and in operation, we will have to monitor the swifts at the centre and see how it is working.

Finally, we have had a few field trips this spring. I led the inaugural trip for the Flying Squirrel Adventures (see article by Judy Lipp and Emily LeGrand in this issue). Patrick Kelly led three trips (see his reports on Valley birding and Cape Split), and the annual spring bird migration count took place. Later today I will lead a walk in the Kentville Ravine (see article by Howard Williams this issue).

I hope everyone will have a wonderful summer with lots of naturalizing.



TWILA ROBAR-DECOSTE

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. For more information on any events, contact us at info@blomidonnaturalists.ca.*

JULY AND AUGUST—No meetings

MONDAY, SEPTEMBER 17—*Sable Island*. Presenter Dan Kehler, a native Wolfvillian, is currently the park ecologist for Sable Island National Park Reserve. He will introduce us to the mysterious and magical Sable Island, a place that has captured the imagination of Nova Scotians and the world for centuries. Dan will give us an overview of everything related to Sable Island, from its glacial origins to its history of human settlement, to its current management as a national park reserve, and then focus on its unique ecological features, including the largest breeding colony of Grey Seals, and the Sable Island ponies.

Field trips and other nature events

Visit the BNS website for upcoming events and for field trip maps and directions. If you do not receive e-mail alerts for events and would like to, please let Pat Kelly know and he'll make sure you're on the list (info@blomidonnaturalists.ca).

MONDAY, JULY 30—Space to Roost, from 12:30 to 3:30 p.m. at Land of Evangeline Campground, 84 Evangeline Beach Rd, Grand-Pré. For more information please contact Kerry Lee at Kerry.Cormier@natureconservancy.ca. See also the Space to Roost article in this Newsletter.

CITIZEN SCIENCE

Citizen Science Expo 2018

by Ian Manning

✂ MAY 5, 2018—BNS hosted the Citizen Science Expo at the Kentville Town Hall. There were 14 different groups. The bottom floor of the hall was filled with tables with an assortment of posters, literature, and a huge variety of displays, including microscope stations, instrumentation, digital displays, and insect trays.

The doors opened at 1 p.m. to a steady stream of people—an estimated 150 attended throughout the day. At 2 p.m., presentations started upstairs with a small but enthusiastic crowd. Seven different speakers gave short presentations. When this event is held in future years, we'll have to figure out a better configuration to ensure that more people attend the talks.

Below is a list of the 2018 Citizen Science Presenters/Speakers 2018. Organizations that gave presentations are marked with an asterisk:

A Little Less Litter Cape Breton (*Marian Whitcomb and David Quimby*)

Acadia University—Avery Lab (*Trevor Avery and Acadia University students*)

Blomidon Naturalists Society (*Ed Sulis and Marina Myra*)

Canadian Food Inspection Agency* (*Ron Neville and team*)
Canadian Sea Turtle Network* (*Kayla Hamelin*)
Clean Annapolis River Project (*Katie McLean*)
Flying Squirrel Adventures* (*Judy Lipp*)
Landbirds at Risk in Forested Wetlands* (*Cindy Staicer, Dalhousie University*)
Maritime SwiftWatch, Bird Studies Canada* (*Ally Manthorne*)
Mersey Tobeatic Research Institute (*Lori Phinney*)
Space to Roost, Bird Studies Canada* (*Jaya Fahey*)
Turtle Patrol, Halifax Field Naturalists* (*Clarence Stevens and Paul Turbitt*)
Watch for Wildlife (*Wanda Baxter*)

What impressed me most about the event was the genuine buzz/roar of participants. It was noted several times that the expo provided a great opportunity for networking among the various groups. It was made very clear that there is a huge appetite to build on citizen science efforts in the province. Participant enthusiasm and interest suggest that it will be worthwhile to try again next year. I've gathered a lot of feedback from folks who attended, and based on their very valuable feedback, we'll do our best to continue to improve and grow the event in future years. If you'd like to help plan next year's event, please contact me (ianmanning4@gmail.com, 902-300-4328).

Thanks to everyone who helped make this happen—special thanks to Mary-Claire Sanderson for organizing the venue, James Churchill for his guidance and original vision, Ed Sulis for manning the BNS booth and providing technical support, and Marina Myra and Soren Bondrup-Nielsen for making everyone feel welcome and helping make sure everything ran smoothly and on time. Also, a big thanks to T.A.N. Coffee in Kentville, which graciously provided coffee for the event. Hats

off to T.A.N. for stepping up and supporting citizen science in Nova Scotia.

In a world with a growing disconnection from nature, citizen science might be our best tool for connecting people with the natural world, inspiring interaction, involvement, and change. We're in a good position here. Let's build on BNS's strong reputation and networks and help promote citizen science to be the most effective tool it can be.

FIELD TRIP

Early Valley Birding

by Howard Williams

☞ MARCH 24, 2018 —The annual early Annapolis Valley birding field trip held in conjunction with the Nova Scotia Bird Society consisted of 16 participants, led on a relatively mild morning by Patrick Kelly. The aim of the trip was to observe nesting raptors, over-wintering birds, and recent migrants.

The first stop was memorable for the dozen or so Bald Eagles, both adult and immature, roosting in trees beside Main Street at Eye Road and perching beside the huge nest several hundred metres to the south. Participants were also treated to the usual winter birds, including Northern Cardinal, Black-capped Chickadee, American Robin, Ring-necked Pheasant, a pair of Common Ravens, Song Sparrows, American Crows, Rock Pigeons, and Mourning Doves.

The second stop was on Church Street, northeast of Port Williams, where a Bald Eagle was seen on a roadside nest, along with a treat consisting of 40 Cedar Waxwings and a flying Canada Goose. At the third stop, along the loop beside the old Wolfville Ferryman's cottage east of Port Williams, we saw and

heard what was for many participants their first Red-winged Blackbirds of the year.

The fourth stop was just south of the Prescott House Museum, where more waxwings and blackbirds were seen, along with a lone American Tree Sparrow.

At the Wellington Dyke aboiteau, the fifth stop, we observed over 100 Canada Geese huddled down below high-tide mark, grazing on the mud.

Stop 6, at Shipyard Picnic Park in Canning, several Green-winged Teal, some Mallards, and many Canada Geese were feeding in the shallows on a receding tide. The seventh stop, again along Church Street, but west of Route 358, we saw the nest of a Red-tailed Hawk, along with a hawk that flew enough to show off his red rear; many American Goldfinches were heard from the trees behind the nest, but not seen.

Much expectation was associated with the final stop, Miner's Marsh in Kentville. We had expected open water and many species but were met with frozen water and an environment nearly devoid of birdsong. Whilst we saw and heard the usual common winter birds, only two things were of note: the light drumming of an unseen woodpecker, and a leftover Baltimore Oriole nest that hangs over the path on the north side of the pond.

Altogether, a good trip, spotting 21 species, over 350 individual birds. Our thanks to Patrick Kelly.

FIELD TRIP

Cape Split

by Patrick Kelly

☞ SUNDAY, MAY 13, and SUNDAY, MAY 20—I think that most people will agree that this has been a late spring. That was also

evident to the small group (me and four others) who set off on the morning of May 13 under clear sunny skies. One benefit of the recent improvements by the Department of Natural Resources is to make the walking safer, and drier. A wooden bridge now crosses the first part of the trail where the stream used to run down the trail. Large stepping stones have also been added in a few places. The long wet area that had normally been traversed by walking across lots of logs has a raised dirt trail and culverts under it. The new washrooms, partway out to the end, were not open – that may be more a case of being ahead of the Victoria Day weekend.

The three main plants one looks for were in bloom: Dutchman's Breeches, Red Trillium, and Spring-beauty. There was Spring-beauty everywhere once we hit the right habitat. One plant that had me puzzled on the earlier parts of the trail was a strange reddish shoot that looked to be part bamboo and part rhubarb stalk. It was only further out where there was more open cover (and thus more sunlight) that I came across one that was starting to unfurl its leaves, and I realized it was Rosy Twisted Stalk. It has always been fully open, and often in bloom, on past trips. Even the Lily-of-the-valley (I agree with Jim Wolford that calling the original version "wild" makes little sense) had no open flowers that I could find. Chipmunks and squirrels were also few and far between.

There were very few birds to be seen, or heard, yet this is the first time that I have encountered four winter wrens singing (three had been my old record). Two were on the south side at the start of the trail, one was in the area of the old clearcut, and a final one was off to the south at the very end, in the area where you have to sidestep the large crevasse. There was an interesting learning experience when I stopped to point out a Black-and-white Warbler that was "squeaking" off to the north. I was the only one who was able to hear it! At its closest, one of the others heard it once. We were all in the same general age range, with three men and two women, and it was only two

men that heard it. Given that the high-frequency hearing for men is supposed to diminish with age, it was a bit of a surprise to me that I had no trouble picking it up. Then again, I often hear police and fire truck sirens before others, so maybe I am an exception to the usual rule.

Once we reached the end of the trail the view was fantastic. The tide was at about the midpoint, going out, so we heard it well before reaching the grassy area. It was a great place to have a lunch, especially as a Peregrine Falcon put in two appearances, flying first counter-clockwise, then about 10 minutes later going in the opposite direction. The gull colonies on the split itself (Great Black-backs on top, Herring Gulls along the side) were about the same as always in terms of numbers, but the Double-crested Cormorants seem to be increasing in number. Usually there are some Common Eiders floating in the waters nearby, but there was no sign of them on that trip.

A week later, the weather could not have been more different from that of the previous Sunday. It was cool, overcast, drizzly, with a forecast of possible periods of rain. While there was no one at the Wolfville waterfront (as had been the case the previous Sunday), I got to the parking lot to find that, with the exception of a black Toyota SUV, my car was the only one there. Imagine my surprise when Bill Shaw, one of the people who had been on the previous trip, popped out from behind the other vehicle. He was all kited out for the weather and had planned to do the hike again for exercise. We had a great talk for about 30 minutes, during which a couple in another black Toyota SUV pulled in next to his. Given that he had gotten the naturalist tour the previous week, I decided to head home. If I run this field trip next year, I must make a point to remind people to register with contact information to save a lot of time and effort.

Kentville Ravine

by *Howard Williams*

✚ SATURDAY JUNE 2, 2018—Over the course of two hours, Soren Bondrup-Nielsen led six participants into the ravine area for the purpose of highlighting the magnificent old-growth hemlock stands that are isolated remnants of the cover associated with the Acadian forest found over much of the Maritimes. The near-constant questions and ensuing discussion during the trip led us to a much deeper understanding of the roles these trees play in determining the distribution and age of other trees and forest floor plants. These hemlock-dominated forests also contain Yellow Birch, Red Spruce, American Beech, and maple but the success of these other trees is somewhat dependent on the death of hemlock trees. Gaps where hemlock once stood produce sunny glades that allow the rapid growth of young trees and many different types of forest floor plants such as Starflower, Lily-of-the-valley, and Blue-bead Lily. Death of one tree provides opportunity for many other species to take advantage of the newly available light. Soren's light meter indicated that in the deep forest there is a reduction in light to less than 0.5 percent of normal incident intensity. No wonder that for much of the forest there are no plants living under the trees.

We learnt also about the role of fungus on dead and dying trees, how plant debris raining down to the forest floor is balanced by the various methods of fungal and animal reprocessing into nutrients that are then used by the trees and cooperatively shared by them. Trees cooperate for nutrients rather than compete. Is there a life lesson here?

Thank you, Soren.

Space to Roost

by *Jaya Fahey, Bird Studies Canada*

✚ Bird Studies Canada initiated the Space to Roost project with the Blomidon Naturalists Society and other partners in 2015. The project collaborates with recreational users to reduce human disturbance to shorebirds at high-tide roost sites in the Minas Basin. Human disturbance causes shorebirds to flush—flying over water in search of safe roost sites—which depletes the energy reserves required to complete their long non-stop flight to South America.

Shorebird Resting Beaches

In 2017, local recreational users and partners helped us designate one section of the coastal area at The Guzzle and Avonport Beach a *Shorebird Resting Beach*. We placed signs at each end of the beach asking people to avoid use during resting periods (two hours before to two hours after high tide) throughout peak migration in August. We also distributed handouts on site and at local businesses to raise awareness about the shorebirds and what people could do to help.

Summary of outcomes comparing 2017 to 2016:

- * Fewer shorebirds disturbed by people at both Shorebird Resting Beaches
- * 100% respect of Shorebird Resting Beaches by anglers
- * Proportion of people interviewed who knew the importance of the area to shorebirds increased from 47% to 78%
- * Proportion of beachgoers staying on the dyke above the Guzzle Shorebird Resting Beach increased

August 2018 will be our third and final year of research, and we will again be asking people to avoid Shorebird Resting Beaches at the Guzzle and Avonport Beach in the Minas Basin around high tide.

Ethical photography & birding

BNS members are among the strongest shorebird enthusiasts and conservationists in the province, and we've been inspired by your commitment and long history of shorebird conservation in the Minas Basin. We would like to ask your membership for help in encouraging shorebird photographers and birders to please stay back from the birds so as not to flush them, and to use telephoto lenses. Audubon's guiding principle of ethical bird photography asks that we "place the welfare and safety of the birds and their habitats above all else and avoid disturbing them in any way." You can learn more here and share this page with other photographers and birders: <https://www.audubon.org/news/the-ethical-bird-photographer>

If posting photos online, we encourage the use of the hashtags #ShareTheShore and #FlushingIsForToilets to show others that your photos were taken without disturbing the birds. We hope your good example will encourage other birders and photographers to follow Audubon's ethical photography guidelines as well.

30th anniversary WHSRN celebration

We also invite you to join us for the 30th anniversary of the Minas Basin WHSRN (Western Hemisphere Shorebird Reserve Network) site on Monday, July 30, from 12:30 to 3:30 p.m. at Land of Evangeline Campground, 84 Evangeline Beach Rd, Grand-Pré. For more information please contact Kerry Lee at Kerry.Cormier@natureconservancy.ca.

We welcome questions, ideas, and volunteers to help at roost

sites in August. We greatly appreciate support from our partners and vital funding from BNS and others. Please get in touch and stay connected through Facebook or by contacting Jaya Fahey (SpaceToRoost@BirdsCanada.org) or Sue Abbott (abbott@birdscanada.org).

YOUTH

Flying Squirrel Adventures Program Takes Flight

by Judy Lipp and Emily LeGrand

✚ With over 50 people of all ages out for our inaugural event, Flying Squirrel Adventures is off to a flying start! This new, free all-ages nature program in the heart of the Valley is a collaborative initiative of the Blomidon Naturalists Society, Jijuktu'kwejk Watershed Alliance, the Town of Kentville, and several other Valley nature groups.

Flying Squirrel Adventures (FSA) is a new monthly nature outing in the Kentville Ravine, held on the 3rd Saturday of the month. The program is open to anyone with an interest in being outside, active, and learning about nature. Each session starts with all ages combined in a sharing circle where we chat about the plan for the day. Depending on the themes and topics to be explored, the group does some activities together before breaking into a children's stream and an adult stream. At the end of the session, the two groups come back together to share their experiences.

At our inaugural event on April 21 we started with a very large opening circle to share introductions and enthusiasm for our outing. To build awareness and excitement about our time in the ravine, we played a giant game of Build a Tree. Partici-

pants were taken through the various parts of a tree and asked to hold the parts, starting with the heartwood through to the leaves, sapwood, cambium, phloem, roots, and bark. Four tall and strong people held the core position chanting “tall and strong” as others were added to represent the taproot and lateral roots by lying on the ground. The roots made slurping sounds to represent their vital role in bringing water and nutrients to the tree. Then came a ring of people around the heartwood holding the place of the sapwood. Then came another ring of players around the sapwood representing the cambium and the phloem. Finally, of course, came the outer bark people, arms linked to protect the tree, chanting “we protect, we protect.” Each tree part group had its own chant and movement, and we tried to choreograph everyone in a giant tree orchestra performance. We did it, but we’d need some more rehearsing before we take the show on the road!

And then came the test. From out of the tall grass came the ferocious short-nosed, long-antennaed woodboring beetle trying to attack our human tree, but the bark stood firm, and that tree survived. This great game, developed by Joseph Cornell, helped us understand the different parts of a tree and the essential role each part plays in tree physiology. We learned some cool facts about the mechanisms that allow trees to grow tall and strong.

Following that activity, the large group split into an adult group and a children’s group, and each had distinct, age-appropriate adventures.

The adult program was led by BNS president Soren Bontrup-Nielsen, who took us on a tree discovery walk. The walk started at the top of the ravine exploring the dramatic influence of light on tree growth and forest succession. Participants were reminded to stop and smell the trees and use all their senses in recognizing and developing an understanding of different tree species. With no fresh leaves out yet, we learned some helpful tips for winter tree identification and speculated on



Winter tree identification with Soren

why beeches and oaks don't drop all their leaves in winter. We meandered down into the ravine at a comfortable pace, with Soren pointing out notable tidbits, allowing time for a closer look and answering questions.

We learned about the tiny hairs on the Red Spruce that help distinguish it from the White; make sure you have your loupes along. We also learned about the inter-connectiveness of trees through mycelia and a growing scientific understanding of the inter- and intra-species cooperation of trees in a forest—an important reminder about how as humans we may have a thing or two to learn from our tall friends in the forest. We didn't cover a lot of ground physically, but Soren took us on an extensive learning journey, pointing out various tree species and differences between them, ravine ecology, and so much more. It was a rich and engaging walk.

The children's group, led by Outdoor Play and Learning facilitator Emily LeGrand and BNS board member Marina Myra, decided to start the inaugural FSA program by looking for flying squirrels! Or at least their homes, since they are shy nocturnal creatures. It's a great opportunity to explore what makes the program's home base, the Kentville Ravine,



Kids practise flying

an important place from an ecological perspective. It is one of the few remaining stands of older-growth forests in Nova Scotia, and old-growth forests are exciting in part because of the habitat they provide to many interesting and adorable native animals, especially the flying squirrel. Flying squirrels require old-growth coniferous forest. They make their homes in holes of giant, dead, standing trees. They require tall healthy trees close enough together to glide back and forth in the treetops to move around. The Kentville Ravine seemed like a place that could meet these requirements.

So we set out with this understanding in mind, looking up into the forest canopy, looking for big dead trees with holes far up on the tree. Our plan, if we found such a tree, was to give it a gentle knock on the trunk to see if we might wake up our nocturnal squirrel friends for a quick glimpse. To get a sense of whether the trees were close enough together and big enough, we ran around and tried to give every tree in a certain area a hug! When there were lots of trees and ones we couldn't completely wrap our arms around, we knew we were on the right track.

We had a great time exploring and looking for holes, but

ultimately we didn't find any in the time we had. We found lots of tall, big, healthy trees, but we quickly noticed that tall, big, healthy trees do not have holes in them for squirrels to live in. And we did not see big old dead trees still standing.

But just as we were gathering together to share our highlights of our time together, we heard a pair of Barred Owls hoot to each other. They were trying to locate each other. And then, one flew what seemed like 100 metres to meet its mate, and we saw the whole flight! It was a spectacular end to our exploration, and while we came up short on evidence of flying squirrels, we were delighted to see that Barred Owls have a comfy home in the Kentville Ravine.

The two groups rejoined at noon for a sharing circle. Our flying squirrel mascot served as our talking stick as we heard from all who wanted to share about highlights of their adventures.

Flying Squirrel Adventures is a monthly event running year-round, rain or shine. We are excited to be partnering with the Young Naturalist Club, Wild Spirits Forest and Nature School, Jijuktu'kwejk Watershed Alliance, and the Town of Kentville—and for the support of the Department of Communities, Culture and Heritage—to bring you this exciting program. Soon we will be adding a youth leadership training element to the program, so if you have a young person in your life who might be interested in getting involved, or if you are interested in exploring programming in your community, please e-mail valleyflyingsquirrels@gmail.com.

The July outing is on Saturday, July 21. Be sure to visit the website or Facebook page to find out all the details for our monthly outings: <https://valleyflyingsquirrel.wordpress.com/>

NOTE: Judy Lipp is program coordinator for FSA and loves running outdoor nature programs for all ages. Emily LeGrand is a facilitator of the children's stream of the FSA program.

Wild Spirits at the Harriet Irving Botanical Gardens

by Melanie Priesnitz

✚ Remember when you were young and ran wild in the ravine behind your house, splashed in puddles in the garden, and climbed trees? I hope so, because it probably means that you are now a confident person with a healthy understanding of risk management, strong creative thinking, and problem-solving skills, along with inherent respect for the environment and how you fit into it. You likely weren't aware that you were honing these skills as you played freely in wild spaces as a child, but you were.

A myriad of research indicates that kids need unstructured outdoor play to be mentally and physically healthy and to grow to be high-functioning members of society. Unfortunately, we have discovered this the hard way as a society—by seeing what happens when kids are raised with highly structured time in a technological world filled with fears of danger and liability. It's hard for spirits and imaginations to soar without freedom and fresh air. We don't generally give our kids a lot of unprogrammed space to take risks and build confidence and creativity. How often do you hear a parent say, "Go outside and lie on the grass and do nothing"? We're much more likely to say, "Go mow the lawn, practice piano, do your homework, do something useful."

We put a lot of pressure on kids at a very young age, but we don't always help them develop the coping skills they need. As a result, an estimated 1.2 million children and youth in Canada struggle with mental illness, and obesity in young Canadians

has tripled in the last 30 years. It's time to reverse these trends by getting kids outside playing in the dirt again.

To meet the needs of parents and kids, forest and nature schools are popping up around the world. The concept started in Europe, where there are many successful forest schools for children of all ages. The Child and Nature Alliance of Canada in Ottawa is doing great work to help communities develop forest schools across the country. They work to connect children and youth with nature, and they hold practitioner courses for educators across Canada.

The Harriet Irving Botanical Gardens is partnering with the Valley-based not-for-profit Wild Spirits Forest and Nature School for a pilot project this spring. Wild Spirits is running a preschool play-based nature program on Acadia's Woodland Trails and Harriet Irving Botanical Gardens. *Chickadees in the Garden* takes place Mondays from 9:30 a.m. to 1:30 p.m. Program fee is \$190 for seven weeks. The Friends of the Acadian Forest are helping to support this program by offering bursaries to families who need financial assistance. If you know of young wild spirits interested in participating, visit www.wildspirits-forestschool.com for more details.

NATURAL HISTORY

Men So Hungry They “Ate Da Funks”

by B.D. Fardy

✂ Thirty-six miles off Deadman's Point on the sands of the Straight Shore of Bonavista lies a chunk of barren rock, rising bleak and isolated in the frigid North Atlantic waters. Barely one-half mile long, fifty feet high, and twelve hundred feet wide at its greatest girth, this island is uninhabited by man, as

it has been since the beginning. The island has known man: at least three primitive races of them were occasional visitors to its forbidding solitude. But it outlived these primitive predators, just as it will its present protectors. Those primitive men were merely visitors, for they could be no more to the inhospitable rock. Yet although no man could long live there, the island teemed with life—bird life. And among the life the isle has outlived is that of one of its feathered flock.

Funk Island they called it, white Europeans who soon after its discovery learned of its usefulness. Funk; a place of stench, of “great stench,” of “steaming decay,” the decay and filth of death. Yet the island is alone, as it has always been, vibrant with the fowl life which for centuries made its deep-sea remoteness and dangerous, steep bluffs well worth the risks the predators took in small boats and fragile canoes. The harvest of flesh and feathers was boundless.

The island was an ideal breeding place for sea birds: isolated from man, with no natural predators, pushed up from the sea just where the cold waters of the Labrador current met the warm northbound ones of the Gulf Stream, colliding and churning up from the ocean floor the food that was the nutrients for the fish on which the birds fed.

The rock itself was a natural fortress, protected by steep-sided bluffs, huge swells guarding its scoured faces, with few good landing sites for the predators, none without great danger—even in the best of seas. The island’s sterile surface grew no trees, harboured no soil, not a place for man or beast. Only for the birds.

Time had scarred the rock’s face, gouged it deep with jagged, rocky ridges, dissecting it east to west into three low plateaus, or steps. Mostly, its sides were steep and craggy, but at two spots the shelf-like rock sloped off into the sea. Here, the flightless fowl slid off—and were washed back upon the rock after their feeding forays into the sea. It was as if nature had shaped and finished the rock for the bird alone, as a mother, a protector.

Defiant of the eroding whipping winds and pounding seas

the island thought itself safe, but it did not know the tenacity of the predators. They came in flimsy bark and skin canoes, small and frail, yet handled with expertness and a courage that rivaled that of the island.

Primitive stone-age people they were, dark-skinned Archaic Indians, and later Dorset Eskimos. They came to the island regularly, although not frequently, and they took away some of the island's wards and their eggs. But the small numbers they took were quickly replenished.

These men came in turn and then were gone, and then came others, their skin painted red, yet not unlike the others. What was most strange was those who began to come soon after the red-men. White skinned they were, in large boats of wood, and they took the birds in numbers greater than any of the dark-skinned men ever had. These newcomers came more often, and soon a summer never passed without the white-skinned predators coming. This new breed of predator was the most avaricious and insane of any the island would know.

Viking explorers were probably the first white-men to visit Funk Island and to know and use the Great Auk, recognizing it as the same bird that bred in their latest homeland, Iceland. But the Norseman's visits were few and short-lived. Next came French fishermen and Basque whalers, and it was the French explorer Jacques Cartier who first described the island and the Great Auk.

On a voyage to the new world in 1534, Cartier put into the rock to stock up on fresh provisions. The "Isle of Birds" he called it, and the big, numerous birds that inhabited it he called "Apponath." It was the name used by the Indians. But it was left to the English to bestow the moniker which would last. Penguin they called it, the first bird in the new world to carry the appellation. The Auk was flightless, its rudimentary wings looking pinioned, or "pin-winged." They gave this name to the rock too, and it lasted until the offended nostrils of the predators placed the name Funk on the vile-smelling chunk of stone.

Just how long the Auk made the island its home perhaps

someone can say, but that is unimportant. Thousands of years perhaps, for evolution is a slow thing, and by the time of the arrival of the Europeans the bird had already lost any need for wings. The Auk, like the island, had seen three races of men come and go before the white-men.



Two of them had already passed into time, and the third, the Beothuck Indian, he would also outlive, if only for a short time.

The Great Auk, or Garefowl, was a large flightless bird, the largest of all North American divers. Standing almost thirty inches tall, on large webbed feet, its thick, plump body made it the biggest bird to breed on Funk Island. Each year, after eight months on southern seas, it made its way back to the North Atlantic, many going to European waters, but in North America the bird bred exclusively on Funk Island. More than 1 million of the big birds nested on the barren rock, kept company by thousands of Atlantic murrelets, puffins, Arctic terns, kittiwakes, tickle-aces, and its smaller cousin, the razor-bill auk.

The mated pairs of Auks returned to the almost exact spot of their breeding on the island, and there on rocky outcroppings or in shallow clefts, the female laid one large egg in August. Nearly five inches long, the pale, buff-olive colored egg with brown and black splotches would be incubated for weeks by both adults until it hatched. The newborn would need care for months. It was uncanny how the adults could find their own in the carpet of exuding eggs and feathered fluff. Yet mother would know chick forever once she had heard its croaky call.

In the earliest days of the white visitors the French were dominant in the waters of the new-found land. They came to fish, and visited the island to take the Auk for meat and eggs, but mainly for use as bait. Surely the Isle of Birds could spare

some of its glut, for it was so exceedingly full of birds that one would think they had been stowed there. In the air and roundabout are a hundred times as many more as on the island itself. The Auks were so plentiful that Cartier, on his visit in 1534, loaded his two ships' boats with them in less than half an hour. Each of his ships salted four hundred pounds and they also took aboard a large number to eat fresh.

When the English took possession of the northeast coast of Newfoundland they settled there, unlike the French before them. Funk Island was visited more often now, by parties of fishermen looking for bait and hungry hunters needing meat and eggs. The Auks were limitless it seemed. It became a colloquial expression for one who was hungry to say that he was so famished he could "eat da Funks." It was laughed and joked about. Still the Auks flourished.

The predators came each summer, after the Auks had laid their eggs and the island was a steaming, florid hunk of tumultuous, squawking life and foul-smelling death. Carcasses and eggs lay strewn and rotting everywhere, unattended by scavengers. Unhatched eggs, abandoned to the heat, popped and exploded like five finger loaded muskets. The screeching, squawking clamour, the decaying filth, and the vile stench was too much for any man to suffer very long. Some men went "funny in the head" while out there: others, they say, went insane. But through all the pain and bedlam and decay and insanity the Auk and the island endured.

Then the crisis came.

Until now the predators had come to take the birds and their eggs only for food and bait. Pressures enough, but now a new avarice arose.

In the second half of the eighteenth century a new market suddenly bloomed in Europe. Downy feathers to adorn women's hats and bustles and to stuff pillows and mattresses for the effete upper classes of continentals placed the Auk in even greater peril. Isolated on Funk Island, with not even recourse

to flight, the Auks were easy prey for hunters who now came not for food but for feathers.

Each summer thousands of the birds were slaughtered for their feathers alone. Fishermen would take their families to the island every August and camp there while they reaped the harvest. They would build stone huts from the slabs of granite rock scattered—almost providentially it seems for the hunters—only around the southwestern portion of the island, right in the midst of the Great Auks' breeding grounds. The living huts were placed along the ridges or crests of the rock, free from run-off in the rains, and just far enough from the birds so as not to disturb them in their nesting. Near these huts the predators built stone pounds, piled cages of flattened stones. Using sticks they herded the large birds into the confining pounds and held them there until it was time for the fires.

They carted large kettles to the island with them. Scooping them full of brackish water from the pools along the ridges, they fired them up to a boil. Kindling could be brought to the island; fuel to sustain the long burning fires could not. But the predators were ingenious as well as courageous. The fat, oily, plump bodies of the Auk were used as fuel to keep the fires stoked.

Boiling and plucking was tedious work. There were easier ways to take the treasure of feathers. "If you come for their feathers you do not give yourself the trouble of killing them, but lay hold of one and pluck off the best of the Feathers. You then turn the poor Penguin adrift, with his skin half naked and torn off, to perish at his leisure. This is not a very humane method but it is the common Practize.

"Common Practize" for an uncommon profit! For the impoverished fishermen the Great Auk was a Godsend, a reprieve, a respite from hard times and privation, a boom to be exploited to the fullest. When telling what the new bonanza meant to him, one fisherman commented, "I made two trips to the Funks. In these trips I gathered, with one person with me, half a ton

of Feathers and as many eggs as sold at St. John's for Thirty Pounds! Thirty pounds of yore was so much more, and eggs then not near so dear."

The white predators were greedy. They would not share the harvest with anyone. The red painted men who once visited the island regularly now came only occasionally, and were made to land in the narrow, dangerous approach called Indian Gulch, a place too perilous for the boats of the whites. What the red-men took the white-men could not.

MacDonald told him that he with four other men were on the Funk Island to get birds eggs etc. on Saturday the 7th instant when they saw two canoes which they knew must belong to the native savages of this country paddling towards the isle. When they came within shot MacDonald said he fired his piece which was loaded with mole shot directly into one of the canoes and supposed he wounded some of the Indians who upon a second gun being fired at them paddled off and went to the small isles or rocks called Gannet Rocks which lay to the northward of Funk Island about three-quarters of a mile. They there landed and stayed time enough to take what birds' eggs were there and then paddled away towards Wadhams Isles. Feathers decorating a red-man's hair could not be used for peacock perukes adorning the heads of ladies in European courts.

Most of the white predators needed the food that the Great Auk's flesh and eggs offered. Some were greedy for the profit their feathers promised. A few were simply cruel. One told of how his father and his ship's crew went to the rock on several occasions, herded the birds into the stone pounds, stoked up the fires with plump bodies, then roasted the birds to death "for pure mischief."

For years the slaughter went on. The demand for feathers was a shameful practice—even if common—the manifestation of an unthinking, yet self-acclaimed enlightened civilization. An enlightened civilization which slept on the down of a disappearing species, and in their enlightenment, called for the stomachs of the Auk, which had been stuffed with fat and dried

and smoked, to be shipped to the courts of Europe to be used as a remedy for the aches and pains of aristocrats.

“This wasteful slaughter must stop!” George Cartwright’s warning was lost to buffeting winds and crashing seas. In 1785 he warned: “If a stop is not soon put to that practice [taking feathers] the whole breed will be diminished to almost nothing, particularly the penguins, for this is now the only island they have left to breed upon.”

Cartwright had only a little earlier warned about another species in danger of extinction. He feared that the Beothuck Indians would also soon be gone and he suggested placing aside a section of the northeast coast of Newfoundland for the exclusive use of the red-men. No one listened. The red-men were gone before the Auk. Cartwright was obviously a far-sighted man; his trouble was that he lived in short-sighted times.

Years too late the warnings of Newfoundland’s first conservationist were at last heeded by someone in authority. By 1794 a law had been passed forbidding the taking of the Great Auk for its feathers. However, it was still permissible to take them for use as bait. It was wisely decreed that the birds were indeed valuable, not only as a source of bait for industrious fishermen, or as food for hungry livyeres, but were “useful in warning vessels that they were nearing the land.”

Cartwright’s voice had been heard, but much too late. The Auk population had been decimated. Even though the law prohibited the taking of the birds for their feathers there was still a demand for them. Parties of “pirates” continued to visit the island in the early years of the nineteenth century, stealing the precious eggs, destroying the breeding birds. Some of these “pirates” were caught and taken to St. John’s where they were flogged at the Cart’s tail.

By the 1840’s naturalists and conservationists had become alarmed to the possibility that the Auk—already extinct in Europe—would suffer the same fate on the other side of the Atlantic. Peculiarly, like so many scientific efforts of the day, they waited too long and acted too late. The Norwegian scien-

tist Peter Sturvitz visited the island in 1841 to learn the status of the bird. He reported that his worst fears were confirmed. Not a single living Auk was to be found on the rock. The last two survivors of the species were taken on the rocky island of Eldez on the southwest coast of Iceland in 1844.

Now that it was extinct, the Auk became the subject of studies. In 1863 the Reverend R.N. Johnson of Nova Scotia undertook a trip to the island to study the remains of the sea bird. Eleven years later Professor John Milne visited the isle and gathered piles of bones, which he carried back to the United States for study.

Milne's trip was followed by the 1887 expedition of the U.S. Fish Commission. Even then the summer living huts and killing pounds of the predators were intact, but the island had changed. In the place where the Great Auk had been slaughtered in its thousands its rotting carcasses and bleaching bones had perfumed the stench of the Funks and crusted its sterile skin with a thin spot of soil that sprouted groping grasses and wispy weeds.

Where once there had been Auks now there were puffins, and if any benefit can be ascribed to the demise of the big bird it is that the spot of soil created by their piles of bones became the burrows of the colorful sea parrots.

Funk Island endures. Its face is scarred a little deeper, the stone pounds stand as mute monuments, and the birds still come. Murres are dominant now, 1,000,000 of them, and puffins, tinkers, even far away visitors from Europe—fulmars. They gather there each summer, nesting through the short season, leaving early in September, the chicks barely three weeks old yet ready for the long winter at sea.

The Great Auk is gone. Some will argue that it was in nature's evolutionary scheme that the flightless bird would become extinct. Yet hundreds of years of hunting—perhaps thousands—by dark-skinned men was not enough to bring about their disappearance. The trade in feathers must probably be debted with having caused the destruction of the species.

The inexorable process of evolution is a moot point, and both the Auk and the island alike mute.

All that remains of the Great Auk today are eighty-one skins, seventy-nine eggs, twenty-one assembled skeletons, and one pickled specimen in a museum in Copenhagen. In those long-ago days when men were impoverished, oppressed, and isolated their hunger was great indeed, so great that they “ate da Funks.”

NOTE: *Original article published in The Newfoundland Quarterly, volume 78, no. 4 (Spring 1983). Downloaded from Memorial University archives (Centre for Newfoundland Studies) and lightly edited by John Belbin.*

BOOK REVIEW

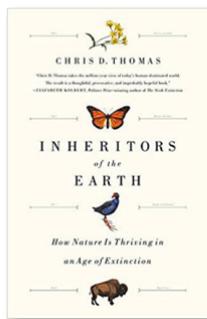
Inheritors of the Earth

Reviewed by Howard Williams

Chris Thomas. *Inheritors of the Earth: How Nature Is Thriving in an Age of Extinction*. New York: Public Affairs (2017). ISBN 978-1-61039-727-8

✚ This most enjoyable, accessible, and at times iconoclastic book is a must read for all those concerned with recent trends in evolution, conservation, and the natural world around them.

Dividing the book into four parts, Thomas deals first with the fall and rise of different species, using examples of sparrows, humans, dinosaurs, and flightless birds. In the second part he describes the general ecological success of a number of species, both in time and space. The success of some species lies in the development of new habitats, created by humans, in novel locations. He claims that only in very few places is there a loss



of diversity, despite loss of individual species, and then only for very specialized species such as flightless birds and ancient lizards on islands such as New Zealand. He makes an important point: evolution is certainly not static in time—that's self evident—but neither is it static in space. Species keep moving and hybridizing, naturally, and especially as we are changing the planet's climate and vegetation.

A third section describes evolutionary response to a human-altered world. Thomas makes the argument that there is no such thing as an evolutionary tree, and this may be Darwin's big mistake. Rather than a simple tree it also has the properties of a lattice, where a species can separate into two or more, which may then come back together, hybridizing. Humans are responsible for much of the modern mixing of species, while continental drift and major, ancient climatic changes such as ice ages are responsible for much of the creation and hybridization of species. It was Darwin who recognized that islands expedite the production of new species, but humans, too, have facilitated the movement of species to new places, where they have either hybridized with existing species or changed to accommodate to new habitat. Thomas documents the speed at which new species are developing, within decades and centuries rather than millions of years. Recent research on DNA has shown us that most humans are a result of hybridization between the various Neanderthal, Denisovan, and African-derived humans. We're all mongrels, and probably better for it.

Finally, Thomas argues that humans should consider themselves a part of nature and agree to be at one with it and take a more positive attitude toward the many changes that we see currently. For example, should we police hybridization of plants and animals? Thomas says probably not, the task is too large, and actually in the long term unnatural.

Thomas has four principles by which we should live: we must accept current and past change; we must maintain flexibility to accept future change; we should accept that we are a natural

part of Earth, not superior to it; and we should live within our planetary bounds, sustainably.

This book describes a diversity that he claims is actually increasing, often by hybridization, even while individual species are going extinct. He would submit that weeds do not exist; what exists is a mindset that refuses to accept that evolution is still occurring and that species move. Conservationists should dare to read this book.

The book is available at the Wolfville library.

NATURE COUNTS

Kings County Migration Bird Count

by Larry Bogan (Coordinator)

☘ MAY 12, 2018—We had a nice sunny day, starting cool (5°C minimum), with warm temperatures (17°) in the afternoon, and wind only developing in the afternoon.

Twenty-one field observers and seven feeder watchers counted 4,235 birds distributed over 110 species, including 21 species of warblers. They spent 82 party-hours in the field and 22 hours at feeders. They walked 82 km and drove 361 km during the day.

For comparison, here are the statistics for the last three years:

Year	Total	Birds	Species	Hours (field/feeder)
2017	4,543	99	84/05	
2016	5,390	102	72/19	
2015	4,867	87	68/20	

This year we observed more species than in any other year since 2011, when 113 were seen while counting 8,202 birds in 123/42 hours of effort.

Species	Field Birds	Feeder Birds	Total Birds
Canada Goose	61	0	61
Wood Duck	5	0	5
Gadwall	1	0	1
American Black Duck	41	0	41
Mallard	125	0	125
Northern Shoveler	1	0	1
Green-winged Teal	8	0	8
Ring-necked Duck	2	0	2
Common Eider	8	0	8
Surf Scoter	15	0	15
Black Scoter	37	0	37
Hooded Merganser	2	0	2
Red-breasted Merganser	4	0	4
Ring-necked Pheasant	83	4	87
Ruffed Grouse	6	0	6
Red-throated Loon	2	0	2
Common Loon	4	0	4
Double-crested Cormorant	18	0	18
Great Blue Heron	3	0	3
Turkey Vulture	1	0	1
Osprey	1	0	1
Bald Eagle	32	0	32
Sharp-shinned Hawk	1	0	1
Broad-winged Hawk	1	0	1
Red-tailed Hawk	6	0	6
Merlin	2	0	2
Peregrine Falcon	1	0	1
Killdeer	2	0	2
Spotted Sandpiper	8	0	8
Greater Yellowlegs	3	0	3
Willet	2	0	2

Species	Field Birds	Feeder Birds	Total Birds
Wilson's Snipe	1	0	1
Common Murre	1	0	1
Herring Gull	229	0	229
Great Black-backed Gull	100	0	100
Rock Pigeon	46	0	46
Mourning Dove	95	14	109
Barred Owl	3	2	5
Chimney Swift	42	0	42
Ruby-throated Hummingbird	2	8	10
Belted Kingfisher	2	0	2
Yellow-bellied Sapsucker	12	0	12
Downy Woodpecker	32	14	46
Hairy Woodpecker	12	3	15
Northern Flicker	52	9	61
Pileated Woodpecker	9	0	9
Least Flycatcher	12	0	12
Eastern Phoebe	3	0	3
Say's Phoebe	3	0	3
Eastern Kingbird	2	0	2
Blue-headed Vireo	34	1	35
Red-eyed Vireo	2	0	2
Blue Jay	101	12	113
American Crow	199	27	226
Common Raven	114	1	115
Tree Swallow	87	2	89
Bank Swallow	16	0	16
Barn Swallow	35	0	35
Black-capped Chickadee	165	24	189
Red-breasted Nuthatch	37	3	40
White-breasted Nuthatch	7	6	13
Brown Creeper	1	1	2

Species	Field Birds	Feeder Birds	Total Birds
Winter Wren	3	0	3
Golden-crowned Kinglet	7	1	8
Ruby-crowned Kinglet	6	0	6
Veery	1	0	1
Hermit Thrush	8	0	8
American Robin	195	7	202
Gray Catbird	11	0	11
European Starling	263	24	287
Cedar Waxwing	50	0	50
Ovenbird	96	0	96
Northern Waterthrush	5	0	5
Blue-winged Warbler	6	0	6
Black-and-white Warbler	30	0	30
Prothonotary Warbler	4	0	4
Nashville Warbler	1	0	1
Mourning Warbler	1	0	1
Common Yellowthroat	14	0	14
American Redstart	4	0	4
Northern Parula	34	0	34
Magnolia Warbler	6	0	6
Blackburnian Warbler	10	0	10
Yellow Warbler	41	0	41
Chestnut-sided Warbler	16	0	16
Blackpoll Warbler	8	0	8
Black-throated Blue Warbler	5	0	5
Palm Warbler	11	0	11
Pine Warbler	3	0	3
Yellow-rumped Warbler	72	0	72
Black-throated Green Warbler	26	0	26
Wilson's Warbler	1	0	1
American Tree Sparrow	2	0	2

Species	Field Birds	Feeder Birds	Total Birds
Chipping Sparrow	22	4	26
Savannah Sparrow	33	1	34
Song Sparrow	257	9	266
White-throated Sparrow	29	3	32
Dark-eyed Junco	23	1	24
Northern Cardinal	33	11	44
Rose-breasted Grosbeak	16	4	20
Bobolink	1	0	1
Red-winged Blackbird	180	17	197
Common Grackle	100	9	109
Brown-headed Cowbird	3	0	3

SEEN IN THE WILD

A Very Strange Tapping!

by Patrick Kelly

Once upon a midnight dreary, while I pondered, weak and weary,
 Over many a quaint and curious volume of forgotten lore—
 While I nodded, nearly napping, suddenly there came a tapping,
 As of some one gently rapping, rapping at my chamber door.
 “Tis some visitor,” I muttered, “tapping at my chamber door—
 Only this and nothing more.”

FROM “THE RAVEN,” BY EDGAR ALLAN POE

It is an old maxim of mine that when you have excluded the impossible,
 whatever remains, however improbable, must be the truth.

SHERLOCK HOLMES, IN “THE ADVENTURE OF THE
 BERYL CORONET,” BY ARTHUR CONAN DOYLE.

✿ The spring migration count had been going well. Beautiful weather, no wind to speak of, and my camera held close-up

photos of a male Rose-breasted Grosbeak that had been at a feeder from a recent stop. Now the woods beckoned. My route covers the “Avondale Loop” and I was about to do the trail that goes into the woods behind the community centre in Avondale. Not only is this a nice spot for a walk in the woods, it is right next to the Avondale Sky Wintery, which would be my following stop to pick up more Lady Slipper rosé. The reason for my good spirits: this trail is where I usually add about 10 species to my count list. The first eight I got on the outbound part of the loop: Yellow-rumped Warbler, cardinal (singing), Pileated Woodpecker, Northern Parula, Ovenbird, Blue-headed Vireo, Red-breasted Nuthatch, Least Flycatcher, and Brown Creeper. The Brown Creeper was a real treat, as it is a bird you don’t go looking for—they just show up if you are lucky. That has been my experience with them.

I am now on the return section of the loop. The trail, in part, runs along an old woods road, and I suddenly stop in my tracks as there is a tapping on a nearby tree. It stops. It seems quite close, coming from the trees on my right. I look around, and all I can find is a Red Squirrel that does not seem upset with my presence. The tapping starts again. I back up, thinking the woodpecker must be on the back side of a tree and invisible from where I had been standing. The tapping stops. Still no sign of a bird. This time, I walk ahead of where I had been. More tapping, more looking around, and still no bird. It was hard to say what was rising more quickly, my curiosity or my blood pressure.

It was at that point that I put Holmes’s maxim to work. If there was clearly a woodpecker tapping on a tree so loudly that it should be easily seen, and yet I could not see it, then having ruled out the impossible (invisible woodpecker, woodpecker with a cloaking device, squirrel mimicking sound of woodpecker tapping, etc.), that left another possibility. The woodpecker was not on the outside of a tree tapping, it must be inside a tree tapping! I took another look at the trees around



me and noticed a small round hole part way up one of them. The tapping started again, and I was sure that a nest caving was currently under construction. The hole looked to be too small for a flicker, so likely a downy or a hairy. The question was, how long would it take before it decided it needed some fresh air and would look outside so I could add the right species to my list? Imagine my surprise when, not 30 seconds later, a male Yellow-bellied Sapsucker stuck his head out of the hole with his beak full of wood chips. The next thing I knew, the female showed up. The male popped his head out and then went back inside. The female flew to the side of the entrance and stuck her head in. There were some muffled chirps (no doubt caused partly by the fact the entrance was now full of sapsucker) and the female withdrew and flew off. The male, apparently having met the building code and all zoning variances, went back to his work, as did I.

Spring Weather 2018, Eastern Annapolis Valley

by Larry Bogan, Cambridge Station

☞ Surprisingly, our spring this year was normal. I remember the warm period in March and the deep snowfall later in the month, but that is not unusual. Then April seemed cool, but that was a result of the disappointment that it was not like early March.

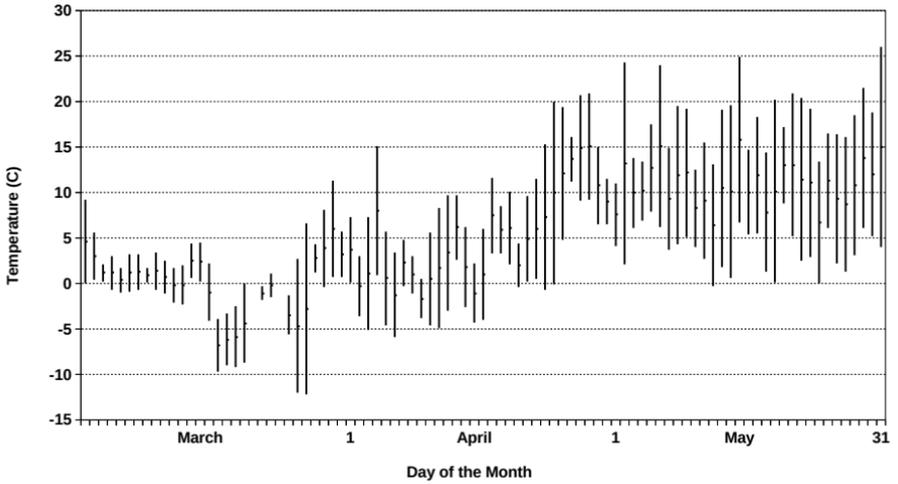
	TEMPERATURE			PRECIPITATION
	Max (°C)	Min (°C)	Mean (°C)	Total (mm)
March 2018 (30 yr. average)	2.8 (3.4)	-3.0 (-5.3)	0.0 (-1.0)	114 (110)
April 2018 (30 yr. average)	9.8 (9.9)	0.4 (0.6)	5.1 (5.3)	100 (93)
May 2018 (30 yr. average)	17.9 (16.4)	3.9 (5.6)	10.9 (11.0)	66 (102)
Season (30 yr. average)	10.2 (9.9)	0.5 (0.3)	5.3 (5.1)	280 (305)

SOURCE: *Environment Canada data for Kentville, NS (<http://weatheroffice.gc.ca>).
30-yr. averages: 1981-2010.*

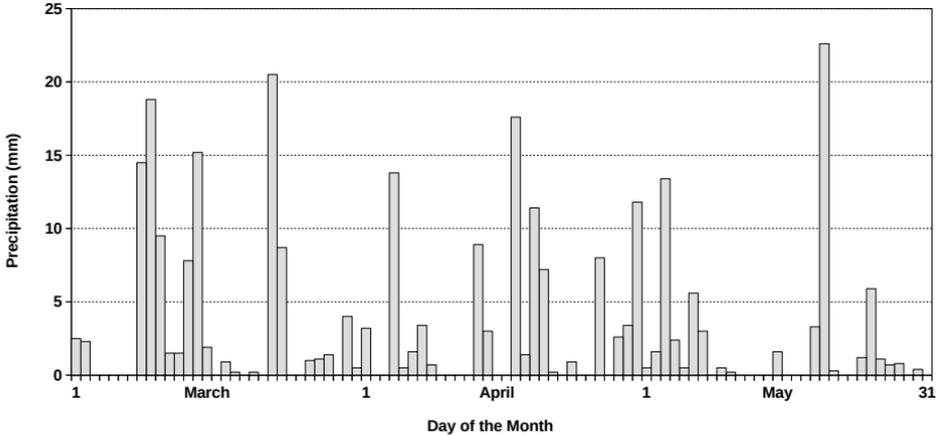
Temperatures

As you can see from the summaries of temperatures in the table, March was only a bit above average by 1°C. April and

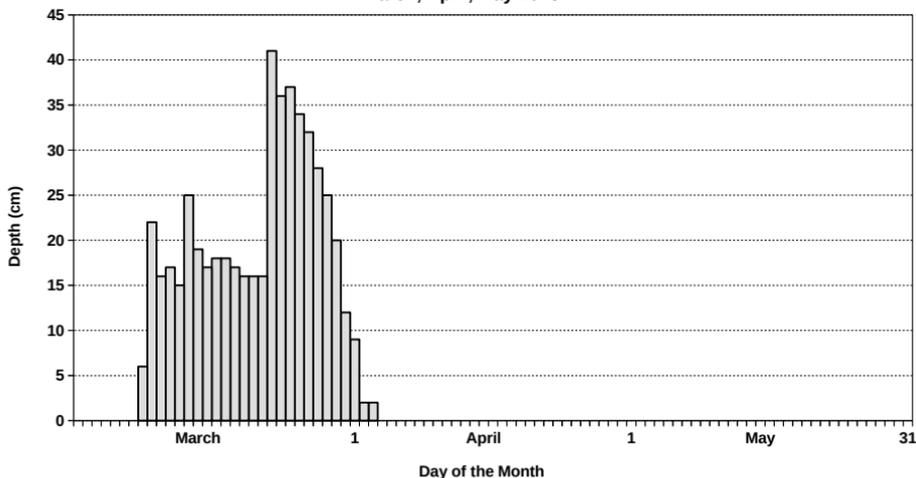
Daily Temperature - Kentville, N.S.
March, April, May 2018



Daily Precipitation, Kentville, N.S.
March, April, May, 2018



Depth of Snow on the Ground, Kentville, N.S.
March, April, May 2018



May were within a few tenths of average monthly temperatures, and so was the spring season. On the daily temperature chart, it is clear that the first half of March was uniformly above freezing, but when the snow came it was colder. April days averaged between 0 and 5° for most of the month then warmed quickly at the end. May was the most uniform month, with moderate temperatures all month long.

Precipitation

The rain and snow of the season was as expected for March and April, with precipitation near normal amounts. May, however, has been dry and received only two-thirds of average rainfall. As a result we had a small deficit of 9 percent in seasonal precipitation. As you can see in the daily precipitation chart, the moisture was pretty evenly distributed over the season. I have included a depth-of-snow-on-the-ground chart as a reminder of the snowfalls in the middle of March. The accumulation was over 15 cm for the last three-quarters of the month, but it all disappeared by April 4.

What's in the Sky?

by Patrick Kelly

✂ Highlights for July 2018 to October 2018

JULY 11: Mercury at greatest elongation east (p.m.)

JULY 12: New Moon

JULY 14–15: Large tides (Moon at perigee July 13)

JULY 15: Moon and Venus 3° apart (p.m.)

JULY 27: Full Moon

JULY 27: Mars at opposition

JULY 31: Mars closest to Earth

AUGUST 11: New Moon

AUGUST 11–12: Large tides (Moon at perigee August 10)

AUGUST 12: Perseid meteors peak

AUGUST 17: Venus at greatest elongation east (p.m.)

AUGUST 25–26: Full Moon (*Note:* The Moon is full near mid-day so you will see an almost-full moon on both evenings.)

SEPTEMBER 9: New Moon

SEPTEMBER 21: Venus at greatest brilliance

SEPTEMBER 23: Equinox, the first day of autumn

SEPTEMBER 24: Full Moon (*Note:* For some events, the date shown is the date at which one will get the best view. For example, Full Moon officially occurs on September 25 at 2:52 Universal Time, which would be on September 24 at 11:52 p.m. AST. Thus, I have used September 24, as most people expect a Full Moon in the evening sky on the date given.)

OCTOBER 9: New Moon

OCTOBER 23–24: Full Moon (*Note:* The Moon is full near mid-day so you will see an almost-full moon on both evenings)

Planets and the Moon

MERCURY: Mercury can be seen in early July, but it will not be as easily visible as it was in March. On July 11, at around 9:30 p.m., use binoculars and start with brilliant Venus in the west. You want to look about the 4 o'clock position from Venus, about halfway from Venus to the horizon, assuming you have a good, low western horizon.

VENUS: Venus has been dominating the evening sky since the spring and has been steadily getting brighter as well as appearing farther from the Sun in the sky. This now allows it to be above the horizon in a dark sky, where its brilliance is impossible to miss. If there is no moon or nearby bright lights, you should be able to see your shadow cast by Venus! Venus reaches its greatest angular separation from the Sun on August 17. At that time, if seen through a telescope it would show a “first quarter” phase, just like that of the Moon about a week after New Moon. As Venus now begins to come between Earth and the Sun, two competing effects contribute to its brightness. The phase starts to become a crescent, which means there is less light shining toward Earth, thus dimming Venus. On the other hand, it is also getting closer, and larger, so the lit area covers a bigger area on the sky. The latter wins out, causing Venus to grow in brightness until September 21, when Venus reaches its maximum brightness. From that point on, the former effect takes over, with Venus both dimming rapidly and closing on the Sun rapidly as it laps Earth. It will leave the evening sky in less than a month.

EARTH: Perform the following experiment. Using a second-floor window or a ladder (safety first!), hold a heavy object 4.8

metres above the ground. Using a stopwatch, time it to see how long it takes to hit the ground after you drop it. If you get 1 second, you are on a planet with a surface acceleration of 9.8 m/s/s. Earth is the only such body in the solar system.

MARS: Mars, which has been brightening all spring and early summer, becomes brighter than Jupiter in early July, although still posing no threat to Venus. Mars will continue to brighten until the end of the month when it reaches opposition on the 27th and is closest to Earth a few days later. With an orbit larger than that of Earth, and a slower average speed as it orbits the Sun, Earth catches up to Mars like this roughly every 26 months. Thus, one will have to wait until October 2020 for the next chance to see Mars so bright. While all planets orbit the Sun in elliptical orbits, the orbit of Mars is decidedly non-circular. This means that, at their closest, the distance between Mars and Earth varies considerably. The next time Mars will be this close is not until 2035. The red planet will be in the evening sky for all four months covered in this report. It is best seen in a telescope in July and August, when its apparent size is at a maximum.

JUPITER: As Earth passed Jupiter back in May, Jupiter is slowly moving from being roughly south at sunset in July to being low in the western sky at sunset by the end of October. Compare how slowly its brightness fades with the more-rapid dimming of Mars. By early September, Jupiter will once again become brighter than Mars, and with Venus soon out of the evening sky it will rule in the west at sunset. Jupiter has a much larger orbit than Mars: The average distance of Earth from the Sun is 1.0 astronomical units (au), that of Mars 1.5 au, and that of Jupiter 5.2 au. As a result, Jupiter's distance to us changes relatively a lot less as we lap it, so its brightness does not undergo such a large swing as that of Mars. See for yourself by sketching the orbits, using centimetres instead of astronomical units.

SATURN: Having passed Saturn in late June, the ringed planet is found to the east of Jupiter, trailing it across the sky each evening. Farther from Earth and smaller than Jupiter, Saturn is not as bright as Jupiter, although it partially makes up for that by showing a hint of yellow. Its greater distance also means that its brightness does not change all that much due to the planet's distance from us. (If you want to add it to your Jupiter diagram, Saturn is 9.6 au from the Sun.) There is a noticeable slow variation that is related to the angle of the rings as viewed from Earth. By slow, I mean 15 years, so it is not the sort of thing you will miss due to one cloudy night.

THE MOON: The Moon does nothing really remarkable over this four-month period other than cycle through its normal phases. It is involved in two eclipses in July (a partial solar eclipse and a total lunar eclipse) as well as a partial solar eclipse in August. None of these events is visible from Nova Scotia.



Northern Mockingbird (from Wolfville Xmas Bird Count 2017)

The Mushroom

by Emily Dickinson

The mushroom is the elf of plants,
At evening it is not;
At morning in a truffled hut
It stops upon a spot

As if it tarried always;
And yet its whole career
Is shorter than a snake's delay,
And fleeter than a tare.

'Tis vegetation's juggler,
The germ of alibi;
Doth like a bubble antedate,
And like a bubble hie.

I feel as if the grass were pleased
To have it intermit;
The surreptitious scion
Of summer's circumspect.

Had nature any outcast face,
Could she a son contemn,
Had nature an Iscariot,
That mushroom,— it is him.

SOURCES OF LOCAL NATURAL HISTORY

Amphibians & Reptiles	Sherman Bleakney	H: 902-542-3604
	Jim Wolford	H: 902-542-9204
Astronomy	Roy Bishop	H: 902-542-3992
	Sherman Williams	H: 902-542-5104
	Larry Bogan	H: 902-678-0446
Birds—General	Bernard Forsythe	H: 902-542-2427
	Richard Stern	902-679-9247 sternrichard@gmail.com
	Jean Timpa	H: 902-542-5678
	Gordon & Judy Tufts	H: 902-542-7800
Butterflies & Moths	Jim Wolford	H: 902-542-9204
	Jean Timpa	H: 902-542-5678
Fish & Wildlife	Devin Johnstone	H: 902-679-3611
	NS Department of Natural Resources	O: 902-679-6091
Flora	Ruth Newell	H: 902-542-2095
	Acadia Herbarium	O: 902-585-1355
Fungi	Nancy Nickerson	H: 902-542-9332
Hawks & Owls	Bernard Forsythe	H: 902-542-2427
Indian Prehistory & Archeology	James Legge	H: 902-542-3530
Mosses & Ferns	Ruth Newell	H: 902-542-2095
	Acadia Herbarium	O: 902-585-1355
Mammals	TBA	
Rocks & Fossils	Geology Dept., Acadia University	O: 902-585-2201
Seashore & Marine Life	Sherman Bleakney	H: 902-542-3604
	Jim Wolford	H: 902-542-9204

BLOMIDON NATURALISTS SOCIETY

2018 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.)

NAME

ADDRESS

POSTAL CODE

E-MAIL

TEL

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

No.	Description	Price	Total
_____	Individual/ Family Membership	\$30.00	\$ _____
_____	Junior (under 16 years) Membership	FREE	\$ _____
_____	Nature Nova Scotia Membership	\$5.00	\$ _____
_____	2018 BNS Calendar	\$15.00	\$ _____
_____	<i>Natural History of Kings County</i>	\$15.00	\$ _____
_____	<i>Within the View of Blomidon</i>	\$15.00	\$ _____
_____	<i>Eagles of the Maritimes</i>	\$5.00	\$ _____
_____	<i>My Life with Trees</i>	\$25.00	\$ _____
_____	<i>Merging</i>	\$25.00	\$ _____
_____	Blomidon Naturalist hat	\$15.00	\$ _____
	Postage: (calendar \$2) (parcel \$6)		\$ _____
	Tax-deductible Donation		\$ _____
	(Registration number: 118811686RROO1)		
		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.



