

# Blomidon Naturalists Society



SPRING 2020 NEWSLETTER

VOLUME 47 · NUMBER 1



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.

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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.  
All articles, queries, and letters to  
the editor should be directed to  
HowardWilliams,newslettereditor:  
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Digital photographs should be  
submitted to  
*doug@fundymud.com*

Next submission deadline:  
May 31, 2020

## From the Editor

by Howard Williams

☞ This issue of the Newsletter contains book reviews by Carolyn Green, the president's report, various bird count summaries for the Windsor and Wolfville areas, and an essay by Riley Scanlan, our student representative board member.

We learnt early this year that the province had made overtures to dispose of what had been generally understood to be Owls Head Provincial Park to a developer. Bob Bancroft, a BNS life member, was, among many others, outraged, and proceeded to challenge the decision in court. Soren presents more detail in his president's report.

Sadly, Peter Austin-Smith, a founding member of BNS passed away just after Christmas. He had been very active in the society, though not so much lately. He, Merritt Gibson, Larry Bogan, and Sherman Bleakney put together the BNS book *A Natural History of Kings County*. According to the obituary in the Chronicle Herald (January 2, 2020), Peter taught biology for a short while at Acadia University and supervised masters students. He then worked as manager of non-game biology in the (now-named) Department of Lands and Forestry. He helped to re-establish the Bald Eagle in Massachusetts and the Peregrine Falcon in the upper Bay of Fundy. A good sense of humour is indicated by his presentation of a conference paper on the migration patterns of *Phoenicopterus ruber ornamentalis* (plastic pink flamingo) to a puzzled audience. Donations can be made to the Peter Austin-Smith Sr. Memorial Fund at Acadia University (online) or by mail at 15 University Ave, Wolfville, NS B4P 2R6. BNS notes that this fund supports fieldwork students in biology or a related field of study. We also note, with sadness, the death of Harry Brennan, a life member of BNS.

Denial of climate change and its effects on us are still evident in small pockets of the population, and denial has been researched at length by Gabrielle Wong-Parodi, assistant professor of earth system science at Stanford's School of Earth, Energy & Environmental Sciences ([www.sciencedaily.com/releases/2020/01/200108160312.htm](http://www.sciencedaily.com/releases/2020/01/200108160312.htm)). It seems that efforts to sway climate deniers may seem futile, though researchers found four approaches in peer-reviewed studies from the past two years that could be most effective:

1. reframing solutions to climate change as ways to uphold the social system and work toward its stability and longevity
2. reducing the ideological divide by incorporating the purity of the Earth, rather than how we harm or care for it
3. having conversations about the scientific consensus around climate change with trusted individuals
4. encouraging people to explicitly discuss their values and stance on climate change prior to engaging with climate information

“Many people who deny climate change recognize that there is some change, but the change is so threatening because it basically could affect their quality of life, their income, and things or relatives that they care about.” Preliminary studies suggest that rather than trying to get around people’s identities and denial of climate change, conversations should instead embrace their views. We should not try to ignore who people are, but rather acknowledge their views so that they can be dealt with and the conversation can move on to behavioural changes—such as finding solutions that match their values and do not threaten a person’s sense of identity or quality of life.

Research undertaken in Quebec for the British Ecological Society indicates that reducing the intensity of lawn mowing in urban spaces leads to increased biodiversity, economic savings, and reduced presence of allergy-triggering weeds. So why do we do so much lawn care? It is one of those cruel ironies that

pest species seem to benefit from intense lawn management. According to the article, the authors looked at seven datasets across three studies in Eastern Canada (Quebec), and “in all of these studies they found that intensive lawn mowing resulted in an increase in the abundance of weeds and lawn pests. . . . These findings support a lot of research done by the turfgrass industry that shows that the more disturbance a lawn gets, the higher the likelihood of pest and weed invasion” ([sciencedaily.com/releases/2019/12/191219074744.htm](https://sciencedaily.com/releases/2019/12/191219074744.htm)). In effect then, lawncare companies are persuading us to manage our lawns, which then causes more problems than before. Are we stupid, or what?

Another two studies show the benefits of getting outside more. What follows is just the sort of research that BNS needs to broadcast. Two recent articles are listed in *Science Daily*.

The first, “Reconnecting with nature key for sustainability” ([sciencedaily.com/releases/2020/01/200115075615.htm](https://sciencedaily.com/releases/2020/01/200115075615.htm)) by researchers at Exeter University, indicates that reconnecting with nature is the key to regaining sustainability. This is precisely what BNS attempts to do via its lectures, field trips, and support of Flying Squirrel Adventures. It seems that people who live in more-built-up areas and spend less free time in the natural world are less likely to take actions that benefit the environment, such as recycling, buying eco-friendly products, and environmental volunteering. Getting out and about in the natural world is good for you and your planet. This finding indicates that “policies to preserve and develop urban green spaces, and support urban populations [to] reconnect with nearby nature, could help meet sustainability targets and reduce carbon emissions.” Researchers looked at people’s exposure to nature in their local area, their recreational visits to natural environments (parks, woodlands, beaches, etc.), and the extent to which they valued the natural world. It seems that people making green choices were more common among those “who lived in greener neighbourhoods or at the coast, and among those who regularly visited natural spaces regardless of where they lived. The relationships were the same for men and women, young and old,

and for rich and poor.” In the UK, over 80 percent of people live in urban areas and have become increasingly detached from the natural world. It seems that not only will greening of our cities help us adapt to climate change (e.g., city parks and trees can reduce urban heat spots), but that urban greening could help reduce the damaging behaviours causing environmental problems in the first place by reconnecting people to the natural world.

The second article, “Wilderness in urban parks important for human well-being” ([sciencedaily.com/releases/2020/02/200226130524.htm](https://sciencedaily.com/releases/2020/02/200226130524.htm)) by University of Washington researchers, covers much the same ground. They discovered, using questionnaires, why people went to Discovery Park in Seattle: “Experiencing wildness, specifically, is particularly important for physical and mental health.” Apparently, there was considerable evidence that “the wilder areas in an urban park seem to be affording more benefits to people—and their most meaningful interactions depended on those relatively wild features.”

These research projects are an indicator of why we need more accessible, wild parks, not fewer. They are good for mental health and for healthy attitudes toward climate change.

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CLUB NOTES

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## From the President

*by Soren Bondrup-Nielsen*

☞ It is Sunday morning, and it is an hour later than usual; summer time took effect early this morning when most of us were asleep. If this issue of the BNS Newsletter is late, you can blame me. I have been a bit tardy getting this report written. Now, I have been down with a cold, and I have been renovating the kitchen. Pia and I *did* need a functioning kitchen, so I feel

that with my cold and the kitchen, I have a legitimate excuse.  
[NOTE: it is not Soren's fault that this is late—DL]

As I look out my window, I only see the odd patch of snow on the ground. It is cold, about minus 5 degrees, but we have not had a lot of snow this winter, and there have been warm spells melting what snow there was. This is the first winter where we have not had massive snowdrifts making it necessary for me to put on my snowshoes when going out to feed the chickens in the coop behind the barn or going up to my woodlot. I did manage to go skiing from my back door a few times earlier this winter.

Since the last Newsletter, we have had three presentations. In December, Dave Ireland gave an engaging talk titled Marketing Nature and the Rise of Citizen Science, where he talked about biodiversity conservation and science communication. Dave suggested that the public will not support what they don't understand, and citizen science may play a key role in bringing public awareness to the plight of biodiversity. In January, we were treated to a duo presentation by James Churchill and Alain Belliveau about their biological expedition to Isle Haute. I think most of us in the audience enjoyed how they played off each other. We heard about their investigation of the island's birds, plants, lichens, and rugged landscape. They discovered dozens of new species for the island's checklist, including many rarities that are almost exclusively found in the Bay of Fundy region within Canada. In February, we were treated to a presentation by Richard Haworth titled Pre-Atlantic Evolution of Atlantic Canada. One might think that listening to geological processes many millions of years ago would be dry, but such was not the case. Richard gave an engaging presentation and made it fascinating to hear about the processes that gave rise to the present configuration of Atlantic Canada.

We are still waiting for the judge to hand down a decision on the Species at Risk (SAR) lawsuit. The two lawyers were asked early in the year to file a statement on how the precedence of a case involving *Bell Canada v. Canada* might affect the SAR case. This is why I am not a lawyer, because how in the world

can a case involving Bell Canada possibly affect our SAR case. Nevertheless, our lawyer filed his statement, and now we are waiting—how long is anyone’s guess.

I think most people in Nova Scotia have heard about Owls Head. The province included the Owls Head Crown land property, in its 2013 list of parks and protected areas, as a provincial park. Apparently, it was never formally legally protected as a park, but it did have its page on the government’s list of provincial parks. In March 2018, it was de-listed as a provincial park, and this happened without any public notice or consultation. This decision was revealed to the public only after a reporter (CBC’s Michael Goram) did a FOIPOP to get some of the behind-the-scenes details published on December 18, 2019. BNS was asked by Bob Bancroft (our fellow litigant in the SAR case) if we would support a legal action; in February 2020, the board voted to support this action, but it was too late for us to be part of the lawsuit.

The legal action launched by Jamie Simpson (our lawyer) alleges that the Minister of Lands and Forestry owed the public at least a minimum level of procedural fairness (reasons, notice, and opportunity to comment) when deciding to de-list the Owls Head property so that it could be sold to a private developer to be turned into three golf courses.

I have been acting treasurer of BNS since the annual general meeting. We have made this job decidedly easier by hiring a bookkeeper, Gary Dunfield. Gary will be doing our books from now on. The results of his work can be found in the financial statements printed in this issue. As you can see, we had a slight surplus. [Since the writing of this article, George Alliston has volunteered to be treasurer—ED.]

That is it for now. I wish everyone a wonderful spring.

## Isle Haute: Biological Expedition, 2019

*A summary of the January 20, 2020, presentation to the BNS membership by Alain Belliveau and James Churchill, as reported by Pat Kelly.*

☛ The January meeting had a large crowd, the room being almost full. It started with a summary of the Wolfville Christmas Bird Count. George Forsyth reviewed the FeederWatch results (including a quiz!) and Alison Bogan updated us on the results for the entire count. Patrick Kelly did a quick review of the West Hants count.

James Churchill and Alain Belliveau were part of a three-man expedition to Isle Haute. In 2018, BNS gave a grant to help fund this trip, which had the goal of producing a detailed botanical and ornithological survey of the island. Both of them had always had an interest in visiting the island, especially as they were familiar with the stories of people who had been there in the past. Artifacts have been found on the island dating back to 1200 CE, and there were even tales of pirate treasure being buried on the island. There was a lighthouse on the island from 1878 to 1956 (when both the lighthouse and keeper's house burned down), and the diaries of the lighthouse keepers helped to paint a picture of what the island had been like. Since 1956, nature has been slowly reclaiming the island, and stands of White Spruce now cover previously farmed areas.

The team chose the site of the former wharf as their campsite. The island supports a range of habitat types, including old hardwood stands and even a seepage swamp. Alpine plants can be found in gorges near the cliffs and in other sheltered areas.

We were able to see these as they gave a quick visual tour of the island. The weather was not entirely co-operative; on their second day, it rained, and they discovered that James's tent leaked. The label "James Leaky Tent" was shown on a number of the maps presented so that people could orient themselves. Their survey covered over 60 km and resulted in the discovery of 67 new species of plants, birds, and lichens on the island, of which 31 are of special concern.

They identified about 235 species of vascular plants, of which at least 26 had not been previously reported (21 native and 5 exotics), bringing the island total to about 325 species. One plant that dominates the island is *Nabalus altissimus*, which, unlike the plants found on the mainland, has leaves the size of basketballs. It reminded them of the movie *Jurassic Park*!

There had been an expedition to the island in 1997, mounted by the Nova Scotia Museum of Natural History. That survey had found a number of salt marsh species that were not present during their visit. Another interesting observation was that there are no squirrels on the island; the seeds from the spruce trees actually get to fall out of the cones and cover the ground. The team encountered at least 27 new species of lichens and expect the island checklist to be near 100 once they have finished cataloguing the results. This will include a lichen that grows on seaweed! Previously, the only known example was found on the European coast of the Atlantic.

The island had been visited by the Mi'kmaq since at least 1200 CE and likely before that. Their name for the island is Maskusetkik (place of the wild potatoes). Despite that, it was not until 1888 that someone began recording bird species. Even then, the list only had three birds on it, and they were recorded as their eggs were being collected: Common Eider, Black Guillemot, and Herring Gull. Since then, the list had grown to 90. A previous visit in 1982, after an outbreak of Spruce Budworm, added a number of warblers, including Tennessee, Cape May, and Bay-breasted. That was also the trip that recorded the one

and only crow to be seen on the island! In 1995, Mark Elderkin found the first Peregrine Falcon nest on the island. Between 1982 and 1991, 178 falcons had been released in the Bay of Fundy area to re-establish the species. The 1997 NS Museum trip counted 31 bird species, including 5 new ones. This was the first trip where the locations of the birds on the island were noted, rather than just their presence. The island was surveyed as part of the second *Maritimes Breeding Bird Atlas*. Visits were made in 2008 and 2009, during which the only junco was seen. A group of about a dozen people, including several BNS members, made a trip to the island in 2013, which added four new species, including the only sighting of a Yellow Warbler.

The team's goal was to establish baseline data, not only abundances but also spatial data on where different species are found. They were especially hoping to identify species of concern and to find species such as Leach's Storm-petrel, Bicknell's Thrush, and Gray-cheeked Thrush, which should find the island to be suitable habitat. They also wanted to see what had changed since the NS Museum expedition. In the case of species of concern, they were able to find 11 species. They also added 7 new bird species to the island list. They gave a short quiz based on some of the bird (and not-bird calls) that were recorded while there. The latter were prank calls made by Tom! One small bird mystery was the appearance of a Brown Creeper carrying food, so it may be that this species is starting to colonize the island. They did find about a dozen burrows on the northwest coast but were unable to determine what had made them. The three species from 1888 are still there. Of all the species reported, 35 of them were only sighted once. Given how small the island is, unusually bad weather (or a season) could easily cause a species to be extirpated.

The island is about to become a National Wildlife Area, so its management will be transferred to Environment and Climate Change Canada in the near future. This will also entail a change in how access to the island is granted. As it was, the team went

through all the proper channels to get permission to visit the island, but it was only after their trip that they were officially told that they were not supposed to stay overnight!

NOTE: *For a more-detailed report on this trip, see Alain and James's report to BNS in the Spring 2019 issue (vol. 46, no. 1) of this Newsletter.*

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CLUB NOTES

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## Pre-Atlantic Evolution of Atlantic Canada

*A summary of the February 17, 2020, presentation  
to the BNS membership by Dr Richard Haworth,  
as reported by Howard Williams.*

☞ Richard spent much of his early career sailing the shores and continental shelves of eastern Canada with a view to elucidating its geological structure and providing a basis for subsequent petroleum exploration. After becoming chief geophysicist in the British Geological Survey, he returned to Canada to become the director general of the Geological Survey of Canada (GSC). He became assistant deputy minister in Natural Resources Canada, a post he held until his retirement from the public service in 2003. Since that first retirement he taught environmental policy for six years in the School of Public Administration at Dalhousie, spent three years (including six weeks at sea in the Arabian Sea) working with Pakistan to define its continental shelf, and was elected in 2012 as a member of the International Commission on the Limits of the Continental Shelf at the United Nations in New York.

Richard started with a brisk review of Geophysics 101 in 90 seconds and then used this introduction to describe some ele-

ments of the evolution of Atlantic Canada before the opening of the current Atlantic Ocean. Much of his talk showed how remote sensing, in the form of ship-borne magnetic and gravity data, related to the on-land mapping of geological units. Richard showed how irregular the pre-Atlantic Ocean rifting was, how it failed in part, giving rise to the Bay of Fundy, and culminated further east in a passive continental margin dominated by sediment, much to the benefit of those looking for petroleum.

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CLUB NOTES

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## 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, see the BNS website ([blomidonnaturalists.ca](http://blomidonnaturalists.ca)), the BNS Facebook page ([www.facebook.com/groups/blomidonNaturalists-Society/events/](http://www.facebook.com/groups/blomidonNaturalists-Society/events/)), or contact us at [info@blomidonnaturalists.ca](mailto:info@blomidonnaturalists.ca).

MONDAY, APRIL 20—Acadia student presenters [*Cancelled as of this printing*]

MONDAY, MAY 18—*Ecology of the Minas Basin Mud Flats*, by Glenys Gibson

MONDAY, JUNE 15—*Global Biodiversity Surveys and Citizen Science*, by Mike Gill

## FIELD TRIPS & 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](mailto:info@blomidonnaturalists.ca)).

*NOTE: because of restrictions owing to the coronavirus, much of this schedule will likely be cancelled or postponed. Keep an eye on your BNS email notices—ed.*

APRIL 24–27, 2020—City Nature Challenge (CNC). CNC is a global bioblitz sponsored by the Natural History Museum of Los Angeles and the California Academy of Sciences. The first CNC took place in 2016, featuring Los Angeles and San Francisco, and has grown exponentially since then, with 159 locations competing in 2019. Since its inception in 2016, the challenge has grown from involving cities to other defined geographic areas. In 2019, the global event saw more than 35,000 people participate, resulting in a total of over 963,000 nature observations.

In 2019, Halifax Regional Municipality entered the contest and had great participation, capturing 7,646 observations representing 895 species. Halifax had the distinction of recording the most lichen species of all competing areas. In 2020, the Annapolis Valley (defined by the boundaries of Kings and Annapolis Counties) is putting its hat in the ring with 250 other regions around the world!

To participate in the City Nature Challenge, use iNaturalist to upload photos of species observed between the dates of April 24 and 27 anywhere within the boundaries of Kings and Annapolis Counties. This is followed by an identification period from April 28 to May 3 through the iNaturalist website. We're looking for people to get involved as both identifiers and observers.

Plans are in place to launch some smaller, more-focused events during the CNC observation period, and we're still working on what this will look like. For more information on these events, helping with your own event, or technical information about how to upload or identify observations, please send an email to Mary Kennedy ([cnc2019hrm@gmail.com](mailto:cnc2019hrm@gmail.com)), Dave Ireland ([davehireland@yahoo.ca](mailto:davehireland@yahoo.ca)), or Ian Manning ([ianmanning4@gmail.com](mailto:ianmanning4@gmail.com)).

SATURDAY, APRIL 25, 2020—Kentville Ravine Bioblitz, 10 a.m.–12:30 p.m. We're joining an annual, international effort to document and record the biodiversity of life on earth (see above notice). We'll be looking for and recording species in the beautiful Kentville Ravine. A bioblitz is like a giant scavenger hunt that includes all life forms and involves professionals as well as amateur nature enthusiasts like us. Groups around the



## FLYING SQUIRREL ADVENTURES

All Ages Nature Program in the Annapolis Valley

We know that nature is always teaching. Flying Squirrel Adventures helps facilitate learning about nature *in* nature by bringing people together to share, explore and grow. We will help you connect with nature through games, activities, challenges, discussions, presentations, workshops and more!

Join us for monthly nature outings on the third Saturday of each month, 9:45 a.m.–12:15 p.m. Check monthly event details: <https://valleyflyingsquirrel.wordpress.com/calendar/> or join our mailing list to stay informed: [valleyflyingsquirrels@gmail.com](mailto:valleyflyingsquirrels@gmail.com)

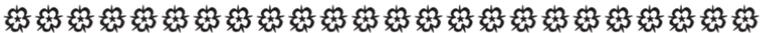
Flying Squirrel Adventures is a collaborative project of BNS, Town of Kentville, & Jijuktu'kwejk Watershed Alliance. It was the recipient of the Recreation Nova Scotia Natural Environment Award in 2018.

world will be out on the fourth weekend in April doing the same thing. Species records are compiled into a single data set of the biodiversity in that location at that point in time, which is then available to researchers, scientists, and policy-makers. Anyone can help out, and we hope you will. Children welcome. This event will be in lieu of a Flying Squirrel Adventures outing on the third Saturday in April.

SATURDAY MAY 16, 2020—*Nature Art*, Flying Squirrel Adventures May outing, 10 a.m.–12:15 p.m. Join us for a peaceful morning in the Kentville Ravine, communing with nature through the lens of the artist. Be inspired by the natural beauty, slow down, and make space to create. We'll have art supplies on hand, or you can bring your own. Flying Squirrel Adventures is a program for all ages from 2 to 102; you just need a youthful spirit, an open mind, and sturdy legs to get into the Ravine.

SATURDAY JUNE 20, 2020—*Bird Walk & Talk*, Flying Squirrel Adventures June outing, 10 a.m.–12:15 p.m. This event will be led by a local birding expert. Bring binoculars if you have them. We'll have some to share. Location to be confirmed. Flying Squirrel Adventures is a program for all ages from 2 to 102.

All FSA events can be confirmed on the webpage ([valleyflyingsquirrel.wordpress.com/calendar/](http://valleyflyingsquirrel.wordpress.com/calendar/)), or email Judy ([valleyflyingsquirrels@gmail.com](mailto:valleyflyingsquirrels@gmail.com)).



*The world's big and I want to have a  
good look at it before it gets dark.*

JOHN MUIR



## Midwestern Visitor Spends the Holidays in Port Williams

*by George Forsyth*

☞ On December 13, 2019, I was out for my daily stroll. I had just gotten a new camera and was excited to see what I might capture, especially birds. As I came past the school's soccer field, some sparrows flushed from the ground, all but one flying low to the shrubs. One, however, flew up to the top of a tree by LBR Fabricator's driveway. A couple of snaps of the lens, a detection of a breast spot, and an American Tree Sparrow was presumed. Not at all a rare bird, just down from the north for the winter.

After I got home and uploaded the photos onto the computer, the breast spot was still there, but the stripes on the bird's crown pointed to a rarer visitor, a Lark Sparrow. The photos were pretty poor for such a new camera, but the distance involved for such a small target would explain the fuzzy images.

Two days later I returned to the edge of the soccer field to find no birds at all. I decided to search the sunny bank south of Lewis Benedict's shop along the dyke. Sitting in the open, sunning itself, was a beautiful Lark Sparrow! These photos were much better, and the news spread quickly. At least 21 bird enthusiasts have observed, photographed, and submitted their reports to eBird.

As of January 12, 2020, the sparrow was still vacationing in Port Williams but had relocated from the brush pile by the dykes to some bird feeders on Belcher St. All of his kin are in Texas and Mexico, vacationing on brush piles of mesquite and sagebrush.

This is a larger sparrow, beautifully marked with a quail-like head pattern of rich brown, chestnut, and black stripes and a



GEORGE FORSYTH

Lark Sparrow, Port Williams, January 3, 2020

white eye ring, the clear breast has one central breast spot, and the longish tail is black with large white corners.

This Port Williams guest is one of only three Lark Sparrows reported in Canada in December 2019. One was reported until January 3 in Montreal. The third report was a bird visiting a backyard in Pictou County in early December but not reported since; it is plausible that this is our bird before finding the sunny bank side in Port Williams.

Hurricane Dorion was devastating to our fields and forests. It also brought many birds north at a time when they should have been going south. It is still unexplained, but the storm also brought many western birds east. This beautiful sparrow might be a lingering result of our most powerful storm of the 2019 season.

Let's hope that this resilient sparrow finds just what it is looking for to survive a northern winter and maybe find a travel agent to return it to the Midwest in time for the 2020 breeding season!

To view photos from other observers, see the Cornell Macaulay Library site ([search.macaulaylibrary.org/](https://search.macaulaylibrary.org/)).

## Nature Notes— Winter/Spring 2020

*by Howard Williams*

☞ These last three months since my previous notes, my monitoring indicates that there are many fewer individuals of each of the bird species than I generally see in my garden and surrounding area of grassland at this time of year. I have no explanation for it other than some sort of natural cycle. I don't feed the birds any differently, nor has the environment changed. One explanation may be the after-effects of Hurricane Dorian or the fact that up to now as I write this, the winter has been on the warm side. I will be interested in hearing from other determined watchers.

Mid-morning on January 6 we were proceeding along Commercial St in New Minas when I noticed some movement on the wasteland on the north side. Three deer raced up to the traffic lights at the Canadian Tire entrance, bounded across the road and disappeared up to the west of Canadian Tire. Drivers braked, nobody got hurt, least of all the deer, who at least crossed at the lights, even if they did not wait for the signal.

A Coyote entertained us in the grassland behind our property on January 20. It was leaping up in the air and coming down on a dead or nearly dead rodent. I've seen Coyotes do this when hunting, much like fox. Two Coyotes serenaded us for five minutes at 3 a.m. on February 29.

On and after February 16 I heard robins for the first time since well before Christmas, along with Song Sparrows and Northern Cardinals all singing their spring songs. American Robins were consorting with Cedar Waxwings along the cycle trail in Wolfville as both species moved en masse from tree to tree looking for berries. After three days of (false?) spring at



HOWARD WILLIAMS

the end of February, there were 24 robins massing along the rows of exotic wild rose in the grassland behind our house. Also that morning, February 25, there was what can only be called a spring dawn chorus—the first I have heard this year. It is almost as if a switch has been turned on, with woodpeckers drumming.

Nova Scotia is not the only area in southern Canada to be warm. Windsor, ON, has been warm enough prior to Christmas for garter snakes to be noticed ([cbc.ca/news/canada/windsor/bird-counts-windsor-essex-mild-winter-1.5412788](http://cbc.ca/news/canada/windsor/bird-counts-windsor-essex-mild-winter-1.5412788)). Despite that warmth, Snowy Owls have been common there too, while here in Nova Scotia there have been far fewer sightings than in previous years (Sambro and Baccaro Heads).

Every month or so I go down to Conrads Beach on the Eastern Shore to look at birds and wildflowers in the dunes. I was entertained by an Otter, feeding on fish upon the ice in one of the tidal lagoons behind the dunes.

Much earlier in the season, in early November, on a cool but not freezing day, we were treated to a flock of Snow Buntings at Houston Beach. They were feeding on something associated with the sandy soil overlying bedrock, high up on the cliffs.

I spent an afternoon in early November at Horton Bluff, looking at the various deformation structures in the cliffs. The photo is of a conjugate kink fold (wife for scale), typical of near-surface folding of thinly-layered strata. I went there to investigate suitability for a BNS field trip.

Finally, a touch of spring—the exotic Witch Hazel was flowering in Wolfville, especially beside the Main St Cemetery, on February 27; have I spoken too soon? As if to press home the point, I watched a pair of Red-tailed Hawks mating in a dead tree on the last day of February.

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CONSERVATION

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## Old Growth Forests in the Valley: A Case for Re-evaluating How We View Our Forests

*by Riley Scanlan*

🌿 Old-growth forests are incredibly complex ecosystems. Though defining them can be difficult, they are essentially the result of decades of undisturbed forest development and succession. Prior to European settlement, old-growth stands would have made up approximately 50 percent of the Acadia Forest Region, the forest type here in Nova Scotia. However, today it is estimated that less than 1 percent of all forested land in the Annapolis Valley contains old growth. Therefore, my goal was to better understand these vital habitats, to identify any remaining old-growth stands in the Valley and to review the history of forestry in order to better protect these forests in and for the future.

It is important to understand what it is exactly we are protecting by conserving old-growth forests. As people often think when discussing old growth, they are dominated by large old trees. However, given that life is not infinite, eventually these

large old trees die. Both standing and fallen dead trees are in fact very important in the continuation of old growth. Once they've fallen, the sunlight these trees once collected is then able to reach the forest floor. There, waiting patiently, lies a bed of shrubs and young trees eager to utilize this new sunlight. This process is called canopy gap formation and leads to young and old trees living side by side in one forest. At a larger scale, old-growth forests will often develop a similar mosaic pattern of groups of older trees living next to groups of younger trees. This too, ensures that when those old trees die, there are younger ones able to take advantage of the newly available resources and ensure the continuation of the forest as a whole. Over many decades, this canopy gap formation at the individual tree scale leads natural selection to favour those species better able to persist in a shady understory for a long time until their growth opportunity arises. We therefore see old-growth stands dominated by shade-tolerant trees such as Eastern Hemlock and Red Spruce.

Furthermore, in the Acadian Forest Region, there are rarely any large-scale disturbances. Only individual or a few tree-size disturbances, such as wind or storms, affect this ecosystem. Because of this, old-growth forests often have a very dense canopy, with little sunlight reaching the forest floor. All of these structures indicative of old growth take a very long time to develop and are precisely what make them so important in conservation.

From genetic to community-scale ecological levels these stands maintain an incredible amount of diversity. High competition for resources in these forests favours trees better able to compete and adapt, leading to a strong genetic diversity. For instance, research has shown old Red Spruce trees, native to Acadian Forest old growth, were able to produce fewer empty seeds and higher quality offspring than young trees. Furthermore, the abundance of dead wood and varied tree ages provide habitat to a variety of species. These forests also play an important role in riparian ecosystems, as leaves provide nutrients and

fallen branches and trees can aerate and enhance aquatic habitats. Globally, old growth plays an important role in filtering water in the hydrological cycle and in sequestering atmospheric carbon in the carbon cycle. In fact, recent studies have found that old trees continue to accumulate biomass. Therefore, old trees can sequester more carbon dioxide than younger, faster-growing trees. These important attributes, especially the latter, will only grow increasingly important in the future as we suffer the consequences of climate change. Old-growth trees will be far better able to adapt to and regenerate from increased storms, higher precipitation, and increased fires. They will also be able to sequester significant amounts of anthropogenic carbon dioxide, thereby mitigating the impacts of climate change.

These intriguing attributes led me to question whether or not we have any old-growth stands remaining here in the Annapolis Valley. Using data from the NS Department of Lands and Forestry (DLF) website and through satellite imagery analysis, I first created a map that highlighted forest stands with high potential to contain old growth. I then visited a number of these highlighted stands and conducted field assessments to determine exactly which stands were indeed old growth. These site assessments followed the Old Forest Policy Scoresheet, as described by DLF. This method essentially assigns a score (out of 100) to each forest stand. A higher score generally indicates higher conservation value, or that the forest contains “better” old growth. It also classifies the forests into Class I through IV old growth. Class I and II are recognized as being old growth, with III and IV having high potential to eventually become old growth. These scores are based on the abundance of various old-growth characteristics, including average tree age, amount of deadwood, the species present, size of trees, and the amount of sunlight penetrating the canopy.

Field assessments revealed that the satellite imagery map was accurate in predicting which areas might contain old growth. Of all field assessments, 27 percent found either Class I or II old growth. In other words, the predictive map was correct one in

four times. In areas not found to be old growth, Class III and IV stands were found. Given the estimate that less than 1 percent of forest land in the Annapolis Valley contains old growth, this is an impressive outcome. Furthermore, most of the old-growth forests were dominated by Eastern Hemlock (88%) and were found near waterways (70%). Also, 90 percent of all highlighted stands were on the North and South Mountains, often along the slopes, with very little highlighted along the valley floor. The patterns that arose in these field assessments led me to question why these old-growth stands occur where they do, and if that information can be used to better protect them. I conducted a literature review on forestry practices in Nova Scotia to investigate this.

When Europeans first settled this province, they brought with them their philosophy that everything in nature is for man's taking. They cleared vast tracts of forests for agriculture and cut lumber for housing and constructing ship masts. Later, with the invention of the steam engine, they began cutting forests to supply the lumber, pulp and paper, and more recently, the bioenergy industries. Though each of these is complex in its own way, industrial logging in general led to a steep decline in old-growth forests. These ecosystems were seen as slow growing, inefficient uses of land that should be cut and converted to more-profitable plantations such as pine. This undervaluing of old growth and the many ecosystem services it provides is why so few stands remain. Only those along steep slopes, such as the North and South Mountains, persist due to difficulties harvesting on slopes. Furthermore, stands remain near streams and rivers because of the Wildlife Habitat and Watercourses Protection Act, which prohibits forestry within 20 m of a body of water. Though created to protect aquatic ecosystems, this Protection Act policy was quite effective in preserving old-growth stands. Essentially, only by logistics—the inability to harvest along the slopes, or indirectly—through policy, were stands protected. The perspective that old-growth stands are not economically

valuable led to their dramatic decline but can perhaps be re-evaluated to protect them.

If we begin to see forests as more than potential lumber, pulp and paper, or bioenergy, we could protect them for the many other services they provide. These include their biodiversity and their roles in global water and carbon cycles. Especially given the expected consequences of climate change, these attributes will only become more valuable. Though initiating a change in societal values is difficult to obtain, a paradigm shift in our economic values is not impossible. For example, Costa Rica is largely heralded as a green, sustainable country. However, only 40 years ago this country was an actively deforesting nation that fed the global food system with coffee, bananas, and pineapples. Costa Rica successfully restructured its economy to be based on eco-tourism, and strengthened both the economy and the health of its forests.

I feel that this shift, too, is possible in Nova Scotia. By promoting more-sustainable harvest methods, such as selective cutting, we can mimic the mosaic structure found in old-growth forests. We also must ban extractive methods such as clear-cutting and whole-tree harvesting that disrupt the delicate succession cycle of forests. We must also value old-growth stands themselves more highly. By promoting the use of higher-quality wood, often old-growth species, we can promote economic development but also shift forests away from pine plantations toward more naturally occurring species.

By preserving old-growth forests and their attributes, especially in light of the consequences of climate change, we would be protecting both ecological and long-term economic sustainability. Of course, it is impossible to protect something of which we don't know the full extent. I hope the map created in this research can be replicated for all of Nova Scotia, or even all of Canada, to better guide future conservation efforts by highlighting old-growth stands with high conservation value. I also hope that the knowledge of remaining stands encourages

individuals to protect these ecologically important ecosystems. In doing so, we would be preserving not only our current economic and ecological integrity but also, importantly, those of future generations.

NOTE: *Riley Scanlan is a fourth year Acadia Environmental Science student and 2019 recipient of the Blomidon Naturalists Society Student award. Funds from this award went toward supporting the research project discussed here.*

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FROM THE PAST

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## Mrs Clark's Notes

*by Wendy Elliot*

☞ Mary Elizabeth Clark wrote the social notes from Clarksville in *The Hants Journal* from 1912 to 1948. A farmer's wife and keen observer of nature, she was one of a legion of social note writers from small villages across this country. This comes from her notes in May 1928:

### DRUMMING

We wonder did everyone know that the woodpecker will also drum like partridge. Last year in early spring there would come a sound of tapping from over the river, made greater by the echo, it even sounded uncanny towards evening and would last for a great length of time. Some thought it a partridge but never had heard it sound so queer. One person investigated it to find that another person had turned the supper dipper up side down on the camp fire pole at the wash pond and a red headed woodpecker (the flicker) was using it to drum on and in a perfect ecstasy, he was doing it; run tan tun, rin tan, tun, it sounded echoing along the river over this side and he kept at it

for weeks before ceasing. It was a sight to see him with bill and wings seeming as if he were trying to make a tune on the dipper; he certainly did make noise.

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ENVIRONMENT

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## Climate Circles

*by Emily LeGrand*

☞ This past January, climate-concerned citizens began gathering every Monday evening at the Wolfville Farmers' Market at 7 p.m. to talk about what they could do together to respond to climate change. The gathering, called Climate Circles, is a weekly action meeting that welcomes everyone who believes climate change is real and requires immediate action. Climate Circles began with the idea that regular meetings are a foundation from which we can plan meaningful action to reduce the effects of climate change in this ten-year window available to us. The underlying values behind Climate Circles are that

- forward motion and action give people hope, purpose, and meaning
- taking climate action can be fun and can feel good
- we need all approaches to responding to climate change to be valued and respected so we don't unintentionally turn away people who feel ready to act
- saying and thinking "thanks for being here, thanks for caring, thanks for working on your bit while I work on mine" might go a long way to motivating ourselves and sustaining a sense of community
- a strong community base is the foundation we need to take on bigger, more complex, coordinated projects that will have greater impact on reducing greenhouse gas emissions

The first gathering had nearly 60 people. Attendance each week hovers between 40 and 60. While many are experienced, long-time organizers and activists, others are newer to action planning and strategy. Everyone has strengths and experience to contribute, and part of our work collectively is to figure out how everyone can contribute. People are coming from well beyond Wolfville, sometimes from as far away as Halifax and Annapolis Royal, to enjoy the positive atmosphere and learn what we are up to. Most attendees are in middle age or older, but students also regularly join in.

The group meets first in a large circle to experience the group as a whole, to set positive intentions for the evening, to hear brief announcements from the community of relevant news and events, and to be reminded of tools that will help us all to be as patient and kind to each other as possible while we grapple together about what to do about the biggest problem we have ever faced. Then, anyone can offer to host a discussion topic. Regular topics that have formed into coherent meeting groups include Transition Annapolis Valley; electricity; waste and consumption reduction and collective action; food security, veganism, and community gardens; and trees. We also regularly talk about climate grief, emotions, and inner transition; transportation; public education; and different emerging opportunities for local and federal climate action. We have already helped each other know when to show up at public events in support of climate decisions, and we committed as a group to letter writing and other collective input.

A two-month check-in process is underway, and so far we are learning that participants were initially drawn to Climate Circles because they wanted to meet others who care about climate action and start on collaborative projects together. And people are coming back because they are enjoying the opportunity for community connection and contribution, which gives them a sense of hope for the future and a motivation to keep working together. In the end, the consensus is that Climate Circles participants hope to take on projects that lead to signifi-

cant reduction of greenhouse gas emissions. Many of the key ingredients for this, including community and hope, are being sown at Climate Circles.

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NATURE COUNTS

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## Wolfville 2019 Christmas Bird Count

*by Alison Bogan, compiler*

☞ SATURDAY, DEC 14—The BNS-sponsored CBC was held on a day of heavy rain and temperatures that soared to the mid teens after sunset. Most of the 49 intrepid field observers started early before the heaviest rain, but compared to the previous year there was less time (53 hrs. vs 81 hrs.) and distance (95 km vs 126 km) spent on foot this year as the conditions worsened. The birds also sheltered, and we ended up with only 59 species, three of which (Red-winged Blackbird, Sharp-shinned Hawk, and Pine Siskin) were seen only by feeder watchers. This was partly offset by reports of 12 species seen during count week, the three days preceding and following the count day. The count week observations included two rare sparrows (Seaside Sparrow and Lark Sparrow) and a Sanderling. Additional count week observations were White-winged Scoter, Bufflehead, Red-breasted Merganser, Merlin, N. Mockingbird, Lapland Longspur, Chip-ping Sparrow, Northern Goshawk, and Red Crossbill.

The five most abundant birds were Starling, Herring Gull, American Crow, Mallard, and Canada Goose. Wood Duck, Great Blue Heron, Sharp-shinned Hawk, Lesser Black-backed Gull, Great Horned Owl, Belted Kingfisher, Peregrine Falcon, Winter Wren, Pine Warbler, Savannah Sparrow, Swamp Sparrow, White-crowned Sparrow, and Pine Siskin were reported as 1 or 2 individuals.

The Wolfville CBC is a success due to the efforts of many people. Thanks to the 49 field observers and 28 feeder watchers, to George Forsyth who organizes and compiles the feeder watchers, to Liz Stern and her crew who look after the tally potluck, and to Rick Whitman who checked reports on eBird for count week sightings within our circle.

### CBC WOLFVILLE 2019

Species	Field	Feeders	Total
Great Blue Heron	1		1
Canada Goose	910	56	966
Wood Duck	2		2
Black Duck	694		694
Mallard	1,155	14	1,169
Com. Goldeneye	13		13
Com. Merganser	52		52
Hooded Merganser	11		11
Bald Eagle (Adult)	111		111
Bald Eagle (Immature)	83		83
Bald Eagle (Unknown)	16	9	25
Northern Harrier	3		3
Sharp-Shinned Hawk	0	1	1
Red-tailed Hawk	34	4	38
Peregrine Falcon	1		1
Ring-necked Pheasant	59	20	79
Ruffed Grouse	1	4	5
Ring-billed Gull	248	3	251
Herring Gull	1,991		1,991
Iceland Gull	8		8
Great B/B Gull	869		869
Lesser B/B Gull	1		1
Gull spp. immature	75		75

Species	Field	Feeders	Total
Rock Pigeon	330	3	333
Mourning Dove	506	173	679
Great Horned Owl	2		2
Belted Kingfisher	1		1
Downy Woodpecker	25	18	43
Hairy Woodpecker	14	13	27
Northern Flicker	20	5	25
Pileated Woodpecker	3	2	5
Horned Lark	43		43
Blue Jay	246	93	339
American Crow	1,449	40	1,489
Common Raven	191	11	202
Black-capped Chickadee	455	183	638
Red-breasted Nuthatch	5		5
White-breasted Nuthatch	21	14	35
Winter Wren	1		1
Brown Creeper	1	1	2
Golden-crowned Kinglet	18		18
American Robin	115		115
Cedar Waxwing	57		57
European Starling	4,504	129	4,633
Pine Warbler	2		2
American Tree Sparrow	5	2	7
Savannah Sparrow	1	1	2
Song Sparrow	137	6	143
Swamp Sparrow	2		2
White-throated Sparrow	23	3	26
White-crowned Sparrow	1		1
Dark-eyed Junco	85	40	125
Snow Bunting	22		22
Northern Cardinal	45	13	58
Red-winged Blackbird	0	3	3

Species	Field	Feeders	Total
Purple Finch	6	1	7
Pine Siskin	0	1	1
American Goldfinch	608	272	880
House Sparrow	38	11	49
Duck species	2		2
Sparrow species	7		7
Total Birds			
<b>Total Species</b>	<b>15,329</b>	<b>1,149</b>	<b>16,478</b>
Hrs. on foot	53		
Hrs. by car	54		
Total hrs.	107	49	
Km on foot	96		
Km by car	715		
Total km	811		

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NATURE COUNTS

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## West Hants 2019 Christmas Bird Count

*by Patrick Kelly, compiler*

☞ SUNDAY, DECEMBER 29, 2019—The weather was quite pleasant, sunny (in the morning), and around freezing, but with little wind and no real snow on the ground. As the day progressed, the clouds gradually arrived, turning it into an overcast day by the end of the afternoon.

We ended up with 42 species and almost 5,500 birds counted. The species count is 5 below the average for the last 10 years

of the count. Similarly, the average number of birds seen on the last 10 counts is about 7,900, so those numbers are down as well. The trend in both numbers has been downward, but the total number of party-hours has also been somewhat higher in the past. Working out the numbers both per party-hour and party-km would be an interesting exercise.

We set a new record for Mallards: 803, blowing past the previous record (from just last year) of 264. There were about 725 of them at the pond by Oulton's farm on Highway 14. Rather than try to count them on the spot, I took four quick pictures while panning across the pond and later used Photoshop to make a panorama image. After that it was pretty simple. Set the paint brush to red, click on each duck as you count it, and continue until all the ducks have red spots! We had a single Peregrine Falcon for the third time in four years. We also had our first Baltimore Oriole since 2010. David Simpson and Alex Wojcik found it enjoying a suet feeder on Bluff Road and got some great confirmation pictures.

This year we added Gadwall to the count for the first time. It was seen at the Windsor sewage lagoon both by Jim Wolford, who normally covers this area, and by Richard and Liz Stern, who were on their way to their assigned area and had hoped to see the Wood Duck that had been reported there in previous days. (It did not show up on count day, but we did get it for the week—the only count week species.) Neither of them realized, at the time, that this was the first Gadwall ever seen on this count!

I will change the tally sheets for next year's count. The Snow Bunting gets dropped from the list of those seen on 13 or more of the last 20 counts to the list of those seen on 5 to 12 of the last 20 counts. The one positive change is that while Snow Bunting goes down, it was inevitable that Northern Cardinal would eventually be seen in more than 12 of the last 20 counts, so it gets bumped up.

The following list does not count three types of birds for

which species ID could not be determined: buteo (3), gull (9), and woodpecker (2). It also does not count American Black Duck X Mallard hybrids, of which three were seen.

Canada Goose 49, Gadwall 1, American Wigeon 4, American Black Duck 346, Mallard 803, Common Goldeneye 3, Ring-necked Pheasant 42, Ruffed Grouse 6, Bald Eagle 31, Northern Harrier 3, Sharp-shinned Hawk 2, Red-tailed Hawk 19, Peregrine Falcon 1, Ring-billed Gull 34, Herring Gull 212, Great Black-backed Gull 22, Rock Pigeon 209, Mourning Dove 197, Downy Woodpecker 12, Hairy Woodpecker 19, Northern Flicker 5, Pileated Woodpecker 2, Canada Jay 2, Blue Jay 242, American Crow 533, Common Raven 41, Black-capped Chickadee 233, Red-breasted Nuthatch 3, White-breasted Nuthatch 16, Brown Creeper 2, Golden-crowned Kinglet 9, European Starling 1,959, Cedar Waxwing 12, American Tree Sparrow 6, Song Sparrow 15, White-throated Sparrow 4, Dark-eyed Junco 47, Northern Cardinal 15, Baltimore Oriole 1, Purple Finch 2, American Goldfinch 270, Evening Grosbeak 74, House Sparrow 22.

Party-hours totalled 74 (48 by car, 26 on foot). The total distance covered was 740 km (695 km by car, 45 km by foot).

As usual, I would like to thank all of those who helped in the field or as feeder watchers this year: Joanne Cook, Rick Crawford, Norma Crawford, Celes Devar, Tony Duke, Ryan Harvey, Andrew Harvie, Susan Harvie, Arianne Janes, Patrick Kelly, Peggy Kochanoff, Brian Laureijs, Virginia Mackenzie, Kevin Moore, John Robertson, Barry Sabean, Janet Sabean, David Simpson, Richard Stern, Elizabeth Stern, Stephanie White, Meaghan Williams, Sherman Williams, Stephen Williams, Alex Wojick, and Jim Wolford. A special thank-you goes to Joanne Cook for organizing the after-count potluck.

# 2020 Cyril K. Coldwell Eagle and Raptor Count of Eastern Kings County

*by Jim Wolford, compiler*

☞ SUNDAY, FEBRUARY 2, 2020—Again this year we volunteers lucked out with good viewing conditions, in spite of a predicted snowstorm that ended up elsewhere. The 32 participants went in 17 cars to designated areas, for just one hour from 10 to 11 a.m. See the Spring 2019 BNS Newsletter (Vol. 46 No. 1) for the history of this count since 1979.

The day started out overcast, then became intermittently brightly sunny with light winds and moderate temperatures from about  $-2$  to  $+3^{\circ}\text{C}$ . As usual, our total area covered was Kentville to Avonport and North Mountain to Black River Lake.

Our collective overall results:

- 454 total Bald Eagles (284 adult, 155 immature, 15 of undetermined age, approximately 65%/35% adult/immature)
- 26 Red-tailed Hawks
- 1 Rough-legged Hawk (dark phase)
- 1 adult Peregrine Falcon
- no harriers, no Sharp-shinned Hawks, no Merlins
- 1 Barred Owl
- 1 Great Horned Owl heard hooting near Avonport in evening
- 750 mixed Black Ducks & Mallards
- 3 White-winged Scoters
- 3 Common Goldeneyes
- 3 Common Mergansers
- 100+ Great Black-backed Gulls
- 16 Horned Larks

- 10 Blue Jays
- 2 Northern Cardinals
- 7 White-tailed Deer
- 3 Gray Squirrels

Our total of 454 eagles was well above our average and significantly more than the 319 counted last year. They were widely distributed throughout our covered areas: 153 were in Sheffield Mills/Woodside areas, 46 along Gaspereau River, 43 west of Port Williams, 56 northeast & northwest of Grand Pré, 35 south of Grand Pré, 24 in Cornwallis Valley, 26 north & east from Canning, 20 south of Canning, 25 south of White Rock, 16 northeast of Port Williams and 10 elsewhere.

Everyone agreed that viewing conditions were excellent, except for difficulties with the bright and low Sun. These counts are very unscientific, with only one count per year, and the many factors that account for the year-to-year differences are poorly understood. I don't see any ongoing trend in the total numbers of eagles, but there is considerable interest in some public discussion about how much, if any, artificial feeding of them is warranted. Eagles are not just scavengers but are opportunistic predators and kleptoparasites, with effects on Ospreys and loons and who knows what else.

Volunteer participants in 2020: George Alliston, Margaret Alliston, Charlane Boates, Sherman Boates, Soren Bondrup-Nielsen, John Brazner, James Churchill, Joanne Cook, Peggy Crawford, George E. Forsyth, Harold Forsyth, Bernard Forsythe, Glenys Gibson, Jamie Gibson, Gerry Hardy, Pat Hawes, Patrick Kelly, Debbie Mander, Sheila McCurdy, Terry Murphy, Mike O'Brien, Glen Parsons, Ian Paterson, Meg Raven, Stan Riggs, Liz Stern, Richard Stern, Judy Tufts, Rick Whitman, Olivia Williams, Sherman Williams, Jim Wolford (compiler), two younger participants (Isla & Lahrin Churchill), and Pauline Meldrum, who helped with getting the Great Horned Owl on our list.

## Flying Squirrel Adventures: Reaching our Full Glide Potential

*by Judy Lipp*

☛Ravine mapping, fire making, and winter walking, tracking, snowshoeing, reflecting, and planning; winter is a good time to slow down and take stock of things, reflect on the year that has been, and dream about the future next to a warm fire. We did all those things since the winter solstice and are excited about the year ahead. We had a sweet little solstice event on December 21 in the Ravine, with a mapping exercise that had us exploring the Ravine in new ways, followed by fire and chocolate. After the holidays we held our third annual Xmas Bird Count for Kids & Families in Berwick. We had a great turnout of people and a beautiful sunny morning, but despite starting an hour earlier than in previous years we counted fewer birds, with only 11 species spotted this year. This decline is consistent with other bird-counting events this season.

Early in the calendar year we kicked things off with a new hiking series—Wonderful Winter Wandering for Women and Girls—in partnership with Kings County Recreation. We enjoyed four beautiful hikes with a dynamic group of girls (ages 9–14) and their moms. This has been a popular series, and we hope to offer more into the spring.

In March we hosted a Community Nature Celebration in Canning. Based on FSA's success organizing previous community nature festivities, the Village of Canning hired us to set up and lead a multi-activity, celebratory-style event on March 7 around the Bigelow Trail. Key features of the session included an opening circle followed by a self-directed nature challenge along the trails, a fire area for cooking stick bread and fire tend-



JUDY LIPP

Examining tracks in February

ing, and other activities. And we welcomed back spring on the equinox with our regular monthly Kentville outing.

We started our reflection process by tallying our numbers and are pleased to report that we hosted 18 public events in 2019 with about 300 participants in total. We also successfully piloted a Forest Play program for 3- and 4-year-olds in the Kentville Gorge in the fall, and we hosted monthly nature leaders sessions to build capacity for the work we do in the Valley.

We also reflected on the qualitative aspects of our work and looked at what changes might be needed. Recognizing that nature connection and community interaction is important for everyone, we want to help facilitate that among more diverse groups going forward. A big focus of our work this year will be developing programs for children and families who are more marginalized in our society and offering them ways to interact with, learn about, and enjoy nature on their own terms. We've

secured some funding to get started with that and hope to have a multi-faceted program up and running by the end of May.

We also hope to pilot a Ravine-based nature program for teens (13–16) involving trail cams, outdoor skills, and team building. We are waiting to hear back on funding. If there is a teen in your life who enjoys the outdoors, creating videos, or meeting new people, send them our way. Regardless of a formal program we often have volunteer opportunities for folks who are able to commit for a few months. Contact Judy at [valleyflyingsquirrels@gmail.com](mailto:valleyflyingsquirrels@gmail.com). Finally, we are excited to be offering our Forest Play program for 3- and 4-year-olds again this spring. The program will run for seven weeks from May 12 to June 25 in the Kentville Gorge. Register by April 14 through the Town of Kentville: [kentville.ca/programs](http://kentville.ca/programs).

We hope to see you at one of our events or out and about on the many trails and natural places around the Valley this spring! [valleyflyingsquirrel.wordpress.com/](http://valleyflyingsquirrel.wordpress.com/)

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REVIEW

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## Climate Change: Two Books, One Message

*Reviewed by Carolyn Green*

Mike Berners-Lee, *There Is No Planet B* (Cambridge UP, 2019);  
Brett Favaro, *The Carbon Code* (Johns Hopkins UP, 2017)

☞ This article is a follow-up to Allen Amey’s thoughtful article “Reflections on Climate Change” in the last issue. A question many of us might be asking: Does it really matter if I, as one individual, take action, and if it does matter, what should I do? Two recent books offer very similar answers to these questions: *There is no Planet B*, by Mike Berners-Lee, and *The Carbon*

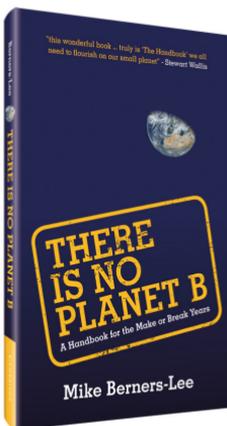
*Code*, by Brett Favaro. I will summarize their answer to the first question (does it matter?) in three main themes, then outline their advice on the second (what should I do?) as a three-step program.

## DOES IT MATTER?

*Urgency*: These books were written before the recent wildfires in Australia, but both authors would cite these fires as a perfect example of the feedback effect: Global warming contributed to starting these fires, but now the fires themselves have added CO<sub>2</sub> to further contribute to global warming. Besides this feedback effect, we also have what Berners-Lee calls the rebound effect. That is, perceived new efficiencies and reductions may be illusions if you look at the total supply chain and after-effects. As a small-scale example, you might buy a new fuel-efficient car, but then you decide to commute to work every day, whereas you previously carpooled. When the commuting is added to the new car's carbon footprint from the manufacturing process, you end up with a larger carbon footprint than if you had kept the old car. This rebound effect is happening on a large scale in industries and business. Furthermore, green or sustainable energy has not reduced emissions because it cannot keep up

with the continuing global increase, which is caused by the ever-growing world economy and the continued extraction and use of fossil fuels. If this increase in emissions continues, the world will not meet its Paris Agreement target of 1.5°C, nor the upper limit of 2.0°. The experts say we have only 10 years to turn this around.

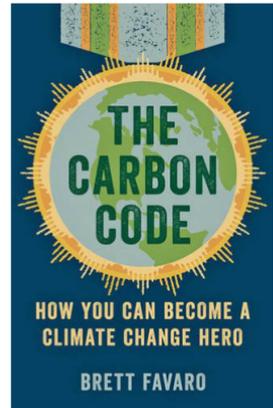
*Complacency*: Given this urgency and given that a majority of Canadians believe climate change is a fact, why are so few of us taking action? The biggest reason both authors cite is the belief that as one individual you



can have little effect, along with the belief that your own carbon footprint is very tiny within the larger whole. Both books argue that your actions *can* have an effect and that, if you look at your carbon footprint from a different perspective, you will see that it *is* important. To begin with the latter claim, you should see your carbon footprint as part of a bigger whole. As Favaro says, “Climate change is caused by seven billion of these footprints, all adding up to one big impact on our shared atmosphere.” This

“big picture” approach is a very effective argument, exposing and dramatizing our involvement in a giant web of fossil fuel dependence. Both authors use food as an example of our everyday dependence. The food industry uses fossil fuel energy and/or emits greenhouse gases at all stages, generating a global total of 23 percent of greenhouse gases. If you eat, you are part of this “big system” and inadvertently supporting it. If you eat meat, should you feel responsible for the fact that forests in Brazil are being cut to make room for more grain crops and cattle ranches? Both authors say yes. Food is just one example of a myriad of global industries that we support via our purchase of everyday items like clothing and via our participation in activities such as flying and use of the internet. Both authors argue that our complicity in these systems gives us no choice but to act.

*Morality:* This combination of urgency and responsibility allows both to argue that it is our moral duty to act. Favaro calls his program for action a “code of conduct” (to be covered in the next section). Berners-Lee takes the ethical theme further, mounting a critique of the “growth economy” whereby a country’s success is measured only by GDP or “total money wealth.” This single-minded economic system is partly the cause for today’s climate crisis and also for why our governments are failing to act. They use “cost-benefit analysis” and see fossil fuel extraction as necessary to keep “growing the



economy.” Berners-Lee argues for a different system for measuring a country’s success, such as the extent of human rights and equality, the health and life expectancy of all citizens, and the gap between rich and poor. This approach gives a positive spin to climate crisis action, arguing that it could lead to a more just economic system and a healthier society. This idea is currently being popularized in the US as the “Green New Deal.” As we move into the next section, this political message is an important component of their advice on personal action. The actions you take are to live not just more sustainably but toward the goal of creating a better world.

### WHAT SHOULD I DO?

*Step 1:* By offering their books for us to read and digest, both authors obviously believe it is important to first inform ourselves. Whatever your source of information, but especially with the internet, it’s critical to use trusted sources. Berners-Lee stresses the need to promote what he calls a “culture of truth,” especially with respect to our politicians. He offers some practical advice on how to judge the sources. Favaro urges us to inform ourselves enough to feel confident in our actions, but “you don’t need to have perfect knowledge of climate change to act on it.” Both authors stress the importance of determining the most important and most effective things to do. For example, tree planting is often cited by politicians, but in fact tree planting is not the most effective short-term action because we need to reduce emissions and sequester carbon within the next ten years. Trees will not have an appreciable effect until 20 or more years have passed.

*Step 2:* The next step is to look at your personal life. Favaro’s “Carbon Code of Conduct” offers the “4R’s”: Reduce usage, Replace carbon intensive actions, Refine your actions for more efficient usage, and Rehabilitate. (The last means that if you are causing emissions such as by flying, you can buy offsets. Offsets are actions that make up for emissions, such as funding a wind

energy project.) Both authors emphasize that our actions can be incremental. For example, if you are a meat eater, you could have one and then two non-meat meals a week. Sounds small, but if everyone in the west did this, the effect would be huge. If you love to travel, begin by reducing your international flights and look for local trips to enjoy. As you take these steps, you will serve as a model to others. However, changing things in one's personal life is not enough. The third step is public engagement,

*Step 3:* Public engagement does not mean you have to make public speeches or run for office, but you do need to address global warming at higher levels beyond your own life. This is because the biggest changes have to come from global agreements, from national government policies and programs, and from local government actions. You can engage at whatever level you feel comfortable. At one extreme you might join an activist group such as Extinction Rebellion. At the other extreme you might write letters and sign petitions urging action from the government. Other areas to consider are the workplace (form a climate-change committee) or clubs or groups you belong to in your leisure time. For example, what about the Blomidon Naturalists Society? As naturalists, we should be seriously concerned that the combined effects of climate change and habitat destruction (such as by clear-cutting) are an existential threat to wildlife. Currently, a number of provincial issues require our attention, such as the possible sale of Owls Head land for golf courses. I suspect that both authors would applaud our Society's current support of the court case calling for government action on species at risk.

*Conclusion:* This 3-step program is not at all like the 10-step alcoholic's program that results in complete abstinence. As much as we reduce and refine, we will to varying degrees still rely on energy from fossil fuels. But Favaro states that "it is entirely legitimate to work within a system to change it," once again not letting us off the hook. Favaro and Berners-Lee both push us to act, but they also offer us the positive and optimistic goal of participating in the creation of a better world.

# Winter Weather 2019, Eastern Annapolis Valley

by Larry Bogan

	TEMPERATURE			PRECIPITATION
	Max (°C)	Min (°C)	Mean (°C)	Total (mm)
December 2019 (30 yr. average)	2.6 (1.5)	-5.4 (-6.1)	-1.4 (-2.3)	104 (122)
January 2020 (30 yr. average)	0.6 (-1.3)	-6.7 (-9.8)	-3.1 (-5.6)	77 (116)
February 2020 (30 yr. average)	1.8 (-0.5)	-7.4 (-9.2)	-2.8 (-4.9)	55 (101)
Season (30 yr. average)	1.7 (-0.1)	-6.5 (-8.3)	-2.4 (-4.3)	236 (339)

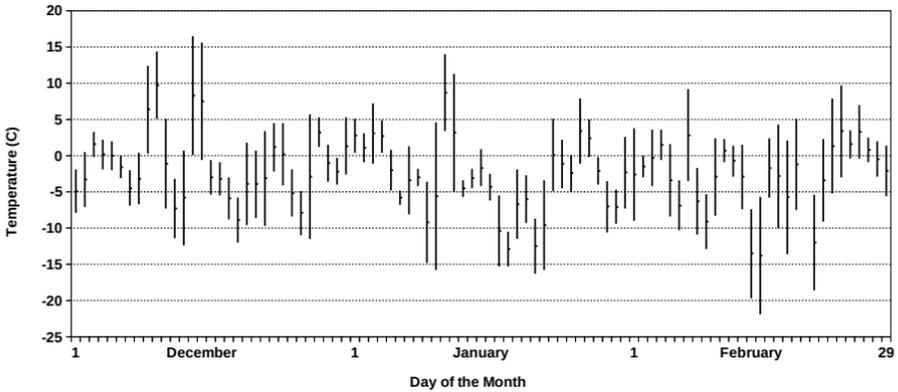
Source: Environment Canada data for Kentville, NS  
([weatheroffice.gc.ca](http://weatheroffice.gc.ca)). 30-year averages: 1981–2010.

☔ This was a warm winter with mean temperatures almost 2°C above the 30-year average, and drier than usual.

## TEMPERATURE

Normally, the daily temperatures in the winter decrease until about the end of January, then start to increase slightly before March arrives. This year, as you see in the chart of daily tem-

Daily Temperatures - Kentville, N.S.  
Dec 2019, Jan-Feb 2020



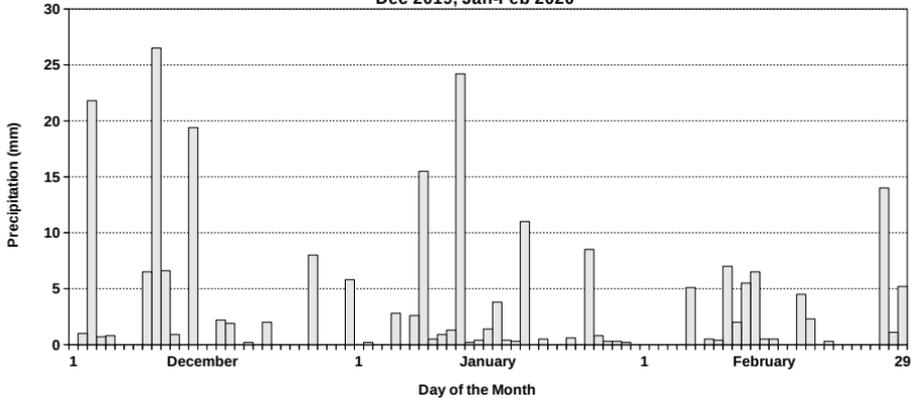
peratures, they did not vary significantly. The mean monthly temperatures were  $-1.4^{\circ}$ ,  $-3.1^{\circ}$ , and  $-2.8^{\circ}$ , a variation of only  $1.7^{\circ}$ , whereas over the last 30 years January has averaged  $3.3^{\circ}$  lower than December. This winter, December was closest to normal but still  $0.9^{\circ}$  above its average temperature. January was farthest from the average,  $2.5^{\circ}$  warmer than usual.

### PRECIPITATION

There were 236 mm of precipitation (both snow and rain) during the season—over 100 mm less than the average. All three months of winter were below average in snow and rain, but February had the biggest deficit, 45 mm. The months progressively got drier during the winter. There were really no dry periods because, as you can see in the precipitation chart, there was a nice distribution throughout the season. It is just that the amount falling decreased as the winter went along.

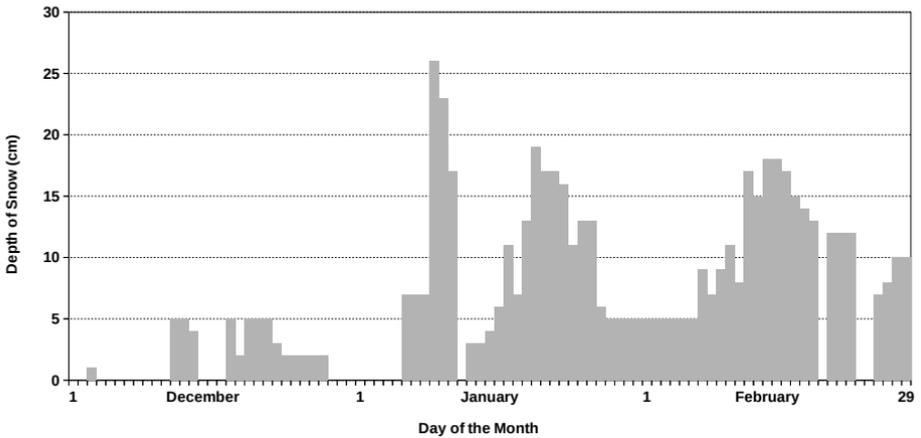
There were few clear, dry, cold periods this winter. The weather systems kept coming and coming, so there was a lot of cloud. The Valley tended to be on the southern, or warm, side of most of the weather systems and would get rain or wet snow when New Brunswick had cold and snow. There was no great

Daily Precipitation - Kentville, N.S.  
Dec 2019, Jan-Feb 2020



Depth of Snow on the Ground - Kentville, N.S.

Dec 2019, Jan-Feb 2020



depth of snow cover this winter. December never had more than 5 cm, and in January and February the times that we had more than 10 cm did not last long. Only 26 days this winter had more than 10 cm of snow on the ground.

## What's in the Sky?

*by Patrick Kelly*

### ☾ Highlights for April 2020 to July 2020

*April 3: Venus in Pleiades! (9:30 p.m.)*

*April 7: Full Moon*

*April 8–10: High tides*

*April 15: Moon and three planets (5:00 a.m.)*

*April 22: New Moon*

*April 28: Venus at greatest brilliance (p.m.)*

*May 7: Full Moon*

*May 22: New Moon*

*June 4: Mercury at greatest elongation (10:00 p.m.)*

*June 5: Full Moon*

*June 19: Moon occults Venus! (5:00 a.m.)*

*June 20: Solstice*

*June 21: New Moon (Solar eclipse: Africa & Asia)*

*July 4: Full Moon\**

*July 6: Saturn 2° from Moon (a.m.)*

*July 10: Venus at greatest brilliance (a.m.)*

*July 12: Venus 1° North of Aldebaran (4:00 a.m.)*

*July 14: Jupiter at opposition*

*July 17: Venus 3° south of Moon (a.m.)*

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\* For some Full Moons, the date shown is that of the best evening view; e.g. Full Moon officially occurs on July 5 at 1:44 a.m. ADT. Thus, I have used July 4, as most people expect a Full Moon in the evening sky on the date of the Full Moon.

*July 20: New Moon*

*July 20: Saturn at opposition*

*July 22: Mercury at greatest elongation (5:15 a.m.)*

*Planetary gathering of April 15:* The outer planets have not moved that far since the Moon passed them a month ago, as they move relatively slowly against the background stars. Mars moves most quickly and is now to the left of both Saturn and Jupiter instead of to the right of them as was the case a month ago. The three planets are now spread over twice the angular distance,  $15^\circ$  compared with only  $8^\circ$  back in March. On the morning of April 15, around 5:00 a.m., look eastward for the waning crescent Moon. Directly above the Moon, and about  $3^\circ$  away will be a bright yellowish “star,” the planet Saturn. About  $5^\circ$  to the right of Saturn shines brilliant Jupiter. About  $9^\circ$  away and at the 8 o’clock position from Saturn is reddish Mars. If you look at the same time the following morning (April 16) you will see that the Moon’s motion has carried it past Mars.

*Mercury:* Mercury swings from behind the Sun (superior conjunction) on May 4, swings into the evening sky in early June, passes between the Earth and the Sun (inferior conjunction) on July 1, and then swings into the morning sky in the middle of that month. As usual, Mercury stays near the Sun and can only easily be seen at the times of maximum elongation (where it reaches the greatest angle from the Sun as viewed from Earth). On June 4, at about 10:00 p.m., look in the northwest, above and left of where the Sun has set. You will need a low, flat horizon, as at this time Mercury is only about  $7^\circ$  above it. You can start looking earlier, but it is not that bright and may be harder to find against the brighter sky. To make matters worse, there are two stars of comparable brightness in the area. Procyon is about  $25^\circ$  to the left of Mercury, while Capella is about  $25^\circ$  to the right. Both are at similar altitudes. Then again, if you see all three, Mercury will be the middle one. On July 22 at 5:15 a.m.,

look in the northeast. Unlike the previous elongation, this time you have an easy guide to Mercury. Brilliant Venus will be well above the horizon, above and to the right of the rising Sun. If you look at the “7:30 o’clock” position from Venus, about three-quarters of the way to the horizon, the star will be Mercury.

*Venus:* Venus puts on quite the show for this time period. If you have been watching Venus, you will have seen it high in the evening sky all winter. It is now getting lower in the sky as the evenings pass and will come between the Earth and the Sun on July 5, only four days after Mercury does the same. On April 3 look for a rare treat. Venus will appear within the Pleiades star cluster in a dark sky. The Pleiades (or Seven Sisters) is an open star cluster of about 1,000 stars that formed about 100,000,000 years ago. As they are all at the same distance from the Sun, the brightest members of the cluster are also the most luminous. You may be more familiar with this cluster by its Japanese name, Subaru! On April 28, Venus will reach its brightest and will be high in a black sky at 10 p.m.— only the Sun and Moon will be brighter. On the morning of June 19, the Moon will pass in front of Venus. This occultation will already be underway when the Moon rises, and you will need a good eastern horizon. The Moon will also be very close to the New Moon phase, so it will appear as a very thin crescent. You will want to be in place by at least 5:00 a.m., as Venus should appear from behind the dark limb of the Moon at about 5:10 a.m. On July 10, Venus reaches its greatest brilliance, and two days later, on the morning of July 12, it is only  $1^\circ$  away from the red giant star Aldebaran. To see them at their best, be up at 4:00 a.m. If you want to sleep in for another hour, the sky will be a lot brighter, and while Venus will still be easy to find, Aldebaran may not.

*Earth:* If the mammals on the planet you are on get inebriated when consuming beverages laced with  $C_2H_6O$  (in the combination  $CH_3-CH_2-OH$ ), you are on Earth.

*Mars:* Before and after the gathering of the Moon and planets on April 15, Mars slowly moves higher in the sky each morning, getting brighter and brighter as it heads toward opposition in mid-October. At that time it will be quite close to Earth and will be one of the brightest objects, passing Jupiter as the second-brightest planet, with only Venus being brighter.

*Jupiter:* Jupiter reaches opposition on July 14. When at opposition, the Earth lies between the Sun and the planet. Thus, the planet rises around sunset, is highest in the sky around midnight, and sets at around sunrise. It is also as close to the Earth as it will get as we lap it in our faster orbit. If you want to look at it with a telescope to see detail, this is the best time.

*Saturn:* Take the Jupiter listing and change the first line to read: Saturn reaches opposition on July 20. As these two planets reach opposition only six days apart, they appear very close in the night sky, the brighter Jupiter leading the way.



RICHARD STERN

White-winged Crossbill

# BNS Financial Statements 2018/2019 as presented at the 2019 AGM

## GL Balance Sheet Report, Blomidon Naturalists Society

DESCRIPTION	September 30, 2019
<i>Assests</i>	
Bank Account	25,322.63
VCU Equity Share	0.00
Bank-Flower	0.00
Bank SaR	0.00
Bank FS	0.00
Accounts Receivable	3,356.45
HST Receivable	1,619.04
GIC #1	20,340.00
GIC #1 Interest	Interest 15.35
GIC #2	40,820.00
GIC #2 Interest	43.56
GIC #3	10,000.00
GIC #3 Interest	192.88
Inventory Books	6,630.67
Inventory Merchandise	614.00
<b>ASSESTS TOTAL</b>	<b>108,954.58</b>
<i>Liabilities</i>	
Accounts Payable	876.00
Deferred Income SAR	8,395.95
Deferred Income Flying Squirrel	4,846.23
Deferred Income Wildflower Book	6,500.00
<b>LIABILITIES TOTAL</b>	<b>20,618.18</b>
<i>Equity</i>	
Current Retained Earnings	1,419.84
Retained Earnings	86,916.56
<b>EQUITY TOTAL</b>	<b>88,336.40</b>
<b>TOTAL LIABILITIES AND EQUITY</b>	<b>108,954.58</b>

**GL Income and Expense Report, Blomidon Naturalists Society  
October 1, 2018 to September 30, 2019**

DESCRIPTION

*Income*

BNS Dues	3,350.00
NNS Dues	45.00
Donations	1,061.40
Calendar Sales	10,383.37
Calendar Donations	1,500.00
Misc. Sales	507.00
Interest Income	1,351.41
Other	36.00
Previous Years HST	2,031.45
Species at Risk	13,541.47
Wildflower Guide	0.00
Flying Squirrel	7,648.51
<b>INCOME TOTAL</b>	<b>41,455.61</b>

*Expenses*

Meetings	697.07
NNS Distribution	155.00
Displays	145.00
Admin.	971.65
Calendar Costs	3,616.30
News Letter	5,126.13
Bank charges	45.65
Awards	2,000.00
Wages	4,926.93
Donations to Others	3,850.00
Flying Squirrel	2,721.58
Species At Risk	13,541.47
Ilse Haut	1,000.00
Portion of HST	55.27
Inventory Expense	507.00
Other	676.72
<b>EXPENSES TOTAL</b>	<b>40,035.77</b>

Total Income	41,455.61
Total Expenses	40,035.77
Net Profit (Loss)	1,419.84

# BLOMIDON NATURALISTS SOCIETY

## 2020 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	\$ _____
_____	Student Membership	\$15.00	\$ _____
_____	Junior (under 16 years) Membership	FREE	\$ _____
_____	Nature Nova Scotia Membership	\$5.00	\$ _____
_____	2020 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: 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

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Jean Timpa 902-542-5678

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Vacant

### FISH

Vacant

### FLORA

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### FUNGI

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Ken Harrison [nosirrah@bellaliant.net](mailto:nosirrah@bellaliant.net)

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### MOSESSES & FERNS

E.C. Smith Herbarium

### ROCKS & WATER ISSUES

Howard Williams 902-791-5194 [gruncle.howard@gmail.com](mailto:gruncle.howard@gmail.com)

### SEASHORE & MARINE LIFE

Jim Wolford 902-542-9204 [jimwolford@eastlink.ca](mailto:jimwolford@eastlink.ca)