

THE HALIFAX FIELD NATURALIST



No. 190
March to May 2023



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

HFN is incorporated under the Nova Scotia Societies Act and holds Registered Charity status with the Canada Revenue Agency. Tax-creditable receipts will be issued for individual and corporate gifts. **HFN** is an affiliate of Nature Canada and an organisational member of Nature Nova Scotia, the provincial umbrella association for naturalist groups. **Objectives** are to encourage a greater appreciation and understanding of Nova Scotia's natural history, both within the membership of HFN and in the public at large, and to represent the interests of naturalists by encouraging the conservation of Nova Scotia's natural resources. **Meetings** are held, except for July and August, on the first Thursday of every month at 7:30 p.m. in the auditorium of the NS Museum of Natural History. **HFN Field Trips** are held at least once a month; it is appreciated if those travelling with someone else share the cost of the gas. **Participants** in HFN activities are responsible for their own safety. **Memberships** are open to anyone interested in the natural history of Nova Scotia. Forms are available at any meeting of the society, or by writing to: Membership Secretary, Halifax Field Naturalists, c/o N.S. Museum of Natural History. Members receive **The Halifax Field Naturalist**, along with its included **Programme**, quarterly. Our membership year is from January 1st to December 31st, and new memberships received from September 1st to December 31st of any year are valid until the end of the following membership year.



HFN ADDRESS

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David Patriquin.....	423-5716
Clare Robinson	446-6603
Ron Arsenault.....	410-6868
Vacant	

NNS Rep.

YNC Rep.

Website

CSC Award

David Patriquin.....	423-5716
Janet Dalton	443-7617
David Patriquin.....	423-5716
Allan Robertson.....	422-6326

FEES

Student	\$15.00 per year
Individual	\$20.00 per year
Family	\$25.00 per year
Supporting	\$30.00 per year
NNS (opt.)	\$5.00 per year

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GRAPHICS All uncredited illustrations are by H. Derbyshire or copyright-free sources. **Front Cover** - Smooth Green Snake in May /22 at Albany New, Lesley Jane Butters; **Back Cover** - Spring Fiddleheads, Rebecca Robertson; **Tide Table** - Cdn. Hydrographic Service, Fisheries & Oceans Canada.

HFN NEWS AND NATURE NOTES

!CITY NATURE CHALLENGE 2023!

The dates have been set! Between April 28th and May 1st Canadian participants will be recording wildlife observations in their patch of the outdoors (in 2021, over 450 cities around the world participated). It's anticipated 50 Canadian cities will take part – from St. John's to Vancouver and north to Yellowknife and Whitehorse. Let's hope that nature will be responding to spring weather then.

This four-day window will capture a snapshot of findings to showcase the biodiversity of chosen local habitats. Among the top 10 findings from the Maritimes in 2022 were Mayflower, the American Robin, Balsam Fir, and Colt's Foot. Plants may not be in bloom but leaf recognition is a bonus.

Log in to register at iNaturalist.ca to create an account. Watch a two-minute YouTube video to learn more about the magic of identifying nature, perhaps new to you, in the field. This will be your tool while using a smart phone, or – your observations can be uploaded on return to your wifi. Camera images are best (uploaded upon return). For plants, two or more images make it easier for the team to ID or confirm. Your findings should include habitat and close-ups of leaves and/or blossoms. If you can't get out in the field, participate and assist as a reviewer during the week following; this is an excellent way to learn more about our local biodiversity.

City Nature Challenge is organised by the California Academy of Sciences and the Los Angeles Natural History Museum. The Canadian participation is coordinated by the Canadian Wildlife Federation.

NATURE NOTES



– S. Robertson & J. Dalton

JANUARY 5th MEETING

Lesley Jane Butters said that the Wolfville/Melanson/Gaspereau area has been just inundated with **hundreds of Bald Eagles!** It was also prolific with very **many Starlings**. She also saw both **Red- and White-tailed Hawks and Harrier Hawks**. On New Year's Eve there were lots of birders at Scots Bay in 12°C weather; on the beaches there Hurricane Fiona had thrown up tons of driftwood, about one storey high. Marion Sensen reminded us to put out our Christmas trees for winter birds to shelter in (Gareth Harding noted "Unless there are cats around!").

Susan Holmes reported a **Great Egret** at Sambro Marsh and a **Pileated Woodpecker** on Chestnut Street.

Gareth has been seeing an **increased White-tailed Deer** population in Point Pleasant Park; he spotted 12 of them crossing Point Pleasant Drive. Gillian Webster went on a Christmas Bird Count. She saw **30 Harlequin Duck, 10-20 Long-tailed Ducks, and Black Guillemots**.

Dennis Hippen has a **Sharp-shinned Hawk** in his area of Dartmouth. He says they are successfully controlling the **Pigeon population**.

FEBRUARY 8th MEETING



Mille MacCormack has spotted a **pair of Wolves** during her walks. At Mill Cove she saw an **American Coot**.

On January 3rd, Lesley Jane saw a **Woolly Bear Cat-**

erpillar; she thought it was dead, but while cradling it in her palm its warmth started it moving again. Allan Robertson reminded us that Woolly Bears might be one of those caterpillars that survive winter freezing (and indeed, they do produce a kind of antifreeze which protects their organs and other soft tissues while the rest of the caterpillar freezes solid over the winter – only to come to life again when temperatures rise).

Gareth Harding spotted a **dead Razorbill** on the beach at Point Pleasant park. Bernie McKenna reported that birds were feeding heavily on their garden berries, and noted the 'skinniness' of the **Rhododendron leaves** in the extreme cold.

Carol Klar saw **16 Red-breasted Mergansers** at the Dingle on February 7th – eight females and eight males; Lesley Jane spotted the same group off Point Pleasant Park on Saturday, February 4th.

Ron Arsenault noted that although Friday February 3rd was very very cold, he spotted a **Kingfisher** along with a **number of Black Ducks**.



MARCH 1st MEETING

Stephanie Robertson reported **Western Pine Beetles** emerging in her house. About two or three appear every year about now and around September. They never seem to fly, but do wander far all over the house. She also had two **Mayflies** for awhile. Allan Robertson saw **nine Deer** crossing Point Pleasant Drive near the industrial area there. Stephanie mentioned that Gareth Harding saw a group of **twelve Deer** there, both older and younger, crossing in a group.

Lesley Jane Butters mentioned there was ice on the Northwest Arm right up to the Dingle Tower but not thick enough to skate on. Whenever she was down by the Northwest Arm she saw about **six or seven Deer tracks** in the snow as if they had travelled the area like a highway. On February 28th she saw a **Gray Squirrel** on Walnut Street. Stephanie mentioned that many years ago there was a Grey Squirrel in Point Pleasant Park, and without there being a second one as a possible mate, it eventually disappeared.

Max Raissi mentioned he saw two **turtles** last summer at the the Public Gardens' large pond. With the pond now frozen over, he wondered where the turtles may have gone. Clarence Stevens said that they are still there down in the mud. He joked that they did not go south as birds do. Bernie McKenna stated that there are a **pair of Cardinals** in his neighbourhood and on February 26th he heard one singing for the first time.

eNotes From Gareth Harding on Feb. 24th – "Big surprise! We have a Gray-crowned Rosy Finch at our feeders!!! A first for me, it is a west coast finch from the rockies. Quite the weather event."

NEW AND RETURNING



Joanne and Pierre DesRoches
Carolyn Pineau & Roman Husiuk
Lilian & Stephen Leonard
Sheila Pugsley
Sharon Russel
Wendy Weckworth

SPECIAL REPORTS

2022/2023 YEAR-END REPORTS

MEMBERSHIP

In 2022 our membership figures indicate that we collected dues for 53 individual, 29 family, 23 supporting, and 4 institutional memberships (one with 2 subscriptions) for a total membership of 109. It should be noted that these figures represent memberships, not 'members', as additional members from family and supporting memberships are not recorded. Halifax Field Naturalists no longer collects membership funds on behalf of Nature Nova Scotia.

A special thank you to Doug Linzey and to Bernie McKenna for all their help with membership related tasks.

TOTAL MEMBERSHIPS BY YEAR:

2013	/14	/15	/16	/17	/18	/19	/20	/21	/22
109	114	129	146	115	123	113*	113*	114*	109*

*Based upon memberships received. Years prior to 2017 were reported as membership numbers at the end of December. **Note:** Facebook numbers are > 2000.

– *Respectfully submitted, Ronald Arsenault*
Membership Secretary

NEWSLETTER

SPRING ISSUE NO. 186, 16 PAGES After the 2021/2022 Year End Reports, we followed Gareth Harding once again with his intriguing Tree Swallow sightings and stories from his cottage at Morar, just south of Cape George Point near Cape George. Patti Leclerc reviewed for us Chris Harvey-Clark's 1996 *Maritime Marine Life - Field Guide to Fishes, invertebrates and plants of the North-west Atlantic*, a much broader-in-scope publication than his 1996 *Eastern Tidepool and Reef*.

Despite COVID restrictions, and by not violating them, Clarence Stevens planned, conducted, and reported on his 2021 thirty-day, province-wide event "**Saving Salamanders**". Thirteen other types of amphibians were also helped at the same time.

We heard all about the **Cobequid Wildlife Rehabilitation Centre** in a presentation by volunteer Brenda Boates and CWRC's Operations Manager, veterinarian Dr. Jessica Rock. Coastal Action's coordinators Taylor Creaser and Noah Hardy told us all about their **Species at Risk and Biodiversity Project** via Zoom, focusing on the plights of turtles and snakes.

Birds Canada's **Piping Plover Conservation Programme** and the Space to Roost Programme's Coordinator Laura Bartlett shared this little birds needs, declining population spots, distribution, specific threats, and what not to do in order to help this dear little beach nester and feeder.

Brian Bartlett ("Selected Dawns and Sunrises"), Emma Bocking (wetlands pictures), and Burkhard and Ingrid Plache (a summer Cape Breton camping trip) shared their beautiful images for our "AGM and 'Slide' Night".

SUMMER ISSUE NO. 187, 16 PAGES Our nature notes made a comeback with lots of exciting reports at our April, May, and June meetings, and our New and Returning (members) feature contained 15 memberships (19 people). On April 7th Jamie Simpson presented "**Species at Risk**" and "**Eating Wild**", the first a quick run-down of the successful legal case against the Minister of Natural Resources who was not meeting his legal obligations to protect our

species at risk. HFN was a litigant as well Jamie Simpson, Bob Bancroft of Nature Nova Scotia, and various others. May 5th was a wonderful talk by Chris Harvey-Clark on the status and dangers of **Great White Sharks** in Nova Scotia's coastal waters. On June 2nd we learned all about the latest on **Chimney Swifts** from Laura Bartlett of Birds Canada.

Field Trip Reports: April 29th – an eventful **Seaweed Hike** near Peggy's Cove in cold, windy, and rainy weather (we balanced on slippery rocks while learning all the differences between seaweed species in the blustery cold wind. no one fell in.); and on May 14th – a **Bookfield Wetlands Hike** full of birds, plants, and lovely warm weather.

FALL ISSUE NO. 188, 12 PAGES This was our saddest issue, with the news of our former President Burkhard Plache's drowning on September 10th during our Melmerby Weekend; a great loss to his wife Ingrid and his family in Germany, and as a highly valued member of HFN and his workplace.

We had our always fulsome and interesting Nature Notes from **Albany New** by Lesley Jane Butters, and also from Gareth Harding with a **New Arrival to Morar**, which was a House Wren!

Field Trip Reports: **350 Millions Years Later: Blue Beach** – a fabulous all-day learning and gathering trip with 28 participants led by Geology Professor Howard Donohoe on March 22nd. Also – **Backyard Bees** on August 6th at the Cole Harbour Heritage Farm led by its Michelle McPherson. We learned all we didn't know about different species of bees, their habits, and what areas they prefer along with all the differences between them and wasps, hornets, and flies. **Shubenacadie Canal** was our August 13th trip where we hiked and learned about its detailed and varied construction history.

WINTER ISSUE NO. 189, 12 PAGES We opened with the Bench Dedication at Belcher's Marsh to our late Bob McDonald, longtime HFNER who was instrumental along with his wife Wendy in saving this beautiful area for all to enjoy right in the midst of a heavy residential development. October, November, and December **Nature Notes** had a plethora of sightings which included some surprises. **Notes From Morar** included an endearing story about a young Philadelphia Vireo probably blown in by Hurricane Fiona. Pat Leader told us of the **The Giant Eggs of Merry Bar, Iceland** – large, 3-dimensional carved rock eggs in the town of Djupivogur. Once again mycologist John Crabtree presented us with an always informative talk on **Mushrooms** on October 6th. Physician Norm Pinsky presented his trip to **Papua New Guinea**. In truly primitive conditions in this hard-to-travel country with its very steep, mountainous, and thickly jungled hills, medicines that he could to people in villages there.

Field Trip Reports: We had a wonderful and rewarding follow-up **Mushroom Hike** led by John Crabtree on October 12th in Shubie Park, Dartmouth. Our **Almanac** and **Tide Table** rounded out all these issues.

Thanks to everyone who so ably and willingly contributed their submissions, and to Don Flemming for offering to take over from Pat Chalmers as Almanac Compiler.

HFN TALKS

ORGANIC CHEMISTRY 5 JAN.

– Stephanie Robertson

“What in the World Isn’t Organic Chemistry?” –

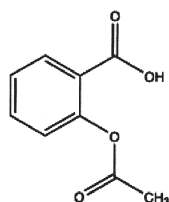
(and for that matter, what in the world *is* organic chemistry?) Retired St. Mary’s Chemistry Professor and longtime HFNER, Keith Vaughan thought this might be an interesting topic for HFN because of the type of trips we sometimes offer, such as the June 2nd, 2016 geology talk “Not All Rocks are Granite” and its following June 4th field trip to Bayer’s Lake and Peggy’s Cove presented and led by geologist Barrie Clark who detailed the history, *chemistry*, and origins of the rocks there.

Keith was a professor of chemistry at Saint Mary’s for 44 years – from 1969 to 2013. His main interest was in organic chemistry which is distinct from inorganic chemistry. What *is* organic chemistry? It is the chemistry of carbon compounds (inorganic chemistry is the remainder, i.e. the other 91 naturally occurring elements without carbon, such as minerals (i.e. rocks) which are inorganic). All life is based on organic chemistry.

Biochemistry, sometimes called biological chemistry, is the study of chemical processes within and relating to living organisms. *All* the molecules of life, such as proteins, nucleic acids (DNA, RNA, etc.), carbohydrates (sugars), lipids (fats), and hormones are organic and contain carbon – along with some contributions from elements other than carbon such as iron (blood), and zinc and magnesium (chlorophyll).

Organic chemistry is intimately involved in our lives – in our food and drink; our hygiene (soaps, detergents, perfume); our health with drugs and medicine; the colours we enjoy in nature (flowers, autumn leaves, and synthetic dyes and paints); our clothing fibres such as wool, cotton, nylon, and rayon; and in agriculture with its fertilisers and insecticides.

(Have you got a headache yet? Take two aspirin, or ASA, the acronym for acetylsalicylic acid.) And – here is its diagram:

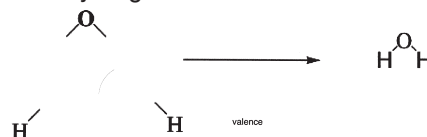


aspirin, acetylsalicylic acid

What does this diagrammatic structure mean? “Time for some basic chemistry”, Keith said and proceeded to explain chemical bonding.

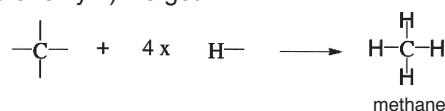
Organic compounds are a collection of molecules. Each molecule is a specific collection of atoms which have precise and unique arrangements. A good example is water, described alphabetically as H₂O because it has two atoms of hydrogen (H) and one of oxygen (O). However, why not H₃O or HO₂? Well, that is because of ‘valence’, a measure of an element’s power when combining with other atoms in forming different chemical compounds. Oxygen has a valence (combining

strength) of 2; hydrogen has a valence of 1, so when oxygen and hydrogen combine it looks like this:

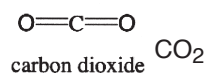


Oxygen can hold on to two hydrogens, but the two hydrogens, which only have the strength to hold on to one atom, are both fulfilling their valence 1 in sharing the same oxygen atom.

What about the valence of carbon, the essence of organic compounds? Carbon has a normal valence of 4, and this means it can attract, or bond to, four elements. So, when we combine carbon and hydrogen (with its valence of only 1) we get -

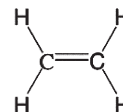


and this makes methane, also known as natural gas. Other examples of carbon compounds are;



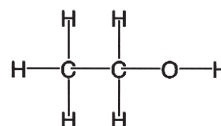
carbon dioxide

CO₂



ethylene

(precursor of polythene)



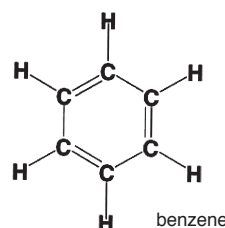
ethanol

CH₃-CH₂OH



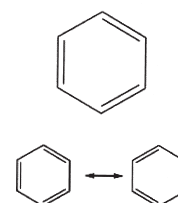
acetylene

The double lines in carbon dioxide, CO₂, represent a stronger bond between elements; it’s a ‘double bond’. In ethylene there’s a double bond between the two carbons. An even stronger triple bond exists between the two carbons in acetylene. These different bonding strengths affect how the molecules will behave. Keith shared many other chemical diagrams with us and interesting tidbits about each substance they represent. Apparently for instance the hydrocarbon benzene is ‘a special case’ – a six carbon ring compound with three alternating double bonds. This structure imparts unique properties to benzene which are different from other ring compounds. Because many fragrant oils contain that unique six-sided benzene ring, these compounds became known as aromatic.



benzene

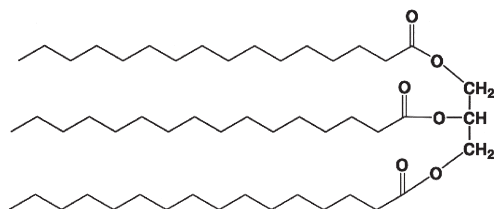
or



The double bonds in benzene can be in different places, such as shown lower right, previous page. This is known as resonance and can cause oscillation. Moreover, its double bonds make it very stable, and because of that it can be found in many other substances (such as we saw in the aspirin diagram on p.6).

All this is so far just a nano-bit of information about all the trillions of different carbon compounds there can be, how they behave under certain conditions, what they can further combine with, and how humans use them, change them, and benefit from or can be harmed by them. Keith showed diagrams for a few of the many pharmaceuticals used in Canada – Tylenol (acetaminophen), Amoxicillin (an antibiotic), warfarin (a blood thinner), Celebrex (an anti-inflammatory for acute pain and arthritis), and hydrochlorothiazide (a diuretic which lowers blood pressure). All had one or more benzene hexagon rings and looked fairly similar in their structure.

The main chemicals of life are **Proteins** (poly amino acids); **Carbohydrates** (sugar, glucose); **Nucleic Acids** (DNA, RNA, genes); **Lipids** (organic fatty acids and derivatives insoluble in water but soluble in organic solvents (many natural oils, waxes, and steroids);



fatty acid triglyceride

and **Hormones**, fauna- and flora-produced substances transported in fluids such as blood or sap to stimulate specific cells or tissues into action – e.g. epinephrine (blood pressure); enkephalins (regulate pain); and testosterone and progesterone (sex hormones). Keith showed us the chemical diagrammatic representation (above) of a fatty triglyceride (found in cell membranes) along with three types of detergent which render them soluble in water. Surprisingly, male testosterone and female progesterone are identical in every respect except at one spot; testosterone has an add-on there of OH, an hydroxide, and progesterone's add-on at the same spot is a methyl group of oxygen, O, and CH₃. The latter is derived from methane, CH₄, and is also a methyl group (the other methyl group we encountered was at the bottom in the first diagram of aspirin).

Proteins are found in enzymes, silk, collagen (cartilage), and keratin (hair, nails, feathers, etc.).

Sugars can be found in fruits, sugar cane, vegetables such as the sugar beet, and plant saps, nectars, and honey. Keith showed us a slide of a sugar refinery in Maui. When we lived in Barbados, we'd regularly walk our dog Oliver up and around the sugar cane fields (avoiding cane snakes and cane toads). There were one or two sugar refineries there as well.

Our lives would be pretty boring without the glorious **colours** found in flowers and plants. Plants have three principle substances which exhibit colour – **Anthocyanins** (red, pink, purple, and blue; **Carotenoids** – yellow,

low, red, and orange; and **Chlorophylls** – the greens in leaves and other plant parts.

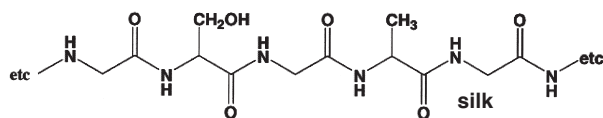
Keith showed us two anthocyanin diagrams – peonidin, the purplish-red hue in peonies, roses, and some morning glories; and petunidin, the dark-red of purple petunias, chokeberries, and some grape species. Anthocyanins are common in Lady-slipper Orchids.

The carotenoid beta-carotene gives sunlowers their wonderful yellow. A stunning fall Musquodobit River valley photo illustrated both the greens of chlorophyll and the oranges and reds of the carotenoids. A Sobey's produce display showed the intense colours of red, green, and yellow peppers.

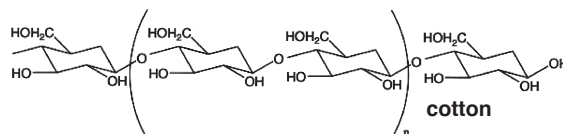
There are also synthetic, man-made dyes used in textiles, paint, and even our food. There are many types of them (for instance acid, cationic, sulfur, naphthol, azo, aniline, and many more). Keith showed diagrams of two azo dyes used in food – methyl orange and sunset yellow, also a colourful building mural in Halifax, and a wall of paint sample cards – millions of colour possibilities there!

Taste and Flavour – Fruit flavours are often attributed to the presence of an 'ester', an organic compound made by replacing the hydrogen of an acid by an alkyl or other organic group. It's a class of organic compounds which react with water to produce alcohols and organic or inorganic acids. Many naturally occurring fats and essential oils are esters of fatty acids. The ester pentyl acetate is the flavour of pears; iso-pentyl acetate is that of bananas; methyl butyrate - apple; ethyl butyrate - pineapple; pentyl butyrate - strawberry, iso-butyl methanoate - raspberries, and methyl salicylate - wintergreen (teaberries, wintergreen peppermints). There wasn't too much difference in their chemical diagrams. Then there is limonene - oranges and lemons, phellandrene - oil of eucalyptus, and menthol - oil of peppermint, (great for cough drops). Food chemists can reproduce almost all of them, as one can buy many artificial flavourings for use in cooking such as maple, almonds, orange, mint, vanilla, etc.

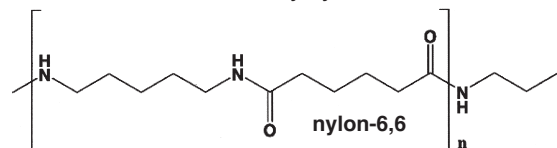
Fibres – Our clothing is made from both natural and man-made (synthetic) fibres. Natural fibres come from animals such as worms (silk), sheep (wool), and mammals (woolen cloth, leather). Plants give us jute (*Corchorus* spp.), cotton (a cellulose), and flax (linen). Silk is a protein fibre produced by silk worms from mulberry trees,



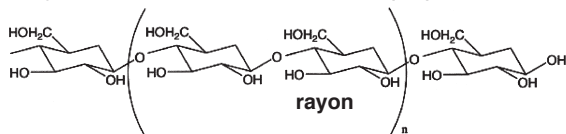
and cotton is a cellulose, based on the carbohydrate polyglucose (a sugar).



Some synthetic fibres are nylon, rayon, and polyester. Here's nylon in a short-hand diagram which does not show the carbon atoms; it's fully synthetic:



It looks completely different from the cotton and rayon diagrams which are based on plants. Here's rayon, a semi-synthetic fibre made from wood pulp:



the wood pulp is chemically treated to make its naturally-occurring cellulose form into fibrous filaments which can be woven just like wool and cotton fibres.

Agriculture – A solid, brilliant yellow field of rapeseed flowers (canola) was Keith's intro to farming practices. In a very essential way, modern agriculture, which first started in the late 1940's, is 'organic' but not in the way we understand organic today. Large producers use pesticides, chemical agents that deter, kill, and/or otherwise discourage pests; herbicides, such as weedkiller, chemical substances used to control unwanted plants in the crop field; fungicides, chemical agents which kill fungi; fertilisers, any natural or synthetic material which supplies nutrients essential to the growth of plants; growth hormones (phytohormones), chemicals which regulate plant growth; and animal feed supplements, added to livestock feed for extra nutrients, such as vitamins, amino acids, fatty acids, and minerals.

Organic farming today Organic farming is an alternative agricultural system which originated early in the 20th century in reaction to rapidly changing farming practices using many synthetic chemicals, of which some, after years of use, were found to be harmful to the environment, animals, and people (e.g. the notorious DDT). Organic agriculture relies on fertilisers of natural origin such as compost, green manure, and bone meal, and it places emphasis on techniques such as crop rotation and companion planting. Biological pest control, mixed cropping, and the fostering of insect predators are encouraged. In general, organic standards are designed to allow the use of naturally occurring substances while prohibiting or strictly limiting synthetic substances. Organic farming continues to be developed by various organic agriculture organisations.

There was a long and interesting Q&A session after Keith's talk. Thank you Keith, for the enlightening, important, and interesting presentation about organic chemistry which touched on the basics of how each unique substance is constructed at the molecular level.



OSPREYS

8 FEBRUARY

– Bernie McKeena

NS Power environmental scientist Peter Morrison took us on a wonderfully informative talk through its Osprey Management Programme. Despite the handicap of not being able to marry his computer to the Museum's AV system after a half-hour of trying, it soon became clear that it didn't matter – Peter had an in-depth knowledge of it all, with a passion for both the programme and the Ospreys themselves. He really knew his stuff!

Upon graduation as a marine biologist from Dalhousie, he worked four years at the esteemed Huntsman Marine Science Centre in St. Andrews NB before doing ten years, also in NB, as an environmental consultant. After a stint with NB Power and Emera, he signed on with NS Power in his current capacity. This wealth of experience certainly showed (and held him in good stead when his visuals could not be transferred to the screen).

The true beneficiary of the Osprey Programme is the Osprey *Pandion Haliaetus*. By an act in the House of the Assembly, it has been our provincial bird since 1994. A large predator, it dines almost exclusively on live fish which it catches by diving vertically from 30 metres or so. With its one-inch talons and feet pads covered in hundreds of sharp spiny scales, not many fish once caught manage to escape. Ospreys measure between 53 to 61 cm in length with the female being about one third larger than her mate. Often seen soaring or hovering over water it is just as often initially heard as seen; very vocal, it's hard to mistake the sharp shrill whistles as it makes its presence known. Summer migrants to our province, they spend the season here, raising a family before heading south to warmer climes, somewhere around the middle of September.

This NS Power Osprey programme has been run for forty years now. As time goes by the programme continues to evolve and improve through innovation, experience, and knowledge gained. Peter assured us the NS population is doing very well, rebounding tremendously, especially after DDT was banned in Canada in 1985 (however stocks were still allowed to be sold until the end of 1990). Prior to that they were in trouble. Presently, throughout the province, NS Power has slightly over 100 pairs nesting on their poles. This no doubt has played a large part in its expanding population growth. Also, the amount of information that is currently shared between individuals, government departments, and other interested parties, has also been a big boost to the programme's results.

Peter has been involved in a number of different aspects of the Osprey programme: the associated elements of risk (to both the birds and personnel); the NS power poles themselves; Osprey reproductive success; other animals and birds which become involved; the field biologists and power pole technicians themselves; wetland surveys, and line work. Ospreys nest, or try to, on about every type of power pole, all the way from the familiar wooden poles we see everywhere to the large, metal, high tension structures which can be seen very often with a large nest on top. He covered several points in relation to the monitoring and maintaining poles: the risks of the work to both the birds and the power line technicians (PLTs); how suitable the poles are for nesting; and the upper pole structure in relation to insulator location. Typically, on their tops, wood poles normally have two horizontal wooden cross members for bracing. From the birds' perspective these make



excellent nest platforms on which to build, they are very stable, level and solid. While wood pole insulators are mounted on top of the cross members and with the wires themselves being insulated there seems to be no danger in that respect.

With the large metal high tension structures there's ample area on which to build a nest. On these structures the wires are uninsulated but the insulators hang down and thus remove much chance of the birds coming in contact with the wires.

As Peter mentioned, there are many potential problems in nest location, with each being unique to some degree. Examples of such problems and their considerations are:

Bird safety – The top priority in every instance throughout, from nest building to when the young eventually fledge and leave the nest.

PLT safety Of prime importance also, with all guidelines and regulations being carefully followed.

Noise level and light intensity – Can be very disturbing to the birds and is a prime consideration especially in nest relocation situations.

Weather exposure – High winds can be punishing and Peter said there's one nest in the province which gets blown off the pole every single year. When the birds come back they're faced with rebuilding it over and over again.

Nest size – Can be an occasional problem, as any long branches in the vicinity of the poles can contact one or more lines. If these branches get wet they can become electrical conductors and actually start a fire; there's one nest fire per year in the province.

Pole integrity – Is of great importance, it has to be solid and structurally sound. One problem in this area is woodpeckers – they make large nest holes which other birds and animals can also use; this in turn opens the pole interior to the elements and it hastens internal decay.

Repair timing – All nesting pole repair or replacement work is scheduled and done in the off season – from August 31st to April 1st and always in conjunction with the NS Department of Natural Resources.

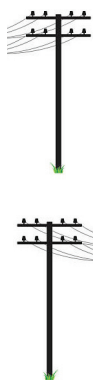
The main aims of the Osprey Programme are to protect the birds at all times; allow for a safe, reliable power supply; carry out nest trimming and other work as required; provide the optimal time/season for nest removal or relocation; and thoroughly train PLTs and contractors in all its important procedures and requirements.

Normally, work flow for a specific site begins with a phone call or report of some concern. This can originate from anyone, anywhere, and on average results in 15 nest assessments and/or actions per year. Calls are received at the NS Power customer service desk and all the particulars, such as location, specific problems, degree of urgency, and contact information, are collected. This is relayed to experienced assessors and work teams, and then a site visit for an NS Power assessment will be scheduled. If deemed necessary, an action plan is designed. Depending on the situation DNR may or may not be involved; within nesting season DNR will always be informed and consulted. Necessary remediations could vary from nest trimming, nest relocation, or even nest removal (in which DNR is also always involved). With some, it's found necessary to make that specific site unavailable for future nest building.

With nest relocations, sometimes the whole nest platform may be moved to another convenient and acceptable location (Russell Lake comes to mind). In others, only the

whole nest may be physically moved. In both cases location is always critical as NS Power trucks have to be able to have access. If the new site is on private property, the land owner's permission is needed. This is not always given. Always, in any relocation, a natural site alternative is much preferred, however if so, it still must address all the risks and potential problems.

Following an active Q and A session it was very clear to all that Peter had had everyone's riveted attention from start to finish. As well, several members remarked how much they were surprised and impressed with such an excellent talk where we had no video capability for photos. Peter's experience and mastery of his topic played a major part in that assessment.



AGM & 'SLIDE NIGHT' 1 MARCH

– *Stephanie Robertson*

After our annual AGM at which Bernie McKenna was elected our new President for 2023, **Lesley Jane Butters** knowledgeably shared lots of facts about winter ice, along with her surprising and beautiful ice images from a two-week kick-sledding sojourn in the Wolfville area.

What was so distinctive were the different appearances of the ice depending on the conditions in which it had frozen. White ice is made of snow which has melted then refrozen. Some ice patterns resemble grey-blueish shapes like stained glass windows (without colour) or a mosaic artwork. Others look like baseballs; tinier ones like white cotton wool balls. Some resemble long shards of manufacturing steel – all depending, before their refreeze, on how the wind thrashed these fragments about while they lay floating in open water. There can be striking wispy patterns embedded in ice layers; then, when strong winds swirl and twirl the dry snowdrifts, or during a snow flurry, and if the ice surface is wet, these whorls of dry snow adhere to the ice, then freeze, leaving behind exquisite patterns resembling slow-drifting smoke as seen from a chimney.

Clarence Stevens shared his pictures of many common Nova Scotia flowers, plants, and trees which can be eaten or used for medicine. Highlights are: **Foxglove** – it contains digitalis which strengthens the heart (if needed, otherwise it can be very dangerous); and **Bunchberry**, which most people think is poisonous but is not. **Yellow Birch's** minty leaves are edible, while its bark oil extract is used for skin problems and also as an anti-inflammatory. **Staghorn Sumac** flowers can be squeezed for their delicious juice and even eaten as is. The little blue **Periwinkle** is very poisonous, to both animals and humans. **Yarrow** – this is the 'first-aid plant'. It will stop bleeding almost instantly. **Bedstraw** is also a springtime edible plant, and **Sarsaparilla** root gives its distinctive (and name-giving) flavour to root beer.



ALMANAC



WINTER 2022

"There is no time like Spring, / When life's alive in everything, / Before new nestlings sing ..."
From "Spring", by Christina Rossetti

NATURAL EVENTS

- 7 Mar. Full Moon
- 20 Mar. March Equinox (first day of spring in the Northern Hemisphere) occurs at 17:17 AST
- 21 Mar. New Moon
- 25 Mar. Earth Hour 2023 from 20:30 to 21:30 AST (<http://earthhour.org>)
- 6 Apr. Full Moon
- 11 Apr. Mercury at greatest eastern elongation (view low in the western sky just after sunset)
- 20 Apr. New Moon
- 22 Apr. Earth Day 2023 (<http://earthday.org>)
- 22-23 Apr. Peak Lyrids Meteor Shower (meteors radiate from the constellation Lyra)
- 5 May Full Moon
- 6-7 May Peak Eta Aquarids Meteor Shower (meteors radiate from constellation Aquarius)
- 8 May Average date of the last spring frost for the Halifax Area (<http://almamac.com>)
- 19 May New Moon
- 29 May Mercury at greatest western elongation (view low in the eastern sky just before sunrise)
- 4 Jun. New Moon
- 4 Jun. Venus at greatest eastern elongation (view in the western sky after sunset)
- 8 Jun. World Ocean Day (<http://worldoceanday.org>)
- 10 Jun. to 21 Jun. Earliest mornings of the year in Halifax area (sunrise at 05:28)
- 18 Jun. New Moon
- 20 Jun. to 2 Jul. Latest evenings of the year in Halifax area (sunset at 21:03)
- 21 Jun. June Solstice (first day of summer in Northern Hemisphere) occurs at 10:51 AST

– Sources: *Sea and Sky Astronomy Calendar*

SUNRISE AND SUNSET ON WINTER SATURDAYS FOR HALIFAX: 44 39 N, 063 36 W (all times AST)



4 Mar.	06:46	18:05	1 Apr.	06:55	19:41
11 Mar.	06:34	18:14	8 Apr.	06:42	19:50
18 Mar.	07:21	19:23	15 Apr.	06:30	19:58
25 Mar.	07:08	19:32	22 Apr.	06:18	20:07
			29 Apr.	06:07	20:16
6 May	05:57	20:24	3 Jun.	05:31	20:54
13 May	05:48	20:33	10 Jun.	05:28	20:58
20 May	05:41	20:40	17 Jun.	05:28	21:02
27 May	05:35	20:47	24 Jun.	05:29	21:03

– Source: www.timeanddate.com

ORGANISATIONAL EVENTS

Blomidon Naturalists Society <https://blomidonnaturalists.ca>

- 20 Mar. "Vernal Ponds" Zoom meeting, 7:30 to 9:00 p.m. with speaker John Brazner, Provincial Wetlands Biologist
Note: see <https://blomidonnaturalists.ca/events> for more info.
- 26 Mar. "Miner's Marsh Walk", 10:00 a.m to 12:30 p.m., 87 Cornwallis St., Kentville.
- 17 Apr. "Bird-Friendly Communities & Cities", speaker Melissa McDonald, by Zoom and at Wolfville Curling Club.
- 14 May Spring Birding Meet-Up; Beginners Welcome
- 14 Apr. "Geology of Horton Bluffs at Low Tide", with Peter Wallace at Blue Beach.
- 4 Jun. "Jim Wolford Memorial Hike to the Vernal Pond", 10:00 a.m., Soren Bondrup-Nielsen, Blomidon Prov. Park.

Canoe/Kayak Nova Scotia <https://ckns.ca>. Unless otherwise indicated, registration is required for walks/hikes. See <http://hikenovascotia.ca/GuidedHikesandWalks> for details.

- 25 Mar. "Planning Safer Paddling Trips", 9:00 a.m.-4:00 p.m, Seven Bays Climbing Gym, 2019 Gottingen St., Halifax.
Note: There is a cost of \$20.00; for more info see <http://ckns.ca/events>.
- 3 May "SAR (Search and Rescue) Info Night for Paddlers", 6:30-8:30 p.m., Halifax Joint Rescue Coordination Centre (JRCC), 3242 Watchdog Rd., Halifax. See <http://ckns.ca/events> for more info.

Hike Nova Scotia <https://www.hikenovascotia.ca/>.

- 22 Mar.** “Walk Leader Virtual Training”; register by 21st. March.
20 Apr. “Walk Leader Virtual Training”; register by 19th April.
2 Jun. to 4 Jun. “Hiking Summit”, Antigonish

Nova Scotia Bird Society <https://www.nsbirdsociety.ca>

- 25 Mar.** Trip to Baccaro & Blanche Peninsula, Shelburne Co., 8:30 a.m.-2:30 p.m.
30 Mar. “Southern Columbia/Panama Travel”, via Zoom 7:00-8:30 p.m., go to <http://nsbirdsociety.ca/calendar> for Zoom ID/passcode.
27 Apr. “Discord for Birders - Use & Benefits to Birds/Birders”, Zoom meeting, 7:00-8:30. <http://nsbirdsociety.ca/calendar> for Zoom ID/pass code.
20 May Trip to Cape Sable Island, Shelburne Co., 8:00 a.m.-2:30 p.m.
27 May Trip to Conquerall Mills, Lunenburg Co., 8:30 am-2:00 p.m.

Nova Scotia Institute of Science <https://nsis1862.ca>. All events are presented at Saint Mary’s University, Stephanie MacDonald Lecture Theatre (SMU Atrium 101), starting at 7:30 p.m.

- 3 Apr.** “How to Stop Global Warming”, via Zoom, with Dr. Andrew MacDougall, 7:30 p.m., SMU Atrium 101.
29 May “Winter: A Bug’s Eye View”, via Zoom, with Dr. Jantina Toxopeus

Royal Astronomical Society of Canada, Halifax Centre <http://halifax.rasc.ca>.

- 4 Mar.** “Astrotourism - Creating New Opportunities”, 1:00 p.m., speaker Stephen Picard, RASC NB Centre; and, “Sky Lore”, speaker Chris Young, RASC Halifax Centre, Room AT101, S. Mary’s (or online Zoom).

Young Naturalists Club <https://yncns.ca>

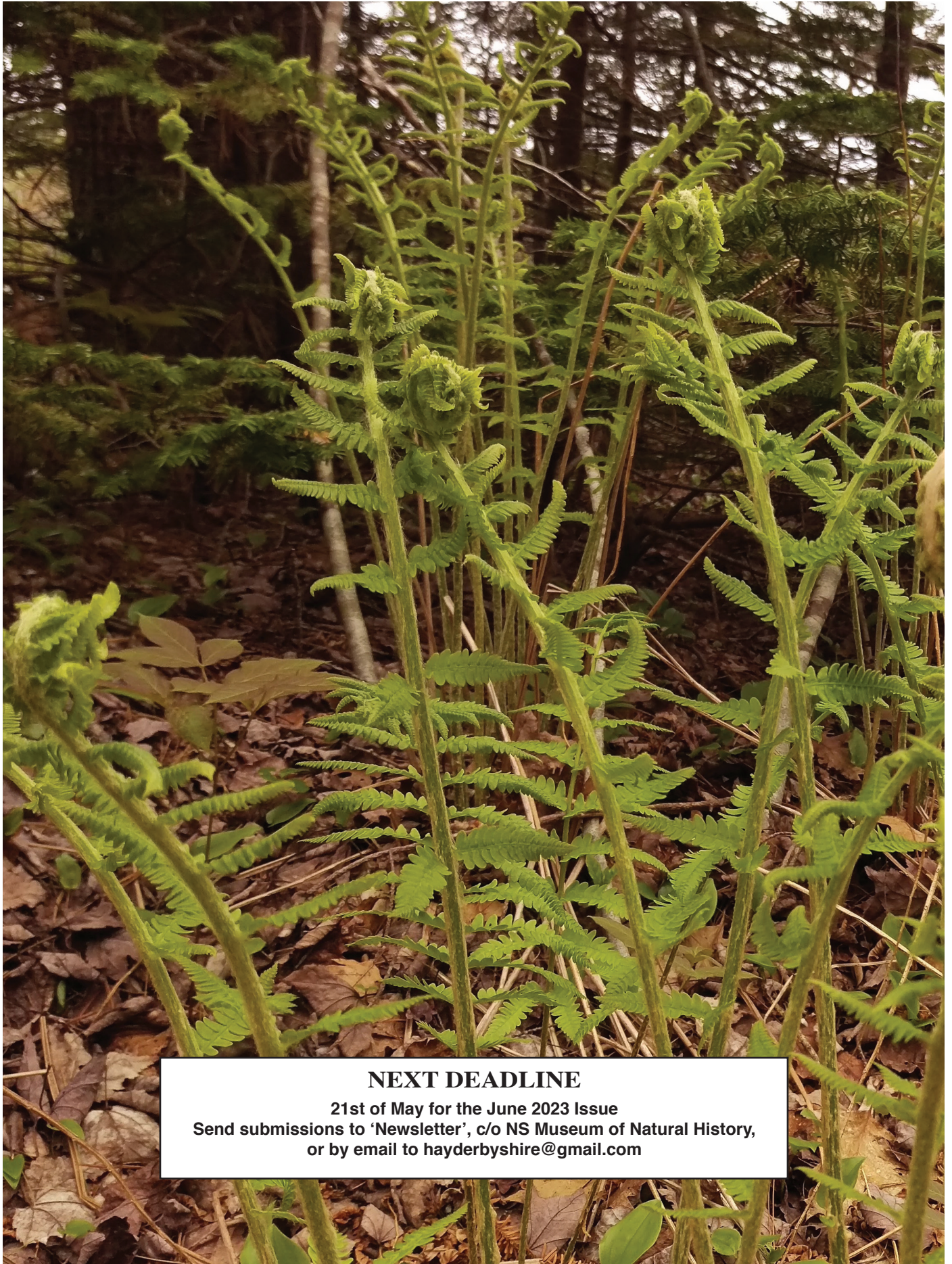
- 25 Mar.** “Beach Cleanup and Mini Blitz”, 2:00-5:00 p.m., MacCormack’s Beach Provincial Park.
26 Mar. “Animal Tracking”, an East Hants YNC Kick-Off, 1:00-4:00 p.m., Shubenacadie Wildlife Park.

INTERNATIONAL EVENTS <http://citynaturechallenge.org> and <http://ebird.org/home>.

- 28 Apr. to 1 May** “City Nature Challenge”, finding & documenting city wildlife using iNaturalist. You’ll need to join iNaturalist and enter your urban wildlife pictures.
13 May “Global Big Day”, a spring bird count recording finds on eBird. You’ll need to join eBird and enter your observations for that day.

– compiled by Don Flemming





NEXT DEADLINE

21st of May for the June 2023 Issue

**Send submissions to 'Newsletter', c/o NS Museum of Natural History,
or by email to hayderbyshire@gmail.com**