

January-April 2023

CONTENTS

[Editor's Corner](#)

- [Editorial](#) / Le [mot de la redaction](#)

[Meeting Reports](#)

[Outing Reports](#)

[News](#)

[Outing Committee](#)

[Recommendations](#)

[Book reviews](#)

- [Ecology Book](#)
- [Ever Green](#)

[Sundry](#)

- [Calendar](#)
- [Executive](#)
- [Membership](#)
- [Nature NB](#)
- [Publication Information](#)
- [Website](#)

[Current Executive](#)

President: Graham Forbes

Webmaster: David Lilly

Director-at-Large: Doug Jackson

Treasurer: Andre Vietinghoff

Newsletter Editor: Andre Vietinghoff

Fredericton Nature Club Newsletter



Editor's Corner / Le coin du rédacteur

Editorial

Dear readers:

Were you able to spend some time in nature observations outdoors or near your bird feeder over the winter?

The Fredericton Nature Club has experienced growth in membership over the past year and is slowly becoming more active. Here's another shout out to Nature NB from which two staff members, Alysha McGrattan & Claire Vézina attended our 3rd November club meeting at which they passed around a sign-up list for volunteers for an Outing Committee. Nature NB then organized a first planning meeting for the new committee in their Fredericton office on January 25th. In addition to Alysha and Claire, this committee includes Vanessa Roy-McDougall, executive director

Le mot de la redaction

Chers lecteurs :

Espérons que vous ayez pu passer des heures en observation de la nature en plein air ou près de votre mangeoire à oiseaux pendant l'hiver.

Le Club de la Nature de Fredericton a connu une croissance d'adhésion depuis un an et commence à devenir plus actif. Nous devons encore exprimer notre reconnaissance envers Nature NB dont deux employés, Alysha McGrattan & Claire Vézina ont assisté à notre réunion du 3^e novembre où elles ont fait circuler une liste de recrutement aux volontaires pour un comité de planification de randonnées. Nature NB a ensuite organisé une réunion de planification. Cette première réunion des membres du comité a eu lieu au bureau de Nature NB le 25 janvier. En plus d'Alysha et de Claire, ce comité comprend Vanessa Roy-McDougall, [directeur exécutif](#) de Nature NB ainsi que Judith Dewar, Denise et Gerry Doekes, Maxwell Francioni, et Jane Loughborough – tous membres du Club de la Nature de Fredericton.

SOME IMPORTANT DATES

- **6 April FNC monthly meeting Stepping Stone**
- **30 April Nashwaak River Spring Fling! In Stanley.**
- **11 May FNC monthly meeting Stepping Stone: Stephanie Brewster from DU**
- **13 May Global Big Day: Bird outing(s)**
- **2 to 4 June Nature NB Festival of Nature in Saint John**



Nashwaak Watershed map

of Nature NB and Judith Dewar, Denise & Gerry Doekes, Maxwell Francioni, and Jane Loughborough – all from the Fredericton Nature Club.

This meeting resulted in recommendations to which two club executive members responded and to a first social event at the New Maryland Centre. The recommendations and responses are included in this issue. Many thanks to all of you who volunteered to sit on the Outing Committee. And, hey, new volunteers for this committee or other club responsibilities are always welcome!

This issue has club meeting summaries commencing October 2022, outing **reports**, and two book reviews. Happy reading, hopefully!

Cette réunion a abouti à des recommandations auxquelles deux membres exécutifs ont répondu et à un premier événement social au Centre New Maryland. Vous trouverez les recommandations et les réponses dans ce numéro. Un grand merci à tous ceux qui ont offert à faire partie du Comité de Planification des Randonnées. Et oui, des nouveaux volontaires pour ce comité ou pour d'autres responsabilités au sein de notre club sont toujours les bienvenus - pensez-y !

Ce numéro comprend des résumés des réunions de notre club à partir d'octobre 2022, des comptes rendus de nos excursions et deux revues de livres. Espérons que ce sera une bonne lecture.

Meeting Reports

Meeting Report: 6 October 2022

Presenter: **Mariah Belyea**, Nashwaak Watershed Association, MEM Restoration Coordinator

Title: [The Nashwaak Greenway Project: Scaling up community-based restoration](#)

Number of Attendees: 9

At our first monthly meeting of the 2022/23 season, our guest speaker, Mariah Belyea gave a PowerPoint presentation on the **Nashwaak Greenway Project**, a partnership between the Nashwaak Watershed Association and the City of Fredericton to restore and steward retired hayfields in the floodplain through tree-planting in various locations on the lower Nashwaak River and to ensure a healthy ecosystem that balances a variety of economic, recreational, social and landowner interests. This effort encompasses the following broad goals:

- Maintain the Nashwaak watershed as a healthy, functional, and connected aquatic ecosystem.



Nashwaak restoration



Silver Maple (*Acer saccharinum*)

Above and below



NWA logo

- Restore degraded sites including riparian areas, wetlands, floodplain and uplands.
- Create and increase community awareness of the importance of a healthy watershed.
- Foster & empower community environmental stewardship.

Mariah highlighted land cover percentages in the entire watershed, which is 88.78% forested, but she quickly focused in on the Nashwaak River floodplain and bottomlands where the NWA’s restoration efforts are centred. These are within the lower seventy kilometres of the Nashwaak River and comprise the most highly developed and disturbed riverfront and floodplain area in the watershed – the site of resource competition for people and terrestrial & aquatic organisms. Mariah addressed the issue of past flooding in Fredericton and the impact of climate change. The solution chosen by the NWA is a “nature-based solution” that entails restoration of the floodplain and riparian zones. The final year of tree planting on the Marysville Flats was 2021. The Marysville Flats are now under the first municipal conservation easement in New Brunswick.

Mariah outlined ten golden rules for restoring forests and then discussed the project’s ten-year strategic plan with the goal of scaling up restoration from 1,500 to 23,000 trees per year. In this quest, the NWA must consider many factors including funding, partnerships, supply of seeds and seedlings, planting, managing and monitoring restoration efforts. Even tasks like mowing, weeding, and pest control are part of this process. There is also a need to educate and empower the local community.

The NWA plants species of local provenance, especially Silver Maple but also Burr Oak, Butternut, Red Oak, Red Maple, Red-tipped and Sandbar Willow, Balsam poplar, and even Red Osier Dogwood (?). This is vegetation that can withstand swift river currents, flooding and ice scour and loading.

Plans for the Greenway 2022 and beyond include bank stabilization and restoration projects along the Greenway, increasing capacity for pest management and improving pre-treatment strategies, creating new and adapting management plans, increasing monitoring capacity, and creating a stewardship endowment fund to manage areas once permanently conserved under easements.

Thank you, Mariah, for your thorough presentation on a very important local issue!



Eastern Wolf (*Canis Lycaon*)



Grey Wolf (*Canis lupus*)



Red Wolf (*Canis rufus*)



Eastern Coyote (*Canis latrans*)



Western Coyote (*Canis latrans*)

Meeting Report: 3 November 2022

Presenter: **Dr. Graham Forbes, President, Fredericton Nature Club**

Title: The Wolf in the Maritimes

Number of Attendees: 29

Before the meeting began, Alysha McGrattan & Claire Vézina of Nature NB addressed our club. They broached the idea of a planning committee for outings. Planners would not necessarily be outing leaders. A sign-up sheet was sent around. They also talked about a bird walk on the Marysville Flats, a Nashwaak Watershed Association forest restoration area, and a coffee hour afterwards sometime in November. Graham's presentation is derived from his preparations for one chapter of a book about the historical presence of certain biological organisms in the Maritimes.

Part of the problem is disagreement and controversy among experts about wolf species that exist in North America in general. It seems that while the **Grey Wolf (*Canis Lupus*)**, is found across North America, but especially in the north, the **Red Wolf (*Canis rufus*)** seems to be found in southern parts of North America. Some biologists have also posited the existence of an **Eastern wolf (*Canis Lycaon*)**, whose genetic makeup might have been diluted by interbreeding between Grey Wolves and Coyotes, hence the smaller size of the Eastern Wolf – though the **Eastern Coyote (*Canis latrans*)**, a larger variant of the Coyote, and also a hybrid, is smaller still. The Eastern Wolf is found from the Great Lakes eastward as remnant populations in Algonquin Park, Ontario and in a few other places in Ontario and Quebec.

Little is known about the early history of the wolf (in the Maritimes). There are no skulls, pelts, bounties in Nova Scotia or New Brunswick from 1792-94 but Ganong reports 3 bounties in 1862. Some historical evidence can be accredited to First Nations people who had their own names for wolves. The wolf seems to have been a culprit in stories and poems, e.g., "The Skater and the Wolves", and it is difficult to vouch for the veracity of creative writing or journalistic sources about wolves. There is no Nova Scotia bounty data except that the last bounty for a wolf was in 1845. during the bounty period 1792-1843, while 541 bounties were reported from New Brunswick during the period 1792-1843. Astonishingly, lots of bounties are reported for the mid 1850's while the last 5 bounty reports for our province stem from 1862. Pelt data is not very reliable; it's hard to tell where the pelts originated. Anyhow, wolves in NB and NS seem to be sporadically present until the 1860's. In 2012, a large wolf, named the Caraquet Wolf, was shot on the Acadian Peninsula; it is possible that this wolf came across the Baie des Chaleurs on an ice floe. Eastern Coyotes were first reported in the Maritimes in 1958, regularly reported in the 1970's and now seem to be common in New Brunswick, Nova Scotia, and Prince Edward Island.

Thank you, Graham, for your historical perspective on wolves in New Brunswick!



Tantramar Marsh area



Cliff swallow
(*Petrochelidon pyrrhonota*)



Tantramar Marsh



Big Island, Hawaii



'Otopu Nopili = Nopoli rockclimbing Goby, or Stimpson's Goby
(*Sicyopterus stimpsoni*)

FNC Meeting Report for: 1 December 2022

Speakers: **Sarah Fensore** and **Patricia Nancekivell**

Title: Aerial Insectivores of eastern NB

No of attendees: 15

Sarah and Patricia are master's degree level students whose studies focus on the ecology and conservation of birds of eastern New Brunswick, specifically, the Tantramar Marsh area, which catch insects on the wing. They look at nesting and related issues of swallows and some of the Epidonax flycatchers. They had great photos of swallows, flycatchers, and other birds, but it is sobering to realize that most of the birds that Sarah and Patricia are studying have dwindled in numbers.

Thanks to Sarah and Patricia for a close-to-home presentation on New Brunswick birds!



Willow flycatcher (*Empidonax traillii*)



Barn swallow (*Hirundo rustica*)

FNC Meeting Report for: Thursday, 5 January 2023

Presenter: **Dr. Derek Hogan**, club member

Title: Life in the Edge: the biology and conservation of Hawaii's unique freshwater fishes

No. of attendees: 16

Derek, who earned a PhD in coral reef ecology from the University of Windsor, resides and works in Fredericton. He did postdoctoral work in Hawaii where he and a few other researchers studied the five native freshwater fishes of the streams in Hawaii.

According to Wikipedia, "Due to its isolation, very few native freshwater fish species are found in Hawaii, and none are entirely restricted to freshwater (all are either anadromous, or also found in brackish and marine water in their adult stage) ... Three of the gobies, *A. stamineus*, *L. concolor* and *S. stimpsoni*, are famous for their ability to climb waterfalls to reach higher sections of freshwater streams."¹ Derek used the Hawaiian names, i.e., 'O'opu Nopili, or Nopoli rockclimbing goby or Stimpson's goby (*Sicyopterus stimpsoni*), 'O'opu Alamo'o or Hawaiian Freshwater Goby or Hiukole Goby (*Lentipes concolor*), 'O'opu Nākea or Pacific River Goby, or Common



'O'opu Alamo'o = Hawaiian Freshwater Goby, or Hiukole Goby (*Lentipes concolor*)



'O'opa 'Akupa or Akupa Sleeper (*Eleotris sandwicensis*)



'O'opu Nākea or Pacific River Goby, or Common Streamgoby (*Awaous stamineus*)



'O'opu Naniha or Naniha Goby (*Stenogobius hawaiiensis*).



New Brunswick relief map

Streamgoby (*Awaous stamineus*), 'O'opa 'Akupa or Akupa Sleeper (*Eleotris sandwicensis*), 'O'opa Naniha or Naniha Goby, or Blackbar Streamgoby (*Stenogobius hawaiiensis*). It is estimated that these native fish species colonized Hawaii one million years ago. There is niche separation among the five different native fish species.

These are migratory fish that spend most of their lives in fresh water but their eggs hatch in the ocean. Inversely to the type of life cycle of fish like the Atlantic Salmon that spawn in the upper reaches of streams, the Hawaiian fish have an anadromous life cycle, meaning “downward running.” They are chiefly dispersed by ocean currents near and far from the coasts of the islands but when they reach a certain maturity, return to the rivers. As Hawaii is mountainous with steep hillsides, streams often end in waterfalls. The fish must climb these falls to gain access to the rivers. Derek played a short extract from a Sir David Attenborough film showing the goby climbing up the cliff face—an amazing adaptation.

Hawaii is defined by high variation in habitat and precipitation. Human impact is greatest in the big cities like Honolulu where waste is a problem for streams. Derek and his colleagues seem to have focussed on the non-human menace to the native freshwater fishes, and especially on the 68 invasive species some of the worst of which are the following fish: guppies, mollies, swordtails, and armoured catfish. For example, the guppies eat the O'opa species, and the armoured catfish consume the food that is important to the native freshwater fishes.

Thanks for the fascinating presentation, Derek!

1. “List of Fish Found in Hawaii” [Wikipedia](https://en.wikipedia.org/wiki/List_of_fish_of_Hawaii). https://en.wikipedia.org/wiki/List_of_fish_of_Hawaii
2. Schmidt, Konrad. The “native streamfishes of Hawaii.” American Currents. Vol. 39, no. 3 (Summer 2014), pp. -6.



FNC Meeting Report for: Thursday, 2 February 2023
Presenter: **Jessie Vickruck**, PhD, researcher with Agriculture and Agri-Food Canada.

Title: [The role of nest sites in wild bee ecology and evolution](#)

No. of attendees: 23

The opening slide of the presentation was of an Eastern Carpenter Bee (*Xylocopa virginica*). There are ca. 900 species of wild bees in Canada, but this particular species was the focus of Jessie’s research in southern Ontario. Jessie stated early on that the building of nests takes time and energy for



Eastern Carpenter Bee
(*Xylocopa virginica*)



Carpenter Bee tunnels in wood



Geo NB logo



Geo NB map view –
data catalogue

bees; appropriate sites and building materials are necessary. The Carpenter Bee tunnels in wood, and the bees, particularly the developing larva and some females overwinter in these tunnels. The life cycle of a Carpenter Bee is about one year. Females do all the work. Mostly nest sites are inhabited by single females on their own, but if there are insufficient suitable nesting niches, there can be two or more bees per nest.

The prairies represent a very different environment because it is grassland, though 70% of grassland is under cultivation. Jessie and fellow researchers examined a number of variables in trying to determine whether infield wetlands were being used by wild bees. They used twenty-one fields divided among three different variable types, i.e., seven fields per type. They found that bees were more numerous on field edges because they needed to stay close to their nests. Species richness decreases in crop fields. Wetlands within canola and wheat fields do serve as habitat for wild bee communities. Jessie pointed out that New Brunswick represents a different environment again for wild bees. She is currently studying colonization of wild bees in our province.

Thank you, Jessie, for this overview of your work on wild bees in different Canadian provinces including New Brunswick!

FNC Meeting Report for: Monday 6 March 2023

Presenter: **Bernie Connors**, P. Eng.

Title: Introducing GeoNB

No. of attendees: 16

Bernie, who is a graduate of UNB's Geodesy and Geomatics Engineering program and who has worked in geomatics since 1987, joined Service NB in 2008 to work on the GeoNB project that was originally envisioned in 2005.

GeoNB provides a huge variety of geomatics information to the various departments and employees of the Government of New Brunswick. Environment, forestry, roads, and public safety are only some of the sectors that make use of this kind of digital data. However, everyone with a computer or mobile device and a web browser plus Internet access can access and use GeoNB. You can even package your own data. The website for the Geo NB index is: www.snb.ca/geonb1/e/index-E.asp

The most popular map view is the GeoNB map viewer. Bernie presented some tips on use: scroll with a mouse on a microcomputer; use the "pinch out, pinch in" feature on mobile devices. Other tips concerned the legend tool, the layers tool, and tools for highlighting areas on a given map. The default map is topographical, but a good starting point can be a plain base map that can be overlain with online templates, e.g., wetlands. Users can employ the share button to share links, even coordinates from a GPS



Geo NB map view - map viewer



Evening Grosbeak
(*Hesperiphona vespertina*)



Pine Grosbeak
(*Pinicola enucleator*)



(global positioning system). Bernie suggested that it would be possible for us to create our own datasets for bird sighting locations based on such coordinates on a mobile device with a GPS.

In preparation for his presentation, Bernie had also talked to Nature NB and the Nature Trust of New Brunswick and downloaded some datasets from these organizations. On the screen, Bernie shared many other maps including flood hazard maps and property assessment maps – a wealth of information. It is up to us now to go to the GeoNB website to explore!

Thank you, Bernie, for a most enjoyable presentation!

Outing Reports

FNC Outing: Sunday 15 January to Jemseg area

Participants: 12

Leader: Dr. Graham Forbes, club President

Report submitted by Jane Loughborough

Weather: overcast, blustery, minus 6 or 7

Our club President proposed this outing that was well attended and well rewarded with a goodly number of winter species including the following: Snow Bunting, Bald Eagle, Common Goldeneye, Blue Jay, American Crow, Raven, Pine Grosbeak, Evening Grosbeak, Northern Shrike, Rough-legged Hawk, Northern Harrier (Marsh Hawk), Great Horned Owl, Northern Cardinal, Black-capped Chickadee, Wild Turkey, American Tree Sparrow, Red breasted Nuthatch, White breasted Nuthatch, Rock Dove.

FNC/Nature NB Outing Committee first event: Sunday 12 February

Snow shoeing and hot chocolate at the New Maryland Centre from 2 – 4 pm

Attendees: approx. a dozen

Chief Coordinators: **Alysha McGrattan** and **Claire Vézina** of Nature NB

A shout out also to: Jordan, Maddy, Judith, Maxwell, Barry (and my apologies to anyone who has been omitted)

This drop-in event was the kind one doesn't want to miss; just show up and everything is provided: snowshoes (high tech, no less) on loan courtesy of Nature NB, binoculars for those who didn't have them; hot chocolate and cookies afterwards!

The New Maryland Centre has a nice trail circuit that leads through mixed woods. It was an unusually calm, mild, sunny mid-February day – a great day to be in the woods. The trails had been well-trampled and were easy to walk on. Participants identified six different species of bird on the trail: Black-capped Chickadee, Red-breasted Nuthatch,



New Maryland Centre, Village of New Maryland, NB



Eurasian Widgeon
(*Mareca penelope*)



American Widgeon, or Baldpate
(*Mareca americana*)



Hansen Art Gallery & Sculpture Garden from www.hansenartgallery.com Google Images (above & below)



White-breasted Nuthatch, American Crow, Downy Woodpecker, and Pine Grosbeak.

The spacious New Maryland Centre was a great place to sit and hobnob over hot chocolate with fellow naturalists after some time on the New Maryland Centre's trails.

FNC Outing Saturday, 8 April to Jemseg Area

Participants: 7

Leader: Dr. Graham Forbes, club President

Report submitted by Milda Markauskas

Weather: sunny, blustery, ranging from -2 ° to +2 ° C.

We saw a total of 26 species, but no rarities. (Two club members, Don Gibson and Derek Hogan drove downriver a few days earlier and found a **Eurasian Widgeon**)

There were good sightings of the following raptor species: Northern Harrier, Merlin, Kestrel, Turkey Vulture, and Bald Eagle; Duck sightings were: American Widgeon, Wood Duck, Hooded Merganser; Common Mergansers; Common Goldeneye; Ring-necked Duck, Green-winged Teal, Black Duck, Mallard; other water-loving species: Canada Goose; Double crested Cormorant, Great Blue Heron, Ring-billed Gull; Passerines seen were: Rock Pigeon, American Robin, American Goldfinch, Common Grackle, American Crow, Red-winged Blackbird, Song Sparrow and Black-capped Chickadee.

News

Some of you will recall "**Bird Watching and Bird Feeding in winter**", a presentation by **Dr. Tony Diamond** and **Dorothy Diamond**, that was wonderfully hosted by **Robin Hanson** at the **Hanson Art Gallery** in French Lake, NB on Sat. 22 Feb. 2020. Fredericton Nature Club members had been invited. The Hanson Art Gallery was a great venue for the meeting. It boasts lots of wildlife and other nature art by Robin. (Reported in FNC Newsletter Spring 2020).

On Wednesday, 22 March Harry Forrestall on CBC New Brunswick featured Robin and his giant wooden sculpture of a Semipalmated Sandpiper. Apparently, such a sculpture graced the entrance to Dorchester before, but this is a new, bigger version. Our congratulations to Robin Hanson on his sculpture and his appearance on CBC!



Northern Shrike (*Lanius borealis*)



Rough-legged Hawk (*Buteo lagopus*)



Great Horned Owl (*Bubo virginianus*)



Bald Eagle (*Haliaeetus leucocephalus*)



American Kestrel, or Sparrow Hawk (*Falco sparverius*)

Recommendations Emanating from a first meeting of the Outing Planning Committee on 25 January 2023:

Present: Claire Vézina, Alysha McGrattan, Vanessa Roy-McDougall, Jane Loughborough, Maxwell Francioni, Judy Dewar

Welcome & Introductions

Purpose

The club wants to gain more membership and we (Nature NB) know that there are people in Fredericton who are interested in this kind of thing. So how do we get these people to the club?

The biggest hurdle is visibility – letting people know the club exists – and having something to offer them when they come. Nature NB believes that having regular outings outside of club meetings is a way to achieve both better visibility and having something to offer new members.

Plans from February - May

Nature NB has heard from other clubs that the highest participation in events occurs during the summer months. So though meetings only run from September to May, there should be regular outings throughout the summer.

Having something scheduled consistently is the best way to get started.

- **Second Saturday of the month at 2:00 PM**

Having a social component to club outings & meetings is a real foundation for some of the other clubs. People build connections through these social aspects, and it keeps them coming back.

The monthly outing is feasible. Is there interest in weekly, casual outings?

Birding seems to be the most popular activity. Is there a birding location that the club uses regularly that could be the consistent meeting place for a weekly birding outing? It could be a nature walk, something very low pressure, as a way to connect existing members. You don't need to have a specific leader.

These outings would be for existing club members as a way to build in the social component. The monthly outing would be the advertisement for the club.

Audience

Who are you trying to attract to the monthly outings, and ultimately, to the club?

Nature NB gets the sense that not a lot of the current membership aren't super keen on going on regular outings. Is that the sense you get?

Mostly in agreement. There likely won't be a complete overlap between people at the outings and current club members.

The goal of these outings is to attract like-minded people who already go birding/on nature walks/etc., but don't know about the club, or people who are interested in these things but don't know where to start.



Snow Bunting
(*Plectrophenax nivalis*)



American Tree Sparrow
(*Spizelloides arborea*)



Common Goldeneye
(*Bucephala clangula*)



Barrow's Goldeneye
(*Bucephala islandica*)



Long-tailed Duck
(*Clangula hyemalis*)

Membership model

Some of the clubs have a good existing membership, but they're having a hard time getting new people to commit. Club events are all well attended, but they can't get them to pay the membership fee.

We were wondering about a "pay what you can" drop-in fee to make up for the lack of memberships OR Drop-in or pay your membership fee.

Does the drop-in fee model for outings sound good?

All in agreement.

ACTION ITEM – At next week's club meeting: someone should ask Andre to pass out the club business cards & pamphlets to members to hand out to interested people.

Storing information

As we develop processes, documents, etc., where would you like to store it? Does Google Drive seem like a good option?

Maxwell could be the Drive manager.

Information that will be stored on this Drive:

- Outing sign-up sheet
- Outing participant contact info (email list)
- Outing Planning Guide
- Additional documents as needed as the club grows (e.g., Nature NB has a "Birder Code of Ethics")

ACTION ITEM – Andre to hand over FNC Gmail account to Maxwell. Set-up drive from this account. Maxwell to take over emailing club updates also?

Outing Brainstorm

February outing – February 11th

Snowshoe outing at Hanwell Recreation Park

- The Village of Hanwell would probably share the event with the community.
- No leader; this would be a casual outing to kick things off.

March outing – March 11th

Birding trip at the Landfill?

Maxwell can contact Landfill. Could ask Graham to get in touch with Joe Nocera to lead something there?

April outing – ~~April 15th~~ (revised to "Spring Fling" in Stanley on April 30th)

Nature NB has talked to the Nashwaak Watershed Association, and they would do a guided tour of the Marysville Flats. Could have a social aspect after it, either bring things for a snack or go to the Landing afterwards.

Alysha can take the lead on coordinating with NWA.

May outing – May 13th.

Global Big Day with André (as he organized it last year)

Additional items

Club meeting location

Does the location of the monthly meeting hinder membership growth?



Common Merganser
(*Mergus merganser*)

{Above: male; below: female}



Red-breasted Merganser
(*Mergus serrator*)



Hooded Merganser
(*Lophodytes cucullatus*)



Greater Scaup
(*Aythya marila*)



Lesser Scaup (*Aythya affinis*)

Used to be more of a social aspect, but now you can't have food, so the meetings sometimes feel cold.

What if the meeting location was the Odell Lodge?

More foot traffic around Odell, so might be an opportunity for visibility.

Could a group show up before the meeting to do a nature walk?

Facebook Page

Nature NB will continue to manage the Facebook page for the next 6 months.

Following that, we will hand it off to some members to continue. Nature NB will create process documents and "cheat sheets" for content.

Response by Doug Jackson and edited response by A. Vietinghoff

Doug:

Thanks, everyone, for contributing to our club's growth. The scope of your meeting goes well beyond what I expected.

Just a few comments:

Consistent monthly scheduling of outings is a great idea, whatever the date. Saturday mornings with a day-after Sunday rain date sounds right. A social aspect such as lunch afterward would work.

There are several locations around town (see brochure) for weekly or bi-weekly walks followed by Tim's (?) for a snack. Weekday morning outings would, of course, limit participation to retired members. Increased attendance at outings and meetings won't come from current members but, rather, from new members.

There are people who would join if they knew about us. More brochures and a wide distribution of them would help, as would greater exposure to social media, and direct contact with specific groups. Although a drop-in fee is less of a deterrent than a \$20 membership fee, nothing appeals as much as a freebie.

Perhaps meeting presentations could include those from nature and environmental advocacy groups such as Nature Trust and NCC. That might attract younger people and the media.

Is Google Drive necessary or redundant, considering we have a website for storage. Do we need outing sign-ups? We never did before.

The FNC e-mail address was created to facilitate communication both ways between the Board of Directors and members. With Nature NB's creation of brochures and business cards, it also enables contact by non-members. The latter usage is currently the only one. I think that all of the Board should at least be able to see messages coming to the FNC address, so I wouldn't want the address "turned over" to anyone. Is anyone concerned about showing personal e-mail addresses to all rather than using bcc?

There are regular outings which should be kept/scheduled on the calendar: Carman Creek, Wilkins Field, waterfowl trip to Sheffield/Jemseg/Lower Jemseg



Ring-necked Duck
(*Aythya collaris*)



Green-winged Teal
(*Anas carolinensis*)



Blue-winged Teal
(*Spatula discors*)



Hairy Woodpecker
(*Leuconotopicus villosus*)



Downy Woodpecker
(*Dryobates pubescens*)

Andre:

Hello all. Thank you, Claire, for the minutes of the 25 January planning committee meeting. It's great that three persons from Nature Nb and three from the Fredericton Nature Club could attend. My own perspective on what you wrote follows:

- The purpose of the meeting, which you described in the first two paragraphs sounds good.
- Planning for summer outings sounds like a great idea.
- The second Saturday of the month sounds good for outings but, although 2 pm may be good in the winter, 2 pm is not good if the outing is to see birds.
- Weekly casual outings will work for small groups of people if only those people are notified or for large groups of people if everyone (in the club) is notified. For example, member A could call members B, C, and D and have an impromptu outing, and that's okay, but it doesn't qualify as a club outing.
- Full weekly outings to which everyone is invited take (a) date chosen well ahead of time (b) advertising (c) a contingency plan, i.e., snow or rain date; but (d) might work with or without an outing leader.
- I'm not sure that "not a lot of current members are super keen on going on regular outings." If there is a schedule of outings with variety (not just birds) built into the plan, and this schedule is made available through email, website, and Facebook, then more members would be interested.
- Re membership model: we don't really have problem of payment of membership dues by regular members.
- A drop-in fee may or may not work.
- It would be great if Maxwell could be the Drive manager. Would we all need a password to access the information on Drive?
- Re handing over the FNC Gmail account to Maxwell. Doug Jackson should be consulted. He set it up. I access it on my Gmail. Fairly regularly, and no doubt Doug does the same. I suppose everyone can do this. My own plan re monthly meetings (Stepping Stone) would still be to email my group list, and of course, David would advertise these on the club website.
- April 15th: a Marysville Flats outing sounds inviting if the Nashwaak River is not in flood, which it might well be at that time of year.
- Club meeting location: we chose Stepping Stone as a good central location. Previously, we were at Odell Park Lodge, and at times the walk from the parking lot to the lodge was difficult because of ice, darkness, etc. Graham rightly felt that it was risky especially for our older club members. Please note that we have paid Stepping Stone up until May 2023.
- Thanks to Nature NB for managing the Facebook page.



Common Grackle
(*Quiscalus quiscula*)

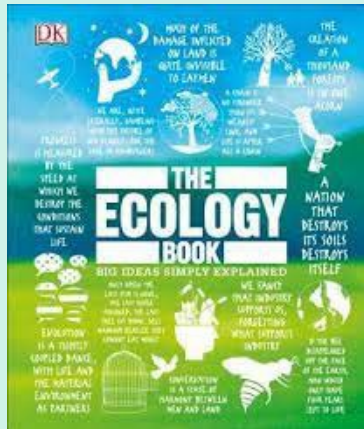


Rusty Blackbird
(*Euphagus carolinus*)



Red-winged Blackbird
(*Agelaius phoeniceus*)

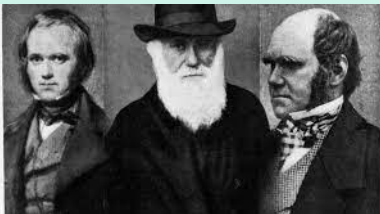
Book Reviews



Book cover: [The Ecology Book](#)



Alexander von Humboldt



Charles Darwin (different ages)



Sandra Diaz

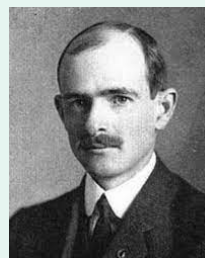
Coyne, Celia [et al.]; Schroeder, Julia, Consultant. [The Ecology Book](#). New York, NY: DK Publishing, 2019. ISBN: 9781465479587. 352 pages (print version) Available from New Brunswick Public Library Service under **577 ECO**; Available in Fredericton at Nashwaaksis Public/ Library

This monograph in the DK series, [Big Ideas Simply Explained](#) falls somewhere between a compact encyclopedia and an introductory textbook to the very broad topic of ecology. While not alphabetically organized, it covers ecology under the following sections: The Story of Evolution, Ecological Processes, Ordering the Natural World, The Variety of Life, Ecosystems, Organisms in a Changing Environment, The Living Earth, The Human Factor, Environmentalism and Conservation. Each section is further broken down into smaller topics, each covered in one to four pages and enhanced by infographics, a photo or two, and often a portrait and mini biography of the key person(s) associated with a specific idea. These short topics also include an “In Context” sidebar that provides the name of the key figure and with the names and important dates associated with precursors and successors in this topic. Thus under the topic, “The Ecological Guild: a Group of Species that Exploit Their Environment in a Similar Way”, the key figure is Richard B. Root, 1936-2013 who studied Blue-Grey Gnatcatchers and other birds that consume oak-leaf insects. “Before” him are listed: Alexander von Humboldt (1793), Joseph Grinnell (1917), Arthur Tansley (1935); “after” him, James MacMahon (1989), Sandra Diaz and Marcelo Cabido (2001). Great thinkers like Darwin and von Humboldt understandably appear as precursors in more than one section.

A directory and a glossary add to the usefulness of this volume that would be of particular interest to anyone seeking a broad accessible introduction and overview to the very extensive topic of ecology.



Marcelo Cabido



Joseph Grinnell



James MacMahon



Aldo Leopold

Reviewed by A. Vietinghoff



Book cover: Ever Green



Agouti, or Common Agouti
(*Dasyprocta*) genus



Tukinsky National Park, or “The Tunka” is located in south central Siberia. Russia



(*Araucari*), genus

Reid, John W., and Thomas E. Lovejoy. Ever Green [electronic resource]: Saving Big Forests to Save the Planet / John W. Reid and Thomas E. Lovejoy. Minneapolis, Minnesota: HighBridge Audio, 2022. 1 digital audiobook (8 hrs., 47 min.). ISBN: 9781696607476. Call Number: DIGITAL AUDIOBOOK

OR

Reid, John W., and Thomas E. Lovejoy. Ever Green [electronic resource]: Saving Big Forests to Save the Planet / John W. Reid and Thomas E. Lovejoy. New York, NY: W.W. Norton & Company, 2022. 1 e-book. ISBN: 9781324006046. Call Number: E-BOOK

This scintillating manifesto on saving the five megaforests - Taiga ¹ of northern Russia, the North American boreal forest, the Amazon (the largest tropical megaforest), the Congo, and New Guinea, the smallest of the megaforests - begins with a prologue, “Anastasia’s Woods.” We follow the authors’ visit to some tribespeople of the Momo clan in western New Guinea’s megaforest and gain first glimpses of the rich biodiversity of these great forests and of the authors’ thesis of preventing global warming through their preservation. “The climate solutions that we hear about most often, like swearing off coal or switching to electric cars, address the problem by disrupting the industrial processes by which fuels coming out of the ground get into the air. These strategies are absolutely necessary, but they skip what is between rock and atmosphere: the biosphere. The math of keeping our world livable doesn’t add up without caring for our planet’s biology in general and keeping our big forests in particular. The PPCC (Intergovernmental Panel on Climate Change) finds that all pathways for limiting warming to 1.5 0 C involve reversing deforestation by 2030.”

The prologue also introduces the concept of “intact forest landscapes” or IFL’s. To earn this designation the forest must be at least five hundred square kilometers and free of roads, power lines, mines, cities, and industrial farms. There are supposedly two thousand such IFL’s worldwide, many within megaforests. In the next four chapters, the authors take us to the three tropical and two boreal megaforests and give us a glimpse of their rich fauna and flora and of the grandeur of the forests. In a section on the Congo within a chapter on “The Jungles,” the authors begin with a lively description of the loading of a pirogue and the crossing of the Sangha River at night. “The boat was a single piece of wood around 65 feet long and 5 feet wide ... Few forests in the world have trees big and straight and heavy enough to make a



Blakiston's Fish Owl
(*Ketupa blakistoni*)



Adolfo Ducke Forest Reserve

"a protected section of the Amazon rainforest within the city of Manaus, Brazil." (Wikipedia), above and below



Adolfo Ducke Forest Reserve

piroque that can carry six dozen humans, plus cargo and animals, across a big river at night." Reid and Lovejoy also mention the importance for continental climates of evapotranspiration emanating from the megaforests. More importantly, in a chapter entitled, "Forests of Thought," the authors home in on indigenous peoples of the megaforests - on their languages, cultures, and place in these forests.

In fact, we meet representatives of indigenous forest peoples throughout Reid's and Lovejoy's guided tour. Megaforests have spawned thousands of cultures and a commensurate number of languages. "Now, intact forests shelter this diversity in a world where at least 43% of languages are endangered." The authors state that "New Guinea is the global epicenter of language diversity, with an extravagant array of families – at least forty – and copious languages within them." South America has one hundred and eighty-five "uncontacted" forest societies. The authors meet Sydney Possuelo who worked for the Brazilian government in contacting such societies, but after witnessing the devastating effects of contact, succeeded in changing the government policy to one of avoiding contact and of recognizing Indigenous peoples' right to exclusive, undisturbed use of their ancestral territories. They also write that "Canada has at least sixty Indigenous languages in thirteen families. Alaska adds another dozen languages. In Russia, the government recognizes forty 'small-numbered' Indigenous groups, defined as peoples with less than 50,000 members." Megaforests have nurtured thousands of ways of knowing and describing nature with language. Megaforest people still know how to heal with bark and medicinal plants, share their forest with large animals, navigate unerringly in their environments, and talk about this environment in their own rich languages that reflect unique views of the world specific to each culture and language group.

Reid and Lovejoy develop the idea of the role of such peoples in preserving their ancestral forests in a chapter entitled "Guardians." Forest people often are good guardians of their land and will fight for it. The authors tell the story of their Marubo friend, Tamasaimpa, who together with men from the neighbouring Matsés tribe, "took on a detachment of heavily armed Peruvian National Police" and won. "Across Canada, First Nations are playing more central roles in forest protection ... thanks in part to Valérie Courtois (who) ... founded the Indigenous Leadership Initiative (ILI) in 2013 to foment a national movement of Indigenous 'guardians.'" Also mentioned are the Haida Watchmen who are guardians of Haida Gwaii (formerly Queen Charlotte Islands). In 2004 the Canadian Supreme Court ruled that the



Arapaima or Pirarucu
(*Arapaima gigas*)

These are found in Amazon Basin. There are several other species of Arapaima, among the largest freshwater fishes.



Haida Gwaii (formerly Queen Charlotte Islands)



Madidi National Park in the upper Amazon in Bolivia

Haida First Nation existed, and they had never formally ceded their land. We meet Tanya Ball who is a guardian for the Kaska people in northern BC. In the Yukon the Kaska fought in court for traditional ownership and won a moratorium on mining on their ancestral lands; they also issue their own hunting licences.

In Russia, “Thirty years after the dissolution of the Soviet Union, there are big forest regions under Indigenous governance—on paper. The Komi, for example, have their own republic, one of twenty-two established for ethnic minorities. It’s an area the size of France nestled along the western slope of the Ural Mountains and contains the largest expanse of forest in European Russia.” Admittedly, in practice groups like the Komi, the Buryatia, and the Soyot have little say about how forests are used. The authors travel to meet Pavel Sulyandziga, an Udege Indigenous activist from the Russian far east and the former head of “an alliance of the sub-50,000-member Native groups called the Indigenous Small-Numbered Peoples of the North, Siberia, and the Far East. As a national leader, he helped secure passage of the 2001 TTNU law, which he hoped to apply in his own people’s forest in the Bikin River valley” where logging had already commenced. The Udege influenced a deal that set up a national park that protects nature, including tigers, and furthers the development of Indigenous people: this resulted in the Bikin National Park (created 2015) where the Amur tiger population has rebounded.

In the Congo indigenous land rights are tenuous, although the 2007 UN Declaration on the Rights of Indigenous Peoples (UNDRIP) and subsequent legislation in The Republic of the Congo enshrines some protection of Indigenous peoples, especially Pygmies, though “Pygmies’ ancestral forests are subsumed within logging leases or protected territories.” In New Guinea native people own 90% of the land but ownership claims are complex. Some clans are protecting their lands; others are selling it. As well, mapping clan boundaries and averting conflicts with neighbouring clans is tricky in a country with more than two hundred and fifty tribes. The Samdhana Institute is working on customary governance in New Guinea in which tribes have more say in what resources are sold. In New Guinea (and other megaforests), alternate strategies like education of indigenous youth and ecotourism are being implemented.

Two chapters are devoted to the economics of preserving megaforests. In “Forests and the Real Economy,” the authors suggest that “To save the planet-cooling megaforests, we need an economy that supports nature rather than erases it.” This maxim wasn’t heeded in the



Jaguar (*Panthera onca*)



Giant Otter, or Giant River Otter (*Pteronura brasiliensis*)



Bikin National Park map(s) and panorama, below, preserve for Amur Tiger



Siberian or Amur Tiger (*Panthera tigris tigris*)

Atlantic forest of Brazil. This country is named after pau brasil, or ember tree, the first tree to be exploited in the once significant Brazilian eastern coast rainforest, but now there is little left of this forest. The precolonial forest has also disappeared from the lower forty-eight states of the USA, though that country still has plenty of trees. The authors, who do not deny the importance of lesser forests, state that the “mother of all public goods” is “a stable global climate” and go on to assert that “Intact forests are overflowing gardens of public goods.” The authors argue that one of the problems in preserving the megaforest is that the marginal value of individual units, i.e., trees is trivial; the larger the whole, the more inconsequential individual units seem; and the cost of frittering away at the edges also seems trivial. They argue that the “unit of marginal analysis must be the forest, not the trees.”.

Reid and Lovejoy state that the idea of keeping carbon in and under forests is undervalued by most people. However, the authors urge journalists to draw on the wealth of data already available, for example, in the data of Global Forest Watch, to cover tree-related stories with consideration for what good there is for nature in their reporting. They refer to the work on ecological economic dynamics by Elinor Ostrom who won the 2009 Nobel prize in economics. At the end of this chapter, they praise the “three biggest megaforest countries, Brazil, Russia, and Canada for strides made in forest protection. Notable international “market-limiting agreements are the Great Lakes Water Quality Agreement, the Convention on Migratory Species, the Convention on Biological Diversity, the UN Declaration on the Rights of Indigenous Peoples, the UN Convention to Combat Desertification, and the UN Framework on Climate Change.” However, it is important that these broad agreements filter down to and are implemented at the local level.

The following chapter, “Money Trees” addresses the major current topic of carbon finance. Reid and Lovejoy make us understand that while tropical forests accumulate large amounts of carbon above ground – in stems, bark, leaves, ferns, creepers, flowers, etc. – the carbon caches of boreal forests are mainly underground. One problem with initial climate protocols and the Clean Development Mechanism (CDM), which assisted rich countries in paying for emissions reductions in not-so-rich countries, was that they only recognized credits from replanted or new forests. Saving a standing forest did not count. Since then, many projects, which “were proving grounds for how to structure agreements, measure their results, and make sure they didn’t simply push forest loss somewhere else”, have been born. REDD+, Reducing



Kahuzi-Biega National Park = Parc national de Kahuzi-Biega, in eastern Democratic Republic of the Congo



Pirogues



African Forest Elephant (*Loxodonta cyclotis*)



Gila National Forest, New Mexico panoramas, above and below



Emissions from Deforestation and forest Degradation” was born in 2007. Some have critiqued REDD+ funding as inadequate and there are inequities; for example, Norway has contributed many times the funds any other single country has contributed. The authors sum up the carbon issue: “Carbon is not equal to the value of the forest. But its safe storage is crucial to humanity’s shared destiny, and carbon is produced and stored in intact forests in terrific quantities.”

Lovejoy and Reid point out many, often interrelated, causes of the loss of forests and of species within the forests, hence, logging, agriculture, extractive industries, hunting, fire, and consumption. However, their greatest criticism is reserved for roads - the subject of an entire chapter, “Less Roads Travelled.” The authors equate the completion of the Jaguar Highway, or Belém-Brasilia with the beginning of deforestation and lawlessness in the Amazon. The authors give examples of road building in South America that resulted in corruption scandals and uncontrolled exploitation of natural resources. They point out that “95% of Amazon deforestation has taken place within three miles of roads or immediately adjacent to one of the region’s major navigable rivers.” It takes a trip to a remote spot in Madidi National Park - where there are no roads - for them to see wildlife like a Giant River Otter and a Jaguar. Similarly, in the Congo, roads lead to the razing of jungles and open up access to hunters that are depopulating the jungle of wild animals. Meanwhile, “In the boreal, roads block streams, lead to more fire, and threaten game animals like caribou.” That is why, for example, “eleven native villages oppose the proposed 220-mile Ambler Mining District Industrial Access Road.” The authors declare that “Roadlessness is central to the survival of the megaforests, both tropical and boreal, but few countries that we’re aware of have explicit roadless policies.” Lovejoy and Reid convincingly argue that “Destructive forest roads are usually a huge waste of money.” They are expensive to build; not enough people use them and, conversely, they benefit a small number of people who often don’t pay for them; road funding comes mainly from urban taxpayers.

Interestingly, in the United States, which no longer boast a megaforest except in Alaska, there is a tendency to safeguard roadless areas, a trend started by Aldo Leopold when he established the Gila National Forest in southwestern New Mexico. According to the authors, “The United States can contribute to protecting the world’s megaforests by keeping our (*their!*) portion – over 67 million acres in Alaska, including the Tongass – as roadless as it is today.” There are solutions even where roads have already been built: “Still, logging need not spell doom for the forest, especially if logging is light. Abandoned logging



West Papua in context map



Borneo Teak, also known as Moluccan ironwood, and under many other names (Intsia bijuga)



Pandanus Conoideus



Siberian Silver Birch (*Betula platyphylla*)



Siberian Pine (*Pinus sibirica*) above and below



roads in the Congo melt back into forest. Closing logging roads after harvest is a cheap and common-sense policy that minimizes poachers' access to wildlife and reduces governments' policing costs." Furthermore, funding that is "indexed to carbon can help pay for a variety of forest-saving interventions such as the following: guardians, protected areas, alternative non-road transportation, subsidies for sustainable products."

Besides reducing the need for roads, the authors propose many solutions for preserving megaforests and thereby the well-being of planet Earth. First, of course, we must understand the importance of forests in storing carbon. Then, we need to comprehend the grandeur of the megaforests and the diversity of life that must be preserved. National parks and other types of forest reserves help greatly in this respect. In chapter 11. "Making Nature" they plead that preventing forest loss in the first place is much "easier and cheaper than getting a forest back." Natural forests require no planting and provide carbon storage, biodiversity, and other benefits immediately. Despite some reservations about regrowing forests, a time-consuming process that will often fail to bring back the species that were there in the first place, and a process that tends to be unattractive to the forest peoples in those localities, Reid and Lovejoy concede that some reforestation, or "forest landscape restoration" (FLR) is necessary. They cite Greenpeace-Russia head Alexey Yaroshenko, a proponent of tree farms who asserts "Leave some areas wild and use some areas in an intensive way." Yet the planting of monocultures that will be harvested quickly is not the best means of reforestation. Natural regeneration is better though not always perfect. The authors recall a visit to a forest in West Papua; their guide, Fince Momo tells them how her mother had planted vegetables in that spot; the authors notice that the trees are thinner in that spot and that a sign of former human occupation is the presence of red pandanus trees (*Pandanus conoideus*) that the locals cultivate for fruit and for making mats. Yet even in this reforested spot, all kinds of wildlife like hornbills, cassowaries, and tree kangaroos had returned. Of course, natural regeneration is better where crops have not been planted. In areas that have lost most of their tree cover and, worse, have been overgrazed, natural regeneration is hardly feasible. "Unfortunately, most degraded land has baked in the tropical sun and hardened to a concrete-like-consistency under the meanderings of half-ton cows."

In "An Invitation," the final chapter, of this inspired and inspiring work, Lovejoy and Reid write, "Losing our planet's intact megaforests will tip us into a climate trajectory incompatible with stable human society,

SUNDRY

FNC website:

<http://www.frederictonnatureclub.com/>

Email webmaster, David Lilly, at dillynb@gmail.com

Nature NB is the umbrella organization for all nature clubs in New Brunswick, but they are much more than that.

Visit their website at:

<http://www.naturenb.ca/home/>

FNC member information

Annual membership:

\$20.00 per individual
\$25.00 per couple/family

Send a cheque payable to: The Fredericton Nature Club c/o Andre Vietinghoff, Treasurer 224 Highland Ave. Fredericton, NB E3A 2S6

Or

Bring your payment to a meeting.

membership form found on our website at:

<http://www.frederictonnatureclub.com/membership.html>

The Fredericton Nature Club newsletter is published twice a year. Contributions are welcome.

Please contact the editor at: andre.vietinghoff@yahoo.com

Photographs/images in this issue that are not identified are public domain images (hopefully) derived from Google Images.

extinguish millions of life-forms, and render humanity an ever-more uniform army of bipeds carousing on an increasingly lifeless rock.” The authors ask the reader to consider very long-term environmental goals. A shared land ethic is needed. Individual choices in consumption matter. Indigenous peoples who live in harmony with the forest and who can be excellent “guardians” are a critical link in the preservation of the megaforests. The authors convey to us an invitation from indigenous folk as well as concerned nationals in the forested regions they visited, namely, to come see their forest. Or, as the authors suggest, simply visit a small one. The seriousness of its main subject notwithstanding, this timely, beautifully written work has much humour, is replete with anecdotes from personal visits to megaforests, and is ultimately one of hope. Read the prologue, “Anastasia’s Woods” only for an overview, but at this point you will probably be hooked and wish to read the entire work. Highly recommended.

- 1. The authors distinguish between the Russian boreal forest that the Russians call Taiga and our taiga, or tundra that is without forest and that is not a topic of this book.

Both the audio book (MP3) version that is dynamically narrated by Roger Wayne and e-book version, with maps, b&w photos, and index, are available for loan on the Electronic Library New Brunswick (NBPLS) through the Libby app (OverDrive) Paperback version recently released and available through Indigo/Chapters or Amazon for ca. \$25.00.

Reviewed by A. Vietinghoff

Wishing Fredericton Nature Club members Enjoyable days of Spring and Happy nature trails and observations!