

May-October 2022

CONTENTS

[Editor's Corner](#)

- Editorial / Le mot de la redaction

[Meeting Reports](#)

[Outing Reports](#)

[Book review](#)

Kolbert, Elizabeth. Under a White Sky: the Nature of the Future

Sundry

- [Calendar](#)
- [Club email](#)
- [Club Facebook page](#)
- [Executive](#)
- [Financial picture](#)
- [Membership](#)
- [Nature NB](#)
- [Photos](#)
- [Publication Information](#)
- [Website](#)

[Current Executive](#)

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Treasurer: André Vietinghoff

Newsletter Editor: ditto

Fredericton Nature Club



Newsletter Autumn 2022

[Editor's Corner](#)

[Coin de l'Éditeur](#)

Dear readers:

Happy autumn, Fredericton Nature Club members. I hope that you enjoyed the summer and were able to spend plenty of time in nature. During my few weeks in Ontario in July, I completed some point counts with my wife as a minuscule contribution to Ontario's 3rd breeding bird atlas (2nd of 5 years of atlassing). This was fun but once I started to do the rather painstaking data entry, I realized that my organization had been poor. I hope to do better next summer. What was fun is that our 10x10 km square included our family property on Quade Lake (near Golden Lake, Ontario) and some neat backroads with which I had no previous familiarity. Even more fun was to hear various birds including two "blue bird" species that I would have thought quite uncommon: we tallied Eastern Bluebird and Indigo Bunting in more than one location. I also learned to love the app, Merlin, though I still don't always believe it!

Chers lecteurs :

Bienvenus à l'automne, adhérents du Club de la Nature de Fredericton. Espérons que vous ayez passé un été agréable et beaucoup d'heures en pleine nature. Pendant mes deux semaines en Ontario en juillet, j'ai fait avec ma femme Virginie, en forme de dénombrement ponctuel, une contribution minuscule vers l'Atlas des oiseaux nicheurs de l'Ontario (2^e année sur 5 de la 3^e édition). C'était amusant mais lorsque j'ai commence la saisie minutieuse des données, j'ai du reconnaître que mon organisation avait été mauvaise. Je compte faire mieux l'été prochain. Ce qui était "le fun" c'est que notre 10 km carrés comprennent la propriété familiale située sur Quade Lake (près de Golden Lake en Ontario) et des routes rurales intéressantes que je ne connaissais pas. Encore plus délirant c'était entendre des espèces diverses d'oiseaux y compris deux espèces d'oiseaux

SOME IMPORTANT DATES

- **Saturday, 24 September Mushroom Walk and Wildcrafting with Jessika ___ Odell Park 12:00 – 15:00 h. Register in advance please; pay cash or via e-transfer at door**
- **Thursday, 6 October Fredericton Nature Club regular monthly meeting: Mariah Belyea (Restoration and Outreach Coordinator with the Nashwaak Watershed Association) presentation: "Restoration on the Nashwaak"**
- **Thursday, 3 November Fredericton Nature Club regular monthly meeting**
- **Thursday, 1 December Fredericton Nature Club regular monthly meeting**
- **Sunday, 18 December Fredericton Christmas Bird Count followed at 6:00 pm by potluck compilation dinner at Stepping Stone**
- **Thursday, 6 January 2023 Fredericton Nature Club regular monthly meeting**
- **Thursday, 2 February 2023 Fredericton Nature Club regular monthly meeting**
- **Thursday, 3 March 2022 Fredericton Nature Club regular monthly meeting**

As a new club year begins, we need to recognize the time and effort that Nature NB has put in to bolster our club and put us on a new footing. Alysha McGrattan, Claire Vezina, and the rest of the Nature NB crew at the Fredericton office under the leadership of Vanessa Roy-McDougall have been extremely proactive on our part; the following is a breakdown of what they have done for us:

- At two club meetings explained how Nature NB proposed to help us
- Created a promotional flyer and printed 100 copies free of charge
- Created a business card for our club and printed 100 copies free of charge
- Created a public Fredericton Nature Club Facebook page
- Assigned to us a table at the spring 2022 Festival of Nature for our promotion
- With Fredericton Public Library organized a "beginner birdwatcher outing" led by a member of the Fredericton Nature Club
- Proposed and organized a planning committee meeting for our club
- Planned a mushroom walk and workshop in Odell Park in late September under the auspices of the Fredericton Nature Club

"bleus" que je pensais peu commun. Nous avons entendu un Merle bleu de l'Est et un Passerin indigo dans plus d'un endroit. J'ai fini par aimer l'application Merlin mais je ne m'y fis pas parfois !

Au début d'une nouvelle saison, il faut reconnaître l'effort qu'a fait Nature NB de soutenir le Club de la nature de Fredericton et de nous mettre sur des bases nouvelles. Alysha McGrattan, Claire Vézina, et les autres employés de Nature NB du bureau à Fredericton, sous la direction de Vanessa Roy-McDougall, ont entrepris une démarche très proactive à notre égard; le tableau ci-après indique ce qu'elles ont accompli :

- Pendant deux réunions de notre club elles ont expliqué aux adhérents comment Nature NB allait nous aider
- Créé une carte de visite et imprimé cent copies gratis
- Créé un dépliant promotionnel et imprimé cent copies gratis
- Créé une page Facebook publique pour le Club de la Nature de Fredericton
- Assigné une table au FNC pour la promotion de notre club au Festival de la nature au printemps 2022



Cousin Island, Seychelles



Coco-de-Mer (*Lodoicea maldivica*) plant



Bridled Tern (*Onychoprion anaethetus*)



Seychelles Fody, or "Tok-Tok" (*Foudia sechellarum*)



Seychelles Magpie-Robin (*Copsychus sechellarum*)

Many, many thanks to Nature NB!



- Organisé une promenade, menée par un membre de notre club, pour les nouveaux observateurs d'oiseaux en collaboration avec la Bibliothèque publique de Fredericton
- Suggéré et organisé une reunion de comité de planification du FNC
- Planifié une promenade à découvrir des champignons et un atelier pour en apprendre plus

Mille remerciements à Nature NB !

Meeting Reports

Fredericton Nature Club Monthly Meeting **7 April 2022** a

Stepping Stone Senior Centre, Fredericton at 7:00 pm

Attendees: 14

Presenter: **Dr. Tony Diamond**

Title of presentation: **"Two Years in the Garden of Eden: Life on an International Nature Reserve in the Seychelles Islands"**

Tony, who had previously conducted research on Aldabra Island in the Seychelles, later worked as the nature reserve manager of the Cousin Island Special Reserve, Seychelles. The Seychelles are the granitic remnant of the ancient continent, Gondwana that teemed with life. General Gordon, of Khartoum fame, saw the Coco-de-Mer (*Lodoicea maldivica*) plant and decided that Cousin Island was the garden of Eden, hence the title of Tony's talk. The Coco-de-Mer plant is only one of the many endemic species found on the island that is only 28 hectares in size and that is infrequently visited except by some tourists on charter boat day trips.

Another endemic species—one of which Tony conducted research—is the Seychelles Warbler (*Acrocephalus sechellensis*) was down to 26 birds on Cousin Island in 1968. Through Tony's work and that of other managers and naturalists, the numbers rose dramatically, brought the



Aldabra Giant Tortoise
(*Aldabrachelys gigantea*)



Indian Mulberry, or Tortoise Tree
(*Morinda citrifolia*)



Green Sea Turtle
(*Chelonia mydas*)



Bonaparte's Gull ((*Chroicocephalus philadelphia*) / Photo by David Lilly

numbers on Cousin Island to capacity, and some were successfully transplanted to Cousine, Arde, and Denis Islands during the 1990's. Other bird species Tony discussed with photos are: the Seychelles Blue Pigeon (*Alectroenas pulcherrimu*) that tends to get drunk on ficus fruit, the Malagasy Turtle Dove (*Nesoenas picturatus*), the endangered Seychelles Magpie-Robin (*Copsychus sechellarum*), the Madagascar Fody (*Foudia madagascariensis*), the Seychelles Fody or "Tok-tok" (*Foudia sechellarum*) that is endemic to three islands (Cousin, Cousine, and Fregate) and that loves papayas, the Seychelles Sunbird (*Cinnyris dussumieri*), the Crab-Plover (*Dromas ardeola*), Black Noddy (*Anous minutus*), White (or Fairy) Tern (*Gygis alba*), Bridled Tern (*Onychoprion anaethetus*), White-tailed Tropicbird (*Phaethon lepturus*), Wedge-tailed Shearwater (*Ardenna pacific*), and Tropical Shearwater (*Puffinus bailloni*).

Tony also talked about the *Pisonia grandis* tree that has a wide Indo-Pacific distribution and the Tortoise tree, or Indian Mulberry (*Morinda citrifolia*) of which the Aldabra giant tortoise (*Aldabrachelys gigantea*) is fond. Tony pointed out that Giant tortoises are much more common in the Seychelles than in the Galapagos Islands where Darwin first discovered them. Two species of sea turtles also lay their eggs on Cousin Island, namely, the Green Sea Turtle (*Chelonia mydas*), and the Hawksbill Sea Turtle (*Eretmochelys imbricata*). Other reptiles include two species of Geckoes and three species of Skinks. Beach fauna includes Ghost Crabs that sometimes predate baby sea turtles.

Many thanks to Tony for the fascinating talk with great slides of many animals and plants of Cousin Island!

Fredericton Nature Club Monthly Meeting **5 May 2022**

Stepping Stone Senior Centre, Fredericton at 7:00 pm

Attendees: 18

Presenter: **David Lilly**

Title of presentation: **Bird Photography**

David began his presentation by talking about the attractive stylized bird logo in colours of black, blue, orange, and red that he uses for his photography. Then he proceeded to present via projector numerous colourful bird photographs. Among these are a very white Snowy Owl with a muskrat, a Ruby-throated Hummingbird, Evening Grosbeaks, various Sparrows including an uncommon Fox Sparrow that David spotted in his yard, Pine Grosbeaks, various woodpeckers including four common local species, an Osprey, a female Goldeneye (with the golden eye very pronounced), and a Loon. He finished his presentation not with a bird but with a mammal, a Long-tailed Weasel.



Savannah Sparrow (*Passerculus sandwichensis*) / photo by Maxwell Francioni



Red Fox (*Vulpes vulpes*) / photo By Carol Wakeham



Eastern Garter Snake (*Thamnophis sirtalis sirtalis*) Photo by Carol Wakeham



Solitary Sandpiper (*Tringa solitaria*) / photo by Maxwell Francioni

Many thanks to David for a very enjoyable presentation to cap off our club season!

Outing Reports

Global Big Day (1st walk): 14 May 2022

Odell Park from 8:00 a.m. to ca. 10 a.m.

Outing leader: A. Vietinghoff

Number of participants: 12

Weather: Calm, sunny, ranging from 15 to 20^o C.

American Goldfinch	19	Parula Warbler	4
American Redstart	2	Pileated Woodpecker:	2
American Robin	3	Pine Siskin:	8
Black and White Warbler	3	Pine Warbler	3
Blackburnian Warbler *	2	Red Crossbill **	2
Black-Capped Chickadee	4	Red-breasted Nuthatch	3
Black-throated Green Warbler	3	Red-winged Blackbird	1
Blue Jay	2	Rock Dove	8
Blue-headed Vireo	5	Ruby-crowned Kinglet	2
Chestnut-sided Warbler	2	Song Sparrow	4
Chipping Sparrow	3	Tree Swallow	4
Common Crow:	9	Turkey Vulture	1
Eastern Phoebe	2	White-Breasted Nuthatch	4
Least Flycatcher	1	Winter Wren	1
Northern Cardinal	1	Yellow Warbler	1
Northern Flicker	1	Yellow-bellied Sapsucker	4
Ovenbird	1	(Gull species ?)	1

Global Big Day (2nd walk): 14 May 2022

Hyla Park from 2:00 to 3:45 p.m.

Outing leader: Doug Jackson

Number of participants: 3

Weather: Sunny, hot ranging from 28 -29^o C.

Species marked with an asterisk not seen on Odell Park walk

American Goldfinch	3	Hairy Woodpecker	2	*
American Redstart	2	Least Flycatcher	2	
American Robin	3	Mourning Dove	2	*
Baltimore Oriole	1	Northern Cardinal	1	
Black and White Warbler	1	Northern Flicker	1	



Ruby-throated Hummingbird
(*Archilochus colubris*) /
Photo by Wendy Rogers



Parthenice Tiger Moth
(*Apantesis parthenice*) /
Photo by Carol Wakeham



White-tailed, or Virginia, Deer
(*Odocoileus virginianus*) /
Photo by Carol Wakeham



Black-Capped Chickadee	2	Red-winged Blackbird	12
Canada Goose	2 *	Song Sparrow	1
Chipping Sparrow	2	Sora	1 *
Common Crow:	2	Turkey Vulture	1
Common Grackle	6 *	Yellow Warbler	4
European Starling	2 *		

Bird Walk: Killarney Lake 21 May 2022

Time: 8:00 – 10:15 a.m.

Outing leaders: Doug Jackson & A. Vietinghoff

Number of participants: 12

Weather: Partially overcast, calm, ranging from 15 to 20 °C.

When we arrived, a gentleman in the parking lot warned us about the presence of a mother Black bear with cubs on one of the trails. This necessarily restricted our choice of walking trails. Nonetheless, this was quite a good outing with a tally of 40 species, though your editor didn't see all of them. The species tally follows:

American Redstart	4	Hermit Thrush	2
American Robin	6	Least Flycatcher	1
Bay-breasted Warbler	2	Merlin	1
Black and White Warbler	4	Mourning Dove	1
Blackburnian Warbler *	3	Northern Flicker	1
Black-Capped Chickadee	2	Ovenbird	3
Black-throated Blue Warbler	1	Parula Warbler	6
Black-throated Green Warbler	4	Pine Warbler	6
Blue Jay	1	Purple Finch	3
Blue-headed Vireo	5	Raven	1
Brown Creeper	1	Red-breasted Nuthatch	4
Canada Jay	1	Red-eyed Vireo	1
Catbird	1	Red-winged Blackbird	5
Chipping Sparrow	1	Ruby-crowned Kinglet	1
Common Crow:	4	Ruby-throated Hummingbird	2
Common Grackle	2	Scarlet Tanager	1
Downy Woodpecker	2	Song Sparrow	2
Dusky Junco	1	White-throated Sparrow	2
Eastern Phoebe	1	Yellow-bellied Sapsucker	3
Golden-Crowned Kinglet	2	Yellow-rumped Warbler	1
Hairy Woodpecker	1		



Blupete Lupine
(*Lupinus Leguminosae*) /
Photo by Carol Wakeham



Eastern Phoebe (*Sayornis phoebe*) / photo by Maxwell Francioni



American Redstart
(*Setophaga ruticilla*) / photo by Maxwell Francioni



Scarlet Tanager (*Piranga olivacea*) / Photo by Maxwell Francioni

Bird Walk **Carman Creek: Saturday, 11 June 2022**

Time: 8:30 – 11:15

Outing leaders: Graham Forbes

Number of participants: 9

Weather: Mostly sunny, 22⁰ C., light breeze

The outing started at McMinniman Ct. and proceeded along the Wetmore Trail as far as the wetland behind the One Stop Trailers. “Birds were a bit slow to start but picked up as we continued. Highlights were a few nesting Killdeer at the end of the path and a pair of Sapsuckers entering and exiting a nest hollow. We also saw several painted turtles, including one that Graham moved off the footpath.” Thanks to club members Maxwell Francioni and Milda Markauskas for the information, photographs, and the following list of 44 species:

Wood Duck 4 (3 chicks)	Gray Catbird 2
Mallard 20	Veery 3
Mourning Dove (3)	American Robin 3
Killdeer 2 (and nest with eggs)	Cedar waxwings 5
Belted Kingfisher 1	Purple Finch 1
Yellow-bellied Sapsucker 2	American Goldfinch 1
Downy Woodpecker 1	Chipping Sparrow 3
Hairy Woodpecker 1	Song Sparrow 3
Eastern Wood-Pewee 1	Swamp Sparrow 2
Alder Flycatcher 3	Baltimore Oriole 1
Eastern phoebe 2	Red-winged Blackbird 12 (estimate)
Great crested Flycatcher 1	Common Grackle 2
Eastern kingbird 1	Ovenbird 2
Philadelphia Vireo 1	Northern Waterthrush 2
Red-eyed Vireo 7	Black-and-white Warbler 2
Blue Jay 1	Common yellowthroat 2
American Crow 5	American Redstart 20
Black-capped Chickadee 5	Northern Parula 4
Tree Swallow 1	Yellow Warbler 6
Barn Swallow 1	Chestnut-sided warbler 6
Red-breasted Nuthatch 1	Pine Warbler 1
European Starling 1	Northern Cardinal 1

Bird Walk **Wilkins Field: Saturday, 18 June 2022**

Time: 8:30 – 12:15

Outing leaders: Graham Forbes

Number of participants: 8

Weather: sunny, warm, 17 – 25⁰ C.



Common Goldeneye (*Bucephala clangula*) with both Common Goldeneye and Hooded Merganser chicks / Photo by Maxwell Francioni



Monarch Butterfly (*Danaus plexippus*) Caterpillar



Monarch Butterfly (*Danaus plexippus*) Chrysalis



Monarch Butterfly (*Danaus plexippus*) adult

Luckily the weather forecast was wrong, and the weather for this popular outing became better and better. We did find most of the desired species - Marsh Wren, Bobolink, Willow Flycatcher - but missed out on the Least Bittern. Out front, our leader also spotted a Green Heron that the rest of the walkers didn't see (*Hey, Graham, you did it again! Last year you saw the Least Bittern; no one else did! Will you try for a hat trick next year?*) We saw a Deer in one of the big fields and Graham pointed out that it almost certainly had a fawn somewhere in the field. I made the mistake of purchasing my rubber boots after the event ... so, besides the birds, have other reasons to return to Wilkins Field. Let's hope that the City of Fredericton does see fit to designate this unique habit in Fredericton as a nature preserve.

Monarch Butterfly Blitz: Wednesday., 3 Aug. 2022: 7:00 - 8:30 pm
Weather: Calm, sunny, 22 – 20 ° C.
Fredericton Nature Club Event Organized by **Nature NB**
Instructor: **Alysha McGrattan**
Number of participants: 9

A single Monarch Butterfly floated over the south end of the football-field-sized Common Milkweed area as I walked towards the participants already gathered at the top of the parkette on Ferris Street) that served as an entry to the U-Pick as well as an official “Monarch Butterfly Habitat/Habitat du Papillon Monarch” and that, according to our instructor, Nature NB’s Alysha McGrattan, is one of the most productive breeding sites for these butterflies in Fredericton. It was a lovely 3 August evening on which eight participants, armed with clipboards, tally sheets, pencils, and identification guides, after ample instruction, combed through swathes of milkweed to find and tally Monarch eggs, various phases or “instars” of Monarch caterpillars, Monarch Chrysalids, and the butterflies themselves. Some of us did find evidence of Monarch breeding but not your editor: when I finally thought I had “hit the motherlode”, the numerous caterpillars on the underside of one leaf turned out to be Black Tussock Moth Caterpillar; well, it was a fun while it lasted ... but in my case, better luck next time!

Beginner Birdwatchers’ Walk – Saturday, 6 Aug. 2022: 9:00 a.m.
Fredericton Wildlife Refuge – Salamanca Trail portion
Outing Leaders: A. Vietinghoff and Alysha McGrattan
Weather: Clear, sunny, warm ranging from: 17 – 24 ° C.

Not properly a Fredericton Nature Club event (except for my participation as outing leader), the Beginner Birdwatchers’ outing was chiefly a collaboration between Nature NB and Fredericton Public Library



Great Blue Heron
(*Ardea herodias*) / photo by
Carol Wakeham



Cooper's Hawk
(*Accipiter cooperii*) / photo by
Maxwell Francioni



Killdeer (*Charadrius vociferus*) /
photo by Maxwell Francioni



and was intended to be an inaugural event for the library's new "Birder Backpacks" whose contents had been chosen and purchased under advisement from Nature NB.

FPL agreed to advertise this event and to coordinate the inscription. Eight persons who had signed up at the library including a mother with four children showed up. With my wife Virginia and Alysha McGrattan of Nature NB, who had kindly showed up with extra pairs of binoculars, we were a group of eleven who wended our way along the Salamanca Trail from the Morell Park parking lot to the Princess Margaret Bridge. Alysha spoke about the background of the event and then passed the baton to me; I had prepared a five-minute introduction about birdwatching for beginners.

Despite a late start (9:25) and a rather quiet beginning to our walk, birds did start to call, sing, and flit briefly into view in the trees and on the trail. We were particularly thankful for the first large home just north of the trail that boasted a wondrously landscaped lawn, a small stream strewn with rocks on which some birds (not all identified) hopped, and above all, three bird feeders! These had been filled with seeds and were being visited by Black-capped Chickadees, White-breasted Nuthatches, American Goldfinch, a Downy Woodpecker, and Mourning Doves. Our beginning birders were able to get long looks at these birds. Alysha and I both demonstrated the use of the app, Merlin to identify birds through their calls and songs.

Although the original plan had been to walk to the Bill Thorpe walking bridge after completion of the Salamanca Trail, the late hour (11:30) and the heat of the day forestalled us. We all went home. A list of species noted follows:

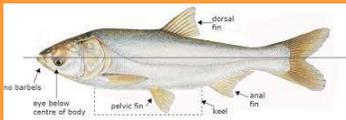
American Goldfinch	Evening Grosbeak
American Redstart	Gray Catbird
American Robin	Mallard
Black-capped Chickadee	Mourning Dove
Canada Goose	Rock Dove
Common Crow	Song Sparrow
Double-crested Cormorant	White-breasted Nuthatch
Downy Woodpecker	Yellow-rumped Warbler



Killdeer (*Charadrius vociferus*)
broken wing act / photo by
Maxwell Francioni



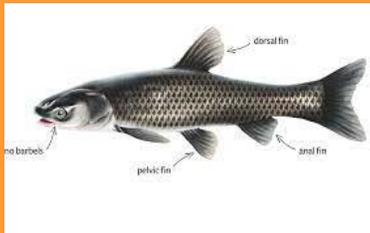
Bighead Carp
(*Hypophthalmichthys nobilis*)



Silver Carp
(*Hypophthalmichthys molitrix*)



Grass Carp
(*Ctenopharyngodon idella*)



Black Carp
(*Mylopharyngodon pices*)

Book Review

Kolbert, Elizabeth. Under a White Sky: the Nature of the Future. New York: Crown, 2021. ISBN: 9780593136294. [242] pages (print version)

This work about human intervention in nature by Elizabeth Kolbert, author of the Pulitzer-prize winning The Sixth Extinction, during what we now call the Anthropocene, the epoch in which man’s influence on nature has been close to catastrophic, is divided into three main sections. The title derives from the third section, “Up in the Air”, specifically from descriptions of geoengineering proposals to send particulates (even diamonds) or chemicals (sulfur dioxide, salt, etc.) into the air to reflect more sunlight away from the earth and hence to cool it with the consequence that we would be living under “white skies.” This third section tackles the hot topic of man’s attempts to counter global warming in novel ways including capturing carbon dioxide and pumping it into the ground to petrify. The first two sections of Kolbert’s book bring us back to earth.

At the outset of the first section, “Down the River”, in chapter one, the author is taking a tour down the terribly polluted Chicago Sanitary and Ship Canal with a group called “Friends of the Chicago River.” This canal was a human attempt to control nature by changing the direction of the Chicago River that used to flow into Lake Michigan and now indirectly feeds into the Mississippi River. The author also visits the U.S. Army Corps of Engineers in Chicago to learn about the electric barriers on the Chicago River that are designed to drive back if not kill public enemy number one, Asian Carp. In fact, the electric barriers were first introduced to prevent the Round Goby from gaining access to the Mississippi from Lake Michigan, but that fish slipped through the barriers into the mighty river. Asian carp were approaching from the other direction and the purpose of electrification was to prevent them from entering Lake Michigan. The discussion of Asian Carp, an invasive species, is quite fascinating: these are “four famous domestic fish” species that were originally raised in ponds in China: Grass carp (*Ctenopharyngodon idella*), Silver carp (*Hypophthalmichthys molitrix*), Bighead carp (*Hypophthalmichthys nobilis*), and Black carp (*Mylopharyngodon pices*). The author visits the town of Morris where carp were being caught, killed, and shipped away to be ground into fertilizer. There is also mention of more conventional (and acceptable) use of these fish as food.

In chapter 2, the author visits the Mississippi River delta to see first-hand a shrinking coastline, a shifting delta due to avulsion and subsidence, and disappearing locales like Plaquemines Parish on the southeasternmost tip



Devils Hole, Nevada, the only natural hangout of the Devils Hole Pupfish



Devils Hole Pupfish
(*Cyprinodon diabolis*)

FREDERICTON NATURE CLUB

Member information:

Annual membership, Fredericton Nature Club:

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

Send a completed membership form found on our website at:

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

and a cheque payable to:
Fredericton Nature Club c/o

of Louisiana. Where levees had been a temporary solution to keep out the water and reclaim the land, organizations like the U.S. Army Corps of Engineers have decided to exert even more control by building the Bonnet Carré Spillway to divert floodwaters from the Mississippi into saline Lake Pontchartrain and hence into the Gulf of Mexico. They also constructed the Old River Control Structure, a floodgate system that “regulates the flow of water from the Mississippi into the Atchafalaya River, thereby preventing the Mississippi River from changing course.”¹ In the wake of Hurricane Katrina in 2005, Louisiana’s Coastal Protection and Restoration Authority instigated “marsh creation” projects. The author also accompanies coastal geologist Alex Kolker on a bike tour of New Orleans, a city that is sinking half a foot per decade despite all human control efforts.

Section 2 is entitled “Into the Wild.” The first chapter of this section describes biologists’ attempts to save the Devils Hole pupfish (*Cyprinodon diabolis*), that is found in only two places – Devils Hole in Death Valley, Nevada and in a strictly protected and controlled replica tank, hence the designation of this fish as a “conversation-reliant” or “Stockholm” species.”

In the following chapter, the author meets marine biologists like Ruth Gates and Madeline van Oppen who are concerned about the bleaching of coral reefs worldwide and especially the Great Barrier Reef off the Australian coast. One of their strategies is to breed coral that is more apt to resist the stresses that cause bleaching and hence to survive. Organizations like the Great Barrier Reef Marine Park Authority (GBRMPA) have proposed more radical interventionist ideas like “deploying underwater robots to reseed damaged reefs, developing some kind of ultrathin film to shade reefs, pumping deep water to the surface to provide corals with heat relief, and (in another allusion to the title) cloud-brightening”² (Kolker also devotes a chapter to coral reefs and the endeavour to save them in The Sixth Extinction)

At the start of chapter 3, the author purchases a genetic home lab kit for ca. \$200.00 from an Oakland, CA-based genetic engineering company named Odin that designed this kit as a beginner’s introduction to CRISPR (clustered regularly interspaced short palindromic repeats) genetic engineering technology; the brief description of her experiment with this kit is a prelude to a discussion of this technology as a possible solution to combatting a destructive invasive species, the Cane Toad (*Rhinella marina*). The author visited the Australian Animal Health Laboratory where genetic editing of cane toads by scientists such as Mark Tizard and Caitlin Cooper was taking place.

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[Fredericton Nature Club website:](http://www.frederictonnatureclub.com/)

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

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[Nature NB](http://www.naturenb.ca/home/) is the umbrella organi-
zation for all nature clubs in New
Brunswick, but they are much more
than that. Visit their website at:

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

The [Fredericton Nature Club
newsletter](#) is published twice per
year. **Contributions are welcome.**
Please contact the editor at:
andre.vietinghoff@yahoo.com

Some of our club members
contributed photos that were used
in this issue. Thanks go out to
**Maxwell Francioni, Carol Wakeham,
Wendy Rogers, and David Lilly.**
Photographs/images in this issue
that are not Identified are public
domain images derived from Google
Images. Many of these are ebird
images.

Kolbert's [Under a White Sky: the Nature of the Future](#) truly illustrates the trend in the current Anthropocene epoch for scientists, engineers, and others to save nature by further intervention and control. This exploration by a supremely gifted writer of scientific and technological ideas that are often startling, at times scary, and always fascinating is well-worth the read and highly recommended.

Available through NBPLS OverDrive or through the Libby app as an **e-book** or in hardcopy/print form under the call number **304.28 KOL**. You can get this book at your favourite Fredericton public library by placing a hold on it (the book was purchased by some public libraries elsewhere in NB).

1. [Wikipedia](https://en.wikipedia.org/wiki/Old_River_Control_Structure). "Old River Control Structure." [https://
en.wikipedia.org/wiki/Old_River_Control_Structure](https://en.wikipedia.org/wiki/Old_River_Control_Structure). 23 Aug.
2022,
2. Kolbert, Elizabeth. [Under a White Sky](#).

Reviewed by A. Vietinghoff

FREDERICTON NATURE CLUB
Financial Picture 20 June 2022

Previous Balance 25 August 2021	\$ 1,436.23
Revenues	
Memberships to 20 June 2022	\$ 565.00
Other Revenues	\$ 0.00
Revenues to 20 June 2022	\$ 565.00
Balance	\$ 2,001.23
Expenses for 2021/2022 Year	
Stepping Stone monthly rental (Including Christmas rental)	\$ 500.00
Webmaster's Fee *	\$ 130.00
(Minus \$ 25.00) * =	\$ 105.00
Club Membership Insurance i In Nature NB for 2021/2022	\$ 85.00
Total Expenses as of 20 June 2022	\$ 690.00
Balance as of 20 June 2022	<u>\$ 1,311.23</u>

* Webmaster's fee was \$130.00 and includes \$25.00 family membership. This membership is not revenue for us but our expense is \$105.00 David Lilly also indicated that his webmaster was raising the webhosting cost.

