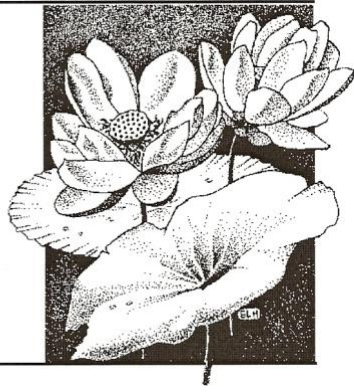


Lotus

NEWSLETTER

of the

NORFOLK FIELD NATURALISTS



APRIL 2025



A Bug's Life: Stream Quality, Caddisflies and Benthic Volunteers

By **Bernie Solymar**
(First published February 2003)

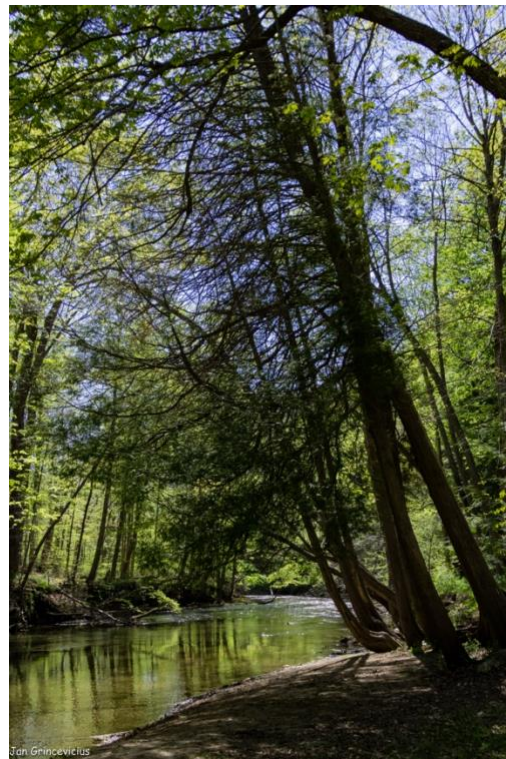
Water quality. We hear that term a lot in the media today. Ever since Walkerton there has been an increased public awareness about the physical and chemical condition of our drinking water. But to get the real story you have to go beyond the tap and beyond bottled water.

Ultimately it is the health of our streams, rivers and lakes (collectively called surface water) and groundwater, which determine whether we live in an ecologically healthy environment. Let's use streams, which Norfolk County has plenty of, as an example. Streams are natural flows of surface water that move on a gradient, flowing into rivers or lakes. Streams support a wide range of aquatic organisms and provide water and food to countless other "land" fauna. But the quality of a stream can be affected by chemical contamination (pesticides, fertilizers, livestock manure, industrial waste) or physical factors like stream bank erosion, sediment loading, removal of sunken logs, canopy cover from surrounding trees, etc.

Scientists use biological monitoring techniques to assess and monitor the health of streams. There are countless techniques used to measure turbidity, solids suspension, levels of contaminants, phosphorous and nitrogen load, oxygen and eutrophication levels, bacterial counts, and stream bank erosion. Aquatic insects, referred to as benthic invertebrates, are also very important tools as indicators of aquatic ecosystem health.

Benthic invertebrates are defined as organisms that live on the bottom of streams, rivers, ponds and lakes. They can include various insects, sowbugs, worms, leaches, snails, clams and crayfish. Insects that reside on stream bottoms include immature stages of stoneflies, mayflies, damselflies, dragonflies, fishflies, alderflies, caddisflies, blackflies, and various beetles, midges and true flies. Numbers of benthic invertebrates can be in the

dozens and hundreds per square metre. The most common sampling techniques are the use of nets which are slowly swept along the stream bottom at intervals. Collected organisms are placed into jars, labelled and then sorted and identified at a layer at a time. Diversity and numbers can vary widely at different depths, stream bottom types (e.g. soil, vegetation, debris) and points along a stream. Sampling at the same location over periods of time therefore provides the best estimates of changes in benthic invertebrate composition.



**Big Creek in
Delhi
Photo by
Jan
Grincevicius**

Cont'd. p.2

And why are these creatures used for biological monitoring? Because they don't travel far, they can be seen without magnification, they are found in even the smallest streams, and they have a wide range of sensitivities to pollution and stress. Mind you it's not all a cakewalk – sampling can be costly and time-consuming. Samples can contain a lot of sand, silt and plant debris, which has to be rummaged through to pick out your benthic invertebrates and then they still have to be sorted and identified. And that's where volunteers come in.

After a number of in-depth studies, U.S. researchers have discovered that volunteers can be a valuable resource when it comes to biological monitoring using benthic invertebrates. The trick to successful volunteerism, in this case, is a simplified protocol, concise and easy to read identification keys, proper training and quality control programs.

Through the development of simplified procedures volunteers can collect valid and valuable data that can help not only scientists, but also politicians, municipalities and conservation groups make important conclusions on stream quality and then pro-actively act on them.

So, the logic follows like this... to have good streams you need good populations of benthic invertebrates. To know if you have good populations of benthic invertebrates, you need good "benthic" volunteers. Chalk another one up for volunteers!

**Scientists brought to tears by huge loss of U.S. butterflies
22% decline between 2000 and 2020; similar trends expected in Canada**

A fluttering butterfly makes most people smile with delight — a reaction that makes them special among insects.

Some people love butterflies so much that, like birders, they look for and count them for fun.

Now, a new study funded by the U.S. Geological Survey has finally compiled all that data — and found some bad news. Populations declined 22 per cent between 2000 and 2020.

Jeremy Kerr, a University of Ottawa professor who studies butterflies says his own work in southern Ontario and the Prairies suggests butterfly declines in Canada are "probably pretty similar" to those in the U.S. He said species are also struggling with warming temperatures on our side of the border.

To read the entire article, go [here](#).



Monarch Butterfly - Photo by Bernie Solyman

Species in Focus

Thistle Tortoise Beetle (*Cassida rubiginosa*)

Information provided by Member, Jeff Hiebert

Tortoise Beetles (Beetles in the subfamily Cassidinae of the Family Chrysomelidae) have always been some of my favourite insects. Their wide elytra (wing-covers) protect their limbs and heads from predators and provide them with an appealingly round shape. The Thistle Tortoise Beetle is not native to Canada (having been introduced to combat the non-native Thistle plant), but it was still exciting to spot this charismatic insect on my back porch, trundling along. Their larval stage is less appealing, but still interesting, protecting itself not with a hardened armor covering but a "fecal parasol". Yes, that's right, larval Tortoise beetles carry their poop within a forked abdomen curved forward over their backs to ward off predators. There is even a specific word for this behaviour: "merdigery" — from the Latin for "dung" and "carry" (Costa 2006). Likely not a word you'll find too much use for.



Thistle Tortoise Beetle

Photo by Jeff Hiebert

Cornell Lab of Ornithology WATCH: A Dazzling Collection of Video Highlights

Escape for a few minutes and immerse yourself in the world of birds. Cornell scoured the more than 41,000 video recordings from all seven continents that were uploaded to the Macaulay Library in 2024, and chose 21 favorites. Then the most interesting, beautiful, and exciting moments were packed into a compelling [three-and-a-half-minute highlight reel](#). Enjoy!



Photo by Member, George Pond

The Silent Migration Beneath Our Feet

By Stephen Paterson for Canadian Geographic

Earthworms have long been recognized as some of the most ecologically important animals on the planet. Charles Darwin famously wrote of them, “it may be doubted whether there are many other animals which have played so important a part in the history of the world.” However, despite their fame, there remains much to be learned about these humble subterranean creatures. For example, there are about 7,000 described species of earthworms, but it’s expected that another 20,000 have yet to be discovered; the biology and life history of many species is poorly understood; and their ecological roles are diverse and complex.

The earthworms most Canadians are now used to finding in their gardens or scattered across the sidewalks after a summer rain are non-native European species that have been introduced over the last few hundred years since the arrival of European settlers.

There are believed to be eight species of native earthworms in Canada. Most of these species are found along the west coast of British Columbia and in the Yukon and are considered rare.

See the rest of the story [here](#).



Dendrobaena Octaedra Earthworm

Photo by Stephen Paterson

***The Storm of Progress* — an Interesting Read**

Contributed by Member Lisa Timpf

For those who have sometimes wondered why it’s taking so long to take meaningful action to address climate change, Wade Rowland’s *The Storm of Progress: Climate Change, AI, and the Roots of Our Dangerous Ethical Myopia* offers some theories.

Rowland positions *The Storm of Progress* as a “series of interconnected essays inquiring into a central issue,” that issue being the threat posed by modern technologies to the well-being of the planet, and to humanity itself.

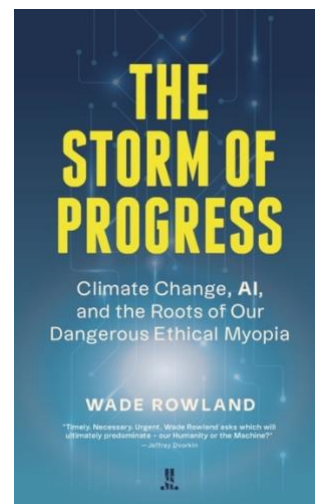
Storm of Progress takes a critical look into “the ideas that shaped Western societies in the wake of the momentous era of intellectual ferment called the Enlightenment.” Those who took entry-level philosophy or humanities courses may be familiar with many of the philosophers alluded to.

Rowland traces the evolution of economic theory, and how the importance placed on money at the expense of other values impacts publicly-traded companies’ willingness to take environmental impact into account when making decisions.

Other issues are also discussed, including our perception of technology and science as good things in and of themselves, rather than asking what we really need and using science to get us there. Rowland also comments on the “dwindling ability to think clearly about ethics and values.”

The Storm of Progress makes a convincing argument that some of the beliefs that have become ingrained into Western culture run at cross purposes to combatting climate change, and there are a lot of powerful forces tilting the field toward the status quo.

Those who would like a deeper dive on this book can find the full review [here](#).



QUIZ — 4 LETTER BIRD CODES

North American birders often use 4 letter codes, also known as banding codes or alpha codes as a shorthand way to log species in a checklist or communicate in writing to other birders. BTW, they are basically acronyms, and it seems that we are using those more and more these days....FWIW.

Although it seems complex at first, the more common bird codes quickly come to mind and become second nature. It can also be good mental exercise for some of us older birders, so here goes!

THE RULES:

There are formal rules so.....

If the bird's name is one word, then the code is the first 4 letters, for example Sora is SORA, easy, right?

If the bird's name is two words, then the code is the first two letters of each word, e.g. American Bittern is AMBI (not ambiguous..... get it?)

If the bird's name is three words, then the code is the first letter of each of the first two words, and then first two letters of the third word, e.g. Great Crested Flycatcher is GCFL

If the name has four words, then the code is the first letter of each word, e.g. Black-crowned Night Heron is BCNH.

There are a few subtleties regarding whether the names have hyphens or not, but for the purposes of this quiz, let's skip that. However, note that the codes **always** use the bird's full name, for example the code for Robin is actually AMRO - American Robin.

Now that you know the rules, here is a list of bird codes and a photo of each. This is a two-part quiz, first you have to identify the bird, then figure out the 4 letter code for each — some are possibly easy, a few not so much! See if you can match the code with the photo, answers on page 6.

TUVU, RNBU, LEOW, DOWO, RTHA, RWBB, CEDW, EAGR, NOCA, PISI, RBGU, SEOW

1 2 3 4

5 6 7 8

9 10 11 12

What Nesting Materials are Safe for Birds?

To successfully help your birds with their nest building—and save them valuable energy for breeding—here are some recommendations for providing bird-friendly nesting materials: twigs or small sticks, leaves and other yard waste, small pieces of straw, grass clippings and native plants.

Materials to avoid are: human hair, yarn or string or dryer lint.

To see more information, go [here](#).



Photo by Greg Pasek, Audubon Photography Awards

NATURE

The beauty of the natural world lies in the details. ~ Natalie Angier

The richness I achieve comes from nature, the source of my inspiration. ~ Claude Monet

Answers to Photo Quiz on Page 5

1. PISI Pine Siskin
2. RTHA Red-tailed Hawk
3. NOCA Northern Cardinal
4. RBNU Red-breasted Nuthatch
5. LEOW Long-eared Owl
6. EAGR Evening Grosbeak
7. RBGU Ring-billed Gull
8. DOWO Downy Woodpecker
9. TUVU Turkey Vulture
10. CEDW Cedar Waxwing
11. RWBB Red-winged Blackbird
12. SEOW Short-eared Owl

Thank You!

From Norfolk Field Naturalists to

Will & Morgan Partridge

Guardian Computing

For hosting our website

Learn to Use iNaturalist Workshop

On Saturday, March 15th, thirty registrants joined Mike Burrell, a birder and naturalist, as he provided all the basics to learning how to use iNaturalist, not only for our own benefit but to contribute to citizen science.

We then got to go outside, take photos of birds and plants and submit them to iNaturalist.

Now, we just need to practice what we learned to hone our skills. Hope everyone who was there has been doing just that!



Create a Garden That Benefits Nature Workshop

On Saturday, March 22nd, thirty-three registrants joined Kevin Kavanagh, the owner of South Coast Gardens and Consulting, a small nursery and landscape design business, to learn some of the actions that gardeners can take to make properties both beautiful with native plants, and more beneficial to the many species of animals that share our landscape. Even small patches of native plants help birds and insects survive. We learned that keystone species are goldenrods, asters, sunflowers, coneflowers, lupins, sneezeweeds, bergamots and mountain mints.

Kevin noted that it is OK to mix native and non-native plants.

It is important in Spring to cut and drop stems in the garden as this keeps the habitat for over-wintering insects in place.



Kicking Garden Clean-up to the Curb

Spring is here, and with it comes the familiar urge to tidy up our gardens. But before you grab your rake and pruning shears, consider this: traditional spring cleanups are doing more harm than good — no matter how you approach it.

Downside to garden clean up: Many wildlife species overwinter in leaf litter, hollow stems, logs, seed pods, and other natural features. Routine garden cleanups — like clearing leaves or cutting plants to the ground — can harm beneficial insects by destroying their habitat.

A “messy” winter garden supports wildlife:

1. Woolly Bear Caterpillars: Survive winter under leaves or rocks by producing natural antifreeze.
2. Cavity Nesting Bees: Overwinter in hollow stems where their larvae feed on stored pollen and emerge as adults in spring.

3. Birds: Insects hiding in fallen leaves are a vital food source for species like robins, juncos, and thrashers. A "messy" garden supports a natural buffet more nutritious than commercial birdseed.

[Re-think your garden clean up with these tips.](#)



Slate Colored Junco
Photo by Lori Harrison

PRESIDENT'S REPORT

When I was a young boy, I collected butterflies. I caught them with a net, killed them with ethyl acetate and then stuck a pin in their bodies and carefully spread their wings to dry. Today I am content to photograph butterflies and build a library of photos, which digital cameras have made very easy and cheap. (Back in the day I spent a small fortune on slide film!) I am old school in that I continue to use field guides for I.D.ing not only butterflies, but moths, dragonflies, wildflowers, mushrooms, ferns, etc.

Last year I began to think how great it would be to have an inventory of the butterflies of Norfolk. The NFN have always hosted the Long Point Butterfly count, held every first Saturday in July. But that offers only a snapshot of one day a year. Of course, some species of butterflies are not necessarily active in July – they may have their flights earlier in the spring and summer, or in late summer and fall. So, I talked to Mike Burrell of the Natural Heritage Information Centre and asked him to give NFN members a presentation on a digital tool called iNaturalist. This app allows you to send photographs of different plants and animals to a central database operated by volunteers. Every observation contributes to biodiversity science, from the rarest butterfly to the most common backyard weed. iNaturalist shares all data with scientific data repositories like the Global Biodiversity Information Facility and is accessible by ecologists and other biologists.

Mike helped me set up a project within iNaturalist called “Butterflies of Norfolk”. This project will allow all naturalists and photographers in Norfolk to contribute butterfly sightings, thereby building a database of our winged jewels. The beauty of it is that the new project also collected all previous sighting reports in the County (so we already have over 6,700 observations from past years!); and anyone who has photos of butterflies on their computer can now input them as well. All you need to provide is what, where and when. Here is the site for anyone interested in getting involved - <https://inaturalist.ca/projects/butterflies-of-norfolk>. (Note you have to first download the app).

Your Board of Directors met on March 25th. Highlights of the meeting included a discussion on where to store future archival information. Our current archives are in the Pt. Rowan library and managed by

the Pt. Rowan/South Walsingham Historical Society, but they are out of space. Inga and I plan to meet with staff from the Norfolk County Archives about storing current and future NFN archival information at the former Eva Brook Donly Museum. We also approved an increase in individual and family membership fees to \$30 and \$50, respectively. Note that is the first increase in well over a decade! We felt it justified as our costs (i.e. bookkeeping, speakers, venue rentals, etc.) have all increased.

The next Board Meeting will be held on June 24, 2025. The report from this meeting will be in the Summer edition of the Lotus.



BRIEFS

- **A Future Where Nature Thrives: Donating to a Charity in Your Will**
Did you know that, as part of your Will, you can set aside a gift for charity? You may have heard this is often called “planned” or “legacy giving”. Learn more [here](#).
- **Experience the Newly Upgraded Trails at George C. Newton Nature Reserve**
This reserve is located just a few kilometres from the shore of Lake Huron between the towns of Goderich and Bayfield. The upper trail meanders through rolling hills, passing a fascinating combination of natural and human history. The lower trail slopes steeply through a dense grove of cedars, eventually meeting and following a creek. Learn more [here](#).
- **[Ontario Nature Magazine, Spring 2025](#)**
- **[Vote in the Federal Election](#)**

To receive selected information by email, you can sign up:
ontarionature.org

Welcome New NFN Members

2024 - 2025 Season

**Scott Guthrie, Adam & Sarah Lohonyai,
Elmer Lickers & Carole St. Amand and
Joe Stephenson** (welcome back)

We look forward to meeting you and hope you will participate in and enjoy all the NFN indoor presentations and field outings.

Upcoming NFN 2025 Spring Events

- Star Party - April 5, 8:30 p.m.
- Timberdoodles - April 11, 7:50 p.m.
- Ephemeral Wildflower Walk - May 10, 10:00 a.m.
- Mother's Day Wildflower Walk - May 11, 10:00 a.m.



Gardening for Birds - Have fun exploring this courses that can get you started on your journey with birds, or help improve your existing skills and knowledge. For this free course from Birds Canada, go [here](#).

US Bird Populations Continue Alarming Decline

The 2025 U.S. State of the Birds Report, produced by a coalition of leading science and conservation organizations, reveals continued widespread declines in American bird populations. Read more [here](#) and [here](#).



[Long Point Bird Observatory Newsletter](#)

Tell a friend about us.

The benefits of membership, membership forms and payment options are available at www.norfolkfieldnaturalists.org

We welcome new members. Don't keep us a secret.

NFN Meetings

Norfolk Field Naturalist meetings are held the second Tuesday of the month from September to April. Meetings take place at the **Simcoe Recreation Centre, 182 South Drive, Simcoe**. The meetings are free and visitors are always welcome. Doors open at 6:30 pm, programs begin at 7:00 pm.

NFN Mailing Address

Norfolk Field Naturalists
PO Box 995, Simcoe, ON
N3Y 5B3

Next Lotus Issue:

Summer 2025
Input dead line:
Friday, June 20, 2025

About the NFN

Norfolk Field Naturalists members participate in meetings and field outings, many of which are family-friendly. **Membership fees are \$20 Individual and \$30 Family.**

Donations are eligible for income tax credits. Charitable registration # 11905869RR00001

Guest speakers present programs on interesting and relevant natural history and conservation topics. Club members receive the Lotus newsletter with articles on local natural history and club activities. Copies of the Lotus are available at meetings, by mail or by email and posted on the NFN web site. Articles published in the Lotus reflect the views and opinions of the authors, but not necessarily those of the NFN.

www.norfolkfieldnaturalists.org

2024 - 2025 NFN Directors and Coordinators with Project Information

Email: info@norfolkfieldnaturalists.org

Board of Directors

President
Vice-President
Treasurer
Secretary
Membership Secretary
Director for Environment
Director-at-Large
Director-at-Large
Director-at-Large

Bernie Solymár
Bernd Mueller
Peter Black
Amber Zuber
Jan Grincevicius
Madaline Wilson
Elisabeth Duckworth
Len Grincevicius
Keith Hekker

Coordinators and Other Appointees

Speaker Program Coordinator
Field Events Coordinator
Lotus Editor
Publicity Coordinator
Website Coordinator
Archives Coordinator
Rowanwood Steward
Butterfly Count Coordinator
Christmas Bird Counts Coordinators

Len Grincevicius
Bernie Solymár
Jan Grincevicius
Elisabeth Duckworth
Lisa Timpf
Inga Hinnerichsen
Peter Carson
Adam Timpf
Adam Timpf - Woodhouse Count
Stu Mackenzie, Long Point Count
Nancy Furber and Faye Socholotiuk-Duym - Fisherville Count

Honorary President
Honorary Directors

George Pond
Anne and Dolf Wynia