

The Woodland Observer

Newsletter of the Nipissing Naturalists Club

www.nipnats.com



May 2020

This dramatic photo by Fred Pinto shows the power of a windstorm that piled up ice on the shoreline of North Bay's Waterfront – one of the many nature sightings Club members reported at our meeting in April.

From the Editor

As we continue to adapt our lives to the on-going need for social distancing in this time of COVID-19, many of us finding new ways to enjoy nature. For some it may be more solitary outdoor pursuits, while others are learning more about on-line resources to keep connected. In this month's Woodland Observer you will find that the NipNats Board and other members have

been working to bring interesting presentations to us “virtually” while still allowing us to interact with each other. Fred Pinto has organized a whole series of on-line presentations on various nature topics (see schedule below). We have also been able to have on-line Board and Club meetings, including the Bird Wing meeting this week.

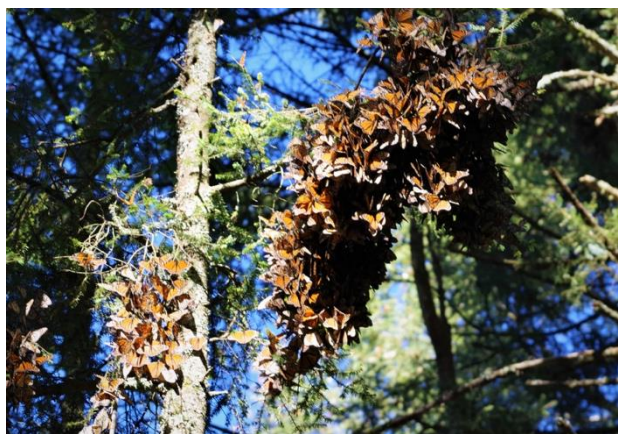
This issue also includes a sampling of members’ **nature sightings** over the past month and an article by Paul Smylie on **How Water Came to be on Earth**. There’s a new **spring photo contest** and a challenge to design and build a **sign for our Nature Garden**. For those interested in home gardening there is a detailed plan for building your own vegetable planter!

Recent Meetings and Club Activities

Club Meeting and Presentation – April 14th

As an alternative to an in-person meeting, we had an on-line ‘virtual’ meeting using the ZOOM videoconferencing app. The format worked very well with **27 members participating**. Although we certainly missed the personal social aspects that are part of face-to-face meetings, the format allowed members who live at a distance to participate more easily; people called in from as far away as Verner and Ancaster.

Fred Pinto chaired the meeting and also gave a presentation on **Monarch Butterflies** in their winter sanctuary in the mountains of central Mexico. With slides and video Fred gave us a sense of this amazing natural phenomenon whose [location](#) in an Oyamel fir forest was located precisely only in 1975 with the help of a Canadian entomologist, Fred A. Urquhart, and his American colleagues. We also heard about the challenges in preserving this habitat as local farmers attempt to expand avocado and other cash-crop plantations. Criminal activities also threaten the peace and safety of the area as lucrative ‘avocado cartels’ are replacing the drug cartels of the past.



Monarch butterflies overnight in huge clusters in Oyamel fir trees in the mountains of central Mexico. *Photo by Fred Pinto*



Monarch butterflies seek moisture when it is sufficiently warm to “awaken”.

At the meeting Keith Pearson announced a new **Spring Photo Contest** to encourage members to take photos and stay connected to nature during this time of COVID precautions. Also, Mel Alkins announced that she is looking for members to help **design and build a sign for the Nipissing Naturalists' Nature Garden at the Waterfront**. (see below for details on these two activities).

Many members shared their **spring nature observations** during the meeting. In the **mammal category** otters, snowshoe hare, white-tailed deer, moose, red squirrels (lots!), chipmunks, and even a black bear mom with three cubs have been spotted.



Grant McKercher

Sightings of **resident and returning migratory birds** in the last month included: pine grosbeaks, dark-eyed juncos, merlin, kestrels, osprey, Northern harrier, wild turkeys, killdeer, and tree swallows; nesting bald eagles, displaying grouse and calling barred owls have also been noted. Kaye Edmonds saw a trumpeter swan in Laurier Woods and Dick Tafel thinks this is a first sighting for the park.

Mel Alkins has observed a chukar in the Wasi Road area recently – it may be an escapee from a game farm but is certainly an interesting visitor to see at your feeder!



Chukar

Grant McKercher

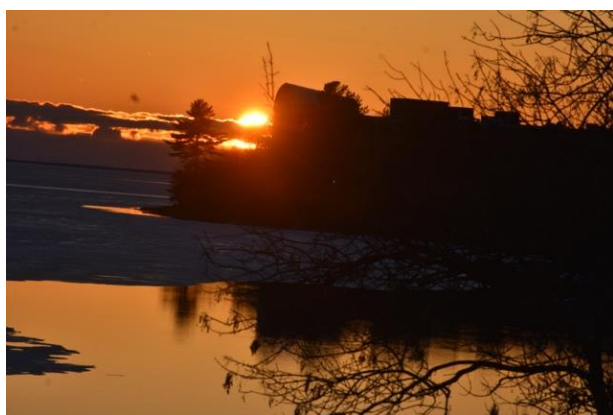


Trumpeter Swan

Kaye Edmonds

Katie Tripp saw her **first mosquito**.

As illustrated by the cover photo, the **ice on Lake Nipissing** has been moving in response to high winds over the Easter weekend. It also piled up on some parts of the Callander Bay shoreline.



Sunset – St. Joseph's Motherhouse

Kaye Edmonds



Callander Bay Shoreline April 2020

Grant McKercher

The sunsets are beautiful this time of the year.

I'm always looking for your nature sightings, photos and stories, so please send them along (grant.mckercher705@gmail.com) and I'll put them the newsletter!

On-line Presentation – April 23rd

“Habitat Restoration for Kirtland’s Warblers in Simcoe County”

Peter Burke - artist, bird enthusiast, Senior Ecologist with Savanta Inc., London, ON

Fifteen participants “zoomed in” for this presentation about the efforts to re-establish Kirtland’s warbler habitat in Simcoe County in central Ontario. These small warblers have very specific habitat requirements, typically nesting in large forests of young jack pine, a habitat often created by fire. This habitat has largely disappeared from southern and central Ontario due to development and forest fire suppression.



Photo: Brian E. Small
www.ontario.ca/page/kirtlands-warbler

This species has just recently been taken off the [endangered species list](#) in the United States after 52 years due to the success of conservation efforts in Michigan. The Ontario group is taking early steps to recreate this success by restoring a small area of habitat near Midhurst just west of Barrie.

For more information on Kirtland’s warblers see: <https://www.ontario.ca/page/kirtlands-warbler>

On-line Presentation – April 30th

“Project Dragonfly”

Valerie Walker, Sault Area Naturalists

Valerie Walker, a volunteer with the Sault Area Naturalists (Ontario and Michigan) presented an overview of [Project Dragonfly](#) – a study funded through Ontario’s Species at Risk Stewardship Fund.

The purpose of the project was to determine whether two endangered dragonfly species (the [Pygmy Snaketail](#) and the [Riverine Clubtail](#)) were present in the Goulais River near Searchmount, north of Sault Ste. Marie. Volunteers from the Sault Naturalists of Ontario and Michigan collected dragonfly exuviae (shed larval skins) over two seasons (2016-17) from transects along the river.



Dragonfly exuviae (bugguide.com)



Riverine Clubtail (bugguide.com)



Pygmy Snaketail (bugguide.com)

In addition to looking for the two species at risk, the survey also identified all the other odonate species collected. Although neither of the two target species were found during the survey, 15 other species were identified. Two species, the [Riffle Snaketail](#) and the [Moustached Clubtail](#), accounted for 70-77% of the exuviae collected.

This project was a great example of citizen science in action. The 16-20 volunteers involved logged in 1531 person hours over the two seasons and contributed significantly to the knowledge of natural history in the Sault Area. For more information on the project see:

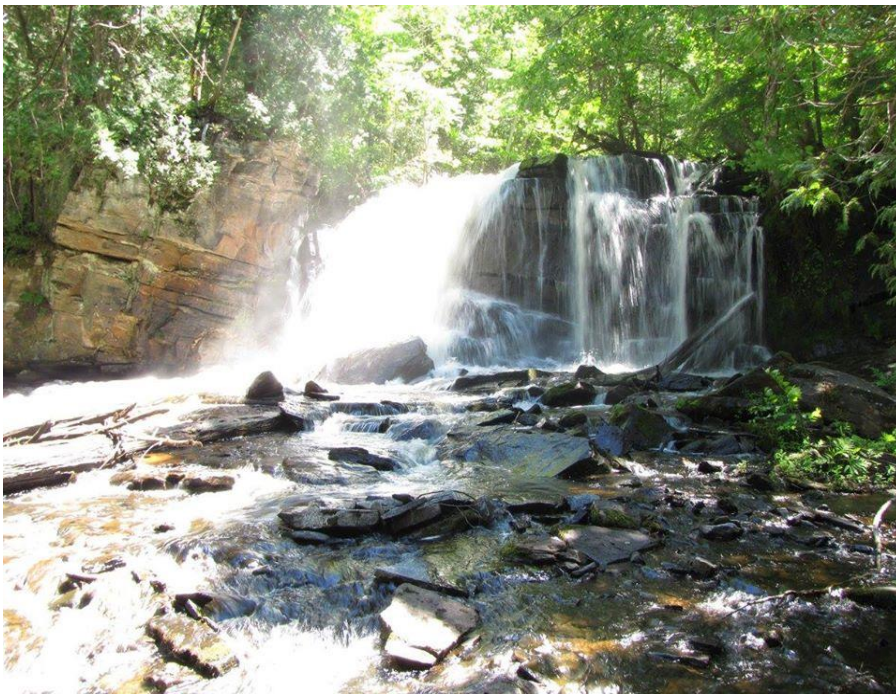
<https://northernhoot.com/goulais-search-dragonflies/>.

Submitted Articles

Water, Water Everywhere.....But Where Did it Come From?

By Paul Smylie

Waterbodies hold a special appeal to most naturalists. Ponds, lakes and marshes are places of bounty when it comes to biodiversity, providing habitat for everything from bugs to bats. Wetlands provide nesting areas for waterfowl, breeding grounds for frogs and salamanders, year-round housing for turtles and fine dining for slithery snakes. The plethora of dragonflies in a marsh is simply an indication of the diversity of insect species that make up the lengthy menu of these highly - skilled predatory aviators.



High Falls on the Barron River (Nipissing District – Renfrew County) *Paul Smylie*

There's no question that the abundance of water on our planet is one, if not the only reason, that life has originated on Earth. Although not speaking from personal experience, from space, our home planet appears to be mostly covered by ocean. In fact, about 70% of the planet is covered with water. Even our bodies are about half water, depending on your age, with tendencies to becoming more raisin than grape-like as we get older.

Water being at its most dense at 4° C is another fascinating physical aspect, since as water cools below 4° C, it starts to expand. This is a good thing as it explains why frozen water, or ice, floats while warmer (4°C) water sinks to the bottom of a lake or pond. If it weren't for this strange phenomenon of water, which is contrary to most other liquids, life as we know it would not exist. Lakes and ponds would freeze solid right to the bottom, making swimming for all the aquatic critters a somewhat difficult task. Ice-fishers would have to find a new past-time as well.

Now that we have established just how important water is to life, have you ever taken a moment to wonder where it came from? It had never dawned on me until not that long ago, when it was brought to my attention in an article I was reading, that water was not always here. It's something I had never considered; I thought water was 'always here'. Well, it wasn't!

The current view is that the sun and its planets coalesced from a dusty swirl in what is known as the 'solar nebula' about 4.5 billion years ago, approximately 9 billion years after the big bang. In

that dusty swirl there was sure to be water molecules which had formed from hydrogen and oxygen. However, during the early formation of the earth, with high temperatures and no enveloping atmosphere, any water molecules would have no reason to stick around and would evaporate and head back out into space. That begs the question, 'if water didn't form as part of the earth, then where did it come from?'

There are two obvious suspects that may have brought water to the earth from external sources – namely, comets and asteroids. Both make up part of the space gravel orbiting our sun. Comets differ from asteroids in that they contain a lot of easily vaporizable material surrounding a usually rocky nucleus. Dust, water, ice, and frozen carbon dioxide, carbon monoxide, methane, and ammonia surround the nucleus and give rise to the long characteristic tail.



Asteroids in contrast are large rocky bodies in orbit around the sun. Both asteroids and comets do contain ice though. In the early years, or epochs really, of earth's formation, enough collisions with asteroids and comets would have occurred to account for most of the water on the planet. The debate has raged on for some time however about the relative importance of comets and asteroids as the source of much of the earth's water.

Recent research that looks at the chemical makeup of water in our oceans now points to asteroids as the main delivery system. Water is made up of two hydrogen atoms and one of oxygen, H_2O mostly. Occasionally, one of the hydrogens is replaced by a deuterium atom. Deuterium is an isotope of hydrogen that is responsible for what we know as 'heavy water' when substituted for a hydrogen atom. Hydrogen normally only has one proton; add a neutron, and it becomes deuterium. The ratio of deuterium to hydrogen in water can be used as a 'fingerprint' to match up sources of water. The H/D ratio in our ocean's matches most closely with that found in asteroids, and not so much with comets. Thus, the current evidence suggests that most of earth's water came from bombardment with asteroids. Recent analysis via the Rosetta spacecraft, the first to orbit a comet, determined that the ratio of deuterium to hydrogen of comets doesn't match well with our ocean's water. Current evidence suggests that only about 10% of water came from comets.

The mystery of the origin of our planet's water doesn't quite end there. New research using isotope analysis indicates that some of the water on earth doesn't quite match with either of that of asteroids or comets. This suggest there may have been another source of water that had not yet been considered. At the boundary layer between the earth's core and mantle, the deuterium to hydrogen is much lower than that found in asteroids so this water must have had a different origin. As the earth formed during the solar nebula, the surface of the earth was molten magma. Nebular hydrogen bonded with abundantly available oxygen and became incorporated into the mantle during cooling. Deuterium levels in this water that has recently been sampled from northern Canada has levels matching with that water that didn't come from asteroids or comets. It is now thought that 1-2% of the earth's water came from the solar nebula. Some estimates

suggest that there may be as much as 10 oceans worth of water bound up in the earth's mantle. Science is an ongoing process, constantly updating and improving as new evidence becomes available, bringing us closer and closer to a final answer to a question. The final word on the origin of water likely remains to be heard.

Now that you know where water came from (based on current evidence), hopefully you won't be kept awake all night wondering how all the water got here. After all, getting the most out of your naturalist experience usually means getting up with the birds. Thanks to asteroids, you can hasten your morning waking with a cool splash with di-hydrogen monoxide before you grab your binos and head out to your local wetland.

Here are some links for more information on the origins of water on the earth:

<https://earthsky.org/space/origin-earths-water-asu-solar-nebula>

<https://www.smithsonianmag.com/science-nature/how-did-water-come-to-earth-72037248/>

<https://www.scientificamerican.com/article/how-did-water-get-on-earth/>

<https://www.astrobio.net/also-in-news/what-is-the-origin-of-water-on-earth/>

Upcoming Events & Speakers

With the on-going pandemic precautions, and necessity to maintain social distancing our President, Fred Pinto, the Board of Directors, and other Club members are exploring ways to connect “virtually” using the on-line videoconferencing application called Zoom. We have a number of speakers lined up in the next few weeks to give short on-line presentations (about 30-45 minutes with 15 minutes for questions and discussion). These may happen more than once a month and the listed presentations may change depending on the availability of speakers. **All NipNat members will be notified by e-mail a day or two in advance about the topic and how to connect via Zoom.**

Video conference talks for Nipissing Naturalists while we self-isolate April- June 2020

Date	Start Time	Speaker	Topic	Comments
Thursday April 23	12.00h	Peter Burke, Senior Ecologist with Savanta Inc.	Restoration of Kirtland's Warbler's habitat in Simcoe County	Peter is a birding enthusiast and artist. For example, he was one of the two illustrators for the <i>Peterson Field Guide to Birds of Northern Central America</i> . For more info on Kirtland's warblers see: https://www.ontario.ca/page/kirtlands-warbler
Thursday April 30	19.00h	Valerie Walker, volunteer with the Sault Naturalists	Project Dragonfly to determine the presence of two endangered dragonfly species in the Goulais River - the Pygmy	Volunteers from the Sault Naturalists of Ontario and Michigan collected dragonfly exuviae (shed larval skins) from transects along the river over two seasons. Val Walker will summarize the results of this unique study. This project

			Snaketail and the Riverine Clubtail.	was funded through Ontario's Species at Risk Stewardship Fund.
Tuesday May 5	19.00h	Franco Mariotti, Sudbury Naturalists Club	What's Up With Polar Bears?	Ontario is home to the most southern population of polar bears in the world. They are the front line of the impacts of climate change. Is their population affected and how so? Are more northern polar bears impacted? Explore the world's largest land predator and its unique adaptations to one of the most hostile environments on the planet.
Thursday May 7	Noon EDT (17.00h GMT)	Ted Wilson, Walsh Scholar in Silviculture, Teagasc - The Agriculture and Food Development Authority, Republic of Ireland	A (Very Short) History of Trees in England's Lake District	
Tuesday May 12	19.00h EDT	Dr. Sonya Richmond	Exploring Canada from The Great Trail	Trekking partners Sonya Richmond and Sean Morton are hiking across Canada on the World's longest recreational pathway – the 24,000 km long Great Trail – to connect individuals and youth to nature through birding.
Thursday May 15	19.00h EDT	Diana Komejan Conservator	Conservation work in 2011 on Shackleton's hut at Cape Royds and Scot's hut at Cape Evans in Antarctica	For more information see on the Antarctic Heritage Trust see https://nzaht.org/conservate/history-of-the-project/
Tuesday May 19	To be determined probably 20.00 h	Oliver Jewell, PhD candidate, Perth Australia	White sharks, where they are and how to track them	Oliver will be joining us from Western Australia that is 12 h ahead of us, so it will be 8 am on Wed morning for him
Thursday May 21	19.00h	Dr. Rachel Sturge Assistant Professor, Dept. of Biological Sciences, University of Toronto	Alaskan nature	A report of a visit to Alaska in 2019
Tuesday June 9	19.00h	Dr. Rachel Sturge, Assistant Professor, Dept. of Biological Sciences, University of Toronto	An Overview of Bird Migration	
Thursday June 11	19.00h	Dr. Nandadevi Cortes Rodriguez, Assistant Professor Department of Biology, Ithaca College, Cornell University	The Crow and the Snake: a modern tale of the Mariana Crow population decline in Guam and Rota	The Mariana Crow is a critically endangered species due to the spread of invasive species, human persecution and habitat destruction.

Other Announcements/Information

New Spring Photo Contest!

Keith Pearson

Spring is here and we're having a photo contest to celebrate!

We would love to see what spring looks like at your home. Photos will be separated into three categories:

PLANT LIFE - Such as flowers, potted plants, trees, shrubs, home gardens etc.

WILDLIFE - Ideas include feeder birds, visiting deer, squirrel antics etc.

PEOPLE AND PETS ENJOYING NATURE (while practicing social distancing).

Send your entries to nipnatsphotos@gmail.com. Please, send only photos personally taken by you or your family, and be sure to practice social distancing. **You may submit one photo per category for each Single and Student membership, and on photo per family member for Family memberships.** There is no age limit. If you later take a photo that you like better, you can submit the new one and we will enter it instead. You can do this as many times as you like. Please indicate the name of the person who took the photo and the category in which you wish the photo to be entered.

The cut-off for submissions is June 30. In the first week of July, we will send out a Google survey form by email for each category to all members. You will see all the photo entries and will be able to select your favorites. Winners will be announced at the July Club meeting and their photos posted to our Facebook page and featured in the Woodland Observer.

Please continue to practice social distancing, stay safe, and have some fun with this.
Happy snapping!

We Need a Sign for the Club's Waterfront Nature Garden!

Mel Alkins is asking for help in having a sign erected at the Club's Waterfront Nature Garden on Memorial Drive. **She is hoping that someone will design and construct a suitable sign by the end of May!**



The general guidelines are:

- The construction media are flexible. Whatever you work with – wood, paint, wire etc., is up to you. We want people to use their creative talents and come up with something unique! **You are welcome to submit a design sketch and details before actually proceeding with construction of the sign.**
- The size should be at least 3 feet long by 2 feet high so that it is visible as people walk or drive by the garden.
- The text on the sign should highlight the great things that the Nipissing Naturalists are doing and showcase this new project. So, the sign should say something like “Nipissing Naturalists Nature Garden”, “NipNats Nature Garden”, or “Welcome to the Nature Garden” and have the NipNats logo on it. We can send you a copy of the logo on request.
- **Oh yes, there is a prize - \$100 to the winner!** All runners-up can use their sign for their own gardens or opt to have them auctioned off as a fundraiser for NipNats!

Please contact Mel at melalkins@hotmail.com if you have any questions.

Connecting to Nature While Stuck Inside During COVID-19

[Ontario Nature](#) has gathered some ideas and nature-related activities that you can participate in while still practicing social distancing.

[Cornell Laboratory of Ornithology](#) also has some **free on-line resources**:

- [Bird-Related Educational Videos](#) - 175 free videos covering a myriad of ornithology topics from anatomy and behavior to evolution and conservation
- [The Wall of Birds](#) - explore the Cornell Lab’s stunning 3000 sq. ft. mural illustrating all of the families of birds across the globe
- [Feathers](#) - an interactive tutorial about this most unique of bird characteristics
- [The McCauley Library](#) - a wildlife media library of birds, amphibians and mammals; includes maps, photos and sounds
-

Do you need a project? How about a vegetable planter?

By Keith Pearson

If you need something to do, read on. I found plans for a vegetable planter that looks interesting, and I love growing my own vegetables.

The Plan

I don’t have a lot of garden space that is not already occupied with flowers and shrubs, so my deck is my target for growing vegetables. Here is a link to the plan I am going to use for my deck planter box. <https://myoutdoorplans.com/planter/vegetable-trug-planter-plans/>



MyOutdoorPlans.com

The first thing I did was sort out what materials I needed to do the job and ordered from [Home Depot](#) for curbside pickup. Using a browser on your PC works best for this.

- 4 - 5/4" X 12' Cedar deck boards. The new pressure treated wood is apparently good for vegetable planters, but I love cedar, and am okay with the cost difference.
- 7 - 2" X 4" X 8' Cedar boards.
- 50 - 2 1/2" zinc plated square-head pocket screws.
- 100 - 1 5/8" #6 deck screws. There will be some leftover screws.
- Landscape cloth as a liner.
- Eco Wood Treatment. This seems to be a good water based non-toxic sealant for a vegetable planter. It's a powder you mix with water.
- [Burrows Garden Centre](#) helped me sort out the soil I needed, and I was also able to get seeds there. They have curbside pick-up, as do the other garden centres in town, such as [Laporte's](#) and [L'Ami's](#). I am going to use 1/2 Quad mix soil and 1/2 Pro Mix potting soil; I think it will take about 360 liters.
- I am going to plant beans, cucumbers, leaf lettuce, swiss chard and multiplier onions. Sounds like a lot, but we will see!
- I am also ordering a small watering system from [Lee Valley](#).

I don't want to add up the bill for this or calculate the cost per bean! It's much like my fishing experiences where the cost per pound never justifies the expense of the trip. It's just for fun and who doesn't love fresh picked vegetables? The planter should give many years of pleasure.

Update: If you find that the plan above is too large for your available space, a more compact "wall-hugger" planter might be an alternative (<https://www.ana-white.com/woodworking-projects/veg-trug-inspired-planter-wall-hugger-version>).

Keith actually ended up building this smaller version to fit better on his deck. *Editor*



Almost ready for planting!



Board of Directors 2020

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705-476-9006

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Dick Tafel, Chairman rtafel@sympatico.ca

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Renee Levesque, Bird Wing Coordinator

705-472-7907

Monthly Bird Wing and Bird Bash reports are sent to members by e-mail and posted on the Nipissing Naturalists Club's website: <https://www.nipnats.com/bird-wing/bird-wing-meetings-outings/>, and <https://nipnats.com/bird-wing/bird-bash-reports/>.

The Woodland Observer

The Club's newsletter, *The Woodland Observer*, is published electronically September to June, and sent to members by e-mail and posted in date order on the Nipissing Naturalists Club's website: <https://nipnats.com/newsletters/>.

Grant McKercher, Editor grant.mckercher705@gmail.com 705-499-5577

Contributors to this issue: Mel Alkins, Kaye Edmonds, Fred Pinto, Keith Pearson, Paul Smylie

Membership Fees

Annual Nipissing Naturalist Club membership fees are:	Single	\$20.00
	Family	\$30.00

There is an **additional annual \$5.00 membership fee for Bird Wing** which meets the fourth Tuesday of each month in the auditorium of the North Bay Public Library from 6:30 - 9:00 p.m. **This membership fee is paid directly to treasurer of the Bird Wing.**

Nipissing Naturalists Club is a member Ontario Nature:
<http://www.ontarionature.org/>.

