



# The Woodland Observer

## Nipissing Naturalists Club

### April 2015



President: Fred Pinto — fredpinto1@gmail.com — 705-476-9006

## A banner year planned for the Nipissing Naturalists

*A Summary of the Board of Directors Annual Strategic Planning Meeting*

The Board of Directors met to develop a plan and budget for activities this year. We continue to have a shortfall in our revenue compared to our planned expenses by about \$500. We will use our reserves to cover this shortfall while we try and increase membership and other sources of revenue. We decided to not recommend an increase in membership fees even though membership fees have not increased for about 20 years.

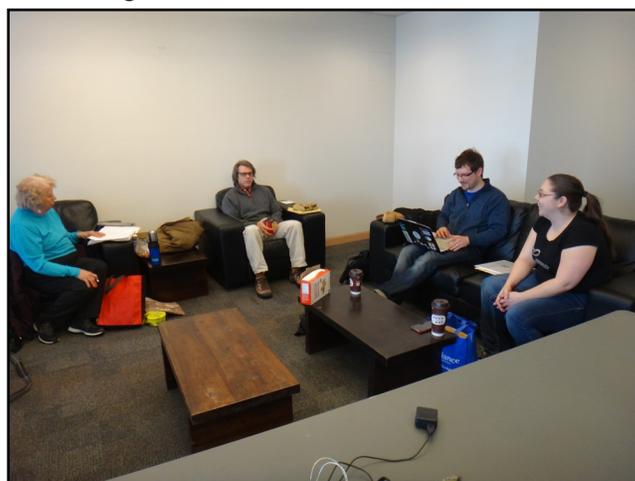
### We will try and increase revenue by:

1. Asking visitors for a donation when they attend a meeting or outing.
2. Seeking sponsorship with a marketing company in the use of images from the club photo contest.
3. Inviting donations for refreshments after our meetings.
4. Increasing membership by holding fun and exciting events through the year and using all forms of advertising to inform members and non-members of these activities.

### Here briefly is what is planned:

1. A full slate of unique outings throughout the year. Various directors have been charged to develop the suggestions into a specific outing. For example, we will try and visit a local winery (did you know we had one?), hold a nature film festival, visit a local tree nursery and important bird areas.
2. Have interesting and informative speakers for our monthly meetings. For example, have a speaker on ethno-botany and another on alternative energy.
3. Cooperate with other community groups involved in nature so that you know of their events.
4. Host the 2<sup>nd</sup> Louise de Kiriline Lawrence Nature festival on Saturday August 15<sup>th</sup> 2015.
5. Work to recognize Louise de Kiriline Lawrence, possibly with a provincial heritage plaque at Pimisi Bay.
6. Work with the Friends of Laurier Woods who are celebrating their 25<sup>th</sup> anniversary to hold walks in the **Laurier Woods Conservation Area**. Each walk will cover a different topic related to nature and local history.

7. Develop practical solutions that enhance the ecological value of sites used for other human purposes. Last year we grew milkweed and planted some on the old waste disposal site. Similarly this year we will try and work with a utility and Nipissing University to enhance habitat for pollinators, including Monarch butterflies, and swallows.



Come to the meeting on April 14<sup>th</sup> to find out more about what is planned. Also like the Nipissing Naturalists on Face Book to get updates on details of the club activities.

To start it off right, here's a list of our monthly outings in **Laurier Woods Conservation Area**:

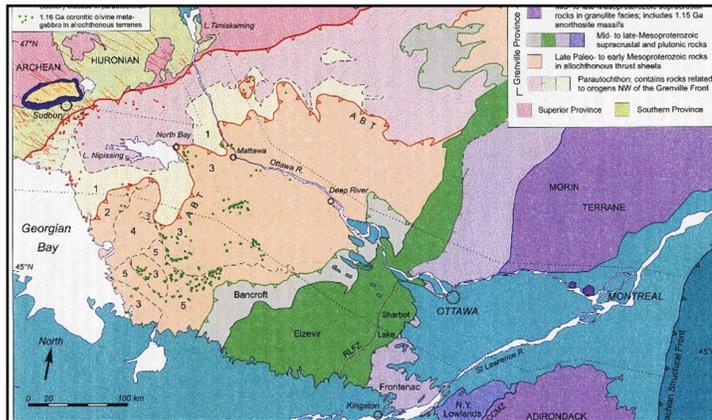
| Date        | Topic                          |
|-------------|--------------------------------|
| May 2       | Birds                          |
| June 6      | Glaciation                     |
| July 4      | Aquatic insects                |
| August 1    | wild edibles and wild-crafting |
| September 5 | Seedless plants                |
| October 3   | Geology                        |
| November 7  | Investigating tracks and signs |
| December 5  | History of Laurier Woods       |

# The Geological Significance of Nipissing

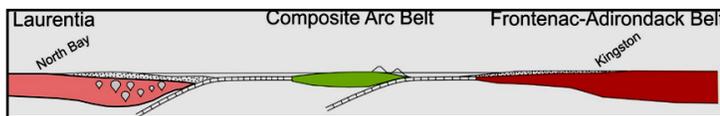
A follow-up to the presentation by Larry Dyke

By: April Phelps

...continued from February & March 2015

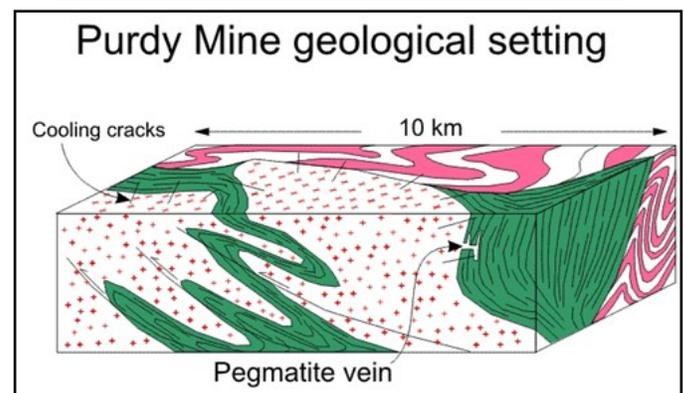
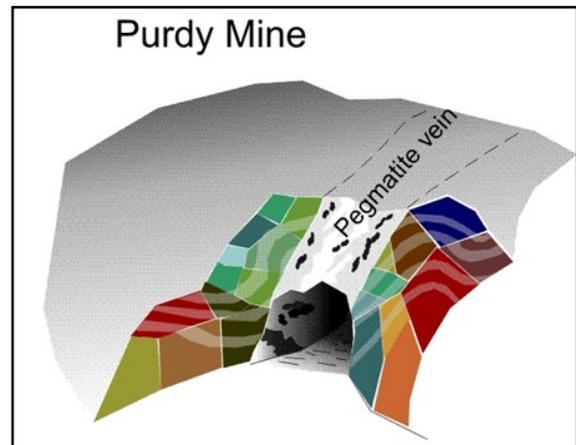


The above red lines with “teeth” on them are considered structure zones. They were basically different parts of ancient terrain of various ages, each being pieced together over the course of 30-40 million years.



North Bay to Kingston were three different pieces of terrain that were being pieced together during this time.

The BC coast was the same; the rock melted and intruded into pre-existing crust. These are the main places for mineral deposits.



The Purdy Mine was an example of Silica melt, which gave way to the introduction of smaller amounts of deposits of minerals like Gold and Silver. How these form is by the segregation that occurs during cooling. Essentially the rocks have much lower melting points and therefore create lots of water and steam that vary in temperature from 600-700 degrees Celsius. This volatile environment is mobile, but it's also very concentrated. When the rock cools, it cracks and gives way for mineral intrusion, it dries, and the cycle continues.

Pegmatite (above Purdy Mine) is a rock with very large crystal sizes. At the Royal Ontario Museum, an eight foot crystal can be observed that was obtained from the mine. During World War Two, this mine gave up over 2,000,000lbs of Mica for Electronics in warfare.

...Continued on page 5

# Calendar of Events

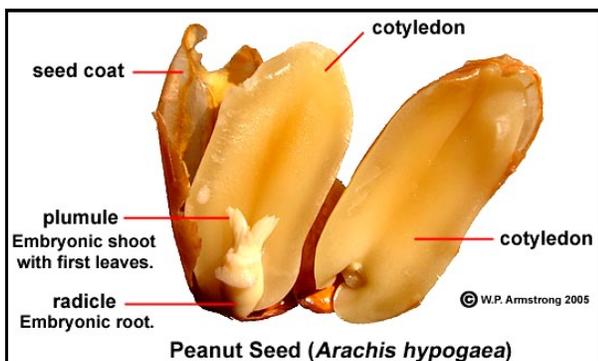
## Next General Meeting

Tuesday, April 14, 2015  
Cassellholme Auditorium @ 7:00 pm

## Previous Meeting Review

Lets give a big thank you to last month's speaker, Joe Boivin, whose intriguing presentation on "Asleep at the switch: how seed dormancy helps some plants to survive" included an edible peanut dissection! A summary of his presentation can be found on page 4 of this newsletter and a downloadable version of his power-point presentation can be accessed on the Nipissing Naturalists home page at this link:

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



### Science Fair 2015: Results

Thank you to April Phelps and Steve Mitchell for another successful judging of the yearly Science Fair. The winner of the Nipissing Naturalists Club Science Fair Award this year was Payton Hack, who has been studying the colour preferences of birds.

### Monthly Bird Bash — Saturday & Sunday

Spend some time observing our local birds and report on how many species of birds you see. Contact Dick Tafel for details [rtafel@sympatico.ca](mailto:rtafel@sympatico.ca) or 705 472-7907.

### Birdwing Meeting

Fourth Tuesday of each month at 6:30 pm  
Bird watching topics will be discussed. Meet at the library (auditorium). Contact Dick Tafel at 705 472-7907 or email [rtafel@sympatico.ca](mailto:rtafel@sympatico.ca)



## Upcoming Speakers/Events

Date: April 14, 2015

Speaker: Peter Nosko

Topic: Moose and Balsam Fir in Gros-morne National Park

Date: May12, 2015

Speaker: Lesley Lovett-Doust

Topic: Endangered Species—  
Endangered Spaces: The ecology of the Eastern Prickly Pear Cactus, an Endangered Species in Canada



## Seed Dormancy: An Edible Dissection

By: James Hallworth and Corinne Arthur

First of all I'd like to extend a huge thank you to Joe Boivin, a professor at Nipissing University, for his captivating presentation at our March 10th meeting about "Seed Dormancy: Life in Suspended Animation". He took a talk from a course he taught at Nipissing called 'Introduction to Cross Disciplinary Analysis' and re-vamped it into a wonderful presentation for us. Not only did he provide us with a fantastic overview of what a seed actually is, how they become dormant, how they get released from dormancy and their use in agriculture and the "new" green revolution, but he even brought an "edible dissection" for us to enjoy during the presentation. He provided us with shelled peanuts so that we could dissect them to see their seed parts, including cotyledons and radicles. While we nibbled on the snacks, he went on to describe the intricacies of seed dormancy and their uses to our society.

What is a seed? Here is one definition - "An adaptation of some terrestrial plants consisting of an embryo packaged along with a store of food within a protective coat" (Reece et al. 2011).

A seed consists of 3 components - the embryo, food store and protective coat. These components can further be split into the radicle, hypocotyl, epicotyl, cotyledons and seed coat. Seed dormancy can be defined in terms of how environmental factors control germination. There are two types of seed dormancy – primary dormancy that is acquired before the seed leaves the maternal plant, and secondary dormancy which is acquired after the seed has been released from the plant. The evolutionary importance of dormancy is that this ensures that germination only happens when survival is optimized.

Seed selection in agriculture is designed to improve their usefulness to us (e.g. yield) and increase the conditions in which the seed successfully germinates. The Green Revolution in agriculture between 1950s – 1990s was the development and distribution of high yielding crop varieties such as rice and wheat. This led to an increase in population health and calorie intake worldwide, especially in developing countries. However this had several negative impacts – soil degradation due to intensive farming practices, aquifer depletion due to the high demand for irrigation, chemical pollution due to unregulated usage of pesticides/herbicides and loss of endemic crop species biodiversity.

The 'New' Green Revolution focuses on the use of Genetically Modified Organisms (GMOs) or Genetically Modified Crops using Biotechnology. This could lead to being able to plant crops in poor quality crop land; reduce pesticide/herbicide reliance, and increase yield and nutritional quality. These GMOs can

have traits such as built-in pesticide production, resistance to herbicides and genes that sterilize the plant. Here are some examples to go with these traits. The toxin gene from *Bacillus thuringiensis* was used in corn, potato and cotton plants to deter insects from eating them. The agricultural company Monsanto developed genes that when placed in soybean, imparted resistance to the herbicide Glyphosate. To stop viable seed and distribution, modified seeds can be treated with an antibiotic or hormonal chemical, so the plants that grow from them produce a toxin that kills embryos late in seed embryogenesis. These seeds would still be edible, but would contain no embryos.

However Biotechnology is not without its pitfalls, including the possibility of insect pest and weed resistance, invasiveness of new crops, gene transfer to wild plant species, and socio-economic impacts.

### 25<sup>th</sup> Anniversary of Friends of Laurier Woods

The Friends of Laurier Woods, formed by the Nipissing Naturalist Club to help protect land that now forms the largest park in the city, is celebrating its 25<sup>th</sup> anniversary this year. Everyone is welcome to join in the start of the celebration – the Friends of Laurier Woods Annual General Meeting. The event will be held on Thursday April 30<sup>th</sup> starting at 6.00p.m. at the 406 Wing, located at 406 First Avenue West. The speakers for the event are Stefan and Anne Board, Owners of Board's Honey Farm, who will share their passion & knowledge of the honeybee and their yield of all-natural, tasty, healthy and unique products. Tickets need to be purchased before the event so that the chefs have a head count. Contact: Theresa Haist 705-492-9735 or Judy Fraser 705-472-6565 for your tickets.



*High value wetlands in Laurier Woods protect the homeowners in the city from flooding and provides homes to many wildlife species including the uncommon Blandings turtle (above)*

