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Where did all the Balsam Fir go?

A Summary of the presentation by Peter Nosko during April's Nipissing Naturalist Meeting

By: Corinne Arthur

Peter began his presentation entitled "Moose and Balsam Fir Regeneration Failure in Gros Morne National Park, Newfoundland" with a description of his obsession with beautiful Newfoundland. He talked about how he originally moved there for work, fell in love with it, eventually made his way back to Ontario to work as a Biology professor at Nipissing University, and then discovered a way to return there each year with students through a field work course. His main presentation included an overview of the relationship between moose and balsam fir in Newfoundland, along with an introduction into the research that he and his students conduct in Gros Morne National Park.

Balsam Fir

Balsam fir is a tree species that every forester in Ontario has cursed at some point in their career. It grows in abundance in the understory, often creating an impenetrable wall that makes any field work or research difficult without a machete. Their syrupy sap blisters don't help either, as they are sticky and impossible to get off your hands. As Peter put it, they are weedy and in the way in Ontario. But in Newfoundland, balsam fir are a foundation species in the forest, an important and dominant species. Peter told us there has been an almost 80% decline in the success rate of balsam fir regeneration after an insect disturbance. This leaves behind barren landscapes without the important successional presence of balsam fir.

Moose

Moose are not native to Newfoundland. Two pairs of moose were introduced into Newfoundland from New Brunswick in 1904 and flourished. By the 1950's they were well-established in Newfoundland and now they have been officially classified as 'hyperabundant' in Gros Morne National Park (150,000 moose in Nfld). In the park, they are at the highest density in the world. Why has the moose population exploded? In Ontario, there are natural predators such as wolves, but they have been extirpated from Newfoundland for over 50 years. Occasionally one will make the journey over from Labrador to the island, but its life expectancy is just a few hours due to hunting. Another reason for the exploding moose population is that there is no moose hunting in Gros Morne, no human-induced moose control.

Moose vs. Balsam Fir

The moose are directly responsible for the nonregeneration of the balsam fir. In the summer, they eat the aquatic plants that grown in and near wetlands. They can consume up to 30kg/ day of aquatic plants. But in the winter, there is a lack of desirable food, and the best that the moose can access is young balsam fir twigs. They can eat up to 25kg/day of balsam fir. Do a little conversion, multiply the number of moose by how much they consume per day and that's a whopping 45,625 tonnes of plant material per year in Gros Morne NP that goes into the stomachs of hungry moose!!!! Balsam fir makes up 97% of their diet in the winter, so you can just imagine the impact that this has on a balsam fir tree. It prevents the balsam fir from continuing to grow. Landscape-scale impacts were visible in the photos that Peter showed, large areas of forests that are just not regenerating after an insect disturbance.



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Good Friday Bird-banding Extravaganza

A summary of the Nipissing Naturalist Club Outing to Hilliardton Marsh

By: Corinne Arthur

We met bright and early on Easter Friday to head up to Hilliardton Marsh for some spring bird-banding. Upon arrival, we headed out to check the nets. We had caught a few common redpolls. The experienced banders carefully untangled them from the nets and put them in bags and then brought them

inside the cabin for banding.

Birds in the bags waiting to be banded and then released. Photo courtesy of Kaye Edmonds.



Once outside of

the bag, the bander would measure the wingspan of the bird and record its species in a log book to be later sent to the national database. He would then oh-socarefully put a band on its tiny leg. Some of the birds already had bands and he told

us how he'd seen bands from as far as Texas. We would then take the birds outside and release them.



Banding a common redpoll. Photo courtesy of Kaye Edmonds.



Fred releasing a common redpoll. Photo courtesy of Kaye Edmonds.

Later on we managed to catch a hoary redpoll in the net and band it. This was an exciting find, as it is a rarer species and was a new addition to a few of our life lists!

The Hilliardton Marsh Bird-banding station is open to the public. The best time to go is Mid-May when the spring migration is at its densest. If you are up for an early morning (leave North Bay at 5am to get to the marsh for prime time 7am), then you should be in store for some pretty cool bird species making an appearance!

Carden Nature Festival

For those who are interested, the Carden Nature Festival is happening on **Saturday, June 6.**

Registration is necessary for am/pm workshops, there is limited enrolment and some free kids activities. Cost is \$39.00, \$59.00 with evening dinner. More details can be found at:

Cardennaturefestival.ca

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, Peter Nosko, whose intriguing presentation on **"Moose and Balsam Fir in Grosmorne National Park"** explored the relationship between the moose population explosion and the balsam fir tree decline in Newfoundland, as he described to us his self-proclaimed obsession of this magical landscape.



Vs.



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 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

Upcoming Speakers

Date: May12, 2015

Speaker: Lesley Lovett-Doust, Nipissing University's Biology Department

Topic: Endangered Species-

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



Upcoming Events

Date: Saturday, June 13, 2015

Event: Carden Plains Bird-watching

Location: Meet at Visitor's Centre at 7:00am

Details: Bring lunch and drinks for the day. Depending on the length of stay we may stop for dinner on the way back to North Bay.

Monthly Laurier Woods Events Location: Meet at Laurier Woods at 10am for these hikes/events:

Date (2015)	Торіс
June 6	Glaciation
July 4	Aquatic insects
August 1	wild edibles and wildcrafting
August 15	LKL Nature Festival—a full day of family friendly activities scat- tered throughout Laurier Woods (www.naturefastival.jimdo.com)
September 5	Seedless plants
October 3	Geology
November 7	Investigating tracks and signs
December 5	History of Laurier Woods

Check out http://www.nipnats.com/ for more information, including Sat. morning birding.

Enjoy Nature !

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"The Good, the Bad and the Ungulate"

This incident of Moose vs. Balsam Fir is not the first time that ungulate species have been linked to the failure of regenerating flora species on an island. Peter showed us case studies of two other islands (Isle Royale National Park and Anticosti Island) where introduced ungulates have been documented destroying island vegetation. Other changes in the forest ecosystem have also been recorded, which could have dire consequences on the stability of the ecosystem functioning. Changes include decreases in biodiversity, decreased habitat for bird species and increases in other invasive plant species.

Possible Solutions?

Now what can we do to combat this? Peter gave us a list of suggestions, and we had a little discussion about which may be the most feasible. Here were his suggestions:

Forest Conversion to black spruce Reintroduce wolves Lethal control Translocation of moose Natural regulation Fertility control

Which one would you recommend?

Bird Colour Preference Project Wins Nipissing Naturalists Science Fair Award!

By: Kelly Major

Over 150 students took part in the 53rd annual North Bay Regional Science Fair held at Nipissing University on April 1st, 2015. Once again, the Nipissing Naturalists Club sponsored an award at the fair to recognise a project of merit in the field of environmental science. This year, the award



was presented to Payton and her project entitled "Bird's Colour Preference".



As a grade 8 student from St. Hubert elementary, Payton tested the effect of bird feeder colour on bird feeding habits. With the use of several feeders representing all the basic colours of the rainbow, Payton observed that the red feeder was consistently visited more often than any other colour. This pattern held true even when feeders were relocated around the yard to account for variation due to proximity of nearby vegetation and structures.

Payton plans to attend the June 9thClub meeting where she will present her findings in person and be presented a free family membership to the Club along with a cheque for \$50. In the future, Payton would like to revisit her study to see if colour preferences vary by species.



Science Fair 2015: Judges Thank you to April Phelps and Steve Mitchell for judging the science fair this year and to Kelly Major for being our Nip-Nats Club liaison for this event!