

THE BRODIE CLUB



Established 1921

Website: <http://thebrodieclub.eeb.utoronto.ca>

THE 1,096th MEETING OF THE BRODIE CLUB

The 1,096th meeting of the Brodie Club was held on Tuesday, 15 November, 2016 in Room 432 of the Ramsay Wright Laboratories of the University of Toronto.

Chair: Marc Johnson

Secretary: George Bryant

The meeting was called to order at 7:30 pm and was attended by 40; 29 members and 11 guests.

Roll Call:

Present: E. Addison, Beadle, Bertin, Bryant, Carley, Coady, Currie, Curry, Daniels, Dengler, Dunn, Eadie, A. Falls, B. Falls, Hussell, Iron, Johnson, King, Kotanen, Machin, McAndrews, Peck, Reading, J. Rising, T. Rising, Seymour, Slessor, Tomlinson, Young

Guests: Sharon Hick (guest of McAndrews), Greg Stuart (Seymour), Kathryn Falls (Falls), Anne Bell and Jerry DeMarco (Rising), Roy Smith (Coady), Deirdre Tomlinson (Tomlinson), Katy Thomas (Beadle), and guests of the Club: Russell Turner, Hugo Kitching and Patrick Moldowan.

Regrets: Abraham, R. Addison, Crins, H. and A. Juhola, Martyn, Obbard, Peter, Pittaway, Riley, Speakman, Sutherland, J. and Y. Bendell

Minutes:

Moved to accept the minutes by T. Rising and seconded by C. King. Approved.

Committee Reports:

Refreshment Committee (T. Rising): Styrofoam coffee cups will now be recycled by the committee, and the new juice cups are biodegradable.

ON Nature (G. Slessor) mentioned ON Nature activities and publications.

Program Committee (E. Addison): Speakers and topics for forthcoming meetings were reviewed.

1100th Meeting Committee (Bryant): The Arts and Letters Club has been booked for the evening. Location, facilities, staff, dining room and menu are all excellent. Title of speaker Michael Runtz' presentation will be "How beavers enhance the sex life of moose, and other beaver tales." Members will shortly receive registration forms which can be mailed or given to Bryant at December and January meetings. Early registrations are appreciated, members are encouraged to bring guests, follow-up registrations are more than welcome. Committee members are looking forward to participation by all Brodie members.

Announcements:

Jim and Trudy Rising invite members to check out the new book by Malcolm Telford, ***Flying Sand Dollars, Left Handed Crabs, Giant Earwigs, and Other Curiosities.*** Malcolm is a professor emeritus of the U of T, and his essays relate so many interesting, and some hilarious, experiences he had in the field, as well as intriguing facts of biology and history. Here's his web site which members will enjoy because it's filled with photographs of interesting invertebrates, fascinating facts, and a few quizzes that are fun to take. <http://flyingsanddollarslefthandedcrabs.ca/>.

Just a friendly reminder from the Refreshment Committee: Contributions of a loonie for a drink and twonie for drink+cookie will ensure the refreshment coffers stay in the black!

SPEAKER:

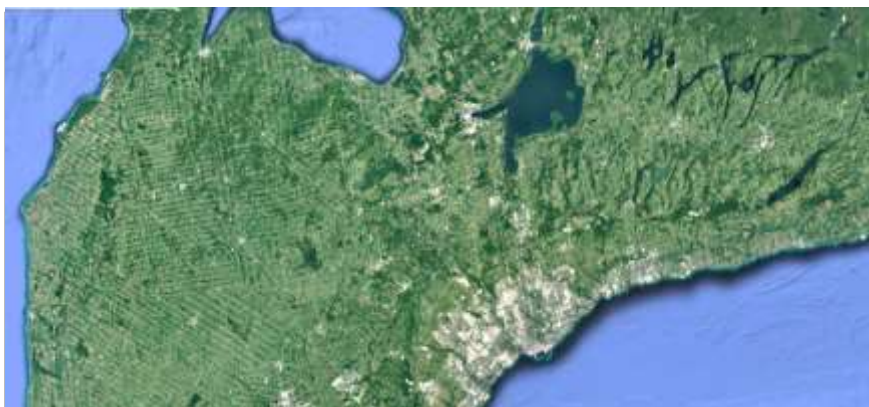
Bruce Falls introduced our speaker, Dr. Erica Nol of Trent University, speaking on "Songbirds in the settled landscapes of Ontario: how will they survive?"



Dr. Nol has been working with graduate students on songbird studies dating back twenty years. Studies of woodland songbirds are particularly bleak in Ontario. Forty percent of Canada's population is in Ontario, and with 65,000 housing starts annually there is considerable habitat destruction. Housing is taking over from birds. Although development is a major threat to birds in Ontario, native woodland songbirds are off our radar. Since the 1970's woodlot bird populations have dropped off, levelled, then declined again. The Veery is now down by 30%. Grassland birds are really down. Boblinks are recognized by farmers, unlike most grassland birds, and this species has declined significantly from the 1970's to the present. Some very common birds have increased; e.g., Mourning Doves (a hunting season has been established), but many other increasing species are non-native.

Our speaker reviewed five studies on birds in Ontario, looking at the effects of:

- forest fragmentation
- recreational trails
- pine plantations
- forest management in Algonquin Park
- changes in grassland habitat



Southern Ontario forests are highly fragmented

In woodlots on the Oak Ridges moraine and Peterborough area, the Ovenbird is a bird of the forest interior. They are area sensitive; foraging and nesting is on the forest floor. Often Ovenbirds nest on underused trails. Nol and her students studied 31 woodlots, mapping male territories by following each one closely for 90 minutes. Yogurt container drop-in traps were sunk into the ground for 24 hours to determine food

abundance and biomass. Most food items were ground beetle larvae. Forest fragmentation proved to have a strong effect on food supply. Small forests have a higher proportion of edge, where winds more readily blow away leaf litter and causes soils to be drier. This produces a bottom-up effect on Ovenbirds that leads them to nest farther from edge. Ovenbird nest sites, even if placed far from woodlot edges, proved to have more food nearby than did randomly-chosen sites. Larger woodlots produced more Ovenbirds per unit area than did smaller ones, clearly indicating the importance of large blocks of interior forest for this species. In a similar study, Nol's team looked at 216 small woodlots and conducted point counts from Norfolk to Peterborough County. Small woodlots close to large ones were much more likely to have Ovenbirds than those farther away, indicating that their breeding populations depend on frequent immigration of birds produced in the larger woodlots. The same patterns applied to Rose-breasted Grosbeak, Veery and several other species. The conclusion is clear: large forests are much more important than a lot of small ones.

To study effect of trails on bird populations, comparisons were made among single trails, double ATV trails and forest roads. Abundance of edge species increases when trails are present, while interior species such as Scarlet Tanager declined in relative abundance. The wider the trail, the fewer the species. The resulting recommendation of this study was to consolidate trails in public forests. As a result of this research, Northumberland County closed a number of ATV trails.



Red pine plantations appeared to provide good habitat for Wood Pewees. Nol's students compared pine plantations with beautiful oak stands at four study sites in the Ganaraska forest. Wood Pewees like openings where they can sally to catch flying insects. The question studied was whether pewees might prefer pine plantations to native deciduous woodlands, which would be indicated by their settling into this habitat first when arriving from spring migration. It was found that pewees selecting all habitats arrived at the same time, so that hypothesis was overruled. The researchers then looked at nest success, measured as daily survival rates. The nests are always in a fork on a horizontal branch. Malaise traps were used to determine insect availability, which turned out to be more or less the same in both habitats. Predators were a different matter. Blue Jays, quiet skulkers, were twice as abundant in pines, and red squirrels were also much more abundant there. The conclusion was that for Wood Pewee, pine plantations were a weak sink but deciduous forests produced stable populations. What to do? Clear cut or thin pine plantations? The recommendation actually made was to thin plantations, allowing for deciduous understory growth.



Brown Creeper was the focus of work on forest management effects on birds in Algonquin Park. Creepers are an indicator species of old growth forest, and they nest under sloughing-off bark on dying trees. The management goal was to increase black cherry and yellow birch, and to create gaps in forest. However, any logging would decrease Brown Creeper numbers. With logging in upland forests, creepers move into forested wetlands away from the logging stands. The logging scenarios included general selective cutting, vs. various distributions of openings cut into the forest that would promote regeneration of the target tree species. The recommendation resulting from the Nol team's work was to use one of the latter designs.



Declines in grassland species has led to concern among farmers that they may be subject to onerous rules about the way they graze cattle. Nol's group studied effects of rotational grazing on Bobolinks. The plan was to divide pastures into paddocks and move cattle through various paddocks and see how Bobolinks fared. If paddocks were grazed once, Bobolink nests were very likely to get trampled. If twice, the fields basically became cut lawns and no nests survived. If cattle density is greater than 0.5 cows per acre, Bobolink survival really drops off.

There are always a few ungrazed hay fields, however, especially on larger farms. When July is wet in Ontario, these produce a lot of Bobolinks. In a drought year, farmers cut grass earlier, destroying Bobolink nests. This can be mitigated by cutting hayfields after 15 July, and farmers in Carden Alvar have agreed to this. Farmers are essential partners to Bobolink management. If recommendations prove too difficult for them to reconcile with grazing, they may plant row crops (corn and soybeans)—which of course destroys all Bobolink habitat.

Questions following the presentation:

Eadie: *What are effects in small woodlots of house cats?* A meta-analysis of many fragmentation studies showed there is higher predation in settled landscapes. Much of it may not be due to cats, although they may figure into the avoidance of houses by Wood Thrush. Housing on the edge of woodlots has relatively little effect on forest quality for songbirds, but siting houses within the forest is terrible for birds.

George Peck: *Were Vesper Sparrow nests found in Carden?* They found lots of Bobolink nests, a few Meadowlark but no Vesper Sparrows. Peck encouraged Nol to report all nests from her studies to the Ontario Nest Record Scheme. (Some have been, but not all.)

Enid Machin commented that recently Renfrew County had prohibited a land severance because Bobolinks were involved.

Ricky Dunn for John Riley: *What is the distance from edge that can be considered "interior forest?"* For songbirds, it is 100 metres from all edges.

Johnson: *What other flora and fauna are studied in Ontario's settled landscapes?* This depends on the need. Botanists use a conservancy value index for plants which is helpful. A similar process applies to other taxa.

Addison: *Have there been any studies of corvid effects on songbirds in woodlots?* Corvids are hard to census. Blue Jays for sure are more abundant in woodlands where there are trails and openings. Everybody now uses game cameras to monitor predation, but when Nol's students were doing their studies they lacked this equipment and could not identify predators.

Carley: *Are professional planners involved in the process of making conservation recommendations?* Researchers quite often conduct workshops with planners. They publish but planners probably don't read the reports. But researchers have been successful in getting some things into planning. Ontario has one lucky example—Oak Ridges moraine has been critical.

Ricky Dunn thanked the speaker. She was especially impressed that some of the researcher's recommendations were not only being brought to the attention of public authorities, but even being implemented.

OBSERVATIONS

Addison noted the high amount of brilliant red fruit on *Ilex* (Winterberry Holly) throughout southern Ontario, not something you see every year.

Tomlinson observed that European Starlings seemed to have disastrous breeding results. He is used to seeing 1000's of young starlings in late summer but not this year.

Daniels commented that the much-vaunted November super moon is actually only 7% larger than normal—most people cannot perceive this larger size.

Carley reported on late season butterflies on the Leslie Street split. Curry observed five butterfly species yesterday. The number of late season butterflies has increased substantially in Ontario, particularly since 2010.

Eadie enjoyed a mushroom excursion last week seeing 70 kinds of fungi on one small clearing.

The meeting adjourned at 9:15. p.m.

NEXT MEETING

The next meeting will be on Tuesday, December 13. Members are reminded to bring an edible contribution towards Christmas cheer. The speaker will be Peter Mills, speaking on metamorphosis in Ontario's amphibians.

The meeting was adjourned at 9:15.

CORRESPONDENCE

Norma Martin, the second woman member of the Brodie Club (1987) and now living in Belleville, has just celebrated her 90th birthday -- with a beer, as shown here. She still plays tennis, too! Our best wishes to Norma!

