

THE BRODIE CLUB



Established 1921

THE 1,067th MEETING OF THE BRODIE CLUB

The 1,067th meeting of the Brodie Club was held on Tuesday, 17 September, 2013 in Room 432 of the Ramsay Wright Laboratories of the University of Toronto.

Chair: Bruce Falls

Secretary: Rose Addison

The meeting was called to order at 7:35 pm and was attended by 26; 23 members and 3 guests.

Roll Call:

Present: Abraham, E. Addison, R. Addison, J. Bendell, Y. Bendell, Bertin, Boswell, Bryant, Dunham, Dunn, A. Falls, B. Falls, J. Hussell, Iron, A. Juhola, H. Juhola, Kotanen, Martyn, McAndrews, Pittaway, Reading, Seymour, Zoladeski.

Guests: Christian Friis, Coordinator of James Bay Shorebird Survey, guest of Jean Iron, Xiaotian Wang and Sharon Hick, guests of J. McAndrews.

Minutes: R. Addison reported that McAndrews had emailed several corrections to the 2013 Field Trip report. The edited version will be posted on the web page.

Minutes of the May meeting and the corrected report of the June 2013 Field Trip were moved for approval by Dunn and seconded by Bryant. Accepted.

Announcements and New Business

- Sharon Hick announced the death of Glen Wiggins, entomologist at the ROM. Wiggins worked on aquatic insects, especially Trichoptera, and was known by many club members. See <http://www.rom.on.ca/en/collections-research/rom-staff/glenn-b-wiggins>

- Program—Bruce Falls provided information for meetings as follows:

Oct. 15	John Casselman	The Dramatic Decline of the American Eel: Are They Squirming Back Up That Slippery Slope?
Nov. 19	John Riley	Once and Future Great Lakes Country
Dec. 17	Various presenters	Bruce Falls
Jan 21	Darryl Gwynne	Six Legged Sex

Remaining meetings will be Feb. 18, Mar. 18, and April 15, 2014, with dates for May and June to be determined.

- R. Addison reminded members of the annual elections to be held during the October meeting and informed the club that she is stepping down as “editing” secretary. She encouraged members to consider volunteering to serve on any of the committees and that there had been much discussion in the spring for the need to fill the Field Trip Committee.

Here is the **2012-2013** roster:

Secretary:

“Editing” secretary: Rose Addison

Recording secretaries: Ed Addison, Rose Addison, George Bryant, Ricky Dunn, Sandra Eadie, Trudy Rising, Kevin Seymour.

Treasurer: Aarne Juhola.

Membership: Ann Falls, Bill Crins, Kevin Seymour, Trudy Rising.

Program: Bruce Falls, Ed Addison, George Bryant, Hugh Currie,

FON representatives: Glenda Slessor, Bob Currie

Archives: Ricky Dunn, Sandra Eadie, Kevin Seymour.

Refreshments: Oliver Bertin, Ann Falls, Trudy Rising.

WebSite: Ricky Dunn, Jeremy Hussell, Oliver Bertin, Ken Abraham.

Field Trip: no committee members during 2012-2013

Ed Addison encouraged members to visit the club website; interesting information on past members and many of the minutes back to 1935 have been digitized and posted. Appreciation of the huge contribution by Ricky Dunn on this project was shown by the members. The URL is: <http://thebrodieclub.eeb.utoronto.ca/>. To see Member Content, type in the password: TBC1921. You may get a warning page about untrusted sites; it means U of T hasn't done all it's supposed to for registrations. The site really is safe.

- Dunn donated a new artifact to the BRODIE Club; a gavel presented to her as President of the AOU. She has re-engraved this mallet with "*The Brodie Club 1921*" and given it to the BRODIE club to be used to bring meetings to order. Thank you Ricky!
- Seymour reported on the second Rouge Bioblitz. "This was the second year of the Rouge Bioblitz, which was a 24 hr inventory (Sat. Sept. 14 noon to Sun. Sept. 15 noon) of all species in the future Rouge Park. About 430 volunteers signed up this year compared to 125 last year. Last year 1440 species were found and so far this year 1285 species have been identified, but more identifications are on their way, as some groups have not yet reported. More plants and birds were reported this year compared to last, so it is likely that with the large increase in the number of volunteers, more species will be identified this year. Next year a portion of the Humber River valley will be the target for the Bioblitz." See:<http://www.ontariobioblitz.ca/>
- R. Addison summarized some club stats from last year. Five people were nominated and voted in as BRODIE Club members during the 2012-2013 year: **David Dunham** and **Kristen Martyn** (Sept. 2012) **Martyn Obbard** (Oct. 2012), **Peter Kotanen** (Dec. 2012) and **Sid Daniels** (March 2012), No members left the club during the year. Total active membership during the 2012-2013 season was 51. We averaged 27 members and just fewer than 5 guests per meeting.... for an average total of 32: This is a slight increase over the 29.3 of last year and 28 of two years ago. Lowest attendance was in May with 27 and highest was March with 38. Six members attended all 9 meetings: Ricky Dunn, Ann Falls, Bruce Falls, Jeremy Hussell, Jock McAndrews and Enid Machin. And additionally, four of those members also took part in the field trip: Ricky Dunn, Ann Falls, Jeremy Hussell and Jock McAndrews.



SPEAKERS:

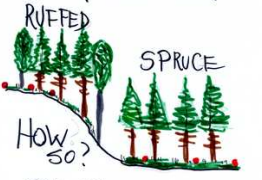
Six members (Jim Bendell, Ken Abraham, Jean Iron and Ron Pittaway, Peter Kotanen, Jock McAndrews and Chris Zoladesky) made short presentations and have provided short write-ups for

these minutes. Kotanen provided a pdf of his power point presentation and it will be forwarded by email.

Jim Bendall - The Microclimate for Nests may cause the Habitat Selection of Spruce and Ruffed Grouse.

This is a summary of preliminary work done near Gogama, Ontario. Warm dry forest is selected by Ruffed Grouse; relatively cool and moist forest by Spruce Grouse. Chicken eggs gained mass in the moist forest and lost mass in the dry forest. Avian eggs must lose about 18% of mass for successful incubation. Loss is by water vapour through pores in the shell. Eggs of Spruce Grouse have more pores and lose mass in a drying agent and open air faster than those of Ruffed Grouse. Eggs of Ruffed Grouse are apparently adapted to a drier environment than those of Spruce Grouse. We conclude the habitat selection density and distribution of each grouse are caused by the microclimate of the nest needed by each species. For background and data see: James F. Bendell and L. I. Bendell-Young. 2006. Can. J. Zool. 84:1688-1692 at <http://www.nrcresearchpress.com/doi/pdf/10.1139/z06-155>

How so? CHICKEN EGGS OUT FLATS : GAINED MASS! UPLAND : LOST MASS!

<p>QUESTION</p>  <p>How so?</p> <p>CHICKEN EGGS OUT FLATS : GAINED MASS! UPLAND : LOST MASS!</p> <p>(1)</p>	<p>THE AVIAN EGG</p> <p>WATER FULL @ LAYING</p> <p>18% LOSS TO HATCH</p> <p>PORES VENTILATE GASES : H₂O, CO₂, O₂</p> <p>CHICKEN EGG 6,000 - 7,000 PORES</p> <p>(2)</p>	<p>EGGS</p> <p>RUFFED SPRUCE</p> <ul style="list-style-type: none"> • PORES: FEWER MORE • LOSS OF WATER IN DRYING AGENT + OPEN AIR: LESS MORE <p>CONCLUSION!</p> <p>DENSITY AND DISTRIBUTION CAUSED BY MICROCLIMATE OF NEST NEEDED BY EACH SPECIES!</p> <p>(3)</p>
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Jim looks forward to comments by email to jfsbendell@sympatico.ca

Ken Abraham-Update of 2013 Hudson Bay Lowland Wetland and Waterbird Research and Monitoring Program

Ken Abraham gave a brief update on the phenology of the summer in the Hudson Bay Lowlands (HBL) and highlights of bird breeding. The spring melt was 7-10 days later than average. Conditions varied from south to north and east to west, with snow cover in the western part of the Ontario HBL still near 100% in mid May. When the temperatures moderated, melt was extremely rapid. The effect was nesting of early nesting species like Canada and Snow Geese (which arrive in April or very early May) was delayed by 7-10 days, and interestingly, peak hatch of Canada geese was more similar across larger areas of the HBL because of greater synchrony in melt timing. Effects on other later nesting waterfowl are unknown. Later nesting waterbirds such as shorebirds had nest timing at Burntpoint Creek in Polar Bear Provincial Park that was similar to 2012. Canada Goose nesting density at Burntpoint Creek and on Akimiski Island, Nunavut, were near record highs and predation was near record lows (based on 10 and 20 years of monitoring, respectively). Vole population indicators showed extremely low population levels.

The northern half of the Ontario HBL was extremely dry from the time of snow melt from mid-May through June and July. There was no rain during that period and as a result water levels in rivers, creeks and wetlands dropped at an accelerated rate compared to a typical summer, with many surface water bodies being dry during late July. In particular, freshwater ponds and marshes in the exposed supratidal and intertidal zone were rare, forcing brood rearing geese inland into shrub dominated wetlands or into concentrations on tidal creek and river estuaries. However, the rains began and continued through all of August, which apparently allowed goose and (presumably) duck breeding success to be good.

Ken provided some information on the Arctic Shorebird Demographics Network project at Burntpoint Creek. This is the second year of the project (see Jean Iron's article in the OFO

newsletter about the 2012 season). In 2013, the research team searched a larger area more systematically and found a large number (over 25) of Whimbrel nests and good numbers of nests of Least Sandpiper, Dunlin, Semipalmated Plover (about 10-15 of each) and a few Hudsonian Godwit (3), Wilson's Snipe, Killdeer and others. Nest success appeared to be good. This year's activities included colour-marking, and several shorebirds of the most common nesting species were trapped and marked.

Ken also showed pictures of butterflies and a close encounter with a herd of woodland caribou.

Ron Pittaway and Jean Iron - Natural History of Iceland

Ron Pittaway and Jean Iron visited Iceland from 25 June to 6 July 2013 with Quest Nature Tours. Jean discussed some of their natural history experiences, illustrated with photos.

Situated in the North Atlantic just below the Arctic Circle, Iceland's cool climate is moderated by the Gulf Stream. Proximity to Europe influences its birdlife. Spectacular scenery draws thousands of visitors to Iceland. Big attractions are waterfalls, volcanoes, geysers, hot springs and glaciers. Coastlines are rugged, with long estuaries and inlets where safe harbours were built. The interior is volcanic and rocky, and the climate varies from milder in the south to arctic-like conditions at mountain tops. Lush vegetation at lower elevations and tundra-like heath characterize many areas. For a northern country Ron and Jean were surprised at how agricultural it is along rivers and the coast where soil is deeper and richer. Early Norse settlers were farmers, ditching the moorlands and converting the land to crops and hay. With no native conifers, they cut the lowland birch forest, creating a landscape that looks like the Arctic. Heavily grazed by sheep, cattle and Icelandic Horses, the countryside is still attractive to birds.

Arctic Fox is the only native terrestrial mammal, arriving after the last Ice Age on an ice bridge or ice floe from Greenland. Sixty-seven percent are blue morph. Sea life is rich with whales and seals such as Minke Whales and Harbour Seal.

Breeding shorebirds in Iceland have a strong European affinity: European Golden-Plover, Common Ringed-Plover, Black-tailed Godwit, Common Redshank, Eurasian Oystercatcher, Eurasian "White-rumped" Whimbrel, and the Dunlin subspecies *schinzii*. Shorebirds were conspicuous, often around towns and villages.

Common Loon, Harlequin Duck and Barrow's Goldeneye are North American species that breed in Iceland, and nowhere else in Europe. Atlantic Puffin, at about 3 million, is one of the most numerous birds in Iceland, well outnumbering the human population of 320,000. Along the coast, Northern Fulmars and Black-legged Kittiwakes were common breeders on sea cliff. Flocks of male Common Eiders gathered preparing to molt, while females cared for crèches of downy young. Passerine diversity is low. White Wagtail was the first passerine seen at the airport upon our arrival. The European Blackbird is a thrush that has recently colonized Iceland as a breeding species, possibly in response to tree planting. The Common Redpoll in Iceland is large and brownish, similar to *rostrata* "Greater" Common Redpoll found on Baffin Island and Greenland, however its taxonomic status is uncertain. The most common thrush was the Redwing, a rare visitor to Newfoundland in winter. Conspicuous breeding Snow Buntings were an indication of Iceland's northern latitude.

Wildflowers

The landscape was a profusion of wildflowers at their flowering peak, and many were similar to species found in the Canadian Arctic and Sub arctic. Most spectacular was the non-native Nootka or Alaska Lupin, introduced from western North America to help prevent erosion and fix nitrogen in the soil. This plan is now controversial because as a successful invasive, lupins outgrow native plants and lower plant diversity. In some areas people are cutting it down.

Erosion and reduction in soil productivity are of great concern and the government supports programs to plant trees. Sitka Spruce from the Pacific Northwest is one species that does well in Iceland's cool damp climate.

Many people visit Iceland just to enjoy the scenery such as the glaciers, volcanoes and snow-capped mountains. Most Brodie members would look beyond these attractions and would love to explore the natural history associated with Iceland's dynamic landscapes.



Common Redshank on the breeding grounds in Iceland, July 2013.



Eurasian Oystercatcher near nest in a parking lot. June 2013.

Peter Kotanen

Kotanen's interest in natural history is in "everything, but especially interactions between plants and their enemies (birds, mammals, invertebrates, pathogens)". He discussed some research for his MSc with Snow Geese and his PhD with Wild Pigs (which he described as being like "4-legged geese") in Northern California.

Kotanen is now looking at effects of northern range limits on insect damage on invasive plants. Another study investigates the effects of non-native earthworms, *Lumbricus terrestris*, on native forest ecosystems.

Jock McAndrews- Lead and other elements in Crawford Lake: the last 1,000 years

Crawford Lake, located 50 km west of Toronto, has been depositing two seasonal sediment layers (varves) for the past 1,000 years. Together with carbon dates and fossil pollen these layers indicate local Iroquoian Indian farming in the 1400s and Canadian farming since 1850. Using an ICP-AES analysis we analyzed 25 elements in 36 levels. Lead was absent before 1850 when it then rose to a peak in 1980 and then declined to almost nothing in 2010. This parallels the increased use and then banning of leaded gasoline. Lead in the blood of children declined more slowly. Iron and aluminum, common elements of rocks and soils, are especially abundant during the Iroquoian and Canadian intervals and indicate erosion of upland soils into Crawford Lake. Canada Geese who foraged on Iroquoian fields and then roosted on the Lake are the animals who brought the element laden soil to the Lake.

Chris Zoladeski -Book Reviews

Chris Zoladeski presented a review of two very contrasting books on climate: "The Weather Makers" by Tim Flannery and "Climate: The Counter Consensus" by Robert Parker. While the first was found very predictable in its approach and conclusions, the second - with its much more interesting and evidence-supported contents was a better read. True to the title, the author presents a convincing view that contradicts the supposedly prevailing scientific opinion.

QUESTIONS:

Because of the time, there was no formal question or observation time. Members enjoyed visiting over refreshments.

The meeting was adjourned at 9:40.

CORRESPONDENCE:

From J. McAndrews: "Naturally-occurring magnetic spherules found in Pennsylvania soil link to an impact crater in the St. Lawrence Estuary near Sept Isle. The basal sediment in the crater dates to time of mastodon and mammoth extinction about 12,900 years ago. Perhaps the Charity Shoal Crater near Kingston has a similar age. A meteorite or comet is implicated."

NEXT MEETING

The next meeting will be held Tuesday, October, 15th at 7:30 pm in Room 432 of the Ramsay Wright Zoological Laboratories. The speaker will be John Casselman. His presentation is titled The Dramatic Decline of the American Eel: Are They Squirring Back Up That Slippery Slope?

