

THE BRODIE CLUB



ROYAL ONTARIO
MUSEUM OF ZOOLOGY

THE 1,059th MEETING OF THE BRODIE CLUB

The 1,059th meeting of the Brodie Club was held at 7:30 pm on Tuesday, October 16, 2012 in Room 432 of the Ramsay Wright Laboratories of the University of Toronto.

Chair: K. Abraham
Secretary: R. Dunn

The meeting was attended by 34; 31 members and 3 guests.

Roll Call:

Present: Abraham, Beadle, Bertin, Boswell, Bryant, Currie, Curry, Dunham, Dunn, Eadie, A. Falls, B. Falls, D. Hussell, J. Hussell, Iron, Johnson, H. Juhola, Larsen, Lumsden, Machin, McAndrews, Obbard, Pittaway, Rapley, Reading, T. Rising, Slessor, Sutherland, Tasker, Tomlinson, Varga.

Regrets: E. Addison, R. Addison, Bousfield, Crins, A. Juhola, Martyn, J. Rising, K. Seymour, Zoladeski.

Guests: Bruce Pond, guest of Ken Abraham; Patrick Schaefer, guest of B. Falls; and Sharon Hick, guest of J. McAndrews.

Minutes: Minutes of the September meeting were acclaimed without correction, but the following corrections were submitted after the meeting.

The number of speakers was seven, not eight as recorded, and the write-up for Jim Bendell's contribution was omitted. It follows here.

Jim Bendell- Impact of Wild Turkeys

Wild Turkeys are observed feeding regularly on sunflowers on the ground under the Bendell's bird feeders (see photo of habitat). Wild Turkeys have become one of the commonest feeder visitors. Wild Turkeys are related to Grouse and are omnivorous.

Groups number about twenty, consisting mostly of hens with one or two males in full display. Ten to twelve Turkeys became regular visitors to the feeders, and one hen in particular was very commonly seen.

Jim set some chicken eggs in the feeding area to see whether the turkeys might be potential nest predators. The Wild Turkey ignored the eggs, eating grass, clover and dropped sunflower seeds. Other songbirds continued to visit the feeder, the grackles especially checking the





scratchings of the Wild Turkey. Song birds stopped feeding while the Wild Turkey groomed but did not leave the area.

Bendell's conclusion: I can't report damage by Wild Turkeys, but I'm damned sure they cause some.

[20 October note to Secretary: the news today reported turkeys eating whole fields of grapes.]

Announcements and New Business

- New member Marty Obbard was welcomed by the membership.
- Dunn said she corresponded with Locke Rowe about the Club's proposed website, and received assurances that the department can build us a password protected site, with little or no restriction on number of pages. Discussion indicated support for limited public pages and extensive resources on the members-only pages. A committee was struck to continue work on a website (see below).
- The Chair read the Treasurer's report submitted by A. Juhola (see addendum to minutes). **Members are reminded to bring dues (\$10) to the November meeting.**
- Bruce Falls presented current committee membership and called for volunteers. The revised slate was acclaimed. Current committee membership is as follows:
Secretary: R. Addison, E. Addison, Aird, Bryant, Dunn, Eadie, T. Rising , Seymour.
Treasurer: A. Juhola
Membership: A. Falls, Crins, Seymour, T. rising
Program: B. Falls, E. Addison, Bryant, Currie, J. Rising
FON representative: Curry, Slessor
Archives: Dunn, Eadie, Seymour
Refreshments: Bertin, A. Falls, T. Rising
Web site: Abraham, Bertin, Dunn, and J. Hussell
Field trips: 2012 trip was organized by Crins and Sutherland. Local organizer generally picked after selection of destination.
- Bruce Falls announced that the speaker at the next meeting, November 20, will be Jeff Bowman of MNR, speaking on flying squirrels. In December, (date likely to be moved forward to 11th rather than the traditional 3rd Tues, which would be the 18th) member Ellen Larsen will speak on lichens.
- The memorial gathering for Fred Bodsworth will be held on Sunday Oct. 28, 1:00-5:00 pm, at Qssis Banquet Hall, 3474 Kingston Rd.(almost at corner of Kingston and Markham Rd. in Scarborough. Please indicate plans to attend the gathering by contacting family or getting in touch with Rose or Bruce Falls.
- Sandra Eadie brought some photos of the Bodsworth gathering at the Bracebridge Sewage Lagoons.

- The Membership Committee has received a biography from John Carley (below), and proposes him for Club membership

John Carley is the sole principal of a small architectural firm, John Robert Carley, Architect Incorporated. Established over thirty years ago, the practice specializes in custom residential and historical restoration and renovation projects.

Since 1986, John has been co-chair of Friends of the Spit. Established in 1977, Friends of the Spit is a citizen advocacy group dedicated to preserving the entire Leslie Street Spit as a public urban wilderness for passive recreational enjoyment with no admission charges and no private automobile traffic.

To date, the organization has enjoyed remarkable success in achieving these goals. Friends of the Spit has received awards from the Ontario Association of Landscape Architects, the Federation of Ontario Naturalists, the Toronto Region Conservation Authority, and the City of Toronto.



Photo by Jean Iron

John was a volunteer member of the City of Toronto Bird-Friendly Development Working Group, which received the City Initiatives Urban Leadership Award, 2008, from the Canadian Urban Institute, for their production of the *Bird-Friendly Development Guidelines*. John continues to work with city representatives on *Best Practices* for abatement of bird strikes on buildings.

John was one of the volunteer author/editors of the City of Toronto Butterflies of Toronto Working Group, which produced *Butterflies of Toronto* in 2011 as part of the City's ongoing Biodiversity Series of publications.

John is an avid birder and butterfly enthusiast. He is a member of the Ontario Field Ornithologists and the Toronto Ornithological Club, and has participated in both Ontario Breeding Bird Atlas projects. Currently, his yard list at his west-end Toronto house is 159. Additionally, John coordinates the Toronto Centre Butterfly Count, now in its 19th year, an annual census conducted under the auspices of the North American Butterfly Association.

SPEAKER:

Ken Abraham introduced the speaker for the evening, Brodie member Don Sutherland. Don is a biologist in the Natural Heritage Information Centre with the Ministry of Natural Resources, Peterborough. He is well-known for the depth and breadth of his expertise in natural history, both faunal and floral.



The Sutton Ridges

The Hudson Bay Lowlands (HBL) are generally flat and boggy, so the high ground and cliffs of the Sutton Ridges form a notable land feature, with geology that hosts some unique flora and fauna. The ridges are 1,250 km NNW of Toronto, and extend roughly 75 km from NW to SE. They are formed of Precambrian rock intruding through the younger Paleozoic rocks which underlie much of the HBL. The most conspicuous feature of the ridges is a diabase sill that forms highly

jointed vertical columns of gabbro. Underneath is a complex of sedimentary layers. The ridge rocks are about 1.9 billion years old, and rest on Archean-age granites of 2.5-3.7 billion years.



Aquatuk Tower: photo by S. Brinker

The Ridges were explored early (and still are) for mineral potential, particularly for silver and iron. Biological work also has a long history. Brodie Club member Harry Lumsden visited in the 1950s and, among other accomplishments, found a Golden Eagle nesting at the Sutton Gorge -- the first documented nest for the province. Other expeditions have included Royal Ontario Museum work in the 1960s and 1980s, some fisheries work, and bird surveys connected with the Ontario Breeding Bird Atlases. Recent work by the Far North Biodiversity Project has added considerable to our knowledge of the biota of the ridges.

Besides Lumsden, other Brodie members have also taken part in research on the Sutton Ridges over the years, including David Hussell, John Riley, Marty Obbard, Bill Crins and Don Sutherland. John Riley's book on the Hudson Bay Lowlands and its postglacial origins is well worth reading.

Most of the breeding birds present on the Sutton Ridges are characteristic of the boreal forest. However, American Pipits, normally found along the Hudson Bay coast, are also found on the flat, barren tops of the Ridges, and the Ridges hosts a concentration of Golden Eagles because it offers numerous nest sites.

Helicopter surveys for Golden Eagle nest sites are done in early July when chicks are beyond the vulnerable stage, but still retain their conspicuous white natal down. The presence of up to a dozen alternate nests scattered throughout nesting areas make it hard to determine the total number of breeding pairs, but up to a half dozen pairs may nest annually.

There are also cliffs along some of the large rivers draining into Hudson Bay, but these are friable, and the few eagle nests there are often supported by bowed trees hanging over cliff tops. A few are even placed on standing trees, and these may be more common than realized. Up to 50 apparently non-breeding eagles use the Hudson Bay coast in summer, and are often found near Snow Goose creches.

Much of the flora of the Sutton Ridges is characteristic of the northern HBL and includes such common, often dominant species as Bog Bilberry (*Vaccinium uliginosum*), Labrador-tea (*Rhododendron lapponicum*), Arctic Raspberry (*Rubus arcticus*) and Mountain Cranberry (*Vaccinium vitis-idaea*). Fire is common and extensive in the region, which doubtless affects plant ecology. Ericaceous plant species are a common component of the sparsely vegetated, exposed sites of the summits of the ridges. However, the ridges do support an assemblage of relict arctic-alpine plant species, 15 of which are not known to occur elsewhere in the HBL and seven of these nowhere else in Ontario. A few examples follow.

- Alpine Sweetgrass (*Anthoxanthum monticola*), an eastern species known in Ontario only from the Ridges.



Golden Eagle nest, with chicks about a month old. The fresh sprigs of conifer indicate an active nest.

- Siberian Polypody (*Polypodium sibiricum*), though not restricted to the Ridges, is nonetheless a little-known fern in the province. It is said to be separated from very similar Common Polypody, *P. virginianum*, by its eglandular sporangia, smaller spores, and entirely dark brown rachis scales.
- *Minuartia groenlandica* (Greenland Stitchwort; Caryophyllaceae) is another eastern arctic-alpine species known in Ontario only from a couple of sites in the Sutton Ridges. Very similar to Rock Stitchwort (*Minuartia michauxii*), a species of southern Ontario sand and/or rock barrens, and a species with which Brodie Club members may already be familiar.
- *Diapensia* (*Diapensia lapponica*) is another addition to the flora of Ontario discovered during Far North Biodiversity fieldwork in 2010. It is an evergreen, sprawling shrub which is known to occur in adjacent Quebec, as well as a number of high elevation sites in the mountains of New England. It is in its own family, Diapensiaceae, with its closest relatives in the Himalayas.
- Alpine Azalea (*Kalmia procumbens* [formerly *Loiseleuria procumbens*] – Ericaceae) recently discovered new to Ontario in 2010 during Far North Biodiversity surveys on several of the lower ridges near Aquatuk Lake. Somewhat expected given its occurrence in both adjacent Quebec and at Churchill, MB. It also occurs on summits of mountains in New England.
- Bigelow's Sedge (*Carex bigelowii*) and *Luzula confusa* (Northern Woodrush; Juncaceae) are restricted in their occurrence in Ontario to moist turf on diabase sills of the Sutton Ridges.
- Alpine Blood-spot Lichen (*Ophioparma lapponica*), a dinner plate-sized lichen with bright white thalus and blood-red fruiting bodies. This distinctive crustose lichen is an arctic species that was discovered new to Ontario during Far North fieldwork in 2010.
- Arctic Bluebell (*Campanula uniflora*; Campanulaceae) grows in moist fissures on shaded north-facing cliff faces at the contact between the diabase sill and the Sutton Ridges formation. Like the *Kalmia*, its occurrence in the Ridges was somewhat expected, as it was known to occur both at Churchill, MB, and in adjacent western QC.
- Alpine Brook Saxifrage (*Saxifraga rivularis* subsp. *rivularis*; Saxifragaceae) was found new to Ontario at two sites in the Sutton Ridges by M.J. Oldham and S. Brinker in 2010. It has an amphi-Atlantic distribution, occurring both in Europe and northeastern North America, including adjacent Quebec. It grows on moist shaded talus.



Campanula uniflora

The three amphibians found on the Sutton Ridges are all widespread and common in the lowlands: American Toad (*Anaxyrus americanus* – the colorful Hudson Bay variant = former subsp. *copei*); Wood Frog (*Lithobates sylvaticus* - many or most individuals in Ontario's Far North are the striped morph, more common westward); and Boreal Chorus Frog (*Pseudacris maculata* – most of which have a striking green background colour).

Large numbers of insects have been collected recently, and the huge job of sorting, pinning, labelling and circulation to taxonomic experts for identification is an on-going process. The diversity and distribution of HBL biting insects (horseflies & deerflies, blackflies, mosquitoes, punkies [Ceratopogonidae]) are comparatively well-known, but additional species are still being discovered, some demonstrating significant range disjunctions.

Butterflies, dragonflies and damselflies, tiger beetles and other conspicuous macro insect groups have been fairly well documented in the lowlands. Bog Fritillary (*Boloria eunomia*) is one of the most widespread and common butterflies in the lowlands. Bronzed or Common Shore Tiger Beetle (*Cicindela repanda*) is one of only four tiger beetle species currently known from the lowlands. The uncommon and local Riffle Snaketail (*Ophiogomphus carolus*), although not known to occur in the vicinity of the Sutton Ridges, is nonetheless a recent addition to the odonata of the lowlands. Orthoptera, like the Bog Katydid (*Sphagniana sphagnorum*) are less well known.

QUESTIONS:

Q. *Dunham: What is the functional significance of extra nests built by Golden Eagles?*

A. Unknown, but it is a range-wide phenomenon. The nests are built over a number of years—not all at once.

Q. *Johnson: Were you surprised to find so many new plants?*

A. The main ridges had already been thorough investigated by John Riley, but the lower ridges had received less attention. Most of the additions to the provincial flora were found fairly readily, because many of the species were known to occur in similar habitats in adjacent Quebec or Manitoba and directed searches were made in these habitats in the ridges.

Q. *McAndrews: Another feature of the geology of the Ridges is that they were drowned in the past by the Tyrell Sea, after Ice Age melting and prior to rebound.*

A. Correct, and some Tyrell Sea shorelines are visible at the bases of a number of the ridges.

Q. *Hussell: Where do the Golden Eagles nesting on the Ridges spend the winter? Those wintering in Pennsylvania and West Virginia are known to return to the Gaspé to breed.*

A. It's not known, but those from the east side of Hudson's Bay have been found wintering in North Carolina, Pennsylvania and Michigan – all sites with high deer populations. Eagles wintering in the upper Mississippi River valley on the border of Wisconsin and Minnesota concentrate on abundant turkey populations.

Q. *Hussell: Are all the White-crowned Sparrows on the Sutton Ridges of the Eastern sub-species?*

A. Yes. The western *gambelii* sub-species only starts to appear near Fort Severn and there is a zone of intergradation between *leucophrys* and *gambelii* with individuals in the west *gambelii*-like, but perhaps not pure.

Q. *B. Falls: Were any of the passerines on the Ridges distinctive, or more/less abundant, than birds of the surrounding Lowlands?*

A. No, except for the pipits being present so far from the coast, the avifauna of the Ridges is essentially the same as that found elsewhere in the northern Hudson Bay Lowlands.

Q. *Bryant: What about mammals?*

A. The small mammals of the Sutton Ridges area have been little studied. The Royal Ontario Museum conducted small mammal trapping surveys at Aquatuk and Kiruna lakes in the early 1980s and among the species found was Northern Bog Lemming (*Synaptomys borealis*). This species is one of the most poorly-known in the province; it is likely not truly rare, just under-detected. Small mammal populations cycle and in the northern Hudson Bay Lowlands populations can vary from hyper-abundant to totally absent. This is probably also the case for the Sutton Ridges, but there has been too little trapping effort to say for sure.

Q. *Reading: Did you find Rough-legged Hawk?*

A. No. The Sutton Ridges would seem to offer abundant suitable nesting habitat for Rough-legged Hawk, but to my knowledge there is no evidence even suggestive of nesting. With the exception of the navigational beacon at the tip of Cape Henrietta Maria where Rough-legged Hawk has nested on at least one occasion, the only location in Ontario where the species has been found nesting is at the abandoned Mid Canada Line Radar Sites 415 and 416.

Q. *B. Falls: What about Peregrine Falcons?*

A. Like Rough-legged Hawk, it would seem that the Sutton Ridges offer abundant suitable nesting habitat, yet there is no evidence of nesting attempts. In fact, I am not aware of any observations of Peregrines at the Ridges. Hickey's 1969 'Peregrine Falcon Populations: Their Biology and Decline' maps a nesting location at the mouth of the Sutton River; however, there is no suitable nesting habitat there and the record is now generally regarded as erroneous. The species is seen fairly regularly along the coasts of both Hudson and James bays, primarily during fall migration.

Q. *Schaefer: What was the diversity of tabanids like?*

A. The diversity of tabanids (horse- and deerflies) can be quite high in the Hudson Bay Lowlands. Although we have conducted Malaise trapping at a number of locations in the Sutton Ridges, the samples are still being processed and we don't yet have the answer to that question.

Q. *Johnson: And what about fireflies?*

A. A lot were seen, but again, the results of sweeps have not yet been analyzed.

Q. *Obbard: Given the abundance of waterfowl in northern Ontario, might there be a bigger population of Golden Eagles than just at the Ridges?*

A. The estimate is about 12-20 breeding pairs (vs. as many as 200 in Quebec). Possibly there are more tree nests than have been found, but these are known to be very rare elsewhere. The eagles arrive two months before the waterfowl, so their population may be limited by the abundance of hares and ptarmigan in early spring.

The speaker was thanked by Jean Iron.

OBSERVATIONS:

Bryant: Noted he had caught no white-footed deer mice at his Muskoka cottage, for the first time in 30 years. Possibly this will affect Barred Owls?

Sutherland: Responded to Bryant saying wandering owls have recently been observed.

Bertin: Recently found a road-killed opossum at Glen Huron, about a mile west of Creemore.

H. Juhola: Observed over 100 Common Loons on 18 September.

Varga: Found a report on the internet of a Bald Eagle nest in Vaughan. He'll check it out to see if it's a legitimate report.

Iron: At the Niagara River today, saw Herring and Ring-billed Gulls, and a hybrid between Great Black-backed and Herring Gull. There were “hundreds and hundreds” of Rough-winged Swallows over the water, and this may be a good place to look for vagrant Cave Swallows.

Rapley: Reported on the bioblitz of the Rouge on 15-16 June this year. Over 100 specialists took part, and 1400 species were identified, including six bat species. For details, see <http://www.ontariobioblitz.ca/>

Rapley saw large numbers of Wild Turkey on the Bruce Peninsula on Thanksgiving weekend (fittingly), as well as numerous Rusty Blackbirds and White-crowned Sparrows.

The Toronto Zoo is in the process of getting a pair of Giant Panda on loan, so perhaps Brodie members will be getting an invite next year to see them. Numbers in captivity have risen from 150 to 350, and re-introductions to the wild are beginning.

Currie: 21 Cackling Geese were detected in a flock of Canada Geese at Cranberry Marsh. Despite being difficult to pick out, they were in a single bunch, indicating that they don't have any such problems themselves.

Reading: observed a Giant Swallowtail in Thornhill, and follow-up comments indicated a big year for these, as one was in Aurora in August (*Tomlinson*) and they have been reported in Muskoka and Peterborough (*Sutherland*). However, *Curry* wondered whether native butterfly populations might have been adversely affected by this summer's drought.

Pittaway: Pine Siskins are irrupting strongly on the eastern seaboard, and out west. More recently they have begun to arrive in southern Ontario. Purple Finch and Red-breasted Nuthatch have been conspicuous in southern Ontario for over a month, with some Common Redpolls and even a few Evening Grosbeaks also turning up. There are no reports of White-winged Crossbill, which may be staying in central Canada where there is a decent cone crop. eBird.org is a good place to look for up-to-date information on irruptions.

Pittaway also reported raptor sightings from the bluffs overlooking Lake Ontario; Golden Eagle, Peregrine and goshawk included.

Tomlinson noted that the cone crop has not only been poor for conifers, but also for deciduous trees in Ontario. *B. Falls* hypothesized that this might be the reason for the dearth of white-footed deer mice that Bryant reported.

NEXT MEETING

The next meeting will be held Tuesday, November 20th at 7:30 pm in Room 432 of the Ramsay Wright Zoological Laboratories. Jeff Bowman of the Ontario Ministry of Natural Resources will speak on Flying Squirrels of Ontario.

The meeting was adjourned at 9:15.

CORRESPONDENCE:

25 years ago (From the Brodie Club minutes of March 1987): “Savage offered an elk humerus and a walrus baculum for use as a gavel. The Chairman called the meeting to order with the elk humerus.”

From Oliver Bertin:

The Brodie Club was invited to attend a panel discussion in the zoology building on Oct. 24, 2012 that was held to raise awareness of recent and proposed changes to federal regulations and proposed cuts to federal staffing that affect Canada's freshwater and fisheries resources. I attended on behalf of the Club.

The panel included two organizers, UofT doctoral student Derrick (Dak) de Kerckhove and Diane Orihel, director of the Coalition to Save ELA and a student at the University of Alberta. The other speakers included:

- Laura Bowman, environmental lawyer, Iler Campbell LPP
- Dr. Ken Minns, retired research scientist, Fisheries & Oceans Canada (DFO) and UofT adjunct professor;
- Tony Maas, Freshwater Director, World Wildlife Fund-Canada
- Dr. Norman Yan, Professor of Biology, York University
- Dr. Donald Jackson, Co-Editor-in-Chief, Canadian Journal of Fisheries and Aquatic Sciences and UofT professor.

The panel concentrated on two key issues: proposed cuts of up to 300 scientists and staff at DFO and potentially another 3,000 at the federal Environment ministry, as well as the proposed closing of the Experimental Lakes Area (ELA), a world-renowned study area of 58 lakes in northwestern Ontario that has been running for 44 years. The panel also discussed recent or proposed legislative changes that could water down Canada's environmental protections.

Many of the changes are included in the 2009 and current omnibus budget bills. They could affect the federal Fisheries Act, the Canada Environmental Assessment Act, the Canada Environmental Protection Act, the Navigable Waters Protection Act and the Species at Risk Act.

The changes are subtle but could have widespread impact. For instance, the trigger for an environmental assessment has been reduced to "permanent serious harm to a commercial or recreational fishery" from the current "harm aquatic habitat." Bowman argued that the new requirements will be virtually unenforceable, thereby reducing the need for an environmental assessment. DFO is apparently issuing more "letters of advice", instead of requiring environmental assessments. It is increasing the number of exceptions and reducing the need for disclosure. About 3,000 environmental reviews have apparently been cancelled.

The exceptions include the proposed international bridge across the Detroit River in Windsor, which could be exempt from any environmental or legal challenges.

Minns said the changes could roll back Canada's environmental protections by about 50 years. They also obviate the need, in many cases, for parliamentary debate or meaningful consultations and they allow for the passing of new regulations without review.

TREASURER'S REPORT FOR 2012:

Funds: Aug. 31, 2011		\$1,625.93
Plus: Memberships	210.00	
Less: Speakers	110.00	
Secretarial	34.81	
Flowers	56.00	
FON	<u>75.00</u>	
	<u>275.81</u>	
Excess of Expenditures over Memberships		<u>(65.81)</u>
Funds: Aug. 31, 2012		<u>1,560.12</u>