

THE BRODIE CLUB



Established 1921

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

THE 1,101st MEETING OF THE BRODIE CLUB

The 1,101st meeting of the Brodie Club was held on Tuesday, 18 April 2017 in Room 432 of the Ramsay Wright Laboratories of the University of Toronto.

Chair: Ricky Dunn

Secretary: George Bryant

The meeting was called to order at 7:34 pm and was attended by 30; 23 members and 7 guests.

Roll Call:

Present: E. Addison, R. Addison, Bertin, Bryant, Curry, Daniels, Dengler, Dunlop, Dunn, Eadie, A. Falls, B. Falls, Hussell, Iron, Machin, McAndrews, Moldowan, Obbard, Peter, Pittaway, J. Rising, T. Rising, Slessor

Guests: Mary Latta (T. Rising), Diego Nazar and Peggy Haist (Bertin), Graham Dugga (Moldowan), Jerry De Marco and Anne Bell (T. Rising), Sharon Hick (McAndrews)

Regrets: Abraham, Coady, Crins, Martyn, Peck, Rapley, Seymour, Sutherland

Minutes:

No corrections were suggested to the minutes of the February meeting. B. Falls moved to accept the minutes, and this was seconded by T. Rising. The motion was unanimously approved.

Committee Reports:

Membership (A. Falls): The committee reviewed the applications. Steve LaForest and Bob Kortright have been approved as new members.

Field Trips (Curry): The excursion is scheduled for Sunday June 18. Curry and Pittaway scouted Sibbald Point Provincial Park recently. The site seems quite appropriate for the annual Brodie field day. Parking should be \$10.50 per car.

Program Committee (E. Addison): Member Justin Peter will be discussing the western hinterlands of India at the May meeting.

1100th Meeting Committee (Bryant): By all accounts the 1100 celebratory meeting at the Arts and Letters Club with speaker Michael Runtz was a resounding success. All 82 people who registered were in attendance. Revenue was \$6400; expenses were \$6491. For a (break-even) net loss of

\$91.98. Bryant thanked his committee members, particularly Eadie for the retrospective Brodie display plus introduction to her A&L Club, Dunn for the superb chairmanship and dissertation and Ed Addison for the well-considered toast, all of which have been captured in the minutes. Bruce Falls called for a vote of thanks to the 1100 Meeting Committee.

Treasurer: Bryant reported current that the bank balance is \$1635.67, unchanged since he assumed finances last October when it was \$1635.67. Bryant advised he would present a motion at the September meeting to raise annual dues from presently \$10 per person and \$15 per couple to \$20 per member. Justification for the dues increase includes: inflation; last dues were increased twelve years ago; the club has no money for speaker honoraria; too many members absorb expenses; we have no reserve cushion; and no bank account which would cost money. The latter is reason enough to increase dues. There was some discussion with some members suggesting a higher amount, some lower.

SPEAKER:

Obbard introduced new Brodie Club member Patrick Moldowan, a fellow Algonquin Park alumnus. His topic was “Paradise found, paradise lost, paradise *in limbo*: biodiversity and conservation on the island of Mauritius”.

Paradise found, paradise lost, paradise *in limbo*: biodiversity and conservation on the island of Mauritius

Moldowan confessed that as a child he had always loved creepy crawly things. This ultimately led to his being selected by Wildlife Preservation Canada as the annual winner of a research (“New Noah”) scholarship to the Mauritius. He received word of this award in February 2015 and by April 2015 he had set foot on the island.

Mauritius is part of the Mascarene Islands, in the Indian Ocean, 850 km off Madagascar. Only 50 by 25 km in size, it is a popular European vacation destination. The island has a long history of colonization, now densely populated (1.2 million people) with present forest representing only 2% of the land cover but nevertheless a centre of biological diversity.

Dutch sailing ships were the first to arrive harvesting animals and ebony. They found giant tortoises, over-sized geckoes and a strange flightless pigeon (the Dodo). In quick order these species were rendered extinct. But there is still many remaining endemic species. A big factor in the preservation of the flora and fauna of Mauritius was the Gerald Durrell Wildlife Trust. More than thirty years’ ago, Durrell visualized a trust to train local people to manage local resources and spread their message across the world. Patrick was fortunate to be part of this movement. He joined a group of students from all over the world, a realization of Durrell’s dream. They were tasked with studying the biota of the island, developing research techniques, and promoting local landowner (stakeholder) partnerships.

Despite the karst topography, most of the island has been developed with 70% planted in sugar cane. Plant and animal introductions have led to conflicts with native species. Introduced Chinese guava trees, wild pigs and deer all represent a major challenge. In some cases, mammal exclusion fences have been erected along with tree removals. Crab-eating Macaques predate cavity-nesting

birds, but since monkeys are worshipped by Hindus – the main religious group – control of the macaques has been contentious.

The Pink Pigeon is an iconic species for Mauritius. It is what attracted Durrell in the first place to the island. At one time, there were fewer than ten individuals left in the wild. A captive breeding program was set up in the 1980's and the present population now totals over 500 individuals. Challenges include inbreeding and providing adequate food.

The Echo Parakeet, another endemic was also down to less than twenty individuals. A cavity-nester it was predated by macaques and outcompeted by an introduced congener, the Ring-necked Parakeet. Custom-made nest boxes and close monitoring brought this species back from the brink.

Mauritius has a wide array of beautiful gecko species. Isle-aux-Aigrettes, a less-disturbed offshore island supports many geckos as well as Mauritius Fody (Endangered), endemic Olive White-eye (Critically Endangered), and last stands of intact lowland ebony forest. Aldabra Giant Tortoises were introduced there as an ecological analog to the extinct giant Mauritius tortoises (of which there were two species).



Moldowan with an Aldabra Giant Tortoise on Isle-aux-Aigrettes

Round Island, about 20 km north of the mainland is a volcanic island containing a collapsed crater. It supports several endemic lizards, a large seabird breeding colony and one of the last remaining native palm forests. The endemic Keel-scaled Boa is unique. It has a split upper jaw and is the only boa known to lay eggs. Luckily Black Rats have never colonized the island. There are very strict quarantine requirements for anyone visiting Round Island. Clothing is fumigated and food is put in mild bleach solutions but it was worth the effort. The boat trip over to the island was gorgeous. Round Island was down to only one native Hurricane Palm (last *in situ* individual of the species/variety; *Dictyosperma album* var. *conjugatum*), among other rare palms, but recovery efforts are underway.

Mascarene Flying Foxes are an interesting study. They are frugivorous, so locals assumed they were major predators of cultivated fruit so persecuted them. Studies showed that the Indian Myna and other introduced birds were the main culprits. The flying fox really prefers upland native forest. Now it is matter of educating the local farmers.

Moldowan spent six months working for the Durrell Trust in Mauritius. He took a lot from the opportunity and clearly loved the experience.

Questions following the presentation:

Obbard: How do palms reproduce if only one was left?

Answer: I'm not sure but perhaps seeds had been kept in various herbaria.

*Follow-up: the Hurricane Palm is monoecious (organs or flowers of both sexes carried by a single plant) and self-fertile; therefore the last individual can produce seeds.

T. Rising noted the bright colours of the lizards. Are they toxic?

Answer: No, they eat nectar and are quite colourful when young but lighten up with age.

S. Eadie: Did Moldowan have any surprises when he studied Mauritius natural history?

Answer: Yes, much of his previous ecology and environmental studies were from a narrow perspective. He had never thought much about the role of captive breeding programs in conservation and species recovery until he got there. It raises questions about whether the programs can all be continued. People are often out of the equation in these situations but people are everywhere. All activities to support conservation and native species require a lot more stakeholder involvement.

E. Addison commented that it was a great talk but he was saddened by the stories of extinction even though 99% of all plants and animal species are extinct. Once we were taught that forests would recover and recycle after a trauma—they would return to the climax state. Now it is realized that once something happens in an ecosystem it never returns to the way it was. There is a discordant harmony factor. Time stops for no change. E. Addison suggested more on this topic by consulting: Daniel B. Botkin. 1990. Discordant harmonies. Oxford University Press. ISBN 0-19-505491-1.

R. Dunn: How do the introduced tortoises on Round island get hydrated?

Answer: The island is windy with periodic rainfall. Tortoises utilize dew, and rainfall puddles—they seem to survive.

T. Rising: What measures have been implemented, if any, to help fruit bat colonies?

Answer: The National Park service has been very supportive of the research endeavours. Even the President of the island has attended lectures and field trips. There have been many newspaper announcements to introduce policy changes. Nets have been implemented to protect the crops from birds and are subsidized by the government.

Dunn thanked the speaker. A lot of interesting conservation measures were covered in the presentation.

OBSERVATIONS AND ANNOUNCEMENTS

Hussell discussed the Norfolk Forest BioBlitz on June 17-18, 2017. The goal is to bring together experts to inventory all species in a 24-hour period and compel a database. Norfolk Forest is one of

the best remaining examples of Carolinian Forest in Canada. Person to contact is Jody Allair
jallair@birdscanada.org

Eadie recently visited Rattray Marsh. All the ashes (about 80% of the trees) have been cut down, leaving much open space. What a difference!

Curry visited St. Williams Forest recently and was pleased to observe *Celastrina aedon*, a new form / species of what was formerly called Spring Azure. It is the first azure to emerge in the spring. There are only a few specimens for Ontario.

Hussell. On April 12, he observed a Piping Plover at Port Dover. Bands indicated it is the oldest male on record at 15 years. The next morning the bird was spotted at its traditional nesting site in Michigan, 570 km from Port Dover.

NEXT MEETING

The meeting was adjourned at 9:20 pm.

The next meeting will be on Tuesday, May 23. Justin Peter will present “Natural History of Rajasthan and Gujarat”.