

THE BRODIE CLUB



Established 1921

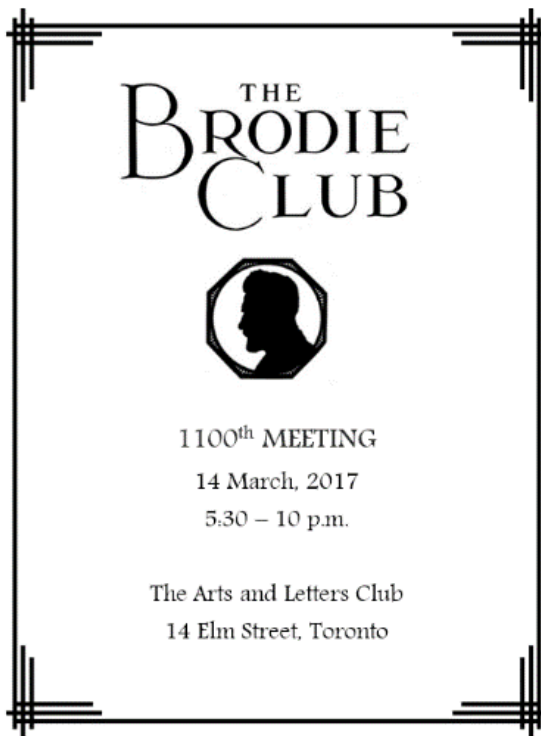
Website: <http://thebrodieclub.eeb.utoronto.ca>

THE 1,100th MEETING OF THE BRODIE CLUB

The 1,100th meeting of the Brodie Club was held on Tuesday, 14 March 2017 at the Arts & Letters Club of Toronto at 14 Elm Street.

Chair: Ricky Dunn

Secretary: Justin Peter



1100th Meeting Committee

Ed Addison

George Bryant

Hugh Currie

Ricky Dunn

Sandra Eadie

Bruce Falls

Justin Peter

The meeting was called to order at 6:55 pm and was attended by 82; 38 members and 44 guests.

Members:

Abraham, E. Addison, R. Addison, Aird, Bryant, Coady, Crins, Currie, Curry, Dengler, Dunn, Eadie, A. Falls, B. Falls, Hussell, King, Larsen, Lindsay, Lumsden, Machin, Martin, Martyn, McAndrews, Moldowan, Muller, Obbard, Peter, Pittaway, Rapley, Riley, J. Rising, T. Rising, Seymour, Sherry, Slessor, Sutherland, Tomlinson, Young

Guests: Eve Geisler, Robert Turland, Jane Salhani, Rob Salhani, Frank Shaw and Susan Shaw (guests of Addisons); Linda Pim (Aird); John Black, Stephanie Bryant, Eleanor James, Matthew James, Marilynn Murphy, Dan Salisbury, Martin Wiener and Dominic Stones (Bryant); Warren Dunlop, Janet Kelly, Anda Rungis (Crins); Davie Currie (Currie); Bill Lamond (Curry); Ron Dengler (Dengler), Warren Clements (Eadie), Alison Colalillo and Kathryn Falls (Falls); Steve LaForest (King), Dorothea Godt (Larsen), Shirley Little and Mandy Martin (Martin); Cameron Hogarth (Martyn); Sharon Hick (McAndrews), Marjorie Bousfield (Muller); Sarah Rupert (Peter); Eleanor Beagan (Pittaway); Paula Rapley (Rapley), Camilla Dalglish, Peter Dalglish (Riley), Anne Bell and Jerry DeMarco (Rising); Greg Stuart (Seymour), Allan Scott, Deirdre Tomlinson and Beth Tomlinson (Tomlinson); Michael Runtz and Ann Mayall (guests of the Club).

MENU

Sweet pea soup with aged White Cheddar
*
Paupiettes of Sole with Smoked Bacon Farce
or
Roast Breast of Herbed Chicken with Chevre
Farce
or
Roasted Sweet Pepper With Wild Rice Farce
*
Asparagus-Cauliflower-Sweet Pepper Barley
*
Caramel Praline Dacquoise
*
Regular or decaf coffee
Tea

AGENDA

5:30 -- Reception and Cash Bar
A chance to visit and view club memorabilia
*
6:30 -- Group Photo of Club Members
*
7:00 - Dinner
*
Announcements and Toast to Club

8:15 - Evening Program
*
Erica Dunn: Introductory Remarks

Michael Runtz: How Beaver Enhance the
Sex Life of Moose, and Other Beaver Tales

Introductory Remarks by Ricky Dunn:

“Welcome to the 1100th meeting of Brodie Club. (Today is also Pi Day, as the date is 3-14).
 ○ Brodie Club traditionally celebrates every 100 meetings, and the last one, our 1000th, was 11 years ago.
 ○ A feature of past milestone meetings has been an overview of our history, but Bruce Falls gave an especially complete and engaging historical talk at the 1000th meeting that is online, along with several earlier histories. Here I’ll only make a few remarks about club as it is now, versus when it began in 1921 – 96 years ago.

“We remain a rather old-fashioned club, with many of the founding traditions. This is perhaps antiquated, but it’s also part of the Club’s charm.
 ○ There are no officers, just *ad hoc* committees, and we collar someone at each meeting to serve as chair.
 ○ Our dues have remained about the same for 96 years. It was \$1.00 in 1921, and is \$10 now – which actually represents a reduction, as a dollar in 1921 is now the equivalent of over \$13.
 ○ Membership is by invitation, which may sound snooty, but this contributes to the club being close-knit and helps ensure that members are people who want to take part for the long run.

- Indeed, members find it hard to leave. We keep them on mailing list even if they move away, and there they remain until we read an obituary, or get a letter telling us to cease & desist.

“Members do pass on, of course.

- Since the 1000th meeting 11 years ago, 23 members have died; their names will be listed in the official minutes of this meeting [see below]. But 23 new members joined in same period, with several more pending, so our numbers remain healthy.
- As an example of longevity of membership, I should mention the two longest standing members, both of whom are here tonight. Bruce Falls and Harry Lumsden joined the club within one month of each other, in 1949 – before many of our current members were even born. Bruce and Harry knew some of the original founders of the Club, and have now been members for 67 years.

“When the Club started, about a third of members were connected to the Royal Ontario Museum, a third were from University of Toronto, and about a third were amateur. Of course, given the era, all were male. Today, over a quarter of members are female, but otherwise the make-up is rather similar: about half professional biologists (now from a far broader range of institutions, though only a few from museums), and about half amateur. However, these days there are many more avenues for using biological training in non-academic jobs, and it has become far harder to draw a neat line between professionals and amateurs.

“Amateur, of course, means only that a person makes a living in some other field, and the combined expertise of group is amazing. There is always someone who can answer nearly any question. One of the great attractions of the club is that we all learn from each other.

“Today, as from the beginning, presentations given at our meetings cover a broad range of topics. As with all natural history clubs, we focus on aspects of flora or fauna, though often with a more scientific slant than may be typical. However, we’ve always taken a broader view of what natural history means. We have certainly had talks that fit into the Merriam-Webster definition: “the study of plants, animals, and sometimes ancient human civilizations” (although we haven’t limited ourselves to the ‘ancient’). And we go farther still, having occasional talks on such non-biological topics as geology or astronomy. Perhaps the definition of natural history that best describes our interests is one put forward by entomologist Terry Wheeler: “*the search for, and description of, patterns in nature – whether biotic or abiotic.*”

“Another characteristic of Brodie Club members is that we tend to keep meticulous records – even excessively so. This applies to our meeting minutes, so on our website you can find a list of presentations from 1935 on, and if you’re really interested, you can read summaries of all talks given for the past 40 years.

“We have always been connected to the University of Toronto, and on behalf of the Club I want to thank the Department of Ecology and Evolutionary Biology, under whose umbrella we currently operate and which kindly hosts our website.”

Words of Welcome, by Sandra Eadie:

“Good Evening.

“Welcome to the Arts and Letters Club! Both Jennifer Young and I are members and we hope you enjoy yourselves this evening. In this magnificent hall, many eminent Canadians have dined at the very tables where you are sitting, including the Group of Seven, the famous artists of Canada’s landscape and lovers of the Canadian wild. The banners you see on the walls were painted by one of them, JEH MacDonald.

“Our two clubs are both part of Toronto’s heritage. The Arts and Letters Club was founded in 1908, a bit earlier than the Brodie Club’s first year in 1921.

“The clubs share some history as well. This building was constructed in 1891 on the site of a seed farm owned by the father of JH Fleming, a most eminent Brodie Club member. He was president of the American Ornithologists’ Union and a major contributor to the ornithology collection of the ROM.

“Arts & Letters Club member, Owen Staples, painted the ROM’s portrait of William Brodie which was on your invitation. Indeed, both were mentors of Brodie’s young cousin Tom Thomson, as the three walked and sketched in the Don Valley together. Later, Tom Thomson was an inspiration for the Group of Seven.

“The two clubs share so much, a love of nature, their Toronto history and friendships. Please enjoy our common experience and have a wonderful celebration together.”

A Toast to the Brodie Club, by Ed Addison:

“Would you please charge your glasses?”

“Tonight at this 1100th meeting, we celebrate the Brodie Club and its rich and ongoing history. The Brodie Club has historically included, and continues to include, many outstanding naturalists; individuals:

- Having an overarching respect for nature,
- Having an exceptional curiosity and passion for learning more about natural history,
- Who are generalists yet an area... or several areas of specific unique knowledge, and
- A willingness to share that knowledge with others.

“May The Brodie Club continue to promote this respect, curiosity, passion and sharing of knowledge for many more years.

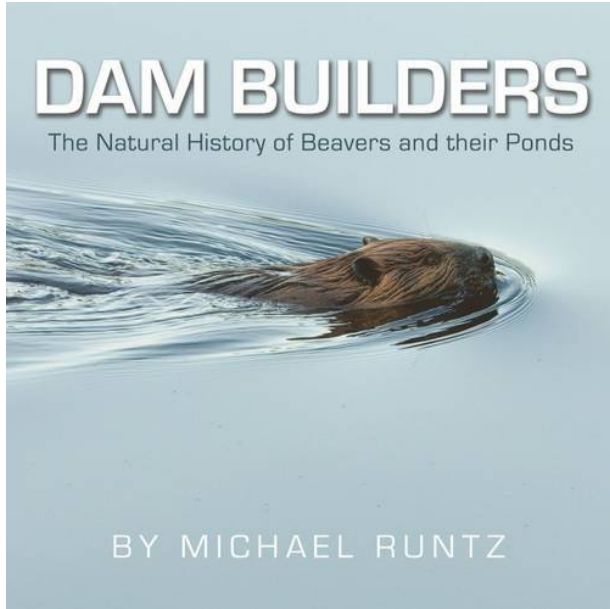
“As able, would you please stand.

“Ladies and gentlemen: please raise your glass in a toast to the vitality and longevity of the Brodie Club.

“*To the Brodie Club.*”

“Please enjoy your meal.”

SPEAKER:



Crins introduced the speaker, Michael Runtz, whom he has known since their time working together as Seasonal Park Naturalists in Algonquin Park beginning in 1972. After a lifetime of watching and researching beavers, Michael released *Dam Builders: The Natural History of Beavers and the Ponds*.

Beavers

Michael began with a general overview of a most famous animal. Beavers have long been important owing to their fur, important in the fur trade. Long known to be waterproof, there has been question of where the waterproofing qualities of the fur originate. Castoreum and anal gland secretions (produced by glands within the cloaca) is not

thought to extend any waterproofing qualities, although whatever the substance is may come from glands present in the skin over the entire body.

Beavers have various structural features. One whose function is not fully understood is the split toenail, on the innermost two toes of each hind foot (most developed on the second innermost toes). It is used in grooming, though whether it functions to help remove water from the fur or to remove ectoparasites is not known.

Then there is the tail, which is the most modified and multifunctional tail in the mammalian world. It serves as a rudder and counterbalance, first of all. The base is hair-covered and muscular. Fat is stored in the rest of the tail. The tail serves in heat regulation by counter-current circulation. The best heat retention is in the winter. The tail itself is very cold. Beavers also use their tail in communication: the tail slap. A tail slap could indicate a beaver is afraid, and a different style of tail slap (that actually involved two slaps) indicates a higher degree of fear.

Beavers are known for their teeth, which are of high importance in feeding activities. Beavers smell everything they eat, and can discriminate between very closely related trees and therefore select their favourite. They eat lots of aquatic plants, especially water lilies. Adults eat everything, whereas young are more selective, and may make a “waterlily wrap” from the leaves. Beavers’ feeding areas are easily located. When chewing, beavers use primarily one tooth; other teeth serve as ‘anchors’. Beavers of course use their teeth to cut building materials, dragging trees to a dam site from the upstream side.

They also build lodges. Where does a beaver sleep while constructing its lodge? It may do so on top of the unfinished lodge or on shore. Lodges serve other wildlife as well; Muskrats may share a lodge with a beaver family, and Canada Geese have taken to nesting atop lodges.

Three generations of beavers may live together under the same roof. Younger members leave as their second birthdays approach, and the male (father) may shove youngsters around. Lodges are refurbished in the fall with mud and lots of branches. ‘Drag trails’ become visible around the beaver pond. A winter food stockpile also become evident. The most edible wood material is added to the

bottom of the food pile, and less edible stuff is added to the top as ballast to weigh down the good food so as to make it readily accessible below the ice. With winter weather the ice comes eventually but beaver keep ice open for a while and will add bubbles to the ice! Air from their fur is released as the beavers swim below. As the bubbles are incorporated into the forming ice, they weaken it.

Beavers are vulnerable to predation on land and are vigilant against threats. Beavers can coexist with otters, however, and a beaver can drive off otters.

Scent mounds are another well-known beaver structure, but these are built and maintained only by the North American Beaver, not the Eurasian Beaver (which scratches out scent marked locations on banks). Anal gland secretion may be used for identification (like castoreum). Beavers are highly territorial and respond to these scents. If a territorial battle comes to blows, beaver will bite each other and can cripple one another.

Beaver ponds are important in local hydrology. During drought periods, the water table in an area with beaver ponds drops significantly less. Beaver ponds are also a great reservoir of nutrients as these are withheld behind the dam, and the pond therefore holds a concentration of life, including many insects such as midges. Ponds are also great feeding and breeding areas for bird, and dead standing trees within the pond are good nesting structures. Fallen dead trees add structural diversity to the habitat. A beaver pond might last perhaps 10-11 years.

Eventually a dam breaks, and the pond bed is a fertile plant growth medium. Sedges are among the first colonizers. Various flowering plants also colonize the site (beaver meadow). Butterflies and spiders benefit, as does the Meadow Vole, which – next to the beaver – is the most important mammal in Ontario owing to its importance as a food source. Wolves use beaver meadows as rendezvous sites during the summer, and Moose preferentially use these as breeding courts in the fall. With succession the area becomes forest again, and there will be a recurring sequence of pond-meadow-forest.

Beaver ponds are a living theatre and an example of Nature's art.

*Editor's Note: Michael's book provides a beautifully illustrated and pithy account of the lives of beavers and is highly recommended.

Questions to Michael following the presentation:



Dunn: do beavers have special digestive adaptations?

Answer: The caecum is well developed, and beavers practice coprophagy.

Question from the floor: How long does it take to build a lodge?

Answer: This depend on effort, whether it's a lone or cooperative effort. It's sustained work. It could take days to a week, or perhaps as many as two weeks.

Question from the floor: How is it that beavers may live where they don't have dams?

Answer: Beavers don't need to build dams.

Comment (Sarah Rupert): there are 20 lodges in the Point Pelee marsh (where beavers don't build dams)

E. Addison: Are beavers born with their eyes open?

Answer: I don't know, but suspect that their eyes are closed.

Curry thanked Michael.

The meeting was adjourned at 9:48 pm.



Members of the Brodie Club in attendance posed for their group photograph before the formal proceedings

Brodie Club members who are known to have died between the dates of the 1000th and 1100th meetings:

Baldwin, Don(ald) Henry
Barlow, Dr. Jon C.
Barnett, Dr. H.J.M.
Bodsworth, Fred
Boswell, Mary
Bousfield, Ed L.
Cringan, Alexander T.
du Vernet, Ernie (Ernest A.)
du Vernet, Sylvia
Edwards, Yorke
Freedman, Bill
Hardy, Pat(rick) A.
Helmsley, Alan
Hussell, David J. T.
Lennox, Dean Charles S.
Livingston, Dr. John A. (Jack)
Martin, Rev. Norm(an) Duncan
Muller, Bernard
Ritchie, Bob (Robert C.)
Scott, Dr. W. Bev
Scovell, Ron
Soper, Dr. Jim (James) H.
Sparling, John
Tilt, Russ

UPCOMING MEETINGS

The next meeting will be on Tuesday, April 25. New Brodie Club member Patrick Moldowan will present “Paradise found, paradise lost, paradise *in limbo*: biodiversity and conservation on the island of Mauritius”.

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

CORRESPONDENCE

The Membership Committee received applications for membership from Warren Dunlop and Bob Kortright. Their applications have been welcomed and approved by the committee, and they have forwarded biographies for inclusion in these minutes.

PROPOSED NEW MEMBERS

Warren Dunlop

Born: Anniston, Alabama, 1956

Interests:

- Distribution, ecology, and management of freshwater fishes
- Distribution and ecology of birds
- Ecology of marine inter-tidal zones
- General natural history



Education and work history:

- Hon.B.Sc. Marine Biology (University of Guelph)
- Canadian Department of Ocean & Aquatic Sciences: (summers of 1976-1977)
- LGL Ltd., Environmental Research Associates: 1979 – 1982, Fisheries and Invertebrate Biologist
- Ontario Ministry of Natural Resources: 1978 – 1987, Fisheries Technician and Fisheries Biologist, Lake Erie Fisheries Assessment Unit (FAU) in Aylmer and Wheatley; 1985, Fisheries Biologist, Haliburton-Hastings FAU in Bancroft; 1987-1997, Unit Biologist/Supervisor, Muskoka Lakes FAU in Bracebridge; 1997-1999, Management/Assessment Supervisor, Lake Huron Management Unit in Owen Sound; 1999 – 2004, Fisheries Analyst, Southcentral Science & Information Section in Bracebridge; 2004-2014, Senior Aquatic Ecologist, Fisheries Policy Section in Peterborough

Key influences:

- My interest in natural history started as a young boy, exploring tidal pools with my parents and sister along the sea shores of Great Britain. My interest in marine biology was further developed watching Jacques Cousteau T.V. specials!
- A series of excellent high school science teachers made learning fun, and influenced my decision to study biology at university.
- Many of my early supervisors and colleagues at MNR encouraged me to move outside my comfort zone and take on new challenges. Friends and colleagues continue to help me improve my bird and plant identification skills.

Bob Kortright

Born: Toronto, Aug 21, 1953

Interests:

- Macroscopic forms identifiable in the field, especially those that move
- Taxonomy, especially deep levels related to the questions of the origin of life and primary branches within Eukaryota
- Ecology

Education:

- BAsc Nuclear and thermal power engineering, University of Toronto, 1975
- MASc Economics, University of Toronto, 1980

Work History:

- Ontario Hydro/Ontario Power Generation 1975-2009: Nuclear waste management, accounting, project evaluation, financial information systems.

Key Influences:

- Bob first developed a love of nature on his parent's farm in north Pickering near Claremont, studying the original Peterson guide to birds as soon as he could read.
- At summer camp in Haliburton, Bob was one of the few campers for whom a nature walk was the favourite activity.
- Love of birds and conservation of natural resources came into the family from Bob's grandfather Frank (1887-1972), author of *Ducks, Geese & Swans of North America* (1942), and founder of the annual Sportsmen's Show (1947). The Kortright Centre for Conservation was named after Frank by TRC (Toronto Region Conservation) in gratitude for the support of the Sportsmen's Shows for TRC conservation projects, including \$150,000 toward the construction of the Kortright Centre.
- A nature tour of Costa Rica in 1990 led to development of interest in evolutionary biology and taxonomy. After the Toronto Bird Observatory gave up bird banding on Mugg's Island and established, with Toronto Region Conservation, the bird banding project on the Leslie Street Spit (the Tommy Thompson Park Bird Research Station - TTPBRS), Bob volunteered to assist there each Saturday in 2004-5 during the monitoring seasons. This led to some years on the board of the Toronto Bird Observatory.

Bob is Treasurer and a past-President of the Toronto Field Naturalists (TFN), a member of Ontario Field Ornithologists (OFO), Toronto Ornithological Club (TOC), Mycological Society of Toronto (MST), and Toronto Entomologists Association (TEA). Bob was a member of Long Point Bird Observatory before it spawned Bird Studies Canada, of which he is a life member.

Bob has led a dozen or more nature walks a year, mainly for the TFN and the TTPBRS, but also for the TOC, Rouge Park, and the Toronto District School Board's continuing education program. Bob contributed to two of the booklets in the Toronto Biodiversity Series: *Birds of Toronto*; and *Butterflies of Toronto*. Bob is torn between a desire to contribute to solutions to the world's problems and a desire to spend his time learning, including about the wonderful intricacies of the workings of nature.