

THE BRODIE CLUB



ROYAL ONTARIO
MUSEUM OF ZOOLOGY

THE 973rd MEETING OF THE BRODIE CLUB

The 973rd meeting of the Brodie Club was held on Feb. 18, 2003 in Room 432 of the Ramsay Wright Zoological Laboratories of the University of Toronto.

Chairman: Fred Bodsworth

Secretary: Oliver Bertin

Attendance: 16 members and two guests

Enid Machin, guest of Ann Fowle

Peter Addison, son of Ed Addison and a fourth-year biology student at Trent University.

The minutes of the 972nd meeting were approved as written.

NEW BUSINESS:

FON representative George Bryant brought a variety of literature provided by the FON.

Bryant moved that the starting time of the meetings be moved ahead to 7:30 pm from the current 8 pm, seconded by Addison. After considerable discussion, the motion was carried. The next meeting will start **promptly at 7:30 pm on March 18**. Those going to the Faculty Club for dinner should meet at 6 pm.

Bryant suggested an order of procedure, a guide for chairmen that would be followed at all meetings. It was adapted from the previous order, adopted in 1960. A copy is attached.

Members voted to send flowers to Mary Tasker, who was ill.

Hugh Currie has changed his e-mail address to hcurrie@ca.inter.net.

William Rapley has moved to wrapley@torontozoo.ca.

SUBSEQUENT EVENTS:

Member Fred Bodsworth has been awarded the Matt Cohen award for lifetime achievement as a writer by the Writer's Trust of Canada. The award is the most prestigious of several given by the Writer's Trust. Congratulations to Fred.

Two newspaper articles are attached.

Brodie Club member Mary Tasker died on March 5th. Mary was an active and contributing member of the club and will be greatly missed. The club offers our condolences to Ron and the family.

The following notes were taken from The Globe and Mail March 7, 2003.

Mary Morris Tasker, dearly beloved wife of Dr. Ronald R. Tasker and mother of Moira, James, Ronald, and Alison Tasker, passed away peacefully from cancer on Wednesday, March 5, 2003 at her home in Toronto with her family and sister Sheila by her side. Mary helped people throughout her life and so delayed making her own original and unique contribution in art, one of her principle loves, until later in life. Mary lived an energetic and full life, crossing the paths with people from all walks of life who remember her fondly for her rich humanity and caring, gentle and kind nature. Despite her disease, she kept on until the end, staging an art show of her original works and travelling the Arctic Ocean she loved so much during her last year and a half. Memorial donations may be made to the Nature Conservancy of Canada, 110 Eglinton Ave. W., Suite 400, Toronto M4R 1A3; the Heliconian Hall Foundation, 35 Hazelton Ave., Toronto M5R 2E3; or the Canadian Cancer Society, National Office, Suite 200, 10 Alcorn Ave., Toronto M4V 3B1

SPEAKER:

David McLeish completed a baccalaureate and master's degrees in forestry at York University before joining the fisheries department of the Ontario Ministry of Natural Resources. He worked out of the Maple station doing stream management and rehabilitation of spawning grounds before moving to Haliburton as district biologist. He is now manager of the MNR Upper Lakes Management Unit, responsible for Lakes Huron and Superior, based in Owen Sound.

MANAGEMENT of the AQUATIC RESOURCES
of the GREAT LAKES

The Great Lakes are the largest freshwater fishery in the world, one that McLeish said faces numerous challenges including ecosystem change, the demands of commercial and sport fishermen and species-specific problems, particularly regarding Lake Trout, Walleye and Sea Lampreys.

The management of these resources comes under the auspices of the Great Lakes Fishery Commission, and a variety of agencies that oversee the individual lakes. The commission is a bi-national body with eight members, split between Canada and the United States which meets twice a year. The members do not agree on every issue, but McLeish said the commission remains the best example of consensual fisheries management in the world. Among other tasks, it sponsors a considerable amount of research, spending between \$500,000 and \$600,000 last year.

Ontario has six stations on the lakes with three on the upper lakes, at Thunder Bay, Sault Ste. Marie and Owen Sound. They concentrate on the assessment and management of the fisheries, perform the necessary operations and enforce the regulations. In recent years, McLeish has starting working with 30 First Nations communities that border the upper lakes.

The prime challenges in the lakes are changes to the ecosystem and fish populations, and the invasive species, all changes that have been going on for a very long time. He noted that in 1908, the Dominion Fish Commission warned that the Whitefish population was facing extinction in Georgian Bay, while Lake Trout were “better adapted by nature for self-protection and reproduction.”

How wrong they were. McLeish noted that the Lake Trout population crashed in the late 1940s and still represents less than five per cent of the Lake Huron commercial catch. But Lake Whitefish have boomed, now accounting for 90 per cent of the catch.

Sea Lampreys have been the single most important factor affecting the Great Lakes fish community since the early 1970s but other introduced species, including Rainbow Smelt, Alewives, Gobies, Ruffe and Zebra Mussels, are also causing problems. Lake Trout are particularly susceptible to the Lamprey.

A survey in 1970 found that eight of the original 104 fish species have been extirpated or driven to extinction. There are now 117 species in the lakes, including 96 native species. Eight have been introduced from within the Great Lakes basin, two from the Mississippi basin and 11 from outside eastern North America.

McLeish blamed commercial ships for introducing many of these species. The ships sometimes load ballast water in fresh water ports in Europe, cross the Atlantic and dump the ballast in the Great Lakes, along with any fish that entered the tanks. MNR is urging the federal government to introduce regulations to control these imports. Some recommend poisoning the ballast tanks to kill the intruders, but this causes problems when the tanks are emptied. McLeish prefers that ships flush their tanks with salt water while in the Atlantic, a technique that kills the freshwater intruders with minimal side effects.

The lakes are definitely changing. Climate change is affecting ice cover, water temperatures and stream flow. McLeish said water temperatures have risen by 2C since 1958, with lower precipitation and stream flows. Lake levels are now at record lows. Human and agricultural activity is increasing the level of nutrients and contaminants in the lakes. There have been increases in the levels of chlorides, sulphates and nitrates, but the level of phosphorus has dropped sharply from the worrying levels of the early 1970s. Levels of mercury, DDT and PCBs have generally declined.

Worrying trends include a decline in the abundance of Diporeia, a benthic amphipod (a shrimp-like crustacean that lives on the bottom of the lakes); the reduced growth of Whitefish and Chinook Salmon; and a decline in the abundance of Cisco, or Lake Herring.

In the original lake ecosystem, the top predators were Lake Trout, Walleye and Burbot, a bottom species related to Cod. These predators fed on Sculpin, Lake Herring, Lake Whitefish, Round Whitefish and Bloater Chub. Now, Chinook Salmon is the top predator, followed by Lake Trout and Burbot, and then Walleye, Brown Trout and Rainbow Trout. The prey include Alewife, Smelt, Lake Whitefish, Lake Herring, Bloater Chub, Sculpin and Round Whitefish. Sea Lamprey remain a serious problem.

McLeish listed other invasive species as the Ruffe, White Perch, Round Goby, and the invertebrates, Zebra Mussel, Quagga Mussel and Spiny Water Flea.

A worrying and mysterious trend is the disappearance of Diporeia across large areas of the Great Lakes. These shrimp are a key food for Lake Whitefish. Nobody is sure why they are disappearing but McLeish suspects that Zebra Mussels are interfering

with the *Diporeia* food sources. Another theory is that Zebra Mussels may have interfered with the *Diporeia* habitat in some way.

The commercial fish harvest has fallen from 12 million kilograms in the 1890s to six million now for a variety of reasons. Overfishing caused the total harvest to crash to two million kg in 1910 and again in the early 1970s, but the population recovered both times. Lake Trout all but disappeared in the late 1940s, replaced in the commercial catch by Lake Whitefish. This species is abundant but the number of young fish is falling and the remaining ones are becoming smaller and more scrawny by the year. McLeish said this could be related to the decline in *Diporeia*.

One of MNR's tasks is rehabilitating Lake Trout in the upper Great Lakes. He is concentrating on this species because it has a good chance of sustaining itself. It has a broad habitat that ranges from shallow to deep water, from inshore to the open lake. It was an original dominant predator and is well adapted to the Great Lakes. It can feed on a wide variety of food and has good economic benefits for both the commercial and sport fisheries.

McLeish is using a variety of methods to bring the species back. He is controlling the Sea Lamprey population, restocking trout with native progeny, controlling the harvest and fostering the reproduction of wild fish.

Enormous numbers of fish of many species are stocked in Lake Huron. In 1999, various authorities put two million Lake Trout into Lake Huron, three million Chinook Salmon, three million Walleye as well as smaller numbers of Coho Salmon and Rainbow Trout.

The rehabilitative efforts appear to be successful. The number of wild Lake Trout caught in sample trapnets in Parry Sound has climbed from an average of two per night to 15 since the early 1990s. Now there are enough top predators in the main basin that the biomass of Smelt and Alewife has fallen to very low levels, possibly enough to crash their populations.

That has posed a difficult question for McLeish to answer: Should he keep stocking predators in hopes of extirpating the population of Smelt and Alewives? That could allow the native Bloater Chub and Lake Herring to come back.

QUESTIONS:

- Health concerns affected the Great Lakes commercial fishery in the early 1970s, but those concerns have dwindled in recent years, allowing the fishery to recover. There is a good market for freshwater fish in Detroit, Chicago and nearby cities.
- The family fishing enterprises in the Great Lakes have been largely replaced by larger, commercial organizations, often tied to processing plants.
- The population of Yellow Perch fell in the mid-1990s in Lake Erie, but they have come back. They have never been a major fish in Lake Huron.
- Lake Trout are less common in Lake Erie because that is not the best habitat for this cool-water species.
- MNR is using a wide range of methods to control the Sea Lamprey. Most Lampreys spawn in stoney rivers, and remain there for several years. Others spawn along stoney beaches, particularly in the St. Mary's River. McLeish has used lampricide in spawning beds; electrofished the young; used barriers to block

access to spawning streams; released sterile males; and used deepwater electrofishing to kill the young in the St. Mary's River.

- There are many explanations for the crash in the Lake Trout population, including predation by Sea Lampreys; over-fishing; and predation of the young by Alewives.
- New York state has stocked large numbers of Coho and Chinook Salmon in Lake Ontario primarily to satisfy the needs of the sport fishermen and charter boat operators. Chinook are easier to raise in the hatchery than Coho, which take about 12 months.
- The ministry has done little work on Carp.
- The Asian Carp is a new exotic that is causing considerable concern. It grows to 80 pounds and can jump eight feet out of the water, sometimes injuring conservation officers. It was introduced into catfish farms in the southern Mississippi basin to control weed growth but a number have escaped and reached as far as the Mississippi Ship Canal in Chicago. The only barrier preventing their entrance to the Great Lakes is one electric barrier, run by one generator. The authorities are so worried by the Asian Carp that they have now installed a stronger electric barrier with a spare, emergency generator.

The speaker was thanked by Ed Addison.

NOTES & OBSERVATIONS:

- Currie visited Santa Cruz Island, a short ferry ride from Ventura, Calif. He saw many whales and birds on the trip.
- Sandra Eadie asked whether Red Fox is an imported species and the Grey Fox endemic. Addison said they are now considered to be the same species.
- Bryant recommended *A Naturalist's Guide to the Arctic* by E.C. Pielou, Univ. of Minnesota Press, 1994, on sale at Indigo for \$22.36, reduced from \$31.95. He was intrigued by a description of mirages in the Arctic island of Novaya Zemla, where temperature inversions allow the spring sunrise to be seen two weeks before the expected date.
- Peter Addison saw a Northern Hawk-Owl in early February near the Grand River. Currie has seen one in Kingston and one in Campbellville.
- Machin said she saw what appeared to be an Anhinga last June in Sullivan's Lake, near the Madawaska River, off Hwy 515. The bird was at the lake for several weeks. Bodsworth said there have been only two recorded sightings of this species in Ontario.

The meeting adjourned at 10:03 pm.

NEXT MEETING:

The next meeting will take place 30 minutes earlier than usual, **promptly at 7:30 pm** on March 18, 2003 in Room 432 of the Ramsay Wright Zoological Laboratories at UofT. Those going to the Faculty Club for dinner should meet about 6 pm. The speaker will be Spencer Barrett from UofT's botany department, who will speak on *Genetic modification of plants and biodiversity*.

FRED BODSWORTH WINS AWARD

G&M (March 7) -- The \$20,000 Matt Cohen Award: In Celebration of a Writing Life, went to Fred Bodsworth. Born in Port Burwell, Ont., in 1918, Bodsworth is the author of four novels, including Last of the Curlews, and one non-fiction title. The Writers' Trust said he "has had important things to say about our place in the natural and, increasingly, unnatural scheme of things, and he has said them well."

Toronto Star: (March 7)

Entertainment

**Insights into nature and humanity --- Fred Bodsworth receives award for body of writing
Writers' Trust recognizes eight writers last night**

Judy Stoffman

Toronto Star

Fred Bodsworth, who wrote a Canadian classic in 1955, received a standing ovation from about 175 writers, agents, publishers and editors gathered last night at the Arts & Letters Club when he won the Matt Cohen award for lifetime achievement.

Bodsworth is still very much alive at 84 and living in Toronto, though he hasn't published a book since The Pacific Coast, a non-fiction work he wrote 32 years ago.

Born in Port Burwell, Ont., he worked at the Star as a young man from 1943 to '46. He is best known for his sorrowful first novel Last Of The Curlews.

In the 1960s, he was president of the Federation of Ontario Naturalists, the man who made bird watching an activity not restricted to eccentrics.

"When I began writing it was in the era of pulp magazine fiction and the standard rate was one cent a word," said Bodsworth, a lively, dapper, gray-haired figure who does not look his age. "In fact it worked out to less than that because you wrote a hell of a lot you couldn't find a market for. If you could make one cent a word, you could survive."

Having received the \$20,000 award, he says he has always had admiration for the Writers' Trust, which administers the awards, and now he'll be "admiring them even more."

The Matt Cohen Award was the most valuable of eight prizes totalling \$133,000 handed out last night for everything from best biography of the previous year to children's literature. Another award given for the first time in memory of the late Timothy Findley to a male writer in mid-career went to Bill Gaston of Victoria, B.C.

"Mid-career? How do they know," wondered Gaston, who's 50 and has written 10 books. He said he now has to write till he's 75, since he started at 25.

The Cohen Award, which last year went to the ex-pat short story writer Norman Levine, 79, is subtitled "In Celebration Of the Writing Life." The judges said that in his four novels Bodsworth has had important things to say about man's place in the natural world, about species survival and the disintegration of indigenous cultures.

Judges included Cohen's widow Patsy Aldana, Toronto Life editor John Macfarlane, philanthropist Jack Rabinovitch, and authors Graeme Gibson and Wayne Grady.

In *Last Of The Curlews*, Bodsworth recreated the tenacity of a male Eskimo curlew migrating south from the Barren Grounds of the Arctic to Patagonia and back again, searching, finding and losing his mate. He made the reader feel the bird's fear, excitement, loneliness, even love.

The New York Times praised Bodsworth's "fresh, exact and clear" prose while the late Roger Tory Peterson, author of the definitive *Field Guide To The Birds*, wrote that Bodsworth's novel "demonstrates great insights into shore birds" and has been "a positive asset to the environmental movement."

Of his four novels, *Curlews* is the only one still in print. In the U.S. it was reissued by Counterpoint, a Washington-based press, with a glowing introduction by the American poet W. S. Merwin, while in Canada it is kept in print for educational use by the New Canadian Library paperback series.

When asked why he stopped writing, Bodsworth groaned before answering: "I felt I was repeating myself. Some people keep on writing the same novel but I thought there were other important things. I have a non-fiction book I've been working on about climate change. It's almost done, but the problem is to keep it up-to-date. There is always new information."

Daniel Richler of Book Television, host of the evening, revealed a prize might be added in memory of his stepfather, Mordecai Richler.

"No decision has been made but I feel that Mordecai would approve of the neck-risking-journalism-by-literary-writers award."

Brodie Club
Order of Procedure

- 1 Call to Order
(*"I call to order the # meeting of the Brodie Club"*)
- 2 Roll Call
- 3 Introduction of Guests
- 4 Minutes of the Previous Meeting
(*"Are there any errors, or omissions?"*—The chair can approve unamended minutes)
- 5 Business Arising from the Minutes
- 6 Reports of committees
(Membership—Introduction of New Members)
(Other committees are Program, Treasurer, Environment, Archivist and FON Rep)
- 7 New Business / Communications / Announcements
- 8 Introduction of Speaker
(Questions ——Appreciation of Speaker)
- 9 Field Observations and Literature Reviews
- 10 Reminder of Next Meeting
- 11 Adjournment (The chair does this—no need for a motion)

Extracted from By-Laws of the Brodie Club

courtesy: George Bryant