MINUTES OF THE 892nd MEETING OF THE BRODIE CLUB

FEBRUARY 15, 1994

The meeting was held in the Dr. Howard Savage Faunal Archaeo-Osteology Laboratory, South Borden Building, University of Toronto. It was called to order at 8 p.m. by the Chairman, Don Young. Aird acted as Secretary.
There were 18 members and 5 guests present.

Guests: Janet Cooper, Julie Park, Joanna Reading, Carolyn Doherty (Savage); Jennifer Young (Young).

Minutes: The minutes of the meeting of January 18, 1994 were read and accepted without modification.

Announcements: The annual meeting of the Long Point Bird Observatory is scheduled for March 26 at Port Rowan.
Christine Bishop, Canada Centre for Inland Waters will address the next Brodie Club meeting on the subject of snapping turtles.

Speaker of the Evening: The speaker, Dr. Premek Hamr, Canada Centre for Inland Waters, Canadian Wildlife Service, was introduced by Bodsworth. The speaker studied at Concordia University in Montreal, Quebec, Trent University in Ontario and the University of Tasmania in Australia. His PhD thesis was on crayfish. He is also a talented artist. He has worked with the Inland Fisheries Commission in Tasmania and with the Canada Centre for Inland Waters in Ontario. He is currently working on contaminants in benthic (bottom dwelling) organisms. The topic of Dr. Hamr's presentation was "Crayfish Tales from Ontario to Tasmania".

What is the difference between crayfish and lobsters? Crayfish live in fresh water; lobsters live in salt water. The crayfish carry their young under the tail while lobsters release eggs. The crayfish young are released when they have become miniature adults.

Crayfish occur on all continents except the arctic and antarctic. In Sweden and southern US they are a culinary delicacy. They are decapods, ten legs, and shed their skeletons.

There are 470 species in three families throughout the world. There are 330 species in North America north of Mexico. In Canada there are eleven species in four genera and in Ontario nine species in three genera.

Three of our species build chimneys which are an agglomeration of mud built upon the soil surface. During a hot summer, the crayfish will cover the chimney to keep the soil moist. Their burrows go below the watertable and have two or three openings. They are often found along ditches.

Crayfish can be caught by shovelling and reaching with a long arm. They pinch. They are eaten by waterbirds, grackles, skunks, raccoons, bullfrogs, turtles, mink and other organisms.

Crayfish shed their skeletons. They gather most of the calcium from the carapace into two structures, and pull out of the carapace. At this stage

they are really soft, like jelly, and then harden up again. They eat up the old carapace to get all the calcium back. Moulting takes about one-half hour, while the whole process takes about one month.

During the mating process, the male is on top with the female on the bottom. Only the male of the species can fit into a female of the same species -- it is like fitting a key into a special lock. She secretes the eggs which are glued to the underside of her abdomen.

The Tasmanian climate is similar to Victoria, British Columbia. The west part of Tasmania gets two metres of rain each year. There are forty species of crayfish in Tasmania, with thirty-five of them endemic. Some have neat colours -- orange, green, blue. Some are 10 cms in length, live in streams, fields, wilds, and highland lakes more than 1000 metres above sea level. They feed on roots and button grass.

Tasmania also has big armoured crayfish -- the world's largest, up to four kilograms in weight and one metre in length, with claws larger than a human hand.

Crayfish may be caught by tying bait (barracuda heads) onto string and pulling it in to land the crayfish with a net or by hand. They may also be caught in gill nets and by snorkelling. Also, we can look for crayfish diggings and place bait there.

There are lots of terrestrial leaches in Tasmania. They live on vegetation and drop onto you. They have anticoagulant and anaesthetic faculties.

Tasmanian crayfish females breed only every second year, producing up to fifteen hundred eggs. When the eggs hatch the organisms live on the yolk sacs. The males take ten years to mature; the females fifteen years.

The speaker lobbied to harvest fewer crayfish. Now, the females are outlawed and only three males may be collected.

Photographs were shown of emu, wallaby, eastern grey kangaroo (up to six feet tall), copperhead snakes (all snakes on Tasmania are poisonous and very aggressive), possum, platypus, anteater, and the Tasmanian devil, whose bark is worse than its bite.

Questions and Answers

Female crayfish have slender claws. The males have larger claws, often fight, and can snap off another's claws. The claws lock and are difficult to open.

All crayfish are edible. They are very tasty if boiled with dill until red.

There is no explanation for the differences in species size.

Tasmanian crayfish live longer than crayfish in other places, presumably because of fewer predators. Though rivers may be fished out there may still be young ones present.

Age estimates can be made only by marking and recapture. Twenty-five years is the conservative estimate. Crayfish may be marked by clipping a code on the five tail fans or scratching a number on the carapace.

No one has really studied the Ontario crayfish - they mature in one or two years. The young leave the maternal burrow and start new burrows. They don't make chimneys until later.

There are not many records of crayfish on the Great Lakes, though there are many on Georgian Bay and immediately offshore, but not on offshore islands.

The natives at Curve Lake near Peterborough eat them.

The crayfish we eat in restaurants are all red crayfish mechanically sucked up from the river bottom in the Louisiana area.

Quebec has exported some crayfish to France, but their crayfish are not large enough to become a substantial market.

Once abundant in the Muskoka district, crayfish are not common now, and the reason is not known. They prefer to live by a waterfall. Their life history is three to four years, with a maximum of six, in southern Ontario. They are found north to Hudson Bay.

The chimneys are a global phenomenon, without explanation. The speaker cut one off and shellacked it to use as an ornament.

The speaker was thanked by Jennifer Young, followed by a hearty round of applause.

Reference

Crockert, Denton W., and David W. Barr. 1968. Handbook of the Crayfishes of Ontario. Published for the Royal Ontario Museum by University of Toronto Press, Toronto, Ontario.

Notes and Observations

Bodsworth: Scoters are beginning to arrive and there are many redpolls.

Bendell: A red-tailed hawk is keeping the local crows happy. There is more mouse activity now with warmer days.

Falls, Anne: A red squirrel arrives at the feeder by tunnelling through the snow and looking out every six or eight feet. Black squirrels do not tunnel.

Falls, Bruce: Large rafts of goldeneyes were seen - hundreds in flocks, and many flocks. Also seen were four grey and two adult trumpeter swans.

Carrick: The swans were bred at Wye Marsh. Half a dozen Canada geese were seen very badly oiled, presumed due to discharge of ballast from ships.

Savage: Joanna Reading, a student of Savage, found bones of the extinct sea mink in an archaeological sample from islands off Passamaquoddy Bay in New Brunswick. There are no previous records of sea mink bones in Canada. The Royal Ontario Museum and the National Museum do not have any specimens. There is only one skin in the Smithsonian Institution.

Huff: Norman Martin did some of the original research on old-growth forests in the Algoma district north of Sault Ste. Marie. There was a press release today to urge the retention of these old-growth forests.

Cooper: The antics of a raccoon herald the coming of spring.

Young, Don: Reports seeing a hoary redpoll on his urban property.