

THE BRODIE CLUB

Minutes of the 910th meeting held in the Faunal Laboratory,
Borden Building, University of Toronto, February 20, 1996

Chairman: Hugh Currie

Call to Order: 8:10 pm

Roll Call: There were 16 members and 4 guests present.

Guests: Michael Boyer, guest of Carrick, Ken Abraham, guest of Hussell, Yvonne Bendall, guest of Jas. Bendall, Martin Obbard, guest of Bruce Falls.

Minutes: The minutes of the 909th meeting were approved.

Announcements

Botany Books: Savage discussed the gift of some ancient books from Barry Macklin to the club. He reported that McAndrews had suggested donating the books to the ROM library. Savage will approach the museum with the view to accepting the books.

Conserving the Birds of Ontario: Hussell and Lumsden reviewed this new FON publication. It is a fairly creditable document that considers prioritizing bird species conservation and should be widely distributed.

International Grouse Symposium: Bendell will be attending the seventh meeting and first in North America. It will be held in Colorado this summer and brings in galliforme specialists from around the world

Program

Our speaker, Martin Obbard, was introduced by Bruce Falls. Since 1989, Mr. Obbard has been conducting long-term studies of Black Bears in the Chapleau area for the Ministry of Natural Resources.

The current estimate is that there are 75,000 to 100,000 bears in Ontario -- this is 20% of the North American population of 500,000. The annual Ontario harvest of 7,000 (8-10%) is in line with the MNR guidelines of 10% for a sustainable harvest. The genesis for Obbard's study was the MNR concern was that bears in the boreal forest might not withstand hunting pressures. Unlike the Great Lakes - St. Lawrence region, in which bear studies had previously been conducted, the boreal forest does not produce a fall mast crop of acorns and beechnuts.

Black Bears are found virtually throughout the province and are gradually moving into southern Ontario. There is a remnant population of 200 bears on the Bruce Peninsula that seems to be genetically distinct. The Chapleau Crown Game Preserve, the largest game preserve in the world, was used as a control along with two adjacent sites in which hunting was permitted. This area has much regenerated timber and is excellent for bears as they feed on early succession vegetation.

Male bears are distinguished from females by their shorter snouts, larger heads, smaller ears and muscular shoulders and forearms. Black Bears continue to lose weight from the beginning of hibernation until July of next year. A female nursing young will be in a negative energy balance until blueberries ripen. It is difficult to neck-collar bears because an individual may vary from 300 pounds to 500 pounds in one year. A pre-molar tooth is removed to age each bear. The oldest bear was a male in the early 30's when it died. Bears are highly intelligent and much learning goes on in young bears.

There were very high levels of female mortality in the study areas. The level of overall mortality was the same in the game preserve as in the hunted areas. Females often lost cubs or their entire litters. Cub survival is higher in the Great Lakes forest area.

From mid-May to June, along roadsides and in forest openings, bears feed on sedges, grasses and clovers. Following that they will patrol streams for spawning suckers. Mr. Obbard is convinced that bears actively hunt moose when they are calving. Bears usually skin their prey before eating and they do not disarticulate the skeleton. This is unlike wolves which eat the skin and fur and disarticulate skeletons. Mr. Obbard discussed the case of a female found dead in the woods in the third week of May. An autopsy disclosed broken ribs and a punctured lung consistent with being kicked by a moose. In spring, bears will dine on early aspen growth but their guts are similar to ours and they cannot digest much vegetation.

Females have a 60-70 day gestation with cubs weighing only 3/4 pound when born in January. Plants are a big protein source for the bears. They have loose jaws that really pluck at berries. Bears will travel 100 kms to look for blueberries. Cutovers are critical to blueberries in boreal forest. Blueberries are tremendously productive after the forest canopy is removed.

There is much evidence of cannibalism. Our speaker has found about six adult females killed by males. He looked into 25-30 kills. The male was nearby in about half the cases but Obbard was never attacked. When you approach a fresh kill the big males will go downwind. Now he takes a big German Shepherd with him in the bush.

Dens are excavated under a windfall or stump. The bears rake considerable sand and material such as bracken toward the den and use it to close the den entrance. This can be quite evident sometimes.

There is an incredible variation in the size of yearlings. In one spring following a bad summer, a mother weighed 85 pounds and her yearling was only 13 pounds. Bears have cubs every second year as they keep their cubs (yearlings) over the next winter. In the study areas he found 75% survival in both the first and second year.

Questions: Mr. Obbard did not see the sale of bear parts such as gall bladders as a significant problem in Ontario. People are not finding poached bears in the woods. In Ontario, it is illegal to trade in gall bladders from Ontario bears but legal if they came from Quebec.

There have been only three fatal bear encounters in Ontario and the only thread was all three bears were old males. He thinks the behaviour of these bears was natural as individual bears vary a lot. He has induced bears at dumps to charge and found they give a lot of warning. They huff and blow through highly resonant lips and then charge for a few feet. He recommends you always fight back and never run. Pepper spray has been found effective on brown bears and it will stop a charging bull moose, so he recommends it.

Hunting over bait is the most humane way of killing a bear. Most of the shooting is done within 30 yards and that is an effective killing distance. In Maine they eliminated the spring hunt and female mortality increased. Females are critical to the population dynamics of larger mammals. Questions about whether it is sporting to use bait or dogs to hunt bears are red herrings when considering their population dynamics.

Our speaker was thanked by Don Huff.

Observations

Savage displayed a large canine tooth that had recently been accessioned by the Faunal Lab. It belonged to a Cave Bear (*Ursus spelaeus*), a very large bear that became extinct late in the Ice Age.

Bendell reviewed some of many colours of snow. First there was the red snow which is caused by an algae. It is most often seen on old snowdrifts in the mountains. Black snow can be seen now. It is caused by aggregations of springtails. Bendall's favourite seemed to be prismatic snow. Hoar frost sublimating on existing snow surfaces will break sunlight up into brilliant prismatic colours when seen from the right angle.

Speakman discussed an observation of hovering Bohemian Waxwings.

Bryant produced the frozen corpse of an adult female Sharp-shinned Hawk. The bird had collided with Bryant's patio window while pursuing a Mourning Dove which also met the same fate. The specimen was contributed to Savage's Faunal Laboratory.

Currie declared the meeting adjourned at 10:25.

Secretary: George Bryant

The 911th meeting of the Brodie Club will be held at the Faunal Lab Borden Building, University of Toronto on March 19, 1996 at 8:00 PM.

*Mr. Bob Murphy - Royal Ontario Museum - will be guest speaker
Subject: Biodiversity Crisis in Vietnam.*

*Mr. Michael G. Boyer has been nominated to membership in the club.
Your approval is automatic unless objections are received.
Resume is included with this notice.*

A letter received from Ken Reading is also enclosed.