BRODIE CLUB

ROYAL ONTARIO
MUSEUM OF ZOOLOGY

THE 954th MEETING OF THE BRODIE CLUB
MINUTES

The 954th meeting of the Brodie Club was held on Jan. 16, 2001 in the Ramsay Wright Zoological Laboratories of the University of Toronto.

Chairman: George Bryant
Recording Secretary: Oliver Bertin
Attendance: 24 members and seven guests.

GUESTS:

Marc Johnson, guest of Jock McAndrews
Roy Smith and Glenn Coady, guests of Alexandra Eadie
Ed and Rosemary Addison, guests of David Hussell
Sharon Hick, guest of Fred Bodsworth
Erica Dunn, guest of the club

ANNOUNCEMENTS:

Norm Martin reported that Reginald James, a prominent Toronto birder, died in mid-January at the age of 91. James was a close friend .and colleague of Martin, and the best man at his wedding. He was also a good friend of Jim Bailie, a highly respected field ornithologist and a member of the Toronto Ornithological Club, going back many years. As early as the 1930s, James used his position as foreman of the paint shop at Sangamo Electric in Leaside to build 1,000 Screech Owl nests which he placed all over Ontario as far north as Thunder Bay. He obtained small barrels which he painted at work and placed in trees and buildings at the rate of 10 or 20 on a Sunday. He vowed to place 1,000 by the time he was 40, a goal that he met. His next project was to make bird feeders and sell them to rich homeowners on Bayview Ave. in Toronto. This project was so successful that it developed into a very profitable business called Conservation Enterprises.

McAndrews proposed Johnson for membership. Johnson's biography is attached.

Jean Iron distributed two booklets: "Birding Guide to Carden Alvar" by Ron Pittaway, published by the Ontario Field Ornithologists, and "Field Checklist of Ontario Birds - 1999," published by the Federation of Ontario Naturalists.

Eadie has prepared a bibliography of Brodie Club talks for the period 1988 to 1998. She invited members to check the list for mistakes and to fill in any missing references.

Minutes of the previous meeting were approved without change.

SPEAKERS:

Bruce Falls introduced Hussell, a long-standing member, and his wife Erica Dunn, who drove down from their home in Kanata, Ont. for the meeting. They met at the University of Michigan where Hussell, a former engineer, was doing a PhD in biology. Hussell went on to become director of the Long Point Bird Observatory on Lake Erie and then became a research scientist, studying population biology of deer and birds for the Ontario Ministry of Natural Resources. He recently retired.

Dunn recently co-authored a book "Birds at Your Feeder" for Project FeederWatch, which she founded and worked on for 10 years. She is now a survey scientist at the Canadian Wildlife Service in Ottawa where she works on bird populations.

Setting Priorities for Conservation of Canadian Birds beyond VTE (Vulnerable, Threatened, Endangered).

Hussell said Bird Life International drew up a map of endemic bird areas around the world about 10 years ago. The map showed many species with restricted ranges in such countries as Peru, Ecuador, southeast Asia and New Zealand, but only one area for an endangered bird in Canada, the Whooping Crane of Wood Buffalo National Park.

"It was very revealing that Canada doesn't have many rare birds," he said, pointing to just four which are considered globally endangered: Kirtland's Warbler (which rarely occurs in Canada); Eskimo Curlew (which may already be extinct); the Piping Plover and the Whooping Crane.

Other organizations have developed their own lists. COSEWIC (Committee on the Status of Endangered Wildlife in Canada) lists 47 species: 18 endangered, seven threatened and 22 of special concern. Hussell argued that many are not, in fact, endangered. There may be very few in Canada, a political jurisdiction at the extremes of their range, but they are sometimes abundant in their preferred environment. Of the 47, he noted that 26 are "core" species, while 21 are "peripheral" species.

Core species have a significant portion of their ranges in Canada. Peripheral species are at the peripheries of their ranges in Canada - the bulk of their ranges are outside Canada. The peripheral species are not truly native to Canada. They live primarily elsewhere.

Hussell argued that these peripheral species are not very "useful" for directing habitat management in Canada because they are typically found only on the southern edge of the country. The core species are, however, endemic to Canada and typically more useful for forest management.

There are five forest birds on the COSEWIC core list: Kirtland's Warbler, which could be useful for managing Jack pines; Marbled Murrelet, a seabird that nests in trees on the B.c. coast; Bicknell's Thrush, which occurs on some mountain tops in Quebec; Queen Charlotte Goshawk of coastal B.C.; and the Red-shouldered Hawk, used by MNR for forest management in southern Ontario.

Another list of threatened species is contained in "Ontario Birds at Risk" published by the Federation of Ontario Naturalists and Long Point Bird Observatory. It names 80 birds, including 11 supposedly endangered species, 9 threatened and 31 rare. Of that number, Hussell rated 18 as core and 62 as peripheral to Ontario. To determine how many are useful for managing forests,

Hussell showed a map of Crown timber lands from south of Georgian Bay to the Hudson's Bay Lowlands that was reviewed by the Environmental Assessment of Timber Management in Ontario.

He found several classic cases of peripheral species. The Hooded Warbler, Acadian Flycatcher and Prothonotary Warbler-are found in forests all over the eastern US. with the odd occurrence at the extreme northern extremity of their ranges, in southwestern Ontario. They are classified as southern peripherals. The Western Kingbird is deemed a rare bird in Canada because it has been reported only a few times near Rainy River, Ont. It is common in the western US., making it a western peripheral. Several other species are northern peripherals. They are arctic species that breed in Ontario only on the narrow strip of tundra along the coast of Hudson Bay.

The Ontario Ministry of Natural Resources has its own list with 26 birds on it. The Ministry rates 13 species as endangered, two threatened and 11 of special concern, while Hussell says 13 are core and 13 peripheral. Forest birds on this list include Kirtland's Warbler, Great Gray Owl, Red-shouldered Hawk and Red-headed Woodpecker.

The Red-headed Woodpecker is noteworthy because its vulnerability seems to be a factor of record-keeping rather than nature. It is common all over the US. but in Canada, MNR records show it has been declining since the survey started in 1968. However, long-term records kept by the Long Point Bird Observatory show that this species rose steadily from 1960 until it peaked in 1968, when it started to decline. This indicated that there were external factors - possibly the abundance of dead Dutch Elm trees following the spread of that disease in the 1960s - which led to an abnormal abundance around 1968. Now that the supply of dead trees has dwindled, the species is apparently returning to its normally low level.

Hussell suggested that Canadian conservationists should be more concerned with those rare species which are endemic in Canada or Ontario, than with those that are common elsewhere but are rare in this country. In contrast to the Red-headed Woodpecker, Acadian Flycatcher and Yellow-throated Vireo, he mentioned the Yellow-bellied Sapsucker, the Yellow-bellied Flycatcher, and the Philadelphia Vireo, which he deemed to be primarily Canadian birds because the bulk of their breeding sites are in Ontario, with only a few south of the Great Lakes.

Hussell believes Canadians should take responsibility for many migratory birds such as the warblers which concentrate their breeding in northern Ontario. "They should be considered quite important," he said.

Other migratory birds important to Canada are the Black Duck, White-throated Sparrow and the Connecticut Warbler, which has the greater proportion of its range in Canada despite its name.

In conclusion, he said Canadians should protect their core birds, those which concentrate in Canada, because Canadians are responsible for significant areas of their habitat and therefore can provide guidance on how large areas of Canadian habitat should be managed. Peripheral birds are less important from a conservation viewpoint because they concentrate their activities elsewhere, and occupy relatively small areas of Canada.

As chair of the Canadian Wildlife Service land-bird committee, Dunn has spent considerable time working on conservation priorities of the 300 species of land birds in Canada.

Various other groups are working in the same area, including several U.S. organizations. The Nature Conservancy and the International Union for the Conservation of Nature look at the global conservation status of these birds. Dunn has worked mostly with Partners in Flight, an umbrella group of governments, resource industries, conservation organizations and academics.

PRIORITY SPECIES POOL FOR BCR 13[1]
(LOWER GREAT LAKES AND ST. LAWRENCE VALLEY IN PQ AND NY)

SPECIES	JR	VTE	SPECIES	JR	VTE
Tier 1: Range-wide concern			Tier llLA. High responsibility		
Henslow's Sparrow	5	E	Caspian Tern	5	V
Black-throated Blue Wrblr	5		Bicknell's Thrush	5	
Golden-winged Warbler	5		Blackburnian Warbler	5	
Cerulean Warbler	4	V	Eastern Towhee	5	
Blue-winged Warbler	4		Nashville Warbler	5	
Canada Warbler	4		Sedge Wren	5	
Red-headed Woodpecker	3	V	Red-shouldered Hawk	4	V
American Black Duck	3		Black-throated Green Wrblr	4	
American Woodcock	3		Chestnut-sided Warbler	4	
Bay-breasted Warbler	3		Mourning Warbler	4	
Black-billed Cuckoo	3		Northern Parula	4	
Bobolink	3		Scarlet Tanager	4	
Whip-poor-will	3		Tier IV.A. VTE species		
Baltimore Oriole	2		Golden Eagle	3	E
Piping Plover	(5)	E	Hooded Warbler	3	T
Worm-eating Warbler	1		Least Bittern	3	V
Tier II.A. Moderate concern, strong decline			Prothonotary Warbler	2	E
Brown Thrasher	3		Acadian Flycatcher	2	E
Eastern Meadowlark	3		Bald Eagle	2	E
Eastern Wood-Pewee	3		Loggerhead Shrike	2	E
Field Sparrow	3		Prairie Warbler	2	V
Willow Flycatcher	3		Northern Bobwhite	1	E
Sharp-shinned Hawk	2		Barn Owl	1	T
Belted Kingfisher	1		Great Gray Owl	1	V
Killdeer	1		Short-eared Owl	1	V
Tier n.c. Moderate concern, important threats			Yellow-breasted Chat	1	V
Black Tern	3	V	Eskimo Curlew	(5)	E
Louisiana Waterthrush	3	V	Kirtland's Warbler	(5)	E
Upland Sandpiper	3		Peregrine Falcon	1	E
Northern Harrier	2				

1 First draft. JR in parens indicate high JR should the species actually occur regularly in the BCR

These three groups have different priorities. TNC has 50 birds on its list of important North American species, IUUCN has 25 and PIF has 100.

Dunn has categorized Canada's 300 species, rating them on their population trend, vulnerability and dependence in Canada. She has developed a complex scoring system to arrive at measures of "vulnerability" and "concern," using a variety of characteristics including the breadth of their breeding and wintering range and their global abundance. She then works out a "responsibility" score based on the proportion of time the species spends in Canada. Most birds are shared with the US., while some are shared with circumpolar neighbours. "This is a pretty straightforward measure," she said.

Dunn has scored all 300 species. She showed that about 113 of Canada's landbirds are year-round residents, about 113 are short-distance migrants wintering in the US., and about 1/3 winter in the Neotropics.

Most of Canada's high "concern" species winter in Mexico, and most of our high "responsibility" species winter in both the US. and Mexico. Species ranking high on both scores tend to winter along the US. coasts and the southern Mississippi Valley. Her maps indicated that Canadians need to work with the US. and Mexico to preserve important wintering habitat. Dunn also divided species by habitat, and found no important differences in average concern or responsibility scores among habitats. Sparrows, pipits and longspurs were among the taxonomic groups scoring high both on responsibility and concern.

The next job was working out targets and priorities. Dunn noted that most of the important species need better monitoring, while some need more research to find out why they are declining. About 100 species need monitoring, including owls, loons, grebes, marsh birds, northern birds and rare species. About 25 have been targeted for winter counts.

Partners in Flight has also mapped out a series ofBCRs - Bird Conservation Regions - across North America, of which three are exclusively Canadian. BCR 13 includes the Lower Great Lakes and the St. Lawrence Valley. The draft list for BCR 13 is attached, including the Canadian responsibility score ("JR") and COSEWIC status.

Tier I species have high concerns across their range; Tier 11 species are of moderate concern but with particularly high decline, threats, or concentration; Tier III species are those with high responsibility scores; and tier IV was added for political reasons, as these species were officially listed as VTE (Vulnerable, Threatened or Endangered).

The final modus operandi is: rank the species; set priorities; identify high-priority habitats; develop an action plan; assign responsibility; evaluate and finally, communicate.

QUESTIONS:

Jim Bendell noted that Ontario has the highest density of Spruce Grouse in the world, particularly in the Gogama region. He asked why no area has been set aside for their conservation. Dunn answered that they are a provincial, not a federal responsibility, because they do not migrate.

Bendell noted that Red-headed Woodpeckers apparently peaked in numbers following the onset of Dutch Elm disease. He asked whether this and other species had increased in numbers as a result of the ice storm last year.

McAndrews asked whether some species are - and always have been - rare, while other species have always been common. The answer was in the affirmative.

The speakers were asked whether it was better to emphasize a priority habitat or to concentrate on a specific population, sparking considerable debate.

The speakers were asked about the accuracy of the priority lists. Dunn answered that they should be regarded as a tool for sifting through all species.

The speakers were asked about the relationship between the bird conservationists and the forest managers. Hussell answered that the Ministry of Natural Resources set up and funded the wildlife monitoring program, and list of priority species.

Bruce Falls said the idea of a jurisdictional responsibility was a good idea, but he wondered whether it was better to focus on a few endangered species that conservationists could become emotional about or whether it was better to produce a complex and confusing matrix of species. Hussell answered that the priority setting narrowed down the list of concerned species considerably, allowing people to focus better than before.

Bodsworth noted that some birds receive a lot of emphasis in Canada because they are rare in this country. Many of these species are not rare at all when the full range is considered. He asked whether anything could be done about the Connecticut Warbler which is - and always has been - rare. Hussell answered that the species wasn't necessarily threatened, but it has special habitat requirements.

McAndrews noted that all species ultimately go extinct. It is natural.

Bendell noted that there had been a lot of good work done on the Red-shouldered Hawk in his area of the Ottawa Valley. The only drawback is that this species has received considerable attention at the expense of other species.

Ed Addison commented that forest managers live a very difficult life because they have to steer around a considerable number of constantly changing guidelines. He argued that more money is spent on revising the guidelines than is spent on the monitoring of the species.

Hussell commented that he first encountered the concept of jurisdictional responsibility as used in Norway. The Norwegians take high responsibility for species that have at least 25 per cent of their population in Norway at some point in the year.

The speakers were thanked by Norma Martin.

NOTES & OBSERVATIONS:

Bernard Muller recommended a periodical: "The State of the World - 2001," published by Worldwatch Institute, WW Norton & Co., New York. He said it was an annual book with articles of great interest. This issue has chapters on the decline of amphibians and coral reefs around the world, on the de-carbonizing of the economy and the melting of the Greenland ice-sheet.

Yvonne Bendell saw a Red-tailed Hawk outside her kitchen window.

Hussell's son saw four rats foraging in the snow between the Royal Ontario Museum and the Royal Conservatory of Music in Toronto. Bryant commented that they may be living off compost heaps in the city. Norma Martin said she sees rats in the parking garage of her waterfront condominium in Belleville, Ont.

Ron Scovell has seen a stunning number of waterfowl. at the west end of Lake Ontario and in the Hamilton ship canal. "It's just an incredible sight... a seething mass." He has seen 5,000 ducks of every species including Goldeneye and Scaups, Black Dabblers and Pintails. But there is a complete lack of White-winged Scoters. He wonders whether the spread of Zebra Mussels is a factor. He noted that Lake Ontario seems to have more birds than Lake Erie, which is shallower. He also suspects that birds are staying in Lake Ontario, rather than going to the Atlantic coast.

Another member commented that Lake Erie tends to ice over in the winter, whereas Lake Ontario does not. Eadie has seen ducks eating Zebra Mussels off Toronto Island.

Coady observed that he sees more and more ducks in High Park and in Humber Bay every year. "It's astounding."

Bryant has seen two Ivory Gulls already this year, and hopes to see a third. They have been observed in Toronto, Hamilton and Amherst Island.

Bendell has seen 15 Wild Turkeys around the feeder in his garden. He also watched a Raven chasing a Snowy Owl.

John Speakman is curious as to how Crows are getting enough food this winter. He has seen huge numbers along Hwy 404, and seen them feeding on Sumach berries. "I've never seen that before."

Bodsworth noted that his son has seen Winter Finches in Sioux Lookout heading south. They appear to be migrating very late this year.

Eadie saw 40 Trumpeter Swans at the west end of Lake Ontario. She is convinced they are migrating south from Lake Huron and Georgian Bay.

Bill Carrick has seen 90 Trumpeter Swans on Lake Ontario between Toronto and Hamilton. One of his swans is migrating from Sudbury to Hamilton. He believes it would normally fly as far south as Indiana, following the migration route it was taught, but it has apparently mated and that has affected its migratory pattern.

Carrick said Harry Lumsden had 308 Trumpeter Swans in the wild last fall, including offspring. He expects to release another 72 over the next year or two.

Bryant has been curious for years about the black "berries" that he sees on White Ash trees. It turns out that they are not berries at all. Rather, they are male flowers that have produced galls after being parasitized by mites.

The meeting adjourned at 10: 10 pm.

NEXT MEETING:

The February meeting will be held at 8 pm on Feb. 20 in Room 432 of the Ramsay Wright Zoological Laboratories when Dr. Douglas Larsen of the University of Guelph will speak on: "The Paradox of Great Age in a Short-lived Species: Escarpment Cedar."

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January 4, 2000

Dear Members of the Brodie Club:

Please accept this letter as my application for membership to The Brodie Club. It is my understanding that I am eligible to apply for membership, since I have attended three meetings as Dr. Jock McAndrew's guest. I have thoroughly enjoyed the meetings that I have attended. I am particularly impressed by the enthusiasm, knowledge and accomplishments of the club's members, in relation to natural history. I feel that my experience and enthusiasm as a naturalist would fit into the Brodie Club's membership well.

My passion is the study and teaching of natural history, especially as it pertains to evolution and the ecology of plants and animals, including their interaction. I am interested in most aspects of natural history but I am especially interested in birds, plants and insects. I have been able to study the flora and fauna throughout much of North America and northern South America. My studies have included observing in the field, collecting (with permits of course) and banding or marking birds, butterflies and small mammals. Professionally I worked as a Park Naturalist at Algonquin Provincial Park from 1995 to 1998, where I intensively-studied the natural history of the park, in' addition to teaching the public about Algonquin's many natural wonders. My interest in plants began while working at Algonquin, which has led to me serving as co-curator of the Algonquin Park Museum Herbarium (APM) since 1997. I have also spent much time volunteering at Presqu'ile Provincial Park, assisting with their interpretive programmes and conservation projects.

Since the spring of 1998, I have been conducting research on various topics related to the evolution and ecology of plants and plant-animal interactions. ln 1998, I began to investigate how polyploidy in plants can be correlated with the evolutionary processes of habitat differentiation and

mating isolation. In 1999, I began two projects to study how small mammals and birds can affect plant community structure by eating seeds that have fallen to the ground. I have also been studying how the rare plant, Hyssop-leaved Loosestrife (a close relative of Purple Loosestrife), can colonize and quickly increase in numbers in Ontario.

In April, I will be departing for an eight-month excursion with two other naturalists, during which we will tour five continents to study natural history around the world - ambitious but surely fun. At the end of the trip I will be returning to Toronto to begin a Masters of Science degree in the Botany department at the University of Toronto.

The reason that I would like to become a Brodie Club member is because of the atmosphere that the club members create, which makes the learning and sharing of information pertaining to natural history easy and enjoyable. Thank you for considering this application.

Sincerely,

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