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Photo by Dorothy McFarlane.
S.C.O. President (Tony Diamond) in action – real bird work (no computer, no board room).

Society of Canadian Ornithologists
Société des Ornithologistes du Canada

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NOTES FROM THE PRESIDENT

This is an exciting time in Canadian ornithology. In January 1998, Long Point Bird Observatory, long the leader among North American bird observatories, transformed itself into Bird Studies Canada. As a national organization for the promotion and implementation of national studies of bird populations, B.S.C. will be an important player on Canada's ornithological stage, and we in S.C.O. look forward to a productive relationship.

S.C.O. members played important parts in the metamorphosis of L.P.B.O. into B.S.C.. Past-President David Nettleship and several Council members, including myself, served as members of B.S.C.'s Advisory Board that worked with the L.P.B.O. Board for over two years to bring about its transformation, and former President Bruce Falls chaired the Advisory Board. So we as an organization can take pride in our role in bringing a new and very significant ornithological body into being. Throughout this process, we debated the roles of B.S.C. vis-a-vis S.C.O., and I would like to share with you some of my own thoughts on this.

Ornithological organizations in most countries have several separate roles. One important role is as a scientific body that has credibility in presenting general scientific knowledge of birds, and that promotes professional or semi-professional scientific research. The number of professionals and other serious researchers will always be smaller than the number of skilled and enthusiastic amateurs who participate in national or regional surveys that are designed, coordinated and analysed by a core professional staff. This is the role that B.S.C. has emerged to fill. Both S.C.O. and B.S.C. share a strong motivation to put their science to serve the conservation needs of birds; this was not always so in earlier history of ornithological organizations, but has now become a dominant theme in most countries. However, neither B.S.C. nor S.C.O. is in the business of carrying out conservation projects; this is the role of others, including Canadian Nature Federation and World Wildlife Fund, which rely on scientific data and advice provided by organizations such as S.C.O. and B.S.C. to decide their conservation priorities. S.C.O.'s interest in conservation has taken a leap forward with recent establishment of a conservation committee. This is chaired by Keith Hobson, whose description of the Committee's mandate appears elsewhere in this issue of *Picoides*.

In the next few months your Council also will establish a Meetings Committee to reflect the increasing importance of our annual meetings in S.C.O.'s affairs and to help each year's organizers - rather than allowing overworked individuals to bear the additional work as was the case to date. Please look for Kathy Martin's update on what promises to be a very exciting meeting in Vancouver this year. Plans are afoot also for a joint Millenial Meeting with the British and American Ornithologists' Unions in St. John's in the year 2000; look for more on this in the next *Picoides*.

Editing the Proceedings of the Fredericton Conference has taken longer than I had hoped - I should not be surprised by this! - but I still plan to have it available at the August meeting in Vancouver.

In the last two years we have significantly increased S.C.O. activities. Our continued effectiveness as an organization will depend on enlarging our membership to reflect these changes. My final note is to challenge each of you to recruit two new members this year; this is not a difficult task for any individual, but collectively could triple the size and resources of the Society, and allow us to continue the vigorous expansion of activities begun so effectively under David Nettleship's leadership, which I resolve to continue during my two years at the Society's helm.

S.C.O. ANNUAL MEETING AND CONFERENCE

The University of British Columbia, Vancouver, B.C.

1 - 4 August 1998

The Society of Canadian Ornithologists' 17th Annual Meeting and 3rd Conference will be held 1-4 August 1998, on the campus of the University of British Columbia, Vancouver, B.C., Canada. This gathering is hosted by the Centre for Applied Conservation Biology at U.B.C., the C.W.S./N.S.E.R.C. Chair of Wildlife Ecology at Simon Fraser University, and the Pacific Wildlife Research Centre of the Canadian Wildlife Service.

The Conference will include a symposium "New Horizons in Ornithology" - featuring areas likely to be prominent in the coming decade, plus contributed papers.

The meeting will begin with registration on the evening of Saturday, 1 August, followed by field trips Sunday, 2 August, and scientific sessions at U.B.C. 3-4 August. The gathering ends with a salmon barbecue on Tuesday evening. Inexpensive accomodation, including breakfasts, are available at Totem Park Residence at U.B.C., overlooking infamous Wreck Beach.

An invitation to the meeting, with registration forms and details on submitting abstracts for oral and poster papers, are included as a separate brochure with this issue of *Picoides*. Deadline for submission of abstracts is 1 June 1998. For updated information, and to provide registration information on-line, please visit our web site, at http://www.biol.sfu.ca/sco98

For further general information about the meeting and registration, contact:

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CONSERVATION NEWS AND HIGHLIGHTS

The birth of a S.C.O. Conservation Committee

by Keith A. Hobson

The Society of Canadian Ornithologists has a broad membership ranging from serious amateurs to professional biologists. One common thread linking all of us must surely be a serious interest in conservation of Canadian birds and their habitats. Many of you already are members of one or more conservation-oriented organizations, and a number of very dedicated individuals over the years have been instrumental in protecting and conserving birds in Canada. Most recently, we have seen the establishment of Bird Studies Canada that has a strong conservation mandate. However, the unique focus of S.C.O. and the composition of our membership presents an ideal organization to

champion the cause of bird conservation in this country and to lend informed insight into several aspects of bird conservation that might otherwise fall through the cracks. Most informed readers will agree that never before has the need for a dedicated and respected voice for the conservation of Canadian birds been so urgent.

During a flight from Saskatoon to Toronto last November, I discussed the need and potential role of a S.C.O. Conservation Committee with David Nettleship. David has a long history of concern for conservation of birds here and internationally and has long wished to establish such a committee. During that conversation, we agreed to establish such a Committee with myself as Chair. We were quickly and enthusiastically joined by Mike Cadman and Robert Butler, also of Canadian Wildlife Service. The Committee still needs more members, and has a truly daunting task ahead, but some basic initial goals were readily identified. First and foremost, the Conservation Committee has the task of informing S.C.O. membership of pressing conservation issues involving Canadian birds and their habitats. Second, once issues are identified, there is a real need to examine and discuss critical information gaps hampering effective solutions and ultimately to recommend scientific or political pathways to resolve these issues. We see *Picoides* as the (in-house) communication vehicle of the Committee and plan at least one focus article in each issue. These articles may range from species-specific problems to broad multi-species/ecosystem alterations such as commercial fisheries and petroleum activities. They will cross taxonomic and ecosystem boundaries. We invite the S.C.O. membership to forward articles for consideration to members of the Conservation Committee, or to apprise us of issues of concern. Other suggestions included recognition or awards for conservation efforts by individuals or organizations. Also, and importantly, the Conservation Committee can act as a clearing house for issues identified by S.C.O. members and make these issues known to a broader audience. Can a web page be far off? Any ideas and input from S.C.O. membership will be gratefully received.

To start the ball rolling, David Nettleship and Mike Cadman agreed to provide accounts of pressing conservation issues from eastern Canada that have obvious ramifications for bird conservation across the country. These inaugural accounts deal with major issues facing two very different bird communities. David focuses on issues concerning seabirds and Mike on forest birds.

[Keith Hobson is chair of the S.C.O. Conservation Committee, and research scientist with Canadian Wildlife Service, Environment Canada, studying bioenergetics of birds ranging from prairie grasslands to polar waters.]

Seabirds in Crisis: Eastern and Atlantic Canada

by David N. Nettleship

Awareness of the aquatic and coastal crisis is paramount. Coastal zones worldwide are overcrowded, overdeveloped, and overexploited, with insufficient effort made to address the crisis. Eastern and Atlantic Canada is no exception. Petroleum developments offshore span marine waters from Greenland to the Scotian Shelf and Georges Bank. These operations pose serious risks to birds breeding or wintering in this vast area, as well as to winter visitants from the eastern Atlantic and beyond the equator. Pursuit of food from the sea and diversification of fishing effort worldwide has removed massive quantities of marine resources and altered ecosystems, including those in Atlantic Canada, on a large scale. By 1990, 44 of the world's 186 major commercial fisheries (24%) were over-exploited, all of them coastal fisheries (L. Harris, 1990: State of the Northern Cod Stock, DFO). Worse, 23 of the 25 largest fisheries included in the 1990 review were nearing commercial extinction by 1995 ('State of the World 1995' ed. L.R. Brown et al. 1995: Worldwatch Inst. Rep., Washington, D.C.). Recent reports suggest that destruction of life in the oceans has progressed farther than anyone suspected

(see D. Pauly et al. 1998: Science 279: 860-863). In Atlantic Canada, both northern cod (*Gadus morhua*) and capelin (*Mallotus villosus*) fisheries around Newfoundland collapsed in 1992, with little recovery since. With other assaults on the habitats and living systems upon which seabirds depend, the future is bleak for specialist species, and the conservation task is formidable. First, let us review major threats to colonial seabirds in Atlantic Canada.

Oil Pollution - Apart from chronic release offshore of oil from shipping, which kills tens to hundreds of thousands of seabirds in waters off Atlantic Canada each year (e.g. L.M. Tuck 1961: The Murres, CWS; P. Evans and D.N. Nettleship 1985: The Atlantic Alcidae, Academic Press; J. Piatt et al. 1985: NICOS Rep. 105, and 1991: Effects of oil on wildlife, Sheridan Press), offshore oil megaprojects on the Grand Banks (Hibernia, Ben Nevis, Terra Nova) and Scotian Shelf (Cohasset-Panuke fields) pose major threats to marine birds. The Hibernia development, 315 km SE of St. John's, began production in 1997. Longevity was estimated at 20-25 years with production up to 180,000 barrels/day, indicating about 750 million barrels of recoverable crude oil, and expenditure of at least $5.8 billion is forecast. The probability of oil spills is very high, at levels up to many times the 1989 *Exxon Valdez* disaster in Alaska. A worst-case scenario sees a release 32 times the oil volume lost in Prince William Sound (Alaska), with single blow-outs allowing releases up to 40,000 barrels/day for up to 200 days. Relief-well drilling normally exceeds 45 days, depending on time of year and marine weather/sea state conditions. Six blow-outs have occurred on Canadian offshore developments since 1970 (natural gas), the most recent June 1989 in the Beaufort Sea (from Canadian Petroleum Assoc. & Independent Petroleum Assoc. of Canada documents). Hazards of drilling on the Grand Banks are high owing to ice-infested waters and inclement weather year-round, most severe in winter (see 1982 *Ocean Ranger* tragedy). When a blow-out or other major release of oil occurs, little can be done to mitigate the disastrous impacts on the huge numbers of marine birds in the region (based on performance of industry and government in response to the *Exxon Valdez* spill in Alaska; see J. Piatt et al. 1990: Auk 92: 387-397; Rice et al. 1996, P. Wells et al. 1995: Exxon Valdez Oil Spill, ASTM; J. Burger, 1997: Oil spills). The southeastern Grand Banks is among the most important winter areas for seabirds in the NW Atlantic owing to biological richness, a region used by many birds from arctic and eastern Canada, Greenland and the eastern Atlantic (R. Brown et al. 1975: Atlas of Eastern Canadian seabirds, CWS). Losses of birds will be high, even before a major blow-out, owing to recurring small spillage during extraction and transport to mainland storage/processing sites. Little effort has been made to monitor impacts on marine birds and critical habitats, despite promises implicit in the Migratory Birds Convention Act (1917) and Biodiversity Convention (1992). Status of other offshore petroleum sites in Atlantic Canada is similar.

Commercial Fisheries - Causes of the fishery crisis are clear: too many people chasing decreasing fish; persistent assumptions that marine resources are limitless; chronic overfishing beyond sustainable yields; leading to fisheries collapse. Fisheries actions through the 1980s followed a recipe for disaster. Diversification of fishing efforts, with development of more effective capture technologies and targeting of new fish species at lower trophic levels moved remnant populations and food webs to new high levels of risk. Increase in world catch followed, but accompanied by declines in catch/unit effort and in per capita fish production. In Atlantic Canada, the international fishery for capelin in Newfoundland waters (from 1972) formed part of this gamble. Exploiting species farther down the food chain, especially 'keystone' species such as capelin, places the target species at risk, and also other living components of the ecosystem. The food web in low arctic waters of Atlantic Canada is relatively simple, with most other fish (including cod), marine mammals and birds, and some invertebrates (squid) directly or indirectly dependent on capelin for survival and successful reproduction. The capelin population collapsed in 1978-79, only six years after commercial fishery began, and again following

partial recoveries before the fishery ended in 1992 (shortly after the northern cod fishery was terminated). Capelin-dependent seabirds were adversely affected through the declines in capelin abundance. Atlantic Puffin (*Fratercula arctica*; 60% of North American population breeds in Nfld.) declined 30-35% since 1967, mostly after 1976 (D.N. Nettleship et al. 1984: Marine Birds: feeding ecology and commercial fisheries relationships, CWS; DNN and P. Evans 1985: The Atlantic Alcidae; DNN, 1991: IOC 20: 2263-2271; 1996: Family Alcidae [Auks], Lynx Ed.). Causes were largely low productivity (total reproductive failure in some years) and recruitment, from food shortages during chick-rearing (normally on capelin), with possible changes in survival rates related to winter food supply (also capelin). Other specialist species may be similarly affected, but few data exist other than for Atlantic Puffin. Even more threatening is the likelihood that overfishing has irreparably altered the function of the Grand Banks ecosystem, as happened on Georges Bank where herring, cod, mackerel, haddock, etc. were replaced by non-marketable skates and spiny dogfish, after long-term overexploitation of the former (E. Cohen and R. Langton, 1992: Gulf of Maine, NOAA). Cohen and Langton (1992) concluded that the dominant factor affecting abundance of commercial fish in the Gulf of Maine is fishing (based on trends in catch and fishing effort), and changes in population sizes brought about by overexploitation. This massive degradation of the Gulf of Maine ecosystem poses serious threats to top trophic feeders such as specialist seabirds, as does the collapse of capelin and cod on the Newfoundland Grand Banks. The auks and terns are particularly vulnerable. No studies are being conducted to assess the impact of fishery collapses on seabirds in Atlantic Canada.

Human Predation - Unregulated hunting of coastal birds continued from the earliest arrival of Europeans, expanding from local subsistence use to 'market' hunting for profit. Food demands of new cities combined with the millinery trade of the 19th century caused reduction of most coastal bird populations, many to remnant populations, some - Great Auk (*Pinguinus impennis*) and Labrador Duck (*Camptorhynchus labradorius*) - to extinction. This unsustainable slaughter came under control early this century when the United States protected all birds (except some 'pest' and 'game' species), prohibited market hunting, and restricted sport hunting to parts of fall and winter. These actions paralleled the Migratory Bird Treaty of 1916 between Canada and United States, and the Migratory Birds Convention Act in 1917, extended to Newfoundland when that territory became a province of Canada in 1949. Although this legislation covers most seabirds in eastern Canada, subsistence hunting by aboriginal peoples is permitted year-round, with hunting of murres (*Uria* spp.) by residents of Newfoundland in September-March. Legal hunting of murres in Newfoundland expanded from subsistence hunting in the 1950s to 'market' hunting later, until in the late 1980s the annual kill was estimated as between 500,000 and 1.1 million birds, mostly Thick-billed Murres. This unsustainable harvest in Newfoundland, with high mortality of murres in west Greenland from year-round hunting [(& drowning in salmon drift-net fishery 1968-76) eastern Canadian arctic birds spend part of winter in west Greenland waters, as do Greenland murres off east Newfoundland], resulted in reduction of Thick-billed Murre breeding populations, by 40-60% in west Greenland since 1940s (K. Kampp et al. 1994 *in*: Seabirds on Islands, BLI & Smithsonian Inst.) and 30-35% in eastern Canada since 1950s (D.N. Nettleship et al. 1984; DNN and P. Evans 1985: The Atlantic Alcidae, and others). Incidental kill of other birds during the Newfoundland murre hunt is also of concern, particularly for the scarcer Razorbill (*Alca torda*) and puffin. In Atlantic Canada, the winter hunt of murres now has regulations, put in place 1994-95, but it remains to be seen whether they can be enforced, to reverse the massive declines that wintering populations endured over recent decades. No attempts to limit murre kill in Greenland are underway, even though the scale of hunting and disturbance at colonies during summer remains excessive, as does winter hunting both in Greenland and Newfoundland.

Also of great concern is the irresponsible

behaviour of provincial governments towards so-called 'pest' species. Although the MBC Act covers most seabirds, cormorants, with some supposedly 'non-migratory' and pest species, were omitted. Thus cormorants are under provincial, not federal, jurisdiction, which produced widely different management policies across the country. Cormorants eat fish and are conspicuous in nearshore waters, so commercial and sports fishermen continue to call for culling to keep cormorant numbers at low levels. Despite the lack of evidence in support of claims that cormorants take large quantities of commercially-important fish, in Atlantic Canada or elsewhere, fishing interests have effectively pushed provincial governments to allow (often uncontrolled) shooting of birds (New Brunswick, Prince Edward Island) and issuance of kill permits to individual fishermen (Nova Scotia, Newfoundland). All four Atlantic provinces turn a 'blind eye' to recurring and systematic destruction by fishermen of cormorant colonies in remote areas. In Québec too, a cull of breeding Double-crested Cormorants (*Phalacrocorax auritus*) occurs each year in the St. Lawrence River estuary to 'protect' island habitat for eider-down farmers (J. Bédard et al. 1995: Colon. Waterbirds 18, Spec. Publ. 1: 78-85). In Manitoba, fishermen illegally kill thousands of cormorants (and other fish-eating species such as scarce American White Pelicans) on Lake Winnipegosis and elsewhere (K. Hobson et al. 1989: Colon. Waterbirds 12: 191-197; Y. Sheppard 1994-95: Birds of the Wild 3(4): 30-34). Similar actions in Atlantic Canada would place the cormorant population (c. 38,000 pairs: 84% Double-crested, 16% Great) at serious risk, particularly the less common Great Cormorant (*Phalacrocorax carbo*). Cormorants and other wild species are natural components of aquatic ecosystems, deserving protection as for other seabirds. The federal government should provide leadership in protection and management of cormorants in Canada as needed, using the national Wildlife Act (1970) and international Biodiversity Convention (1992), and over the longer term should amend federal legislation to include cormorants, as was done in the United States.

Gull and Human Displacement - Continued human population growth and activity in Atlantic Canada can lead to further deterioration of the marine environment and threats to seabirds. One consequence of enlarged human population is increases in habitat disturbance and pollution. Habitat alteration and disturbance by people displaced many seabirds from optimal breeding sites in the past (see W. Drury 1973-74: Bird-Banding 44: 267-313, 45: 1-15; I. Nisbet 1980 & 1981: Status and trends of Roseate Tern, MAS for USFWS; D.N. Nettleship 1977: CNF Special Report No. 6, etc.). Indirect effects are even more insidious. Increased garbage, sewage, and fish offal from commercial fisheries cause rapid growth of *Larus* gull populations by enhancing winter survival. The rise in gull numbers puts further pressure on smaller specialist species, excluding them from preferred breeding locations through physical displacement, by interference with reproduction, or predation. Displacements of Arctic (*Sterna paradisaea*), Common (*S. hirundo*) and Roseate Terns (*S. dougalli*) from optimal to sub-optimal breeding sites by expanding gull populations are well known (W. Drury 1973-74, see above; J. Burger and M. Gochfeld 1996: Family Laridae [Gulls], Lynx Ed.), and similarly for Atlantic Puffins in Newfoundland (D.N. Nettleship 1972: Ecol. Monogr. 42: 239-268). Limited control of gulls at major colonies of threatened species and those experiencing serious population problems is required where they cause serious damage in Atlantic Canada).

Population Problems and Actions Required

The principal threats (reviewed above) and associated conservation problems highlight the scale of environmental problems in Eastern Canada. Although individual species most threatened by human activity in Atlantic Canada can be identified (see below), the most serious issue remains the massive degradation of coastal and offshore marine ecosystems. Species identified below are specialists, top trophic feeders that do not adapt easily to perturbations in the marine environment. Their life history patterns evolved within the marine systems

of which they are parts, including adaptations to cope with natural environmental changes. They lack similar protection from changes deriving from technological man. The overall conservation goal and biggest challenge is to safeguard aquatic and terrestrial habitats that these species require to ensure future welfare and survival. Species of concern include:

Highest Priority: Roseate Tern;

High Priority: Great Cormorant, Black Tern;

Moderate Priority: Double-crested Cormorant, Common Tern, Arctic Tern, Razorbill; and

Near Priority: Thick-billed Murre, Atlantic Puffin.

Conclusions and the Future of Seabirds in Atlantic Canada

Pressures arising from rapid growth and expansion in human populations in North America (and elsewhere) can only result in continued pollution, habitat destruction, and overfishing. This will cause further economic and biological stresses in oceans, and human-induced global climatic change (now underway) could bring even greater deterioration to ocean systems. The long-term challenges are enormous – greater awareness, and transformation of our technology and values, to provide a sustainable human society, but numerous actions can be taken now to help safeguard seabirds and their marine environment.

Management strategies can be formulated based on existing knowledge on status of species and ongoing threats. We must continue to develop a network of conservation biologists and other concerned parties to meet short- and long-term conservation goals identified by work in and outside governments. The immediate push is to marshall efforts towards the protection and welfare of the seabird community *per se*, with particular focus on species populations experiencing problems, not only those with official (COSEWIC) designation as endangered or threatened. We must take action *before* species populations reach the low levels recognized by designation. A combined view that treats problems at local, regional, national and international scales is essential. This objective can be attained through the collective work of individuals from NGOs and GOs determined to better the state of the marine environment and seabirds in Eastern and Atlantic Canada.

[Excerpted from referenced larger work soon to appear entitled: "Ecosystem disturbance and seabirds in crisis: Eastern and Atlantic Canada". David Nettleship is a long-term member and past president of S.C.O., and senior research scientist with Canadian Wildlife Service, Environment Canada.]

Lands for Life - a major concern for bird conservation in Ontario's forested lands

by *Mike Cadman*

The Lands for Life program is the Ontario government's comprehensive land-use planning process for the central part of the province. The area under consideration extends from the southern edge of the Canadian Shield to the southern boundary of the Hudson Bay Lowland, representing 46 million ha or 44% of the landmass of the province. The area contains 58% of Ontario's and 11% of Canada's forests, used by proportional numbers of our birds at various seasons.

The Lands for Life program began in June 1997, and by June 1998 will have in place Regional Land Use Strategies (RLUS) for three large, ecologically based regions: Boreal West, Boreal East, and Great Lakes/St. Lawrence [see map on next page]. In each region, large parts will be designated for multiple use, and other areas will be assigned for primary use by forestry, parks and protected areas, or resource-based tourism. Round Tables have been established in each region to provide for local involvement in the planning process. The primary objective of each RLUS is "to sustain the quality and quantity of natural resources and the array of products and services that careful management of the resources is capable of providing". Birds, presumably, are

MNR Land Use Planning System

addressed indirectly, if at all, despite the primary dependence of many species on these forested lands.

The round tables will work through several stages of public consultation, as follows: they first put out background materials, consider input from the interested public, then offer several options for public review. The "preferred option" will then go forward for another round of public review. Preliminary RLUS will then be offered for "inspection" by the public, with an "appeal opportunity", after which the RLUS will be submitted to the Minister for approval and communication.

The options will prescribe different scenarios for factors such as whether, or the extent to which, the current parks system needs to be expanded, or what activities will be allowed within parks and protected areas. To assist the process, OMNR is undertaking a gap analysis to determine what needs to be done to complete the parks system.

At the time of writing (late February), the process is behind schedule. The Great Lakes/St. Lawrence region will put forward its first land-use options for public review in early March, and the other regions are expected to do so by the end of March. There has been no indication that the process will be extended to ensure the full process is completed by the June deadline. According to the Lands for Life Hotline, the public will have until approximately 15 April to comment on the first set of options. After that, the preferred option in each region should be available for comment.

Once the RLUS are in place, the fate of crown lands in those three regions will have been decided. The next step after the Lands for Life process is subregional planning, where details of specific uses within each designated area will be decided.

From an ornithological/ecological perspective, the foremost concern is that the process must ensure the conservation and sustainability of the wildlife and ecological processes of a large portion of the province. Dr. Tom Nudds of University of Guelph is organizing professional ecologists for a critique of OMNR's gap analysis, which they consider deficient in representativeness, size, boundary, and connection criteria. Their paper, in draft form by late February, recommends how those inadequacies may be addressed. This should ensure some attention to the needs of forest birds in Ontario. *Partnership for Public Lands*, a cooperative undertaking of Federation of Ontario Naturalists, World Wildlife Fund, and Wildlands League (1-888-371-LAND; www.web.net/wild) is undertaking its own gap analysis, in an attempt to ensure that the process results in as ecologically sustainable a scenario as possible.

What can SCO members do?

It's important that ecologists and ornithologists provide expert input to help ensure that the best options are adopted, for birds as well as for people. Public meetings are scheduled throughout the province during March and April, and written comments can be contributed at any time. Each region is producing a tabloid summarizing each round table's first set of options. You can get on the mailing list, or get more information, by contacting the Lands for Life web page via OMNR's page: http://www.mnr.gov.on.ca, or by contacting the following people:

Bob Michels, Chair Boreal West Round Table, c/o Min. Nat. Res., 435 James St. So., ste 221, Thunder Bay, Ontario P7E 6S8 ph: (807)475-1251; fx: (807) 473-3023; em: bwrt@webmail.mnr.gov.ont.ca

Bettyanne Thib-Jelly, Chair Boreal East Round Table, P.O. Bag 3020, Hwy 101 E, So. Porcupine, Ont. P0N 1H0 ph: (705)235-1254; fx: (705)235-1246; em: bert@webmail.mnr.gov.ont.ca

Bob Gray, Chair Great Lakes/St. Lawrence Round Table, c/o Min. Nat. Res., 300 Water St., 4th floor, Peterborough, Ont. K9J 3C7 ph: (705)755-3240, or (800)898-8530; fx: (705)755-3292; em: glrt@webmail.mnr.gov.ont.ca

[Michael Cadman has a particular interest in forest birds of Ontario, and is a research biologist with Canadian Wildlife Service, Environment Canada.]

S.C.O. Council Elections

A well-supported ballot by members in December 1997 resulted in the following elections to Council:

Vice-President (President-elect): Kathy Martin

Councillors: first terms - Fred Cooke, Erica Nol, J.-P. Savard
2nd (2-yr) terms - Michael Bradstreet, Michael Cadman, Keith Hobson

Congratulations to all of you!

[The full list of officers & councillors, with addresses, etc., appears on the inside front cover.]

A.W. Diamond, Chair

S.C.O. Student Awards

Reports from 1997 Awardees

(a) James L. Baillie Student Research Award

"Parental investment in the Rhinoceros Auklet *(Cerorhinca monocerata)* at the colony and at sea off southwestern Vancouver Island". Gail Davoren, University of Victoria

Declining prey availability was suggested to affect seabird activity-time budgets, chick growth, and ultimately adult survival, sequentially. Therefore, prey availability was thought to be a major factor regulating seabird populations. Recent studies showed that seabirds can buffer deleterious effects of moderate prey declines on breeding success by increasing the proportion of time spent foraging ("time-buffer" hypothesis). Other recent studies showed that seabirds were unable or unwilling to increase time spent foraging under exceptional food shortages. Therefore, as seabirds are generally long-lived species, parents may set a threshold on provisioning and breeding efforts, beyond which they risk breeding failure to ensure their own survival and thus increase lifetime reproductive success.

My M.Sc. project was conducted just south of Barkley Sound off southwestern Vancouver Island, British Columbia. The study was designed to test whether parental time-budgets at sea and chick-growth rates reflected changes in prey availability, thereby indicating whether seabirds are useful monitors of prevailing ocean conditions. The Rhinoceros Auklet

(Cerorhinca monocerata), a marine diving bird (family Alcidae), was selected as an ideal species for monitoring effects of ocean changes on marine ecosystems. With greater recent appreciation of effects of warm ocean events (El Nino) in coastal British Columbia, this study was timely.

Specific objectives of this project were: to measure size and composition of meals delivered to Rhinoceros Auklet chicks at the colony (parental provisioning); to measure growth rates of chicks; to use instantaneous scan and focal-animal techniques to determine time-budgets and foraging behaviour of auklets foraging in near-shore seas; to determine spatial distribution of auklets and their prey (using an echo-sounder) by conducting boat transects around the colony; and to collect samples of prey from aggregations of feeding auklets to compare with those delivered to chicks. Numerous studies addressed one or a few of these aspects of seabird biology, but none measured breeding parameters at colonies with simultaneous estimates of parental foraging effort and prey availability. Aspects of this study were standardized with researchers elsewhere in British Columbia, allowing comparisons of Rhinoceros Auklet responses to prey availability across different oceanic regimes along the B.C. coast in different years.

My results showed that prey abundance did not change among the three years (1995-97) but prey were more dispersed in 1997 than in previous years. This led to higher dispersal of both Rhinoceros Auklets and Glaucous-winged Gulls *(Larus glaucescens),* the latter being the most important flock-forming species in my study area. This subsequently led to fewer mixed-species feeding flocks of seabirds being formed in the study area in 1997. When fewer feeding flocks were formed, auklets were less likely to be found at prey patches, and they spent more time foraging, illustrating benefits of flock-foraging to diving marine birds.

Prey accessibility also varied within years, with schools of juvenile herring and sand lance appearing in near-surface waters one to several days in succession. When prey were in surface waters, or were highly accessible, auklets primarily exploited prey from mixed-species feeding flocks rather than foraging solitarily. Auklets also spent more time foraging and less resting, and they did not appear to discriminate between high- and low-density prey patches. This suggested that auklets were taking advantage of these readily accessible prey, a strategy to exploit an ephemeral but profitable resource.

Another interesting discovery was that certain wind and current patterns promoted persistence of zooplankton in near-shore waters, which led to periodic increases in abundance of prey in the study area. The increased prey abundance was associated with reduction in time spent foraging by auklets, suggesting an interesting link between coastal oceanography, local prey distribution, and foraging behaviour of seabirds.

Overall, Rhinoceros Auklets were able to adjust foraging behaviour and the time spent foraging under varying environmental conditions. This probably allowed them to maintain nestling growth rates consistent with other studies on Rhinoceros Auklets, despite fluctuations in prey availability through each breeding season. The high proportion of time spent resting (24-39%) in daily time-budgets suggested that auklets did not approach maximum work capacity, probably contributing to behavioural flexibility exhibited.

To my surprise, significant differences between provisioning (chick-feeding) and self-feeding behaviour also were found in the three years of the study. Self-feeding Rhinoceros Auklets used a mixed strategy of flock and solitary foraging, and took primarily small schooling fish caught near the surface in mixed-species feeding flocks using short dives. By contrast, provisioning parents delivered chick meals with high proportions of larger, more mature fish, generally caught late in the day by solitary diving using prolonged dives. Although differences between chick and adult meals are well-documented in several seabird species, especially alcids, this appears to be the first study showing a concomitant switch in foraging behaviour from self-feeding to provisioning in seabirds.

Overall, the study showed that flock foraging may be important in determining the daily time-budgets of seabirds, and suggested that behavioural flexibility is important for animals living in variable environments. In addition, both time-budgets and foraging behaviours of Rhinoceros Auklets appeared to be sensitive to

moderate fluctuations in prey availability. This emphasizes the importance of examining buffering capabilities of seabirds when designing experiments to test their ability to indicate changes in oceanic conditions.

I gratefully acknowledge the funding I received from the James L. Baillie Memorial Fund of the Long Point Bird Observatory and Bird Studies Canada, NSERC, the John K. Cooper Foundation, the Bamfield Marine Station, the NSERC/CWS/SFU Wildlife Ecology Chair, and the Nestucca Fund.

(b) Percy A. Taverner Awards

(i) **"Mating tactics of female Black-capped Chickadees"** Scott M. Ramsay, Queen's University.

Recent studies showed that sexual selection, typical of sexually dimorphic, socially polygynous species, also operates in sexually monomorphic, socially monogamous species, and affects females in previously unconsidered ways. Much evidence for this came from behavioural observations and DNA fingerprinting, which revealed that in many bird species females actively seek extra-pair copulations, leading to mixed paternity of broods. Where it was possible to identify fathers of extra-pair young, extra-pair males were often of higher quality than the social partners of females. In Black-capped Chickadees *(Poecile atricapillus)* the difference in quality between males was most readily seen in the social rank of individuals within winter flocks.

Dominance hierarchies in chickadee flocks are sex- and age-structured. Males are dominant to females and particularly among males older birds are dominant to younger ones. Age is less important in female dominance patterns and may be related to a faster turnover of females than males within a population. Social pairing for chickadees is assortative by rank, but given an opportunity low-rank females attempt to access high-rank males either for social partnership or sperm. In spite of this evidence, it is not clear whether age causes female social rank or if females attain social status as a result of their partnership with high-rank males. My research tests whether social rank leads to partnership or partnership confers rank.

The resource-holding potential (RHP) hypothesis predicts that factors such as age or condition make a female successful in competition for partnership with high-quality males, and thus social status is related to intrinsic characteristics of the female. The resource value (RV) hypothesis predicts that an individual that places greater value on partnership with a high-quality male will be successful in competition, and her status comes as a result of having won. When high-rank females are removed from their territories, lower-rank females move in to replace them, usually within 24 hours. This provides a useful way to create competitive interactions between females of different social rank. By varying timing of removals, I also create differences of RV between females competing for social partnerships. In 1996 and 1997 I conducted removal experiments in late April and early May in my banded study population at Queen's University Biological Station, Chaffey's Locks, Ontario. In each year I removed high-rank females from their territories for approximately 90 h (range 86-94), either (early) immediately following flock breakup in last week of April, or (late) leading up to egg-laying in first week of May. Timing of removals gives RV advantage to removal females in the early group and to replacement females in the late group. The results thus far favour the RHP hypothesis, with 8 of 11 removal females successfully regaining their partners. Of 3 cases where the replacement female was successful, one was an early removal and two in late removals. I will repeat this experiment in 1998.

With my study of competition for mates, in 1996 I began to study acquisition of rank by females in captivity in the absence of males. Both RHP and RV hypotheses (see above) plus the owner/intruder (O/I) hypothesis are potential explanations of female rank-acquisition in this context. I brought females into captivity in autumn, and varied combinations of RV, O/I asymmetry, and RHP, and observed who won in competition for social rank. I was unable to continue these experiments in 1997, but plan to do so in 1998.

If a female loses in competition for social partnership with a high-rank male, she can have some of her offspring sired by him. Extra-pair young occur in about 30% of chickadee nests. To facilitate access to

extra-pair males and to monitor partnership status of the same neighbours, females might locate their nests adjacent to territory boundaries of males which are targets for extra-pair copulations or divorce. Alternatively, nest-choice might be based on vegetation features or prey abundance, on previous nesting experience, or on simple conspecific attraction without any element of sexual selection.

Analysis of nest-site characteristics in 1996 and 1997 failed to reveal distinctions between nest and control sites in any of 40 measured characteristics. Prior residency and previous fledging success also did not influence placement of nests. The position of nests with respect to territory boundaries revealed a pattern supportive of the reproductive tactic and simple conspecific attraction hypotheses. When I categorized neighbours as good choice (high rank, potential EPC partner, potential divorce partner) vs. poor choice (low rank, not likely to be an EPC partner or a divorce partner), females nested nearer the boundaries of good-choice males than poor-choice males in 1996. In 1997 nests were near territory boundaries regardless of the quality of neighbouring males. The results support both the hidden-lek hypothesis and the simple conspecific attraction hypothesis. To distinguish which hypothesis might be operating for chickadees, I will map nest locations with respect to territory boundaries and neighbour rank again in 1998. In addition, I will conduct paternity analysis for nests of 1996-98 to examine whether males nearest to a female's nest are those that sire extra-pair offspring. The study thus far has eliminated habitat characteristics and prey abundance as factors of nest-choice for chickadees, but it remains for us to distinguish among several social hypotheses of nest-site selection.

Analyses of female reproductive success showed that females mated with high-rank males gained enhanced fitness in terms of number of offspring produced and probability of successfully fledging offspring. To address whether this fitness advantage results from enhanced female condition arising from better food access prior to nesting, I will weigh females through winter 1997-98 and compare these weights with social rank. Females mated with high-rank males have a numerical advantage in offspring production; do they also have a quality advantage? I collected blood samples from males, females and offspring in 1996 and 1997, and will continue to do so in 1998, to examine blood parasite loads as an index of individual quality. These data are currently being analysed. I also will conduct molecular sexing of offspring produced in the site in 1994-98 to see whether females bias the sex ratio of their offspring based on the rank of their mates.

I am now midway in my research on outcomes of female-female competition in Black-capped Chickadees. The results thus far support RHP as determining outcome of competition for mates, and some form of social attraction for choice of nest locations. The remainder of my research program will see the completion of field-work, and a shift to the lab to clarify some results from the field. I am grateful to the S.C.O. for its support of my research in 1997 with a Taverner Award. The end result will be a better understanding of the impact of sexual selection on females.

(ii) **"The influence of forest fragmentation on food abundance, nest site habitat, and reproductive success of forest breeding birds."** Dawn Burke, Trent University.

Neotropical migrant birds nesting in deciduous forests across eastern North America have declined. Reduced fecundity, due to habitat fragmentation in breeding areas, appears to be a major cause contributing to observed population declines. This occurs as a result of reduced pairing success, higher rates of nest predation, and increased brood parasitism by Brown-headed Cowbirds *(Molothrus ater)*. Declining populations may also be attributed to changes in forest microclimate, food abundance, and suitable nest site habitat. All these factors may act together to limit reproductive success of forest-nesting birds through lower recruitment into the breeding population.

This study was designed to examine how fragmentation affects avian nest success, and to determine whether size-related changes in forest microclimate, food abundance or nest-site availability may limit selection or suitability of small forest fragments. I monitored nesting success of Ovenbird *(Seiurus aurocapillus)*, Red-eyed Vireo *(Vireo*

olivaceus), Wood Thrush *(Hylocichla mustelina),* Veery *(Catharus fuscescens),* and Rose-breasted Grosbeak *(Pheucticus ludovicianus)* on 40 forest fragments (12 to 2,350 ha) and 2 continuous forest sites in south-central Ontario in 1994-97 to determine whether amount of forest cover in the landscape and fragment size influences reproductive success of these birds. Fragments surrounded by less than 30% forest cover were separated from those with >30% regional forest cover to monitor landscape effects. Woodlots were grouped into small fragments ($\bar{x}$=7.8 ha core area, 91 ha woodlot area), large fragments ($\bar{x}$=134 ha core area, 850 ha woodlot area), and continuous forest. I monitored 165 nests of Ovenbird, 60 of Wood Thrush, 56 of Rose-breasted Grosbeak, 83 of Red-eyed Vireo, and 30 Veery nests. I documented nest failure in relation to woodlot size or distance from forest edge, calculated nest success using the Mayfield method, compared across species to determine which were most vulnerable, and used population viability estimates to determine the size threshold for local sources.

Woodlot size was the most important variable affecting reproductive success, with local forest cover having no additional effect. Ovenbirds, Veerys, Wood Thrushes, and Rose-breasted Grosbeaks had significantly lower reproduction in small vs. large fragments. Only fragments >25 ha core area or >225 ha total area acted as sources for Ovenbirds and Wood Thrushes, whereas Veerys and Rose-breasted Grosbeaks were close to maintenance levels in small fragments, contrary to published reports. For all species except Red-eyed Vireos, female reproductive success was at or above replacement levels in large fragments and continuous forest, and below replacement in small fragments. Reproductive success of Rose-breasted Grosbeaks and Veerys was similar in large fragments and continuous forest. Red-eyed Vireo productivity was particularly low, with single-brooded females not maintaining populations in any woodlots monitored, although close to replacement levels in continuous forest.

Nest predation was the major cause of nest failure, with brood parasitism by cowbirds also reducing young fledged by Ovenbirds and Red-eyed Vireos. Ovenbird parasitism rates, and predation rates on all species except Red-eyed Vireo were significantly higher in small than large fragments. Nests in edges (<100 m from edge) suffered higher predation rates in Rose-breasted Grosbeak and Veery, and higher parasitism rates in Ovenbird and Red-eyed Vireo, than nests farther from edges. Nests in woodlots surrounded by scanty forest cover were not more vulnerable to predation, but were more likely to be parasitized.

I further tested that area-related changes in food abundance and availability of suitable nest sites may limit settlement and reproductive success in forest fragments. I monitored forest-edge and forest-interior wind speeds, light intensity, soil moisture, humidity, soil and air temperature, through the year to determine how microclimate changes from edge to interior, and whether changes were affected by size of fragments. These factors may affect food supply or availability of habitats selected as nest sites.

Habitat structure and availability were measured on 18 forest fragments. Ovenbirds, Wood Thrushes, and Veerys consistently selected nest sites in forest interior (lacking in small fragments), whereas Red-eyed Vireos were most plastic in nest-site selection, with different habitat features selected in large vs. small fragments. Vireos, grosbeaks, and Wood Thrushes selected nest sites with high density and percent cover of saplings for nesting, vireos preferring deciduous cover and Wood Thrushes using more coniferous elements than the others. These habitat features were similarly abundant in small and large forest fragments. Litter depth was important to nesting Ovenbirds, whereas denser herbaceous cover was critical for ground-nesting Veery, the former of which was significantly scarcer in small fragments.

In 1997, insect abundance and biomass was measured in mid-May to mid-August on 9-16 fragments. Food abundance in small woodlots was not limited for aerial, bark, or foliage insectivores; however, biomass of ground insects was significantly lower in small woodlots, and at edges compared to interiors. Microclimate associated with fragmentation (reduced soil moisture, high wind, increased soil temperature) may affect microhabitat for ground invertebrates through dessication. As small woodlots contain proportionately more edge habitat, these may not have microclimate suitable to support high biomass of ground insects. Lower food biomass may reduce

suitability of small fragments for ground-foraging Ovenbird, Wood Thrush, and Veery, and may explain reduction in pairing success (found in Ovenbirds), smaller clutch sizes, or declines in fledged young.

No habitat features reduced incidence of nest predation. Although this may be important in nest-site selection, high predation levels in small woodlots may negate ability of birds to select nest sites possessing habitat features that reduce the incidence of predation. Species which do not select large woodlots (e.g. Rose-breasted Grosbeak, Red-eyed Vireo) may be particularly vulnerable to population declines where breeding in small fragments in which success is poor.

Less successful breeding with decreasing woodlot area was most critical for birds requiring interior nesting sites and those that forage on the forest floor. Although habitat modification may encourage forest birds to nest in small fragments, high predation rates will keep those populations below replacement levels. As only 1% of forest fragments locally available were large enough to function as source habitats, their loss or continued fragmentation could have huge negative repercussions on local songbird populations. I strongly recommend preservation of forest tracts over 225 ha in size, particularly woodlots with >90ha in core area, to function as sources and guard against population declines on a local scale.

I am very grateful for funding received from the Society of Canadian Ornithologists in support of my research. Thanks also to Mountain Equipment Co-op, Science Horizons, Ivey Fund, and NSERC.

North American Banding Council

by Brenda C. Dale, Canadian Wildlife Service, 200 - 4999 98th Ave., Edmonton, AB T6B 2X3

I served as a Society of Canadian Ornithologists (S.C.O.) representative to the North American Banding Council (N.A.B.C.) for the past two years. The following summarizes the background, formation and activities of N.A.B.C. to date.

1. The Canadian Wildlife Service banding office in 1993 initiated a project to improve bander training in Canada. The approach was to provide better and more consistent training materials to all prospective banders and to improve testing methods. The initial step was to produce a Study Guide and a Banding Instructor's Guide (through contract to Long Point Bird Observatory). The initial manuals concentrated mainly on passerine banding.

2. The Institute for Bird Populations arranged a Banders' Forum at Mill Valley, Cal., in March 1995 to investigate needs and means for more formalized bander training and evaluation in North America. Attendees were mostly passerine banders, but some other banders attended (of hummingbirds, raptors). Lucie Métras of C.W.S. banding office, Jon McCracken of L.P.B.O. and I were Canadian representatives. John Tautin of the U.S. banding lab also attended. Banding authorities of both nations indicated that issuing new permits would be less complicated if applicants had taken a recognized course, achieved a certain level of competence, and been tested by a certified trainer.

We reviewed training/evaluation protocols used in Britain, Germany, Poland, and Australia, and agreed we could not, in our large countries, administer programs like Britain's or Germany's. Three levels of certification are needed: Assistant, Permittee (both

Sub- and Master-), and Trainer. The Assistant category is to accommodate people who want to help on banding projects but have no desire to operate independently. Assistant certification provides recognition of their skills and serves as a reference if they move to new projects or locations.

There was much discussion about how certification could be achieved (short course, formal apprenticeship with units of learning to be completed, combination of the two, etc.). Consensus was that - methods for obtaining training must remain flexible enough to accommodate people who are geographically isolated; methods of training must be accessible and affordable; AND certified training cannot be a rapid rubber-stamp process. It was recognized that banders with focused goals (e.g. graduate students) or a relatively limited group of birds to work on might take less time to achieve appropriate skill levels.

We prepared a preliminary list of skills/evaluation techniques and suggested formation of a banding council to include the main banding and ornithological societies and to represent a cross-section of geographical locations and banding specialties.

3. The first meeting of the North American Banding Council was 15-16 April 1996 at Laurel, Maryland. Jon McCracken, Lucie Métras and I attended. Most banding specialties - passerine, raptors, waterfowl (3 of 4 flyways), colonial waterbirds and hummingbirds - were represented. Members of all specialized banding groups agreed on the need to upgrade and standardize training levels and criteria for permits.

The mission of the N.A.B.C. is to promote sound and ethical bird-banding principles and techniques in North America. The goal of the Council is to increase skill levels of banders by preparing and disseminating standardized training and study materials and establishing standards of competence and ethics for banders and trainers. The first portion of the goal was achieved through slight modifications to the Canadian Wildlife Service Study Guide (McCracken et al. 1997) and Instructor's Guide (Shepherd et al. 1997) to accomodate U.S. regulations and species-group exceptions to the general principles. Appendices (for both manuals) are, or will be, developed for species-groups and made available for use with the main guide.

The second meeting of N.A.B.C. took place at Museum of the Desert, Tucson, Arizona, 20-23 March 1997. N.A.B.C. now has 18 voting members including one each from:

American Ornithologists' Union
Association of Field Ornithologists
Cooper Ornithological Society
Colonial Waterbird Society
Eastern Bird Banding Association
Inland Bird Banding Association
Ontario Bird Banding Association
Society of Canadian Ornithologists
Pacific Seabird Group
Raptor Research Foundation
Western Bird Banding Association
Wilson Ornithological Society
National Waterfowl Council (1 each U.S. and Canada)
Western Hemispheric Shorebird Reserve Network;

plus three members at large (to balance avian groups). One representative each of U.S. and Canadian Banding offices will attend ex officio. The S.C.O. and National Waterfowl Council positions guarantee two Canadians on the Council, roughly proportional to our numbers in the North American banding community.

A draft evaluation protocol for the written portion of exams was approved, and the practical portion of evaluation will be finalized by committee. The practical portion will take some time to complete, because relevant and reasonable minimum standards and mandatory elements must be set for various taxonomic groups and for three levels (assistant, permittee and trainer).

Reports and updates were received from the manual review committee and the taxonomic group appendix committees. The goal was to have trainers, study guide, passerine, hummingbird and raptor manuals ready by 1 Jan. 1998. The U.S. banding lab will place completed manuals on the WEB and the Canadian Wildlife Service will print and distribute hard copies.

The Council nominated a small provisional group of Trainers, known for prior experience in training others. Nominations were accepted only where a second Council member attested to their competency as banders and trainers. This was done to cover off geographic areas and taxonomic expertise. Each of these nominated Trainers will be given a set of manuals (once completed) and asked to accept the principles of N.A.B.C. before receiving certification. These initial Trainers will evaluate Assistant and Permit level candidates who have utilized N.A.B.C. training materials and garnered sufficient experience. The first formal certification of trainers will occur 1 January 2000, by which time there should be sufficient certified banders in the pool to draw on for wider certification as trainers.

4. The N.A.B.C. is pursuing incorporation, as it will be necessary to receive and disburse funds. Assistants/Banders/Trainers each will pay a fee before testing and receive a certificate if successful. A database of certified individuals will be maintained.

Once the initial manuals are finished, the focus will shift to completing taxonomic coverage by manuals, promoting use of these standard materials, certification of those participating in banding, encouraging cooperative efforts in use of banding in study and conservation of birds, and assessing the effectiveness of N.A.B.C. in achieving its mission.

The third meeting of N.A.B.C. will be 6 April 1998 in St. Louis, Missouri.

5. Canadian trainer nominees to date are all landbird banders, and we still need to nominate raptor-banding trainers from across the country and landbird trainers from B.C., Québec, and the Atlantic Provinces. Limiting numbers of initial trainers (Jon nominated 4 and I nominated 3) temporarily restricts access to certification. This allows time for the very important first step - utilization of standard training materials - to become widespread, and ensures that those certified in the first years are evaluated in a consistent manner. By limiting trainer nominations we ensure that all banders or assistants certified between 1998 and 1 January 2000 are tested by a limited number of individuals, thus enhancing standard skill and knowledge levels. This should provide a sound basis from which N.A.B.C. can grow. The goal is to improve knowledge and standards, not push everyone through a program in record time. The limitation of initial trainer numbers does not impede anyone receiving a permit, as certification is not (yet) mandatory in Canada. Obviously certification cannot, and will not, become mandatory until teaching and testing methods are well-established and generally available, so the process will evolve in phases. At some point, when training materials and evaluation are widely available, certification will come to precede obtaining a permit in all but the most exceptional of circumstances. None of this affects banders who already hold permits, but they too may welcome the new materials and might wish to be certified as banders and eventually as trainers.

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Call for Applications - *1999* S.C.O. Research Awards

Applications are invited for two Taverner Awards (up to $500 each) and one Baillie Award ($1,000) for 1999.

Taverner Awards are offered by the Society of Canadian Ornithologists to honour Percy A. Taverner and to further his accomplishments in increasing knowledge of Canadian birds through research, conservation and public education. The awards are aimed at people with limited or no access to major funding, regardless of professional status, who are undertaking ornithological work in Canada.

The James L. Baillie Student Research Award is open to any student conducting ornithological research at a Canadian university. It honours the memory of James L. Baillie and will support field research on Canadian birds. This award is funded by Long Point Bird Observatory from proceeds of the Baillie Birdathon, and is administered by the Society of Canadian Ornithologists.

A single application may be made for both awards, but only one award can be won by an applicant in a given year. Taverner Awards are given only once for the same project; Baillie Awards only once to the same person. Past winners of either award may apply for the other. Funds are not awarded for stipends.

Application procedures are the same as in the last two years (changed from earlier). All applicants must use a standard application form, which may be obtained by contacting the chair of the committee. Completed applications must reach the chair before 15 January 1999. Awards will be announced by 1 April 1999.

Chair of S.C.O. Awards Committee: TBA
[if not appointed when this issue goes to press, forward enquiries (by fax or e-mail, please) to S.C.O. President - see inside front cover for address, etc.]

Call for Nominations - DORIS HUESTIS SPEIRS AWARD

The Speirs Award is presented annually to an individual who has made outstanding contributions to Canadian ornithology. If you wish to nominate someone, please forward name & supporting details to:

Society of Canadian Ornithologists, Speirs Award,
c/o Dr. D.N. Nettleship, Canadian Wildlife Service, DOE, Queen Square, 45 Alderney Dr., Dartmouth, N.S. B2Y 2N6 (see inside back cover for phone, fax, and e-mail).

RECENT LITERATURE

Books to be reviewed in future issues of *Picoides*, not repeating those listed earlier, include:

- The Great Blue Heron. by Robert W. Butler. U.B.C. Press, Vancouver, 202 pp. $39.95. **Any offers?!**

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NEWS ITEMS AND ANNOUNCEMENTS

International Ornithological Congress (I.O.C.) News

The XXII I.O.C., to be in Durban, South Africa, 16-22 August 1998, was announced in Picoides (8(1), spring 1995) and elsewhere, and many already have plans to attend this first I.O.C. in Africa. Invitations now are circulating for the XXIII I.O.C. in 2002. Thus far I have seen formal proposals from Beijing, China, and from Jerusalem, Israel. At the Vienna I.O.C. in 1994 there was also talk of an invitation from India. It thus seems likely that the first I.O.C. of the new millenium will be the first-ever in Asia (excluding Australia and New Zealand). Better plan on having an extra-large research grant in 2002!

Editor

North American Seaduck Specialist Group

A seaduck specialist group for North America is being set up. Its goal will be to facilitate exchanges about seaducks among concerned researchers and managers. The group will be a North American counterpart to the Seaduck Specialist Group under Wetlands International. An official coordinator will be named at the meeting of the board of Wetlands International in Senegal November 1998. Meanwhile, Jean-Pierre L. Savard provides leadership, with Peter Hicklin coordinating east coast interests and Margaret Petersen west coast ones. Arctic concerns, for now, are split between east and west. If you want to join this group, please send the following information: name, title, association, country, address, phone, fax, e-mail, area(s) of interest; to

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from J.-P. L. Savard,
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EDITOR'S MUSINGS

Bird distribution/population patterns and conservation problems/needs in Canada vs. the United States

People who study individual species may focus on one aspect, but include the entire range - breeding, migration, wintering - in their perspective of the organism. People who look at wider scenes sometimes falsely assume that what applies in the U.S.A. does so equally in Canada, and vice versa. Some examples make clear how misleading such assumptions may be.

A. One misconception that emerged in early **Partners in Flight** (U.S.A.) documents related to the "west". The Rocky Mountains are an avifaunal divide as well as a watershed, but the main "spine" of the Rockies does not run north-south, but more nearly northwest-southeast. Roughly one-third of the U.S.A. lies west of the Continental Divide, compared to less than half that proportion in Canada. West of longitude 100°W involves mostly "western birds" (plus cosmopolitan species) in the States, but in Canada most forest and shrubland birds between 100° and 120°W are the species found across eastern Canada. Arising from this difference are two major contrasts between migratory bird systems of Canada and the U.S.A.

One contrast is that the bird faunas between longitudes 100° and 120°W comprise very different

sets of species in the two countries, western montane and shrubland species in the States vs. prairie and eastern forest species in Canada. A much smaller fraction of the Canadian avifauna from those longitudes migrates to or through Mexico than from American areas directly to the south. Conversely, relatively more of the Canadian birds migrate southeast and cross the Gulf of Mexico and the Caribbean Sea to South America.

The much smaller area, relatively and absolutely, of Canada west of the Rockies "divide" means that populations of most western bird species that extend into Canada are numerically much smaller than in the States and more restricted in total range, as well as fragmented into disjunct populations separated by inhospitable mountain terrain. Populations of western bird species in Canada may be more vulnerable to environmental insults than the same species in the U.S.A.

B. Also, rather few bird species have northern range-limits that coincide closely with the Canada-U.S. border. The few exceptions may result from the east-west barrier of the Great Lakes (especially Lake Erie) - barely passed by several species characteristic of the (more southern) Carolinean forest, and from eastern outliers of the Rockies that scatter all across Montana but of which the Cypress Hills are the only Canadian counterpart, with 3-4 bird species found nowhere else in Canada. Nevertheless, a surprisingly large proportion of species that breed commonly on both sides of the Canada/U.S. border reach range limits within 2-3° north or south of that arbitrary line.

Canadians tend to forget, if they knew, that Song Sparrows breed in Tennessee or Virginia at less than half the average density found in Ohio or Kentucky; that White-throated Sparrows breed locally if at all south of northern New England, Michigan, and Minnesota; and that both are lacking in the southern states, as are many other birds common near the border. Conversely, most Americans seem unaware that many birds of the eastern hardwood forest, of the prairie grasslands, and of the intermountain shrublands find their northern range limits where those habitats end, <300 km north of the Canada/U.S. border.

The persistent habit of drawing range-limits around the farthest-flung historical breeding records of a species, even after it has not been seen in an area for 50 years, also contributes to misconceptions about species' ranges. The recent appearance of breeding-bird atlases allows for more realistic delineation of the main or "active" breeding ranges of many species, and such sources should be used wherever possible. Relative-density maps derived from the Breeding Bird Survey also allow more realistic mapping of species' main ranges. The failure of maps in the *Birds of North America* pamphlets to make any use of existing density mapping is an unfortunate omission in what are otherwise convenient summaries of current information. In general, the correlation between human population density and information about bird distribution remains distressingly strong, because basic distributional data depend so much upon volunteer activity.

Editor

ACKNOWLEDGEMENTS

Thanks for all contributions. I was down with the flu, so I needed all the help I got.

IN THE NEXT ISSUE **(deadline for copy is 1 October 1998)**

The official "Call for Papers" for the 1998 Conference accompanies this (1998 spring) issue of Picoides. The fall issue will feature our conference in Vancouver, and an ongoing consideration of bird conservation initiatives.

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