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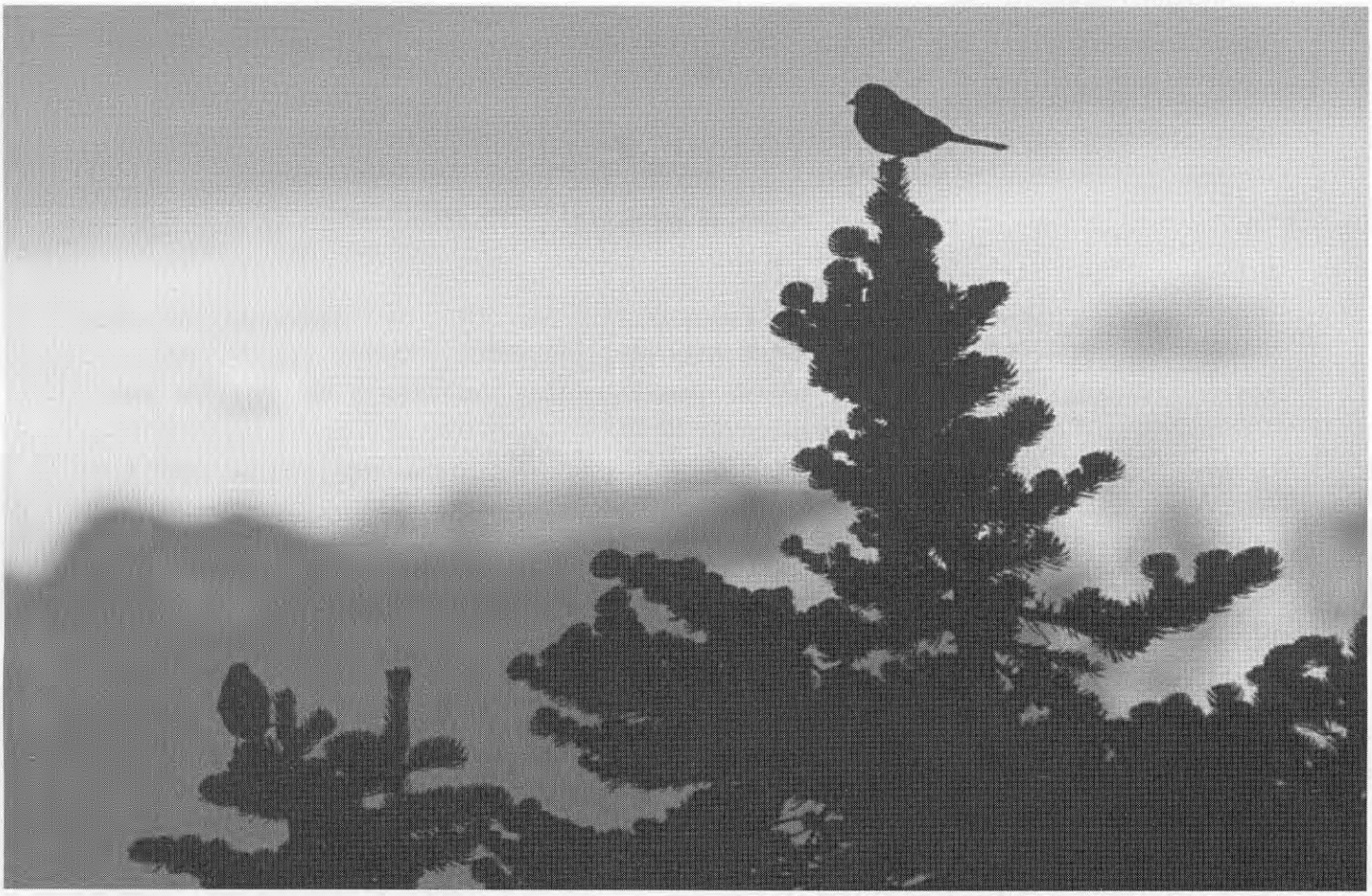

Dark-eyed Junco - Garibaldi Park, B.C., August 1998
(photo by Steve Ogle)
[Our first B.C. cover picture, to accompany reports on our first B.C. Conference - see pp. 2-23]

Society of Canadian Ornithologists
Société des Ornithologistes du Canada

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1999 SCIENTIFIC AND ANNUAL GENERAL MEETING "THE SCIENCE OF SAVING BIRD SPECIES" MCGILL UNIVERSITY, MONTREAL, QUÉBEC

The S.C.O. is delighted to announce that the 1999 meeting will be held at McGill University, Montréal, 4-6 August. The symposium focus of endangered species is expected to attract many excellent speakers and to provide the core of an S.C.O. publication. Organizers can provide opportunities for meetings of special interest groups before the S.C.O. meeting but need to be informed early.

Further details will be provided in the spring *Picoides* and *Ornithological Newsletter*. Meanwhile, mark these dates in your calendar and plan to be there.

For further information, please contact

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PRESIDENT'S MESSAGE

Those of you who were unable to make the Vancouver Meeting missed a fine series of talks, and also some excellent field trips and remarkable weather. I was lucky enough to find a place on the Gulf Islands trip that explored the seas around Mandarte Island and spent several hours ashore on Sidney Island, field site for the work described in Rob Butler's fine book *The Great Blue Heron.* This was a priceless opportunity to visit some field sites famous in Canadian ornithology as well as to see some remarkable birds that we easterners only read of. To see a tight pack of 50+ Rhinoceros Auklets diving almost in unison, and many scattered pairs of Marbled Murrelets, in the same day was a truly memorable experience. The two days of talks were rounded off by a fine banquet in an incredible setting overlooking Vancouver; the presentation of awards culminated in the revelation that Jamie Smith's trademark Scottish accent is really an affectation - he does know how to speak in a proper English accent!

The fun component of any meeting is important, but we also made some changes to the Society that move us forward. We agreed to join the Ornithological Council, which will host a Web site for us, and are looking for volunteers to set up that Web site. To help us launch a journal in the near future we increased membership fees, but took care to establish a student rate that will ensure there is no financial barrier to younger ornithologists joining the Society. We also have been very fortunate to secure the enthusiastic agreement of members in Québec, notably Gilles Seutin and Jean-Pierre Savard, to host next year's meeting in Montréal. We hope that the theme of Endangered Species, and the location, will attract not only sponsors and a high quality of papers, but an increased attendance by members.

In view of the increased importance of the Annual Meeting to the Society, your Council has established a Meetings Committee which will be chaired by the President and will include the organizers of the previous meeting and the next, to maintain continuity and ensure that hard lessons of meeting organization learnt by one set of organizers do not have to be re-learnt by the next.

I repeat my challenge to you all to recruit at least two new members by the end of the year. We all know active ornithologists who are not S.C.O. members but have a lot to contribute to the Society. To build on our increasing commitment to annual meetings, publications, and membership in the wider North American ornithological community, we MUST increase our membership and the revenues it brings - so please get out there and recruit!

17th ANNUAL MEETING and 3rd CONFERENCE of the SOCIETY OF CANADIAN ORNITHOLOGISTS

University of British Columbia, Vancouver, B.C.

1-4 August 1998

Scientific Program
K. Martin & D. Lank (Co-Chairs)

MONDAY, 3 AUGUST 1998 (H.R. MacMillan Bldg., rm.166)

SYMPOSIUM - NEW HORIZONS IN ORNITHOLOGY (chair: K. Martin)

0905-0945 Using stable isotope measurement in ornithological research: on the benefits of crossing discipline boundaries - K.A. Hobson
0945-1025 Physiological approaches to avian studies: opportunities and obstacles - T.D. Williams
[1025-1055 Coffee break]

1055-1135 Songbird population dynamics: adding space to time - J.N.M. Smith
1135-1215 Future landscapes in ornithological research - A.W. Diamond; response by F. Cooke
[1215-1330 Lunch break]

ORAL PAPER SESSION - Physiology and Migration (chair: R. Butler)

1330-1350 Using daily mass gain to compare quality of stopover sites for Magnolia Warblers - E. Dunn
1350-1410 Endogenous control of body mass in Western Sandpipers wintering in Panama - P.D. O'Hara & F.S. Delgado
1410-1430 Physiological and biochemical modulation for migration in Western Sandpipers; clues to behavioural strategy - C.G. Guglielmo, T.D. Williams and O. Egeler

POSTER SESSION (H.R. MacMillan Bldg., rm.160)

1430-1530 Posters (Authors present for discussion; see abstracts for titles & authors)
[and Coffee break]

ORAL PAPER SESSION - Forest Birds in Managed Landscapes (chair: J.-P. Savard)

1530-1550 Predation on cavity nests in the boreal mixedwood forest: effects of location in a harvested landscape - J.P. Pierre & C.A. Paszkowski
1550-1610 Landscape connectivity and its effect on the population processes of Spruce Grouse - S. Harrison

1610-1800 ANNUAL GENERAL BUSINESS MEETING

[1800- "Dispersal & foraging" (activities, not a session!)]

THURSDAY, 4 AUGUST

0900-1000 **THE DORIS HUESTIS SPEIRS AWARD**
- presentation by D.N. Nettleship (past-president, S.C.O.).
The 1998 Award was presented to **Dr. Ian McTaggart-Cowan,** Dean Emeritus (Graduate Studies) and Professor of Zoology (Retired) of University of British Columbia, for his outstanding contributions to Canadian ornithology. Dr. McTaggart-Cowan gave a short address following the presentation of the Award (see below - Speirs Lecture).

1000-1030 Posters
[and Coffee break]

ORAL PAPER SESSION - SEABIRD AND LANDBIRD CONSERVATION (chair: E. Nol)

1030-1050 The nest success and characteristics of 23 Marbled Murrelet nests located by radio telemetry - L.W. Lougheed [also given as a poster presentation]
1050-1110 Preliminary analysis of winter distribution of the Razorbill, *Alca torda,* and auk assemblages in the lower Bay of Fundy, New Brunswick - F. Huettmann, T. Diamond, K. MacIntosh, B. Dalzell, T. Lock, D. Nettleship
1110-1130 Prioritizing landbird species for conservation in the Georgia Basin - W. Easton & K. Moore
1130-1150 Are peatlands important in the southern Québec landscape? The point of view of birds - S. Calmé, A. Desrochers, J.-P.L. Savard
[1150-1330 Lunch break]

ORAL PAPER SESSION - REPRODUCTIVE BIOLOGY (chair: N. Mahoney)

1330-1350 Sources of intraclutch egg-size variation in the Common Tern - D.J. Moore and G.J. Robertson
1350-1410 Productivity and survival of Willets and Marbled Godwits - C.L. Gratto-Trevor
1410-1430 A test of the cowbird predation hypothesis for two frequently parasitized hosts at Delta Marsh, MB - C. McLaren & S.G. Sealy
1430-1450 The effects of long-term removal of Brown-headed Cowbirds on communities of breeding songbirds - K.L. DeGroot
1450-1510 Avian brood parasitism - A. Lindholm
[1510-1540 Coffee break]

ORAL PAPER SESSION - THE BIOLOGY OF WATERBIRDS (chair: A. Lindholm)

1540-1600 New horizons in ornithology: satellite tracking of Barrow's Goldeneye in eastern North America - M. Robert & J.-P.L. Savard
1600-1620 Long-term pair bonds in Harlequin Ducks - C. Smith, F. Cooke, G.J. Robertson, R.I. Goudie, W.S. Boyd
1620-1640 The effect of body condition and duckling survival on adult female crèche attendance in Common Eiders *(Somateria mollissima)* - K. Mawhinney & T. Diamond
1640-1700 Behaviorally dimorphic male Ruffs have extremely long, but monomorphic, sperm - D.B. Lank, B. Crawford, C. Croton

ABSTRACTS

Are peatlands important in the southern Québec landscape? The point of view of birds. *Calmé, Sophie, André Desrochers* (Cen. Rech. Biol. For., Univ. Laval, Ste-Foy, Qué. G1K 7P4) and *Jean-Pierre L. Savard* (Can. Wildl. Serv., Québec reg., Ste-Foy, Qué. G1V 4H5) (SC: aac872@agora.ulaval.ca)

Peatland bird assemblages in southern Québec are made of a unique blend of forest, agricultural and wetland species. But do peatland bird assemblages on a given location differ from those found in surrounding habitats? Do the birds view peatlands as discontinuities in the landscape or are peatlands "contaminated" by birds from the surroundings? To address these questions, we sampled during one breeding season 112 peatlands distributed along the St. Lawrence river. We then used the Atlas of Birds breeding in Québec and compared peatland bird assemblages to the species list of neighbouring 10x10 breeding bird atlas squares. Also, for a subsample of 23 peatlands, we characterized from satellite imagery the surrounding landscape for radius of 2 and 5 km. We then compared peatland birds occurrence according to the types and amounts of habitats surrounding the peatlands for both distances radius. Some bird species consistently preferred peatlands throughout the study area, but the presence of other species appeared to be more regional. The occurrence of Palm Warbler *(Dendroica palmarum),* a peatland specialist, depended strongly on the availability of peatlands, stressing the importance of conserving peatlands for the maintenance of this species' populations. Peatlands

enhanced both the local and regional bird diversity of southern Québec.

The effects of long-term removal of Brown-headed Cowbirds on communities of breeding songbirds. *De Groot, K.L.* (Univ. Brit. Col., Dep. Zool., 6270 University Blvd., Vancouver, B.C., V6T 1Z4; degroot@zoology.ubc.ca)

Removal of the brood-parasitic Brown-headed Cowbird *(Molothrus ater)* has been increasingly employed as a management tool to protect songbird populations. Cowbirds have been removed annually from the breeding grounds of the endangered Kirtland's Warbler *(Dendroica kirtlandii)* in the jack-pine forests of Northern Michigan since 1972. Long-term cowbird removal provides an experimental context to test the hypothesis that cowbirds alter the composition of songbird communities through intense nest parasitism of suitable host species. Cowbird pressure on host species may reduce abundance of suitable host populations, relative to the abundance of host species with which the cowbird does not interact strongly, e.g., species that have evolved egg ejection. In 1996 and 1997, I compared songbird abundance and species composition in Northern Michigan where cowbirds had been removed for 5-11 years, to carefully matched habitats where there had been no recent cowbird removal. As predicted, communities at cowbird removal sites had a higher percentage of suitable hosts in the community relative to control sites at least >5 km from cowbird traps. The proportion of suitable hosts present in control sites >10 km from cowbird traps did not increase significantly from sites at intermediate distance (>5 km) from cowbird traps. This occurred despite higher cowbird densities at the more distant control sites. However, cowbird numbers were low even on control sites >10 km from cowbird traps. Mean cowbird abundance detected during ten-minute point counts on these sites was 0.174 cowbird females and 0.583 males per count station. A greater shift in community composition may be more likely in areas that support higher cowbird densities.

Future landscapes in ornithological research. *Diamond, Antony W.* (Atl. Coop. Wildl. Ecol. Res. Netw. [ACWERN], Univ. New Bruns., P.O. Box 45111, Fredericton, N.B. E3B 6E1; diamond@unb.ca)

There is an exciting resurgence of bird research in Canada, in universities, government, and private organisations such as the Delta Waterfowl Foundation and the Institute for Waterfowl and Wetland Research. A characteristic of the current scene is the proliferation of partnerships between sectors which have traditionally been more clearly separate. The Wildlife Chairs established on the west and east coasts are recent and innovative examples of such partnerships. They are challenging traditional approaches by all the partners involved and have great potential to provide 'hybrid vigour' to the research community and to break down barriers which still hinder creative research. A common difficulty that will likely continue is to maintain long-term high-quality research on focal populations, places or problems, in the face of national changes in priorities; how can bird research capitalize on potential opportunities offered by internationally-driven issues such as global change and biodiversity conservation? Can we maintain credibility and integrity if we jump from one band-wagon to the next? I sketch some personal views on the directions that bird research is likely to take as traditionally separate agendas are increasingly challenged to focus on common objectives, as science responds to increasing public pressure to help solve problems of the planet.

Effects of timber harvesting on songbirds in British Columbia's high-elevation forests. *Dickinson, Thomas E., Ernest Leupin, and Nancy J. Flood* (Dept. Biol. Sci., Univ. Coll. Cariboo, Kamloops, B.C. V2C 5N3; (TD) tdickinson@cariboo.bc.ca) [POSTER PAPER]

Numerous studies have shown that harvesting activities can have dramatic effects on the diversity and abundance of songbirds in forested ecosystems. Yet it has often proven difficult to identify the particular feature of forest development (habitat loss, fragmentation, etc.) that has had the greatest impact. This paper presents results of a controlled experiment in which one factor (opening size) was systematically varied using four treatment (10 ha, 1 ha, 0.1 ha, and selection cutting) and control areas in a high-elevation forest near Sicamous B.C. When pre- and post-harvest inventories were compared, several significant differences were evident. Resident species (e.g. Red-breasted Nuthatches *Sitta canadensis*) and short-distance migrants (e.g. Golden-crowned Kinglets *Regulus satrapa*) were more strongly affected by harvesting activities than were other groups. Certain species were affected most in the forest immediately adjacent to experimental openings, whereas others were more uniformly affected across the entire 2000-ha experimental area.

Using daily mass gain to compare quality of stopover sites for Magnolia Warblers. *Dunn, Erica* (Can. Wildl. Serv., 100 Gamelin Blvd., Hull, PQ K1A 0H3; Erica.Dunn@ec.gc.ca)

Whether or not migrants gain mass at a stopover site is a direct measure of site quality. Previous studies have shown that mass gain of retrapped birds may not be representative, and regressing mass at first capture (corrected for body size) on hour of day generally gives higher estimates of mass gain. I used multiple regression to examine the effects on mass, of wing length, date in season, hour of day, and various interaction variables, for Magnolia Warblers *(Dendroica magnolia)* at 3 sites on Long Point, Ontario.

Results showed that a) using mass as the dependent variable is preferable to using size-corrected mass; b) mass gain varies with date in the season and among years; c) on average, mass gain at the 3 Long Point sites is sufficient for net gain over 24-hrs in fall, but only at 2 of 3 sites in spring. If we had similar information on many more stopover sites, we could learn the effects on site quality of habitat type, patch size and geographic location, all important for making decisions on conservation of habitat for migrants.

Prioritizing landbird species for conservation in the Georgia Basin. *Easton, Wendy E., and Kathleen Moore* (Can. Wildl. Serv., Delta, BC V4K 3N2; (WE) wendy.easton@ec.gc.ca)

We evaluated the seasonal status and habitats of landbird species within the Georgia Basin. To assess the vulnerability of each landbird species to declines in their populations, we considered their population trends, distributions, risks of habitat loss, and flexibility in their use of resources. Of the 145 native, regularly occurring landbird species in the Georgia Basin, most species have resident individuals (95), many are Neotropical migrants (34), and some are short-distance migrants (16). Of the 95 species with resident individuals, 42 of these species are usually migratory when they reside outside of the Georgia Basin. Habitats within the Georgia Basin support a high diversity of BC's landbird species during winter and migratory periods. Most species with a high concern use forested (riparian, mature coniferous, Garry Oak *Quercus garryana*) or field/ grassland habitats. Few patches of old coniferous forest (>140 years) remain in lowlands. Lowland agricultural/grassland habitats cover <3% of the Georgia Basin and are threatened by urbanization and the construction of greenhouses. Several species of high concern are vulnerable to human disturbance, parasitism from Brown-headed Cowbirds *(Molothrus ater)*, predation by edge and exotic species, loss of large habitat patches and snags.

Development of statistical methods and multimedia tools to aid in the comparison of oil samples. *El-Shaarawi, Abdel, Geoff Howell, Art Cook, Tom Pollock and Peter Hennigar* (Envir. Canada. 45 Alderney Dr., Dartmouth, N.S. B2Y 2N6 [POSTER PAPER]

The ocean off the east coast of Canada is, in a very real sense, the crossroads of the western North Atlantic. At all times of the year, there is heavy shipping traffic sharing the habitat of a large number (>40 million) of pelagic seabirds. The effects of even a small amount of oil being discharged from ocean-going vessels can be devastating to pelagic seabirds. Monitoring of beaches along the south coast of Newfoundland indicates that tens of thousands of seabirds, principally puffins, Razorbills and murres, are killed by oil discharges each year. In an effort to protect seabirds from chronic and acute discharges of oil, Canada has begun to enhance enforcement activities in the critical seabird habitat areas of the North Atlantic. An integral part of this effort is the development of visual exploration tools and statistical methods that can be used to compare samples from suspect vessels with samples recovered from the environment (i.e. oil slicks, beaches, and seabird carcasses). An interactive multimedia application has been developed which imports analytical results from the gas chromatograph and allows the user to interactively compare fragmetograms of selected samples. This application also reformats the data into a matrix form, suitable for use in a statistical package. A number of statistical methods were evaluated with the goal of developing suitable methods to group oil samples and to quantify the probability that individual samples are related to each other.

Productivity and survival of Willets and Marbled Godwits. *Gratto-Trevor, Cheri L.* (Can. Wildl. Serv., Env. Canada, 115 Perimeter Road, Saskatoon, SK S7N 0X4; cheri.gratto-trevor@ec.gc.ca)

Historic and ongoing habitat loss and environmental change have led to concern about population stability in many prairie breeding species, including shorebirds. Western Willets *(Catoptrophorus semipalmatus inornatus)* and Marbled Godwits *(Limosa fedoa)* are large sandpipers that have been very little studied on their prairie breeding grounds. I present preliminary estimates of productivity and survival for marked populations of Willets and Marbled Godwits from 1995 to 1998 in southern Alberta. Nest success varied from 44 to 81% between 1995 and 1997. Most nest failure was due to egg loss by avian or mammalian predators. Renesting is common only if nests are lost early in the breeding season. In 1996 and 1997, 63 to 85% of willets and godwits successfully hatched nests, and 47 to 64% of pairs with successful nests fledged at least one young. Therefore, 34 to 46% of pairs fledged at least one chick. Annual adult survival rates are upwards of 94% for godwits and at least 85% for willets. Known adult or fledgling mortality on the breeding grounds were from raptor kills or hitting powerlines.

Physiological and biochemical modulation for migration in Western Sandpipers: clues to behavioural strategy. *Guglielmo, Christopher G., Tony D. Williams and Oliver Egeler* (CWS/NSERC Wildl. Ecol. Chair, Dept. Biol. Sci., Simon Fraser Univ., Burnaby, BC V5A 1S6; cgugliel@sfu.ca)

At a tropical wintering site in Panama, only adult Western Sandpipers *(Calidris mauri)* undergo premigratory mass gain, molt into breeding plumage, and migrate north in

spring (O'Hara and Delgado, this meeting). We are studying the magnitude and sequence of changes in body composition, and muscle and liver biochemistry in these birds and those migrating through British Columbia. Before departure, adults in Panama become as heavy and fat as fully migratory birds passing through Canada several weeks later. Lean body components associated with both digestive capacity (e.g. gut, pancreas) and flight performance (e.g. pectoralis muscle and heart) are substantially larger (up to 50%) in full migrants, but do not hypertrophy during the premigratory mass gain, and do not differ from those of juveniles which do not migrate. Liver enzymes associated with fat deposition (fatty acid synthetase and Δ-9-desaturase) show the same pattern. These results indicate: 1) During premigratory fattening, adult sandpipers may not increase instantaneous feeding rate to levels experienced at migratory stop-overs, and instead may rely on behavioural mechanisms such as lowered activity or extended daily feeding time. 2) Wing loading increases without an apparent increase in muscular power output calling into question the importance of a trade-off between predation risk and fat storage (i.e. environmental variability). Alternatively, endurance flight training may be required for the hypertrophy of flight-related components and may act as a physiological constraint on the optimization of body composition.

Landscape connectivity and its effect on the population processes of Spruce Grouse. *Harrison, Scott* (Univ. Brit. Col., Cen. Appl. Cons. Biol., 852 Wellington Dr., North Vancouver, B.C. V7K 1K7; sharriso@unixg.ubc.ca)

We are studying how the level of habitat connectivity affects Spruce Grouse *(Falcipennis canadensis)* natality, mortality, juvenile dispersal, and adult movement rates. We also are investigating how hierarchies of scale affect these ecological processes and aspects of metapopulation theory. We intend to link the demographic and genetic parameters of population by tracking micro-satellites in the population of radio-tagged individuals. The study area encompasses 450 000 ha east of Prince George, British Columbia, in the sub-boreal spruce biogeoclimatic zone. The Bowron and Willow River valleys have been logged extensively in the past 30 years. The logging in some parts of the study area is a dispersed-cut with 100-300 ha clear-cuts that create a checkerboard pattern with 100 ha patches of unlogged forest. This landscape represents the "medium" connectivity treatment. In the other part of the study area, the landscape is an aggregate 55 000 ha clear-cut with 100 ha patches of forest remaining. This landscape represents the "low" connectivity treatment. Spruce Grouse are being radio-tagged, and population parameters are being measured in 8 study sites, each 100 ha.

Territory quality and reproductive performance of Black Oystercatchers in the Strait of Georgia, B.C. *Hazlitt, Stephanie L.* (Dept. Biol. Sci., Simon Fraser Univ., Burnaby, B.C. V5A 1S6; shazlitt@sfu.ca) [POSTER PAPER]

In the Strait of Georgia, Black Oystercatchers *(Haematopus bachmani)* are resident shorebirds, which defend discrete breeding territories in the rocky intertidal habitat. The objective of my study is to understand how the physical components of the habitat relate to reproductive performance of oystercatchers. As the bulk of chick provisioning is done within the territory, I expected food availability during the chick-rearing period to be the primary determinant of variation in oystercatcher fecundity. Six territory characteristics were chosen as measures of food availability, predation risk and intra-specific competition. Intertidal slope is a predictor of reproductive success (no. fledglings/no. eggs laid; $n=30$, $r^2=0.17$, $P=0.024$), with success being greater on territories with gradual slopes. Controlling for brood size, chicks grow more quickly on territories with gradual slopes ($n=22$, $r^2=0.32$, $P=0.014$). Variation in reproductive success is primarily determined by hatching success ($n=30$, $r^2=0.17$, $P=0.027$) rather than fledging success ($n=22$, $r^2=0.12$ $P=0.11$). This suggests that another mechanism acts in conjunction with food availability to determine that higher reproductive success occurs on gradual slopes. I speculate that intertidal slope may play a structural role such that gradual slopes facilitate increased vigilance by the non-incubating bird during the egg stage, and allow chicks to remain closer to foraging parents during the chick-rearing period.

Using stable isotope measurements in ornithological research: on the benefits of crossing discipline boundaries. *Hobson, Keith A.* (Can. Wildl. Serv., Envir. Canada, 115 Perimeter Rd, Saskatoon, SK, S7N 0X4; Keith.Hobson@ec.gc.ca)

The measurement of naturally occurring stable isotopes of various elements that are present in foodwebs provides a new means of tracing feeding source and trophic level of individuals. In ornithological applications, this approach has been used successfully to delineate feeding relationships among marine bird communities and to quantify relative protein inputs from terrestrial and marine sources to diets of several species. More recently, the analysis of deuterium content in feathers has been used to link breeding origins and wintering sites of neotropical migrant songbirds. Recent technological advances in mass spectrometry, in particular the advent of continuous-flow isotope ratio mass spectrometry (CFIRMS), have now made stable isotope analyses accessible to a wide range of researchers. Stable-isotope analyses in ornithological research will become routine, especially in those studies contemplating the role of

birds in ecosystems. Other applications will involve the tracing of endogenous vs. exogenous reserves to reproduction and the refinement of migration tracking through the use of several other stable isotopes. In this paper, I will provide an overview of the stable isotope technique and suggest new areas where developmental research is needed. As with all new technological advances, the challenge will be to apply the technology appropriately and to clarify those areas where further developmental research is needed. However, the development of this field over the last decade underlines some of the benefits of a multidisciplinary approach to solving ecological questions.

Seabird colony locations and environmental determination of seabird distribution: towards a seabird breeding model in the Canadian North Atlantic. *Huettmann, Falk and Tony Diamond* (Atl. Coop. Wildl. Ecol. Res. Netw., Univ. New Bruns. (UNB), P.O. Box 45111, Fredericton N.B., E3B 6E1; k9wk@unb.ca) [POSTER PAPER]

The breeding season constrains movements of breeding seabirds at sea to the feeding range of their colonies. Non-breeders potentially are dispersed at sea wherever they find food; nevertheless, most of them also are found close to colonies. The locations of most major Canadian seabird colonies are well-known and we hypothesize that this is the driving force for seabird distribution in summer in the Canadian North Atlantic. This paper investigates the relevance of seabird colony proximity for seabirds at sea, based on the PIROP (Programme Intégré de recherches sur les oiseaux pélagiques) data base. 21 Environmental data sets for the marine environment from a variety of sources, grouped into biological, oceanographical and geographical factors, are used in this study. A specific foraging range is drawn around these seabird colonies, and the environmental factors are characterized and analysed for their contribution to explaining the distribution of adults, juveniles and non-breeders. Logistic regression and CART (Classification and Regression Trees) are used to explore the influence of these factors on seabird distribution. The results also allow a modelling approach, which enables an evaluation of the quality and type of seabird colonies in relation to their marine environment, potential food sources and species composition, e.g. seabird richness and colony size.

Preliminary analysis of winter distribution of the Razorbill, *Alca torda,* and auk assemblages in the lower Bay of Fundy, New Brunswick. *Huettmann, Falk, Tony Diamond and Ken MacIntosh* (Atl. Coop. Wildl. Ecol. Res. Netw., Univ. New Bruns., P.O. Box 45111, Fredericton, N.B. E3B 6E1; FH: k9wk@unb.ca, 506 452 6033), *Brian Dalzell* (Grand Manan Bird Obs., P.O. Box 179, Castalia, Grand Manan, NB E0G 1LO), *Tony Lock* (Can. Wildl. Serv., Env. Canada, 45 Alderney Dr., Dartmouth, N.S. B3J 2S7), and *David Nettleship* (Bedford Inst. Oceanogr., Dartmouth, N.S., B2Y 4A2).

Wintering areas of Razorbills, *Alca torda,* in the Northwest Atlantic are poorly known (Chapdelaine 1997, Nettleship and Birkhead 1985). Small numbers breed at the mouth of the Bay of Fundy, perhaps a few hundred pairs at three discrete areas (Mawhinney and Sears 1996, Kress and Wheelwright pers. com.). Beginning in early winter, many Razorbills begin to appear off Grand Manan, certainly many more than can be accounted for by local breeders. Casual observations in 1992-97 indicated as many as 25,000 may be found, with 2500-5000 individuals being an average number present between December and February. We conducted standardized surveys for seabirds on 26 days between November 1997 and March 1998 on which we counted up to 53,000 auks off Grand Manan; extrapolated numbers based on identified auk observations suggest that ca. 52,000 Razorbills may have been encountered during a transect 23 January (ca.74% of the North American population); this number dropped 8 days later to 64 identified Razorbills, suggesting strong movement patterns of auks in the Gulf of Maine. Other auks and seabirds were found showing distinct patterns of occurrence, but absolute numbers fluctuated. Counting results for auks, their distribution and possible explanations are presented. A distinct core zone of auk distribution was found around the Old Proprietor Shoals.

Behaviorally dimorphic male Ruffs have extremely long, but monomorphic, sperm. *Lank, David B., Bryan Crawford and Christina Croton* (Behav. Ecol. Res. Group, Dep. Biol. Sci., Simon Fraser Univ., Burnaby, B.C. V5A 1S6; DL: dlank@sfu.ca)

Sperm tails are longer in passerine bird species with higher rates of mixed paternity, suggesting that sperm morphology adapts to rates of sperm competition (Briskie et al. 1997, Evolution 51: 937-945). To test whether a similar relationship might exist in other taxa, we measured sperm size in Ruffs, *Philomachus pugnax,* and compared it with existing measurements from other shorebirds. Mixed paternity rates are higher in Ruffs than in any other shorebird, with over half of female clutches containing eggs fathered by more than one male. We obtained sperm samples from 9 male Ruffs that mated with a stuffed dummy female. Ruffs have the longest sperm known for shorebirds, averaging ca.130µ, compared with values of ca.45µ for socially monogamous Semipalmated Sandpipers, *Calidris pusilla,* and values of ca.100µ for polyandrous phalaropes and jacanas (Johnson & Briskie, unpubl.). Although male Ruffs come in two genetic morphs, with slightly different copulation strategies, all sperm look alike, perhaps because they compete to occupy sperm storage tubules in females.

Oiled seabirds on the east coast of Canada. *Lock, Tony, Peter Wells, Art Cook, Peter Hennigar, Geoff Howell, Doug Bliss, Dave Wilson* (Envir. Canada, 45 Alderney Dr., Dartmouth, N.S. B2Y 2N6), *Jim Osbourne* (Envir. Canada, Place Vincent Massey, Ottawa, Ont. K1A 0H3), *Terry Harvey* (DFO, St. John's, Nfld) [POSTER PAPER]

The seabirds of the continental shelf of eastern Canada are not just a national resource, they are in fact the patrimony of many nations in both hemispheres, and Canada has responsibility for them while they occupy Canadian waters. Bird numbers are often highest far offshore, out towards the edge of the continental shelf where there is enhanced productivity due to upwelling. Oil discharged in this area, far from shore, can cause major seabird mortalities. Canada is concerned that the discharge of oil and oil products in this very sensitive area could affect the long-term viability of some seabird populations. Addressing this issue requires the development of improved hazard assessment techniques, enhanced capacity to determine the minimum lethal dose of oil for seabirds, and better estimates of bird mortality at sea. In an effort to control the incidence of seabird oiling, the Government of Canada is increasing its airborne and satellite surveillance over the Grand Banks area. Where appropriate, Canada will take action to charge the vessels concerned or to forward evidence to the flag state of the vessel concerned in order to protect the seabird populations of the area. This increased surveillance and enforcement will continue as long as necessary to ensure compliance with MARPOL discharge requirements and reduce or eliminate the incidences of oiled birds in the area.

Ecological and physiological data used to study the breeding chronology of the Marbled Murrelet. *Lougheed, Cecilia, Brett A. Vanderkist and Lynn W. Lougheed* (CWS/NSERC Wildl. Ecol. Chair, Dept. Biol. Sci., Simon Fraser Univ., Burnaby, B.C. V5A 1S6; cloughee@sfu.ca) [POSTER PAPER]

Unlike other members of the alcid family that are colonial nesters, the Marbled Murrelet *(Brachyramphus marmoratus)* nests solitarily in the old-growth forest. The solitary and elusive habits of the species have made it difficult to study certain basic characteristics of its life history, such as timing of breeding. The purpose of this paper is to study the timing of breeding and construct a breeding chronology chart for the Marbled Murrelet by integrating data collected in various aspects of the breeding biology of this species at one geographical location, Desolation Sound, British Columbia. We integrate data collected at sea during surveys, physiological data from blood samples of captured birds and behaviour of individually marked birds. Data from at sea surveys capture part of the breeding season by using presence of adults holding fish and appearance of HY birds on the water. Using plasma samples from captured birds and measuring the amount of vitellogenin zinc, a direct measurement of a yolk precursor vitellogenin (VTG), we determined dates for egg-producing females. Finally, radio-tagged birds provided information on incubation and hatching dates. This is the first joint effort to understand the breeding chronology of the Marbled Murrelet.

The nest success and characteristics of 23 Marbled Murrelet nests located by radio telemetry. *Lougheed, Lynn W.* (SFU/NSERC Wild. Ecol. Chair, Dept. Biol. Sci., Simon Fraser Univ., Burnaby, B.C. V5A 1S6; lloughea@sfu.ca) [ORAL AND POSTER PAPERS]

During early May, 1998, 40 Marbled Murrelets *(Brachyramphus marmoratus)* were captured by dip-netting in Desolation Sound, British Columbia, and marked with 1.7g radio transmitters. Of these 40 birds, 24 were tracked to 23 inland nesting locations (both adults had radios at one nest). The general locations of nests included the Powell-Daniels drainage, the Bunster Range, E. Redonda Island, and Toba Inlet. One radio was tracked to the nest of a Bald Eagle *(Haliaeetus leucocephalus)*. There are 15 birds with radios that have not yet been linked to nest-sites. These birds were either consistently on the water and were not obviously breeding, or their status is unknown. The nests were all located within old-growth stands, but these stands were quite variable in tree species composition and topography. All nests that were tracked on the ground were located in trees.

Scale-dependent selectivity for cover at Marbled Murrelet nest-sites. *Manley, Irene A.* (Wildl. Ecol. Chair, Dep. Biol. Sci., Simon Fraser Univ., 8888 University Dr., Burnaby, B.C. V5A 1S6; iamanley@sfu.ca) [POSTER PAPER]

I investigated the nesting ecology of Marbled Murrelets *(Brachyramphus marmoratus)* in high-elevation coastal forests on the Sunshine Coast of southwestern British Columbia. Marbled Murrelets are a threatened species that nests in old-growth forests and has low nesting success largely due to predation. I examined nest-site selectivity at nest-patch, nest-tree and nest-site scales at 52 nests to determine how scale influences selectivity for cover. Murrelet nest-patches (0.2 ha) did not differ in total canopy cover or tree density from randomly selected non-use patches. However, nest-trees were associated with canopy gaps used by murrelets to access the nest-site. These nest-access gaps were significantly larger ($158m^2$ vs. $69m^2$) than other gaps available in nest-patches. Nest-patches and nest-trees had more potential nest-platforms (limbs >15cm in diameter) than non-use sites. Murrelets selected nest-sites on large mossy branches with high vertical cover. Successful nest sites were located significantly farther from forest edges

(254m vs. 79m) and closer to the tree-bole (9cm vs. 34cm) than predated nests. Cover at the nest-site and in the nest-patch did not differ between successful and predated nests. I suggest that cover was avoided at the nest-tree level because murrelets require canopy gaps adjacent to nest-trees in order to approach nests from below nest height and land at nests using a stall flight. The lack of selectivity for openings at the patch level suggests that selection for gaps at the tree level does not outweigh the need for cover at other scales. Cover at the landscape level, measured by distance to edge, has more influence on nesting success than cover measurements at smaller scales.

The effect of body condition and duckling survival on adult female crèche attendance in Common Eiders *(Somateria mollissima)* *Mawhinney, K. and A.W. Diamond* (Atl. Coop. Wildl. Ecol. Res. Netw., Univ. New Bruns., Fredericton, N.B., E3B 6E1; n9bi@unb.ca)

The formation of crèches (groups containing any number of adult female[s] and duckling[s], two or more of which are parentally unrelated) is a conspicuous feature of eider biology. In 1997, 132 adult females breeding on Green Island in Maine were nasal-tagged. Following hatch, more than 70 nasal-tagged females were observed to have abandoned their ducklings to another female; lost their ducklings as a result of gull depredation; become the primary adult of a crèche, or an "auntie" assisting the primary adult of a crèche. In addition, the clutches of 10 nasal-tagged females 20-25 days into incubation were switched with clutches of 10 nasal-tagged females 15-20 days into incubation to produce a sample of 10 females hatching 5 days earlier than expected and therefore in good condition at hatch and a sample of 10 females hatching 5 days later than expected and therefore in poor condition at hatch. More than 185 ducklings fledged in the immediate vicinity of the breeding colony, and large crèches of up to 75 ducklings and 12-25 tenders were observed consistently. The body condition of adult females at hatch will be compared among all nasal-tagged females observed to have abandoned or tended a crèche. Several authors have suggested that the body condition of ducks is a determining factor in parental care and that females in poor condition more readily abandon their young. Although abandonment leads to a lower survival rate of the female's own young, it may benefit lifetime reproduction by increasing the likelihood of the females' own survival.

A test of the cowbird predation hypothesis for two frequently parasitized hosts at Delta Marsh, MB. *McLaren, C.M. and S.G. Sealy* (Dept. Zool., Univ. Man., Winnipeg, MB R3T 2N2;
(CMM) ummcla00@cc.UManitoba.ca)

The cowbird predation hypothesis (Arcese et al., Proc. Nati. Acad. Sci. USA 93: 4608-4611, 1996) has been suggested to explain the frequently observed link between nest predation and interspecific brood parasitism in many passerine birds. Brown-headed Cowbirds *(Molothrus ater)* may exert an impact on the demography of host populations if nests discovered too late in the hosts' nesting cycle for successful parasitism are depredated to create future opportunities for parasitism, by causing hosts to renest. Evidence in support of this hypothesis is limited to two populations of a single host species, the Song Sparrow *(Melospiza melodia)*. We evaluated this hypothesis for two frequently parasitized hosts that nest in the Delta Marsh region of southern Manitoba, the Song Sparrow and the Yellow Warbler *(Dendroica petechia)*. The main prediction of the hypothesis, that parasitized nests fail less often than unparasitized nests, was not supported for either host.

Sources of intraclutch egg-size variation in the Common Tern. *Moore, David J.* (Dept. Biol. Sci., Simon Fraser Univ., Burnaby, BC V5A 1S6; mooren@sfu.ca) and *Gregory J. Robertson* (Can. Wildl. Serv., 6 Bruce St., Mount Pearl, NF A1N 4T3).

In species that exhibit brood reduction, last-laid eggs are assumed to be relatively small to facilitate brood reduction. Alternatively, egg-size variation within a clutch may be a function of the ambient conditions during the period eggs are formed or a function of the condition of the female. We examined the pattern of intraclutch egg-size variation (ICESV) in Common Terns breeding near Hamilton ON over 5 years (1992, 94-97). There was a significant difference in the size of eggs laid in the 5 years; in 1992 relatively large eggs were laid, whereas in 1994 eggs were relatively small. Furthermore, the pattern of ICESV was different across years; in 1992, the second-laid egg, as opposed to the first-laid egg, was largest. In 1994, the last-laid egg was disproportionately smaller then the rest of the clutch compared to other years. The period prior to egg-laying was the warmest, calmest and driest in 1992, conditions were moderate in 1994, while the other years were colder, windier and wetter. Within years, weather conditions during the period of clutch formation were related to the size of the eggs laid: larger eggs were laid when the weather was warmer and calmer/drier. Therefore, environmental conditions during egg formation are related to egg size. Environmental conditions during egg-laying may affect egg size by (1) directly affecting a female's metabolic costs, (2) affecting foraging conditions and therefore female body condition and/or the availability of resources for egg formation, and (3) by serving as a predictor of conditions during chick-rearing, information which females use to optimize the size of the eggs they lay. Our data suggest that all three mechanisms may be influencing egg size variation.

Endogeneous control of body mass in Western Sandpipers wintering in Panama. *O'Hara, Patrick D. and F.S. Delgado* (Wildl. Ecol. Chair, Dept. Biol. Sci., Simon Fraser Univ., Burnaby, B.C. V5A 1S6; (PDO'H) pdohara@sfu.ca)

Results from several studies on captive individuals and in the field support the hypothesis that body mass is endogenously controlled in wintering birds. Western Sandpipers wintering in Panama also appear to regulate their body mass. Population data from two winters at two sites in Panama show little difference in mean population mass and little difference in date of premigratory mass gain onset. Furthermore, before premigratory mass gain begins, adults and first-year birds do not differ in mean mass, which would not be expected if bird foraging was affected by availability of prey. During premigratory mass gain, adults gain weight quickly and at similar rates between years; whereas, first-year birds remain relatively the same. Onset of contour feather moult into breeding plumage in adults begins at about the same time as premigratory mass gain. Repeat sampling of individual birds supports the above patterns. These results support the idea that birds maintain an optimal body mass, and they may be regulating their weights as a reaction to a trade-off between environmental variability and risk of predation.

Predation on cavity-nests in the boreal mixedwood forest: effects of location in a harvested landscape. *Pierre, Johanna P. and Cynthia A. Paszkowski* (Dep. Biol. Sci., Univ. Alta, Edmonton, Alta. T6G 2E9; (JPP) jpierre@gpu.srv.ualberta.ca)

Habitat loss has been recognised as the greatest threat to waterfowl in North America. The boreal forest of western Canada is an important breeding and summering area for waterfowl, and was relatively undisturbed until forest harvesting began in the 1990s. Forestry reduces the number of nest sites available to cavity-nesting waterfowl. Harvesting is also expected to change the distribution and abundance of nest predators, possibly increasing predation rates and impacting populations significantly. We placed 4 artificial cavity nests with eggs in each of 5 low-residual clearcuts, 5 buffer strips and 30 uncut forest areas around boreal lakes in Alberta, in June-July 1997, to document relative predation levels. A nest was 'depredated' if an egg was punctured or removed. Mean predation in buffer strips was 8.3% (± 4.8, SE), compared to 21.2% (± 2.8) in comparable contiguous forest. Predation in clearcuts was 37.5% (± 12.0), compared to 12.2% (± 1.3) in comparable contiguous forest. The difference in nest predation between clearcuts and other treatments was significant. Our results suggest that the risk of predation for cavity-nesting waterfowl is dependent on where a nest is located in a harvested landscape.

New horizons in ornithology: satellite tracking of Barrow's Goldeneye in eastern North America. *Robert, Michel, Jean-Pierre L. Savard* (Can. Wildl. Serv., 1141 Rte de l'église, P.O. Box 10100, Ste-Foy (Québec) G1V 4H5; (MR) michel.robert@ec.gc.ca) and *Guy Fitzgérald* (UQROP, P.O. Box 246, St-Hyacinthe (Québec) J2S 7B6)

Satellite tracking is revolutionizing our understanding of waterfowl ecology. For the first time, breeding, molting and wintering areas can be linked together, allowing comprehensive management of a species. In February and March 1998, seven Barrow's Goldeneye *(Bucephala islandica)* drakes were captured in the St. Lawrence estuary and implanted with radio satellites; three in Baie-des-Rochers and four near Franklin, about 170 km and 375 km downstream from Québec City, respectively. Results indicated important (up to 120 km) local movements on wintering areas and confirmed the clumped distribution of Barrow's Goldeneyes in the St. Lawrence estuary. Two birds started their movements towards breeding areas in the last week of April and two others in the first week of May. Birds remained on the breeding areas until at least the first week of June. They were dispersed on small high-elevation lakes located 60 to 200 km inland, from Tadoussac to east of Sept-Iles. From there birds will be tracked to their molting areas. The information provided by satellite tracking should prove crucial in the elaboration of a recovery plan for this population, estimated at 2,000 - 4,000 birds.

Long-term pair bonds in Harlequin Ducks. *Smith, Cyndi* (Parks Canada, Banff Nat. Park, Banff, AB T0L 0C0, and CWS/NSERC Res. Chair Wildl. Ecol., Dep. Biol. Sci., Simon Fraser Univ., Burnaby, BC V5A 1S6; cms@sfu.ca), *Fred Cooke* (CWS/NSERC Res. Chair Wildl. Ecol., Dep. Biol. Sci., Simon Fraser Univ., Burnaby, BC V5A 1S6), *Gregory J. Robertson* (Can. Wildl. Serv., 6 Bruce St., Mount Pearl, St. John's, Nfld. A1N 4T3), *R. Ian Goudie* (17 Waterfordbridge Rd., St. John's, Nfld. A1E 1C5), and *W. Sean Boyd* (Can. Wildl. Serv., RR 1, 5421 Robertson Rd., Delta, BC V4K 3N2)

Of 29 pairs of Harlequin Ducks *(Histrionicus histrionicus)* banded and resighted on the moulting and wintering area at White Rock, BC, in 1994-98, 23 pairs (79%) re-united the following year. From 1995 to 1997 nine of 15 pairs (60%) of Harlequin Ducks banded and resighted on breeding streams in Banff National Park, AB, re-united the next year on the breeding stream. Seven of these 15 pairs observed on the breeding stream have been observed re-united at the moulting or wintering area also. Pairs may re-unite even if the female was unsuccessful during the breeding season. In all pairs that exhibited mate change, the original mate has not been resighted. Males that do not relocate their previous mate at the usual wintering area may leave either to look for

her elsewhere or to look for a new mate elsewhere. If a male is unsuccessful in finding a mate at the wintering area he appears to return to the last breeding area, perhaps looking for his previous mate or looking for a new mate. Our observations suggest that if both members of a pair are alive they re-unite at the wintering area and return to the breeding stream together, and that this is the rule rather than the exception.

Songbird population dynamics: adding space to time. *Smith, Jamie* (Dept. Zool. & Cen. Biodiversity Res., Univ. B.C., 6270 University Blvd., Vancouver, B.C. V6R 1Z4; smith@zoology.ubc.ca)

Avian population ecology has been dominated by long-term studies of single populations of well-studied species, like the Great Tit in Europe and the Florida Scrub Jay in North America. The results of such studies can not be generalized to other populations with confidence, particularly when they are conducted in true or habitat islands. Although recent analyses of data from the Breeding Bird Survey (BBS) have provided continental and regional population trends for many species, BBS data provide a very coarse demographic picture, and coverage of BBS routes is poor in much of Canada. Thus, there is a need for studies at intermediate to large spatial scales that include more demographic detail than provided by schemes like the BBS, and that retain a strong temporal component. Meta-analyses of existing data offer one possible approach. Because many avian populations are regulated at large spatial scales, a second and perhaps more fruitful approach is to undertake parallel studies of the same species in different places using common methods. I illustrate the potential of these ideas using demographic data on the Song Sparrow. Granting agencies in Canada have collaborative grants that could support such work, and that have yet to be used to full advantage by Canadian ornithologists.

Physiological indicators of reproductive status in wild populations of Marbled Murrelets and Cassin's Auklets. *Vanderkist, Brett. A. and Tony D. Williams* (CWS-SFU Wildl. Ecol. Chair, Dept. Biol. Sci., Simon Fraser Univ., Burnaby, B.C. V5A 1S6; (BAV) vanderki@sfu.ca) [POSTER PAPER]

Long-term demographic data such as adult survival, chick production, and chick survival for the Marbled Murrelet *(Brachyramphus marmoratus)* are as elusive as the nesting habits of this species. Because direct monitoring of large numbers of nests is difficult and usually very expensive, we attempted to obtain demographic information indirectly by using physiological indicators of egg-production. We captured large numbers of Marbled Murrelets by mist-netting and dip-netting at two locations (Desolation Sound/Theodosia Inlet and Mussel Inlet) and obtained blood and plasma samples in 1996 and 1997 for analysis. Two yolk precursors, vitellogenin (VTG) and very low density lipoprotein (VLDL) are dramatically elevated during egg production, and we wished to use them to detect fecund females from our samples of wild birds whose reproductive status was unknown. We used vitellogenic zinc and total triglyceride as our measures of VTG and VLDL, respectively. Blood and plasma samples were also obtained from Cassin's Auklets *(Ptychoramphus aleuticus)* on Triangle Island for comparative analysis. All birds were sexed from red blood cells using a molecular technique. In both species, VTG was superior to VLDL in detecting fecund females. The proportion of egg-producing Marbled Murrelets was high in May and June, but decreased to 0 during the first half of July.

Physiological approaches to avian studies: opportunities and obstacles. *Williams, Tony D.* (Dept. Biol. Sci. and NSERC/CWS Chair Wildl. Ecol., Simon Fraser Univ., Burnaby, BC, V5A 1S6; tdwillia@sfu.ca)

In many areas of avian biology, theoretical ideas, frequently ingrained in the literature in the form of "conventional wisdom", extend way beyond relevant empirical data and, in particular, a sound understanding of the mechanisms (i.e. physiology) underlying such ideas. The negative effect of this is that it can lead to research being directed by theories and hypotheses which appear to be mechanistically impossible or, at least, very, very improbable. On the positive side, this has created immense *opportunities* for research aimed at understanding the mechanistic basis of, for example, many - if not all - life history traits and transitions (sensu Stearns 1992). Further understanding of mechanistic or functional aspects will have two other benefits: a) it will allow development of physiologically appropriate or relevant techniques for field manipulations, and b) it will allow robust and appropriate interpretation of data obtained using increasingly widely available, easy-to-use, and in vogue analytical techniques. Currently, these techniques sometimes appear to present *obstacles* rather than aids to rapid progress in understanding certain aspects of avian biology. I will demonstrate these points further with examples from my own research, focusing on variation in female reproductive effort.

REPORTS FROM 1998 ANNUAL MEETING/RAPPORTS DE LA RÉUNION ANNUELLE DE 1998

PRESIDENT'S REPORT/RAPPORT DU PRÉSIDENT: State of the Society

(Report as given at the AGM in Vancouver [slightly edited]; after discussion in Council and among members, it was agreed to leave amounts of Research Awards as they were; the remaining objectives were generally endorsed.)

The Society has a small but stable membership, modest but healthy finances, distributes a range of awards, and publishes two professionally produced bulletins a year *(Picoides).* It is holding its third annual scientific meeting, completing a classically Canadian passage from east coast to west coast via "central" Canada. What next?

I believe we face several exciting and inter-connected challenges, and that we can and should face them with great confidence. Many members feel the Society should do more than it does; your Officers and Councillors agree, and have articulated several specific objectives:

1. Increase the amounts of the Research Awards, which bring welcome prestige but at $500 make little real contribution to the recipient's research;
2. Produce a regular publication, beginning with the proceedings of scientific meetings (the Fredericton volume should be published by the end of this year);
3. Continue annual scientific meetings;
4. Join OSNA (Ornithological Societies of North America, currently including A.O.U., Cooper & Wilson Ornithological Societies, Colonial Waterbird Society, Association of Field Ornithologists, and Raptor Research Foundation);
5. Join and contribute to the Ornithological Council; and
6. Establish a World-Wide Web site.

Items 1, 2 and 3 come under the heading of *providing increased benefits to members;* items 2 to 6 contribute to *increasing the Society's profile* in the broader ornithological community. All of them will cost more money, but at the same time are likely to increase membership and therefore revenue. The best example is joining OSNA; other societies which joined have found their membership increasing afterwards - but OSNA will accept only societies that publish a journal. We cannot join OSNA until we publish a journal, but can we afford to publish a journal without the increased membership that joining OSNA will likely bring? This is a classic 'Catch 22' predicament. Your Officers and Council propose that the Society have the confidence to increase membership revenues as much as possible - both by increasing the number of members and by raising the membership fee from its current $10 to $15 (keeping student fees at $10) - while simultaneously continuing to publish Meeting Proceedings with the firm objective of seeing those proceedings evolve into a regular Journal of Canadian Ornithology within the next few years.

These proposals would continue progress towards a more active, vigorous and visible Society, as outlined by David Nettleship in recent President's Reports and discussed by members at most recent meetings. The general direction is clear; some of the specifics are new, and I hope you will approve them. I also hope you will contribute your own thoughts and ideas, and will rise to the challenge I set in April's *Picoides* - to each recruit **two** new members to the Society by the end of this year.

S.C.O. FINANCES AND MEMBERSHIP/LES FINANCES ET LE NOMBRE DES MEMBRES S.O.C.

FINANCES (report by T.E. Dickinson)

The Society's finances remained stable in 1997, and we had some noteworthy accomplishments: two fine issues of Picoides; published (with C.W.S.) papers from 1993 meeting in Guelph; made two Taverner Awards (Scott Ramsay, Dawn Burke), and honoured Hugh Boyd with Speirs Award. Our income again (just) offset our expenses; essentially membership fees covered publication costs, and income from investments plus donations covered the awards. Unless unforeseen expenses arise, or income drops (it's hard to imagine lower interest rates), our situation should be stable or improve slightly in 1998 (see interim statement).

At the 1997 meeting, it was noted that the special funds (for awards) should be reported separately in annual financial statements (not done previously). The Constitution calls for reinvestment of 15% of interest generated each year. High interest rates in early years of the Funds allowed reinvestment equal to 15% of the principal, so the Funds grew rapidly to their present (healthy) levels. Recently higher costs (esp. in publication) and lower interest rates forced a more frugal strategy, still meeting the Constitution-required level and covering our costs.

As we face new opportunities, I encourage Council to encourage growth in our Society. Nevertheless, caution is needed; higher membership dues may become essential, more members are needed, and additional funding for publication expenses should be discussed, in Vancouver.

Tom Dickinson
Treasurer S.C.O.

1997 Financial Statement [audited by L.J. Peatt, 15 July 1998]

Opening balances and investments (1 Jan. 1997)		
	Savings	$ 359.22
	Chequing	1,873.94
	GICs	21,054.85
	Total	$23,288.01
Income:	Donations	$ 245.00
	Transfer from other charities	50.00
	Memberships	2,997.03
	Interest on investments	1,066.17
	Total	$4,358.20
Disbursements:	Speirs Award	$ 323.20
	Taverner Awards (Burke, Ramsay)	1,000.00
	Picoides: Fall 1996	1,609.33
	Spring 1997	1,176.45
	Fall 1997	1,466.25
	Special Publication (C.W.S. OP95)	107.00
	Bank service charge	15.00
	Total	$5,697.23
Closing balances (31 Dec. 1997)		
	Savings	$ 622.73
	Chequing	68.85
	GICs	21,257.40
	Total	$21,948.98

1998 **Interim** Financial Statement

Opening balances (1 Jan. 1998): total	$21,948.98
Income (through 30 June 1998): total	2,455.93
Disbursements (through 30 June 1998) total	1,736.25
Closing balances (30 June 1998): total	22,669.31

Summary of Special Funds

Speirs Award

Year	Action	Fund value
1987	Fund established*	$3,000.00
1988	Principal +8.5% interest	3,255.00
1989	as above but 11.25% interest	3,621.19
1990	as above	4,028.57
1991	as above but 9% interest	4,391.14
1992	as above	4,786.34
1993	as above but 6.25% interest	5,085.49
1994	as above	5,403.34
1995	as above but 7.5% interest	5,808.58
1996	Principal +15% of 7.5% interest	5,872.47

1997	as above but 15% of 7.25% int.	5,937.07
1998 (est.)	as above	6,002.37

Taverner Award

Year	Action	Fund value
1987	Fund established*	$4,000.00
1988	Principal +8.5% interest	4,340.00
1989	as above but 11.25% interest	4,828.25
1990	as above	5,371.43
1991	as above but 9% interest	5,854.86
1992	as above	6,381.79
1993	as above but 6.25% interest	6,780.66
1994	as above	7,204.45
1995	as above but 7.5% interest	7,744.78
1996	Principal +15% of 7.5% interest	7,829.97
1997	as above but 7.25% interest	7,916.10
1998 (est.)	as above	8,003.18

* Original Speirs fund donation received 1985; 2nd donation, assigned to Taverner fund, received 1987; total, plus accrued investment income, less Speirs Award outlays to that date, was partitioned as shown in 1987, for accounting purposes only (the two funds were combined for investment, hence identical rates).

Constitution (in force from ca.1989) required reinvestment of at least 15% of accrued interest; high interest rates allowed reinvestment of more interest at first; lower rates from 1993 (reducing accrual) forced reversion to the minimum reinvestment rate from 1996.

Investment summary (as of 15 July 1998):

Certificate no.	Value
8012157-04	$1,250.00
09	2,000.00
10	2,000.00
11	1,250.00
12*	6,270.31
14*	2,000.00
15*	1,250.00
16*	2,080.00
17*	2,000.00
18*	1,250.00

* designated as covering special endowment funds.

MEMBERSHIP (report by N.J. Flood)

Through 15 July 1998, S.C.O. membership was 290, including 12 libraries or museums and 3 clubs/societies. Note that not all of these are paid up! As always, "members" include those we hope will soon renew as well as those who have renewed (Table 1). Total is down only slightly from 1996 (300) and 1997 (296), but with only 5 new members this year our membership may decline substantially when long-term laggards are dropped from the rolls at year-end. Many people (54) joined in 1996 but have not yet renewed; new members are less easy to retain than people who have belonged to the Society for a long time (compare Tables 1 & 2). If, as has been proposed several times, we carry non-renewing members for only one year (instead of two), membership may drop further; this move may be unavoidable as cost of *Picoides* increases and other publications evolve.

Table 1. Renewal status of S.C.O. members (3 complimentary memberships excluded). 31 were sustaining members ($25+/yr).

Paid up to	Number (%)
1996	38 (13.2)
1997	81 (28.2)
	[Not renewed 41.4%]

1998	101 (35.2)
1999	41 (14.3)
2000	19 (6.6)
2000+	7 (2.4)
	[Paid up 58.6%]

Table 2. Retention rates of long-time (joined by 1985) vs. new (joined 1996-97) members.

Membership	Not renewed for 1998	Renewed through 1998 or beyond (%)
Old (by 1985)	17	53 (76)
New (1996 or 1997)	46	29 (39)
Others	56	86 (61)

Table 3. Geographical analysis of S.C.O. membership. (Note: some use work addresses, in a different province than their residence, esp. in National Capital Region.)

Geographical area	Number (%)
Newfoundland	2 (0.7)
Prince Edward Island	**0 (0.0)**
Nova Scotia	14 (4.8)
New Brunswick	20 (6.9)
Québec	34 (11.7)
Ontario	90 (31.0)
Manitoba	16 (5.5)
Saskatchewan	24 (8.3)
Alberta	25 (8.6)
British Columbia	34 (11.7)
Northwest & Yukon territories	4 (1.3)
United States of America	20 (6.9)
Overseas	5 (1.7)

Table 4. S.C.O. members by affiliation (as reported)(n=290)

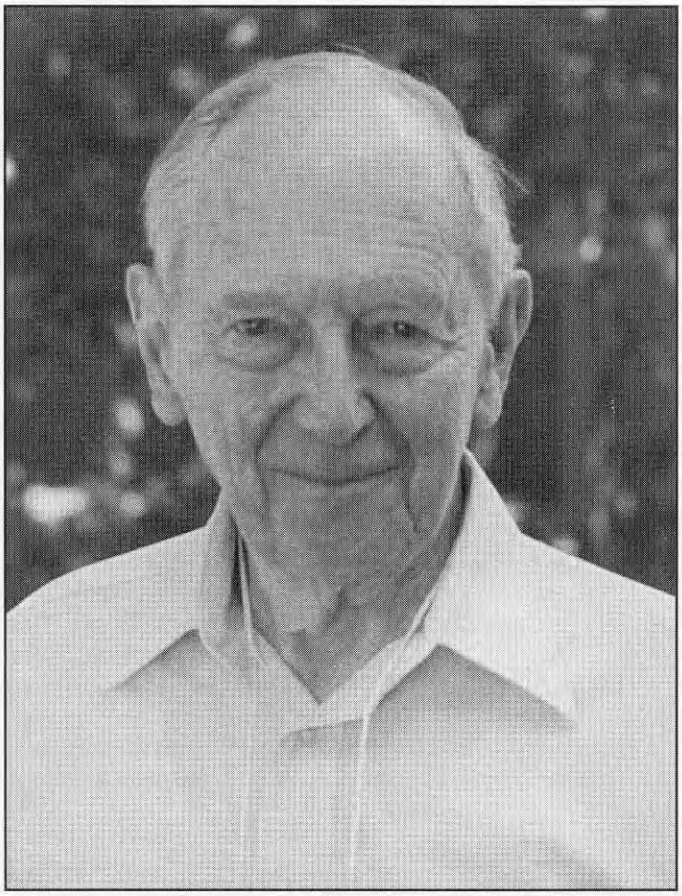
Affiliation type	Number (%)
University/college	99 (34.1)
C.W.S./S.C.F.	58 (20.0)
Other federal govt. agency	5 (1.7)
Provincial govt. agency	15 (5.1)
Museums & libraries	16 (5.5)
Private employment	15 (5.1)
Independent research-oriented agencies (e.e. BSC/LPBO)	13 (4.5)
Nature/Non-profit societies	19 (6.5)
None reported 1/	50 (17.2)

1/ Some known to be retired, others birders and/or people concerned for bird conservation.

1998 DORIS HUESTIS SPEIRS AWARD FOR OUTSTANDING CONTRIBUTIONS IN CANADIAN ORNITHOLOGY

The Society of Canadian Ornithologists presented its most prestigeous award "The Doris Huestis Speirs Award" to Dr. IAN MCTAGGART-COWAN, Dean Emeritus (Graduate Studies) and Professor of Zoology (retired) of University of British Columbia, on 4 August 1998 within the science program of the S.C.O. annual meeting in Vancouver, B.C.. The award honours Dr. Cowan's outstanding lifetime contribution to Canadian ornithology, spanning seven decades, with major achievements in avian science, research, conservation and environmental education and management. Dr. Cowan is presently active in the completion of the fourth and final volume of "The Birds of British Columbia", one of the most comprehensive regional reviews of birds and their distribution produced in North America.

Ian McTaggart-Cowan is distinguished for his scientific work in vertebrate zoology, on mammals and birds, and for his mastery of both university teaching and administration, a rare combination of talents. Although better known as a mammalogist, Dr. Cowan's contributions in ornithology are also impressive, including publications on birds, supervision and encouragement of graduate students, and conservation activities. He has been characterized as "Dean of Vertebrate Zoologists" in Canada, a fitting title. He started publishing on birds in the 1930s and is still at it. His more than 260 publications include at least 40 explicitly on birds, in primary avian journals as well as government series and books. These works covered general biology, systematics, distribution, parasites and disease, and conservation (see selected list). Many other publications are concerned with conservation of wildlife and habitats, and management of environmental impacts in resource development. His Doris H. Speirs Lecture entitled "Moments from the education of an ornithologist" (below) gives glimpses of the range of his knowledge of birds - and the people who study them. He served on many conservation bodies, in and outside government, in Canada and the U.S.A., e.g. former Vice-President of IUCN, current chair of B.C. Habitat Conservation Board. Dr. Cowan received many honours and awards, none previously for his work and support of ornithology alone. His influence on avian science and conservation, directly and indirectly, in this country, has been immense.



IAN MCTAGGART-COWAN

Ian McTaggart-Cowan was born in Edinburgh, Scotland, in 1910, and raised in B.C. He studied zoology at U.B.C. (B.Sc. 1932) and University of California (Ph.D. 1935). Birds captured his interest early, and the addiction remains. By age sixteen he had collected in North Vancouver every owl species then known in B.C., and 72 years later he is still working on birds. Dr. Cowan's first position as biologist was with the B.C. Provincial Museum (1935-40), after which he taught zoology at U.B.C.. In 1954 he became Head of Zoology department, in 1964 Dean of Graduate Studies, at U.B.C.. In 1978-85 he was Chancellor of University of Victoria.

His influence in vertebrate zoology, particularly mammals and birds, was enormous. He supervised more than 100 graduate students, a number of these in ornithology. During the 1940s and 1950s he encouraged and directed a large proportion of the people who later were active in bird work in government and universities. These included Art Benson, Joe Bryant, Alex Dzubin, Tony Erskine, Richard Fyfe, Bob Harris, Ernie Kuyt, Ron Mackay, David Munro, Lawson Sugden, Ernie Taylor, John Tener, Kees Vermeer, and others, in C.W.S., Charlie Guiguet and Wayne Campbell at the Provincial Museum, and most B.C. provincial biologists of that period. University luminaries included Jean Bédard, Jim Bendell, Rudi Drent, Dave Fowle, Peter Grant, Bob Weeden, and Fred Zwickel, with Steve Johnson notable among consultants. Dr. Cowan also excelled as a public educator, responsible (among many other presentations) for 65 television programs under "The Web of Life" and "The Living Sea" by-lines, and six teaching films on animal behaviour (Encyclopaedia Cinematographica, Gottingen; with Dr. V. Geist). His influence in ornithology extended far beyond his publications, catalysing growth of avian study in British Columbia and across Canada.

Dr. Cowan has been honoured across North America for his scientific and conservation achievements (see *Who's Who in Canada* for a fuller summary) - Officer of the Order of Canada 1972; Fellow of Royal Society of Canada and other scientific societies; honorary doctorates from five universities (1971-86); and various awards from wildlife associations. He served as president or chairman of many associations. Dr. Cowan stands out as a model to us, as scientist, conservationist and teacher.

The Speirs Award honours lifetime achievement in Canadian ornithology. Dr. Cowan's contributions include an array of works furthering knowledge of birds in British Columbia and Canada. Avian scientists, conservationists, and animal ecologists throughout North America have benefited from his efforts and those of the people he trained and encouraged. The

Society of Canadian Ornithologists takes great pleasure in presenting the 1998 Doris Huestis Speirs Award to Ian McTaggart-Cowan for his outstanding contributions to Canadian ornithology and conservation.

A Selection of Publications by Ian McTaggart-Cowan.

1937 The House Finch at Victoria, British Columbia. Condor 39: 225.

1938 Distribution of the races of the Williamson Sapsucker in British Columbia. Condor 40: 128-129.

1939 The vertebrate fauna of the Peace River district of British Columbia. B.C. Prov. Mus. Occas. Paper no. 1, 102 pp..

1939 The White-tailed Ptarmigan of Vancouver Island. Condor 41: 82-83.

1940 Winter occurrence of summer birds on Vancouver Island, British Columbia. Condor 42: 213-214.

1940 Two apparently fatal grouse diseases. J. Wildl. Manage. 4: 311-312.

1942 Food habits of the Barn Owl in British Columbia. Murrelet 23: 48-53.

1944-45 (with J.A. Munro) Birds and mammals of Revelstoke National Park. Can. Alpine J. 29: 100-121, 30: 237-256.

1944 (with C.D. Fowle) Visceral gout in a wild ruffed grouse. J. Wildl. Manage. 8: 260-261.

1946 Death of a Trumpeter Swan from multiple parasitism. Auk 63: 248-249.

1946 Notes on the distribution of *Spizella breweri taverneri*. Condor 48: 93-94.

1947 (junior author, with J.A. Munro) A review of the bird fauna of British Columbia. B.C. Prov. Mus. Spec. Publ. no. 2, 285 pp.

1948 Waterfowl conditions in the Mackenzie Delta, 1947. Murrelet 29(2): 21-26.

1952 (with J. Hatter) A trap and technique for the capture of diving waterfowl. J. Wildl. Manage. 16: 438-441.

1955 Birds of Jasper National Park, Alberta, Canada. Can. Wildl. Serv., Wildl. Manage. Bull., ser.2, no.8. 63 pp.

1960 Science and wilderness. Pp.65-78, *in* The meaning of wilderness to sciences. Sierra Club, New York.

1966 Conservation and man's environment. Nature 208: 1145-1151.

1969 Ecology and northern development. Arctic 22: 3-12.

1976 Biota Pacifica. Pp.86-99, *in* "Mankind's future in the Pacific". Univ. B.C. Press, Vancouver, B.C.

1981 The basis of endangerment. Pp.3-20, *in* Threatened and endangered species and habitats in British Columbia and Yukon. B.C. Min. Envir., Vancouver, B.C.

1982 Wildlife conservation issues in northern Canada. Can. Envir. Adv. Coun. Rep. no.11. 80 pp.

1989 Birds and mammals on the Queen Charlotte Islands. Pp.175-186, *in* The outer shores (G.G.E. Scudder, N. Gessler, eds.). First Internat. Symp., Vancouver, B.C., August 1984. Queen Charlotte Is. Mus. Press, Skidegate, B.C.

1990; 1996 (junior author, with R.W. Campbell & others) The birds of British Columbia. vols.1-2; 3. Royal B.C. Mus. & Can. Wildl. Serv., Victoria, B.C.

1998 Moments from the education of an ornithologist. Picoides 11(2): 18-22

also many other articles, reports, oral and printed presentations [incl. many on mammalogy & other wildlife subjects, or authored by graduate students].

THE SECOND DORIS HUESTIS SPEIRS LECTURE

"MOMENTS FROM THE EDUCATION OF AN ORNITHOLOGIST"

Ian McTaggart-Cowan

Aldo Leopold (1949) stated it simply, "There are some who can live without wild things, and some who cannot"... "For us of the minority, the opportunity to see geese is more important than television, and the chance to find a pasque flower is a right as inalienable as free speech." This simple, eloquent observation gave image to what thousands have felt deeply and with growing anger as they watched, throughout North America, the ravaging of landscapes and the destruction, in name of progress, of private beauty spots.

Half a century has elapsed since Leopold voiced his convictions in terms that caught the imagination and gave new impetus to the fledgling conservation movement. He observed, "These wild things had little value until science disclosed the drama of where they come from and how they live." Research in the wild, and active dissemination of results, have been powers for change in the ways we conduct our lives. Nationwide organization and international communication were essential to the progress that was made, but knowledgeable, dedicated individuals drive conservation and identify its directions. In the observations and thoughts that follow I introduce some key players in the field, and their influence on one man's innings.

The Founding Years

In 1886 British Columbia established its Provincial Museum, dedicated to preserving specimens to illustrate all aspects of flora and fauna, native cultures and history of the province. This marked the first recognition, by the Province, of wildlife as an important component of natural resources. It was a momentous turning point.

John Fannin, a resident of the province and a well-known naturalist, was a happy choice as the first director, and though financial resources were meagre he immediately set about making a faunal inventory. The first publication by the new Museum was 'A check list of the Birds of British Columbia' by Fannin (1891).

Through its first half-century the Museum staff consisted of the Director and one assistant, supported by a secretary. Temporary assistants were hired for field work in summers. On Fannin's death Francis Kermode took the reins. As Director he was active and ingenious in building collections of the museum despite a meagre budget. Expeditions were undertaken in 1913 to 1916 to explore biological resources as far afield as Lillooet, the Okanagan Valley and Atlin. Among summer assistants the name of J.A.Munro appeared first in 1915, when he was hired for four months to collect birds, mammals and insects in the Okanagan. His brief report on the field season is notable for habitat descriptions. He was ahead of his contemporaries in his understanding of the essential relationship between birds and their habitats. Budget cuts in 1917 put a stop to field programs, and for 18 years the museum's bird and mammal collections languished and curatorial responsibility was neglected.

Institutional collectors from outside Canada were central in creating and furnishing an environment for bird study in British Columbia. Samuel Rhoads was a pioneer. He made an ambitious expedition in 1892 to study and collect specimens of birds of northwestern Washington and southern British Columbia for the Philadelphia Academy of Natural Sciences. From May to September he collected at carefully chosen locations across the southern and central regions of the province, beginning at Victoria and ending at Field. His report on the summer's work (Rhoads 1893) makes fascinating reading more than a century later. Thumbnail sketches of the terrain around each of his collecting sites are evocative; his brief analyses of faunistic elements of the regions visited are concise and accurate. Rhoads is someone I wish I had known.

The California Influence

Ornithology in British Columbia before 1940 drew much of its impetus and direction from the south rather than from eastern Canada. By 1920, the Museum of Vertebrate Zoology (MVZ) at University of California, Berkeley, had become one of the world's leading centres of research in ornithology. Joseph Grinnell was founding director of the Museum, and during 30 years shaped its philosophy and direction. He was a remarkable man, with a prodigious capacity for work, in office and field. Early in his career he helped found the journal *Condor* and was its editor until his death in 1939. He pioneered the concept of environment and avifauna as inseparable, and was a founder of vertebrate ecology in North America. He also emphasized in ornithology and mammalogy the need for substantial series of specimens, and the use of statistical methods in analysis of geographic variation. By precept he gave force to his conviction that field research in ornithology required active participation by senior scientists, because only that contact could bring from the field the detailed perception of each species of bird and its special niche. A technician could secure and preserve specimens but that was only a small part of what a research expedition should yield. The end result of research was publication, meticulously crafted. If you did not analyze your data and publish it, you had failed. We could relearn his philosophy. Government files are full of reports of work half-done, unanalyzed, never exposed to peer review, an uncatalogued record of wasted talent.

As one of his graduate students, I can attest that every word of my Ph.D. thesis was read by him in my presence and discussed, a sentence at a time. There was a concise and precise way of expressing every nuance. He was a gentle and persuasive mentor, devoted to his students and their success. He saved more than one of us from financial crises during the later days of the Great Depression. All who worked with him learned much more than a passion for birds and their study. His philosophy and example gave ornithology new direction and new goals.

As early as 1908 MVZ turned its attention to northwestern areas of North America, with expeditions to islands off southeastern Alaska. Subsequent expeditions studied birds and mammals along the Stikine River in 1919, the Skeena River in 1921, and Atlin in 1924 and made important contributions to understanding of birds in British Columbia. They established MVZ as a major contributor to knowledge of bird faunas and their distribution in northwestern North America. Harry S. Swarth, a former doctoral student with Grinnell, was scientist-in-charge of these expeditions. Years later he relived for me his summers in the north and his concepts of the dynamics of bird and mammal distribution there.

Before you can know any group of animals you must be able to identify them accurately and understand their place in the larger scheme of things. The roles of systematist and taxonomist underlie most further study. Good series of well-prepared specimens with accurate data are essential to such studies, and faithful, effective curating is a first responsibility of museums of natural history. I fear that in Canada we are forgetting this. Where today can we look for permanent care of valuable collections that can no longer be nurtured locally?

The Private Collectors

From the 1920s until nearly 1960 a few especially keen individuals assembled private collections of birds from widely

scattered parts of the province. Building a useful collection required dedication and enthusiasm beyond the ordinary. Time and effort were required to seek and collect the specimens and to prepare and curate them to established standards. In the course of time all the private collections became parts of the scientific resources of public research collections in museums or universities. The collector's field notes were of inestimable value in assembling the database for the Birds of British Columbia. A brief summary of lives and accomplishments of British Columbian collectors is included in Campbell et al. 1990, 1:24-32. Here I introduce four of them to you, for personal reasons that will be apparent.

J.A. Munro unknowingly gave me useful advice at a very early stage in my adventures with birds. In 1923 National Parks of Canada offered a book prize to any boy scout in Canada who achieved his Naturalist badge and submitted a bird diary covering a year of observation. I met the requirements, sent in my diary, and in time received a copy of Gordon Hewitt's book *The Conservation of Wildlife in Canada.* This was my first introduction to wildlife conservation. I still have the volume, with its congratulation signed by J.B. Harkin, Director of National Parks of Canada. I was impressed. Some days later a letter came from J.A. Munro, Federal Migratory Bird Officer. He had read my diary and, in a nice way, pointed out some mistaken identifications and fine points not covered in my library of one book (Reed's bird guide). I wrote in reply asking more questions and received helpful answers. Of such small kindnesses new directions are born. 24 years later Munro and I co-authored a book on the avifauna of British Columbia!

Munro was indefatigable in research on the waterfowl of the province, the best in the business at that time. Jim, accompanied by his wife Olive, devoted almost every summer to field work in the southern and central interior of the province, followed by many winters at the Fisheries research station at Departure Bay, studying marine birds. Although the main focus of his work at the time was waterfowl, his research included the entire assemblage of birds and habitat. His regional studies of provincial wetlands and their birds provide detailed pictures of how they were in the beginning; his research on impacts of fish-eating birds on Pacific salmon, and his species monographs on some diving ducks on their nesting grounds remain essential references. He will be appreciated also for his dogged fights for conservation, and the imperative of setting aside habitat for birds. In this area his final success was the declaration of Creston Wildlife Management Area, now dedicated to his memory. I think often of days in the field with him and the research we shared.

Tom McCabe, tall, athletic, impulsive, quick of mind as of temper (more often directed at malfunctioning equipment than at people) will forever stride through my memory. Badly beaten up by his years as artillery officer in Europe during the 1914 war, he and Elinor retired to Bowron Lake and then Indianpoint Lake, to rebuild his health in the quiet but demanding wilderness environment. Their home was 7 miles by trail from the nearest road, and everything the house required arrived on Tom's back. There they built a beautiful 2-storey log house and lived adventurously for several years. Elinor was the source of Tom's new interest in the natural world as he regained his physical and philosophical stamina. His collections of data and specimens at & from Indianpoint Lake led to contacts with specialists at MVZ. There he was provided with an office and encouragement. The McCabes established a winter home in Berkeley and for many years were migrants between California in winter, and field camps, or Indianpoint Lake, in summer. Between 1933 and 1939 the McCabes explored distribution of birds and mammals along the middle B.C. coast. Joyce and I shared some of their adventures among the islands; five of us squeezed into M.V. Seabird, owned and skippered by Pat Martin, the first marine bird specialist on our coast. Tom died too young, of a heart attack, not surprisingly, but his contributions were many, well beyond the evidence of his bibliography.

Hamilton Mack Laing was my mentor in the tasks of field biologist-cum-museum collector. In 1930 I was summer field assistant to the National Museum of Canada. The National Museum was in the last stages of an exploration of the mammal fauna along the International Boundary region from the coast to the Rockies. I was instructed to join Laing in Newgate as soon as possible after my university term. It took two and a half days to travel from Victoria to the village of Newgate in the Kootenay valley near the Montana border. The journey included a day on the Kettle Valley Railroad, overnight on a paddle-wheel steamer down Kootenay Lake, more train travel from Kootenay Landing to Fernie. There I slept, and caught a small gas-electric car that ran daily from Fernie to Rexford, Montana, with a stop at Newgate. Mack had driven up in his new 1930 Chevrolet van accompanied by his equally new wife Ethel. They had a comfortable field camp on the river bank, by the bridge so we had easy access to both sides of the river. It was an exciting month. I already knew a fair amount about collecting and preparing specimens, but Mack was a master of these arts and I learned a lot from him. We added much new information on mammals of the region. Bird highlights were Williamson's Sapsucker and Pigmy Nuthatch nesting in open stands of western larch and ponderosa pine; Horned Larks, McCown's Longspurs and Sharp-tailed Grouse on the extensive grasslands of the Tobacco Plains; I understand all are gone today.

On 30 May a telegram from Ottawa instructed Laing to report immediately to Jasper, Alberta, where he was to serve as (first) resident naturalist at Jasper Park Lodge. He caught the next train, leaving me his new car, his bride, and the field camp, with instructions to get the outfit to Jasper as soon as possible. Mack was a trusting soul, as was Ethel. She did not drive and had a fear of heights, and we had lots of both; but she was good company, and closed her eyes in the scary places. We all

survived the adventure as good friends. On the roads of 1930 it took two days to drive to Edmonton and another two and a half days to negotiate the rain-slicked gumbo track 250 miles from Edmonton to Jasper - average speed about 7 miles per hour.

The rest of that summer was devoted to mammals of Jasper with some bird highlights. During three weeks alone in the Tonquin alplands my senses were sharpened by knowledge that I was the first person to occupy the cabin since the warden was killed the previous autumn by a sow grizzly with cubs. The bears were still in the valley! On the alpine slopes I flushed a Timberline Sparrow *(Spizella taverneri)* from her nest in a dwarfed spruce. This was many hundreds of miles south and east of its type locality and nearest known location, Atlin - a major range extension. Exciting stuff! Another surprise was nesting Willow Ptarmigan, also a southerly record. But it was the Golden-crowned Sparrows that were unforgettable. Their plaintive 3-note song greeted each dawn and closed each day. Just recalling, I can see the great sweep of alpine meadows to Amethyst Lake and the towering Ramparts beyond. A Columbian Ground-Squirrel ate the chicks.

Kenneth Racey was a business man whose hobby was birds. In them he found relief from stresses of the work place before the days of Hans Selye. I met him while in my late teens, at a lecture he gave to Burrard Field Naturalists Club, a forgotten name today. He was an ardent student of birds, knew all the best places, and all the other players in the game. He welcomed a shy young enthusiast to his study and his fireside, introduced me to the arts of bird study and the collecting of specimens of birds and mammals, and took me on frequent weekend field trips with his family. For three months in 1931 he took a sabbatical to recover from an illness and invited me to be his assistant. In May we worked the coast and islands around Tofino, long before road access. We discovered a colony of Rhinoceros Auklets and rediscovered the Vancouver Island Marmot, not seen for 20 years. Through June and July, together with his family, we camped and collected in the pocket desert of the southern Okanagan where White-tailed Jack Rabbits, Burrowing Owls and Sage Thrashers provided fascination. Then north to the biologically unexplored regions of the western Chilcotin. For me it was a summer immersed in new habitats and new birds in companionship of a happy family. To this day, as I write about Canyon Wrens, Black Swifts, White Pelicans, or waterthrushes, scenes from that summer guide my hand.

Sixty-two years ago the Raceys welcomed me to their family as son-in-law. Even young men sometimes make inspired decisions, and this was certainly my best. Joyce and I, at first just us, but later with a son and daughter, have roamed the world, and in our homeland have camped over much of the province, from heathered margins of alpine lakes and teeming life of Cariboo marshes, to the sphagnum bogs of northern islands, always savouring wild places and seeking to understand their creatures.

Museum work and university research

In July 1935 I joined the staff of the Provincial Museum as assistant (and only) biologist. The ink was hardly dry on my Ph.D. from University of California, where my research was under guidance of Joseph Grinnell. The salary for my new position was $1,500 per year, less income tax and pension deductions, and I was glad to have it. The alternatives were not pretty, as the social safety net was almost nonexistent. The museum's collections of birds and mammals were in a sorry state from lack of curatorial care: there were no current catalogues, and in general the opportunities for progress were unlimited. The situation in government also was ripe for change. A previous government had opposed support for higher education and had starved the University. Several leading university faculty joined the ranks of the opposition and in the next election the government was defeated. Three faculty members became Ministers and a new philosophy prevailed. Education, energy, and enthusiasm were rewarded and good ideas encouraged. It was a great place to start a career.

We reintroduced exploratory field work, filling blanks on the biological map at Quesnel, Ootsa and Eutsuk Lake, Kootenay and Revelstoke National Parks. Each area produced its surprises. By far the most exciting was that of May-July 1938 when Pat Martin and I made the first study of birds and mammals in the Peace River region of B.C.. It was our first adventure with a spring migration that is taken for granted by our eastern colleagues. We were out before dawn every day, fascinated by the torrent of birds from the Mississippi flyway that daily filled the trees and wetland; many birds I had never seen before. The urgency of that migration was gripping, every day saw new species, they all seemed in a hurry. In two months we added 14 new birds to the provincial list.

From the beginning the Provincial Museum had a special place for birds. After Fannin's distributional list of birds (307 species and subspecies) Kermode (1910) produced an updated list of 339 species and subspecies. In 1925 Allan Brooks and Harry Swarth collaborated on a more elaborate and insightful *Distributional List of the Birds of British Columbia.* This followed style and pattern established by Grinnell. In five introductory pages it presented four bioclimatic life zones of the province based on the Merriam concept, with a coloured map. The book treated 409 species and subspecies. Twenty-two years later J.A. Munro and I (1947) collaborated to produce *A Review of the Bird Fauna of British Columbia.* This broke new ground in recognizing 13 Biotic Areas based upon vegetation and occurrence of birds and mammals in them. Data on distribution were based exclusively on specimen evidence, covering 491 species and subspecies, with key dates and places. I had a productive four years at the museum before moving to the University of British Columbia as Assistant Professor of Zoology in July 1940.

At the University I designed and taught new courses not then available elsewhere in Canada, in biology of vertebrates and

wildlife management. Courses in embryology and comparative anatomy were also in my care. The teaching week was five and a half days, classes were crowded, life was busy and interesting. Especially there were always students to keep you on your toes - and the decades sped by.

Sometime in early 1960s Wayne Campbell joined the student body. His enthusiasm for birds had difficulty in taking second place after essential studies and a job. We agreed it was time for a new look at the birds of B.C.. At the time I was totally immersed in University duties, and thoughts of a new bird summary for B.C. were put aside - by me, but not by Wayne. On becoming a biologist at the Museum in 1973, he embarked upon the many tasks that had to precede the writing of a new book. Bibliographic research, field studies in blank areas, building B.C. nest record scheme, mustering many thousand occurrence records into a database, occupied 14 years of intense activity. Along the way, he gained the confidence and cooperation of several thousand amateur bird enthusiasts from all parts of the province as cooperators in the new venture.

By then 40 years had elapsed since publication of "Munro and Cowan". With support by Royal British Columbia Museum and Canadian Wildlife Service, writing began. The six authors agreed that the many knowledgeable observers across the province, with excellent optical equipment and cameras, made well-documented observations acceptable evidence of occurrence. The first three volumes of the new book are history, and volume 4 is in the final stages. So easy to glide over the thousands of hours, with a computer screen as sole companion, reflected in that last sentence.

A most interesting part of the experience was the appreciation we all gained of the role of amateur birders in this massive task. Several thousand cooperators contributed data, often giving access to years of notes documenting their observations of birds in various parts of the province. More than 20 of them made time to review every species account to make certain it reflects their own experience. Some half-dozen volunteered to draft accounts of species with which they had special familiarity. This contributed importantly to the quality of the book. At the same time it strengthened relationships within the community of bird enthusiasts at a time when united action toward conservation has never been more necessary. The amateurs provide most of the eyes and ears of the team. Compiling such a book is a grinding task, and not one I would commend to my friends as a great way to spend your retirement.

The Universities were the source of most research on biology of birds and bird populations in British Columbia, and a distinguished parade of faculty and students contributed. Recalling only 1940s to 1970s, the faculty included Miklos Udvardy, Mary Taylor, and Jim Bendell, and among graduate students Bob Weeden, Dave Munro, Charlie Guiguet, Tony Erskine, Frank Tompa, Ernie Taylor, Bob Harris, Fred Zwickel, Rudi Drent, Ron Mackay, Steve Johnston and Mary Jackson were among the bird contingent; they kept things lively and continued the education of the faculty. Among them were the founding residents of Mandarte Island who pioneered studies of its cormorants, and its song sparrows, made famous by Frank Tompa and more recently by Jamie Smith and his students.

The Federal Presence

Wildlife management is based on research to discover the nature of the problems, followed by attempts to alleviate them. We seldom can manage bird species in the wild; usually the best we can do is find out which of humanity's ineptitudes caused the problems, and design means to manage people more effectively. Where birds migrate between one nation and another, the necessary action may be out of reach of any one country. International action is imperative. The Migratory Birds Convention of 1916 was a new dimension in international relations and completely changed relationships between people and birds in North America. It was negotiated in response to a request from the provinces (& states), which explains its restricted application. When I first became aware of such things, the concern for birds somewhat resembled fisheries today. The "important" ones were those you could eat or ship to market for a price - ducks, geese, swans and cranes. Even the 1916 Convention gave no protection to eagles, hawks, owls, or corvids, and there was a price on the heads of all of these. Protection of non-migratory species, including all raptors, crows, jays, magpies, and many marine species, remained the responsibility of the provinces, and came later. Ratification of the Convention by Canada set in motion appointment of Migratory Bird Protection Officers. J.A. Munro was responsible for Alberta and British Columbia. From that small beginning, the Canadian Wildlife Service emerged as a major force in research and conservation of migratory birds in British Columbia.

On the Pacific Slope.

In 1920s and 30s British Columbia still behaved like a game keeper on a Scottish Grouse moor. Its fauna consisted of good and bad creatures. A species seen as a sporting target, and eatable, was "good"; all those that sometimes killed a "good" bird or ate its eggs were "bad"; all else were of little importance unless they ate your crops, when they too were "bad". The chosen means of controlling the "bad" species was offering a bounty or promoting "shoots" with prizes as rewards. At one time or another all the "bad" species had a price on their heads, a distinction they shared with coyotes, wolves and cougars. My first biopolitical campaign was to expose the futility and fraud of the bounty system. It took ten years to accomplish this. J.R. Dymond at the University of Toronto was a fellow-campaigner.

Nostalgia of European expatriates led, early in the century, to attempts to add to our native fauna some 13 species of birds from Europe or the United States (Carl and Guiguet 1957). All but a very few failed. Far more harmful to native birds of the province was the introduction of raccoons and Norway rats to

islands important to nesting sea birds. In 1940s a cluster of relatively small, precipitous islands off northern Vancouver Island received raccoons and minks as unauthorized transplants by a local trapper. Even more disastrous was the liberation, on Queen Charlotte Islands, of raccoons from Vancouver Island. This was done at the request of some resident sportsmen on Graham Island. Indigenous otter, marten and weasel had been no problem to the myriad murrelets, auklets, puffins, murres and petrels that came ashore to nest on small, well-isolated islands of the archipelago. But the raccoons spread throughout the islands and pose serious threats to survival of some seabird species. Norway rats probably arrived as stowaways, and have been equally destructive to some colonies. We now face the expensive and possibly futile task of trying to eliminate them from areas of greatest concern.

With its complex array of ecosystems and habitats, British Columbia has a more varied avifauna than any other province in Canada. We are surrounded by birds that have been tested beyond our imagining. The slate was swept almost clean by glacial ice intrusions, the latest one still melting today. They met the supreme challenges of climatic change, but are now confronted by a new arsenal of hazards of human design. The objective of most conservation measures seems to be to stop the clock, and this we cannot do. We desperately need the wisdom to detect problems of our making, as distinct from those that are steps in global processes - when to intercede and when just to watch and record. For nigh on 200 years we have been altering or eliminating habitats. We already have lost two or three species, and reduced another 50 species and subspecies to the point of serious concern for their survival.

Today almost every year some new vagrant bird, from eastern Siberia or from the south, causes excitement among the life-listers. Is this flow of "vagrants" an artefact of more and better observers? Or is there an increasing trend to malfunction among migrant birds today - the increasing complexity of new chemicals loose in the environment causing more migrating birds to miscue? I suspect both factors contribute.

Even a long life is but an instant in biological time, but long enough to see worrisome deterioration in our fauna and its habitats. I finish as I started, with words of wisdom from Leopold: "The first principle of intelligent tinkering is to save all the parts." Tinkering can be inadvertent as well as purposeful. Both are equally final.

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EDITOR'S REPORT/RAPPORT DU ÉDITEUR 1997-98

Two more issues of *Picoides* appeared, more or less on schedule, since the 1997 AGM. Vol. 10, No. 2, with 36 numbered pages covering the 1997 AGM and Conference, was the largest issue to date; vol. 11, no. 1, had 24 pages (not counting covers). Feedback from S.C.O. membership, regrettably, was minimal.

Discussions with Executive members were restricted to content of those bulletins or accompanying materials, until the recent meeting of the Publications Committee (23 July/98). Future evolution of our bulletin will be linked with that of S.C.O. scientific publications. I will continue as Editor until asked to leave, a year or three more anyway, but we might have a better bulletin with more input from others.

I regret that prior commitments for those dates, arranged after different timing was proposed at the 1997 AGM, will prevent me from attending the 1998 AGM and Conference in Vancouver.

Thank you for the opportunity to help.

A.J. Erskine
as Editor, *Picoides*

S.C.O. RESEARCH AWARDS COMMITTEE - 1998 report

The James L. Baillie Student Research Award, funded by Bird Studies Canada from proceeds of the Baillie Birdathon and administered by the Society of Canadian Ornithologists, went to M. Lisa Veit, M.Sc. candidate in the Department of Biology, Queen's University. Ms. Veit's research project, co-supervised by Raleigh J. Robertson and Vicki L. Friesen, is titled "Genetic structure and gene flow in Cerulean Warblers: a test of the source/sink model in nature".

The two Percy A. Taverner Awards of the Society of Canadian Ornithologists went to Barb Glassey, Ph.D. candidate, and to Celia M. McLaren, M.Sc. candidate, both in the Department of Zoology, University of Manitoba. Ms.

Glassey's project, supervised by L. Scott Forbes, is titled "Behavioural thermoregulation by Red-winged Blackbirds". Ms. McLaren's project, supervised by Spencer G. Sealy, is titled "Host selection and reproductive strategies of the Brown-headed Cowbird at Delta Marsh, MB".

Reports on the research supported by these awards will appear in a future issue of *Picoides.*

The Research Awards Committee for 1998 consisted of Gary R. Bortolotti (Univ. of Saskatchewan), Andrew G. Horn (Dalhousie Univ.), and M. Ross Lein (chair, Univ. of Calgary). Committee members reviewed 14 excellent applications to arrive at their recommendations; all applicants are to be complimented on the quality of their submissions.

BEST STUDENT PAPERS, S.C.0. ANNUAL CONFERENCE 1998

Two student awards were given at this year's conference in Vancouver.

The award for Best Oral Presentation by a Student was presented to Kim Mawhinney (Univ. of New Brunswick, Atlantic Cooperative Wildlife Ecology Research Network) for her paper titled " The effect of body condition and duckling survival on adult female créche attendance in Common Eiders *(Somateria mollissima)*". Honorable mention (two tied for second place) went to Christopher Guglielmo (Simon Fraser Univ., CWS/NSERC Wildlife Ecology Chair) for a talk on the physiology of migration in Western Sandpipers, and to Krista DeGroot (Univ. of British Columbia, Dept. of Zoology) for her talk on the effects of removal of cowbirds on songbird communities.

The award for Best Poster Presentation by a Student was presented to Irene Manley (Simon Fraser Univ., CWS/NSERC Wildlife Ecology Chair) for her poster titled "Scale dependent selectivity for cover at Marbled Murrelet nest sites". Honorable mention was given to Stephanie Hazlitt (Simon Fraser Univ., Dept. of Biol. Sciences) for a poster examining territory quality of Black Oystercatchers.

Awardees each received a copy of the book *The Great Blue Heron*, autographed by author Rob Butler, plus one year's complimentary membership in S.C.O..

The selection committee thanks all students who presented papers at the conference; student papers were of very high quality, and comprised over half of all presentations. The selection committee this year consisted of Peter Blancher (chair), Keith Hobson, and Erica Nol.

S.C.O. CONSERVATION COMMITTEE - Keith A. Hobson (chair)

The S.C.O. Conservation Committee continues its objective of using *Picoides* as a vehicle for informing readers, of key conservation issues facing Canadian birds, with two articles. The first is a brief introduction I prepared on the importance of shade coffee plantations to our wintering neotropical migrant songbirds. This paper is by no means an exhaustive review and readers are encouraged to consult the recommended readings upon which this article is based. This topic is an interesting one as it involves a critical bridge between scientific ornithological research, economics, politics and North American consumer buying habits. The pioneering scientific work of Russ Greenberg of the Smithsonian Institute and others forms the basis of conservation concern which is now being brought forth to a wider community. As with so many conservation issues, the shade coffee-migratory bird connection really illustrates how consumer habits can drive critical conservation programs. The second article by Tony Erskine on the Important Bird Areas program and shorebirds in Atlantic Canada provides some very interesting insights on problems and approaches involved in delineating critical bird habitat. This article reveals some of the complexities inherent in "on the ground" conservation actions.

The S.C.O. Conservation Committee continues to welcome help from interested members in drawing conservation issues to the attention of the S.C.O. readership, largely but not exclusively through *Picoides.* For further information, please contact myself, Robert Butler, Mike Cadman, or David Nettleship.

CONSERVATION IN A CUP: THE NEOTROPICAL MIGRANT COFFEE CONNECTION

Keith A. Hobson

One of the most pressing conservation issues facing Canadian ornithologists is current or potential declines in breeding populations of neotropical migrant songbirds that winter largely in Mexico, Central America and the Caribbean. Recently, much attention has been paid to factors occurring on both the breeding and wintering grounds as numerous factors can influence the survival and productivity of these species through their annual cycle. Recent changes in the way coffee is grown in Latin America may assume a primary role in the future health of several neotropical migrants, and essentially dwarf conservation efforts aimed at other areas.

To understand the migrant songbird coffee connection, it is necessary to know something of the nature and importance of coffee production in Latin America. First, coffee is second only to oil as the world's most important commodity, with annual revenues exceeding $10 billion (US). Coffee is also the second most important source of foreign exchange for developing countries. In Latin America, there are approximately 6.7 million acres in coffee production accounting for two-thirds of the world's supply. However, of the million Latin American farmers cultivating this crop, 75% are small landholders. Thus coffee has traditionally been grown in a diverse agricultural mosaic in mid elevations where most of the native forest has been removed. Secondly, and most importantly, until relatively recently, coffee was grown in the shade, typically under a canopy of trees. Recent studies have shown that shade-grown coffee plantations, often involving a canopy of fruit or avocado trees or other cash crops, provide important surrogate forest habitat for wintering neotropical migrant and tropical resident birds. All that is now changing, with conversion from shade-based coffee growing to 'sun' coffee.

In response to a growing demand for coffee, the way in which coffee is grown has recently undergone a radical change. Production increases have not typically involved expansion of coffee lands but instead have resulted from increase in yield on lands currently under production. This "technification" involves use of more sun-tolerant strains of coffee, and the subsequent removal of most or all of the shade trees, leaving a coffee monoculture. However, although yields have increased, the actual cost of production, involving greater inputs of agrochemicals, machinery, etc., has also increased. Moreover, the sustainability of sun coffee is greatly reduced due to increased soil erosion, and fewer people are usually hired to work the land. By 1990, over half of coffee farms in Latin America had been converted to sun coffee. However, this conversion has not been even, and Colombia has seen the greatest conversion to sun coffee, exceeding 70%. In a relatively short period, the remaining shade coffee plantations, with their role as surrogate habitat islands for biodiversity, are likely to disappear or be severely reduced.

Although the canopy covering shade coffee plantations can vary tremendously from farm to farm, ornithological investigations generally have confirmed that such canopies in Latin America can provide extremely important bird habitat. In most of these coffee-producing countries, such forest cover represents the only "forest" remaining at middle elevations. Fruit- and nectar-feeding species (e.g. Northern Oriole and Tennessee Warbler) appear to be most strongly associated with shade coffee plantations, but moist understory habitat can also attract a variety of species (e.g. Ovenbird, Wood Thrush). Shade coffee plantations can also show high densities of species associated with areas of scrubby secondary succession, such as Gray Catbird, Common Yellowthroat, Least Flycatcher, Yellow, Magnolia and Wilson's warblers, Indigo Bunting and Yellow-breasted Chat, as well as species more associated with contiguous canopy like Black-throated Green Warbler. In the Antilles, Cape May Warbler appears to be highly associated with shade coffee plantations.

There are obviously numerous factors influencing populations of bird species that breed in North America and winter in Latin America, and it is currently not clear to what degree the loss of shade coffee plantations will influence continent-wide populations. One possibility is that several species will be greatly affected, in the likely event that shade coffee plantations were already providing a critical habitat buffer in areas undergoing rapid deforestation. Regardless, a conservative approach to this question necessitates that we attempt to preserve as much shade coffee plantation habitat as possible. This can only be achieved through a demand from consumers for shade vs. sun coffee. Fortunately, some progress is being made on this front, and there is a movement toward certification of shade grown coffee through the Rain Forest Alliance with 'Eco-OK' coffee and Conservation International with 'Sustainable Harvest' brand. The major challenge will be to market shade coffee on a large enough scale to make a difference in terms of habitat conservation in Latin America.

Recommended Reading

Greenberg, R. 1994. Coffee and birds. Smithsonian Mag. 25: 24-27.

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Rice, R., and J. Ward. Coffee, conservation, and commerce. Working paper, Smithsonian Migratory Bird Center, Natural Resources Defense Council, Washington, D.C.

Vannini, J.P. 1994. Nearctic avian migrants in coffee plantations and forest fragments of south-western Guatemala. Bird Cons. Internat. 4: 209-232.

Wille, C. 1994. The birds and the beans. Audubon Mag. 96: 58-64.

Wunderle, J.M. Jr., and S.C. Latta. 1996. Avian abundance in sun and shade coffee plantations and remnant pine forest in the Cordilera Central, Dominican Republic. Ornitol. Neotrop. 7: 19-34.

Wunderle, J.M. Jr., and S.C. Latta. 1998. Avian resource use in Dominican shade coffee plantations. Wilson Bull. 110: 271-281.

A fact sheet "Why Birds are Crazy for Coffee" may be obtained free from the Smithsonian Migratory Bird Center (SMBC), National Zoological Park, Washington, D.C. 20008 U.S.A., or downloaded from the SMBC web site **http://www.si.edu/natzoo/zooview/smbc/smbchome.htm**

PROGRESS ON A CONSERVATION INITIATIVE

Anthony J. Erskine

Two years ago *(Picoides* 9(2): 29) we noted the start of the Important Bird Areas (IBA) program in Canada, with B.S.C. and C.N.F. as sponsors. Since then, workshops were held across the country to identify potential sites for IBA designation; over 1000 sites were suggested on that "first pass" (Canadian IBA News, spring 1998). The next step was preparation of nomination forms summarizing information on each suggested site. I (A.J.E.) was invited to compile forms for sites in the Maritime Provinces, and my experiences provide some perspective on the IBA program and, more generally, on bird conservation initiatives in Canada.

Examination of the list of suggested IBA sites revealed ambiguities both in scope and definition of IBA, as it was presented in Canada. Most suggested sites were either

(i) already well-known and considered under other programs, or

(ii) so little known that no useful summary could be made without additional field studies.

Under (i) were sites holding endangered or threatened species, breeding colonies of seabirds (many with Great Cormorants, which breed nowhere else in North America), and concentration areas of waterfowl, seabirds, and shorebirds (some already designated as Ramsar or WHSRN sites).

[*Ed. note:* If you aren't familiar with "Ramsar & WHSRN sites", please let us know, so we can feature them in later issues of *Picoides.*].

Most sites used by landbirds came under (ii), as population data by which to judge their relative importance were fragmentary and mostly subjective.

Some suggested sites were only 50 ha or less in area, comprising a single habitat, qualifying on use (usually for colony-nesting) by one or several species at one season. Others were "site-complexes", spread along 20-200 km or more of shoreline (of coast or river), with various habitats, used by various species in various seasons. Teasing-out species/habitat blocks from the latter "complexes" would multiply greatly the number of sites to be considered, many of which then might have insufficient bird use to warrant designation. It seemed preferable, in such cases, to nominate fairly large contiguous blocks (some up to 50 km across), most qualifying on use by several species or species-groups.

Relative importance of coastal and riparian sites involved mainly water, marsh, and shore birds, and drew heavily on criteria already defined and used for Ramsar sites, thus:

- an important site should be *used regularly by 1% or more of the population of a species that uses the flyway in which the site is located;*

- sites *regularly used by 10,000 or more waterfowl or 20,000 or more shorebirds (of all species combined)* are also considered important.

Definition of such 1% levels depends on approximate knowledge of flyway populations, and work towards estimating these numbers has been underway for many years [e.g. C.W.S., A Waterfowl Management Plan for Canada, 1981; Rose & Scott, Waterfowl (incl. shorebirds) Population Estimates, IWRB Publ. no.29, 1994]. Such estimates involve varying degrees of guesswork in making up for inadequate coverage in pertinent parts of Canada. In the Maritimes, estimates of waterfowl breeding populations and spring and fall flights were already published (Erskine, C.W.S. Occas. Paper 60, 1987, Chap. 7). Seabird breeding was also well-documented (e.g. Brown et al. 1975). Data on populations and 1% levels of shorebirds had not been assembled previously for the Maritimes as a whole.

Another of my recent assignments was a review of the Maritimes Shorebird Survey (M.S.S.), an ongoing volunteer project begun by Guy Morrison in 1974. M.S.S. reports to volunteers summarized seasonal high counts for each species at each "site"; those might assist site-designation under IBA if flyway population estimates, against which to evaluate such

data, could be derived. Morrison et al. (C.W.S. Prog. Notes no. 208, 1994) presented estimates of total shorebird breeding populations for Canada, so I guessed at fractions of each species-population that passes through the Maritimes, thus arriving at provisional 1% levels (ignoring species found here only in trivial numbers). The results were encouraging; aside from species that breed commonly in the Maritimes, for which most 1% levels were far higher than any known staging concentrations here, all species except two (Greater Yellowlegs, Pectoral Sandpiper) gave 1% levels that appeared plausible by comparison with M.S.S. and other data. As a check on (some of) those numbers, I used shorebird data for the upper Bay of Fundy (Hicklin, Wilson Bull., 1987; adjusted after Mawhinney et al., Can. Field-Nat., 1993), and guessed what fraction the birds in Fundy comprised of the total of each species in the Maritimes. For half the species in this (smaller) sample, the two approaches gave similar numbers; the others diverged widely. Morrison et al. (1994) certainly used Hicklin's (1987) data in deriving totals, so these discrepancies suggest differing judgements of the ratios of Fundy birds to Maritimes totals. This kind of "silly-ass modeling" cannot give precise results, but it helps us recognize where our first impressions are wildly out of line, and gives us more confidence when those informed guesses lead to plausible results. Even these first approximations allowed using shorebird data in IBA site definition in the Maritimes. This example also may provide impetus towards completing the population exercise suggested last year *(Picoides,* 10(2): 35), which could prove invaluable for assessing IBA candidate sites in other parts of Canada.

Call for Applications - 1999 STUDENT RESEARCH AWARDS

Applications are invited for two Taverner Awards (up to $500 each) and one Baillie Award ($1,000) for 1998.

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. The James L. Baillie Student Research Award is funded by Bird Studies Canada/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. However, past winners of either award may apply for the other. Funds are not awarded for stipends.

Application procedures changed in 1997 from those used in previous years. All applicants must use a standard application form, which may be obtained by contacting the chair of the committee. Completed applications must reach the following address before 15 January 1999:

Dr. David M. Bird, Chair,
S.C.O. Research Awards Committee,
Macdonald College, McGill University,
21,111 Lakeshore Rd.,
McDonald Stuart Bldg MS2072,
Ste-Anne-de-Bellevue, Qué. H9X 3V9

Awards will be announced by 1 April 1998. For application materials or additional information, contact D.M. Bird,
PH 514-398-7760; FX 514-398-7983; EM bird@nrs.mcgill.ca

Call for Nominations - DORIS HUESTIS SPEIRS AWARD

The Speirs Award is presented annually to an individual who has made outstanding lifetime contributions to Canadian ornithology. If you wish to nominate someone, please contact:

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

Urban Crows - more "feathered rats"?

When I started birding 45 years ago, I learned of the "caste" system by which birds were classified. These ranged from the "gee-whiz!" group, birds seen for the first time by an observer or in a region; next were scarce species and seasonal firsts; and so on, down to "feathered rats" (aka vermin, riffraff, etc.). These latter pejoratives were restricted to a few common, mostly introduced, year-round residents of urban areas - House Sparrows, European Starlings, Rock Doves/Pigeons. Ring-billed Gulls (a native migratory species) later qualified, after their enormous increase in the Great Lakes - St. Lawrence basin.

Except for adding "ticks" to a list - for day, year, or area, feathered rats in the 1950s were scarcely noticed by most keen birders, and they remain so. Features that set those birds apart were alien origin, frequenting artificial (unnatural?) habitats, abundance there, and over-familiarity - all connected with their lack of shyness around people. Recently, a long-familiar native land bird, the American Crow, adopted most of the unappealing habits of feathered rats.

Crows are intelligent creatures, well aware of enhanced feeding opportunities around human dwellings. Ernest Thompson Seton, 100 years ago, published an account of crows around Castle Frank, then in the outskirts of Toronto. Those birds were bold for their time, but familiar with being shot at so his pointing a walking-stick in their direction sent them out of range. What would Seton have thought of crows that scarcely move off the sidewalk when a human passes by? that displace desired species from garden bird-feeders? and that parade on foot through urban backyards? Something has changed radically in crows' perception of the environment they share with humans.

Probably the factors that led to this change operated, in some degree, for ages, but only recently have the birds overcome the inertia of centuries of behavioural traditions. In Sackville, N.B., the change became obvious since 1988, the end of my urban bird censuses (Erskine 1992), during which such behaviour was not noticed. Last winter, even people who rarely report sightings to our local naturalists' club remarked on recent boldness of urban crows. Two trends may have modified corvid attitudes towards humans: a decline (to near-disappearance) of shooting at crows in nearby rural areas; and increased restrictions on free-ranging dogs within the urban community.

Ever since people began cultivating crops, depredations of birds, including crows, aroused human ire (Nicholson 1951). The black (= evil) coloration of crows and their relatively large size focussed particular attention on them, though most other "black birds", migratory or not, were also denied protection in Canada under the Migratory Birds Convention (1916). Early efforts focussed on deterrance, and "scarecrows" remain in the language as a figure of speech even after modern firearms improved opportunities for destroying the perceived pests. Shooting crows provided "sport" for idlers, as well as employment for agricultural workers, for about 150 years, only a short time in the evolutionary picture. With the shift of human population in Canada, 90% rural in 1850 to 90% urban now, and mechanization of agriculture, the few farm workers remaining have no time for labour-intensive shooting of crows. Urban dwellers, though not eschewing violence towards each other, and with ever more leisure time, more often occupy themselves in watching a TV screen or computer monitor than in killing animals. Crows recognized long ago that they were not shot at within town or city, even though crows don't read municipal by-laws forbidding discharge of firearms there.

From the earliest years of evolution of towns and cities, disposal of food waste, carcasses, etc. posed problems therein, and scavangers, including crows, were often tolerated in the absence of garbage collection. In India, where local religions forbid killing of other living things (though wars occur there too...), House Crows *(Corvus splendens)* are still regular urban scavengers (Goodwin 1976). Dogs, the first formerly wild animals to be closely associated with humans, also were major scavengers in most urban areas for centuries, and probably drove off most competitors, including crows, when and wherever they met them. Restrictions on dogs in Canadian towns and cities reflect their increasing numbers - paralleling disposable income of people, and people's desire to use limited urban green spaces for human purposes - rather than as canine toilets. With dogs chained even when being "walked", new foraging and scavenging opportunities emerged in towns for crows. The birds observed and recently adopted canine habits of tearing open garbage bags put out early for collection, as well as visiting bird-feeders within a few metres of houses.

Nesting of crows in towns, mainly high in tall elms (safe from climbing cats and children), began earlier, probably in 1970s in the Maritimes, but this remains infrequent. Jays, smaller than crows and less conspicuous when not vocalizing, more readily adopted urban nesting habits - as did magpies in the west. Presumably concealment of nests, usually in dense conifer trees, was traditionally the most successful approach, and the few urban nestings by crows represent only extreme outliers on the frequency curve? Unless urban crow nests were significantly more productive than traditional sites, they seem unlikely to become more generally used. But crows foraging in towns are likely to increase in future, as they appreciate more fully their newfound freedom from disturbance - by people or domestic animals.

A.J. Erskine,
Sackville, N.B.

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Nicholson, E.M. 1951. Birds and men. The bird life of British towns, villages, gardens & farmland. New Naturalist 17. Collins, London. 256 pp.

Seton, E.T. 1898. Wild animals I have known. Charles Scribners Sons, New York, N.Y. 358 pp.

NEWS ITEMS AND ANNOUNCEMENTS

The North American Bird Conservation Initiative

"A small group of Canadians, Americans, and Mexicans has been working on a document that extracts key principles from the North American Waterfowl Management Plan, Partners in Flight, and the Western Hemisphere Shorebird Reserve Network to make a blueprint for bird conservation that the 3 countries can share. This work has been partially supported by the North American Commission for Environmental Cooperation (CEC)."

(from letter circulated by J.S. Wendt of C.W.S., 14 July 1998).

RENEW - 10th Anniversary Report (1988-98)

This handsome report (pp.14-33 giving accounts for birds) presents clearly current status and recovery progress for endangered and threatened species covered by recovery plans to date. Names of all members of recovery teams, a list of donors (with $$), and breakdown of funding to date by species, are useful inclusions.

EDITOR'S MUSINGS – THE NATURE OF BIRD PUBLICATIONS

A recent issue of *Ibis* included the last "Comment" (under that name) in that journal (139: 572-575, 1997). David Snow reviewed changes in *Ibis* over the past 50 years, with some comparisons to *The Auk* (noted as retaining the definite article, shed by *Ibis* in 1984). Most notable were the "widening of scientific horizons" and the altered "style and presentation of papers". The former was noted in *Picoides* under "I.O.C. News" by Wes Hochachka (7(2): 3-4, 1994). The latter is the subject of this comment.

One night I went to bed after reading book reviews in an earlier issue of *Ibis,* and my wife asked how I'd spent my evening. I told her, with the comment that I found such reviews in *Ibis* more generally interesting than in *The Auk,* and her next question was "Why so?". It was only a "gut feeling" so I had to think about it. My conclusion was that it arose from differing makeup of the ornithological community in Britain compared to North America - though I am rash to combine Canada and U.S.A. in a generalization. Although Snow noted the "decline in the amateur contribution" (to *Ibis*), I believe that U.K. bird journals consider non-professionals an important part of their readership, and the writing and editing there make some allowances for that, with a gain in general readability. In North America, ornithological journals and birding magazines are largely separate streams, the former often including technical jargon and obtrusive statistics, the latter often popular, or even slangy in style.

The composition of the journals differs too. U.K. ornithology now spans biology, even as in America. But in those compact and densely populated islands, a larger proportion of the bird papers dealing with anatomy, ethology, physiology, etc. appear in specialized journals without disappearing beyond the knowledge horizon of bird professionals there. The U.K. bird journals tend to be more field-oriented, with fewer contributions indigestible to non-specialists than is usual in *The Auk* or *Condor.* In Canada, The *Canadian Field-Naturalist* may be dipped into by serious amateur bird students who would never open *Canadian Journal of Zoology*, but *C.F-N.* is nearly unique in this continent.

Thus, the British style lends itself to communication with the many bird enthusiasts of Britain, without excluding professionals, who also may appreciate more easily digestible prose. When S.C.O. progresses to producing a Canadian bird journal, the persons responsible should bear in mind our Society's early decision to avoid duplicating services already provided by others: a journal focussed on and styled for professionals only may duplicate many existing outlets. There might be more room for a bird publication that differed, in being Canadian - and also in being readable by all people interested in birds?

The Editor

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Si vous désirez devenir membre de la Société des ornithologistes du Canada, faites parvenir vos coordonnées ainsi qu'un chèque ou mandat-poste (à S.O.C.) au montant de 15,00$ [10,00$ pour les étudiants] à l'adresse ci-haut. (NOTEZ L'AUGMENTATION DU FRAIS!)

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