Bulletin of The Society of Canadian Ornithologists
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# PICOIDES

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Young Bonaparte's Gull, near Peerless Lake, Alta., 8 July 1964.
(bird held by W. McCrory; photo by Editor)
**[If you think think the Editor's photos are crummy, send along better ones...]**

Species breeds mainly in Canada, dispersed in west boreal areas; population unknown (guess 10K-100K, Rose & Scott 1994, presumably from counts in staging and wintering areas); a difficult species to study or monitor, but with few immediate threats or declines, so not a high priority (compare Conservation Feature and Editor's Musings on same subject - this issue)

# Society of Canadian Ornithologists
# Société des Ornithologistes du Canada

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**Past Presidents:** M. Ross Lein (1982-85), Spencer G. Sealy (1986-87), Erica H. Dunn (1988-89), Jon C. Barlow (1990-91), J. Bruce Falls (1992-93), Henri R. Ouellet (1994-95).

## A WORD FROM THE PRESIDENT - MOMENTS OF TRUTH

When you're off on a two-year jaunt, as I have been since January 1996, it's easy to think that all is possible given all that time in which to work. But since the completion of our magnificent second annual science meeting at Trent University in August, and more so in recent weeks, the realization hit home that my time as president is drawing to a close. This is one of the terrifying moments of truth: Where has the time gone? Have we accomplished a solid proportion of those things we set out to do 22 months ago? Are we (S.C.O.) still more significant as a vehicle for Canadian ornithology than we were at the start? What things remain undone from the initial work tasks we gave ourselves, and how may they be delivered to the next team of officers? These matters were settled at the outset, and we knew intellectually that they would be, but it is very gratifying to realize that all is well with an easy movement of unfinished business from one executive body to the next. The creators of our society showed great wisdom in the way they set up our constitution and working by-laws.

Things do look beautiful. We have come a long way towards our goal of information dispersion through annual meetings in Canada with particular focus on our science and the publication of important findings. The magnificent gatherings during the past two years have been impressive. The special themes of our science meetings - "biology and conservation of forest birds" in 1996 at Fredericton, and "linking bird monitoring with research and conservation: an integrated approach" this year at Peterborough - display a special emphasis by our society towards real conservation and research issues within avian science in Canada. This focus combined with the 1997 publication of the mini-symposium held by S.C.O., with the Wilson Ornithological Society, in 1993 in Guelph, Ontario, entitled "Monitoring bird populations: the Canadian experience" (published for S.C.O. by Canadian Wildlife Service: C.W.S. Occasional Paper Number 95, 62 pp., 1997) and the soon-to-be-published Fredericton proceedings on forest birds, go a long way to show what we can contribute to North American ornithology. Successful use of knowledge generated from our science, collectively and by our scientific curiosity as individuals, must make the critical links between research findings and application to solving wildlife problems, with particular focus on birds and their habitats. Conservation and the wise use of the "fruits of our labours" are paramount to the success of S.C.O.. Thus, science meetings constructed to bring interested parties together to discuss and review important subjects and to produce useful "products" including first-class science publications seem the best route to follow. We have made giant strides along that pathway which can only assure our Society of a strong and useful future. As Hugh Boyd, this year's recipient of our Doris Huestis Speirs Award for Outstanding Contributions to Canadian Ornithology (see below), said repeatedly over the years concerning the role of ornithology in Canada and elsewhere: "Let's keep the pressure on!"

But we cannot and should not rest on our laurels. We must continue to move forward. Indeed much more needs to be done. Some immediate challenges are to provide a permanent vehicle for the dispersion of scientific information on birds, something better than an occasional proceedings publication - perhaps a regular journal with a particular focus on conservation biology of Canadian birds and associated topics. We also need to focus on needs of the ornithological community at large, both professionals and serious amateurs, to help all of our members develop their avian interests to their fullest potential. In the longer term, we need to carve out a direction that will stimulate and excite avian researchers and continue to create a storehouse of knowledge, which can be used to help reduce degradation, of environments important to birds, by human activity. Indeed it will be necessary to further enhance what we already have, such as our all-important communication vehicle for noteworthy news items, Picoides. The list goes on.

The challenge ahead is enormous. It requires the determination and commitment of an active and involved S.C.O. membership to make it successful, in the months and years to come, as we enter the next millennium. The need for an active meetings committee to arrange a full and varied program of events for future meetings is very high, particularly if we are to continue a theme approach of important topics; planning such science meetings takes time. To expand the influence of our research findings, the establishment of an S.C.O. journal is essential. But how is a two-issue a year publication to be funded? Should we consider raising membership dues to help cover the costs of its preparation, publishing, and distribution? Or can we support a journal through the combined increases in membership that might arise through a journal offering as part of the subscription without a fee increase? What benefits might be expected by our accepting membership in OSNA — Ornithological Societies of North America — likely to occur once an S.C.O. science publication is in place? All these questions need to be considered as we move forward.

There are other ways you can help the S.C.O. develop and prosper. For a start, encourage your friends, working colleagues, and students to join the society. Doubtless each of us knows people that stand out as potential recruits, people that will receive benefits from an S.C.O. membership as well as contributing. Get them to join, and have them solicit new members from their associates too. Second, get more involved by attending annual meetings and offering ideas of what you'd like to see occur at meetings. The executive council and planning committees welcome your input. Suggestions of where to hold meetings and potential host organizations are also invaluable, as are offers by members to volunteer their

help. And third, become a sustaining member and commit more than the annual member's fee on a regular basis in support of S.C.O. initiatives. S.C.O. membership offers excellent value, that will only increase in the future.

As part of the S.C.O. development plan, each member will soon receive a free copy of "Monitoring Bird Populations: The Canadian Experience" (edited by Erica H. Dunn, Michael D. Cadman and J. Bruce Falls) along with S.C.O. membership forms for you to recruit new members. Funds to cover the cost of copies for distribution to members have been provided by the Society and the Canadian Wildlife Service (Environment Canada). We hope every one finds the contents interesting and useful, sufficient to serve as a catalyst for members to go out and secure a couple of new members for S.C.O.. You will be doing them a favour!

And before closing, let me share with you a delightful piece of news. Our 1998 Annual Science Meeting is to be held in the westernmost part of our country - British Columbia - co-hosted by Fred Cooke of Simon Fraser University (Burnaby, B.C.) and Kathy Martin of the University of British Columbia (Vancouver, B.C.) and Canadian Wildlife Service (Delta, B.C.). Keep watching for further details. Plan to attend as part of your celebration of summer 1998!

Let me end by saying it has been my privilege to serve you, along with my fellow members of council, for the past four years, as Vice-President (1994-95) and then as President (1996-97). My tasks in both offices were made much easier by an enthusiastic and hard-working executive body and committee/working-group members, always ready to help and undertake work assignments as required. Although indebted to all members of council during those years, I am particularly grateful to Tony Diamond, Tom Dickinson, Tony Erskine, Nancy Flood, Ross Lein, and Henri Ouellet for their strong support throughout my presidency. I look forward to further challenges in my new role as Past President, one that may allow a more statesmanlike manner of conduct to prevail in contrast to what was sometimes necessary during the earlier functions. As I pass the reins of responsibility to Tony Diamond as incoming President, I feel satisfied and elated, knowing that the Society is in excellent hands with future prospects bright and promising. S.C.O.'s new year will be one of celebration and continued prosperity. There will be other "moments of truth" in the future, and I look forward to sharing them with you. Good fall birding and warmest best wishes for the remainder of 1997 and beyond!

David Nettleship
Head of St. Margaret's Bay
12 October 1997 Nova Scotia

## 1998 SCIENTIFIC AND ANNUAL GENERAL MEETING - THE ROLE OF DEMOGRAPHY IN BIRD CONSERVATION

FOLLOWING SUCCESSFUL MEETINGS AT TRENT UNIVERSITY IN 1997 AND UNIVERSITY OF NEW BRUNSWICK IN 1996, S.C.O. IS PROUD TO ANNOUNCE THAT THE 1998 MEETING WILL BE HELD IN BRITISH COLUMBIA. DATES AND LOCATION ARE STILL TO BE DECIDED, BUT THE SCIENTIFIC SYMPOSIUM THEME WILL BE "THE ROLE OF DEMOGRAPHY IN CONSERVATION", AND THE CO-HOSTS ARE DRS. KATHY MARTIN OF U.B.C. AND CANADIAN WILDLIFE SERVICE, AND FRED COOKE OF SIMON FRASER UNIVERSITY. A PUBLICATION ON THE SYMPOSIUM TOPIC WILL BE PRODUCED, AND PROSPECTIVE SPEAKERS ARE ENCOURAGED TO CONTACT EITHER KATHY OR FRED DIRECTLY [KATHY AT (604) 822-9695 OR kmartin@unixg.ubc.ca; FRED AT (604) 291-5610 OR fcooke@sfu.ca). FURTHER DETAILS IN THE SPRING PICOIDES. PLAN AHEAD TO ATTEND AS PART OF YOUR CELEBRATION OF SUMMER 1998!

## 16th ANNUAL MEETING AND 2nd (stand-alone) CONFERENCE of the SOCIETY OF CANADIAN ORNITHOLOGISTS

**Trent University**
**Peterborough, Ontario**

7-9 August 1997

**Scientific Program**
E.H. Dunn (Chair) & R.J. Robertson (Co-chair)

FRIDAY, 8 AUGUST 1997 (Lady Eaton Lecture Hall)

**SYMPOSIUM - LINKING BIRD MONITORING WITH RESEARCH AND CONSERVATION: AN INTEGRATED APPROACH**

0900-0920 Integrating climate, land use and bird census data to test hypotheses about declines in bird populations in prairie and boreal forest - T.D. Nudds
0920-0940 Results of an evaluation of the Monitoring Avian Productivity and Survivorship (MAPS) program - D.F. DeSante, D.K. Rosenberg, K.M. Burton
0940-1000 Monitoring Cerulean Warblers in eastern Ontario: A proactive conservation opportunity - J. Jones, R.J. Robertson
1000-1020 Mist netting as a tool in revegetation monitoring - C.D. Otahal
[1020-1050 Coffee break]
1050-1110 A potential role for the Forest Bird Monitoring Program in the assessment of ecological integrity - M.D. Cadman, D. Tate, L.E. Friesen
1110-1130 Population change in birds and spruce budworm epidemics: how strong is the connection? - E. Dunn
1130-1150 Breeding bird atlas as a tool to monitor bird distribution - G. Falardeau, J. Gauthier
1150-1210 Causes of population change in the Lesser Snow Goose *(Anser caerulescens caerulescens)* - F. Cooke

[1210-1330 Lunch break]

**CONTRIBUTED PAPERS - SESSION #1 - ORAL PRESENTATIONS**

1330-1350 A hierarchical framework for conserving biodiversity - K.E. Freemark, D. White, E.M. Preston, A.R. Kiester
1350-1410 Constructing null models to assess effects of habitat fragmentation on forest bird diversity - C. Henschel
1410-1430 Can volunteers with moderate skill levels contribute to forest bird monitoring? - M.A. McLaren, M.D. Cadman
1430-1450 Birds of a feather do not always flock together - the 1996 prairie regional bander trainers' workshop at Delta, Manitoba - B.C. Dale
1450-1510 Bird community monitoring programs in the Calakmul Model Forest, Campeche, Mexico - J. Salgado
[1510-1540 Coffee break, & Poster Session - see Abstracts]
1540-1600 Distribution patterns of migrant and resident birds in secondary forests of the Yucatan Peninsula, Mexico - A.L. Smith, R.J. Robertson
1600-1620 Nesting success and productivity of two forest-dwelling neotropical migrant species in southwestern Ontario - L.E. Friesen, M.D. Cadman, R.J. MacKay
1620-1640 A comparison of brood parasitism by Brown-headed Cowbirds in island and mainland habitats - D.P. Tate, A.L.A.Middleton
1640-1700 Demography and temporal behaviour patterns of the Brown-headed Cowbird at Delta Marsh, Manitoba - B.E. Woolfenden, H.L. Gibbs, S.G. Sealy

[1700-2000 Dinner, & Annual General Meeting]

2000-2115 **Film - "Roger Tory Peterson - portrait of a bird artist"** [Bata Library Film Theatre]

SATURDAY, 9 AUGUST 1997 (Lady Eaton Lecture Hall)

0845-0900 Presentation of the 1997 DORIS HUESTIS SPEIRS AWARD FOR OUTSTANDING CONTRIBUTIONS TO CANADIAN ORNITHOLOGY TO HUGH BOYD

0900-0930 **THE DORIS HUESTIS SPEIRS LECTURE - "Looking backwards, Looking forward: 30 Years of Canadian ornithology"** - Hugh Boyd

**WORKSHOP - GEOGRAPHIC INFORMATION SYSTEMS : APPLICATIONS IN ORNITHOLOGY**

0930-0950 Selected issues for the successful application of a geographic informations system in ornithology: some considerations for working with georeferenced data - F. Huettmann

0950-1010 Forest birds and woody plants: GIS analyses of broad-scale biogeographic relations - R.B. Boone, W.B. Krohn

[1010-1040 Coffee break, & exhibits]

1040-1100 GIS in the alpine: Vancouver Island White-tailed Ptarmigan - C.L. Hitchcock, K. Martin

1100-1120 Determining conservation and monitoring priorities using digitized range maps and GIS - C.M. Francis, L. Heyming, M.S.W. Bradstreet

1120-1130 Concluding discussion

[1130-1230 Lunch break]

**CONTRIBUTED PAPERS - SESSION #2 - POSTER PRESENTATIONS**

1230-1400 including both GIS and contributed posters
- see Abstracts

**CONTRIBUTED PAPERS - SESSION #3 - ORAL PRESENTATIONS**

1400-1420 Nest site selection by female Black-capped Chickadees - S.M. Ramsay, L.M. Ratcliffe, K. Otter

1420-1440 Female Tree Swallows seek extra-pair fertilizations regardless if mate is their original "choice" or a previous floater - C.A. Barber, R.J. Robertson, P.T. Boag

1440-1500 Polygyny in territorial birds: does it pay to nest asynchronously? - S. Pribil

1500-1520 Spring-summer insect prey resource base on the breeding grounds (Lake Opinicon, Ontario) of neotropical migrants and residents - A. Keast

[1520-1550 Coffee break, and exhibits]

1550-1610 Winter caching ecology and pilfering behaviour of chickadees and nuthatches - C. McLaren

1610-1630 Basal metabolism and incubation energetics of an arctic nesting shorebird: physiological and behavioral considerations - M. Williamson, J.B. Williams, E. Nol

1630-1650 Hatching asynchrony and food stress in Ring-billed Gulls: an experimental test of hypotheses - Percy N. Hebert and Raymond McNeil

1650-1710 The sexy son hypothesis - plausible once again? - S. Pribil

## ABSTRACTS

[listed alphabetically by first (= presenting) author; e-mail for corresponding author(s)]

**Female Tree Swallows seek extra-pair fertilizations regardless if mate is their original "choice" or a previous floater.** *Colleen A. Barber, Raleigh J. Robertson, & Peter T. Boag* (Dept. of Biology, Queen's Univ., Kingston, Ont. K7L 3N6; barberc@biology.queensu.ca)

Before the onset of female fertility, we removed twelve of the earliest-settling male Tree Swallows from their nestboxes and mates to determine whether males who procured nesting sites early in the season differed in age, morphology, or nesting success from floater males who only obtained a nest site through our removal of male residents. Early-settling males were significantly older, and tended to have fewer mite patches than did replacement males. Fledging success, however, did not differ between control and experimental groups. We also tested whether females who remained paired with early-arriving males (their original "choice") obtained fewer extra-pair fertilizations than females nesting with replacement males. The proportion of nests with extra-pair young was not different between control and experimental nests, suggesting that females who had their original mate choice altered were not more likely to engage in extra-pair copulations. In nests containing extra-pair young, control and replacement males fledged similar numbers of within-pair young, but control males fledged more extra-pair young than replacement males, despite similar clutch sizes and hatching success. These results do not support the hypothesis that the female's initial choice of mate influences her decision to obtain extra-pair fertilizations.

**Behavioural tactics of Tree Swallow floaters.** *Cheryl L. Bishop[1], Bart Kempenaers[2] and Raleigh J. Robertson[1]* ([1] Dept. of Biology, Queen's Univ., Kingston, Ont. K7L 3N6; 4clb@qlink.queensu.ca; [2] Konrad Lorenz Inst., Vienna, Austria) [poster paper]

Floaters are birds that do not defend and maintain a breeding territory. Floaters are common in the Tree Swallow which depends on secondary cavities or artificial nest boxes for nest sites. Tree Swallows also have a high frequency of extra-pair paternity, and studies have shown that these fathers are not from neighbouring boxes. Therefore, they must be either residents away from the grid of nest boxes or floaters. In this study, the behavioural tactics of floaters are examined to establish whether these birds 1) are specialists and reproduce only through extra-pair fertilizations, 2) are hopeful residents looking for nest sites, or 3) are opportunists, looking for nest sites, and will copulate if the chance arises. The greatest number of intrusions occurred during the pre-fertile period which indicates that intruders were hopeful residents looking for available nest sites and not primarily for receptive females. Intrusions in the pre-fertile period were characterized by flights within 3m of nest boxes and hovering. In the post-fertile period, more intruders landed on or entered the boxes. This seasonal difference in behaviour could indicate that birds that do not reproduce visit successful nests to gain parenting experience. However, this difference may simply be an artefact of reduced defence by the residents against conspecifics once nestlings hatch. No extra-pair copulations were observed on the grid. These behavioural observations cannot serve to explain the high frequency of extra-pair paternity, and copulations must occur away from the grid.

**Forest birds and woody plants: GIS analyses of broad-scale biogeographic relations.** *Randall B. Boone & William B. Krohn* (Dept. of Wildlife Ecology, & USGS Biological Resources Dvn., Me. Co-op. Fish Wildl. Research Unit, 5755 Nutting Hall, room 210, Univ. of Maine, Orono, Me. 04469-5755 U.S.A.; boone@apollo.umenfa.maine.edu)

McMahon (1990) showed that range limits of woody plants in Maine exhibited two transition zones - regions 50-100 km wide where many plants had range limits. We hypothesized that birds may be responding to woody plant distributions at a broad scale. When bird richness in Maine (n=186) was correlated with woody plant distributions (n=240), we could explain 45% of variation in bird richness using nonlinear relations with woody plant distributions [much more than for amphibians (26%), reptiles (3%), and mammals (26%)], plus 33% in linear relations. The birds were then divided into groups based upon habitats used during the breeding season (i.e. barren/urban; early successional; wetland/open water; forest generalist; forest specialist), and we compared between groups the percentage of species with range limits in the state, and their distributions. Forest specialists (n=44) had 61% of species with range limits in the state, whereas forest generalists (n=39) had 13% - forest specialists appeared limited by the distribution of woody plants, whereas forest generalists were not. Richness and range limit densities for forest specialists and the north-south transition zone were strongly spatially coincident, and early successional species were associated with the east-west transition zone. We concluded that birds exhibit transition zones akin to plants. When bird richness across eastern North America was compared to the north-south vegetation transition zone, they were spatially coincident as well. The bird species transition zone extends across eastern North America, with richness highest between 45° and 50°N latitude.

**A potential role for the Forest Bird Monitoring Program in the assessment of ecological integrity.** *Michael D. Cadman, Douglas Tate & Lyle E. Friesen* (Can. Wildl. Serv., Envir. Canada, Guelph, Ont. N1H 3N4; Mike.Cadman.ec.gc.ca)

The Canadian Wildlife Service's Forest Bird Monitoring

Program is a volunteer-based program to monitor and determine habitat associations of forest birds, particularly forest-interior species. Sites are established primarily in large, fairly mature, unmanaged forest tracts, many of which are in provincial or national parks. As such, the program's data provide a baseline for comparison with sites in less pristine conditions. This paper discusses the potential application of FBMP data for this purpose and how they might be used in assessing the ecological integrity of the forest bird community.

**Causes of population change in the Lesser Snow Goose *(Anser caerulescens caerulescens).*** *Fred Cooke* (Dept. of Biosciences, Simon Fraser Univ., Burnaby, B.C. V5A 1S6; fcooke@sfu.ca)

Many different types of data on waterfowl populations are collected on a regular basis by C.W.S. and other groups. These include mid-winter inventories, breeding ground surveys, harvest surveys, "wing bees", Christmas Bird Counts, banding and recovery data. Usually these data, if used at all, are mainly valuable for setting hunting regulations. They can give us much more important information, however, not only on population change, and also can identify causes of population changes. The mid-continent population of Snow Geese has increased dramatically over the past 25 years. Annual adult mortality has decreased due to a decline in mortality by hunting, whereas mortality of immatures has increased due to an increase in post-fledging mortality as feeding conditions in the arctic breeding grounds have deteriorated. Some conservation consequences of these demographic changes are discussed.

**Birds of a feather do not always flock together - the 1996 prairie regional bander trainers' workshop at Delta, Manitoba.** *B.C. Dale* (Can. Wildl. Serv., 200-4999 98th Ave., Edmonton, Alta. T6B 2X3; brenda.dale@ec.gc.ca)

In an effort to support better and more consistent training and assessment of new banders, a workshop for passerine banding trainers from the prairies was held at Delta, Manitoba, in July 1996. Participants shared practical knowledge and information on methods for teaching various banding skills. Each trainer and the workshop facilitator independently examined, measured and classified the species, age and sex of 50 dead birds. Answers were then compared in an open forum, and trainers indicated if their classification of each bird was changed by the discussion. Initial individual performance varied from near-perfect to unacceptably high levels of critical error for each of species, age and sex. Post-discussion levels of agreement were high. Trainer workshops are one means for providing highly motivated volunteers with wider access to current knowledge and each other. This updated and shared collective knowledge and experience in trainers may improve the relevance and uniformity of information passed on to new banders.

**Parental care and nest site selection by Golden-winged Warblers in the absence of Blue-winged Warblers.** *Timothy D. Demmons & Raleigh J. Robertson* (Dept. of Biology, Queen's Univ., Kingston, Ont. K7L 3N6; 4tdd@qlink.queensu.ca) [poster paper]

The Golden-winged Warbler has received relatively little scientific attention in recent years. This is despite regional declines and its subsequent classification as a species of special concern by the U.S. Fish & Wildlife Service. In 1997, 10 Golden-winged Warbler nests were discovered in the region surrounding the Queen's University Biological Station (QUBS). This study area has a moderate density of Golden-winged Warblers and no breeding Blue-winged Warblers. An intensive parental-care study was conducted to investigate division of labour throughout the breeding season. Competition with Blue-winged Warblers has been discussed as a possible cause for the decline of the Golden-wings in sympatric sites. The vegetation characteristics surrounding each nest were analysed and compared with the results of other studies conducted in regions of sympatry with Blue-wings. Differences in nest-site selection in allopatric and sympatric sites were assessed. Lastly, management recommendations are provided for the creation and conservation of Golden-winged Warbler nesting habitat on QUBS.

**Results of an evaluation of the Monitoring Avian Productivity and Survivorship (MAPS) program.** *David F. DeSante, Daniel K. Rosenberg and Kenneth M. Burton* (Inst. for Bird Populations, P.O. Box 1346, Point Reyes Station, Calif. 94956 U.S.A.; 75521.271@compuserve.com)

The MAPS program uses mark-recapture data from over 400 constant-effort mist-netting stations throughout the continental U.S. and Canada to monitor primary demographic trends (productivity, survival) of North American landbirds. In a recent evaluation of the program, we found productivity to be strongly affected by nest location, with shrub nesters consistently lowest and cavity nesters highest. Migration strategy had a weaker effect on productivity, but resident species did have higher productivity than temperate-wintering migrants, with neotropical migrants having the lowest productivity. The reverse was true for survival; thus, high productivity appears to offset low survival. At the scale of a single national park or forest, short-term population trends were explained better by productivity in some cases, in others by survival, and in some cases both seemed to contribute more or less equally. The USGS review panel recommended that MAPS become a component of an integrated North American bird-monitoring program along with the BBS.

**ACWERN: A new network approach to ecological research.** *A.W. Diamond* (Atl. Co-op. Wildl. Ecol. Research Network, Univ. of New Brunswick, P.O. Box 45111, Fredericton, N.B. E3B 6E1; diamond@unb.ca) [GIS Workshop - poster paper]

ACWERN was established in 1994 as a network of 3 research chairs, at Fredericton, N.B. (Univ. of N.B.), Wolfville, N.S. (Acadia Univ.), and St. John's, Nfld. (Memorial Univ. of Nfld.).

Core funding is provided by Canadian Wildlife Service and NSERC (Nat. Sci. Eng. Res. Coun. of Canada), with contributions from the 3 universities. The author (Senior Chair) is at U.N.B.; Philip Taylor at Acadia and Ian Jones at Memorial are Associate Chairs; Richard Elliot is ACWERN Coordinator at C.W.S., Sackville, N.B. ACWERN's mission is to enhance understanding of wildlife ecology in Atlantic Canadian ecosystems and to provide educational opportunities for students. The poster provides summaries of the major projects now underway, with a map showing their locations; currently we have 22 graduate student research projects addressing questions in conservation biology, seabird ecology, and forest bird ecology. The majority of projects involve birds, with a common focus on responses to changes in their ecosystems.

**Population change in birds and spruce budworm epidemics: How strong is the connection?** *Erica Dunn* (Can. Wildl. Serv., 100 Gamelin Blvd., Hull, Que K1A 0H3; Erica.Dunn@ec.gc.ca)

Many neotropical migrants increased in the 1970s and decreased in the 1980s. In the same period there was a major epidemic of spruce budworm, which began in the Maritimes and moved westward. To see if bird numbers responded directly to budworm abundance, I searched BBS and migration monitoring data for evidence of population peaks that shifted geographically in synchrony with the budworm outbreak. Results indicated agreement of trends among many species in some data sets but not others. Only the "budworm specialist" warblers and Evening Grosbeak showed strong concordance across all data sets. Results do not provide strong evidence that other species respond dramatically to budworm, but for various reasons do not give definitive negative evidence of response. The study shed light on certain limitations of monitoring programs, and raised numerous questions for future research.

**Setting priorities for Canada's birds.** *Erica Dunn* (Can. Wildl. Serv., 100 Gamelin Blvd., Hull, Que K1A 0H3; Erica.Dunn@ec.gc.ca) [poster paper] - see also Conservation Feature in this issue.

C.W.S. developed a simple scheme to rank species at a national scale using 2 scores: (1) "Supervisory Responsibility", a scale-free score dependent on maximum proportion of range (any season) in area of interest ("AI"); and (2) a "Preliminary Concern" score based on equal weighting of "Trend" and "Vulnerability" (reflecting global abundance and breadth of range). Score 1 identifies species the AI has special responsiblity to look after. Score 2 (strongly emphasizing trend) aims at early warning of concern. Canada has high Supervisory Responsibility for many arctic-nesters and short-distance migrants. High Preliminary Concern species include landbirds at the northern edges of their ranges in Canada, seabirds and shorebirds. Landbirds ranking high on both lists overlap particularly in winter along both U.S. coasts and s. central U.S., and include longspurs, pipits, sparrows, loons, and cranes.

**Breeding bird atlas as a tool to monitor bird distribution.** *Gilles Falardeau & Jean Gauthier* (Serv. can. de la faune, Rég. québ., 1141 rte de l'Église, Ste-Foy, Québec G1V 4H5; Jean.Gauthier@ec.gc.ca)

Breeding Bird Atlases are useful tools for monitoring bird distribution, particularly when repeated at regular intervals. In the Quebec Breeding Bird Atlas, bird distribution was correlated with major ecological regions, which brought new perspectives in understanding bird ecology. It showed how different bird species, particularly those with a large distribution, responded to various landscapes, and provided useful information for managers and conservationists. It also helped identify the forest regions most important for a given species. To accomplish this, we devised a method that overcame observer variability and allowed appropriate comparison between 100 $km^2$ grids from one ecological region to another.

**Determining conservation and monitoring priorities using digitized range maps and GIS.** *Charles M. Francis, Louise Heyming, & Michael S.W. Bradstreet* (Long Point Bird Observatory, P.O. Box 160, Port Rowan, Ont. N0E 1M0; cfrancis@nornet.on.ca)

Because bird species differ in their habitat requirements, land management is likely to increase habitat for some species, and decrease habitat for others. To ensure preservation of avian biodiversity, lands must be managed in such a way that, on appropriate local, regional, or national scales, adequate habitat is available for each species. To determine which species should be emphasized in management of each area (at various scales), two major criteria can be considered: responsibility scores and preservation needs. The responsibility score varies among regions, and is an indication of the proportion of a species population that occurs in that region. If a high proportion of a species population occurs in a region, then that region has a particularly high responsibility for protecting that species. The preservation score is an indication of the immediate need for protection of a species. This may be high if a species is rare, or undergoing severe population declines, or otherwise is at risk. We have been using GIS and digitized range maps and atlas data to aid with two components of the process: estimating responsibility scores, and developing monitoring strategies to estimate population trends of each species. For estimating responsibility scores, we are using GIS to estimate the proportion of the range of a species that occurs within a jurisdiction, relative to the area of that jurisdiction, using the range of each species as a surrogate for population size. We are using range maps at the national and provincial level, and atlas data at the local level. Atlas data are much more precise, but present some particular challenges due to uneven and missing coverage in some areas - we are exploring interpolation methods such as kriging to fill in some of the missing data. For developing monitoring strategies, we have been using GIS to compare species range maps with maps of Breeding Bird Survey coverage, to determine which species are adequately covered by

BBS at present, which species could be adequately covered by adding more routes, and which species need to be monitored using other programs such as Migration Monitoring.

**Use of covariates to reduce variance in migration counts.** *Charles M. Francis* (Long Point Bird Observatory, P.O. Box 160, Port Rowan, Ont. N0E 1M0; cfrancis@nornet.on.ca) [poster paper]

Many species of birds are routinely counted by bird observatories on migration. Provided the counting procedures are sufficiently standardized, these counts may provide an index to population size which can be used to monitor population trends. Such counts are often analysed in terms of mean numbers per day or net-hour, or even seasonal totals if coverage was reasonably complete. However, migration counts can be strongly influenced by weather patterns as well as date within the season. Hussell et al. (1992) suggested using multiple regression to derive indices based upon residuals from expected count for particular dates and weather conditions, and used this approach to derive annual indices and long-term population trends for birds migrating past Long Point, Ontario. Unfortunately, obtaining the necessary weather data can be difficult or expensive, and may lead to bias if the weather station changes. Thus, it is appropriate to evaluate the extent to which this approach actually leads to a more precise or more accurate count. I derived population indices for counts from Long Point Bird Observatory using no covariates (i.e. daily means of either original or log counts), using only date covariates, and using date and weather covariates. Trends calculated from any of the methods showed similar correlations with the Breeding Bird Survey, though the mean trend differed among methods, suggesting a possible bias. Trends estimated using multiple regression procedures with date covariates generally had lower variances than those calculated without covariates. However, including weather covariates did not produce much further improvement. I will also test, using simulation, whether covariates improve individual year indices, and whether they are relatively more important if data for the season are incomplete (i.e. counts were missed on some days).

**A hierarchical framework for conserving biodiversity.** *Kathryn E. Freemark[1], Denis White[2], Eric M. Preston[3], A Ross Kiester[4]* ([1] Nat. Wildl. Res. Centre, Can. Wildl. Serv., Hull, Que.; [2] Dept. of Geosciences, Oregon State Univ., Corvallis, Ore., U.S.A.; [3] U.S. Envir. Prot. Agency, Corvallis; [4] U.S. Dep. Agric. For. Serv., Corvallis; Kathryn.Freemark@ec.gc.ca)

Multiple-scale hierarchical approaches are needed for conserving biodiversity. This paper presents a framework based on analyses within the U.S.A. to (1) understand associations of biodiversity with environmental factors over large areas, (2) identify those areas within larger regions having species assemblages which contribute the greatest diversity to the biota, (3) evaluate alternative approaches for managing those important areas in order explicitly to include conservation of biodiversity in land-use planning. Analyses at the scale of the conterminous U.S.A. illustrate associations of environmental factors with the spatial distribution of bird species richness, and centres of anthropogenic risk. Important locations of biodiversity are identified for Oregon and Pennsylvania using hot-spot and complementarity analyses. Landscape-level studies then focus on consequences of possible land-use changes at places identified as important within each state. Biological data are combined with land-use and habitat maps for current conditions, for reconstructions of past conditions, and for one or more alternative scenarios about how the region might change in future, developed in collaboration with land-use planners. Risk statistics are calculated for various measures of biodiversity, showing the proportion of habitat gained or lost in each scenario relative to current conditions.

**Nesting success and productivity of two forest-dwelling neotropical migrant species in southwestern Ontario.** *Lyle E. Friesen[1], Michael D. Cadman[1], R.J. MacKay[2]* ([1] Can. Wildl. Serv., Envir. Canada, Guelph, Ont. N1H 3N4; [2] Dept. of Statistics and Actuarial Science, Univ. of Waterloo, Waterloo, Ont. N2L 3G1; Mike.Cadman@ec.gc.ca)

Forest fragmentation in the temperate zone has been implicated in the decline of neotropical migrant songbirds. Impaired reproductive success in fragmented forests may explain why population declines of some neotropical migrant species have been more severe in small forests than in larger ones. We examined three variables for their impact on the nesting success and breeding productivity of Wood Thrush and Rose-breasted Grosbeak in the Region of Waterloo in southwestern Ontario: forest size, brood parasitism, and nest location (nearness to the forest edge). Sixty-one thrush nests, and 24 grosbeak nests, were monitored in 1996. We found that nesting success and productivity were not affected by forest size and nest location, but were significantly reduced by brood parasitism. Our study demonstrated that some neotropical migrants can nest successfully in woodlands in an intensively farmed landscape, as almost 60% of Wood Thrush nests successfully fledged host young. Differences between our results and those of other studies suggest that severe reproductive dysfunction may not be a general phenomenon of all settled landscapes. Our study does not detract from the demonstrated value of large forests for maximizing regional biodiversity, nor does it justify further fragmentation of existing forest cover. But it does provide additional incentive for conservation in settled landscapes, where small forest fragments are often all that remain of the original forest cover.

**Hatching asynchrony and food stress in Ring-billed Gulls: an experimental test of hypotheses**. *Percy N. Hebert and Raymond McNeil* (Dept. of Zoology, Univ. of Manitoba, Winnipeg, Man. R3T 2N2; phebert@cc.UManitoba.ca)

This study examined the importance of several hypotheses, specifically the Brood Reduction (Lack 1947), Quality

Assurance (Slagsvold et al. 1995), and Peak-load Reduction (Hussell 1972) hypotheses, in explaining hatching asynchrony in the Ring-billed Gull *(Larus delawarensis)*. The hypotheses were tested by manipulating hatching spreads (in 2 years) and food availability (in 1 year). We then compared mass and size of chicks aged 18-20 days from broods that hatched asynchronously (unmanipulated) and synchronously (manipulated). We also compared feeding rates, total brood failure and fledging success between treatments. Mean mass and/or size of first-hatched chicks was greater in asynchronous broods compared to synchronous broods, regardless of food availability, and this is in agreement with the Brood Reduction and Quality Assurance hypotheses. As predicted by the Brood Reduction hypothesis, total brood failure was lower in asynchronous broods compared to synchronous broods, and likely resulted in the observed tendency for fledging success to be greater in asynchronous broods compared to synchronous broods. Feeding rates were significantly lower for parents tending synchronous broods, and this is in agreement with the Peak-load Reduction hypothesis. However, energy savings accrued to parents tending asynchronous broods likely resulted from efficient distribution of resources rather than a spreading-out of peak chick demands as proposed by the Peak-load Reduction hypothesis.

**Constructing null models to assess effects of habitat fragmentation on forest bird diversity.** *Chris Henschel* (Dept. of Zoology, Univ. of Guelph, Guelph, Ont. N1G 2W1; chensche@uoguelph.ca)

How do we assess the effects of habitat fragmentation on the ecological integrity of ecosystems? One approach has been to investigate the presence or absence of individual indicator species. This may not, however, always provide accurate insight to the integrity of the entire ecosystem. Furthermore, results obtained through investigating individual species will yield results that are only useful within that species' range. A more generalizable approach is to assess the total diversity of forest bird species. Bird diversity in fragmented landscapes can be compared to null models of diversity constructed in unfragmented areas. Species-area relationships serve as appropriate models for this comparison. Working out of the Queen's University Biological Station, diversity data were collected from several isolated woodlots of various sizes, as well as from one large section of contiguous forest south of Lower Rock Lake in eastern Ontario. The usefulness of large-scale bird inventories (in this case, the Ontario Breeding Bird Atlas) in constructing null models for application on a smaller landscape scale is assessed.

**GIS in the alpine: Vancouver Island White-tailed Ptarmigan.** *Christine L. Hitchcock and Kathy Martin* (Cen. for Appl. Cons. Biol., Forest Sci., Univ. of B.C., Vancouver, B.C. V6T 1Z4; hitchcoc@SFU.CA)

We use GIS as part of an inventory of the provincially blue-listed subspecies of White-tailed Ptarmigan *(Lagopus leucurus saxatilis)* endemic to Vancouver Island. Metapopulation dynamics are probably important because their high-elevation alpine habitat is distributed in patches that differ in size, extent and the degree of connectivity to other patches. We use ArcView 3.0 for the PC and Macintosh to visualize study areas and locations of banded ptarmigan and radio relocations, to link these positions to existing habitat classifications, and to illustrate seasonal movements and natal and breeding dispersal. The B.C. provincial standard Albers projection is suitable for a large area, but necessitates transformations from other projections. Alpine habitat mapping is coarser than that for the more resource-rich forest habitats. We will use our field research to make on-the-ground comparisons of habitat with the existing remote-sensing classifications from Landsat and aerial photographs. In addition to visualization, we will use GIS to define habitat patches. We plan statistical analyses of habitat use and preference both in the breeding season, and in winter when montane forest may be an important habitat. Ultimately, we hope to estimate the distribution and abundance of the birds, and determine habitat availability for ptarmigan on Vancouver Island.

**Selected issues for the successful application of a geographic information system in ornithology: some considerations for working with georeferenced data.** *Falk Huettmann* (ACWERN - Univ.of New Brunswick, P.O. Box 44111, Fac. of For. & Envir. Manage., Fredericton, N.B. E3B 6C2; k9wk@unb.ca)

A geographic information system (GIS) is a dynamic and highly complex tool: many players and components must work together for its successful use. Organizational issues are demanding; the software vendor, the funding agency, human interactions, the software/hardware topic, the database management/format, the maintenance and education costs for such a complex software system have to be taken very seriously. Ignoring this full set of components usually leads to the failure of the GIS project in the long term. Using a GIS in an ornithological research project needs even more consideration as it is expected nowadays to answer demanding research questions beyond colorful maps and the simple use of buffer zones/vectors. These questions are centred around birds, highly mobile animals which ignore borderlines and can be very difficult to study. Different data sets are overlaid often with each other, area coverages are calculated, surfaces are interpolated, point data are queried for their distribution, different datasets are stratified or databases from different sources are used for overlaying; thus spatial statistics become a major issue although statistical GIS topics are not yet far developed. For example, it is difficult to find a method of calculating the confidence limits for the combined use of GPS (Geographic Positioning System), telemetry, satellite data or other processed datasets in a GIS. The use of georeferenced data has its own rules and pitfalls. Using a GIS in bird research combines different research fields,

such as geography, statistics, computer science, ornithology, and creates a complete new research field. Based on the research project "Environmental determination of seabird distribution off eastern and arctic Canada" using SPANS-GIS and the PIROP database, selected GIS issues are presented and recommendations will be discussed.

**A simple method for measuring and testing the significance of nonlinear population trends.** *David J.T. Hussell* (Min. of Nat. Res., Peterborough, Ont. K9J 8M5; husseld2@epo.gov.on.ca) [poster paper]

Trends are often measured by fitting straight lines to annual population indices ($I = a+bY$, where $I$ is the population measure and $Y$ is year). With nonlinear population data, statistical assumptions are violated and results may be misleading. Nonlinear regression (e.g. $I = a+bY+cY^2+dY^3$) may give a better fit, but interpreting meaning and significance of coefficients is hard, and they give no direct estimate of overall trend. This can be overcome by a simple transformation of variables. The equation becomes $I = a_1+a_2X_1+cX_2+dX_3$, where $X_1$, $X_2$, and $X_3$ are transformed year variables (details in poster), $a_1$ estimates year A index and $a_2$ estimates differences between indices in years B and A. If years B and A are the first and last, then $a_2$/(year B - year A) estimates overall rate of change, and significance of $a_2$ is also the trend significance. Other transformations allow testing differences between 1 year and a block of years, or between 2 blocks of years.

**Monitoring Cerulean Warblers in eastern Ontario: a proactive conservation opportunity.** *Jason Jones and Raleigh J. Robertson* (Dept. of Biology, Queen's Univ., Kingston, Ont. K7L 3N6; jonesja@biology. queensu.ca)

As a result of monitoring showing the most precipitous population declines of any North American wood-warbler, the Cerulean Warbler *(Dendroica cerulea)* has been listed as vulnerable in Canada. In recent years, studies at the Queen's University Biological Station, in conjunction with the Eastern Ontario Model Forest, have shown sizable local populations and high breeding success in these populations. Current research is focusing on determining the density and distribution of the eastern Ontario population on a larger scale. To this end, the Cerulean Warbler Monitoring Project was established in May 1996 with the aid of volunteers. The sampling regime was designed to highlight variation in breeding densities in relation to habitat structure, land management regimes and the resulting landscape mosaic of eastern Ontario. The 1996-97 surveys have shown that this species inhabits a very broad range of habitats in eastern Ontario; over 60% of point-counts detected breeding Ceruleans in habitats ranging from deciduous forests to sumac-juniper scrub. Research projects growing out of this monitoring effort include examining territory size and distribution in relation to cohabiting species, testing source-sink dynamics models and exploring the significance of semicoloniality. One of the primary benefits of intensive monitoring of bird populations is that it can allow for proactive conservation efforts. We have an important opportunity in eastern Ontario for the conservation of the Cerulean Warbler, and it is hoped that linking monitoring efforts with extensive research and public education will allow us to capitalize on it.

**Spring-summer insect prey resource base on the breeding grounds (Lake Opinicon, Ontario) of neotropical migrants and residents.** *Allen Keast* (Dept. of Biology, Queen's Univ., Kingston, Ont. K7L 3N6)

The return of migratory songbirds to Ontario breeding grounds in May is closely scheduled to the initial explosion of prey insects. Northward-moving warblers at Prince Edward Point feed on the dense masses of emerging chironomids that come from the surrounding water and settle on shoreline trees. Caterpillars hatch simultaneously with the unfolding of the terminal leaf buds in the breeding areas and reach lengths of 8 mm within a few days. Malaise trap samples set at ground level and sticky traps set at various heights through the trees reveal the appearance of dozens of families of insects within the first days of May. It is suggested that this great insect diversity is basic to the body tissue reconstitution permitting territorial activity, courtship, and breeding. Subsequently, certain resources figure disproportionately in food fed to young, e.g. green caterpillars to the various warbler species and chickadees, odonates to Tree Swallows. Many of these resources taper off in June. Young of the first Phoebe broods are fed largely caterpillars, those of the second one (late June-early July) adult moths, that replace caterpillars as a dominant prey type. Whilst many late summer insects (e.g. grasshoppers) are utilized by few bird species, food availability in itself is probably not the main reason why some bird species only have single broods.

**Dispersal and population persistence for White-tailed Ptarmigan on Vancouver Island.** *Kathy Martin[1], Christine Hitchcock[1], Karen Wiebe[1], and Jessica Young[2]* ([1] Dept. of For. Sci., Univ. of B.C., Vancouver, B.C. V6T 1Z4; [2] Dept. of Biology, Coastal Carolina Univ., S. Car., U.S.A.; kmartin@unixg.ubc.ca) [poster paper]

Very little research has been done on alpine birds in Canada beyond a few basic inventories. In B.C., 17% of the land area is alpine tundra. Birds residing in naturally fragmented alpine habitat face special problems due to small populations and the need to disperse considerable distances to find suitable habitat. On Vancouver Island, the alpine ranges from extensive and fairly continuous patches centrally, to smaller, fragmented patches in the south. The Vancouver Island White-tailed Ptarmigan *(Lagopus leucurus saxatilis)* is an endemic subspecies, on the B.C. blue list, in part because current distribution and abundance are unknown. Since 1995, we have located 174 birds, and radiod 54 adults and chicks. We follow radio-collared birds throughout the year to monitor movements between breeding and winter sites. Density estimates are complicated by the need to determine what is suitable habitat,

and by their use of subalpine habitat, which may be extensive. Much of the habitat where we have located birds would be classified as unsuitable or marginal for birds in other studied populations. The longest dispersal distance recorded was 34 km, and southern birds appeared to disperse farther than in the less-fragmented core. The mechanisms for persistence of ptarmigan in naturally fragmented alpine patches may assist us in predicting which species will be most resilient to anthropogenic fragmentation. We plan to extend our surveys to other resident and migrating birds to determine the importance of alpine habitats generally.

**Winter caching ecology and pilfering behaviour of chickadees and nuthatches.** *Celia McLaren* (Dept. of Zoology, Univ. of Toronto, Toronto, Ont.)

I examined cache-pilfering ecology of free-ranging Black-capped Chickadees and White-breasted Nuthatches sharing a stable, central food source to determine if the distance of a cache from the food source affects its probability of pilferage. Artificial caches of sunflower seeds close to a feeder disappeared significantly faster than caches farther from the feeder. This effect may be a result of the greater activity of potential cache robbers closer to the feeder. Secondly, I obtained distance-survivorship data for natural caches of both species. These data followed the same trend as the artificial cache data. Thirdly, I examined the effects of weather on pilfering behaviour. The birds tended to remove more artificial caches in warmer weather, but none of the correlations observed was significant. The results indicated that cache loss due to pilferage is common, and is an important factor in the optimization of cache location around a central food source.

**Can volunteers with moderate skill levels contribute to forest bird monitoring?** *Margaret A. McLaren[1] and Michael D. Cadman[2]* ([1] Fish & Wildl. Br., Ont. Min. of Nat. Res., 300 Water St., Peterborough, Ont. K9J 8M5; [2] Can. Wildl. Serv., 75 Farquhar St., Guelph, Ont.; mclarem@epo.gov.on.ca)

The Forest Bird Monitoring Program is in its 11th year of collecting data on breeding bird population levels in Ontario forests. Most monitoring sites are in southern Ontario because the human population, and particularly the population of skilled volunteers, who provide nearly all the data, is sparse in northern Ontario. The need for additional data from northern Ontario led us to test whether interested volunteers with low to moderate skill levels could be trained to identify and count a subset of forest birds well enough to provide credible data. We found no differences in rate of agreement in either counts of individual species or in the suite of species present between experienced-inexperienced pairs and experienced-experienced pairs. Nevertheless, inexperienced observers tended to count fewer birds than experienced observers. These differences were significant for Red-eyed Vireo, Rose-breasted Grosbeak, and Scarlet Tanager in 1995 but only for Rose-breasted Grosbeak in 1996. Of the 9 inexperienced volunteers who participated in both years, all improved in their pre-training ability to identify the target species (from a tape) between 1995 and 1996. We conclude that inexperienced observers can contribute to monitoring efforts, but that they should be made aware that the first year of contribution will be considered a training year.

**An assessment of the songbird habitat quality of upland eastern white cedar: implications for resource management.** *William L. McLeish and Raleigh J. Robertson* (Dept. of Biology, Queen's Univ., Kingston, Ont. K7L 3N6; 3wjm4@qlink.queensu.ca) [poster paper]

At a fundamental level, conservation of forest songbirds requires investigation into the habitat suitability of forest community types, and an understanding of the factors influencing songbird habitat quality, including current management practices. This study investigated songbird diversity and reproductive success within managed stands of upland white cedar, a relatively uninvestigated community type. Censusing was completed within a continuum of stand conditions and correlated to vegetative and structural complexity components. It was hypothesized that songbird habitat quality (measured from species richness, species abundance, pairing and nesting/fledging success) would be positively associated with forest structure and complexity due to an increase in habitat or niche space for songbird species to occupy. The results indicated that upland eastern white cedar can provide quality breeding habitat for a variety of songbird species including: Ovenbird, American Robin, Black-and-white Warbler, Nashville Warbler, Black-capped Chickadee, Hermit Thrush and Black-throated Green Warbler. Songbird habitat quality within the upland cedar community was positively related to the presence of a contiguous and varied forest landscape, patch dynamics (pockets of distinct vegetation within the forest community type), vegetative layering, and microhabitat features (e.g. snags, woody debris, standing water). Regression and multiple regression analyses implicated canopy diversity, large-diameter trees, and understory regeneration as the variables most associated with songbird diversity and implied reproductive success. Although it is understood that management depends upon current stand conditions (e.g. soil quality) and alternative management objectives (e.g. timber harvest, deer yards), the results suggest that management should attempt to encourage the maintenance of white cedar-predominant forests containing a diversity of vegetative and structural complexity.

**Age structure and longevity in the Semipalmated Plover in Churchill, Manitoba.** *Erica Nol and Yuri Zharikov* (Biol. Dept., Trent Univ., Peterborough, Ont. K9J 7B8; enol@trentu.ca) [poster paper]

To test the hypothesis of a stable age structure we examined banding data from a colour-banded population of the Semipalmated Plover *(Charadrius semipalmatus)* breeding around Churchill, MB. The oldest-known breeding individual

was 8 years of age, but 5- and 6-year-olds constituted about 15% of the breeding population. Between 44% and 63% of all birds were first-time breeders in the study area. The number of 2nd-time breeders was similar in all years of study, but the number of older birds (>4 years of minimum calculated age) breeding in 1996 and 1997 (27% in both years) was significantly greater than in 1995 (8%), suggesting that some cohorts have greater survivorship than other cohorts. The reasons for differential survivorship in different cohorts is unknown. The age structure of this population is not stable over time, and survivorship cannot be calculated based on the usual life-table analyses.

**Integrating climate, land-use, and bird-census data to test hypotheses about declines in bird populations in prairie and boreal forest.** *Thomas D. Nudds* (Dept. of Zoology, Univ. of Guelph, Guelph, Ont. N1G 2W1; tnudds@uoguelph.ca)

Since Rio, "inventory, monitor and assess" - in that order - has become axiomatic. But, if inventories and monitoring are done before it is clear as to what needs to be assessed, gross inefficiencies of 3 types result. First, data generated from question-(hypothesis)-free programs may be irrelevant to address environmental concerns (once they are articulated) and end up gathering dust in filing cabinets. Second, data adequate to the task of conducting assessments, and already resident in filing cabinets, are overlooked in the rush to inventory and monitor. Third, researchers who gather data and interpret them after-the-fact are more vulnerable to committing errors of retroductive logic (confusing speculation with explanation about patterns in data), leading to further waste of effort and resources in remediation of "non-" or "wrong" problems. Premised by seemingly stupid, if not blasphemous, *questions* (e.g. "Are bird populations really declining?") and *hypotheses* about causes (e.g. agriculture, clear-cutting), integrated analyses of existing databases (meteorological, LANDSAT, Canada Land Inventory, BBS, OBBA, USFWS/CWS co-operative air-ground surveys) are useful in getting us closer to the answers; to directing cost-effective remedial action; and to focussing new inventory and monitoring programs where new data are most required.

**Mist-netting as a tool in revegetation monitoring.** *Christopher D. Otahal* (Coyote Creek Riparian Stn., P.O. Box 1027, Alviso, Calif., U.S.A. 95002; NEOBIRD@AOL.COM)

This paper presents data which show how mist-netting has been used to evaluate the success of an urban riparian restoration site in creating stopover (resting and fueling) habitat for neotropical migratory birds. During the first 7 years after planting, there has been a shift in bird populations (both in numbers and diversity) from those dominated by a seed-feeding guild to a foliage-feeding guild, indicating a shift toward neotropical migrants. Pacific-slope Flycatcher numbers have increased on this restored site, and individuals appear to be preferentially choosing this site over the existing riparian habitat. Based upon fall data (1987-1991), at least 13% of migrant Pacific-slope Flycatchers stayed for more than one day (mean 6 days) and most of these (49.3%) gained mass (mean mass gain 0.3 g), 29.1% maintained mass, and only 21.5% lost mass. Similar results were seen among several species and during both spring and fall, indicating that this site is being used for resting and fueling stops during migration. Thus, mist-netting allows us to evaluate the success of a restoration site on several levels including the community, species, and individual levels.

**The use of satellite images and GIS to predict potential breeding habitats of rare bird species in Carolinian Canada.** *Richard Pither*[1] *and Charles M. Francis*[2] ([1] Dept. of Geography, U. of West. Ont., London, Ont. N6A 5C2; pither@sscl.uwo.ca; [2] Long Point Bird Observatory, P.O. Box 160, Port Rowan, Ont. N0E 1M0; cfrancis@nornet.on.ca) [GIS Workshop poster paper]

The purpose of this study was to predict the location of potential breeding habitat sites of 14 rare bird species in Carolinian Canada using satellite images and GIS. Species' presence/absence data for 187 forest patches were obtained from 9 different projects spanning 12 years. The number of known breeding sites for individual species were all very low, and analysis was restricted to those with more than 10 known sites (7 spp. plus 1 guild). Land cover data (broad forest types) were extracted from 2 Landsat TM satellite images. Eight spatial variables of the forest patches and landscape (e.g. patch area and local forest cover) were calculated using Fragstats. Forest patches were assigned to broad textural soil classes and to a forest type representative of the overall contiguous patch composition. Presence/absence of each species/guild was modeled against these independent variables using logistic regression analysis. When analysed individually, most of the variables were significantly correlated with the presence/absence of most species. However, when analysed simultaneously, at most 2 variables were significant for a given species, indicating substantial correlation among variables. Unfortunately, the predictive power of the models was weak, scoring at best a 65% accuracy level for predicting the known breeding sites. This technique appears to have fairly limited potential for predicting new habitat localities for these species.

**Is polygyny costly to female Red-winged Blackbirds?** *Stanislav Pribil* (Dept. of Biology, Univ. of Ottawa, Ottawa, Ont. K1N 6N5; s655033@uottawa.ca) [poster paper]

Recent empirical evidence indicates that polygyny neither increases nor decreases reproductive success of female Red-winged Blackbirds *(Agelaius phoeniceus)* in Pennsylvania. I examined the cost of polygyny in Ontario by randomizing harem size with respect to territory quality and male quality. I found small but consistent differences in reproductive performance of polygamous and monogamous females: polygamous females received less help from males, fledged fewer young, and their young were less developed than those of

monogamous females. I conclude that polygyny is costly to females in the study population. The results indicate that polygyny may be maintained by different selective forces in different regions.

**Polygyny in territorial birds: does it pay to nest asynchronously?** *Stanislav Pribil* (Dept. of Biology, Univ. of Ottawa, Ottawa, Ont. K1N 6N5; s655033@uottawa.ca)

Two recent models for polygyny make opposing predictions about the effect of nesting synchrony on female reproductive success. The "asynchronous settlement model" states that reproductive success should increase with asynchrony, whereas the "defense of male parental investment model" states that it should decrease. Neither model has been properly tested. I experimentally manipulated the degree of synchrony of bigamous female Red-winged Blackbirds *(Agelaius phoeniceus)* by switching eggs. I found that synchronous females fledged fewer young, the young were less developed, and the females received less help from males than did asynchronous females. The results are consistent with the asynchronous settlement model, and indicate that asynchrony increases female reproductive success.

**The sexy son hypothesis - plausible once again?** *Stanislav Pribil* (Dept. of Biology, Univ. of Ottawa, Ottawa, Ont. K1N 6N5; s655033@uottawa.ca)

The sexy son hypothesis provides an explanation for the occurrence of polygyny in territorial birds. A key prediction of the hypothesis states that polygynous females should raise fewer young than simultaneously settling monogamous females. Heisler (1981) quantified this prediction in a mathematical model. Here, I argue that that model underestimates the number of young that polygynous females are expected to raise. I propose a revised model and test it with published data for 8 species. When full heritability of male mating status is assumed, the model is supported for 7 species. When heritability of 0.41 is assumed (value expected to occur in nature), the model is supported for 5 species. This support indicates that the sexy son hypothesis provides a plausible explanation for polygyny in a wide variety of bird species.

**Nest-site selection by female Black-capped Chickadees.** *Scott M. Ramsay[1], Laurene M. Ratcliffe[1], and Ken Otter[2]* ([1] Dept. of Biology, Queen's Univ., Kingston, Ont. K7L 3N6; [2] Dept. of Biology, Tabor Coll., Hillsboro, Kans. U.S.A.; ramsays@biology.queensu.ca)

Given the opportunity, through either experimental manipulation or natural circumstances, female Black-capped Chickadees will abandon males of low social rank to form partnerships with males of higher social rank; under the right circumstances they will change partners up to the point of egg-laying. In the absence of such opportunities, females will solicit extra-pair copulations with the same males. Males signal their relative quality and pair status in the dawn chorus. To facilitate assessment of males and movement between territories, females mated to low-rank males might choose to locate their nests near the territory boundaries of high-rank neighbours. By contrast, males should prefer nests located away from territory boundaries to avoid aggression from neighbours. Alternatively, females might choose nest locations based on habitat characteristics, food abundance, or previous experience. In 1996 we tested these hypotheses of female settlement and found that nests were located significantly nearer to the boundaries of higher-rank neighbours than lower-rank neighbours. We found no differences between nest and control plots for any of the habitat variables that were measured, and arthropod abundance did not differ between nest and control plots. When the territory was occupied by the same female in the previous year, the 1995 nest site was no nearer the 1996 nest site than to the 1996 control sites; conversely, when the territory was occupied by different females between years, the 1995 nest site was significantly closer to the 1996 nest site than to the 1996 control sites. These results will be combined with results from 1997.

**Avian monitoring program in the Calakmul model forest, Campeche, Mexico.** *Javier Salgado Ortiz* (ECOMAT, Universidad Autonoma de Campeche, Campeche, Mexico; jsalgado@balamku.uacam.mx)

Habitat destruction in the Neotropical Region is considered a primary factor in the population declines detected in neotropical migratory landbirds. Nevertheless, many regions of Mexico and Central America have undergone habitat changes as land has been converted for cultivation or grazing. Clearing for agriculture often leaves a variety of regenerating and remnant patches of wooded vegetation. Although in the last 20 years large blocks of forest have been declared as protected areas in an effort to preserve biodiversity, the highest percentage of forested areas is outside the reserves, interacting with human populations. During the last ten years, ornithologists have obtained important information about the distribution and relative abundance of migrant species in neotropical habitats; however, knowledge about ecology during the winter remains poorly studied. Habitat use, inter- and intraspecific interactions among migrants and resident species, feeding behaviour and survivorship, are until now poorly known. As part of an international collaboration project among Mexico and Canada, the University of Campeche and Queen's University, a monitoring program was started in 1995 in the Calakmul Model Forest in Campeche, Mexico. Bird census and banding have been done in second-growth vegetation in different seral stages, and in tropical subdeciduous forest, with the goal to determine habitat use by migratory and resident species in these habitats resulting from agricultural activities. The identification of land-use practices resulting in a positive local economy and at the same time representing a benefit for conservation of birds are the main concerns of this monitoring program.

**Application of spatial distribution data on endangered bird species for the calculation of conservational values.** *Astrid Schuster* (Nationalparkverwaltung, Doktorberg 6, D-83471 Berchtesgaden, Germany; 100767.504@CompuServe.COM) [GIS Workshop poster paper]

In nature conservation, especially concerning the declaration of conservation areas, the evaluation of the occurrence of species groups or red data book species is of major concern. Several evaluation models, most of them based on a point system, have been applied in Europe (Usher & Erz 1994). A new system using red data book bird species as evaluation indicators has been developed for the management plan of the Berchtesgaden Nationalpark; by analysing species distribution maps and respectively attaching rating-points corresponding to the red data book status, a spatial distribution of the conservation values has been acquired.

**Distribution patterns of migrant and resident birds in secondary forests of the Yucatan peninsula, Mexico.** *Andrea L. Smith and Raleigh J. Robertson* (Dept. of Biology, Queen's Univ., Kingston, Ont. K7L 3N6; asmith@biology. queensu.ca)

Although much of Latin America is now undergoing rapid conversion from forest to agricultural landscape, surprisingly little attention has focused on the effects of this anthropogenic disturbance on the bird community. In the Yucatan peninsula of Mexico, an important overwintering area for migratory songbirds and a region of high avian endemism, increasing human settlement has led to declines in older stages of successional forest. This study examined bird distribution in early (5 years old), mid (17-20 years old), and late (>50 years old) successional forests during the non-breeding season. Despite significant variation in habitat structure, different stages of secondary forest shared highly similar bird assemblages and did not vary in bird abundance or species richness. The majority of habitat specialists, however, were resident species restricted to late successional forest. Landscape configuration and historical disturbance regimes may confer increased tolerance of habitat perturbation on many bird species of the region, but loss of late successional forest is likely to affect adversely resident birds dependent on unique features of mature habitat.

**Geese and swans in an agricultural landscape: where to feed best?** *Ekkehard Spilling & Hans-Heiner Bergmann* (Dept. of Ethology, Fac. of Biology, Univ. of Osnabrück, Barbarastr. 11, D-49069 Osnabrück, Germany; spilling@cipfb5.biologie.uni-osnabrueck.de) [GIS Workshop poster paper]

The valley of the river Elbe in Germany is a very important staging and wintering area for migrating waterfowl in central Europe. High concentrations of Bean and White-fronted Geese and Whooper, Mute and Bewick's Swans are regularly observed, often feeding on arable lands. To find out more about their feeding habits and space utilization, they were surveyed during two successive winters from 1995 to 1997. Field-use intensity was determined by daily counts in a study area of 40 $km^2$. These data can be compared to field properties, such as size, location, border structures and, most important, food available. We made heavy use of GIS (Arc/Info, Arc/View) to obtain data on 400 fields. But the most important trait, green biomass, had to be estimated in the field (although we will evaluate remotely sensed Landsat-TM data for autumn 1995). The map in our poster visualizes the relation between food availability and intensity of field use in geese and swans. To make comparisons between different food types easier, biomass data were converted into 'usable energy/$m^2$', taking into account different digestibility. A close look at the biomass map reveals that energy density is not the only important parameter determining field use intensity. The structure of food items also affects harvesting efficiency, and therefore field selection, due to animals' morphological characteristics such as body and bill size.

**A comparison of brood parasitism by Brown-headed Cowbirds in island and mainland habitats.** *Douglas P. Tate and A.L.A. Middleton* (Dept. of Zoology, Univ. of Guelph, Guelph, Ont. N1G 2W1; dtate@uoguelph.ca)

Brood parasitism by Brown-headed Cowbirds has been the subject of recent studies in several forest types, particularly in isolated forest patches in agricultural or urban landscapes. However, the ecology of brood parasitism in forested islands is not well known; this paper presents a comparison of brood parasitism on the islands of Fathom Five National Marine Park, Tobermory, Ontario, with rates from mainland Bruce County. Among 55 nests of American Redstart and 27 nests of eight other suitable host species examined on islands during 1995 and 1996, no brood parasitism was encountered. By contrast, mainland redstart nests experienced 25% parasitism; mainland nests of other host species experienced a 19% parasitism rate. Although cowbirds were occasionally observed on the island sites, the absence of brood parasitism is attributed to a lack of suitable feeding areas. These findings indicate that island habitats can function as refugia from brood parasitism.

**Interspecific interactions: do American Redstarts and Red-eyed Vireos interact aggressively with Cerulean Warblers?** *Robyn A.L. Varey and Raleigh J. Robertson* (Dept. of Biology, Queen's Univ., Kingston, Ont. K7L 3N6; rvarey@wwfcanada.org) [poster paper]

Observations in southeastern Ontario have indicated that American Redstarts and Red-eyed Vireos initiate conflicts and act aggressively towards Cerulean Warblers. Recognizing Ceruleans' vulnerable status in Canada makes investigation into the context and regularity of these antagonistic events an important conservation priority. Results will provide insight into whether interspecific interactions could be negatively affecting Cerulean distributions. Cerulean Warblers, American Redstarts and Red-eyed Vireos were observed through the breeding season of 1997 at a site in southeastern Ontario. Interspecific playback with model presentation was used to determine

changes in song rate and distance from the stimuli. This was tested during three stages within the breeding season: i) pre-incubation and territory establishment, ii) incubation, amd iii) nestling period. For each stage, breeding pairs received two randomly placed playbacks within their territory. If nest-site was known, one of these was placed within a 5-m distance. Response to playbacks was lower during territory establishment, pair-bond formation, and feeding of nestlings, and higher during incubation. Vireos and redstarts showed greater response to Cerulean playback than to intervals of no stimuli or to control stimuli. Of the two, vireos appeared to be the more dominant species. Aggressive interactions were never directed towards the stationary model, but occurred only in response to visual stimuli from a Cerulean flying in to its conspecific song. By contrast, Ceruleans showed less response to heterospecifics across the breeding season. However, although it appears that there is underlying aggression among these species, the frequency at which it is displayed is too low to have a detrimental effect on Cerulean distributions.

**Gene flow in Cerulean Warblers: a study in population genetics and the associated conservation implications.** *Melissa M. Veit, Raleigh J. Robertson, & Vicki L. Friesen* (Dept. of Biology, Queen's Univ., Kingston, Ont. K7L 3N6; veitm@biology.queensu.ca) [poster paper]

In the past two decades, the Cerulean Warbler has experienced the largest decline of any North American warbler, identifying this species as an important candidate for conservation research. Currently classified as vulnerable in Canada and as a species of special concern in the United States, the Cerulean Warbler has been the focus of increased attention with studies examining life history attributes and habitat selection. Research at Queen's University Biological Station indicates that the eastern Ontario population is stable or possibly increasing. To evaluate the extent to which this population can contribute to numbers throughout the species' range, we initiated a 2-year population genetics study of Cerulean Warblers, commencing in May 1997. Blood samples in eastern Ontario, Tennessee, and Illinois are being collected. Research will focus on examining mitochondrial control regions and microsatellites to identify if gene flow is occurring. The results of this study could have significant conservation and management implications for Cerulean Warblers. Should gene flow between populations be found, indicative of dispersal capabilities, populations with greater reproductive success have the capacity to act as source populations. Consequently, habitat management of such areas will be vital to the persistence of this species. If no gene flow is evident, each population should be managed independently, and those populations exhibiting significant declines should receive special attention.

**Basal metabolism and incubation energetics of an Arctic-nesting shorebird: physiological and behavioural considerations.** *Mark Williamson[1], J.B. Williams[2], and E. Nol[1]* ([1] Dept. of Biology, Trent Univ., Peterborough, Ont. K9J 7B8; [2] Dept. of Zoology, Ohio State Univ., Columbus, O., U.S.A.; mwilliamson@trentu.ca)

The Semipalmated Plover, an Arctic-nesting shorebird, regularly faces an austere environment during the incubation season. I measured the basal metabolic rate (BMR) of 8 adult birds during incubation at Churchill, Manitoba, using a metabolic chamber and gas analysers. Lower critical temperature (LCT) was also measured and found to be 24.8°C. Both BMR and LCT were consistent with those of other temperate migrants breeding in the Arctic. Both values were determined using multiple allometric nonlinear regressions. Incubation behaviour in the field was also studied in 24-h cycles. In conjunction with these behavioural data, internal egg temperatures were monitored using one or two thermocouples inserted into eggs. It was found that internal egg temperatures of Semipalmated Plovers may fall as much as 15-20°C below an optimum of 38.5°C for periods of varying duration during a 24-h period, and are regularly incubated at temperatures of 31-33°C for extended periods. In extreme weather conditions, incubating birds left eggs unattended to forage, resulting in steep internal egg temperature declines. These behaviour data combined with a high LCT suggest that Semipalmated Plovers must balance the requirements of incubation against their own energetic demands, especially in harsh conditions.

**Demography and temporal behaviour patterns of the Brown-headed Cowbird at Delta Marsh, Manitoba**. *Bonnie E. Woolfenden[1], H. Lisle Gibbs[1], & Spencer G. Sealy[2]* ([1] Dept. of Biology, McMaster Univ., Hamilton, Ont. L8S 2K1; [2] Dept. of Zoology, Univ. of Manitoba, Winnipeg, Man. R3T 2N2; woolfebe@mcmail. mcmaster.ca)

A survey of the available literature reveals much variation in the demography and behaviour of geographically separated Brown-headed Cowbird populations. Demographic differences have been invoked as explanations for observed differences in mating behaviour and temporal behaviour patterns. We have been monitoring the Brown-headed Cowbird population at Delta Marsh, Man., since 1993. Demographic data from this population are summarized and compared to other populations reported in the literature. Results indicate that the survivorship and population densities of the Delta population are higher than in most other documented populations. The sex ratio is intermediately male-biased relative to other populations. Patterns of geographic variation in population density and sex ratio are summarized, and the implications of these population differences relative to mating systems will be discussed.

## REPORTS FROM 1997 ANNUAL MEETING/ RAPPORTS DE LA REUNION ANNUELLE DE 1997

### PRESIDENT'S REPORT/RAPPORT DU PRÉSIDENT : Actions and Accomplishments

Last year's Annual Report appeared within my president's message. That seemed appropriate then, as we first identified an action plan and then initiated parts of it. In contrast, 1997 was a year of total action in pursuit of the goals established earlier. We have passed through such an eventful year that I will simply summarize general business matters, highlight some key activities of the Executive Council, and report on their current status.

* Development and Growth - New Member enrolment reached a record high of 56 in 1997. Total subscriptions in August approached 300, which comprised 281 members, 11 libraries, and 4 natural history organizations. Continued growth is expected as the S.C.O. development plan continues, mainly through our publications and membership drives (see below). The aim is to make the Society and its attributes more visible to the ornithological and conservation communities at large.

* Finances - The society is financially healthy. Assets increased 2-3% in 1997, though growth rate of investments is expected to fall slightly owing to the decline in interest rates. The Finance and Investment Committee reviewed our investment strategy and adjusted accordingly to maximize earnings. Membership and subscription dues continue to support the publication of *Picoides* and S.C.O. awards. However, further expansion of the bulletin (in size or number of issues) will require new revenues, as will the goal of establishing a regular scientific publication. Future growth in service will necessitate additional funds through increases in membership, fund-raising initiatives, new endowment programs, and fee increases. Encouraging membership in "Sustaining" and "Life" categories also will benefit the Society financially.

* Annual Science Meetings - Success of the annual meeting-science program initiative has surpassed all expectations. Both meetings - the first in Fredericton (23-26 August 1996) on biology and conservation of forest birds, and this year's in Peterborough (7-10 August 1997) on integration of research and conservation in avian monitoring - were well attended, showing a clear need for such gatherings to present and discuss research findings on Canadian birds and issues. The theme approach seems an excellent one. It provides focus and allows reviews of major subject areas that often will lead to important publications. A surprise has been the attraction of our meetings to university graduate students and non-Canadian scientists (American and European). This bodes well for the future of S.C.O.. The 1998 S.C.O. Annual Science Meeting will be held in the Vancouver region, so we will have spanned the nation in three years: from Atlantic Canada to British Columbia!

* Publications - Much progress has been achieved. (a) S.C.O. Bulletin *Picoides*: Our long-standing vehicle for communication continues to thrive under the careful editorship of Tony Erskine. Contents expanded this year with feature articles, essays, research in progress, and recent literature. Page-costs remain high, and alternative ways of production (paper type and weight) are being investigated to allow an increase in printed pages per volume without increasing costs. (b) Publications Committee: This committee had an active year. Apart from its advisory role to the editor of *Picoides* and the formulation of a long-term plan to establish a scientific journal, the committee moved forward on three fronts: first, editing and financial arrangement for publication of the first scientific monograph produced by S.C.O. - "Biology and Conservation of Forest Birds" (A.W. Diamond & D.N. Nettleship, eds.), based upon our special symposium in Fredericton. Editing is in the final stage, with printing and distribution of the volume by early summer 1998. This publication will form volume I of the S.C.O. science series. Second, finding an experienced scientific printing firm that is interested in the long-term publication goal of the society: discussions are underway with three qualified printing companies. And last, the recent publication by the Canadian Wildlife Service of "Monitoring Bird Populations: The Canadian Experience" (E.H. Dunn, M.D. Cadman and J.B. Falls, eds.), the proceedings of an S.C.O. workshop held in 1993 at Guelph, Ontario, as part of a joint annual meeting with Wilson Ornithological Society. This work is scheduled to be distributed to S.C.O. members shortly, made possible by special funds acquired by the committee to cover costs of printing and mailing.

* S.C.O. 1997 Awards & Speirs Lecture - (a) Doris Huestis Speirs Award for Outstanding Contributions to Canadian Ornithology: This prestigious award was presented to Hugh Boyd on 9 August as part of the science program at the Annual Meeting. Mr. Boyd reciprocated by delivering the first Doris Huestis Speirs Lecture (see below). (b) Baillie and Taverner Research Awards: The committee, chaired by Ross Lein, successfully formalized the application form to improve fairness and ease of evaluation. The James L. Baillie Award went to Gail Davoren (Univ. of Victoria); the Taverner awards were won by Dawn Burke (Trent Univ.) and Scott Ramsey (Queen's Univ.). (c) Best Student Paper at the Annual Meeting: Presented to Chris Henschel (Univ. of Guelph), selected by the committee chaired by Peter Blancher.

I am pleased to report such progress during 1997. Details of these and other activities undertaken this year by your Executive Council and Standing Committees are presented

elsewhere in this issue of *Picoides*. Seek them out, examine and assess their contents. I believe you will be impressed by what the Society accomplished during the year. S.C.O. has a unique position in Canada as the only professional society focused on birds, and having wide experience in avian biology and conservation. We must continue to advertise our Society as an important player in the acquisition and dispersion of knowledge on the birds of northern North America. We should make a conscious decision to expand our influence in both academic circles and the arena of conservation (i.e., the application of knowledge in solving environmental problems and helping develop wise land-use policies). We should function as a group of professionals working to understand the biology and ecological requirements of birds in Canada, and by doing so to ensure their safety and well-being. In conclusion, I thank all members of the Executive Council, Standing Committees and Work Groups for their support and hard work in helping S.C.O. accomplish so much this year. Special thanks go to Erica Nol for hosting an outstanding annual meeting in Peterborough, and to Erica Dunn and Raleigh Robertson for constructing a stimulating and exciting science program. Our grateful thanks also go to André Cyr, who is retiring from council after eight consecutive years of service, the last six as Recording Secretary - an impressive record. Tomorrow's challenge for S.C.O. will be to continue to grow and influence our science and country!

David Nettleship

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

### MEMBERSHIP (report by N.J. Flood)

As of 5 August 1997, membership of the S.C.O. stands at 296, including 11 libraries, 4 clubs/societies, and 281 individuals, slightly down from the high (over 300) in 1996 but still healthy. Note that over 1/6 (56) joined during 1996, and "new" members are the hardest to hold onto; only 30% of those who joined last year renewed, compared to about 60% overall (see Table 1). Among founder members (n=26) 81% renewed. This year, renewal notices only went out in early June, so I expect many more members (recent and former) will pay their 1997 dues. A second "independent" meeting will, it is hoped, bring in new members to add to the 12 already joined in 1997.

*Table 1*. Renewal status of S.C.O. members (n=293)

| Paid up to | Number (%) |
|---|---|
| 1995 | 34 (11.6) |
| 1996 | 84 (28.7) |
| 1997 | 124 (43.3) |
| 1998 | 30 (10.2) |
| 1999 | 11 ( 3.8) |
| 2000 | 8 ( 2.7) |
| 2000 | 2 ( 0.7) |

*Table 2*. S.C.O. membership by category (Note: 9 members were also donors, contributing amounts from $5 to $100).

| Category | Number (%) |
|---|---|
| complimentary (free) | 3 ( 1.0) |
| regular ($10/a) | 258 (87.2) |
| sustaining ($25/a) | 35 (11.8) |

*Table 3*. S.C.O. membership, by geographic area (Note: some who live in Ontario use Québec office addresses for S.C.O. correspondence)

| Area | Number (%) |
|---|---|
| Northwest & Yukon Territories | 4 ( 1.3) |
| British Columbia | 37 (12.5) |
| Alberta | 28 ( 9.5) |
| Saskatchewan | 28 ( 9.5) |
| Manitoba | 18 ( 6.1) |
| Ontario | 88 (29.7) |
| Québec | 32 (10.8) |
| New Brunswick | 21 ( 7.1) |
| Nova Scotia | 12 ( 4.1) |
| Newfoundland | 3 ( 1.0) |
| United States of America | 19 ( 6.4) |
| Overseas | 6 ( 2.0) |

*Table 4*. S.C.O. members by affiliation (as reported)(n=281)

| Affiliation type | Number (%) |
|---|---|
| University/college | 94 (33.5) |
| C.W.S./S.C.F. | 52 (18.5) |
| Other federal govt. agency | 12 ( 4.3) |
| Provincial govt. agency | 14 ( 5.0) |
| Museum | 11 ( 3.9) |
| Private business | 16 ( 5.7) |
| Non-profit agencies | 12 ( 4.3) |
| Bird or nat. hist. group | 14 ( 5.0) |
| No affiliation given | 56 (19.9) |

## FINANCES (Report by T.E. Dickinson)

The Society's finances remained reasonably healthy in 1996 despite a sobering national economic climate. Again this year we made two Taverner Awards of $500 each to graduate students. We also funded a Speirs Award in recognition of James Murray's contributions to ornithology. Our Society also published two issues of *Picoides,* for which we thank the Editor. At year-end we also added somewhat to our investments.

Our good financial position was mainly due to two factors. Owing to a successful campaign, revenues from membership increased substantially, with an increased proportion of renewals plus new members (particularly at the Fredericton meeting). A number of people renewed for more than one year. The second factor was increased interest income, after repositioning our investments two years ago. Return on GICs invested in 1994 averaged 7.75%.

It will be difficult to hold our position this year - for the same reasons. Because of the economic climate, free capital (as GICs mature) is reinvested at much lower interest rates. Multi-year renewals last year mean less income from renewals this year. Unless we redouble our efforts to increase membership, income from that source will be less. Publication costs of *Picoides* have risen steadily over recent years, now 30-40% higher than in 1993, and we don't even pay (increased) postage charges.

As a Society, we should make some financial decisions: the option of increasing membership dues, direction of publication initiatives (bulletin, journal), the merits of a fund-raising campaign to increase our investments. I look forward to joining you in discussions of these and other matters in Peterborough.

Tom Dickinson
Treasurer S.C.O.

| | | |
|---|---|---|
| Opening bank balances and investments (2 Jan. 1996): | | |
| | Savings | $ 3,527.74 |
| | Chequing | 262.10 |
| | GICs | 16,250.00 |
| | Total | $20,039.84 |
| Income: Donations | | $ 170.00 |
| | Transfer from other charities | 608.73 |
| | Memberships | 4,239.63 |
| | Interest | 1,379.33 |
| | Total | $ 6,397.69 |
| Disbursements: | Taverner Awards (Celada, McMaster) | $ 1,000.00 |
| | *Picoides* printing (Spring 1996)* | 1,484.63 |
| | Speirs Award | 328.41 |
| | Postage and office supplies | 268.78 |
| | President's expenses | 37.70 |
| | Society fees | 30.00 |
| | Total | $ 3,149.52 |

* Outstanding - *Picoides* (Fall 1996) $1,609.33, paid in 1997.

| | | |
|---|---|---|
| Closing balances (31 Dec. 1996): | | |
| | Savings | $ 359.22 |
| | Chequing | 1,873.94 |
| | GICs | 21,054.85 |
| | Total | $23,288.01 |

## 1997 DORIS HUESTIS SPEIRS AWARD FOR OUTSTANDING CONTRIBUTIONS IN CANADIAN ORNITHOLOGY

Hugh James Boyd

Photo by D. N. Nettleship

**The Society of Canadian Ornithologists's 1997 award for outstanding contributions to Canadian ornithology, The Doris Huestis Speirs Award,** was presented to **HUGH JAMES BOYD,** Scientist Emeritus and former Director of Migratory Birds Branch of Canadian Wildlife Service (Environment Canada), on 9 August 1997 within the science program of the 16th S.C.O. Annual Meeting at Trent University, Peterborough, Ontario. The award honours the exceptional lifetime achievement in avian science and research management that Mr. Boyd has made to knowledge, conservation, and preservation of Canadian birds and the habitats they occupy.

Hugh Boyd is distinguished for both his scientific work on migratory birds and his research management skills over the last 50 years in Canada and Europe, particularly on geese, shorebirds, and seabirds. Mr. Boyd's gracious personality and natural modesty provides little evidence of his outstanding accomplishments in the areas of avian science and the conservation of birds. For the last 30 years in Canada, he has provided leadership in the quest for knowledge on birds by government and university scientists, including major long-term research programs on geese, waterfowl, seabirds and shorebirds. He encouraged the acquisition of new information on the biology of birds using sound scientific methodologies, and also the processing and interpretation of data gathered, and the application of research findings to ecosystem conservation and management. His research, described in over 180 scientific papers, including three books and monographs, ranged widely, from avifaunal surveys on oceanic islands to long-term survival rates and population studies of ducks, geese and shorebirds (see selected list below). Mr. Boyd has played central roles in developing integrated and coherent programs between Canada and the United States for the management of North American waterfowl and the international promotion of the conservation of wetlands. His influence on avian science and management spans numerous countries and two continents.

Hugh Boyd, born and raised in Bristol, England, studied zoology, microbiology and chemistry at the University of Bristol, following military service with the Royal Navy in 1943-44. His first wildlife position was in 1948, as Warden of the Lundy Bird Observatory, Devon, renowned for its seabirds, particularly the Atlantic Puffin. In 1949 he was appointed Resident Biologist for the Severn Wildfowl Trust (now The Wildfowl and Wetlands Trust, WWT) at Slimbridge. His major task was to establish a waterfowl monitoring and banding program to provide the scientific information necessary for development of conservation policy. During this work, Mr. Boyd executed detailed studies of the biology and behaviour of waterfowl, with particular focus on White-fronted Geese. In 1953 he published a seminal work in *Behaviour* entitled "On encounters between wild White-fronted Geese in winter flocks". By 1960, monitoring programs on ducks, geese and swans were in operation, studies that provided important new information on patterns of distribution, abundance, population dynamics and habitat use. Results from these long-term programs have been used to protect species populations, create protected areas, and in conserving critical wetland sites throughout the United Kingdom. Before leaving for Canada in 1967, he spent two years designing and initiating research projects in Scotland as part of the ICSU International Biological Programme. This wealth of research and management experience proved invaluable for the formidable tasks awaiting him with the Canadian Wildlife Service as Research Supervisor of Migratory Birds in Eastern and Arctic Canada.

From 1967 to 1974 Hugh Boyd expanded C.W.S.' horizons incredibly. First, by his insistence on the pursuit of scientific excellence and the use of science-based evidence to formulate conservation policy. And second, by his determination to move C.W.S. beyond ducks and geese into the vast unknown worlds of songbirds, seabirds and shorebirds in Canada. Apart from the intellectual thirst for more knowledge about birds, Mr. Boyd displayed great sensitivity towards finding out the impacts of human activity on major bird groups over wide geographic regions. For example, after the discovery of oil on the north slope of Alaska in 1968, he was quick to set up a seabird program to prepare for the offshore oil exploration that would soon occur in eastern Canada. Similarly, he established a shorebird program well in advance of the James Bay hydro development to ensure information on shorebirds in Hudson and James Bays was adequate to measure changes. One of his crowning achievements during this early period was the development and support of the La Pérouse Bay Snow Goose research project, initiated in 1968 under direction of Fred Cooke, which has become one of the longest and most productive field studies of a bird population in the world, comprising more than 25 years of research. Most of these programs would not have happened without Hugh Boyd's wisdom, promotion and particular approach to scientific and environmental problems.

In 1975, Mr. Boyd became Director of Migratory Birds for C.W.S., and in this role initiated numerous key monitoring schemes, statutes and regulations. He spearheaded international agreements on waterfowl conservation and management, and used his sharp wit to jolt associates into new ventures. These included Canada's becoming a member of the International Waterfowl and Wetlands Research Bureau, membership that proved critical to wetland conservation in the Western Hemisphere and to ensuring Canadian adherence to the Ramsar Convention – The Convention on Wetlands of International Importance. He also encouraged collaboration between Canadian scientists and those in other countries, particularly where Canadian birds wintered or research interests overlapped, such as Russia, Denmark (Greenland), Iceland, United States, and several countries in Central and South America. After 1980 when he stepped down as Director of Migratory Birds, he occupied many positions, Senior Policy Advisor, Senior Scientist, Acting Director (Ontario Region), and Chief of Migratory Bird Research. He officially retired after March 1991, but received ongoing status as Scientist Emeritus within weeks of his retirement.

Hugh Boyd's published works centred chiefly on waterfowl behaviour and ecology. He pioneered studies on impacts of human activities and climatic variability on geese and ducks in North America and abroad. Particular focus has been on the effects of hunting and agricultural practices, and the ecological implications of global warming to distribution patterns, survival rates, and reproductive performance. More recently, he is exploring the influence of climate change on arctic breeding birds including shorebirds. Of special note is Mr. Boyd's rate of publication. His productivity remained at a high level throughout his working career, despite enormous administrative burdens associated with Director and Research Manager positions. Of 188 scientific papers he published, the first appeared in 1947, on the breeding performance of Coots, and the last five in 1997, including the first Doris Huestis Speirs Lecture entitled *"Looking Backwards, Looking Forwards: 30 Years of Canadian Ornithology"* (see below). Altogether, more than 3.8 papers per annum were published over 50 years, with the mean rate in 1995-97 over 4.3 published papers per year. An enviable publication record by a research scientist and research manager *par excellence!*

Mr. Boyd has been honoured for his scientific and conservation achievements worldwide. In 1992, he was made a Research Associate of the Wildfowl and Wetlands Trust for his encouragement of young scientists within that organization. In 1996, the Director-General of WWT, together with Lady Scott, awarded him the *Peter Scott Medal* for his exceptional contributions to wildfowl and wetland conservation on two continents. The significance of this award is made still greater in that Mr. Boyd received the first *Peter Scott Medal* to be presented, an award established in 1996 to commemorate Sir

Peter Scott's commitment to using scientific understanding and knowledge as a basis for wildfowl and wetland conservation policy. Selection of Hugh Boyd as the first recipient of this medal could not have been better.

The Society of Canadian Ornithologists' most prestigious **Doris Huestis Speirs Award for Outstanding Contributions to Canadian Ornithology** is presented to honour outstanding lifetime achievement in any discipline of Canadian ornithology. **Mr. Hugh Boyd** exceeds these criteria from several viewpoints. His contributions to avian science and conservation on two continents are exemplary and of immeasurable value. Moreover, he is without question the "engine" that drove avian research in Canada for more than 20 years. Both university and government scientists are indebted greatly to him for his considerable effort and success in moving avian research forward. Thus, the Society of Canadian Ornithologists, and all its members, take great pleasure in presenting the 1997 Doris Huestis Speirs Award to **Hugh Boyd** for his outstanding contributions to ornithology and the birds of Canada.

[Committee Members: A.W. Diamond, D.N. Nettleship (chair), S.G. Sealy]

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The Society's 1997 Doris Huestis Speirs Award was presented to *Hugh Boyd,* Research Scientist Emeritus in the Canadian Wildlife Service (Environment Canada), on 9 August 1997 within the science program of the S.C.O. Annual Meeting and Conference, at Trent University, Peterborough, Ontario. After presentation of the Award, by invitation of the President the first DORIS HUESTIS SPEIRS LECTURE (printed below) was presented as part of the science program.

## LOOKING BACKWARDS, LOOKING FORWARDS: 30 YEARS OF CANADIAN ORNITHOLOGY
by Hugh Boyd

Writing to me about geese, back in the spring, Tony Fox noted that wherever he went in pursuit of an idea he found that Hugh Boyd, in his butterfly-like way, had been there before him. This was presumably intended to be a compliment, but it is also a reproach. Butterflies can be attractive, but they are not heavy hitters. To accomplish anything, it is not enough to have an idea. You must also sell it. Early in this century, Sir William Osler of McGill made the point more elegantly: "In science the credit goes to the man who convinces the world, not to the man to whom the idea first occurs"[1]. My own position is close to that of the mathematician C.L.Dodgson (better known as Lewis Carroll), who wrote to a friend "My view of life is that it's next to impossible to convince anybody of anything"[2]. The best I have been able to do is to find and encourage more forceful characters to pursue their ideas, while I go on fluttering about.

What drives me is endless curiosity about 'what is going on out there' in those fields where I have been lucky enough to work. Colin Clark, one of the founding fathers of econometrics, described my approach very well: "It has always been my profound conviction that economics [read 'ornithology'] should be based on the empirical observation and classification of what has actually been happening, with theory occupying only a secondary position"[3]. Death for an academic, of course, whose achievements are likely to be praised in direct proportion to their remoteness from the messiness of the real world.

I came to Canada in 1967, already over forty and no longer susceptible to fundamental changes in outlook. This was an extraordinary opportunity to play on a far larger stage than Britain could provide. I came as a specialist on wildfowl [waterfowl in N.America] - geese, ducks and swans. At that time, C.W.S., the initials of the organization that had hired me, could well have stood for the Canadian Waterfowl Service. Most of its managerial and research efforts on migratory birds were devoted to the ducks that people most liked to kill. I had never been a hunter, though well accustomed to working with people who were. Nor had I ever 'managed' anybody. So it was very exciting to find myself in charge of C.W.S. bird research in a region that extended from the eastern border of Manitoba to the Atlantic and from Windsor to Alert.

That was a time when government organizations and budgets were growing, to the extent that we had difficulty in finding qualified people to fill positions. This need, and the fact that

C.W.S. had money to spend on contract research, brought me into contact with biologists in nearly all the eastern universities. While I was feeling my way, I became increasingly convinced that C.W.S. needed to pay much more attention than it had been doing to acquiring greater knowledge of the many other groups of migratory birds that the M.B.C. Act of 1917 made a federal responsibility. I believed then that effective conservation requires - in addition to many other things - a sound understanding of birds' needs, adaptability and vulnerability. This belief strengthened over the years, though it doesn't commend itself to the professional managers who now dominate the upper levels of government agencies. For them, specialist knowledge is an undesirable hazard, and caring about other living beings, whose worlds we are trying so hard to damage, is an intolerable form of weakness. So my five-year stint as the Director, Migratory Birds - an odd title, of which I was oddly proud - ended in disenchantment, on both sides. I resigned as long ago as 1981. Scorn for specialist knowledge has grown far worse since then.

The Canada I came to 30 years ago, in which there were more research jobs than people fit to fill them, must seem strange to you. Today, many of the most talented young biologists have to spend much of their time and energy in trying to hop from one short contract to the next, eyes scanning the horizon for future work, rather than for its intrinsic interest, as we, very briefly, were able to do.

The world of 1997 is different in many other ways from that of 1967. That of 2027 will doubtless be at least as different again. Can we begin to see how it might look, not just to those of you who are then alive, but to the birds that will share Canada with you? In detail, certainly not. Yet you should try to look ahead, because not being taken too much by surprise should help you to be more effective.

In the past thirty years, environmental concerns rose to a remarkably prominent place on the public and political agenda, only to fall, much more rapidly, out of general favour. That was probably inevitable: no subject - not even 'jobs' - can make the headlines for more than a few years before going out of fashion.

The change of mood has been especially obvious here in Ontario, where Mike Harris's government is busy trying to reverse as many as possible of the gains in rational land-use management that had been so laboriously achieved in the previous forty years. The situation in northern Alberta and British Columbia looks dire too. Fortunately, thanks to the climate, not to human endeavours, the Prairie wetlands are now in an unusually prosperous state. Drought will undoubtedly be back, but we can enjoy the abundance of ducks for a while yet, with the possibility that, for 'economic' reasons, the Canadian prairies may follow the Dakotas into partial recovery from the worst of agricultural damage. Increasing 'salinization', resulting from alterations in the water table, will surely increase the problems of many birds, though it is benefiting some.

What should Canadian ornithologists be doing about the largely man-made perils that beset the birds that we study and admire? Political activity is not for most professional biologists - at least not if we stick to the principle of concentrating on doing what we do best (less arrogantly, least badly). It may be fun, and relieve our feelings, to jump up and down and make rude noises in public. It will be far more useful to try to fill some of the huge gaps that remain in our knowledge of why, how, and how well Canadian birds live where they do.

That requires difficult efforts to try and put ourselves inside their skins. In the 1960s I gave several talks in Britain under the title 'On being a Goose'. My performance was doubtless inadequate, yet the intent was good. If we look at birds only through our eyes, it is most unlikely that we will see clearly what matters most to them and what determines the choices that they make, all day every day. If we don't see it their way, we will guess wrongly - even more often than we have done in the past - about how best to ensure that birds' needs continue to be met. Try looking at the world with your eyes 10 cm above the ground, instead of 165 cm.

Let me give you an example of how ornithological stories can change, unexpectedly and rapidly. Thirty years ago, it was believed - by the few people who were interested - that the Brant wintering in Ireland bred in north Greenland. Early in the 1970s, Doug Heyland banded a few and, between 1973 and 1987, Lynda Maltby, Austin Reed, myself and some wild Irishmen banded a lot of Brant in the Queen Elizabeth Islands. Recoveries and sightings of these visibly marked Brant in Ireland showed, quite unexpectedly, that the Brant breeding in the eastern Queen Elizabeth Islands, the highest of the High Arctic, spend the autumn in Northern Ireland and the winter in the Republic, though a few prefer the Channel Islands. Many make a brief refuelling stop in autumn in western Iceland, though some fly non-stop from northwest Greenland, nearly 4000 km[4].

In spring, the Queen Elizabeth Island Brant spend most of May in Iceland. While there, they put on a lot of weight, so much that when they leave some need a long take-off, like a swan's, to become airborne. The tasks ahead of them are severe. After crossing Denmark Strait they have to climb over the steep eastern face of the Greenland icecap. Having reached the midwestern coast of Greenland, some are not much more than halfway home: Alert, or eastern Melville Island, are still 1600-1800 km away. When they get home, in early June, they may have to wait 10-14 days before snow cover becomes patchy enough to let them feed, and nest. No wonder they need a lot of fuel. By fitting several with satellite radios, Gudmundur Gudmundsson[5] showed that some Brant find it necessary to pause on the way up the east side of the icecap, as we would have to do. This spring, another satellite-marking project produced an even more unexpected result. Prebend Clausen (in prep.) put radios on some Light-bellied Brant on the west coast of Denmark, to see how they made their way to Svalbard, where they breed. Several did, but two went to north-east Greenland instead. It now seems likely that all Brant wintering in Ireland come from the Queen Elizabeth Islands, and none from Greenland.

This spring, Tony Fox and I were part of a team studying the behaviour of the White-fronted Geese that stop in Iceland on

their way from Ireland and the Hebrides, where they spend the winter, to west Greenland, where they breed. They too have to fly over the Greenland icecap. But we saw that they did not become anything like as fat as the Brant, presumably because when they reach the coastal lowlands of west Greenland, close to the Arctic Circle, in the second and third weeks of May, much of the vegetation is already snow-free. A recent invasion of west Greenland by mid-sized Canada Geese seems to be putting the Whitefronts under new pressure, as well as giving Canadians an extra reason to be interested in geese in Greenland.

The point of this digression into the present is that 30 years ago none of the details I have just given were known, and most would have been dismissed as highly improbable. Here, modern technology, originating from miltary needs, helped to develop the picture. It is hard for us to imagine what rich tales the next generations may be able to tell us, not only about large birds such as geese but about comings and goings of boreal warblers, glimpsed briefly at Long Point and other places where birds and birdwatchers congregate before the birds vanish into their northern forest world and their watchers return to the murky environs of Toronto.

The importance of Long Point Bird Observatory, where devoted bands of birders have been taking the pulse of these small northern birds for as long as I've been in Canada, could be even greater in the future than in the past. There is a new scheme to extend the scope of such studies across the country. It is certainly a good idea to expand the observatory system - and to find other ways of increasing the value of birdwatching in Canada to the birds themselves. But it will be important to make very sure that the future of the L.P.B.O. itself, our greatest 'centre of excellence', is maintained.

Political pressure to downsize government agencies has not yet ceased (though weakening as some of its bad effects are felt). The federal and provincial wildlife agencies have already been shredded, and won't be restored quickly, if ever. The future of bird studies in Canada lies, to a greater extent than at any time since the 1930s, in the hands of academics and amateurs. Academics themselves are 'threatened'; and 'amateurs' are not what they were in Darwin's time.

Coming from Britain, where the volunteer networks of the British Trust for Ornithology and the Wildfowl Trust had done so much, I was dismayed to find in the late 1960s that professional wildlife biologists in North America - especially in the U.S.A. - seemed to fear, not welcome, the involvement of unpaid part-timers in 'their' games. The situation has certainly improved, as demonstrated by the production of several fine provincial atlases of breeding birds in the last decade, all based on the efforts of amateurs. But much remains to be done to "get the most for the least" out of the enthusiasm and skills of observers, who will always be scarce in relation to the size of our country. Whatever 'partnership' arrangements may be tried, it will never be easy to keep volunteer shows on the road. Good and continuous feed-back from organisers to reporters tends to be neglected, though it helps greatly in persuading observers to keep going in spite of the many distractions in their lives.

In choosing what you should be doing, almost everything depends on where you sit and what most interests you. There are no imperatives here except "go for it". It would be a wicked waste of time for us to devote effort to writing Mission Statements or Master Plans for Canadian Ornithology. John Cockcroft, the taciturn Lancastrian who (with Walton) first "split the atom" and later led Britain's postwar nuclear research, advised a student who asked him what he should do: "Go where you can do your best work"[6]. This is a matter both of opportunity and of personal choice. Professional opportunities are almost as hard to come by now as they were in the 1930s, before professional ornithologists existed outside museums. (Now, as we saw at the National Museum in Ottawa, professionals are not safe even there.)

In the lean years of the Depression, David Lack made the studies that produced **The Life of the Robin**[7] while he was a schoolmaster at Dartington [a well-known 'progressive school'] - surely as stressful an occupation there and then as it must be here and now. He had no graduate students to help the quietly revolutionary studies of wild birds that the **Robin** got under way. He was matched in North America by the equally determined Margaret Morse Nice[8], watching the Song Sparrows on the waste ground behind her house. They watched - really watched - the nearest common birds and learned from them. It is still possible to produce results of real scientific worth in the same inexpensive way, with sufficient determination and clarity of thought.

Now it is more fashionable to head for remote parts of South America, where the gaps in knowledge are more obvious. But the expedition mentality is unsuited to serious problem-solving, which calls for quiet contemplation, that most un-American activity. Most Canadians now live in and around cities. We need to make special efforts to encourage those who remain in remote places to join in our fun. We need families like the Bjornssons, who have been watching bird migration at Kvisker, the wettest farm in Iceland, for more than 60 years. Using their records of first sightings in spring, and those of many other birdwatchers in Iceland and Scotland, I have just found out that since early in the 20th century Greylag Geese have been gradually returning to Iceland earlier in spring, thanks both to being better fed in winter and to a long-continued reduction in the frequency of westerly storm systems moving across the northeast Atlantic, with the incidental effect of giving the geese more chances of making the 800 km journey from Scotland without meeting headwinds. Yet the Pink-footed Geese that breed in the interior of Iceland, while the Greylags occupy the lowlands, still continue not to leave Scotland until late in April, or in early May (rather a bad time for unhelpful storm systems)(H. Boyd, unpubl.).

I have also been using records of ducks caught for the market in the decoys in Denmark, north Germany, the Netherlands and England between the beginning of the 18th century and the middle of the 20th century to puzzle out how much of the wide variations in the numbers of ducks caught resulted from climatic variation in Fennoscandia and northwest Russia in summer and how much from conditions in northwest Europe in

winter. There is, of course, a great deal of 'noise' in the records due to local happenings.

No 'Canadian content' there - but using the longest runs of numerical waterfowl data we have from years before birdwatchers became bird counters. In Canada the nearest equivalent comes from the logs kept at trading posts around Hudson Bay between about 1760 and 1870. Tim Ball (U. Manitoba) published an account of the spring migration of geese based on those records[9]. Though the post managers rarely distinguished between Canada and Snow Geese, what I found remarkable was how very similar the timing of movements along the coasts of James Bay and southwestern Hudson Bay two hundred years ago was to those seen today, despite all the agricultural changes in their wintering places that send far more of them north today, far fitter then their forebears.

You may think that historical studies are suitable only for the old. But looking backward may well be the best way of making guesses about what may happen in the future. If we look only at 'the present' - the 2 or 3 field seasons of the usual graduate study, we can't get a reliable idea of the extent of variations over time in the abundance and behaviour of birds. I continue to find more and more examples where what seemed to be major 'causes' of birds' activities in the 1950s have become minor ones now. You should not assume that your predecessors were less observant or more stupid than you, that this time you have got it right.

Change is the most constant feature of the world. In many ways the future will NOT be like the past. From the selfish ornithologist's point of view, this has the great merit that there is no danger of running out of chances to make 'new' observations. From the larger perspective needed for effective conservation, it means that we can never sit back and say that we have 'solved' the problems of threatened species. In 30 years time, many birds may have abandoned the reserves we fought hard to set aside for them, as the world around them alters - whether from the effects of continuing human folly or from profounder causes.

What changes among the birds you will find in southern Canada thirty years from now will depend chiefly on changes in the patterns of human land use. Here in southern Ontario the best agricultural land will presumably continue to be used intensively while the poorer land continues to be suburbanized [the 905 zone; Kanata] as the tidal movement of people into cities produces a counter-flow of many of the more prosperous [the 'affluent effluent']. This flourishing of the property-proud, with their bird-feeders and mown lawns, is fine for the species that flourish on worked-over land, but birds that need undisturbed landscapes will go on going downhill, as they struggle with the Algonquin Park approach to nature conservation - leave a fringe of forest for passers-by to see, take out the rest, and hope that not enough additional damage is done to the functioning of the watershed for the exploiters, or the local and provincial governments, to be called to account. Nearly all land-use changes will continue to be driven by short-term and selfish interests, not by the long-term need to live in harmony with the land.

It will be interesting to see whether a very recent decision to deny a landowner a permit to break up his holding because it is one of the very few places in the province where Loggerhead Shrikes still breed will be upheld. It's remarkable - and encouraging - that officials of the Ministry of Natural Resources have even tried to do this: "Professional licence, if carried too far, Your chance of promotion will certainly mar" as Gilbert's Lord Chancellor remarked in *Iolanthe*[10].

The recent identification of parts of Texas near the coast as especially important for some Canadian-breeding birds is a valuable reminder that migratory birds are affected by people wherever they go. Canadian voices won't carry much weight in land-use decisions in Texas. Nor, one hopes, would Texan voices in Canada, unless as part of a continent-wide approach to land use, which must be centuries, rather than decades, away.

In the Arctic, which happens to be of greatest interest to me, we have seen that industrial emissions - from Siberia as much as from the American industrial belt - have affected the climate and vegetation of even the remotest areas. A different kind of problem, which we are in the middle of trying to think through, has been created by the great success of geese in the second half of the 20th century. Now we see Snow Geese, with their gardener's enthusiasm for pulling up plants, busily destroying large areas in and around their breeding colonies, with harmful effects not only on the vegetation and the Snow Geese but on most other inhabitants of the tundra. Shifting of goose colonies is not new, and some earlier changes may also have been due to their tundra-bashing. It is the scale of recent events that causes alarm - together with some proposed remedies, such as encouraging massive spring shooting, by southern hunters as well as by northerners. One might have thought that Americans would be wary of "destroying them in order to save them", Vietnam-style.

In all Canada's 39 'ecoclimatic regions' changes affecting birds are going on - as they have always done as the regions became warmer or cooler, wetter or drier. We need to track as many of these changes as we can, though in most cases we will be able to do so only by choosing 'indicator species' that are, for a variety of reasons, relatively easy to deal with. The planned minimum of one National Park per region has still not been reached. But, in any case, 'protected areas' are far from being complete answers to the needs of birds and other wildlife. For the most part, they will arrive at their own solutions, irrespective of what we may attempt to do. The comforting thing is that birds seem to make faster and better decisions than people do.

Ernest Rutherford, the great experimental physicist who launched nuclear physics at McGill from a platform of sealing wax and string, said: "We haven't the money, so we've got to think"[11]. Rutherfords are very rare and "thinking hurts my head" (A.G.Loughrey), but all of us can add something to the store of knowledge of what makes birds tick - and enjoy ourselves (and perhaps help them) while doing so.

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## S.C.O. RESEARCH AWARDS COMMITTEE - 1997 report (slightly edited)

The James L. Baillie Research Award, funded by Long Point Bird Observatory/Bird Studies Canada from proceeds of the Baillie Birdathon, and administered by the Society of Canadian Ornithologists, went to Gail Davoren, M.Sc. candidate in Dept. of Biology, Univ. of Victoria. Her research project, supervised by Alan E. Burger, is titled "Parental investment by Rhinoceros Auklets *(Cerorhinca monocerata)* at the colony and at sea off southwestern Vancouver Island".

The two Percy A. Taverner Awards of the Society of Canadian Ornithologists went to Dawn Burke, Ph.D. candidate in Watershed Ecosystems Graduate Program, Trent Univ., and to Scott M. Ramsay, Ph.D. candidate in Dept. of Biology, Queen's Univ.. Ms. Burke's project, supervised by Erica Nol, is titled "How does forest fragmentation affect reproductive success?" Mr. Ramsay's project, supervised by Laurene M. Ratcliffe, is titled "Mating tactics of female Black-capped Chickadees *(Parus atricapillus)*" [Note: 41st Supplement to A.O.U. Check-List, July 1997, changed *Parus* to *Poecile*...]

The 1997 competition saw the first use of a standardized application form with detailed instructions to applications. This procedure worked very well, and allowed easier comparison and evaluation of applications. The form was adapted from one used by the A.O.U., and permission to use it, and assistance of the A.O.U. Research Awards Committee chair, Paul J. DuBowy, are gratefully acknowledged.

The Research Awards Committee for 1997 consisted of Cynthia K. Bluhm (Delta Waterfowl and Wetlands Research Stn.), Anthony J. Gaston (Nat. Wildl. Research Cen., C.W.S.) and M. Ross Lein (chair; Univ. of Calgary). Committee members reviewed 21 excellent applications, and applicants are to be complimented on the quality of their submissions.

M. Ross Lein

[NOTE: This committee will need a new chair after spring 1998.]

## BEST STUDENT PAPER, S.C.O. ANNUAL CONFERENCE 1997

The award for Best Student Paper at the S.C.O. meeting at Trent University, Peterborough, was presented to **Chris Henschel** (Dept. of Zoology, Univ. of Guelph), for the paper titled "Constructing null models to assess effects of habitat fragmentation on forest bird diversity".

Chris had tough competition, with close to 40% of contributed papers coming from students. Papers were assessed on the basis of scientific merit and on presentation. The selection committee consisted of Peter Blancher, Michael Bradstreet, and André Desrochers.

## EDITOR'S REPORT/RAPPORT DU EDITEUR 1996-97

This report closes my fourth year as Editor, and two more issues of *Picoides* were published - 9(2), with 30 numbered pages, and 10(1), with 20 pages. Publication of the program for the first (solo) S.C.O. conference in Fredericton accounted for extra-large size of 9(2). As yet, no one has commented for or against that innovation, nor on our efforts (over several issues) to provide a more informative look at Canadian bird publications. Ongoing scarcity of feedback about content of *Picoides* is frustrating, but not always discouraging. If people out there really don't care what we publish, as long as we do it regularly, that gives me a free hand. Could an Editor ask for more?

More seriously, *Picoides* is a costly way to communicate with S.C.O. membership, but the alternatives also have problems. We should think twice before printing material that will rarely be referred to in future. Having the content in small sections means we print more contributions in each issue, but it means that most longer offerings are edited down to 2-3 pages. Some things appear in every issue, others once each year, but they all need space.

Each issue of our bulletin costs $1000+ to print (plus $300 to mail - but S.C.O. doesn't pay that, now). If we could get the printing done for half that sum, without too much loss of quality, the money saved could help publish our conference proceedings. We can only spend that money once. Unless a glossy magazine gets us a lot more members than we'd get anyway, it might be better to put more effort into content and less money into presentation?

A.J. Erskine
as Editor, *Picoides*

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## Call for Nominations - DORIS HUESTIS SPEIRS AWARD

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

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

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## Call for Applications - 1998 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 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 1998:

Dr. M.R. Lein, Chair,
S.C.O. Research Awards Committee,
Dept. of Biological Sciences,
University of Calgary,
Calgary, Alberta T2N 1N4

Awards will be announced by 1 April 1998. For application materials or additional information, contact M.R. Lein:
PH 403-220-6549; FX 403-289-9311;
EM mrlein@acs.ucalgary.ca

CONSERVATION FEATURE

# PRIORITIES FOR WORK ON CANADIAN LANDBIRDS

Erica H. Dunn

The Canadian Wildlife Service (C.W.S.) recently completed a priority-setting exercise for landbirds as a contribution to Partners in Flight-Canada (Dunn 1997). This article gives a brief overview of the system and a preliminary list of priority species arising from it. (For purposes of this exercise, "landbirds" included all species not counted as seabirds, shorebirds, or waterfowl.)

The C.W.S. system uses a simple, limited set of criteria, and all the data (and sources) have been put into an accessible database for users. Its main unique feature is that it calculates two separate sets of ranks. The first is a "Supervisory Responsibility" list, based on the proportion of a species' North American breeding range in Canada. Birds that breed almost exclusively in Canada are especially important for us to look after, because no one else can; so we need to ensure that our land-use does not endanger species ranking highly on this criterion.

The second set of ranks is based on "Concern". This rank depends on two factors equally: "Population Trend" and "Vulnerability" (a composite score that reflects abundance and breadth of breeding and of wintering range). High "Vulnerability" score indicates that a species could be severely impacted by fairly local events; whereas high "Trend" score is our best early warning of actual trouble for a species (whether it is widespread or not). It is important to note that "Concern" scores are preliminary, and need to be refined through consideration of additional criteria before they are used in setting of priorities for on-the-ground conservation.

Table 1 lists the Canadian landbird species that are of high priority (for any of several reasons), and indicates the kind of work that is most needed. This is a preliminary list, which should be carefully scrutinized and refined before setting final priorities. We offer the list here in hopes that ornithologists on the lookout for new projects will consider taking on some of the work suggested as having high priority.

Dunn (1997) explained the ranking system in full and summarized results, and the underlying database is available for anyone who wishes to use it (in MS ACCESS or DBASE IV versions). Contact Judith Kennedy, Bird Conservation Biologist, Canadian Wildlife Service (PH: 819-953-4390; FX: 819-994-4445; EM: Judith.Kennedy@ec.gc.ca).

Reference cited:

Dunn, E.H. 1997. Setting priorities for conservation, research and monitoring of Canada's landbirds. Can. Wildl. Serv. Tech. Rep. Ser. No. 293, Ottawa, Canada.

*Table 1.* Preliminary list of priority species for Canadian monitoring, research and conservation (based on Dunn 1997), very roughly in priority sequence within groupings.

Note that this list needs scrutiny and refinement before setting final priorities. Under "first work needed" (a subjective assessment by the author), "trend" means more monitoring work (or analysis) is needed, "cause" means research on cause of problems, and "mitigation" means conservation action is urgent.

| | Canadian Concern Score[1] | Canadian Responsibility Score[2] | Trend Score[3] | Vulnerability Score[4] | First information needed (work in progress) |
|---|---|---|---|---|---|
| HIGHEST PRIORITY | | | | | |
| Bicknell's Thrush | VH?? | VH | U? | 5? | Distribution, trend, basic biology (work underway) |
| Yellow-billed Loon | H? | VH | U? | 4 | Trend |
| Sprague's Pipit | VH | H | 5 | 4 | Cause of decline, mitigation |
| Blue Grouse | VH | H | 5* | 4 | Cause, mitigation?, northern trend |
| Harris's Sparrow | H | VH | 4* | 4 | CBC[5] evaluation, cause, mitigation? |
| Yellow Rail | H | VH | 3* | 4 | Trend, density, distribution |
| Rusty Blackbird | H | VH | 5* | 3 | CBC evaluation, cause |
| Blackpoll Warbler | H | VH | 5* | 2 | Trend (target in migration counts), cause? |
| Boreal Chickadee | H | VH | 5* | 2 | Trend, cause? |
| White-throated Sparrow | H | VH | 4* | 3 | Cause (target in migration counts) |
| Clay-colored Sparrow | H | VH | 4* | 3 | Cause, northern trend |
| Horned Grebe | H | VH | 4* | 3 | Cause, northern trend |
| American Coot | H | H | 5 | 2 | Cause |
| Black Swift | H | H | 4*# | 4 | Northern trend, cause?, mitigation? |
| Smith's Longspur | H? | H | 3? | 4 | Trend |
| Northwestern Crow | H | H | 3* | 4 | Northern trend |
| Rufous Hummingbird | H | H | 3* | 4 | Northern trend |
| Purple Finch | H | H | 4* | 3 | CBC evaluation, northern trend |
| American Tree Sparrow | H | H | 4* | 3 | CBC evaluation |
| American Pipit | H | H | 4* | 3 | CBC evaluation |
| Snow Bunting | H | H | 4* | 3 | CBC evaluation |
| Chestnut-backed Chickadee | H | M | 4# | 4 | Trend, cause |
| McCown's Longspur | H | M | 4# | 4 | Trend, cause |
| Veery | H | M | 4 | 3 | Cause |
| White-tailed Ptarmigan | H | M | 3* | 4 | Trend (work underway in B.C.) |
| Northern Hawk Owl | M? | VH | 3? | 2 | Trend[6] |
| White-winged Crossbill | M? | VH | 3? | 2 | Trend |
| Gray-cheeked Thrush | M? | H | 3? | 3 | Trend (target in migration counts) |
| Boreal Owl | M? | H | 3? | 2 | Trend |
| Olive-sided Flycatcher | H | M | 4* | 3 | Northern trend (target in migration counts) |
| Vaux's Swift | H | M | 3* | 4 | Northern trend |
| Golden-crowned Sparrow | H | M | 3* | 4 | CBC evaluation (target in migration counts) |
| Whooping Crane | M | VH | 1 | 5 | Continued mitigation |

| | Canadian Concern Score[1] | Canadian Responsibility Score[2] | Trend Score[3] | Vulnerability Score[4] | First information needed (work in progress) |
|---|---|---|---|---|---|
| MEDIUM PRIORITY: Action needed in Canada | | | | | |
| White-crowned Sparrow | M | H | 4* | 2 | Northern trend, cause (target in migration counts) |
| Short-eared Owl | M | H | 4* | 2 | Trend, cause[6] |
| Ruffed Grouse | M | H | 4* | 2 | Trend |
| Red-throated Loon | M | VH | 3* | 3 | Trend, CBC evaluation |
| Sandhill Crane | M | VH | 3* | 3 | Trend, CBC evaluation |
| Lapland Longspur | M | VH | 3* | 3 | CBC evaluation |
| Snowy Owl | M | VH | 3* | 3 | CBC evaluation |
| Gray Jay | M | VH | 3* | 2 | Northern trend |
| Spruce Grouse | M | VH | 3* | 2 | Northern Trend |
| Hoary Redpoll | M | H | 3* | 2 | Winter count evaluation |
| Common Redpoll | M | H | 3* | 2 | Winter count evaluation |
| Gyrfalcon | M | H | 3* | 3 | Trend (target in migration counts) |
| Great Gray Owl | M | H | 3* | 2 | Northern trend[6] |
| Tree Swallow | M | H | 3* | 3 | Northern trend |
| Northern Goshawk | M | H | 3* | 2 | Northern trend (target in migration counts) |
| Three-toed Woodpecker | M | H | 3* | 2 | Northern trend |
| Northern Shrike | M | H | 3* | 3 | CBC evaluation |
| Rock Ptarmigan | M | H | 3* | 3 | Trend |
| Pacific Loon | M | H | 3* | 3 | Trend |
| Bohemian Waxwing | M | H | 3* | 3 | Northern trend |
| Pine Grosbeak | M | H | 3* | 2 | Northern trend |
| Pine Siskin | M | H | 3* | 2 | Northern trend, winter count evaluation |
| Rough-legged Hawk | M | H | 3* | 3 | CBC evaluation (target in migration counts) |
| Sora | M | H | 3* | 2 | Northern trend[6] |
| Red Crossbill | M | H | 3* | 2 | Northern trend |
| Sharp-tailed Grouse | M | H | 3* | 2 | Northern trend |
| Long-eared Owl | M | M | 4 | 2 | Cause[6] |
| Northern Flicker | M | M | 4 | 2 | Cause |
| Bobolink | M | M | 4 | 2 | Cause |
| Song Sparrow | M | M | 4 | 2 | Cause |
| Northern Saw-whet Owl | M? | M | 3? | 2 | Trend |
| MEDIUM PRIORITY: Cooperation with U.S. especially important | | | | | |
| Spotted Owl | VH | VL | 5* | 4 | Canadian trend, cause, mitigation |
| Henslow's Sparrow | VH | VL | 5 | 4 | Cause, mitigation |
| Eurasian Skylark | VH | VL | 5* | 4 | Trend, cause, mitigation[7] |
| Crested Myna | VH | VL | 5 | 4 | Cause, mitigation[8] |
| Chukar | VH | VL | 5 | 4 | Cause, mitigation[8] |
| American Dipper | H | L | 5* | 3 | Northern trend, cause |
| Eared Grebe | H | L | 4*# | 3 | Northern trend |
| Cerulean Warbler | H | VL | 5 | 3 | Cause (work underway in ON) |
| Loggerhead Shrike | H | VL | 5 | 2 | Cause (work underway) |
| Eastern Meadowlark | H | VL | 5 | 3 | Cause |
| Chimney Swift | H | VL | 5 | 3 | Cause |
| Band-tailed Pigeon | H | VL | 5 | 3 | Cause |
| King Rail | H | VL | 4# | 3 | Trend |
| Wood Thrush | H | VL | 4# | 3 | Trend |
| Lark Bunting | H | VL | 4# | 3 | Trend |
| Canyon Wren | H | VL | 4# | 3 | Trend |
| Lewis's Woodpecker | H | VL | 4# | 3 | Trend |
| Flammulated Owl | H? | VL | 3? | 4 | Trend |
| Siberian Tit | H? | VL | U? | 4 | Trend[7] |

| | Canadian Concern Score[1] | Canadian Responsibility Score[2] | Trend Score[3] | Vulnerability Score[4] | First information needed (work in progress) |
|---|---|---|---|---|---|
| LOW PRIORITY: High Canadian responsibility and apparently O.K., but vulnerable | | | | | |
| Sharp-tailed Sparrow | H | VH | 3 | 4 | Watch distribution and trend closely |
| Baird's Sparrow | H | M | 3 | 4 | Watch distribution and trend closely |
| LOW PRIORITY: High Canadian responsibility and apparently O.K., but info needed north of BBS coverage area | | | | | |
| Canada Warbler | M | VH | 3* | 3 | Northern trend (target in migration counts) |
| Palm Warbler | M | VH | 3* | 3 | Northern trend (target in migration counts) |
| Connecticut Warbler | M | VH | 3* | 3 | Northern trend (target in migration counts) |
| Tennessee Warbler | M | VH | 3* | 3 | Northern trend (target in migration counts) |
| Yellow-bellied Flycatcher | M | VH | 3* | 3 | Northern trend (target in migration counts) |
| Swamp Sparrow | M | VH | 3* | 3 | Northern trend (target in migration counts) |
| Magnolia Warbler | M | VH | 3* | 3 | Northern trend (target in migration counts) |
| Yellow-bellied Sapsucker | M | VH | 3* | 3 | Northern trend (target in migration counts) |
| Mourning Warbler | M | VH | 3* | 3 | Northern trend (target in migration counts) |
| American Redstart | M | H | 3* | 3 | Northern trend (target in migration counts) |
| Orange-crowned Warbler | M | H | 3* | 3 | Northern trend (target in migration counts) |
| Fox Sparrow | M | H | 3* | 3 | CBC evaluation, n. trend (target in migration counts) |
| Golden-crowned Kinglet | M | H | 3* | 2 | Northern trend (target in migration counts) |
| Wilson's Warbler | M | H | 3* | 3 | Northern trend (target in migration counts) |
| Winter Wren | M | H | 3* | 2 | CBC evaluation, n. trend (target in migration counts) |
| Alder Flycatcher | M | H | 3* | 3 | Northern trend (target in migration counts) |
| Black-throated Green Warbler | M | H | 3* | 3 | Northern trend (target in migration counts) |
| Swainson's Thrush | M | H | 3* | 2 | Northern trend (target in migration counts) |
| Savannah Sparrow | M | H | 3* | 2 | Northern trend (target in migration counts) |
| Least Flycatcher | M | H | 3* | 3 | Northern trend (target in migration counts) |
| Ruby-crowned Kinglet | M | H | 3* | 2 | Northern trend (target in migration counts) |
| LOW PRIORITY: Low Canadian responsibility and low vulnerability but deserve watch due to declining trend or trend uncertainty. Cooperation with U.S. especially important. | | | | | |
| Western Meadowlark | M | VL | 4 | 2 | Cause |
| Burrowing Owl | M | VL | 4 | 2 | Cause[6] |
| Barn Swallow | M | L | 4 | 1 | Cause |
| Pied-billed Grebe | M | L | 4 | 1 | Cause |
| Northern Pygmy Owl | M? | L | 3? | 3 | Trend[6] |
| Clark's Grebe | M? | L | 3? | 3 | Better status info needed for Canada |
| Willow Ptarmigan | M? | L | 3? | 2 | Trend |
| Barn Owl | M? | VL | 3? | 2 | Trend[6] |
| Yellow Wagtail | L? | VL | U? | 2 | Trend[7] |
| Brown Thrasher | H | VL | 4 | 3 | Cause |
| Northern Bobwhite | H | VL | 4 | 3 | Cause |
| Chuck-will's-widow | H | VL | 4 | 3 | Cause |
| Prairie Warbler | H | VL | 4 | 3 | Cause |
| Common Grackle | H | VL | 4 | 3 | Cause |
| Prothonotary Warbler | H | VL | 4 | 3 | Cause |
| Bushtit | H | VL | 4 | 3 | Cause |
| Dickcissel | H | VL | 4 | 3 | Cause |
| Gray Catbird | H | VL | 4 | 3 | Cause |
| Least Bittern | H | VL | 4 | 3 | Cause |
| Eastern Wood Pewee | H | VL | 4 | 3 | Cause |

1 Based on average of Trend and Vulnerability scores (see below): VH=very high concern, H=high, M=medium, L=low, VL=very low. Question mark indicates uncertain data (usually inadequate trend information).
2 Based on proportion of North American breeding range in Canada: Very High=>80%, High=60-80%, Medium=40-60%, Low=20-40%, Very Low=<20%. Globally widespread species have discounted scores.
3 5=significant decline, 4=modest decline, 3=stable, 2=modest increase, 1=strong increase, U=no data. Uncertainty of trend: *=less than half of breeding range sampled OR trend is from semi-standardized source, #=trend is not statistically significant, ?=no data or very uncertain.
4 Scores range 1-5, with 5 most vulnerable. Score is average of scores for global abundance, breadth of North American breeding range and breadth of Western Hemisphere wintering range.
5 CBC=Christmas Bird Count (best trend source for this species).
6 Vulnerability should probably be higher than scored because species sparsely distributed within range.
7 Priority rank assumes there is interest in maintaining small North American outpost of Old World species.
8 Priority rank assumes there is interest in maintaining introduced species.

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## RECENT LITERATURE

Books to be reviewed in future issues of *Picoides (not assigned) include:*

- Les oiseaux nicheurs du Québec. sous la direction de Jean Gauthier et Yves Aubry. 1295 pp. Montreal. 1995. (Available in French or English ) [A major regional publication]
- Atlas saisonnier des oiseaux du Québec. par André Cyr et Jacques Larivée. 711 pp. Sherbrooke. 1995. (Available only in French.) [The first Canadian atlas presenting extensive year-round coverage, based on check-lists mainly from 1970-89.]
- The birds of British Columbia. Volume 3: passerines - flycatchers through vireos. by R. Wayne Campbell, Neil K. Dawe, Ian McTaggart Cowan, John M. Cooper, Gary W. Kaiser, Michael C.E. McNall, and G.E. John Smith. 693 pp. Vancouver. 1997. [Latest instalment of the largest regional bird publication in Canada. Note: vols. 1 & 2 of The birds of B.C. (publ. 1990) also were not reviewed in *Picoides.*]

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The Editor received a request to exchange publications with the journal (1-2 issues/year) "International Studies on Sparrows" (J. Pinowski, ed.; publ. in Poland). We should do this as advertisement for S.C.O. - but S.C.O. has no Society library in which to keep it? Has anyone a burning desire to house/use our copies of that publication, when we make this exchange?

Editor

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## NEWS ITEMS AND ANNOUNCEMENTS

### What is the status of songbird populations?

Since some widely quoted publications appeared in late 1980s, the plight of "neotropical migrants" was hailed as the latest disaster to birds arising from human actions. In 1997, an article (Consequences, 3(1)) by Scott K. Robinson (of Ill. Nat. Hist. Survey and Univ. of Ill.) indicated that, on average across wide areas, numbers of many songbirds are generally stable - and this was quickly quoted in newspapers, without all the caveats included in the same article. That conclusion seems to have arisen from the latest U.S. analyses of Breeding Bird Survey data, using a new method, earlier analyses by a different approach having contributed to the former impression. Canadian B.B.S. analyses, using a different variant of the earlier U.S. method, did not agree fully with either of the others. So what's new? Don't believe everything you read in the newspapers.

Editor

### Directory of Latin American Scientists available

A "Directory of ecologists and environmental scientists of Latin America, the Caribbean, Portugal and Spain (DECA)" is available for purchase, as a Windows-based database produced by Fundacion Sirena, Casilla 1395, Correo Central, (1000) Buenos Aires, Argentina. For additional information, contact Erica H. Dunn at C.W.S.-NWRC, Hull.

### Tropical Field Courses Offered

The Tropical Science Center/Centro Cientifico Tropical is offering twice annually field courses in ornithology and dendrology. For additional information, contact: Dr. Humberto Jimenez Saa, Apdo.8-3870-1000, San José, Costa Rica. fax (506) 2534963; E-mail hjimenez@sol.racsa.co.cr [Note: The fax number given will go to New Brunswick unless a country prefix (not provided) is added.]

### Ottawa Banding Group Establishes Memorial Fund

The Ottawa banding group, renamed Innis Point Bird Observatory in 1996, established a fund in memory of Janette Fleming Dean, one of the founders of the banding group and a noted field-naturalist. Once enough funds are accumulated, an annual study grant will be established, awarded by competition, to assist people engaged in seasonal field projects, preferably on birds in eastern Ontario.

### 1998 Prairie Conservation and Endangered Species Conference

"Integrating conservation, society, ethics, and the economy"
February 19-22, 1998
Saskatoon Inn, Saskatoon, Saskatchewan

For information on any aspect of the conference, visit the home page: http://www.usask.ca/conference/pcaes.html, or contact Peter Jonker (voice 306-966-5552; fax 306-966-5567; e-mail PCAES.Conference@usask.ca

## EDITOR'S MUSINGS

In the United Kingdom, population estimates were recently published for all bird species [Avian Population Estimates Panel (APEP), 1997]. Earlier estimates there date back to the 1920s (Max Nicholson) and 1930s (James Fisher), and many sources provided the data used in the latest compilation. Few other countries wishing to follow the British example can approach the intensity and frequency of survey coverage in the U.K.. Canada, a vast sub-continent with sparse human population, has two strikes against it from the start in estimating bird numbers, but the need for such estimates is as obvious here as elsewhere. APEP (1997) noted, as reasons for publishing such estimates, "interest... academic research... conservation of birds", all of which apply here. They noted as "a secondary benefit... to highlight... species... [with] no recent estimates...".

Many national estimates can be no better than "order of magnitude", but they may be improved in time - with comparisons to previous figures. Early bird population estimates in the U.K. were ridiculed by some as sheer guesswork, though based on systematic data to the extent then possible. Waiting for precision before undertaking conservation measures is a recipe for disaster now, whether one is interested in songbird populations or commercial fish or forest stocks.

Our rudimentary knowledge of distribution and density of some Canadian birds should not blind us to the rough population estimates that already exist for most waterfowl, seabirds, and shorebirds, and for various species that are rare or peripheral here. Establishment of an APEP for Canada, perhaps informally at first, with an objective to assemble existing data, might be one useful focus to get our S.C.O. Conservation Committee up and running? The time is ripe.

Literature cited

Stone, B.H., Sears, J., Cranswick, P.A., Gregory, R.D., Gibbons, D.W., Rehfisch, M.M., Aebischer, N.J., Reid, J.B.. 1997. Population estimates of birds in Britain and in the United Kingdom. British Birds, 90: 1-22.

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

The official "Call for Papers" for the 1998 Conference will accompany the 1998 spring issue of Picoides. That issue also will feature our latest "showcase" of publications relating to Canadian birds, and (we hope) a "new look" at bird conservation initiatives.

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# Society of Canadian Ornithologists
# Société des Ornithologistes du Canada
## Standing Committees and Work Groups

| | voice: | fax: | e-mail: |
|---|---|---|---|
| **Doris Huestis Speirs Award Committee** | | | |
| (excellence in Canadian Ornithology) | | | |
| David N. Nettleship (chair) | 902-426-3274 | 902-426-4457 | david.nettleship@ec.gc.ca |
| Tony Diamond | 506-453-5006 | 506-453-3583 | diamond@unb.ca |
| Spencer G. Sealy | 204-474-9459 | 204-275-6352 | sgsealy@ccm.umanitoba.ca |
| **Research Awards Committee** | | | |
| (James L. Baillie & Taverner Research Awards) | | | |
| M. Ross Lein (chair) | 403-220-6549 | 403-289-9311 | mrlein@acs.ucalgary.ca |

Mandate: annual selection of candidates for Baillie Award (1K$) and Taverner Awards (two 0.5K$);
Actions: (a) summer-fall call for applications, review, and announcement of awards 1 April each year; (b) membership appointment and maintenance of rotational committee structure.

| | | | |
|---|---|---|---|
| **Publications Committee** (*Picoides* and journal) | | | |
| Tony Diamond (chair) | 506-453-5006 | 506-453-3583 | diamond@unb.ca |
| Raymond McNeil | 514-343-6878 | 514-343-2293 | mcneilr@ere.umontreal.ca |
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| Spencer G. Sealy | 204-474-9459 | 204-275-6352 | sgsealy@ccm.umanitoba.ca |

Mandate: (a) editorial advisory board to Editor, *Picoides*; (b) assessment of S.C.O. journal re conservation and biology of Canadian birds.

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|---|---|---|---|
| **Finance and Investment Committee** | | | |
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| **Canadian Landbird Conservation Program** | | | |
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| **North American Banding Council** | | | |
| Jon McCracken | 519-586-3531 | 519-586-3532 | jmc@alpha.nornet.on.ca |
| Lucie Métras | 819-997-4213 | 819-953-6612 | lucie.metrasl@ec.gc.ca |
| (CWS coordinator) | | | |

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## MEMBERSHIP INFORMATION

If you would like to be a member of the Society of Canadian Ornithologists, please send your name, address, phone number, and a cheque or money order (payable to S.C.O.) for $10.00 to the Membership Secretary:

Dr. Nancy Flood, Dept. of Biological Sciences,
University College of the Cariboo,
900 McGill Rd. (Box 3010), Kamloops, B.C. V2C 5N3

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 10,00$ à l'adresse ci-haut.