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Thomas Manning (centre) receiving the 1992 Doris Huestis Speirs Award from
J. Bruce Falls (right) and Henri Ouellet (left)

EDITOR'S MESSAGE

This is in the form of an editor's lament rather than a report. I have managed to produce only one *Picoides* in the last 18 months. A number of factors have contributed to this but two stand out. The first is that the spare time I devoted to *Picoides* while I was Curator of Ornithology has vanished now that I am Assistant Director, Curatorial. The design staff at the Provincial Museum of Alberta

who used to fit *Picoides* into their schedule now work overtime to complete museum projects. The second reason is a personal one - the realization that family time is too precious to give away. I have enough evening and weekend work originating from my museum responsibilities that I simply can't continue with other commitments.

I apologize to those who

wondered if they were off the SCO mailing list because they haven't received *Picoides*. I assume a version will appear soon under new editor Tony Erskine. I have enjoyed focusing on the history of Canadian Ornithology and appreciate the assistance I have received from the many authors and contributors over the past 6 years. I would like to thank Colleen Steinhilber for typing and formatting this issue.

W. Bruce McGillivray

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 for \$10.00 to:

Dr. Philip H.R. Stepney
Provincial Museum of Alberta
12845-102 Avenue
Edmonton, Alberta T5N 0M6

Si vous désirez devenir membre de la Société des Ornithologistes du Canada, faites parvenir vos coordonnées ainsi qu'un chèque ou mandat-poste au montant de 10,00\$ à l'adresse ci-haut.

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Attention:

Dr. W. Bruce McGillivray

TABLE OF CONTENTS

Editor's Message	2	Alexander Light	16
Baillie and Taverner Awards	3	In Press	21
Doris Huestis Speirs Award	9	Canadian Ornithologists' and Their	
S.C.O. Column	12	Research	23

BAILLIE AND TAVERNER AWARD REPORTS FOR 1992 GRANTS

"HATCHING ASYNCHRONY IN THE AMERICAN KESTREL." Karen L. Wiebe, University of Saskatchewan.

When a bird begins to incubate before all eggs of the clutch have been laid, the result is a brood with nestlings of different ages and sizes. The youngest nestlings in such broods often die because they are either attacked by older nestmates, or are poor competitors for food. Why birds hatch their eggs in an apparently mal-adaptive pattern has sparked considerable controversy among ornithologists; at least 16 hypotheses have been proposed to explain it. I chose to study hatching asynchrony in the American Kestrel (*Falco sparverius*), a small falcon whose typical clutch of 5 eggs hatches over 1-4 days. The natural variation in hatching span of kestrel clutches is interesting because it suggests that individuals in the population begin incubation at different times after the first egg is laid.

My study area in the boreal forest of northern Saskatchewan near Besnard Lake was exceptional. Kestrels arrived on the site in mid-April after migration and began to lay eggs in mid-May. Typically, 170 pairs bred each year in boxes along roadsides and clearcuts. Each summer, we banded over 700 adults and nestlings for individual identification. By capturing the adults, we were able to determine such attributes as size, age, and physical condition. To assess the abundance of natural prey (mainly voles), I conducted small mammal censuses 3 times per summer in 50 kestrel territories. The number of small mammals was highly variable, ranging from 2-54 individuals per 100 traps among territories. Median numbers of small mammals declined by about 50% from 1989-1990 and again from 1990-1991. My experiments from 1989 to 1991 focused on two general areas: proximate factors influencing the degree of asynchrony, and the consequences of asynchrony to the growth and survival of nestlings.

Proximate Influences

Female birds may initiate incubation (and hence determine the degree of hatching asynchrony) based on environmental or physiological cues during the pre-laying and egg-laying periods. I quantified

proximate factors such as breeding density, habitat structure, weather, age of parents, and food supply. I experimentally manipulated food supply by supplementing some breeding pairs with 2 mice per day from the time they arrived on their territories until the first egg was laid about 14 days later. Kestrels given extra food did not lay earlier in the season than control pairs, nor did they lay more eggs. They did, however, lay larger eggs and hatch their clutches more synchronously. This experiment was the first to demonstrate that birds can control the degree of asynchrony in their clutches based on a proximate cue near the time of laying. The results also suggest a causal relationship between food supply and hatching asynchrony in kestrels. Surprisingly, the hatching order of the eggs did not always match the order in which they were laid. Scrambled hatching sequences were associated with body size and probably ability to incubate; small females had irregular hatching patterns and lower hatching success compared to large females.



Photo E. T. Jones, Courtesy of the PMA

Kestrel ♀, at nest

Adaptive Value

To understand why females might adjust the degree of asynchrony to food availability, I compared the growth and survival of nestlings, and provisioning rates of parents, at synchronous and asynchronous nests in both food-limited and food-supplemented situations. Each year, I created 10 broods in each of the 4 treatments by switching young kestrels among nests soon after hatching - quite a logistical challenge! The supplemented nests were provided with mice every second day and nestlings were weighed and measured every third day. I found that at supplemented nests, synchronous broods produced more and heavier young compared to asynchronous broods. The youngest nestlings in asynchronous broods tended to die even though there was a surplus of food at the nest, suggesting that there is a cost associated with asynchrony regardless of food abundance. At unsupplemented nests, however, the trend was the opposite; synchronous broods were less productive than asynchronous broods. I also installed electronic event records across the nestbox entrances to record the number of visits parents made to the box. Preliminary analyses suggest that parents of asynchronous broods made fewer visits to feed their young. Asynchrony may thus reduce the energetic cost of the brood for parents.

Costs and benefits of asynchrony for kestrels change with food availability. When food is abundant, synchrony is the most productive hatching pattern, but when food is scarce, asynchrony is the better strategy. It appears that kestrels, to a certain extent, predict food resources for rearing young based on resources during pre-laying. Parents seem to respond adaptively to food resources in the pre-laying period by choosing to hatch their young more synchronously when food is abundant and more asynchronously when it is scarce. I am grateful for the support of the James M. Baillie Memorial Fund and the Society of Canadian Ornithologists during 1991. Fieldwork in a remote northern location is expensive and without financial assistance, my research would have been much less productive.

"THE EFFECT OF FOOD ON REPRODUCTIVE SYNCHRONY IN WILLOW PTARMIGAN." Cathy Schuppli, University of Alberta.

The timing of reproduction in birds may be constrained by environmental and physiological factors. In arctic environments where the growing season is short, there are peaks in plant nutrient concentrations and insect abundance. If reproduction is timed to correlate with the availability of high quality food, then these peaks may act to synchronize reproduction. The Willow Ptarmigan (*Lagopus lagopus*) is a holarctic species that exhibits synchrony in the timing of egg laying and hatching. I proposed to investigate two hypotheses of reproductive synchrony: 1) the timing of laying corresponds with a peak in availability of high quality food, such as new plant growth, for breeding females and 2) the timing of hatching corresponds with a peak in the availability of high quality of food, such as insects, for chicks.

I studied Willow Ptarmigan in the subalpine tundra of the Chilkat Pass, northwestern British Columbia. In the spring, I captured hens and marked them with coloured leg bands and radio transmitters. As females eat primarily willow (*Salix* spp.) buds and leaves prior to egg laying, I collected samples of the 4 main willow species on the study area (*S. glauca*, *S. lanata*, *S. planifolia* and *S. reticulata*) throughout the spring and summer. I analyzed these samples to determine protein, fat and fibre content. In contrast to adults, young chicks (0-21 days old) selectively feed on insects. I sampled insects with sweep nets before and after hatch.

In 1990 and 1991, all first nests were initiated within a 14 day period. The median clutch initiation date for 1990 was May 27 (n=55) and June 1 for 1991 (n=26). Median hatch dates were June 26 for 1990 (n=53) and June 29 for 1991 (n=24). Weather was similar in both years although snow melted and willow leaves opened about one week later in 1991.

For Willow Ptarmigan, the duration of rapid yolk deposition, ovulation and oviposition for one egg is about one week. Females do not acquire large nutrient body reserves prior to egg laying, therefore, maximum energy and protein demands for laying females would likely begin 7 days prior

to clutch initiation and continue until laying was complete (a period of about 2 weeks). In both years, this period of egg formation corresponded with the peaks in protein content of three of the willow species. Fat levels of willow were low and changed very little throughout the season. Fibre levels were high in early spring but began to decrease during egg laying. Willow species differed in their protein and fibre contents. *Salix planifolia* showed the highest protein and lowest fibre content. Hence, *Salix planifolia* would be the most nutritious and the most digestible (i.e., low fibre) food item. Using protein requirements estimated for Red Grouse (*L. l. alexandrae*) during laying, my data suggest that hens must start laying when protein levels are highest in order to maintain a satisfactory body condition.

Peaks in insect biomass corresponded with hatch dates in 1991. In 1990, total insect biomass was lower and a peak was not observed. For hens to time their hatch dates to correspond with insect abundance, they must have a cue before egg laying which would allow them to predict future insect abundance. Insect abundance is a stochastic variable because weather, which is unpredictable, affects emergence. The presence of such a cue seems unlikely.

In summary, the period of egg formation and egg laying for females did correspond to the peaks in protein and to the decline in fibre concentrations of willow buds and leaves. Hatching did not correspond well to the peaks in insect abundance. Protein requirements for reproduction are high in willow ptarmigan. Therefore, peaks in protein availability in willow may act as a synchronizing mechanism for egg laying.

I am grateful for the financial support provided by the Percy A. Taverner Memorial Fund (Society of Canadian Ornithologists), Boreal Alberta Research Grant (Canadian Circumpolar Institute) and Northern Scientific Training Program Grant (Department of Indian Affairs and Northern Development through the Canadian Circumpolar Institute).

"HOST SELECTION IN A GENERALIST BROOD PARASITE: INTERACTIONS BETWEEN THE BROWN-HEADED COWBIRD AND HOUSE FINCH." Daniel R. Kozlovic, University of Toronto.

The widespread Brown-headed Cowbird is known to parasitize the nests of many North American species. The House Finch, is parasitized rarely in its native western range, however, following its recent introduction and subsequent colonization of the east the House Finch has become a relatively frequent host for cowbirds.

My research investigates the nature of parasite-host interactions between the Brown-headed Cowbird and a "new" host species, the House Finch, in eastern North America. Specifically, I intend to determine the consequences of cowbird parasitism on both recent and established populations of House Finches in the east, examine the requirements of cowbirds in the host selection process and establish cowbird response to this unsuitable host. Finally, given that the House Finch is an unsuitable host, I predict that the rate of parasitism in the east should decrease over time. Because the House Finch is a colonizing species in the east, it has been in contact with cowbirds at different localities for different lengths of time.



Photo E. T. Jones, Courtesy of PMA

Savanna Sparrow with 3 hungry cowbird nestlings

This time-series aspects of parasitism will be used to test the hypothesis that depressed levels of parasitism should be observed in regions of longer interspecific association. Geographical variation of parasitism in the east will be assessed using both existing House Finch breeding data obtained from the Cornell Laboratory of Ornithology and that collected by me during fieldwork at St. Catharines, Barrie and Orillia, Ontario.

St. Catharines serves as a site for monitoring House Finch-cowbird interactions on a long term basis. Here, House Finch nesting data collected by me in 1983, 1984 and 1985 have provided crucial information on cowbird parasitism of House Finches early in the history of association (approximately 10 years) of these species in southern Ontario. During this period, I monitored 82 nests of which 33 (40.2%) were parasitized. Despite this level of parasitism, no cowbirds fledged from House Finch nests. House Finch diet and parental care appear to be responsible for the lack of cowbird survivorship. House Finches, too, experienced a reproductive loss. Parasitized nests showed significantly smaller clutch size, hatching and fledging success compared to nonparasitized nests.

Fieldwork at St. Catharines during the breeding seasons of 1990 and 1991 revealed that the rate of parasitism on House Finches had decreased to 5.7%. The level of parasitism was relatively low for both years (1990: 4.4%, 1991: 7.0%) suggesting a true reduction in parasitism from 1983-85. This result supports my hypothesis that cowbirds are avoiding House Finches as hosts. Fieldwork at Barrie and Orillia in 1992 suggest a greater incidence of parasitism at these localities, where interspecific contact is relatively recent, than in St. Catharines.

These preliminary results provide evidence for host discrimination by a generalist brood parasite. The decrease in rate of parasitism at St. Catharines suggests that Brown-headed Cowbirds may no longer recognize the eastern House Finch as a suitable host species and that host avoidance may evolve quite rapidly.

I would like to thank the Society of Canadian Ornithologists for the support provided through its Taverner grant program.

1992 SCO ANNUAL MEETING HIGHLIGHTS

The annual meeting of the Society of Canadian Ornithologists was held at Ames, Iowa, 27 June 1992, in conjunction with the Annual American Ornithologists Union meeting.

The following members have agreed to continue to serve in their respective offices for 1992/93:

Treasurer/Membership

Secretary	Phil Stepney
Recording Secretary	André Cyr
Picoides Editor	Bruce McGillivray

From 108 ballots received, five council members were elected, five others are still on duty until 1993:

Council Members to 1993

Tony Erskine
Stuart Houston
Laurene Ratcliffe
Jim Rising
Jean-Pierre Savard

Council Members to 1994

Tom Dickinson
Jean-François Giroux
William Montevecchi
David Mossop
Steve Wendt

STUDENT AWARDS

The **BAILLIE** recipient is: Marilyn S. Merkle (M.Sc. candidate, Dept. Biological Sciences, Univ. Calgary) for "Causes of body mass fluctuations in passerines." (Featuring *Sialia currucoides*.)

The **TAVERNER** awards go to:

1) Troy I. Wellicome (M.Sc. candidate, Univ. Saskatchewan) for "The effects of habitat quality, in terms of prey supply, on the reproduction of Burrowing Owls (*Athene cunicularia*)."

2) R. Bruce MacWhirter (Ph.D. candidate, Dept. Zoology, Ohio State Univ., Columbus, Ohio) for "Environmental effects on parental care and reproductive output of the Northern Harrier (*Circus cyaneus*) in New Brunswick."

The 1992 **Doris Huestis Speirs award** was received by Dr. Thomas Henry Manning (see citation in this issue). A photo of a Red Phalarope taken in the Arctic by Mark Peck will be presented to him at his home by Bruce Falls and Henri Ouellet as he was not able to attend the A.O.U. meeting.

Richard Banks reported on the Ornithological Council that was incorporated in Washington, D.C. The goal is to have the scientific ornithological voice heard on conservation policy matters in the U.S. The A.O.U. has joined the Ornithological Council. Other groups are sought. Individual supporters would be participating. Other non-scientific groups might join. At present, although the SCO may not join the Ornithological Council, it is proposed that the information about it be circulated among SCO members.

Due to the location of the next A.O.U. meeting (Alaska), it is proposed that the next SCO business meeting be held in conjunction with the Wilson Society Meeting in Guelph, 29 April - 1 May 1993, to enable more members of the council to attend. It is also proposed by D. Hussell that the meeting being held in Canada have a session of Canadian ornithology. SCO might also sponsor the meeting. An informal meeting might also be held in Fairbanks, Alaska, 9-13 June.

André Cyr

REQUEST FOR REPRINTS ON OWLS

Authors of articles or publications dealing with owls and wishing them to be listed in the second edition of a Working Bibliography of Owls of the World are asked to send reprints to:

Richard J. Clark
The Owl Bibliography
c/o Department of Biology
York College of Pennsylvania
York, PA USA 17405-7199

RESEARCH PROJECTS INVOLVING NEOTROPICAL MIGRATORY BIRDS

At the recent Partners in Flight Workshop "Status and Management of Neotropical Migratory Birds" held in Colorado (21-25 September 1992), researchers from the Canadian Wildlife Service, University of Alberta, and University of Toronto met with researchers from Alaska in order to establish a forum for the exchange of information on current research projects involving neotropical migratory birds. This meeting was inspired by a common perception that Canadians and Alaskans share common interests in this area and would benefit by participating as a separate working group under the umbrella of Partners in Flight. This is particularly true for those researchers engaged in studies of birds inhabiting the boreal forest zone.

As a first step in facilitating a Canadian-Alaskan information network, it was agreed that Colleen Handel of the Alaska Fish and Wildlife Research Centre and Keith Hobson of the Prairie and Northern Wildlife Research Centre would act as contacts for Alaska and Canada, respectively.

All Canadian ornithologists currently involved in research on neotropical migrants are requested to forward an extremely brief (a few sentences) description of their research together with their address, phone and fax information to Keith Hobson (CWS, 115 Perimeter Road, Saskatoon, Saskatchewan, S7N 0X4). This information, together with that supplied by the Alaskan group, will then be compiled and forwarded to all participants.

Any suggestions regarding the direction that a Canada-Alaska working group might take would also be gratefully received.

BIOGRAPHY OF JAMES L. BAILLIE

The long-awaited biography of James L. Baillie by Lise Anglin was published by the Toronto Ornithological Club and Long Point Bird Observatory in late October 1992. Baillie was long Ontario's best known and beloved field ornithologist, in whose honour the James L. Baillie Fund and the Jim Baillie Birdathon were named. Copies are available by sending a cheque made out to Toronto Ornithological Club to Jim Griffiths, 560 Blythwood Rd., Toronto, ON M4N 1B5 for \$14.60. Toronto residents or visitors there may deduct \$2.60 if they pick up their copies personally.

SYMPOSIUM AT WILSON/ SCO MEETING 29 April - May 1993 - GUELPH

Concerns about possible declines in bird numbers and what can be done about them call for continuous monitoring of populations. The Society of Canadian Ornithologists will sponsor a symposium entitled: *Monitoring bird populations - the Canadian experience*. Speakers from Canadian Wildlife Service, other government and private agencies and universities have agreed to take part. Surveys of seabirds, waterfowl, raptors, shorebirds and small land birds will be represented. Papers will include breeding bird censuses, migration monitoring and winter surveys. Several speakers will emphasize the role of volunteers. An overview discussing integration of monitoring programmes will close the symposium.

ALBERTA MAMMALS: An Atlas and Guide

1993. by Hugh C. Smith (ISBN 0-7732-1073-3)
The Provincial Museum of Alberta is pleased to announce the publication of the first comprehensive reference and field guide to the mammals of Alberta to appear in almost 30 years. Copies are available from the Friends of the Provincial Museum of Alberta Society, 12845-102 Avenue, Edmonton, Alberta T5N 0M6 for \$24.95 (plus GST where applicable) plus \$3.00 shipping and handling.

DORIS HUESTIS SPEIRS AWARD CALL FOR NOMINATIONS

The Speirs Award is presented annually to an individual who has made outstanding contributions to Canadian Ornithology.

If you wish to nominate someone, please inform:

Dr. Bruce Falls
Department of Zoology
University of Toronto
Toronto, Ontario M5S 1A1

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\$10.95 per cassette plus \$3.00 per order for mailing costs. No GST. Mail orders filled by Catherine Thexton, Box 8, Balmoral, Manitoba R0C 0H0

1992 DORIS HUESTIS SPEIRS AWARD FOR CONTRIBUTIONS TO CANADIAN ORNITHOLOGY

Thomas Henry Manning

The Doris Huestis Speirs award of the Society of Canadian Ornithologists honours those who have made important contributions to Canadian Ornithology. I am pleased to announce that this year (1992) we recognize the work of Thomas Henry Manning, a pioneer in exploration and ornithology of the Canadian Arctic. In addition to birds, his activities in the north have embraced archaeology and surveying as well as studies of mammals.

Born in 1911 in Northampton, England, and educated at Harrow and Cambridge, Tom Manning first came to Canada in 1933 to spend two years in a geographical and biological survey of Southampton Island in the North West Territories. That expedition was sponsored by the Royal Geographic Society and involved collecting birds and mammals for the British Museum. From 1936 to 1941 he led the British Canadian Arctic Expedition to Southampton and Baffin Islands and Repulse Bay. During this time he surveyed the last uncharted coastlines of Foxe Basin. In 1942 he joined the Royal Canadian Navy and among other activities advised on the construction of arctic airfields. After the war, he worked in the north with the Canadian Geodetic Survey, the Defence Research Board, the National Museum of Canada, and the Canadian Wildlife Service. In 1955-56 he was executive director of the Arctic Institute of North America.

A majority of Manning's 50 or more publications deal with biology. Representative examples of his ornithological work include *The birds of Banks Island* (1956, with Höhn and MacPherson); a biological investigation of Prince of Wales Island (1961 with MacPherson) and geographical and sexual variation in the Long-tailed Jaeger (1964). Not satisfied to simply record occurrences of birds and mammals, Manning was interested in the origins of variation and patterns of post-glacial dispersal. For the time he worked, he had an unusual appreciation of statistics in biology. Other

studies, published as recently as 1982, were concerned with variation in weight loss of eggs of passerines before and after incubation.

Tom Manning has received many honours for his scientific contributions to arctic biology and geography. In 1944 he received the Bruce Medal from the Scottish Geographic Society, followed by the Patron's Medal of the Royal Geographic Society in 1948. In 1974 he was made an officer of the Order of Canada, and in 1977 he received the Massey Medal of the Royal Canadian Geographic Society. McMaster University conferred on him an Honorary Doctorate of Laws in 1979.

Here is a man who began his career with arctic explorations on foot, with dog teams and small boats in unknown territory, undaunted by the dangers and hardships he encountered. A man of many interests, his efforts turned increasingly to biological study and birds in particular. Later we find him at a computer studying biological variation. It is fitting that we should now honour Thomas Henry Manning for the groundwork he laid in our understanding of birds of the Canadian north.



photo by W.K. Baldwin

***Tom Manning (right), Foxe Basin Expedition
Summer 1949***

RESEARCH AWARDS CALL FOR APPLICATIONS

Applications are sought annually for 2 Taverner Awards (up to \$500 each) and 1 Baillie Award (\$1,000).

Taverner Awards are offered by the Society of Canadian Ornithologists to honour and further Percy A. Taverner's accomplishments in increasing knowledge of Canadian birds through research, conservation and public education. The award is 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 on by an applicant in a given year. Taverner Awards are only given once for the same project; Baillie Awards only once to the same person - but past winners of either award may apply for the other. Funds are not awarded for stipends.

To apply, submit a resumé, two letters of reference and a proposal (maximum 3 pages) which should include the purpose of the study, methods to be used, and a budget outlining total costs and other sources of funding received or applied for.

Applications should reach the Society at the following address before January 15 of each year:

Society of Canadian Ornithologists
Research Awards
c/o Dr. Laurene Ratcliffe
Department of Biology
Queen's University
Kingston, Ontario K7L 3N6

SCO PRESIDENT'S REPORT 1992

Activities of the Council

During the year I sent two newsletters to the Council and received a number of communications from Council members. I should like to thank those who served in several offices and on various committees.

Under the chairmanship of past-President Jon Barlow, Secretary André Cyr and Councillors Laurene Ratcliffe, Jamie Smith and Dan Welsh served on the student awards committee.

Vice-President Henri Ouellet chaired the nominations committee and was assisted by Councillors Dave Nettleship, Jean-Pierre Savard and Jim Rising.

The Speirs award committee, chaired by myself, consisted of Henri Ouellet and Councillors Tony Erskine and Stuart Houston.

Councillor Raymond McNeil accepted an appointment as our representative to ICBP Canada.

We are again indebted to our Membership Secretary/Treasurer Phil Stepney for keeping us afloat, despite his other heavy responsibilities.

Under the capable editorship of Bruce McGillivray, *Picoides* continues to interest and inform us. Both the excellent quality and unusually low cost of this journal owe much to his efforts, acting under considerable pressure of his own busy schedule.

To all I am greatly indebted for essentially carrying out the program of SCO.

I should like to thank especially those councillors whose terms end at this meeting: Tony Diamond, Raymond McNeil, David Nettleship, Jamie Smith, and Dan Welsh. I know we can count on them to help our Society in the future.

I should also like to welcome the newly elected councillors and promise to ask them to accept some responsibility for our continuing program.

Partners in Flight

Last September I was invited as your president to a meeting of NGOs (non-government organizations) interested in migratory birds convened in Hull by the Canadian Wildlife Service (CWS). The subject was the development in Canada of a parallel program to the U.S. Partners in Flight, which involves both government departments and NGOs and coordinates and sponsors projects concerning populations of migratory birds. The chief concern of that program has been reported declines in neotropical migrants. Some Canadian organizations, e.g., Long Point Bird Observatory (LPBO), Canadian Nature Federation, l'Association Québécoise des Groupes d'Ornithologues, as well as CWS, already have relevant programs.

I explained that SCO does not sponsor research programs but that we could act as a source of advisors. I urged that existing programs be continued and evaluated and that the emphasis not be confined to neotropical migrants. I also suggested that tropical programs target countries not already receiving attention from US sources. For example, CWS and LPBO have a program in Cuba.

I expect that as members of SCO we will hear more about these initiatives in the near future.

Concerns

We are now ten years old as a society and there is much in our accomplishments to be pleased with. One immediately thinks of our informative journal and our awards to encourage student research and to recognize the contributions of more senior persons to Canadian ornithology.

However, I do want to express two concerns. One is the drop in paid-up memberships reported by Phil Stepney. This may be temporary but if it continues it will impair our financial ability to continue the scale of our awards and to represent Canadian ornithologists. We must all make an effort to encourage our colleagues and students to join the SCO.

My second concern is our involvement, or lack of it, in conservation matters. As I reported earlier, we are consulted on new initiatives by CWS. Is this sufficient? Some of you will know that an Ornithological Council is being formed in the U.S. to provide scientific input to public programs affecting birds. You may have read about this in the Ornithological Newsletter. Our society has been asked what role we might play in relation to this body and I have consulted the Council on the subject. Opinions have varied and we have not yet formulated an SCO policy. However, most councillors have argued that we should activate our own conservation committee which has been on the books for several years. Yet I understand that attempts by my predecessors to do just that have, so to speak, fallen on deaf ears. I'm not arguing for make-work activities but if we are serious about increasing our profile and action in this area, some members must agree to shoulder the responsibility. I should be very pleased to hear both from council members and the membership at large on these questions.

Perhaps by next year's Annual Meeting I will have more to report.

[Editor's Note: The Society received a request from Donald A. Davis to lobby the Ontario Provincial Government in support of the preparation (cont'd on page 12)]

ATLAS OF THE BREEDING BIRDS OF ALBERTA

The Atlas of the Breeding Birds of Alberta (ISBN 0-9696134-0-7) is now available for \$45.00 plus \$3.00 shipping and handling and GST (total \$51.36) from the Federation of Alberta Naturalists, P.O. Box 1472, Edmonton, Alberta. This stunning addition to a library of atlases provides full color maps and photos along with species accounts and special sections on the history of Ornithology in Alberta and Alberta biogeography. A departure from traditional atlases, this fall 1992 publication borrows from field guides and coffee table books to carve out a distinctive niche in the ornithological literature.

of a management plan for Presqu'île Provincial Park. It is not unreasonable for the Society to take a position on issues such as this and to prepare statements to politicians in the form of resolutions. We have no mechanism at present. To my mind, this is the key role for a Conservation Committee - first to establish procedures for receiving and evaluating ornithological concerns; and second to draft resolutions which can then be ratified {this process would also have to be worked out} and subsequently forwarded to politicians or other worthy recipients.

Providing a balanced scientific viewpoint on important conservation issues could provide the Society with a key role and higher profile for the future.]

Bruce Falls, President

S.C.O. COLUMN

The following article is the first in what we hope will be a continuing series entitled the Status, Concerns and Opinions Column. The column is aimed at either identifying gaps in our knowledge of ornithological topics relevant to Canada, or generating discussion, by presenting opinions on key issues affecting birds in Canada. If successful, this will perhaps become the new focus of *Picoides* and be the rationale for publishing more issues each year. We hope you'll consider contributing an article on your own area of expertise or comment on previous submissions. Subject matter and style is wide open - be as specific or general as you wish, and quote references or not as you deem important. To get you thinking, here are some other topics suggested by potential authors: measuring nest success without influencing outcome, importance of long-term studies, climate change and arctic birds, the pros and cons of bird feeders, ecotoxicology, professional-amateur cooperation (the value of bird atlassing), reproductive strategies of falconiforms and ecological genetics.

GEOGRAPHIC AND TEMPORAL BIASES IN ORNITHOLOGICAL STUDIES: WINTER ECOLOGY OF SONGBIRDS

Erica Dunn

The bulk of our knowledge for North American songbirds concerns the breeding season. Although we recognize that some species spend as little as 3 or 4 months outside their wintering range, the nesting season is when weather is most pleasant and academic schedules afford time for research. Most of the "hot topics" in evolutionary ecology of recent years have concerned breeding season subjects such as cooperative breeding, reproductive effort, correlates of breeding success and nesting habitat.

Some popular research topics such as optimal foraging theory and functions of communal roosting also concern winter biology. With the possible decline of many North American songbirds that winter in the neotropics, however, we are becoming more aware of how very little we know of the needs and habits of birds during the non-breeding season.

This point was brought home to me as I gathered data for a book on species that regularly visit bird feeders. Trying to find interesting tidbits of information on behaviour or ecology in winter, I came to the realization that even basic natural history was unknown for many common species on their wintering grounds.

As a way of highlighting our lack of knowledge, consider what we know of a well-studied species. A recent book by Susan Smith, 'The Black-capped Chickadee' (1991, Cornell University Press), summarizes published material on a wide variety of topics: **Winter physiology** (daily activity patterns and energy requirements, cold tolerance, thermoregulatory behaviour, nocturnal hypothermia); **feeding ecology** (diet, optimal foraging, risk aversion, adjustments in foraging due to weather, learning ability, search image, effects of food colour and handling time on diet, food storage and recovery); **communication** (winter calls and their meaning, visual displays, effects of sex, age and dominance on calling); **winter reproductive**



photo E.T. Jones, Courtesy of the PMA

Black-capped Chickadee

behaviour (maintenance of pair bonds, formation of new pairs, role of dominance), **post-breeding dispersal** (which birds, distance moved, role of dominance); **winter flocking** (age and sex ratios in flocks, role of dominance, relatedness of flock members, flock cohesion vs. switching, flock size, range size); **dominance relations** (effect of age, sex and breeding status, stability of hierarchy, relation of dominance to survival); **parasites and diseases**; **range changes**; **interspecific relations** (mixed species foraging, competition); **population dynamics** (winter mortality and effects on mortality of dominance, age, sex, food supply and winter weather; predators; life table; determinants of local population size); and **migration and eruptions** (frequency, cause, age of migrants).

Contrast this list (just compare the lengths if you skimmed over the above) with nearly all I was able to find in the literature about winter ecology of the

Yellow-bellied Sapsucker: **general habitat, diet, and food storage**. The Varied Thrush is another little-known species. Variation in acorn crops has been suggested as the cause of the bird's regular population eruptions, but the connection hasn't been proven. Rufous-sided Towhee, residents may or may not mix with migrants, and pairs may or may not remain together through the winter. Acorns are possibly important in the winter diet.

I could find nothing for these three species on key winter concerns such as winter site fidelity, causes of mortality or critical elements of winter habitat.

In between these extremes of knowledge are a number of species for which a moderate amount of information is available. These include finches, blackbirds and sparrows, in which topics concerning flocking have been well studied. Thus, roosting or foraging ecology may be well known, while many of the other topics addressed in chickadee studies remain untouched. Within each well-studied group, moreover, there are species, such as Fox Sparrow or Hoary Redpoll about which we know very little.

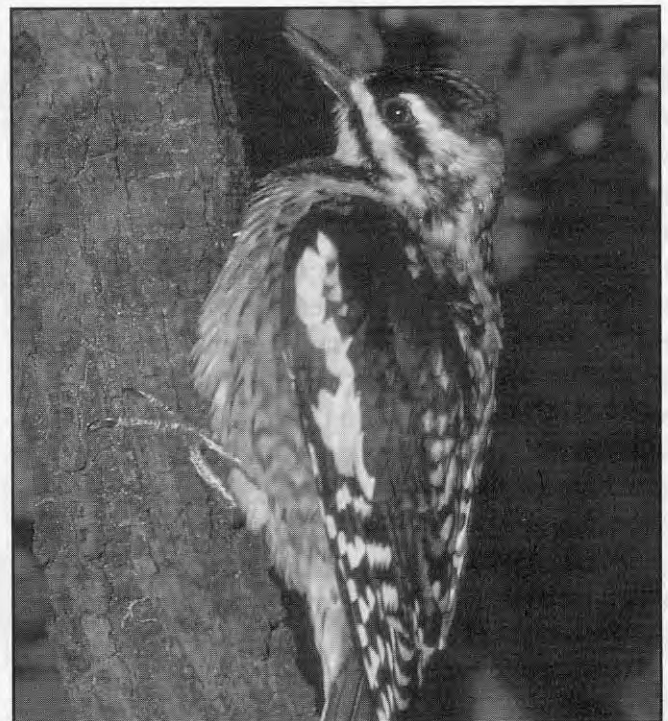


photo E.T. Jones, Courtesy of the PMA

Yellow-bellied Sapsucker, little is known about their winter ecology.

Of the species that breed in Canada and also visit feeders, the ones best studied in winter are resident year-round in the northeastern part of the continent (e.g., Black-capped Chickadees, Downy and Hairy Woodpecker and White-breasted Nuthatch. All hold definable territories permanently and are relatively easy to colour mark and observe. Even the more difficult-to-study jays and crows have been the subject of considerable research. All these birds tend to live in areas dense with human population and dotted with institutions of higher learning where inexpensive, local research topics are in demand.

The other birds that stand out in terms of our knowledge of winter ecology are flocking species that also winter in university-rich areas (California-wintering sparrows, for example), and those that cause agricultural damage (particularly blackbirds).

The birds about which we have least knowledge are ones that winter in the southern U.S., particularly if they are solitary. Examples include Yellow-bellied Sapsucker, Hermit Thrush, Brown Thrasher, Rufous-sided Towhee and Pine Warbler.

Recent studies of warblers wintering in the neotropics (see Morse, D.H. 1989 *American Warblers*, Harvard Univ. Press) have shown that some have strong fidelity to wintering areas, some have different habitat requirements in winter than in summer, and some are declining due to habitat loss in Central America. We needn't go so far to study the same subjects in other species, however, and the need for such knowledge may be just as great for Canadian birds that winter closer to home. A recent summary of Breeding Bird Survey results for 1966-1989 documented significant decreases in the Canadian breeding populations of several species that visit southern U.S. bird feeders in winter, and about which we know little: Northern Flicker, Ruby-crowned Kinglet, Brown Thrasher, Eastern Meadowlark.

Although the species considered here all visit feeders, the same pattern may hold true for other species: flocking species and birds resident in areas dense with humans are relatively well studied in

winter; more solitary, southern-wintering birds require more attention.

Do you think the bias in the level of our knowledge of various species is a serious problem?

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Sample of Canadian breeding species without authors:

Yellow-billed Loon, Pied-billed Grebe, Horned Grebe, Red-necked Grebe, Eared Grebe, Northern Fulmar, Fork-tailed Storm-Petrel, Leach's Storm-Petrel, Northern Gannet, Great Cormorant, Pelagic Cormorant, Green-backed Heron, Greater White-fronted Goose, Brant, Canada Goose, Green-winged Teal, American Black Duck, Northern Pintail, Blue-winged Teal, Northern Shoveler, American Wigeon, Redhead, Ring-necked Duck, Greater Scaup, Common Eider, King Eider,

[Labrador Duck], Oldsquaw, Black Scoter, Surf Scoter, White-winged Scoter, Common Goldeneye, Barrow's Goldeneye, Common Merganser, Turkey Vulture, Osprey, Sharp-shinned Hawk, Northern Goshawk, Swainson's Hawk, Ferruginous Hawk, Ring-necked Pheasant, Willow Ptarmigan, Ruffed Grouse, Sharp-tailed Grouse, Yellow Rail, Virginia Rail, Sora, Semipalmated Plover, American Avocet, Greater Yellowlegs, Lesser Yellowlegs, Solitary Sandpiper, Willet, Wandering Tattler, Spotted Sandpiper, Upland Sandpiper, [Eskimo Curlew], Whimbrel, Hudsonian Godwit, Marbled Godwit, Ruddy Turnstone, Red Knot, Sanderling, Least Sandpiper, Pectoral Sandpiper, Purple Sandpiper, Dunlin, Stilt Sandpiper, Long-billed Dowitcher, Common Snipe, Red-necked Phalarope, Red Phalarope, Pomarine Jaeger, Parasitic Jaeger, Long-tailed Jaeger, Franklin's Gull, Bonaparte's Gull, Mew Gull, California Gull, Herring Gull, Glaucous Gull, Great Black-backed Gull, Sabine's Gull, Caspian Tern, Common Tern, Arctic Tern, Black Tern, Dovekie, [Great Auk], Ancient Murrelet, Rhinoceros Auklet, Tufted Puffin, Horned Puffin, [Passenger Pigeon], Black-billed Cuckoo, Eastern Screech-Owl, Barred Owl, Spotted Owl, Common Nighthawk, Whip-poor-will, Chimney Swift, Vaux's Swift, Ruby-throated Hummingbird, Lewis' Woodpecker, Yellow-bellied Sapsucker, Red-naped Sapsucker, Red-breasted Sapsucker, Downy Woodpecker, Hairy Woodpecker, Three-toed Woodpecker, Black-backed Woodpecker, Pileated Woodpecker, Olive-sided Flycatcher, Western Wood-Pewee, Eastern Wood-Pewee, Alder Flycatcher, Least Flycatcher, Say's Phoebe, Great Crested Flycatcher, Western Kingbird, Eurasian Skylark, Barn Swallow, Steller's Jay, Blue Jay, Siberian Tit, Boreal Chickadee, Chestnut-backed Chickadee, Red-breasted Nuthatch, Pygmy Nuthatch, Rock Wren, House Wren, Winter Wren, Marsh Wren, American Dipper, Northern Wheatear, Eastern Bluebird, Western Bluebird, Mountain Bluebird, Townsend's Solitaire, Veery, Gray-cheeked Thrush, Swainson's Thrush, Hermit Thrush, American Robin, Varied Thrush, Gray Catbird, Brown Thrasher, Sprague's Pipit, Bohemian Waxwing, Loggerhead Shrike, Solitary Vireo, Red-eyed Vireo, Nashville Warbler, Yellow Warbler, Chestnut-sided

Warbler, Yellow-rumped Warbler, Townsend's Warbler, Black-throated Green Warbler, Blackburnian Warbler, Pine Warbler, Blackpoll Warbler, Black-and-white Warbler, Northern Waterthrush, Louisiana Waterthrush, Connecticut Warbler, Canada Warbler, Western Tanager, Rose-breasted Grosbeak, Blackheaded Grosbeak, Lazuli Bunting, Dickcissel, Rufous-sided Towhee, Chipping Sparrow, Clay-colored Sparrow, Brewer's Sparrow, Field Sparrow, Black-chinned Sparrow, Vesper Sparrow, Lark Sparrow, Lark Bunting, Baird's Sparrow, Le Conte's Sparrow, Fox Sparrow, Lincoln's Sparrow, Golden-crowned Sparrow, White-crowned Sparrow, Chestnut-collared Longspur, Red-winged Blackbird, Eastern Meadowlark, Western Meadowlark, Yellow-headed Blackbird, Rusty Blackbird, Brewer's Blackbird, Common Grackle, Purple Finch, Cassin's Finch, Common Redpoll, Hoary Redpoll, Pine Siskin and Evening Grosbeak.

Ornithological Resolutions

The joint meeting of the SCO and the Wilson Ornithological Society is to be held in Guelph, Ontario in late April and early May (members should by now have the details). The Resolutions Committee will accept for discussion and a subsequent vote, any resolutions that are of relevance to Canadian and American ornithologists and ornithology. Please submit resolutions to Erica Nol, Chair, Resolutions Committee, Joint Meeting, SCO, WOS; Biology Department, Trent University, Peterborough, Ontario K9J 7B8, as soon as possible.

ALEXANDER LIGHT

We have only scattered fragments of information concerning Alexander Light. We don't know where or when he was born and we don't know where or when he died. We do know that Light arrived in Hudson Bay one year after James Isham. Light did his collecting in the 1730s and early 1740s, in advance of that done by Isham in the 1740s.¹

A shipwright, Light was sent by the Hudson's Bay Company to Churchill in 1733 for four years at £33 per annum.^{2,3} He arrived on the *Mary* at Churchill on 4 August that year.⁴ John Richardson, almost a century later, added the important information that Light "was sent out ... by the Hudson's Bay Company, on account of his knowledge of Natural History."⁵

It is not known whether Light's collecting activities were in response to a request, dated 2 May 1735, from the Company to its officers to collect specimens, particularly plants: "We must repeat our formal order that you are at a proper season, [to] plant in boxes some roots of the several sorts of herbs, plants, grass and shrubs that are in your part and save it [sic] in proper season some of the seeds, berries, cones or kernels of all growing in your country and send them to us. Also tell your surgeon to give us the particular description thereof and their names and qualities and of what use the natives put them to and send us an account in writing of the particulars of what you put on board of that kind. This order we require may not be neglected for the future."⁶

It is well that Alexander Light took an interest in collecting, since the response by the Company surgeons was not overwhelming. A letter of August 1738 from Moose Factory states that the surgeon, Robert Pilgrim, collected only a few herbs, plants and shrubs. Robert Macduff, surgeon at York Factory, also made a small collection. "We have taken care to send your honours some plants, shrubs etc., this with the names and qualities the surgeon will give some account of..." That year James Dudgeon, the surgeon at Albany, did nothing. "All



photo E.T. Jones, Courtesy of the PMA

Spruce Grouse - new to science

herbs, plants, shrubs, cones or kernels that we can at convenient times gather with their names and qualities given by the surgeon, shall be placed and sent home . . . but have not any at present, this summer proved so cold which frustrated all our endeavours."⁷ One can speculate that these surgeons simply lacked an interest in botany, although individual Company surgeons on occasion were known to be lazy, even when sober.

Light collected two mammals, a turtle and five taxa of birds (all but one new to science), each illustrated in *A Natural History of Uncommon Birds* by George Edwards.⁸ Linnaeus recognized the Spruce Grouse (Edwards' plate 118) as a new species, now *Dendragapus canadensis*. Light also collected a specimen of the Snowy Owl (plate 61), a species already known to Linnaeus from northern Europe.

In the case of each of three birds, Linnaeus correctly considered them to belong to the European species, but later "splitters" appreciated small differences that warranted a new Latin name, today recognized as a North American subspecies. The

Willow Ptarmigan (plate 72) was named *Tetrao albus* by Gmelin and is now a subspecies, *Lagopus lagopus albus*. In 1776, P.L.S. Müller gave the North American specimen of the Northern Hawk-Owl (plate 62) a Latin name, *Strix caparoch*, but it is now considered a subspecies, *Surnia ulula caparoch*.

A third taxon, a subspecies of the Gyrfalcon, *Falco obsoletus rusticolus*, was illustrated as the "Ash-coloured Buzzard" by George Edwards (plate 53), with credit to Light for the specimen. Pennant in *Arctic Zoology*, volume 2, page 208, next described this race of the Gyrfalcon as "the Plain Falcon," from Hudson's Bay. When Gmelin gave it a Latin name, *Falco rusticolus*, in 1788-1789, he identified the locality as 'in freto Hudsonias' in the alternative wider sense of 'the sea in general' [Linnaeus in 1766 had also used 'ad fretum hudsonis' for the Northern Harrier, but this has always been translated correctly as Hudson Bay]. Unfortunately the editors of the *Third* and *Fifth AOU Check-lists* translated 'in freto Hudsonis' literally as "Hudson Strait" (Syst. Nat. 1788, vol. 1, part 1, p. 268), whereas in the *Fourth AOU Check-List* the correct historical and geographical interpretation of

"Hudson Bay" is given. The *Third* and *Fifth Check-Lists* are thereby in error. [The 1st and 2nd Check-Lists gave Stejneger, Auk 2: 187, 1885 as their authority for the subspecies].

In another instance, Light's specimen of what is now known as the Red-necked Phalarope (*Phalaropus lobatus*), though published first by Edwards in 1743 (plate 46), was listed as the second known specimen by Linnaeus, coming after a full-plumaged female specimen brought *later* from Hudson Bay by Isham and published by Edwards in 1750 (plate 143). The *Sixth AOU Check-List*, citing Linnaeus, gives the type locality of the *first* specimen as "*in America septentrionali, Lapponia* = Hudson Bay." Light's specimen "came on board a Ship sailing on the coast of Maryland, a good Distance from Shore, in an Off-land Wind." A description of the environment around Light's specimen, had it been named as a type, would have been an interesting ornithological anomaly.

Linnaeus gave the name *Falco canadensis* to an eagle portrayed incorrectly by Edwards (plate 1) as having feathered tarsi but a white tail, obviously a composite of two eagle specimens. This eagle was said to have been brought alive to England by an unnamed "Gentleman employ'd in the Hudson's-Bay Company's Service", in all probability Alexander Light. Not until the *Fourth AOU Check-List* (1931) was this specimen designated on very questionable grounds as the type for the North American subspecies of the Golden Eagle, now *Aquila chrysaetos canadensis*.

Light also collected one new species of mammal named by Linnaeus, the American Porcupine (*Erethizon dorsatum*, plate 52), and one new subspecies of the Wolverine (*Gulo gulo*), *luscus* from Hudson Bay (plate 103). Light likely brought from Hudson Bay the live Wolverine given to Sir Hans Sloane in London (plate 103). Light later presented George Edwards with a live Box Turtle from South Carolina (plate 205). Light may also have been the "Gentleman in the HBC Service" who sent specimens of the Great Horned Owl and Wild Swan. If the date of August 1739 is correct and not a misprint for 1738, Light could not have been the



photo E.T. Jones, Courtesy of the PMA

**Red-necked Phalarope, first collected by
Light**



photo E.T. Jones, Courtesy of the PMA

"...depending on them for food at some seasons..."

unnamed collector of the live Peregrine Falcon that "pitched on ship" in Hudson Strait during the ship passage of 1739.

Light played a key role in exploration. In 1737, during his fourth year in the Bay, the Company sent two ships north to explore Roe's Welcome Sound, between Southampton Island and the mainland of what is now Keewatin Territory, "in search of a North West Passage, to open trade with the Eskimos, and to dig for minerals." The *Churchill* was under the command of James Napper, with Alexander Light as mate, and the *Musquash* under Robert Crow. Napper's detailed "Orders and Instructions" from the Company were published in the 1749 *Report from the Committee appointed to enquire into the State and Condition of the Countries adjoining to Hudson's Bay, and of the trade carried on there*. Richard Norton, in a letter from Prince of Wales Fort, Churchill River, on 17

August 1736, reported that "whereas Mr. Light is appointed to be mate of the *Churchill* sloop who is to go to the northward upon discovery, we shall be greatly in want of a carpenter to keep our craft of the river in repair in Mr. Light's absence and to do other carpenter's work as is continually wanting to be done..."⁹

The northern exploration was not successful. The two ships got no farther than Whale Cove at 62° 10' North, thereby failing to explore Chesterfield Inlet, Wager Bay or Repulse Bay. Worse, James Napper died at Whale Cove on the 7th of August. Light took charge thereafter, sailing for Churchill on the 15th and arriving there on 18 August; Crow's accompanying sloop, the *Musquash*, did not arrive until 22 August. Norton felt it would not be worth sending sloops in the same quest another year, "the coast being perilous, no rivers navigable that they could meet with nor no woods, and the trade trifling and inconsiderable"¹⁰ The day after his return, Light, whose first term had expired, boarded the *Mary* with Captain Coats and reached London on 23 September 1737.¹¹

Light may have married while on furlough in England. Hudson's Bay Company records (A.1/35, p. 99 and A.1/35, p. 248) show that Sarah Light received £40 in 1740 but only £20 in 1741.¹²

In 1738, Light returned to begin his second term of service. Upon arrival at Moose Factory, he wrote to Sir Hans Sloane "at His House in Russel Street near Bloomsbury, London, H.B. Co.," telling him that he had "not been much on Shore as yet but this Looks Like a Pleasant Country and in it thayr seems to be a Great Deall of Room for Industry. I see at Albany sum Pettryfied Stones and severall fine flowers and I doubt not but here is the same at Moose River, all of which I will Indeavour to make as Good a Collection as I posably would." Light sent Sloan a collection of 35 Eskimo items of ethnologic interest, obtained from natives who visited the ship in Hudson Strait (Latitude 63 degrees and Longitude 72 degrees). The items included a harpoon, a lance, a swivel, and various tools and ornaments.¹³

The August 1738 letter from Richards Staunton and George Howy at Moose Fort stated that the *Beaver* sloop "was to be commanded and repaired by Alexander Light, 'a very good Shipwright.' She was to be stationed at Moose. In spite of Light's repairs, by 1742 the *Beaver* was in 'a sad deplorable Condition, and Bolt sick, and Nail sick, in every part.'¹⁴

In 1740, the *Moose River II*, under command of Joseph Isbister who was also chief at East Main, sailed from Moose River in company with the *Hudson's Bay V*, Captain Christopher Middleton, and the *Beaver* sloop, Alexander Light, master, on 20 August and reached Albany River on the following day. On 22 August Captain Middleton appointed Joseph Isbister Chief Factor at Albany Fort, "and Mr. Light 3^d in Council and Master of ye *Moose* sloop and Trader at ye E^t Main.... Your orders concerning Mr Isbister and the East Main factory shall be carefully performed to Mr Light, who has been thoroughly informed of all matters and things that ever came within our knowledge." The new East Main Fort had been built on George Point on the east shore of James Bay in 1739-40 and first occupied on 30 June 1740. In 1740-41 the Eastmain complement included: "Alexander Light, master and trader... and Richard King, apprentice to Alexander Light."¹⁵

Between 1739 and 1743, Light kept four official year-long trading post journals with daily entries. These are still extant in the Hudson's Bay Company Archives in Winnipeg: B.135/a/9 is the Moose Factory Journal for 1739-40. B.59/a/5, 6 and 7 are the Eastmain journals for 1740-1743.

In 1743, the *Mary* called at Moose Factory 3 to 14 August and stopped at Albany from 15 to 21 August. Alexander Light boarded her and returned to England as Second Mate, and thereby disappeared forever from the Hudson's Bay Company records.¹⁶

We are left with the problem of the obviously incorrect date of "August 10, 1774" in Light's reply to Edwards, published in 1743, over 30 years in advance of the date given for the letter. Edwards

called Light "a friend of mine residing at Hudson's Bay," and had written to him to enquire about the porcupine. Perhaps in anticipation of the arrival of the annual supply ship from London, which arrived on 22 August in 1740 and 26 August in 1741,¹⁷ the following account by Light may have been written on 10 August 1740 or 1741.

"The Porcupine in this country is a beast which makes its nest or den under the roots of great trees, but chiefly on juniper; in winter it eats snow instead of drinking, and laps water in summer like a cat or dog, but carefully avoids going into it. His hair and quills remain all summer without alteration of colour; but, as the weather grows warmer in the spring, the fur grows thinner, as in all creatures in this country. But you may depend on better information next year, for they are very plentiful on the east main, several of my trading Indians depending on them for food at some seasons of the year."¹⁸

Light also told George Edwards "there is a Goose which comes in Summer to *Hudson's-Bay* having its Forehead as it were scorched with Heat, and that the the Natives firmly believe, that these Geese to avoid the Winter's Cold, fly toward the Sun, and



photo E.T. Jones, Courtesy of the PMA

Snow Geese "...forehead as it were scorched with Heat..."

approach so near that it sings its Forehead against his Orb. It is hard to convince these Savages that there are Climates on this Earth warmer than their own, to which Birds may fly for Food and Shelter during their rigid Winters."¹⁹ Edwards was ahead of his time in considering this to be the blue colour phase of the Snow Goose.

There was a three-way connection between Alexander Light, George Edwards and Sir Hans Sloane. It was Sloane, the President of the Royal College of Physicians, to whom Edwards dedicated his second volume. Edwards was Keeper of the Royal College Library and Sloane was instrumental in providing him this job. Alexander Light brought live birds and mammals home from Hudson's Bay for Sloane's aviary-zoo and skinned specimens for the use of Edwards, who portrayed them in his book.

Light, as the first collector of natural history specimens in Hudson Bay, has received less attention than is his due. It is a pity that neither his origins nor his later career have yet been traced.

Acknowledgments:

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CANADIAN ORNITHOLOGISTS AND THEIR RESEARCH

BROCK UNIVERSITY

Ralph D. Morris - (Chardine) - Hatching patterns in temperate nesting gulls and terns; parental behaviour and foraging ecology of Brown Noddies.

Kevin M. Brown - M.Sc. (Morris) - Investigator disturbance, aggressive behaviour and breeding success of Ring-billed Gulls.

Gary P. Burness - M.Sc. (Morris) - Foraging ecology and parental behaviour of Common Terns: Lake Erie.

David P. Moore - M.Sc. (Morris) - Foraging ecology and parental behaviour of Common Terns: Lake Ontario.

Michael R. Killoran - M.Sc. (Morris) - Seasonal variation in intra-clutch hatching synchrony and patterns of chick survival in Ring-billed Gulls.

UNIVERSITY OF MANITOBA

Spencer G. Sealy - Interactions between avian brood parasites and their hosts.

UNIVERSITY OF ALBERTA

Andrew Schoepf - M.Sc. student (Hannon) - Changes in lek distribution and population abundance of black grouse within a Swedish industrial forest.

Brett Sandercock - Recent M.Sc. graduate (Hannon) - Parental investment in brood defense by Willow Ptarmigan.

Cathy Schuppli - M.Sc. student (Hannon) - Reproductive synchrony: the effect of food supply in Willow Ptarmigan.

Cindy Paszkowski - Interactions between aquatic birds and fishes.

Susan Hannon - Impacts of forest fragmentation on breeding bird communities.
- Life history evolution in Willow Ptarmigan.

Lisa Mahon - M.Sc. student (McGillivray, Hannon) - Seasonal song patterns and habitat selection of Baird's Sparrows in southwestern Alberta.

Brent Murray - Recent M.Sc. graduate (Strobeck, McGillivray) - Genetic variation of sub-species and species of vireos.

W. Bruce McGillivray - Reverse size dimorphism in North American Raptors.

Perry Eason - Post-doctoral fellow (Hannon) - Site fidelity in Willow Ptarmigan.

Hans Chr. Pedersen - Post-doctoral fellow (Hannon) - Behavioral ecology of Willow Ptarmigan.

Dan Farr - Ph.D. candidate (Butler) - Distribution and abundance patterns of forest birds in west central Alberta.

Laurie Hunt - M.Sc. student (Holroyd) - Food habits and foraging strategies of Prairie Falcons in southern Alberta.

ATLANTIC REGION

Peter Hicklin - spent Sept.-Dec. 1992 at the Edward Grey Institute, Oxford University, towards completion of his Ph.D. thesis on Common Eider energetics (for U. Western Ont.)

Gerry Parker - took a lateral transfer in 1991, from research on Black Duck movements and harvest to forest wildlife research (one of his earlier specialties, before the 1984-85 cuts); he is now designing a study program.

Tony Erskine - is assembling a compendium of unpublished studies and surveys (1960-92) of Canada Geese staging and wintering in the Maritime Provinces, for a CWS publication.

Diane Amirault, Richard Daury, and Chris Ellingwood - have been working at CWS-AR on contracts or short-term assignments recently. Their work has included compiling databases on important migratory bird habitat and on waterfowl surveys, and writing up studies of lead shot vis-a-vis waterfowl, in the Atlantic Provinces.