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Ruddy Turnstones, including a colour-banded one – note that colour bands can now be reported at www.reportband.gov (Photo by Darroch Whitaker)

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Editor's Message

Rob Warnock and Marcel Gahbauer

We hope everyone had a safe and productive summer and great start to fall this year. It was great to see many SCO-SOC members at NAOC-V in Vancouver in August, and we extend our congratulations to Peter Arcese, Laurene Ratcliffe, and the student presenters who received awards from SCO-SOC at the conference (*see pages 5-7*). Details on the next SCO-SOC meeting to be held in Manitoba in August 2013 will be provided in the next issue of *Picoides*; for now, we include information on the Prairie Conservation and Endangered Species Conference, being held in Red Deer, Alberta in February 2013 (*see page 16*).

Student research is of great importance to SCO-SOC, and again in this issue of *Picoides* we are pleased to feature several interesting projects. We have reports from the 2010 Taverner and Baillie Award winners (*see pages 8-11*), as well as summaries of two recent theses (*see pages 13-14*), plus a call for applications for the 2013 awards (*see page 12*). Prospective graduate students may be interested in the openings featured (*see page 11*).

This issue's feature article highlights the role of the North American Banding Council (*see page 15*). Our book review this time covers *Avian Architecture*, a look at the design and construction of bird nests and more (*see page 17*). Other small news items scattered throughout the issue include invitations to participate in Project FeederWatch (*see page 12*) and the Christmas Bird Count (*see page 7*), a brief summary on recent observations from the Canadian Migration Monitoring Network (*see page 14*), and highlights from the recent *State of Science* report pointing out the importance of ornithology in Canada (*see page 17*).

Loggerhead Shrikes (Photo by Chet Neufeld)

Your feedback and suggestions for *Picoides* are always welcome – we receive very little input from our readers, and would love to get more. As always, we encourage submissions from SCO-SOC members, especially from students and ornithology labs – *Picoides* does not exist without your contributions of articles and photos. The next submission deadline is February 15, 2013. Until then, enjoy winter, and we wish you all a merry Christmas and happy New Year!

President's Message

Ornithology is thriving in Canada. In fact, Canadians produced 8.8% of the world's total publications on ornithology in 2005-2010, a statistic that can be gleaned from the recent report on "The State of Science and Technology in Canada, 2012" (published by the Council of Canadian Academies). In Canada, ornithology ranked as having the 4th greatest scientific output of all 176 subdisciplines assessed in that report. We are clearly doing something right!

I think many of us would be interested to know in which journals our national output tended to appear. Inevitably, the vast majority of these articles would have been published in foreign journals. How many of these articles truly needed to be expatriated? Certainly a proportion of them (some of my own included) might have found a useful outlet in our own ornithological journal: Avian Conservation and Ecology. The articles published in Avian Conservation and Ecology are freely available across the globe, a claim that most foreign journals cannot make. Given how prolific and diligent Canadian ornithologists are at publishing their research, it is worth considering submitting some of that work to Avian Conservation and Ecology. And while you are at it, it is worth renewing your membership in the SCO-SOC.

Message du président

L'ornithologie a le vent dans les voiles au Canada. En effet, les Canadiens ont produit 8,8% du nombre total de publications en ornithologie en 2005-2010, une statistique que l'on peut obtenir du récent rapport intitulé « État de la science et de la technologie au Canada, 2012 », publié par le Conseil des académies canadiennes. Au Canada, l'ornithologie occupe le 4e rang des 176 sous-disciplines considérées dans ce rapport. Manifestement, nous devons faire quelque chose de bien!

Je pense que plusieurs d'entre nous seraient intéressés de savoir dans quelles revues a été publiée notre production ornithologique nationale. Inévitablement, la majorité de ces articles ont été publiés dans des revues étrangères. Combien de ces articles devaient vraiment être « expatriés »? Une portion d'entre eux (incluant certains des miens) aurait certainement pu trouver sa niche dans notre propre revue: *Avian Conservation and Ecology*. Les articles publiés dans *Avian Conservation and Ecology* sont disponibles gratuitement à travers le monde, ce que ne peuvent promettre la plupart des revues étrangères. Étant donné la diligence et la productivité des ornithologues canadiens en recherche, il serait bon de considérer la soumission d'une partie de nos manuscrits dans *Avian Conservation and Ecology*. Et pendant que vous y êtes, il serait bon de renouveler votre abonnement à la SCO-SOC.

Many of you are aware of the recent movement to form a North American super-society called the Society for Ornithology (SFO). For a time, some suspected the SFO could subsume all the ornithological societies in North America. Over the past many months, several societies declined to join the SFO, our own SCO-SOC included. At the recent NAOC-V in Vancouver, it became clear that momentum behind the SFO movement has diminished. Although the SCO-SOC remains interested in discussing possibilities around the SFO, for now, we shall retain our identity and our journal.

The identity of the SCO-SOC is its members. We have members from every province and territory, representing a range of affiliations: government (federal and provincial), universities, museums, NGOs, clubs, consultants, and libraries. This means that our work is relevant to a wide cross-section of society, reaching from government policy to naturalist meetings. Our recent awardees at the NAOC-V exemplify a passion for ornithology: Laurene Ratcliffe was awarded the Jamie Smith Memorial Mentoring Award and Peter Arcese was awarded the Doris Huestis Speirs Award. Our Society has a lot of which to be proud.

The executive face of the SCO-SOC changed somewhat at the recent NAOC-V. Councillors Debbie Badzinski and Paul Martin completed their second two-year term – to them we express our deep thanks for their service. We welcome the new councillors replacing them: Alex Bond, Alex Mills, and Darroch Whitaker. Greg Robertson has taken the position of Vice-President (President-Elect), a task that we thank him for taking, as he replaces me in that spot. Lastly, our now Past-President, Erica Nol, completed her term as President – a role into which I have now stepped. Erica deserves our deepest appreciation; she led us through a turbulent two years. Erica's term had her dealing with the SFO issue (which required an inordinate amount of her time), major changes with our journal, and supporting one of the largest North American ornithological conferences. Thank you, Erica.

I have been President for two months now, and am happy to report that, so far, we are turbulence-free. Thankfully, the biggest issues that have popped up were providing some input to the Ornithological Council on bird-handling guidelines and making a few small decisions about our meeting next August in Winnipeg (more details on that to come). Erica really flattened the road for me, and I hope I can follow her example for the next two years. I am honoured to be able to try.

Plusieurs d'entre vous sont au courant du mouvement récent visant à former une super-société Nord Américaine appelée Society for Ornithology (SFO). Pendant un certain temps, certains pensaient qu'une telle société pourrait englober toutes les sociétés ornithologiques de l'Amérique du Nord. Au cours des derniers mois, plusieurs sociétés ont décliné l'invitation à joindre la SFO, incluant la SCO-SOC. Au congrès NAOC-V, il est apparu clairement que le momentum derrière le concept de la SFO avait diminué. Bien que la SCO-SOC soit intéressée par ce concept, nous allons conserver pour le moment notre identité et notre revue.

L'identité de la SCO-SOC réside dans ses membres. Nous avons des membres de toutes les provinces et territoires, qui représentent toutes sortes d'institutions: gouvernements fédéral et provinciaux, universités, musées, ONG, clubs, firmes de consultants et bibliothèques. Cela signifie que nous sommes pertinents pour une tranche significative de la société qui s'étend du développement des politiques aux réunions de naturalistes. Nos récents récipiendaires au congrès NAOC-V témoignent de notre passion pour l'ornithologie: Laurene Ratcliffe s'est méritée le Prix Jamie-Smith pour le mentorat, tandis que Peter Arcese a reçu le Prix Doris Huestis Speirs. Notre Société a de quoi être fière.

La composition du Conseil de la SCO-SOC a quelque peu changé lors du récent congrès NAOC-V. Les conseillers Debbie Badzinski et Paul Martin ont complété leur second mandat de deux ans – nous les en remercions sincèrement. Nous accueillons les nouveaux conseillers qui les remplaceront: Alex Bond, Alex Mills et Darroch Whitaker. Greg Robertson a obtenu le poste de Vice-président (futur président), une tâche pour laquelle nous le remercions et où il me remplace. Enfin, notre nouvelle ancienne présidente, Erica Nol, a complété son mandat à titre de Présidente – un rôle que j'occupe maintenant. Erica mérite notre appréciation; elle nous a menés à travers deux années pour le moins fébriles. Elle a eu à nous représenter dans le dossier de la SFO (ce qui a requis une grande proportion de son temps), dans celui de notre revue, qui a subi des changements majeurs, ainsi que dans l'organisation d'un des plus grands congrès ornithologiques Nord Américains. Merci Erica.

J'ai maintenant assumé la présidence pendant deux mois et je suis heureux de vous informer que jusqu'à date, il n'y a pas eu de turbulence. J'ai eu à fournir des suggestions au sujet des directives de l'*Ornithological Council* au sujet de la manipulation des oiseaux et à m'impliquer dans quelques décisions au sujet de notre prochain congrès en août à Winnipeg (détails à venir). Erica a déblayé le chemin pour moi et j'espère que je pourrai suivre son exemple au cours des deux prochaines années. Je suis honoré qu'on me donne la chance d'essayer.

Joe Nocera, Ontario Ministry of Natural Resources
Environmental Life Sciences Graduate Program, Trent University

News from SCO-SOC

Report on the SCO-SOC Annual General Meeting, Vancouver BC, 14-18 August 2012

Erica Nol

From the beginning to the end, this was one of the best meetings ever! Fantastic venue, fantastic weather, a wonderful scientific program (12 symposia comprising 104 talks, 4 plenaries, 3 young investigator presentations, and over 530 other oral and 510 poster presentations), social events both general and those specifically targeted at students, business meetings, and award presentations – the Vancouver 2012 meeting of the North American Ornithological Conference (NAOC V) was a resounding success. Our own small part was highlighted through strong advocacy and notable presence of members of our society, including the exceptional organizational abilities of Dr. Kathy Martin as Chair of the Congress, the witty and always insightful remarks of Dr. Bob Clark as Chair of the scientific program committee, the right place at the right time head of the local organizing committee, Dr. Bob Elner, the organization of student-mentor activities, and behind the scenes contributions to many events of Dr. Andrea Norris, volunteer trainer-extraordinaire, Dr. Nancy Mahony and her many student volunteers, and Dr. Russ Dawson for chairing the student travel award committee.

One of the Great Blue Herons patrolling the nearby shoreline (Photo by Marcel Gahbauer)

Our part started with the SCO-SOC council's business meeting, which was well attended. It was the last meeting that I would chair as President of your society, as I handed over the reins to Dr. Joe Nocera. One of the highlights of that meeting was to be able to see our healthy finances, thanks to our past and present treasurers (Pierre Lamothe and Matt Reudink), so that we were able to increase the value of our scientific research awards, the Taverner Awards, to $2000 each. Other highlights included our small financial commitment to any member of our society who would like to be our representative to the North American Banding Council (contact President Joe Nocera if you are interested in this position). The funds ($500) will offset travel costs to this annual meeting. Finally, we have some new committee chairs including Brenda Dale as new chair of the Conservation Committee and Karen Wiebe as new chair of the research awards – and a chair of the Doris Huestis Speirs Award committee will be selected shortly. We also welcome Mr. Andrew Couturier as our new webmaster. I want to take this opportunity to profusely thank Joe Nocera for expert and enthusiastic skills in being our webmaster for the last 5 years. Joe remarked, during our council meeting, on the changes in platforms over his time as webmaster, with nearly half of all readers now downloading *Picoides* on their mobile devices. This ability to track the platforms of readers was started by Joe and has allowed interesting insights into both how many read *Picoides*, how long it takes them (!), the timing of the downloads (usually immediately after it comes out), and the degree to which it is read by others around the world (e.g., the last issue was accessed from 18 countries).

We were very fortunate, thanks to Kathy Martin, to be 'up first' when it came time for societies to present their own awards, an activity that occurred after each of the morning plenaries – the first of which was heralded in by bag pipers, quite spectacular! We presented our Doris Huestis Speirs award to Dr. Peter Arcese, fittingly from the host university (see accompanying citation on page 5 of this issue of *Picoides*). We also presented our Jamie Smith Mentoring award to Dr. Laurene Ratcliffe from Queen's University (citation also included in this issue, on page 6). Both awardees were present to receive their awards, and both seemed very pleased. I also heard several compliments about our awards trickling through the very large audience in attendance in the spectacular Chan Centre. Our mentoring award is unique among the North American ornithological societies, but so nicely shows our values of passing on skills in ornithology to the next generation.

The University of British Columbia was an excellent venue to showcase ornithology to North America. There were many members of the press in attendance, and the campus, albeit large with much ongoing construction in the summer months, was extremely fine. The final banquet, at the UBC Anthropological Museum was held outdoors, in a great setting overlooking Burrard Inlet and the spectacular north coast mountains. I am pretty sure that most attendees came away well satisfied.

I know that everyone there would agree that those involved in the two-year task of putting together this largest of ornithological meetings ever held in Canada or the United States, including Kathy Martin, Bob Clark, Bob Elner, Andrea Norris and Nancy Mahony, and many others too numerous to mention, deserve HUGE THANKS and congratulations. Special thanks to Kathy Martin and Erin Gendron of UBC conference services, for managing the finances of this meeting so judiciously so that our society and the other organizational co-sponsors were able to come out in the black. Sponsorship by Environment Canada and others was also well-appreciated. Full conference details are on the web at http://www.naoc-v2012.com/.

Bald Eagle perched along the coast (Photo by Marcel Gahbauer)

2012 Doris Huestis Speirs Award: Peter Arcese

Greg Robertson

The Doris Huestis Speirs Award is the most prestigious award given by the SCO-SOC. The award is presented annually to an individual who has made outstanding lifetime contributions in Canadian ornithology. The D.H. Speirs Award Selection Committee selected Peter Arcese, the Forest Renewal BC Chair in Applied Conservation Biology and Co-Director, Centre for Applied Conservation Research, for the 2012 award.

Peter obtained his B.A. in Zoology from the University of Washington in 1981. Both of his graduate degrees came in Zoology from UBC, his M.Sc. in 1985 and his Ph.D. in 1988. He then obtained post-doctoral awards from NATO-NSF and NSERC to study at Simon Fraser University. In 1992 Peter took a tenure-track position at the University of Wisconsin-Madison. In 1999 he returned to UBC to take his current position, including continuing the research program on the Mandarte Island Song Sparrows started by Frank Tompa and Jamie Smith.

Peter Arcese (Photo courtesy of Peter Arcese)

Peter's research has examined fundamental questions ranging from genetics, evolution, ecology, demographics and conservation, and the interface among these fields. He has authored over 100 papers, which is impressive, but more noteworthy is the high quality of these papers, many of which are in the leading journals.

Equally significant is the breadth of topics on which Peter has made contributions. His early papers on the Mandarte Island Song Sparrows are benchmark empirical examples of the role of individual behaviour and territoriality on population processes. Following his graduate work, Peter changed gears to work on African mammals and the many conservation challenges they face. After his post-doctoral work, he expanded his interests to host-parasite interactions, and the implications of these interactions on population processes.

More recently, Peter has broadened his work to include species and habitats of conservation interest in western Canada. He is not shy about tackling the most pressing issues, tackling key conservation questions related to Marbled Murrelets, Vancouver Island Marmots and Northern Spotted Owls. His work on wildlife conservation in Africa has led to important conservation gains, and he continues to examine the role of reserve design for effective conservation.

Peter has already received a number of significant awards. Early in his career he was awarded an NSF Young Investigator Award. He is an elected member and fellow of the AOU. Not limited to excellence in research, Peter received the Outstanding Undergraduate Advisor award while at the University of Wisconsin, showing his dedication to mentoring and teaching young scientists. Peter takes great pride in his teaching and supervision; his students have received numerous awards and are themselves making important contributions to Canadian ornithology.

Peter's efforts are not limited to research and scientific study, he is an active member of a number of local naturalist clubs, and regularly participates in provincial, national and international working groups attempting to resolve a myriad of conservation issues.

This award acknowledges the outstanding contributions Peter has made to Canadian ornithology, from fundamental research on the processes that drive bird evolution and population dynamics, to studies with immediate applied conservation value.

2012 Jamie Smith Memorial Award for Mentoring: Laurene Ratcliffe

Andrea Pomeroy

The Jamie Smith Memorial Award for Mentoring is one of the top honours bestowed by SCO-SOC. It is awarded to individuals who are committed to the training and development of the next generation of Canadian ornithologists. I am pleased to announce that this year's award was presented to Laurene Ratcliffe.

Dr. Ratcliffe's scientific record as an exceptional Canadian ornithologist speaks for itself; however, the 19 letters that we received in support of her nomination for this award speak volumes about her unique skill as a mentor. The letters we received were from students that she mentored as undergraduates, graduates, and post-doctorate fellows. Many of these students have gone on to highly successful careers in the field of ornithology. In addition, several letters were from people who had chosen other career paths, and many spoke of Dr. Ratcliffe's practice of encouraging students to evaluate what they wanted for their career and to help them do whatever was necessary to accomplish that.

Dr. Ratcliffe has a positive approach to students, encouraging them to think critically, and provides thoughtful constructive feedback on their work. She is known for her relatively small, but highly productive lab where the student to supervisor ratio allows her to give significant time to each student. She has confidence and trust in her students which gives them the freedom to develop and explore the questions that truly interest them. One of her key gifts is eagerly encouraging scientific imagination while demanding remarkable rigour.

Laurene Ratcliffe and her mentees (Photo by Andrea Pomeroy)

What is most impressive about Dr. Ratcliffe is the lasting influence she has had on her students. Her students not only credit her as an outstanding scientific mentor – but they speak of the influence she has had on them as mentors themselves. Dr. Ratcliffe truly embodies the spirit of the Jamie Smith Mentoring Award in Ornithology, both as a mentor and in her ability to inspire the next generation of mentors.

On behalf of the award committee, I would like to congratulate Laurene on her achievements and encourage others to consider nominating their mentor for next year's award.

2012 SCO-SOC Student Presentation Awards

Robert Curry, Chair – Student Presentation Awards Committee, NAOC-V

Ann E. McKellar: *Experimentally delaying arrival timing reduces reproductive success of male American Redstarts* (co-authors P.P. Marra, L.M. Ratcliffe). Department of Biology, Queens University, 116 Barrie Street, Kingston ON, K7L 3N6, ann.mckellar@queensu.ca

Emily A. McKinnon: *Testing proximate hypotheses for spring protandry in Wood Thrushes using geolocators* (co-authors K.C. Fraser, C.Q. Stanley, M. MacPherson, B.J.M. Stutchbury). Department of Biology, York University, 247 Farquharson Building, 4700 Keele Street, Toronto ON, M3J 1P3, emilymck@yorku.ca

David P. L. Toews: *Introgression in the Yellow-rumped Warbler species complex: Can variation in migratory behaviour explain differences in mitochondrial genotype and phenotype in a cryptic hybrid zone?* (co-authors M. Mandic, J. Richards, D. Irwin). Department of Zoology, University of British Columbia, 6270 University Blvd., Vancouver BC, V6T 1Z4, toews@zoology.ubc.ca

Undergraduate Presentation Award: Daniel Méndez-Aranda: *The use of ecological niche models and alternative species concepts in risk assessment of endemic bird species of the West of Mexico* (co-author A.G. Navarro-Sigüenza). Museo de Zoología, Departamento de Biología Evolutiva, Facultad de Ciencias, Universidad Nacional Autónoma de México, Apartado Postal 70-399, México D. F. 04510, México, mendez_aranda@hotmail.com

Mew Gull on a pier in Vancouver
(Photo by Marcel Gahbauer)

Project FeederWatch welcomes new citizen scientists

The 2012-13 season of Project FeederWatch begins on November 10, but participants can join at any time during the season. Project FeederWatch is a joint program of Bird Studies Canada and the Cornell Lab of Ornithology, which aims to monitor changes in wintering bird populations. Results are published in Bird Studies Canada's *BirdWatch Canada* magazine, and in *Winter Bird Highlights*, the FeederWatch magazine. Current results are also available throughout the season via online maps and charts at http://watch.birds.cornell.edu/PFW/ExploreData.

Anyone with an interest in birds is invited to contribute to Project FeederWatch. New participants receive a kit with a handbook, bird identification poster, calendar, and instruction booklet. For more information, visit www.birdscanada.org/volunteer/pfw.

Downy Woodpeckers
(Photo by Tammie Hache)

Student contributions wanted for *Picoides*!

SCO-SOC encourages students to submit material for *Picoides*.

In particular, we would like each issue to feature abstracts of at least one or two recently published theses. They must be from students at a Canadian university, but need not necessarily focus on Canadian birds. Abstracts should be 250-400 words long, preferably accompanied by one or two relevant photos.

In addition, we welcome articles describing aspects of student research in greater detail; these should focus on a subject relevant to Canadian ornithology, require references, and may be up to 1000 words long, again preferably accompanied by one or two photos. See page 18 for submission details.

2010 Taverner Award Report

Winter rainfall predicts phenology in widely separated populations of a migrant songbird

Ann McKellar, Queen's University

In migratory birds, weather conditions from different parts of their annual cycle can influence migration and breeding timing (Dunn and Winkler 2010; Lehikoinen and Sparks 2010). However, variation in such responses among migratory populations across breeding and non-breeding ranges has received less attention (but see Both et al. 2006; Wilson et al. 2011). Understanding how weather from one phase can carry over to influence migratory animals during subsequent phases of their annual cycle is becoming increasingly important in light of global climate change. This is especially critical when considering the tight linkage between arrival timing to the breeding grounds and reproductive success (e.g., Møller 1994).

In this study, we tested for associations between non-breeding conditions and arrival and egg-laying dates at two widely separated breeding populations of American Redstarts (*Setophaga ruticilla*): one at the Queen's University Biological Station in eastern Ontario, and one at the Meanook Biological Research Station in central Alberta. American Redstarts are thought to exhibit reasonably strong migratory connectivity, as evidenced by a handful of recoveries of banded birds and stable-hydrogen isotope analysis of feathers moulted on the breeding grounds and sampled across the non-breeding range. Specifically, eastern wintering redstart populations are thought to breed in eastern and southern breeding locations, including Ontario, whereas western wintering populations are thought to breed in northwestern breeding locations, including Alberta (Norris et al. 2006). Greater winter rainfall is associated with greater American Redstart food availability, improved body condition, and earlier departure date from the non-breeding grounds (Studds and Marra 2007, 2011). We thus determined whether rainfall at different non-breeding locations, each assumed to correspond to a particular breeding population, was associated with arrival and laying dates. We predicted that increased winter rainfall in the eastern portion of the non-breeding range would be associated with earlier arrival and laying dates in Ontario, whereas increased winter rainfall in the western portion of the non-breeding range would be associated with earlier arrival and laying dates in Alberta.

Results

We generally found support for the predicted patterns (Figure 1): in Ontario, arrival and egg-laying dates were earlier when rainfall in Jamaica was greater, whereas in Alberta, egg-laying dates were earlier when rainfall in eastern Mexico was greater. The relationship between rainfall and arrival dates was not significant in Alberta, perhaps due to the small number of years in this analysis. The magnitude of these associations was similar between populations, despite overall differences in absolute rainfall between non-breeding locations, suggesting that American Redstarts respond in the same way to changes in winter rainfall across their range. Finally, we found that mean population-level responses were similar to within-individual changes in arrival and laying dates of returning birds that experienced years of differing non-breeding season rainfall, indicating that the above associations could likely be explained entirely by phenotypic plasticity, at least in Ontario where sufficient data were available to perform these analyses.

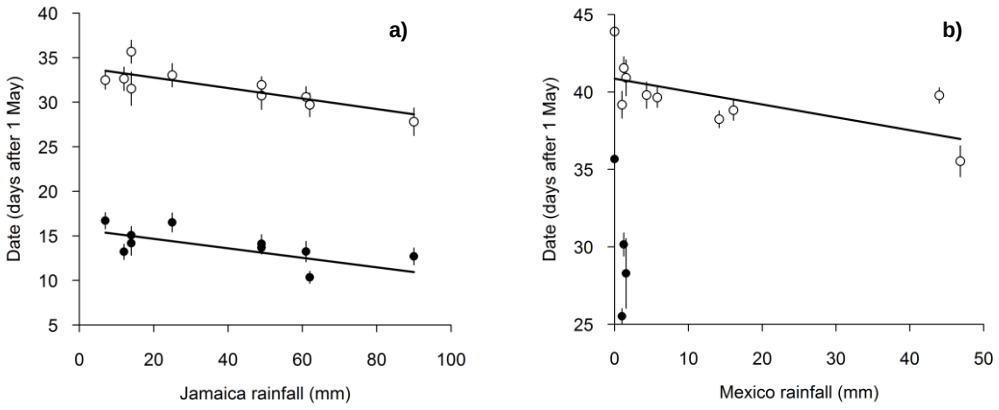

Figure 1. Relationships between mean January to March rainfall in a) Jamaica and adult male American Redstart arrival (filled circles; mean ± SE) and female first egg date (empty circles; mean ± SE) at a breeding site in Ontario, and in b) Mexico and adult male American Redstart arrival (filled circles; mean ± SE) and female first egg date (empty circles; mean ± SE) at a breeding site in Alberta. Solid lines show significant regressions.

By explicitly incorporating migratory connectivity into responses to climate, our data suggest that widely separated breeding populations can show independent and geographically specific associations with changing weather conditions. The tendency of individuals to delay migration and breeding following dry winters could have negative consequences. Drying conditions in tropical non-breeding areas in combination with warming trends across the temperate breeding range (Neelin et al. 2006; IPCC 2007) could presumably cause population declines as a result of the tight association between early arrival and reproductive success. Unfortunately, this may be the case for a number of long-distance migrants owing to climate change at different periods of their annual cycle (Gordo et al. 2005; Both 2010). This work is currently in press at Oecologia (McKellar et al. in press).

Acknowledgments

In addition to the Taverner Award, funding was provided by Queen's University, the Natural Sciences and Engineering Research Council of Canada, the Canadian Foundation for Innovation, the National Science Foundation, the Smithsonian Institution, the Ontario Innovation Trust, Sigma Xi, the American Ornithologists' Union, and the American Museum of Natural History.

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Black-bellied Plovers at Reed Lake, Saskatchewan (Photo by Shelly Fisher)

2010 James L. Baillie Award Report

Thyroid hormones as mediators of energy expenditure in charadriiform birds

Kyle Elliott, Ph.D. candidate at University of Manitoba

Both basal and sustained metabolic rate vary considerably among individuals, and are often correlated with each other during interspecific comparisons. A potential explanation for the correlation between basal and sustained metabolic rates is that they are mechanistically linked because adjustments that maximize daily energy intake also increase basal metabolic rate. As thyroid hormones are known to increase basal metabolic rate in the lab, a mechanistic linkage between basal and sustained energy expenditure would imply a correlation of these parameters with thyroid hormones.

With the support of SCO-SOC and BSC, I set out to examine these ideas in two free-ranging bird species with high levels of energy expenditure (Black-legged Kittiwake, *Rissa tridactyla* and Thick-billed Murre, *Uria lomvia*).

In 2009 and 2011, I visited Coats Island, Nunavut, a long-term monitoring site for Environment Canada, to study Thick-billed Murres in conjunction with Tony Gaston. Sadly, the Canadian Arctic's longest-running avian field study ceased after 2011, at least partly due to safety concerns with polar bears (*Ursus maritimus*). The bears are now coming on land much earlier, due to the earlier disappearance of ice in Hudson Bay. In 2011, one or more bears ravaged the murre colony, wiping out up to one-third of the sites. Tony placed a video describing some of the catastrophic 2011 field season here: http://vimeo.com/28066351. I arrived by Twin Otter at the start of both seasons, and remained until mid-August (the 2011 season was abbreviated by ten days due to bear troubles). I was able to collect blood samples for hormone analysis, daily energy expenditure measurements and basal metabolic rate measurements. Nonetheless, sample sizes were compromised and several other experiments rendered impossible by the necessity of descending on rope to distant parts of the colony to capture birds that still had eggs and chicks.

K. Woo, J. Nakoolak, and K. Elliott (right to left) blood sampling a Thick-billed Murre at Coats Island (Photo by B. Braune)

In 2010 and 2012, I visited Middleton Island, Alaska, a long-term monitoring site for the USGS, to study Black-legged Kittiwakes in conjunction with Scott Hatch. Scott installed one-way glass in an abandoned radar tower at Middleton, and I was therefore able to easily access several hundred pairs of kittiwakes. Many of the kittiwake nest sites have been supplemented with *ad libitum* capelin since the late 1990s, and therefore do much better. However, both 2010 and 2012 were, along with 2008, the best years on record. The warm water regime of 1977-2007 was replaced by a cold water regime, and the seabirds were able to reproduce very successfully. This caused my project some difficulty, as it was no longer useful to compare "fed" and "unfed" birds; both groups were very well fed! I therefore worked exclusively on "unfed" birds. I was able to collect blood samples for hormone analysis, daily energy expenditure measurements and basal metabolic rate measurements.

View of the inside of the Middleton Island tower. Behind each of the one-way mirrors is a kittiwake nesting site. (Photo by M. Johns)

During the field season, I used the doubly-labelled water technique to measure daily energy expenditure at peak demand (chick-rearing). I also used flow through open circuit respirometry over 4-hr long measurements of post-absorptive and thermoneutral resting metabolism to approximate basal metabolic rate at peak body mass (incubation). In the lab, I later measured levels of free and bound levels of the thyroid hormones thyroxine (T4) and triiodothyronine (T3) in the blood samples we collected in the field.

Basal metabolic rate during incubation did not correlate with daily energy expenditure during chick-rearing (Figure 1). Free T3 (but not T4) increased with basal metabolic rate but not daily energy expenditure in both species (Table 1). Free T3 and free T4 did not correlate with one another.

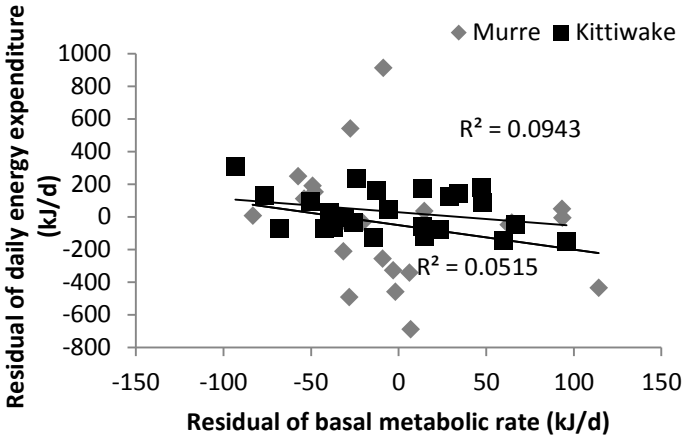


Figure 1: Residuals of basal metabolic rate on body mass do not correlate with residuals of daily energy expenditure on mass for murres and kittiwakes.

Table 1: Correlation coefficients for relationships between thyroid hormones and either DEE or an index of BMR (BMR,). Correlations that are statistically significant ($p < 0.05$) are shown in bold.

	Free T3	Total T3	Free T4	Total T4	Body mass
Kittiwakes					
BMR	**0. 516**	**0.397**	-0.270	0.055	**0.352**
DEE	0. 007	-0.247	0.270	-0.001	**0.706**
Murres					
BMR	**0. 654**	**0.689**	0.228	0.331	**0.590**
DEE	-0. 157	-0.261	0.204	0.102	-0207

Videos describing more details of the Coats Island research are here:
http://www.meltwatermedia.ca/site/meltwater-media-films.html
(choose Arctic Cliffhangers or Pick-up Sticks)
https://docs.google.com/open?id=0B9Amydh2fp6iNzVXbDdoQWxpNVk
https://docs.google.com/open?id=0B9Amydh2fp6iTXZYMG1maE9MeU0

In conclusion:

- T3 is a useful proxy for basal metabolic rate. Given that basal metabolic rate is difficult to measure in the field, it is useful to have a proxy that can be determined from a simple blood sample.
- T3 is not a useful proxy for daily energy expenditure. In the past, T3 has been used as a proxy for activity, but this does not seem to apply to charadriiform birds.
- Basal metabolic rate and daily energy expenditure are adjusted independently of one another.

Master's Student Positions Available

Lewis's Woodpecker Conservation and Management

One M.Sc. position will be available with field work to begin May 2013 and enrolment at Simon Fraser University (SFU), British Columbia in September 2013. This is a collaborative project between the Centre for Wildlife Ecology at SFU (David Green) and Environment Canada (Nancy Mahony and Megan Harrison). The project will address key research questions related to the management of Lewis's Woodpecker, listed as a Threatened Species in Canada. The project will likely involve the study of productivity related to habitat types and land management issues in the southern interior of BC.

Please send a cover letter outlining your research interests and a CV, undergraduate transcripts, and names of 3 references to Dr. David Green at SFU (davidg@sfu.ca). Applications will be reviewed as they come in until the position is filled. The most qualified applicants will have relevant field experience, be willing to work long hours in the field in hot conditions and have data analysis and writing skills. Experience working with birds is a major asset.

Swallow Productivity in Relation to Landscape Context

One M.Sc. position will be available with field work to begin May 2013 and enrolment at Simon Fraser University (SFU), British Columbia in September 2013. This is a collaborative project between the Centre for Wildlife Ecology at SFU and Environment Canada. The project will involve the study of Barn, Tree and Violet-green Swallow productivity in relation to landscape context and agricultural type. Study sites will likely include livestock farms, row crop farms and parks/protected non-agricultural areas in the lower mainland of British Columbia.

Please send a cover letter outlining your research interests and a CV, undergraduate transcripts, and names of 3 references to Dr. Tony Williams at SFU (tdwillia@sfu.ca). Applications will be reviewed as they come in until the position is filled. The most qualified applicants will have relevant field experience, be willing to work long hours in the field and have data analysis and writing skills. Experience working with birds is a major asset.

2013 Student Research Awards Competition

SCO-SOC administers three student research awards - the Taverner Award, James L. Baillie Award, and the Fred Cooke Award. Applicants must be members of SCO-SOC to be eligible. A single application can be made to apply for all three types of Student Research Awards. **The deadline for application is 15 February 2013.** Please note that successful applicants are strongly urged to **submit a brief project report (1-2 pages) to *Picoides* within one year of receipt of an award**, so that SCO-SOC members can learn about your award-winning research. Applications are available online at: http://www.sco-soc.ca/studentawards.htm (et la version française se trouve à http://www.sco-soc.ca/studentawards_fr.html). For further information, or to submit an application (via e-mail only), contact:

Karen Wiebe, Chair, SCO-SOC Student Awards Committee
University of Saskatchewan, Saskatoon SK
e-mail: karen.wiebe@usask.ca

Taverner Award: The Taverner Award is offered by SCO-SOC in honour of Percy A. Taverner and to further his accomplishments in increasing the 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. **Two awards of up to $2000 each are made annually.**

James L. Baillie Student Research Award: The James L. Baillie Student Research Award is open to any student at a Canadian university conducting ornithological research involving Canadian species. It honours the memory of James L. Baillie and supports studies of birds in their natural environment, projects which contribute to the preservation of birds, and/or projects which disseminate knowledge of birds. This award is funded by proceeds from Birds Studies Canada's Baillie Birdathon and administered by SCO-SOC. **A single award of up to $1000 is made annually.**

Fred Cooke Student Research Award: The Fred Cooke Student Award is offered jointly by SCO-SOC and Bird Studies Canada to honour the contributions of Professor Fred Cooke to Canadian ornithology. The award is open to any student conducting ornithological research at a Canadian university (except previous recipients of the award), and is to support travel to ornithological conferences at which the student will make an oral or poster presentation, or for research in any aspect of ornithology anywhere in the world. **A single award of up to $1000 is made annually.**

2013 James L. Baillie Memorial Fund for Bird Research and Preservation

In addition to the James L. Baillie Student Research Award (see above), overseen by SCO-SOC, there are two other aspects to the Baillie Fund grant program, administered by Bird Studies Canada and also currently seeking applicants. Applications for Regular Grants are due December 15, 2012, while applications for Small Grants are due January 15, 2013.

The Baillie Fund Trustees give priority to projects that engage the skills and enthusiasm of amateur naturalists and volunteers to help us understand, appreciate, and conserve Canadian birds in their natural environments. Since 1978, the Baillie Fund has provided grants totalling nearly $660,000 to 560 bird research and conservation projects across Canada. For more information about the Baillie Fund grant programs, past grants, and how to apply for a 2013 grant, visit www.birdscanada.org/about/jlbmf/index.jsp, or else contact the Baillie Fund Secretary at 1-866-518-0212 or acoughlan@birdscanada.org.

Ferruginous Hawk near Maple Creek, Saskatchewan (Photo by Shelly Fisher)

Recent Canadian Ornithology Theses

Norris, Andrea R. 2012. Mechanisms regulating ecological responses to resources pulses within cavity-nesting bird communities. Ph.D. thesis. University of British Columbia, Vancouver BC.

Resource pulses may influence mechanisms that can regulate consumer populations directly through bottom-up effects on resource availability and indirectly via top-down effects of interspecific interactions. Although these are well documented in food webs, the responses within nest webs (communities structured around nesting cavities in trees) have received little attention. Bark beetle (subfamily: Scolytinae) outbreaks represent food pulses that may lead to secondary pulses of nest cavities, and increases in fecundity and competition among insectivores. Excavating new nest cavities may allow exploitation of novel habitats that increase reproductive output for both excavators and obligate secondary cavity nesters (SCNs), and increased territory quality may lead to greater energetic expenditures on territoriality.

Andrea checking a Mountain Chickadee nest (Photo by Haley Kenyon)

Using observational and experimental approaches, I examined how a large-scale outbreak of mountain pine beetle (*Dendroctonus ponderosae*) influenced the production of cavities, fecundity, and competition within nest webs at 30 sites in interior British Columbia, Canada, from 1995-2009. I used 1,018 nests of two species that differed in their ability to excavate cavities and specialize on bark beetles: Red-breasted Nuthatch (*Sitta canadensis*; facultative excavator and bark beetle specialist) and Mountain Chickadee (*Poecile canadensis*; SCN and generalist insectivore).

I found that nuthatches excavated more cavities in lieu of using old cavities, maintained a constant clutch size throughout the breeding season (~6 eggs), and fledged up to 100% more young per nest, at sites and in years with increasing beetle abundance. Chickadee clutches were initiated earlier, mean clutch size increased from 5 to 7 eggs, and fledgling success doubled with a dual pulse of food and nest sites. I examined intra- and inter-specific territoriality by simulating conspecific and heterospecific territorial intrusions using 974 presentations with song playbacks, from 2004-2008. Chickadees, although typically subordinate to nuthatches when competing for food, attacked all intruders more frequently (24% of 397 responses elicited) than nuthatches (8% of 372 responses). Both species showed increasing territoriality with increasing beetle abundance. Overall, my research suggested that species compensated both reproductively and behaviourally in response to resource pulses, and that plasticity in foraging and nesting behaviours can promote the resilience of wildlife communities in highly variable forest environments.

Red-breasted Nuthatch at a nest cavity (Photo by Matt Huntley)

Guindre-Parker, Sarah. 2012. Multiple achromatic plumage signals of male quality in the Snow Bunting (*Plectrophenax nivalis*). M.Sc. thesis. Department of Biological Sciences, University of Windsor, Windsor ON.

Although males can display numerous elaborate ornaments indicative of quality, the evolution of multiple ornaments is not well understood. Furthermore, studies of multiple ornaments have tended to focus on species with exaggerated, multi-modal traits. I investigated whether simple achromatic plumage traits can act as multiple ornaments in an Arctic-breeding passerine, the Snow Bunting (*Plectrophenax nivalis*). Specifically, I used a breeding population in Nunavut, Canada, to examine whether multiple ornaments: are providing multiple differing messages, are redundant, are unreliable signals of male quality or are aimed at different receivers. I measured plumage reflectance and pigmentation patterns made conspicuous during male inter- and intra-sexual displays that advertise different plumage regions. Results indicate that although several aspects of male plumage may have redundant messages, different body regions appear aimed at different receivers. The wings of males—displayed primarily towards females during courtship—appear to indicate male expected reproductive performance. Conversely, melanin-based plumage reflectance displayed during intra-sexual threat displays provides information on territory features and a male's capacity to defend it (i.e. territory size, territory quality, testosterone levels). Taken together, I suggest that an achromatic species can have multiple ornaments that provide information of differential importance in inter- versus intra-sexual communication. This study demonstrates that even relatively simple plumage traits can serve in complex communication.

Male Snow Bunting (Photo by Sarah Guindre-Parker)

Preliminary fall 2012 highlights from the Canadian Migration Monitoring Network

Marcel Gahbauer, CMMN Steering Committee Co-chair

In the last issue of *Picoides*, the feature article focused on the Canadian Migration Monitoring Network. Here as a follow-up is a brief report summarizing a few of the intriguing results observed during this year's fall migration at a selection of the member stations across Canada. Generally it has been an above average season, although Tatlayoko Lake Bird Observatory in BC, Calgary's Inglewood Bird Sanctuary, and Thunder Cape Bird Observatory on Lake Superior reported unusually disappointing results overall.

Significant irruptions of Black-capped Chickadee, Red-breasted Nuthatch, Purple Finch, Pine Siskin, and American Goldfinch have been reported at various southern Ontario sites, with particularly high counts at Long Point Bird Observatory and Prince Edward Point Bird Observatory. The chickadee spike ranged as far northwest as Thunder Cape, and also through to both Quebec stations, but Purple Finches were below average at Thunder Cape, while the other finches appear to be at normal or below average numbers in Quebec, suggesting a contrast in trends between western and eastern boreal populations.

Thrushes were the group that stood out most at McGill Bird Observatory this fall, with records set for six species. The Swainson's Thrush count was nearly five times higher than the previous record, while Hermit Thrush, Gray-cheeked Thrush, and Veery were all more than twice as numerous as usual. Rock Point Bird Banding Station also reported unusually many Swainson's Thrushes, while Inglewood's only significantly above-average species this fall was Hermit Thrush.

Warblers are conspicuously absent from the highlights of most stations this year, except for Mackenzie Nature Observatory in BC, where Northern Waterthrush, as well as Orange-crowned, Yellow, Magnolia, Blackpoll, and Yellow-rumped Warblers reached new highs. Elsewhere in BC, Tatlayoko Lake Bird Observatory had far fewer Lincoln's Sparrows than usual, while Rocky Point Bird Observatory had a record number of White-crowned Sparrows, and also got in on the Red-breasted Nuthatch invasion.

Finally, although most CMMN member stations focus primarily on passerine migration, many also have Northern Saw-whet Owl programs, and they have been exceptionally busy this fall. Even though the season is not yet over, Rocky Point and McGill Bird Observatory have already reached record totals, and all the Ontario stations are well above average and likely on the way to new highs as well. At Tadoussac, the Saw-whet count has been relatively modest, but Boreal Owls are on the move in very good numbers, leading to speculation that stations farther south may yet see a few of them before their seasons are over.

Compiled with input from Ann Nightingale (Rocky Point Bird Observatory), Andrew Harcombe (Tatlayoko Lake Bird Observatory), Vi Lambie (Mackenzie Nature Observatory), Doug Collister (Calgary Bird Banding Society), John Woodcock (Thunder Cape Bird Observatory), Stuart Mackenzie (Long Point Bird Observatory), Jim Smith (Rock Point Bird Banding Station), David Okines (Prince Edward Point Bird Observatory), Simon Duval (McGill Bird Observatory), and Pascal Cote (Observatoire d'Oiseaux de Tadoussac).

Feature Article:

North American Banding Council – a great resource for researchers

Erica Dunn, Environment Canada

Trapping, handling, and marking birds in various ways are such integral tools of field ornithology that many of the professionally-oriented ornithological societies, including SCO-SOC, have appointed representatives to the North American Banding Council (NABC). NABC's mission is to promote sound and ethical bird-banding principles and techniques, and it has developed extensive training programs and materials to aid banders in meeting these objectives.

While most banders are well aware of NABC's activities, many in the academic community are not. Students and professors new to banding, especially those intending to mark relatively few individuals of only one species, often do not realize that training is required. Nor do they always know where to get it. Planning ahead is needed to allow time, not only for getting the necessary permits, but for developing the skills necessary to ensure that the work can be carried out safely and ethically – a process which many prospective banders find to be long, but which is necessary to maintain those standards. A permitted bander must be on site when birds are captured and marked, and the Bird Banding Office requires demonstrated experience before a permit will be issued.

A banded American Tree Sparrow, part of a study on winter site fidelity at McGill Bird Observatory (Photo by Simon Duval)

One of NABC's core activities has been the preparation of detailed manuals for training of banders and of the people who will serve as trainers. These can be accessed through the NABC website (www.nabanding.net), and you can follow NABC on Facebook for the latest information.

The first round of manuals published some time ago, including those for passerines, waterfowl, raptors and hummingbirds, are starting to be reviewed and revised. New ones are underway for seabirds and for birds that use nestboxes. Eventually NABC hopes to prepare manuals for auxiliary markers (from colour bands and tags to electronic devices), and for special procedures that banders are sometimes asked to perform for researchers, including blood sampling, laparotomy, feather collection, and cloacal lavage. Additional NABC training materials include CDs and videos (e.g. how to safely apply hard metal bands). Much of the material has been translated into Spanish and French.

NABC's second major area of activity is bander training, and the group's only funding comes from fees for workshops and courses. Banders can be certified by passing a course with a standardized curriculum. In 2011-2012, seven courses certified 12 trainers, 32 banders and 3 assistants. Numerous sessions have been held for Latin Americans, both in the Northern and Southern Hemispheres.

Researchers whose work involves handling a few birds do not need to become certified by NABC. However, they still require a federal permit from the Bird Banding Office, and sometimes also a provincial research permit, depending on the jurisdiction and the nature of the study. As such, they must obtain some training from a permitted bander, in particular learning the trapping techniques they plan to use, and proper techniques for handling and marking the target species, as well as others that may be incidentally captured.

How does one go about finding a teacher? Bird observatories are a great first contact, as they usually handle a lot of birds and are used to providing training. The home page of the Canadian Migration Monitoring Network (www.bsc-eoc.org/national/cmmn.html) provides links to 25 research stations across the country. Even if you can't travel to a bird observatory, their personnel may be able to give suggestions on how to contact bander trainers who live closer to you. You could also try contacting regional banding associations (Eastern, Inland, Western and Ontario Bird Banding Associations).

Finally, and especially if you aren't planning to handle birds much in future, you should consider simply hiring a licensed bander to do that part of the field work. You can post an advertisement on the Ornithological Societies of North America job board (www.osnabirds.org/jobs.aspx), send a notice to the bird-banding organization that covers your region, or contact the nearest bird observatory – banders often welcome opportunities to participate in other projects, and may even volunteer to help!

Upcoming Conferences

Prairie Conservation and Endangered Species Conference
Red Deer, Alberta | February 19 – 22, 2013

Announcing the 10th Prairie Conservation and Endangered Species Conference: *Engaging People in Conservation*

The 10th Prairie Conservation and Endangered Species Conference will be held in Red Deer, Alberta from February 19-22, 2013. This major North American conference is held every three years, rotating between Alberta, Saskatchewan and Manitoba. The conference will bring together decision-makers, researchers, and community and grass-roots groups along with farmers, ranchers, First Nations and other private citizens who have an abiding interest in sustaining prairie land, water, plants and animals.

The conference theme, ***Engaging People in Conservation,*** recognizes past efforts, supports the identification of current issues, and promotes future work to achieve success with prairie conservation and endangered species management. The full conference program is currently being developed. Details are available at the conference website, www.pcesc.ca. Conference registration is now open, with early bird registration until December 21, 2012. To learn more, or to register, visit: www.pcesc.ca/registration.aspx.

In addition to launching the conference website and opening conference registration, we are pleased to announce that nominations for the Prairie Conservation Award are also open until January 11, 2013. This award is given once every three years, in recognition of significant long-term contributions to native habitat or species at risk conservation. Visit: www.pcesc.ca/awards.aspx for more information.

The 10th Prairie Conservation and Endangered Species Conference organizing partners are the *Alberta Prairie Conservation Forum* and the *Alberta Society of Professional Biologists*. Each organizing partner has made significant commitments of cash and in-kind contributions that support the development of the conference.

Spotted Sandpiper (Photo by Darroch Whitaker)

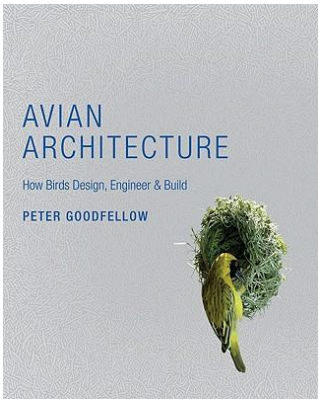
113th Christmas Bird Count: December 14, 2012 – January 5, 2013

The Christmas Bird Count is a tradition for many birders, and an important source of information on wintering birds across North America and beyond. For more than 25 years, the National Audubon Society and Bird Studies Canada have been collecting a $5 participant's fee to help fund data coordination and analysis. As of this year, the fee has been abolished, which will hopefully encourage even greater participation. For more details on the Christmas Bird Count, including information on how to find existing count circles, visit http://www.bsc-eoc.org/volunteer/cbc/index.jsp

Book Review

Goodfellow, Peter. 2011. Avian architecture: how birds design, engineer, and build. Princeton University Press, Princeton NJ. 160 pages, 300 colour illustrations.

Hardcover, 20.3 cm x 25.4 cm. $27.95 US. ISBN: 978-0-691-14849-6.



People have always been interested in construction and have often been amazed by the many kinds of structures that birds build. *Avian Architecture* examines bird building behaviour, nests, and other structures, including their construction, use, variety and complexity. It also features birds that have nest sites but no nests, as well as other structures such as bowers, food stores and edible nests.

The book begins with a foreword by Mike Hansell highlighting why birds are great builders and why people are interested in their nest-building abilities. First-time readers should review the useful introduction chapter because it explains how the book works. Each subsequent chapter includes the following sections: introduction, blueprints, materials and features, building techniques and case studies. This chapter structure is logical and easy to use. Blueprints are annotated drawings that illustrate nest shape, structure and dimensions of archetypical nests and several variations. Materials and features provide a close study of a species' nest type. Building techniques describe how a bird species constructs its nest or other structures and their variations. Case studies provide examples of how different species adapt the nest type to their specific requirements and habitats. The author brings interesting and relevant examples from all continents ranging from North American songbirds to bowerbirds of New Guinea and Australia to describe the diversity and complexity of bird structures and building behaviour. Bird structures are classified as scrapes, holes and tunnels, platforms, aquatic nests, cup-shaped nests, domed shaped nests, mud nests, hanging/woven/stitched nests, mounds, colonies and group nests, courts and bowers, and edible nests and food stores.

The well-written and easy to read text is strongly supported by 300 excellent colour illustrations. The writing style and illustrations makes the numerous nest design, engineering and construction details come alive for ornithologists and lay people alike. The sharp, clear, and relevant illustrations range from paintings and blueprint drawings to photos, and are the heart of this attractive volume that can be read or browsed. The research for this volume is impeccable, as I did not find any serious errors in this book. I was pleased to see my study species, the Burrowing Owl, included as a case study of a hole and tunnel nester. But I do quibble about some information in the book about Burrowing Owls, as they are not limited to using burrows in prairie dog towns.

There is a highly useful two-page resources section where readers can find more information about birds and their nests. Resources listed include classic bird books and papers such as Bent's *Life Histories of North American Birds*, more recent works, and key reputable websites about birds. The book ends with a handy one-page glossary, a subject index where one can find information in the book easily and quickly, and finally acknowledgements and photo credits.

I learned a lot about more nests and other bird structures; their construction and unfamiliar bird species from other continents such as weavers and bowers. The author successfully explains bird building behaviour and at the same time enhances the wonder of birds and their nests for the reader. Therefore, I highly recommend this very useful and attractive book to anyone interested in birds and the structures they build.

Reviewed by Rob Warnock, e-mail: warnockr@accesscomm.ca

Ornithology among the top research disciplines in Canada in a recent review

The Council of Canadian Academies recently released *The State of Science and Technology in Canada, 2012*. Among other results, it found that ornithology ranked as the fourth highest of 176 subfields of science, with respect to Canada's share of global publications (776 papers, accounting for 8.8% of global ornithology output from 2005 to 2010); only geology, forestry, and physiology ranked higher. Although Canada's Average Relative Citations (ARC) index for ornithology is fourth in the world, it was ranked first by top-cited researchers. For details, access the full report at http://www.scienceadvice.ca/en.aspx.

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(Non-voting) Past Presidents:

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Erica Dunn	1988-1990	Tony Diamond	1998-2000	David Bird	2008-2010
Jon Barlow	1990-1992	Kathy Martin	2000-2002	Erica Nol	2010-2012
Bruce Falls	1992-1994	Jean-Pierre Savard	2002-2004		

Membership Information
www.sco-soc.ca/membership.html

SCO-SOC membership forms can be found at the link above. Current membership rates are as follows:

Student	$10.00 / year	
Regular	$25.00 / year	($35.00 / year outside Canada)
Sustaining	$50.00 / year	
Life	$500.00	

SCO-SOC Website
www.sco-soc.ca/index.html

The SCO-SOC website includes sections on membership, meetings, news, publications, awards, information for students, an overview of SCO-SOC, and links of interest to members and other visitors.

To suggest any additions or edits for the website, contact webmaster Andrew Couturier at acouturier@bsc-eoc.org.

Submissions to *Picoides*:

Articles and photos relevant to Canadian ornithology are welcomed by the editors. If submitting photos, please save them in tiff or jpeg format with descriptive file names, and supply captions including common names of species, location, date, photographer, and any other notes of interest. Deadlines for submission are February 15, May 15, and October 15. Please send all submissions to Rob Warnock at warnockr@accesscomm.ca.

Disclaimer: *Picoides* is not a peer-reviewed journal, and the publication of an article in *Picoides* does not imply endorsement by SCO-SOC.