PICOIDES

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Part of a group of over 200 Cliff Swallows huddling together for warmth during a cold rainy day on the sheltered side of a lookout platform at the Frank Lake Important Bird Area near High River, Alberta on 25 May 2013. Photo by Marcel Gahbauer.

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Editor's Message

Rob Warnock and Marcel Gahbauer

Welcome to second issue of *Picoides* in 2013! We are glad winter is finally over and hope everyone had a great spring this year. As usual, the June issue comes out at a very busy time of year (at least in the bird world), so we appreciate that you might not be reading all of *Picoides* right away. However, we encourage you to at least take a quick look at the time-sensitive material, especially the deadlines for this summer's SCO-SOC meeting in Winnipeg (*see page 4*) and news about the BirdLife World Congress being held in Ottawa this June (*see page 10*).

As usual, we begin this issue with the bilingual President's message (*see page 3*) which provides additional considerations for attending the August meeting in Winnipeg. We are pleased to again be featuring a strong focus on student research in this issue, beginning with the announcement of the latest SCO-SOC student award winners (*see page 5*), continuing with a research update from last year's Fred Cooke Award winner, Vanya Rohwer (*see page 6*), and wrapping up with abstracts of three recently published theses (*see page 8*). We congratulate the award winners – the future of ornithology in Canada continues to look promising!

Including a news section in a publication like *Picoides* that only comes out three times each year is perhaps a curious practice. However, we have again compiled a mix of items for our Canadian ornithological news (*see page 10*) ranging from the latest COSEWIC status assessments to updates on resources to aid with bird identification. Let us know whether such information is valuable to you – as with other parts of *Picoides*, we receive minimal feedback from readers, and would like to have more so that we can ensure this publication is of value to SCO-SOC members. SCO-SOC is now on Twitter (*see below*), so that offers an additional venue for communication.

Rounding out this issue, we have a light-hearted guest contribution from a member of the Canadian Authors Association (*see page 12*) and a book review (*see page 13*). This issue of *Picoides* is shorter than most, reflecting a scarcity of contributions. As always, we encourage submissions from SCO-SOC members, especially from students and ornithology labs. The next submission deadline is October 15, 2013. Until then, safely enjoy the summer and the first part of fall!

SCO is now on Twitter! Follow us @SCO_SOC for news, exciting research, updates from members, and more!

Le SOC est maintenant sur Twitter! Suivez-nous @SCO_SOC pour les nouvelles, la recherche passionnant, mises à jour des membres, et plus encore!

New Co-Editor sought for *Picoides*

Marcel Gahbauer

After redesigning *Picoides* in 2010 and creating the past 9 issues over 3 years, it's time for me to turn by attention to other priorities. While Rob communicates with contributors and compiles material for each issue, my role has been to create the layout for each issue, and to edit all material for space and consistency of style (spelling, capitalization, referencing, etc.), as well as to write many of the smaller items that pop up in boxes (such as this!) or as other short articles (e.g. the ornithological news section) in each issue. The current template uses Microsoft Word, but a new co-editor would be free to switch to other publishing software, and to continue to evolve the design of *Picoides*. If you would like to contribute to SCO-SOC as the next co-editor of *Picoides*, please contact me for more information, at marcel@migrationresearch.org.

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 14 for submission details.

President's Message

Our 2013 meeting in Winnipeg is just 2 months away. Some of you may still be deciding whether to go. I do not begrudge those stuck in indecision, as I often feel this way and have had a love-hate affair with conferences for a long time. But, I will be going – and not just because I am the SCO President. I will be going because I get things out of it: collaborations, information, and memorable outings with colleagues. I have yet to get research money out of attending a conference, but I suppose that is possible too. One thing I never truly considered was what I "saved" by going to conferences. An editorial by Aiken (2006, The Scientist, 20:54-56) described survey results showing that most scientific conference participants found they had used knowledge they gained at a conference in their own research that had saved them time and/or money in the end. I completely agree with this, as I have done the same. This is not necessarily the kind of information that would come out from reading peer-reviewed papers either. It comes out on the slides or in the hallway discussions.

This brings us to a quantity vs. quality conundrum, which is a debate that particularly plagues graduate students. Should one attend a large meeting (>300 people) or a small one (<150 people)? I think that anyone who has ever attended a SCO stand-alone meeting sees the value of the small meeting. It makes people much more accessible – for one, you can actually find them – and this creates better informal dialogue. It is these discussions that lead to future potential supervisors, collaborations, or idea exchanges. These benefits are harder to accrue in a meeting where you might see someone, once, as they disappear up the escalator across the convention center. The SCO meetings never have these issues, and the society has a proud tradition of fostering communication and collegiality.

The issue of attending a small or a large conference becomes especially germane on August 14, 2013, which is the sole date of overlap between the AOU/COS conference in Chicago and our SCO conference in Winnipeg. I suspect that some will be attending both and making part of the 14th a travel day, with the flight from Winnipeg to Chicago being fairly short. Others may be time or fund limited and cannot attend both, and to those I would respectfully suggest to consider the balance between what you will put in and what you will get out. And, for the first time, perhaps consider what you stand to "save". I hope to see you in Winnipeg!

Message du président

Notre congrès de 2013 à Winnipeg aura lieu dans 2 mois. Certains d'entre vous tentez sans doute encore de déterminer si vous vous y rendrez. Je n'ai rien contre ceux ou celles qui sont indécis puisque je me sens souvent ainsi et j'entretiens depuis longtemps une relation amour-haine envers les congrès. Toutefois, je serai présent – pas seulement à titre de Président de la SOC. J'irai à Winnipeg parce que je vais en retirer de nombreux bénéfices: collaborations, information et sorties mémorables avec des collègues. Je n'ai jamais obtenu de financement de recherche après avoir participé à un congrès, mais je suppose que cela est possible. Un élément que je n'ai jamais vraiment considéré est tout ce que j'ai "épargné" en participant à des congrès. Dans un éditorial publié en 2006 (The Scientist, 20:54-56), Aiken a décrit les résultats d'un sondage montrant que la plupart des participants à des congrès scientifiques ont intégré dans leurs projets de recherche des connaissances acquises en assistant à des congrès, ce qui leur a sauvé temps et argent. Je suis parfaitement d'accord avec cette conclusion car elle s'applique également à mon cas. Le type d'information dont on parle ne peut pas nécessairement être obtenu en lisant des articles de revues avec comité de lecture. Cette information provient plutôt de diapositives ou encore de discussions entre collègues.

Ceci nous amène à un compromis entre quantité et qualité, qui touche particulièrement les étudiants aux cycles supérieurs. Devrait-on participer à un congrès majeur (>300 participants) ou à un congrès de moindre ampleur (<150 participants)? Je pense que tous ceux qui ont participé à un congrès indépendant de la SOC sont conscients de la valeur des petits congrès. Les collègues et étudiants y sont beaucoup plus accessibles – vous pouvez les trouver! – et cela permet un dialogue informel plus efficace. Ce sont ces discussions qui permettent d'identifier de futurs directeurs ou directrices de thèse, de développer des collaborations ou d'échanger des idées. Ces bénéfices sont plus difficiles à obtenir dans les congrès où vous risquez de ne voir une personne qu'une seule fois, au moment où elle disparaît au sommet de l'escalier roulant du centre de congrès. Les congrès de la SOC ne souffrent jamais de ce problème et notre société a une longue tradition de communication efficace et de collégialité.

La décision d'assister à un congrès de plus ou moins grande ampleur sera particulièrement pertinente le 14 août 2013, la seule journée de recoupement entre le congrès de l'AOU/COS à Chicago et notre congrès de la SOC à Winnipeg. Je soupçonne que certains participeront aux deux et se déplaceront durant la journée du 14, le vol Winnipeg-Chicago étant relativement court. D'autres encore auront peut-être des contraintes de temps ou d'argent les empêchant de participer aux deux congrès et à ceux-là je suggère poliment de considérer l'équilibre entre leur investissement en tant que participant et ce qu'ils en retireront. Pour la première fois, peut-être, vous prendrez en considération ce que vous allez "sauver". J'espère vous voir à Winnipeg!

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

SCO Annual Meeting

Winnipeg MB, 12-14 August, 2013

We are happy to announce that the website for the Society of Canadian Ornithologists Annual Meeting is now live: http://sco.biology.ualberta.ca/. You can now register online, and access detailed information about the program, plenary lectures, field trips, abstract submissions, etc.

This is also the second call for abstract submissions for the Winnipeg meeting this August. We welcome Canada's ornithological community to enjoy plenaries, submitted oral and poster presentations, field trips and celebrations with us in the heart of Canada.

The theme for our conference is "Should we conserve endangered species or endangered spaces?" While this will be the focus of our plenary presentations, we welcome abstract submissions for oral and poster presentations on any topic related to ornithological research in Canada. Submissions about bird species that occur outside of Canada are also welcome. Proposed oral sessions include but are not restricted to citizen science, conservation biology, behavioural ecology, landscape ecology, reproductive ecology, physiology and landscape genetics.

Abstract guide:
Abstracts and text on PowerPoint slides may be in English, French, or bilingual (encouraged, where possible). The oral component of the presentation should be in English.

E-mail abstracts (maximum 250 words, and using Times New Roman 12 pt font) to nicola.koper@ad.umanitoba.ca by the deadlines below, and in the following format:

Preferred presentation: (oral or poster)
Lockhart, J., and Koper, N.
Assessing the relative effects of habitat fragmentation on grassland songbird communities in southwestern Manitoba.
Natural Resources Institute, University of Manitoba
Contact info [optional]: nicola.koper@ad.umanitoba.ca
Grassland birds have declined more rapidly than birds of any other ecosystem … etc.

Deadline for oral presentations: **June 15, 2013**
Deadline for abstracts for poster presentations to be included in abstract booklet and program: **June 15, 2013**
Deadline for poster presentations *without* inclusion in abstract booklet and program: **July 11, 2013** (these posters will be presented in the poster room, and listed on a handout that is separate from the program)

Congrès de la SOC

Winnipeg MB, 12-14 août, 2013

C'est avec plaisir que nous vous annonçons que le site web du prochain congrès de la Société des ornithologistes du Canada est maintenant en fonction: http://sco.biology.ualberta.ca/. Vous pouvez vous inscrire en ligne et accéder aux informations détaillées sur le programme, les plénières, excursions, soumissions de résumés, etc.

Ceci est aussi le deuxième appel de communications pour ce congrès annuel. Nous sommes heureux d'inviter la communauté des ornithologistes canadiens à assister aux présentations plénières et contribuer aux présentations orales ou par affiches, ainsi qu'aux sorties sur le terrain et autres activités avec nous en plein cœur du Canada.

Le thème de notre congrès sera « devons-nous protéger les espèces ou les espaces menacés? ». Les plénières focaliseront sur ce thème, mais nous attendons des offres de communications orales ou par affiche sur tous les sujets touchant la recherche ornithologique canadienne. Les offres de communications portant sur des espèces non canadiennes seront aussi bienvenues. Les sessions orales porteront de manière non exclusive sur la participation des citoyens à la science, la biologie de la conservation, l'écologie comportementale, des paysages, de la reproduction, la physiologie, la génétique des paysages.

Guide de présentation des résumés:
Les résumés et le texte des présentations PowerPoint peuvent être en anglais ou en français (bilingue si possible). La portion orale des présentations doit être en anglais.

Envoyez votre résumé (maximum 250 mots, en Times New Roman 12 pt) par courriel à nicola.koper@ad.umanitoba.ca au plus tard aux dates présentées ci-dessous, et en respectant le format suivant:

Présentation préférée: (orale ou affiche)
Lockhart, J., and Koper, N.
Assessing the relative effects of habitat fragmentation on grassland songbird communities in southwestern Manitoba.
Natural Resources Institute, University of Manitoba
Contact information [optional]: nicola.koper@ad.umanitoba.ca
Grassland birds have declined more rapidly than birds of any other ecosystem … etc.

Date limite pour offre de présentation orale: **15 juin 2013**
Date limite pour offre de présentation par affiche à inclure dans le recueil de résumés et le programme: **15 juin 2013**
Date limite pour offre de présentation par affiche *sans inclusion* dans le recueil de résumés et le programme: **11 juillet 2013** (ces affiches seront présentées dans la salle prévue à cet effet, et listées sur un feuillet qui sera offert séparément au programme)

2013 SCO-SOC Student Award Recipients

Karen Wiebe, Chair of the SCO-SOC Student Awards Committee

The SCO-SOC Student Awards Committee wishes to congratulate the four 2013 SCO-SOC Student Award winners. We received 24 outstanding applications from across Canada. I thank the other members of the committee this year: Marc Avey (University of Alberta), Jacques Ibarzabal (Université de Québec à Chicoutimi), and Ian Warkentin (Memorial University of Newfoundland - Grenfell Campus) for their contributions.

Below are the 2013 SCO-SOC Student Award recipients and thesis titles. Laure Cauchard's biography and project description is also below. Brief research summaries and biographies for Rachael Derbyshire, Adriana Bruni and David Toews will be in next issue of *Picoides* in November 2013.

Taverner Award:

Rachael Derbyshire, University of Guelph: *Examining the hoard-rot hypothesis in a boreal songbird: an experimental test of the food limitation assumption*

David Toews, University of British Columbia: *Hybridization and Introgression in the Yellow-rumped Warbler Species Complex*

James Baillie Award:

Adriana Bruni, University of Windsor: *The influence of weather, eye size, and ambient light on dawn chorus singing behaviour in a Canadian bird community*

Fred Cooke Award:

Laure Cauchard, Département de Sciences Biologiques, Université de Montréal; email: laure.cauchard@umontreal.ca:
Evolutionary consequences of individual variability in cognitive performance

Biography:

I've been interested in animal life and behaviour since I was very young, like every little girl all over the world I guess. Since I was not very good in math (yes - anyone who wished one day to enter a veterinary school has to be a genius in math...), I decided to start a Master in Animal Behaviour (Université Paris XIII) and to live with a mathematics teacher. After several research assistant positions in various fields (dispersion in birds, conservation, cognition, personality, with various methods (population survey, radiotracking, behavioural lab and field experiments) in various species (birds, deer, sheep, fish) and teams, animal cognition, evolution and birds held my curiosity and I've started my PhD at the Université de Montréal in 2009. With my co-supervisors Dr. Bernard Angers (Université de Montréal), Dr. Neeltje Boogert (University of St Andrews) and Dr. Blandine Doligez (Université de Lyon, CNRS), we are interested in the consequences of individual differences in cognitive performance (problem-solving and learning) with regards to fitness, mate choice and other life history traits.

Laure Cauchard catching birds in Gotland, Sweden.
Photo by Thomas Borderie

Project summary:

Spatial-temporal variation in habitat quality favors information use for breeding site selection. Because such information can be complex, cognitive abilities may play a crucial role in information processing and use. Individuals with higher innovation and learning abilities may achieve higher fitness because of a higher ability to optimally use information and thus exploit their habitat. This project aims at experimentally testing this hypothesis by (i) manipulating a source of social information in a natural bird population and (ii) exploring the link between information use by individuals for subsequent nest site selection and their cognitive abilities (innovation and learning), measured via problem-solving performance in a Great Tit (*Parus major*) natural population in Sweden.

2012 Fred Cooke Award Report

Complex species interactions and the maintenance of local diversity: Investigating a plant-bird interaction in the Western Cape region of South Africa

Vanya G. Rohwer, Department of Biology, Queen's University, Kingston ON, K7L 3N6

Interactions among species are potentially important for maintaining local biodiversity. For example, positive interactions with one species can allow a second species to persist in the face of negative interactions with a third species. These kinds of interactive webs are poorly understood, yet they may play central roles in determining whether a species persists or disappears from a local community (Thompson 1994). Below I describe my PhD research that examines interactions between *Eriocephalus* plants and Karoo Prinias (*Prinia maculosa*), and how this plant-bird interaction may play an important role in maintaining local biodiversity in the Western Cape region of South Africa.

Several species of birds that breed in southern Africa use *Eriocephalus* plant material to construct their nests (Dean et al. 1990). In particular, Karoo Prinias frequently use the fluffy, white, seed-material of *Eriocephalus* on the interior and exterior of their nests (Fig.1). Pale coloured material on the exterior of bird nests seems detrimental to reproductive success, as nests would be more conspicuous against background vegetation to visual predators. Why then do some Karoo Prinias construct their nests using an apparent excess of conspicuous pale material?

Several natural history observations suggest an answer. *Eriocephalus* plant material is aromatic and contains secondary chemical compounds that reduce microbial and fungal growth in laboratory experiments (Njenga 2005). Many species of birds travel outside of their territory to collect this material, and some species, including Karoo Prinia, add fresh *Eriocephalus* seed-fluff to the nest throughout the reproductive cycle (Tarboton 2011). These observations suggest that nest constructed with *Eriocephalus* material may benefit birds by providing secondary chemical compounds that reduce nest ectoparasites and microbial infections. Additionally, the fluffy nature of *Eriocephalus* seeds seems like an excellent insulator, which may help maintain optimal temperature or humidity inside the nest. Yet both ectoparasite and insulation hypotheses would seem to favour the placement of *Eriocephalus* material on the interior of nests. Why then might Karoo Prinias use *Eriocephalus* material on the exterior of their nests? The plot of this natural history saga thickens.

Southern Africa is home to a specialist predator, the Rhombic egg-eater snake (*Dasypeltis scabra*). This snake eats only bird eggs and is thought to be one of the major nest predators of birds during the incubation period (Martin et al. 2011). Several aspects of *Dasypeltis* foraging ecology suggest that *Eriocephalus* material in bird nests may reduce predation by these snakes. *Dasypeltis* are nocturnal snakes and likely rely on chemo-olfactory cues to find bird nests (Schwenk 1995, Jackrel and Reinert 2011), suggesting that visual cues, like the pale color of *Eriocephalus* material, may play a minor role in locating nests. Furthermore, at least two compounds responsible for *Eriocephalus's* fragrance, camphor and eucalyptol, are thought to be effective snake deterrents (Harper and Brothers Publishers 1874, Ferko 2006). Thus *Eriocephalus* plant material might function not only to reduce discovery of nests through masking of olfactory cues associated with nests, but could also actively deter predation by egg-eater snakes.

Selection on birds to reduce predation by *Dasypeltis* snakes is likely strong. As specialist predators that eat only bird eggs, food availability is highly seasonal and during the period when birds are not breeding, *Dasypeltis* snakes do not eat (Jones 1996). Long periods of fasting likely require periods of intense foraging during the avian breeding season. Mid-sized *Dasypeltis* snakes held in captivity eat as many as six Japanese Quail (*Coturnix coturnix*) eggs during a single feeding (Jones 1996). Converting the mass of one quail egg (~10g) to the mass of Karoo Prinia eggs (~1g), suggests that a single snake could eat up to 60 eggs, or roughly 15 Karoo Prinia clutches in a single feeding. Therefore, predation from *Dasypeltis* snakes may favour birds that use *Eriocephalus* plant material to deter these snakes from finding or depredating their nests.

To tackle this project, I've taken advantage of the bizarre and seemingly endless array of products available online and bought two key items: *Eriocephalus* essential oil and 10 *Dasypeltis* snakes. I tested the hypothesis that secondary chemical compounds of *Eriocephalus* material reduce ectoparasite loads in bird nests during the spring of 2012 using the Tree Swallow (*Tachycineta bicolor*) population at the Queen's University Biological Station in southeastern Ontario. Experimental nests received four drops of diluted *Eriocephalus* essential oil, and control nests received four drops of fragrant free mineral oil (the liquid used to dilute *Eriocephalus* essential oil). Oils of both treatments were reapplied every 3 days to prevent the aroma from completely dissipating and to simulate the behaviour of adding fresh

material to the nest throughout the breeding cycle. Tree Swallow nests treated with *Eriocephalus* essential oils had on average significantly lighter ectoparasite masses per box, and also fledged more young compared to nests treated with mineral oil. These results suggest that birds constructing their nests with *Eriocephalus* material may benefit through reduce nest ectoparasite loads, and that *Eriocephalus* material may mitigate interactions between birds and ectoparasites. Experiments that test the snake deterrence hypothesis will begin shortly in captivity, and field experiments that test the microclimate hypothesis will begin in July 2013.

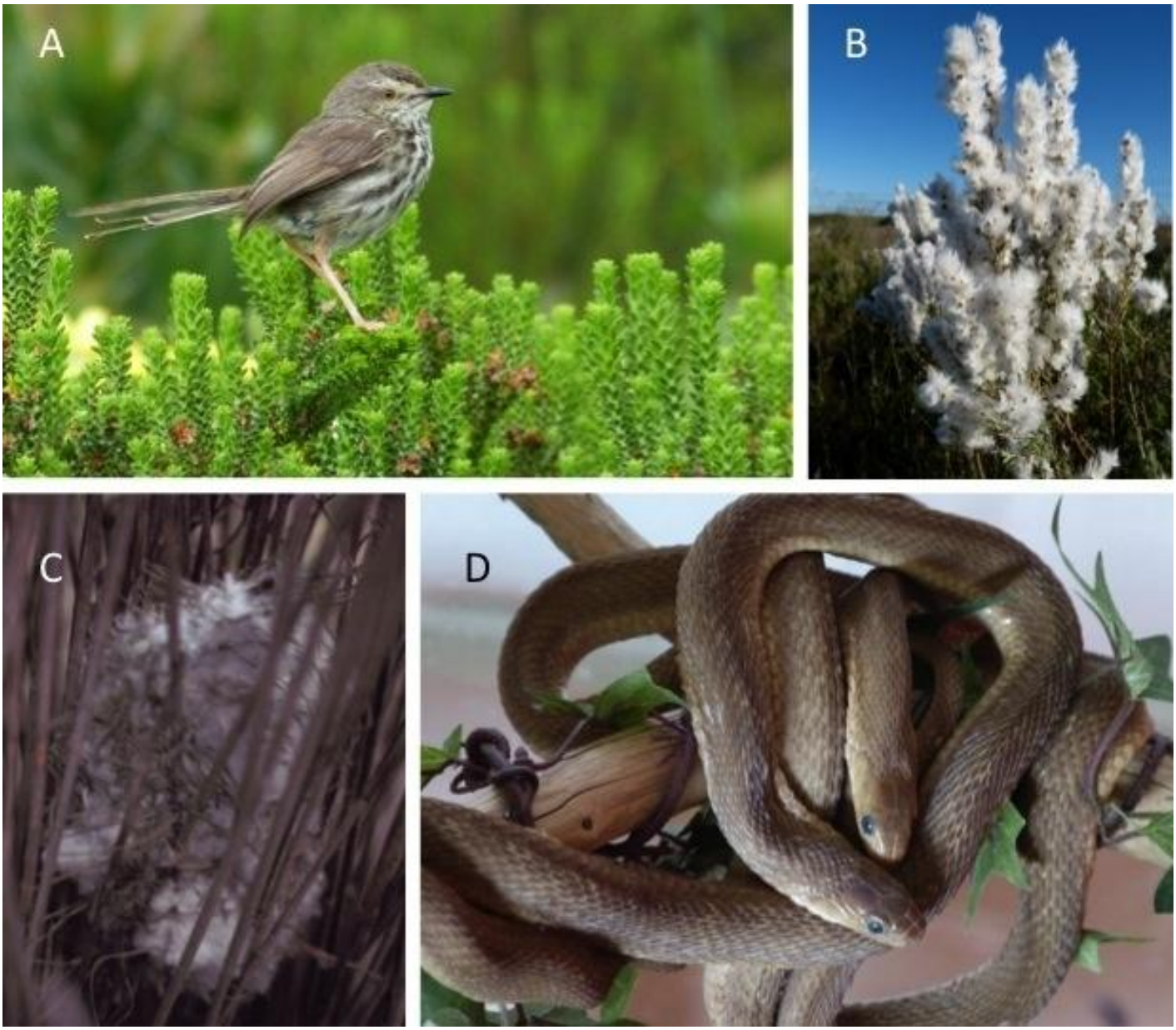


Figure 1. (A) Karoo Prinia (B) Fluffy, white seed material of *Eriocephalus* plants that many South African birds use to construct their nests (C) Karoo Prinia nests, note the conspicuous pale colour of *Eriocephalus* seed-material (D) Captive *Dasypeltis* snakes. Photo credits: Vanya G. Rohwer (A, B, D) and Paul R. Martin (C)

With the help of the Fred Cooke Award I traveled to South Africa in October 2012. This trip was key to setting up future field seasons. I met local collaborators, obtained research permits, and explored the study site at Koeberg Nature Reserve, just north of Cape Town. Karoo Prinias are abundant and their raucous calls sound like a wind-up toy warning its self-destruction, and *Eriocephalus* plants are patchy but common throughout the study site. If birds constructing their nest with *Eriocephalus* material increase their reproductive success by altering the strength of interactions with either snake nest-predators or ectoparasites, then interactions between birds and plants may play an important role in sustaining local populations of Karoo Prinias. Now we wait for new insights brought by the 2013 field season for this intriguing biological puzzle.

References

Dean, W.R.J., S.J. Milton, and W.R. Siegfried. 1990. Dispersal of seeds as nest material by birds in semiarid Karoo shrubland. Ecology 71: 1299–1306.

Ferko, G. IV. 2006. Composition and method for repelling squamate reptiles. United States Patent No.: US 7,033,601 B1.

Harper and Brothers Publishers. 1874. Miss Beecher's Housekeeper and Healthkeeper. Harper and Brothers, New York.

Jackrel, S. and H.K. Reinert. 2011. Behavioral responses of a dietary specialist, the Queen Snake (*Regina septemvittata*), to potential chemoattractants released by its prey. Journal of Herpetology 45: 272–276.

Jones, Z.S. 1996. Captive maintenance and breeding of Rhombic egg-eating snake (*Dasypeltis scabra*). Advances in Herpetoculture 1: 119–126.

Martin, T.E., P. Lloyd, C. Bosque, D.C. Barton, A.L. Biancucci, Y.-R. Cheng, and R. Ton. 2011. Growth rate variation among passerine species in tropical and temperate sites: an antagonistic interaction between parental food provisioning and nest predation risk. Evolution 65: 1607–1622.

Njenga, E.W. 2005. The chemotaxonomy, phylogeny and biological activity of the genus *Eriocephalus* L. (Asteraceae). Ph.D. dissertation, University of the Witwatersrand, Johannesburg, South Africa.

Schwenk, K. 1995. Of tongues and noses: chemoreception in lizards and snakes. Trends in Ecology and Evolution 10: 7-12.

Tarboton, W. 2011. Robert's nests and eggs of southern African birds. John Voelcker Bird Book Fund, Cape Town.

Thompson, J.N. 1994. The coevolutionary process. University of Chicago Press, Chicago.

Recent Canadian Ornithology Theses

García-Pérez, Belén. 2012. Migratory connectivity and differential patterns of decline in Barn Swallow (*Hirundo rustica*) in North America: potential effects of factors on breeding and wintering grounds. M.Sc. Thesis. University of Saskatchewan, Saskatoon, SK.

Barn Swallow. Photo by Belén García-Pérez

Breeding populations of Barn Swallow (*Hirundo rustica*), a long-distance and aerial insectivore, have declined considerably in northern regions of North America but remain stable in certain areas of the southern United States.

I investigated causes of these differential population dynamics by 1) studying patterns of migratory connectivity of populations using a three stable-isotope approach (δ2H, δ13C and δ15N) and 2) evaluating evidence for factors on breeding and/or wintering grounds causing regional differences in population trends. Specifically, I tested the effects of large-scale climatic conditions on annual survival, local weather variation on reproductive performance, and differential exposure of swallows to stressors on their wintering grounds.

Breeding populations of Barn Swallow showed a diverse pattern of migratory connectivity. For stable and/or increasing populations in southern US, at least half of the entire population occupied areas in north-eastern South America, while a large proportion of individuals breeding in declining populations overwintered in western and central South America. This suggests that regions in north-eastern South America may be better quality habitats than those in western and central South America or that migratory distance is a factor in differential population trends. Annual survivorship of swallows in Washington State was strongly correlated with El Niño Southern Oscillation (ENSO) conditions, while no correlation was found for birds breeding in Ontario. This could be related to the geographical variation of the effect of ENSO on weather across continents and the differential degree of migratory connectivity of populations. Annual reproductive performance was significantly affected by ambient temperature early in the breeding season, while precipitation had little effect. However, no significant decrease in reproductive success over time was noted in the studied populations. Wintering ground stressors related to corticosterone (CORT) showed no significant effect on differential population trends, since feather-CORT levels from declining populations were similar to those from stable populations.

Geleynse, Daniel. 2013. Brown Creeper (*Certhia americana*) habitat selection and demography between logged and unlogged forests of Algonquin Provincial Park, Canada. M.Sc. Thesis. Trent University, Peterborough ON.

Silviculture can greatly influence mature forest birds by increasing the amount of edge, and reducing the amount of breeding habitat. The Brown Creeper (*Certhia americana*) has been identified as the most sensitive passerine to partial forest harvest in North America. The effect of selection logging on Brown Creeper density, nest timing and survival, and nest/foraging site selection was examined in Algonquin Provincial Park Ontario, Canada. I compared Brown Creeper biology among 5 silviculture treatments including intensive group-selection, typical group-selection, old single-tree selection, recent single-tree selection and unlogged forests. As Brown Creepers nest in the bark of large, decaying trees, I hypothesized that Brown Creeper density, timing of breeding, nest survival, and nest/foraging site selection would be negatively affected by silviculture, through the removal of large, decaying trees as part of providing safe conditions for loggers. I monitored 88 nests of Brown Creeper during the 2010 and 2011 breeding seasons. Brown Creeper density was significantly lower in logged treatments than unlogged stands. Despite that, silviculture did not significantly alter timing of breeding or nest survival. Nest trees were significantly closer to forested wetlands than randomly selected trees in all stands. In unlogged stands, Brown Creeper nested further from forested wetlands and disproportionately in greater numbers in upland hardwoods, compared to in logged stands. Thus, although adjacent forested wetlands provide coniferous nesting substrate for the Brown Creeper in logged stands, Brown Creeper densities in the harvested upland hardwood forests declined due to loss of nesting habitat.

Farrell, Lindsay L. 2013. Molecular genetics of alternative reproductive morphs in Ruffs. Ph.D. Thesis. Biological Sciences, Simon Fraser University, Burnaby, BC and University of Sheffield, Sheffield, United Kingdom.

Independent male in full ornamental breeding plumage.
Photo by Lindsay L. Farrell

Determining the molecular mechanisms underlying variation in morphology, physiology and behaviour is a prime focus in the field of evolutionary genetics. This thesis investigates the molecular genetics of the unusual alternative male reproductive morphs of a shorebird, the Ruff (*Philomachus pugnax*). Ruffs possess three distinct alternative reproductive morphs: i) territorial dark-plumed 'Independents', ii) non-territorial white-plumed 'Satellites', and iii) small unplumed female-like males called 'Faeders'. Independent and satellite morph development is determined by an autosomal genetic polymorphism at the Satellite locus, and a dominant autosomal allele of unknown location also controls development of the female-mimicking faeders. To investigate the molecular genetics of alternative reproductive morphs in this non-model organism, I used several analytical approaches and molecular techniques, including: developing two microsatellite libraries and characterizing microsatellite markers, constructing a first-generation linkage map of the Ruff genome, attempting to specifically map behavioural and plumage loci on this map, and sequencing the melanocortin-1 receptor (Mc1r) gene to investigate its role in plumage polymorphism.

I characterized 102 microsatellite markers from the Ruff and present 7 linkage groups and 5 single marker loci homologous to chicken and Zebra Finch chromosomes. Through linkage analysis, I identified the chromosomal location of Faeder, the locus that controls development of the female mimic morph, and found it to be unlinked to the Satellite locus. These preliminary data appear to support a two-locus epistatic model of male morph determination, although further studies are needed to confirm this finding. I demonstrated that sequence variation in the coding region of Mc1r is not solely responsible for the dark and white plumage polymorphism in Ruffs, and that other melanin–based colouration, regulatory, or structural genes likely contribute to the plumage polymorphism observed in this species. One non-synonymous SNP, His207Arg, located in the transmembrane region of Mc1r, may be under selection, with the possibility of a lethal in Ruffs maintained by overdominance, or else gene duplication.

This thesis broadens and brings together previous areas of research in the Ruff and sets the stage for further genomic work addressing questions of evolutionary interest in this enigmatic shorebird.

Canadian Ornithological News

Bank Swallow becomes the latest aerial insectivore assessed by COSEWIC as at risk

Eastern Wood-Pewee. Photo by Marcel Gahbauer

The Committee on the Status of Endangered Wildlife in Canada (COSEWIC) typically meets twice each year to review status reports and propose species for inclusion under the *Species at Risk Act* (SARA). During the most recent meeting, held 28 April to 3 May in Winnipeg, COSEWIC assessed Bank Swallow as Threatened, based in part on a substantial population decline estimated to be as much as 98% since 1970. This follows several other aerial insectivores assigned Threatened (Eastern Whip-poor-will, Common Nighthawk, Chimney Swift, Barn Swallow, Olive-sided Flycatcher) or Special Concern (Eastern Wood-Pewee) status in the past six years. Also at the recent meeting, the existing status of two other bird species was reconfirmed as part of the mandate to reassess SARA-listed species at least once per decade. Northern Bobwhite remains Endangered, while the Queen Charlotte Islands (*subspecies*) subspecies of Northern Goshawk is still Threatened. Details on all 29 species of flora and fauna assessed at the Winnipeg meeting are available on the COSEWIC website at http://www.cosewic.gc.ca/eng/sct5/index_e.cfm. The next meeting is scheduled for 24-29 November 2013 in Ottawa, and will include assessment of Harlequin Duck (eastern population), Piping Plover, and Short-tailed Albatross, all of which will first receive careful scrutiny at the annual meeting of the COSEWIC Bird Specialist Subcommittee, being held 9-11 August in Montreal. Observers are welcome to attend COSEWIC meetings, subject to signing a non-disclosure waiver; contact COSEWIC co-chair Marty Leonard (mleonard@dal.ca) or Karen Timm at the COSEWIC secretariat (karen.timm@ec.gc.ca) for details.

Pesticides linked to declines of birds and bees

Grasshopper Sparrow
Photo by Nick Saunders

Habitat loss has typically been considered a key factor in the decline of many grassland birds, but a recent paper in the open-access online journal *PLOS One* by Canadian researchers Pierre Mineau and Mélanie Whiteside concludes that pesticide toxicity may be even more significant. In *Pesticide acute toxicity is a better correlate of U.S. grassland bird declines than agricultural intensification*, they report that acutely toxic pesticides are the most likely cause of the widespread population concerns among grassland species. The full article is available at:
http://www.plosone.org/article/info:doi/10.1371/journal.pone.0057457

Concern over the impact of pesticides on birds is also growing in Europe. In late April, the European Commission introduced two-year restrictions on three neonicotinoids. The American Bird Conservancy has also een calling for a ban on neonicotinoids, and commissioned Pierre Mineau to review roughly 200 existing studies on this class of chemicals. In *The impact of the nation's most widely used insecticides on birds*, he concluded that neonicotinoids are lethal to birds, especially in association with aquatic habitats. That report is available at www.abcbirds.org/abcprograms/policy/toxins/Neonic_FINAL.pdf. Further details on the European Commission decision are at http://www.rspb.org.uk/media/releases/345066-pesticide-restrictions-great-news-for-bees.

BirdLife World Congress hosted in Canada for the first time

For the first time, BirdLife International's World Congress is being held in North America this year. Canadian BirdLife partners Bird Studies Canada and Nature Canada are hosting the 2013 Congress in Ottawa, 19-22 June, with more than 400 participants registered from over 120 countries. Workshops will include "Citizen Science and Conservation" and "Connecting Youth to Nature", and the congress will include a variety of other sessions and social events. Although some portions of the program are limited to internal business, single-day registration for the final plenary session on 22 June is open to the public. That day will feature special presentations, announcements, and a panel discussion on the future of international bird conservation, featuring Margaret Atwood. Other parts of the program open to the public are the Canada Night reception (19 June) and fundraising gala dinner (21 June). Details are available at the congress website, www.birdlifecongress.org.

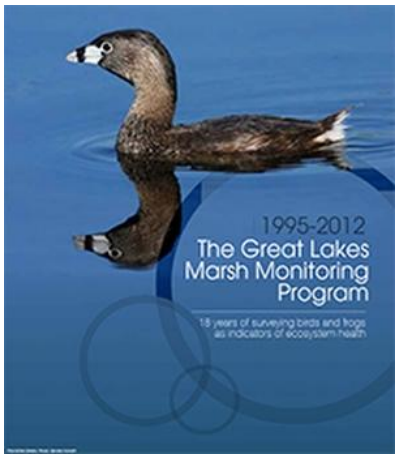
Online aids for bird identification

Whether surveying for environmental assessments, participating in citizen science projects, or "just" birding, there are many times when the standard suite of field guides (whether in book or app form) fall just a bit short. Fortunately, there are many other resources available online to supplement them. Here are brief summaries of just three of them with a Canadian focus.

At the core of Environment Canada's "NatureInstruct" website (www.natureinstruct.org) is the *Dendroica* module, which has photos and recordings of every bird species that breeds in Canada – and many others from the Americas too! You can simply browse the material, or test yourself with the quiz feature. For those who can more effectively learn songs through visual representation, there are now spectrograms to follow along with as you listen to the sound files. The other NatureInstruct module is *Piranga*, aimed at supporting bird banding research by providing an archive of photos that illustrate differences among ages and sexes. While NatureInstruct access requires registration, it is free. Contributions to both modules are welcome – contact marieanne-hudson@ec.gc.ca for details.

The McGill Bird Observatory ID library (www.migrationresearch.org/mbo/id/index.html) also focuses on the finer points of age/sex differentiation. Unlike *Piranga*, the MBO library concentrates primarily on roughly 60 common eastern species, but includes additional commentary highlighting critical identification features. Introductory notes for most species provide a quick overview of key features on which to focus attention. The goal is to expand the collection to at least 100 species, and photo contributions to the MBO library are also welcome, at mbo@migrationresearch.org.

Great Lakes Marsh Monitoring Program publishes an 18-year report



Bird Studies Canada launched the Great Lakes Marsh Monitoring Program in 1995. Aimed at documenting the status of marsh birds and frogs, the program has proven to be a popular citizen science initiative, with as many as XXX participants annually.

Dr. Doug Tozer recently completed a report that summarizes the first 18 years of the Great Lakes Marsh Monitoring Program (www.birdscanada.org/download/GLMMPreport.pdf). While most frog populations remained stable over this period, the majority of marsh birds declined, casting concern on the health of Great Lakes wetlands.

The Great Lakes Marsh Monitoring Program will continue, and new volunteers are always welcome. To participate, contact Kathy Jones, volunteer@birdscanada.org.

Report on the NABC Annual General Meeting, Chiricahua Mountains, Arizona, 8-9 March 2013

Nick Bartok, NABC Certified Trainer

In its 15th year of promoting sound and ethical bird-banding practices and techniques, the North American Banding Council (NABC) held its annual general meeting at the El Coronado Ranch, located nearly 2,000 metres above sea level in the Chiricahua Mountains, southeast of Tucson, Arizona. Attended by 17 people representing ornithological organizations across North America and Costa Rica, we spent two cold and snowy days discussing ethical bird banding in North America and beyond. Besides trying to get an accurate count of White-throated Sparrows, which are rare for the area, discussion topics included: NABC's strategic plan, certification sessions, how to promote NABC in Canada, and finances – to name a few. NABC continues to complete and update training materials for all bird groups, as well as encourage certification sessions, particularly in Canada. To date, only 18 certified trainers reside in Canada, with most situated in the east. In order to host a certification session, at least two certified trainers must be present, of which at least one must have assisted with a prior certification session. This certainly complicates the certification process in Canada. In Canada, to obtain a master permit or sub-permit through the bird banding office you require two testimonials who can attest to your banding experience; an advantage of having an NABC certification is you only require one testimonial. For those who have 'exceptional experience' as a bird bander, the certification process can be waived by filling out an application form which can be downloaded from the NABC website. The 2014 NABC AGM will most likely be held in the southern US, but a location has yet to be determined. For anyone interested in learning more about the NABC or becoming involved, please visit the website: http://www.nabanding.net/.

Feature Article:

The Jocular Justifyingly Judgmental Jury for a "Jabber of Jays"

Robert Joseph Greene

Blue Jay. Source: Wiki Commons

The jays are truly northern hemisphere icons. Jays are made up of several species of medium-sized, usually multicoloured and noisy, passerine birds that are set in the crow family Corvidae. This family comprises between 35-40 species situated primarily in North America and Europe.

When one researches jays, one word is almost always used to describe them. The word is: NOISY

To the artistic world, these noisy, sometimes bothersome, warm-blooded vertebrate of the class Aves have been known to insight poems, grace an author's desire to pen stories and have been vocalized in music by singers and songwriters. However, most people just know jays by sight from their backyards, local parks, and woods.

With the exception of the Gray Jay (formerly known as the Canada Jay), few would not contest that jays are indeed noisy birds. But is it fair to call them "jabbers"? And if we do call them "jabbers", is it also fair to call their grouping a "jabber of jays"? Who is to make the final say?

According to the Merriam-Webster dictionary, "to jabber" means to talk rapidly, or indistinctly, or unintelligibly. Further research has shown that many ornithologists defend jays as being very specific when they tweet or make noise. As such, ornithologists may feel that to label jays with the word "jabber" as "indistinct" or "unintelligible" would not be acceptable. This is a fair analysis because most jays are gregarious social birds with specific reasons for being noisy. Jays tweet to alert others when there is a predator around (like a cat), or are seen tweeting to attract a mate.

However, did you know the origins of the word "jay"? It was first used in the 14th century, thus it is a Middle-English (Anglo-French) term of Latin origin (*Gaius*) that has been turned into an American slang word meaning a person who chatters impertinently.

So, truly "Jabber" would be an extension of what the bird's origin has naturally come to be. Furthermore, what the majority of ornithologists fail to realize is that Merriam-Webster places words in order of importance in their definition and the first word used in the dictionary for the verb "to jabber" is "to talk rapidly" which is clearly what jays are doing.

Jays are not singing, as other birds have won the Grammy on that. Jays give a rather harsh raspy series of calls much to the tune of Joan Rivers versus soprano opera singer Leontyne Price.

Although this is a very tongue-in-cheek discussion, Merriam-Webster has clearly indicated that it is up to the ornithology world and not the literary world to decide the fate of a "jabber of jays." Here, as always, the worlds of arts and science must come together to find common ground. Our peaceful coexistence is the foundation for humanity's growth and progress. We, collectively, are the foundation of all schools and learning.

So, it is presented to you from a standing member of the Canadian Authors Association to be juried by any member of the Society of Canadian Ornithologists who wishes to participate in this discussion. Please email me at jabberofjays@yahoo.ca. If the majority of feedback from the Society of Canadian Ornithologists is in support of using a "Jabber of Jays" as an acceptable word grouping then it shall pass to be.

Book Review

Dickinson, Janis L. and Rick Bonney (Editors). 2012. Citizen science: public participation in environmental research. Cornell University Press, Ithaca NY. 304 pages.

Hardcover, 15.5 cm x 23.6 cm. $49.95 US. ISBN: 978-0-8014-4911-6.

Citizen science is a relatively new term as it is not yet in dictionaries. It is used to describe environmental projects that rely on observations and data collected by lay people. However, citizen science has been around for decades. In the last two decades, major improvements in computer technology and the Internet has made citizen science data collection, analysis, and dissemination much easier and faster, more user friendly and radically altered the management of citizen science projects

Citizen science projects have primarily focused on easily identified taxa such as birds, plants, and butterflies. Examples used in the book are from the US and the UK. Some examples of North American avian citizen science include FeederWatch, eBird, Great Backyard Bird Count, Christmas Bird Count, and breeding bird atlases.

This collection of papers is designed to help project managers and their teams develop, effectively manage, and improve large and small citizen science projects. The volume is divided into four sections: introduction, practice of citizen science, impacts of citizen science on conservation, and educational, social and behavioural aspects of citizen science. The two introductory chapters give a good but brief overview of citizen science including its fascinating history. Current citizen science project managers should be somewhat familiar these four key topics: lessons from existing citizen science projects, the benefits and pitfalls of using bioinformatics in citizen science projects, recruitment and retention of project participants, and project evaluation. These chapters highlight a mix of approaches to working with large scale citizen science datasets, types of questions suitable for citizen science projects, linkages to landscape ecology, data mining, and explanatory analysis. Citizen science can also have policy implications related to habitat and species at risk conservation priority setting and interagency partnerships and cooperation.

The final section of the book looks at cognitive considerations that both improve data quality and scientific/environmental literacy and encouragement of environmental behaviours. Also in the final section are chapters on citizen science's roles in the classroom and helping children connect to nature, aiding disaster and conflict recovery, and as an effective gateway to science for all. Also in the final section is a key chapter on how citizen science projects can effectively use a variety of current and emerging social media tools.

I learned a great deal more about the various scientific and social research aspects of citizen science. Citizen science has been an important tool in the past and its value to conservation research will grow over time because of the many multidimensional benefits, limited resources for conventional ecological research, and fewer and reduced limitations due to computer technology.

The text is well written for researchers and educators that use citizen science in their work, which are the main audience for the book. The book editors assume that readers will at a minimum have a basic understanding of ecology, statistics, databases, learning approaches and social media in order to get the most out of the book. Illustrations are well-done and clear and do enhance the text.

There are more than 30 pages of references in this volume to support the text and help the reader find more information about the various topics related to citizen science. Two things that I found lacking are some online links and resources for the various projects mentioned in the book and reputable online citizen science resources. In addition to the table of contents, there is a useful index to help quickly find specific information in the book.

The book is a well-constructed US-made hard cover which helps to explain its relatively high $49.95 retail cost. The hard cover binding should last a long-time. I highly recommend this book to anyone who is interested in the development and sustainability of environmental citizen science projects.

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

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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 Hazel Wheeler at hazel.wheeler@gmail.com.

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; issues are typically published 3-4 weeks later. Please send all submissions to Rob Warnock at warnockr@accesscomm.ca.

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