



Bank Swallow (*Riparia riparia*) young in nest. // Hirondelle de rivage jeune dans son nid. Photo: Jeff Costa.

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Editors' Message

Rob Warnock and Barbara Bleho

Welcome to the second issue of *Picoides* in 2024. We hope everyone had a great start to spring. In Matt Reudink's President's Message, he discusses the ongoing success of the SCO-SOC mentorship program so far, availability of SCO-SOC merchandise available on our Canadian and US online stores, the three openings for the SCO-SOC Council (VP/President-Elect, Membership Secretary, and two Councilors) and the upcoming SCO-SOC conference with Wilson Ornithological Society (WOS) and the Association of Field Ornithologists (AFO) this August in Peoria, Illinois. Please consider putting your name forward for the SCO-SOC Executive. The call for nominations is now open. Please see the notice on page 27. We also encourage SCO-SOC members to attend the joint SCO-SOC/AFO/WOS conference. Registration is still open. Please see the notice on page 27.

We congratulate University of Windsor students Nelsy Niño (Taverner Award), Connor Acorn (Student Discovery Award), Alysha Riquier (Taverner Award) and Rebecca Jardine (Fred Cooke Student Award) for receiving SCO-SOC Student Research Awards this year. We look forward to receiving reports on their important research in future issues of *Picoides*. In addition, we strongly encourage all eligible students from all Canadian universities to apply for SCO-SOC Student Research Awards in future years.

There are several interesting articles and announcements in this issue. They include Spencer Sealy's new article on Marbled Murrelet nests and eggs of Cox Island, a new risk assessment for field methods in ornithology, Royal Saskatchewan Museum's new website on bird eggs, SCO-SOC member Rob Butler's new historical novel *Letters from Gerald*, and a newly launched continent-wide study on Swainson's Hawks. Also included is a detailed report on SCO-SOC membership and the current Society initiatives, as well as the latest *Avian Conservation and Ecology* Table of Contents. Check them all out!

The next *Picoides* deadline is October 15, 2024. We look forward to your next submission especially from students and bird labs. Without submissions, there is no *Picoides*. We also welcome your feedback as it your publication and we wish everyone a safe, healthy summer.

FRANÇAIS—Message des éditeurs – Rob Warnock et Barbara Bleho

Bienvenue dans le deuxième numéro des *Picoides* en 2024. Nous espérons que tout le monde a bien commencé le printemps. Dans le message du président, Matt Reudink parle du succès continu du programme de mentorat du SCO-SOC jusqu'à présent, de la disponibilité de la marchandise du SCO-SOC dans nos boutiques en ligne canadiennes et américaines, des trois postes vacants au Conseil du SCO-SOC (vice-président/président élu Secrétaire à l'adhésion, et deux conseillers) et de la prochaine conférence du SCO-SOC avec la Wilson Ornithological Society (WOS) et l'Association of Field Ornithologists (AFO) en août à Peoria, Illinois. N'hésitez pas à proposer votre candidature à l'exécutif du SCO-SOC. L'appel à candidatures est maintenant ouvert. Veuillez consulter l'avis à la page 27. Nous encourageons également les membres du SCO-SOC à participer à la conférence conjointe SCO-SOC/AFO/WOS. Les inscriptions sont encore ouvertes. Consultez tous les avis concernant la conférence à la page 27.

Nous félicitons les étudiants de l'Université de Windsor Nelsy Niño (Prix Taverner), Connor Acorn (Prix de la découverte étudiante), Alysha Riquier (Prix Taverner) et Rebecca Jardine (Prix étudiant Fred Cooke) pour avoir reçu les Prix de la recherche étudiante du SCO-SOC cette année. Nous attendons avec impatience les rapports sur leurs importantes recherches dans les prochains numéros de *Picoides*. En outre, nous encourageons vivement tous les étudiants éligibles de toutes les universités canadiennes à poser leur candidature pour les bourses de recherche étudiante du SCO-SOC dans les années à venir.

Ce numéro contient plusieurs articles intéressants. Il s'agit notamment du nouvel article de Spencer Sealy sur les nids et les œufs du Guillemot marbré de l'île Cox, d'une nouvelle évaluation des risques pour les méthodes de terrain en ornithologie, du nouveau site web du Royal Saskatchewan Museum sur les œufs d'oiseaux, le nouveau roman historique de Rob Butler, membre du SCO-SOC, *Letters from Gerald* et d'une étude nouvellement lancée à l'échelle continentale sur la Buse de Swainson. Sont également inclus un rapport détaillé sur

les membres du SCO-SOC et les initiatives actuelles de la Société, ainsi que la table des matières de la dernière édition d'*Écologie et Conservation des Oiseaux*. Jetez-y un coup d'œil !

La prochaine date limite pour *Picoides* est le 15 octobre 2024. Nous attendons avec impatience vos prochains articles, en particulier ceux des étudiants et des laboratoires ornithologiques. Sans soumissions, il n'y a pas de *Picoides*. Nous vous invitons également à nous faire part de vos commentaires concernant votre publication et nous vous souhaitons à tous un été sain et sûr.

Follow SCO on social media for news, exciting research, updates from members, and more!

Suivez SOC pour les nouvelles, la recherche passionnante, mises à jour des membres, et plus encore!



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President's Message

Matt Reudink

Spring is here and it is that time of year when many of us are back in the field, enjoying the return of the migrants and the beauty of bird song filling the air once again. Here is to hoping that everyone has a safe, productive, and fun field season!

In just a few short months, we will once again have our annual meeting, this year in conjunction with the Association of Field Ornithologists and the Wilson Ornithological Society in Peoria, Illinois (July 29-Aug1). Many thanks to Auriel Fournier, who has done an incredible amount of work to ensure that this meeting will be a success. Don't forget to register and [check out the meeting website for more information](#).

Later in this issue you will see calls for nominations for SCO executive and council. This year we have two openings on council and a call for the next Vice President/President-Elect and Membership Secretary—if you are at all interested, please feel free to reach out and get in touch with either me or Danielle Ethier.

SCO-SOC programming continues to be a major highlight, with our mentorship program pairing 12 mentees with professional ornithologists. This program is open to all SCO-SOC members as either mentors or mentees and if you are interested in participating next year, Danielle and I would be more than happy to provide more information.

Last but not least, it's not too late to purchase SCO-SOC gear to wear to the meeting and represent the SCO-SOC.... Our gorgeous black-backed woodpecker logo with artwork commissioned from Haida artist Erik Prytula is always available from either our [US-based store](#) or from our [Canada-based store](#).

I hope everyone that is out in the field has a fantastic season and is looking forward to seeing all our friends and colleagues again this summer at what is sure to be a stellar meeting in Peoria with our friends at AFO and WOS.

FRANÇAIS— Message du président – Matt Reudink

Le printemps est arrivé et c'est la période de l'année où beaucoup d'entre nous sont de retour sur le terrain, profitant du retour des migrateurs et de la beauté des chants d'oiseaux qui remplissent l'air une fois de plus. Nous espérons que votre saison de terrain se déroulera de façon sécuritaire, productive et plaisante!

Dans quelques mois, nous tiendrons à nouveau notre conférence annuelle, cette année conjointement avec l'Association of Field Ornithologists et la Wilson Ornithological Society à Peoria, en Illinois (29 juillet-1er août). Un grand merci à Auriel Fournier qui a fait un

travail incroyable pour que cette conférence soit un succès. N'oubliez pas de vous inscrire et de consulter le site web de la réunion pour plus d'information (<https://afoscowos2024.org>).

Plus loin dans ce numéro, vous trouverez les appels aux candidatures pour l'exécutif et le conseil de la SOC-SCO. Cette année, nous avons deux postes à pourvoir au sein du conseil et un appel au prochain vice-président/président élu et Secrétaire à l'adhésion. Si vous êtes intéressé, n'hésitez pas à prendre contact avec moi ou avec Danielle Ethier.

La programmation de la SOC-SCO continue d'être un point fort, avec notre programme de mentorat qui associe 12 mentorés à des ornithologues professionnels. Ce programme est ouvert à tous les membres de la SOC-SCO, que ce soit pour être mentors ou mentorés, et si vous souhaitez y participer l'année prochaine, Danielle et moi-même serons ravis de vous fournir de plus amples informations.

Enfin, il n'est pas trop tard pour acheter des vêtements de la SOC-SCO afin de les porter lors de la conférence pour représenter la SOC-SCO. Notre magnifique logo de pic à dos noir, dont l'œuvre a été commandée à l'artiste haïda Erik Prytula, est toujours disponible dans notre boutique américaine (<https://www.bonfire.com/store/society-of-canadian-ornithologists/>) et dans notre boutique canadienne (<https://urstore.ca/group/society-of-canadian-ornithologists-apparel>).

J'espère que tous ceux qui sont sur le terrain passent une saison fantastique et qu'ils ont hâte de revoir tous leurs amis et collègues cet été, à l'occasion de ce qui sera certainement une conférence exceptionnelle à Peoria, avec nos amis de l'AFO et de la WOS.

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.

We also 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 1,000 words long, again preferably accompanied by one or two photos. See the SCO-SOC Information page for submission details.

2023 SCO-SOC Membership Survey: A Summary of Results

Prepared by the SCO-SOC EDI Committee

BACKGROUND

In recent years, the SCO-SOC has developed a growing recognition of how inequality and oppression (including racism, sexism, homophobia, transphobia, ableism, colonialism, and other forms of discrimination) has shaped the communities in which we participate as citizens and scientists, including our own ornithological society. The SCO-SOC began proactive measures to recognize and counter inequality and oppression, including the creation of an Equity, Diversity, and Inclusion (EDI) Committee in 2020.

In March 2021, the EDI Committee sent a survey to current and former SCO-SOC members to collect demographic information and feedback as to how the society could better serve its members. Results from the survey allowed the EDI Committee and Executive Council to develop a baseline of membership demographics and establish areas for improvement and growth. In December 2023, the EDI Committee sent a second survey to current and former members to evaluate the society's progress in making the SCO-SOC more diverse, equitable, and inclusive, and to gather additional feedback as to how to better serve and add value for members. Additionally, respondents to the 2023 survey were asked to provide feedback on the current format of and personal experiences at SCO-SOC meetings.

2023 SURVEY RESULTS

Member demographics

Seventy-three people responded to the 2023 SCO-SOC Membership Survey (70 members, 3 non-members); this represents a 20%-member response rate, which decreased from 26% in 2021. Total SCO-SOC membership in 2023 was 349 individuals, up from 265 in 2021. A comparison of demographic results between the two surveys is presented in Table 1.

Table 1: Summary of demographic results of the SCO-SOC Membership Surveys presented to membership in 2021 and 2023. Values presented are a percentage of responses from current members (n = 70 for both years) total responses. Note that the sum of percentages may be greater than 100 for some questions as multiple responses could be submitted by a single respondent. Responses in bold indicate the majority response. Responses that decreased between years by at least five percentage points are highlighted in orange. Responses that increased between years by at least five percentage points are highlighted in green.

Question	Responses	2021 %	2023 %
Which of the following best describes your current career stage in ornithology?	Student / in training	15.7	14.3
	Early career (within 5 years of completing training)	20.0	10.0
	Established career	51.4	60.0
	Retired	10.0	11.4
	Amateur / non-practicing	2.9	4.3
	Aspiring / contemplating a career in ornithology	0.0	n/a ¹
	Prefer not to answer	0.0	0.0
What is the highest degree or level of school you have completed?	Some high school, no diploma	n/a ²	0.0
	High school diploma or equivalent		0.0
	Trade / technical / vocational training		1.4
	Bachelor's degree		12.9
	Master's degree		25.7
	Doctoral degree		58.6
	Prefer not to answer		0.0
What age bracket do you fit in?	< 25	2.9	1.4
	25 – 34	21.4	21.4
	35 – 44	31.4	24.3
	45 – 54	18.6	27.1
	55 – 64	12.9	10.0
	65 +	12.9	15.7
What is your national identity?	Canadian citizen	92.9	94.3
	Foreign national with temporary residency in Canada	2.9	1.4
	Permanent resident in Canada	2.9	1.4
	International member not residing in Canada	1.4	2.9
What is your primary language?	French	14.3	8.6
	English	88.6	94.3
	Another language	5.7	4.3
Do you self-identify as any of the following?	Arab or Middle Eastern	1.4	0.0
	Black or African Canadian	1.4	0.0
	Caribbean	0.0	0.0
	East Asian	1.4	1.4
	Indigenous (First Nations, Inuit, Métis)	2.9	5.7
	Latino/a/x or Latin American	2.9	2.9
	South Asian	1.4	0.0
	White	91.4	91.4
	Biracial, Multiracial, or Multiethnic	5.7	2.9
	A race or ethnicity not listed here	1.4	1.4
	Prefer not to answer	0.0	2.9

Table 1: Continued.

Question	Responses	2021 %	2023 %
Do you self-identify as a member of a minority sexual orientation group?	Yes	17.1	22.9
	No	80.0	72.9
	Unsure	2.9	2.9
	Prefer not to answer	0.0	1.4
Which best aligns with your gender identity?	Woman	52.9	47.2
	Man	44.3	47.2
	Non-binary or genderqueer	2.9	5.6
Is the gender you were assigned at birth the same as your present gender identity?	Yes (cisgender)	97.1	95.7
	No (transgender, agender, two-spirit, bigender, etc.)	2.9	4.3
	Unsure	0.0	0.0
Do you self-identify as a person with a disability?	Yes	7.1	12.9
	No	92.9	84.3
	Prefer not to answer	0.0	2.9

¹ Answer was removed in 2023.

² Question was added in 2023, so no comparable results from 2021.

³ The following definition was added in 2023: “The term ‘neurodiversity’ reflects the range of differences in a person’s brain function and behavioral traits that are considered part of normal variation in the human population. Examples of neurodivergence include (but are not limited to): ADHD, autism, bipolar disorder, Tourette syndrome, obsessive compulsive disorder (OCD), dyslexia and other learning difficulties including dyscalculia, dysgraphia, and dyspraxia.”

The majority of 2023 member respondents (60%) are established in their careers, with diminishing proportions indicating they are students (14%), retired (11%), early-career (10%), or amateur/non-practicing (4%). The majority of respondents also hold a doctoral degree (59%), followed by those with a Master’s degree (26%), Bachelor’s degree (13%), or a post-secondary diploma or technical/vocational training (1%; Figure 1). Most of the respondents (94%) indicated they are Canadian citizens, and the vast majority (96%) listed English as a primary language (Table 1).

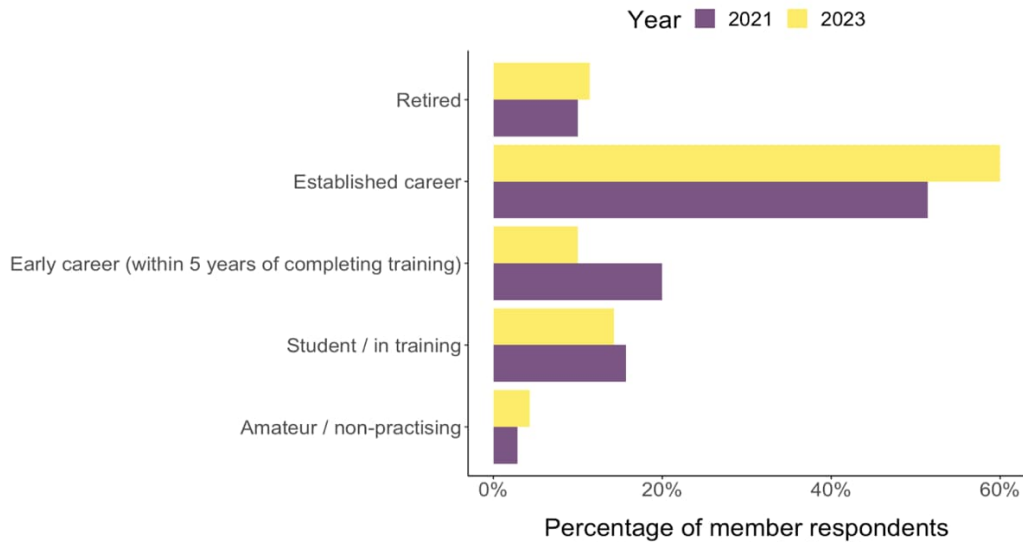


Figure 1: Career stage of SCO-SOC member survey respondents in 2021 (purple) and 2023 (yellow).

A slight majority of respondents (27%) reported belonging to the 45-54 age group, followed closely by 35-44 (24%), and 25-34 (21%). This was a slightly more balanced distribution, compared to the 2021 membership survey (Figure 2). The ethnic and racial diversity of respondents remains low with 91% identifying as white, followed by 6% selecting an Indigenous identity. Smaller percentages of respondents identified as belonging to other ethnic or racial groups (Table 1). We note that respondents could choose multiple options in reporting their ethnic and/or racial background.

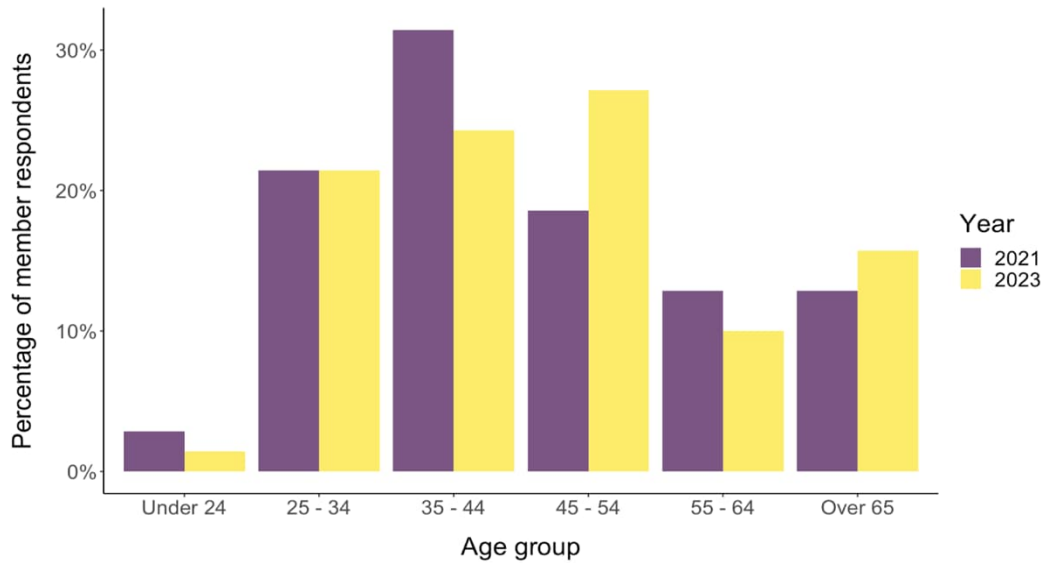


Figure 2: Age of SCO-SOC member survey respondents in 2021 (purple) and 2023 (yellow).

There was an equal number of respondents who identified as women or men (47%), and an additional 6% identifying as non-binary or gender non-conforming, which is an increase from 2.9% in 2021 (Figure 3; note that respondents could select more than one option). Most respondents (93%) identified as cisgender, and 23% indicated they are a part of a minority sexual orientation group (Table 1).

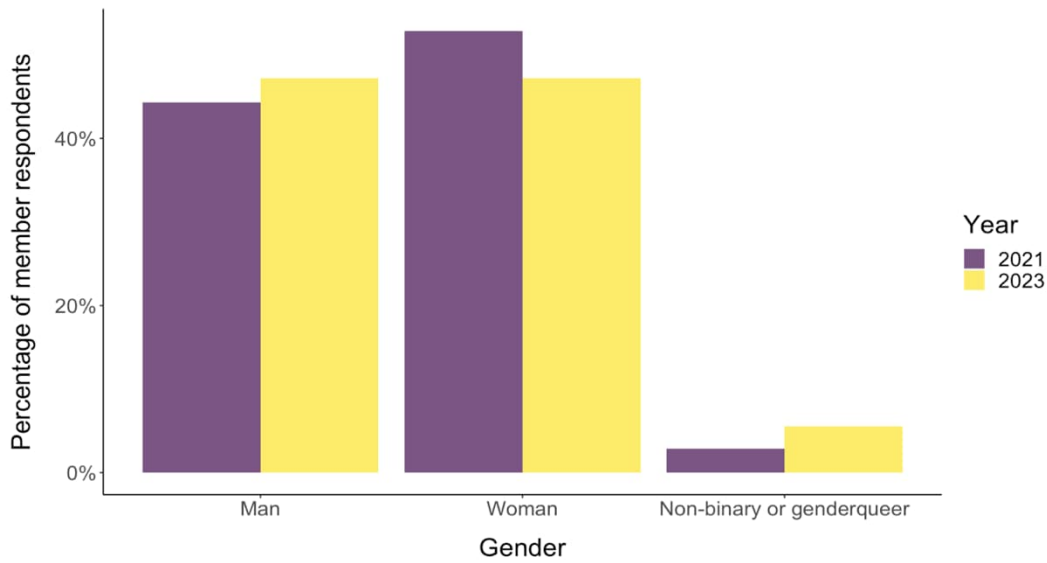


Figure 3: Gender identity of SCO-SOC member survey respondents in 2021 (purple) and 2023 (yellow). Respondents could select more than one option.

Members who self-identify as a person with a disability increased from 7% in 2021 to 13% in 2023 (Table 1). Members who self-identify as a neurodiverse person increased from 9% in 2021 to 23% in 2023 (Table 1). In the 2021 survey we received feedback that there was some confusion about the term “neurodiversity”; in the 2023 survey, we defined this for survey respondents as “the range of differences in a person’s brain function and behavioral traits that are considered part of normal variation in the human population. Examples of neurodivergence include (but are not limited to): ADHD, autism, bipolar disorder, Tourette syndrome, obsessive compulsive disorder (OCD), dyslexia and other learning difficulties including dyscalculia, dysgraphia, and dyspraxia.”

Reasons former members did not renew memberships

Most respondents to the 2023 survey were current members of the SCO-SOC (96%). For those that did not renew their membership (i.e., non-member respondents), reasons given included: financial constraints (2 respondents), lack of inclusion (1 respondent), feeling unsafe or unwelcome in the society (1 respondent), and being part of other Ornithological Society of North America groups (1 respondent; Table 2).

Table 2: Responses of former SCO-SOC members as to why they did not renew their membership. Respondents were invited to select all reasons that applied.

Response	No. of respondents	
	2021	2023
Joined mainly for travel and/or conference benefits	8	0
Lack of value and/or relevance	2	0
Lack of inclusion	1	1
Lack of member benefits	1	0
Lack of opportunities for engagement with members	2	0
Lack of networking opportunities	1	0
I did not feel safe or welcome in the society	0	1
I have/had financial constraints	1	2
Other	4	1

Meeting format

Respondents were generally satisfied (67%) with having standalone SCO-SOC meetings alternating with larger joint meetings with other ornithological societies (Table 3). However, some members expressed concerns about the location of meetings and the commitment to EDI at joint meetings (see “Inclusion,” below).

Table 3: Responses of SCO-SOC members to the 2023 survey question, “SCO annual meetings typically alternate between a solo meeting (SCO-SOC only) and a joint-meeting (often held with AOS and/or other ornithological societies). How satisfied are you with the current meeting structure?”

Response	% of respondents
Very satisfied	51.4
Somewhat satisfied	15.7
Neither satisfied nor dissatisfied	31.4
Somewhat unsatisfied	1.4
Very unsatisfied	0.0

Awareness of SCO-SOC activities and initiatives

Members were provided a list of current or recent activities and EDI initiatives the SCO-SOC has recently provided and asked to indicate of which (if any) they were aware. While a large majority of member respondents were aware of the SCO-SOC mentorship program, workshop series, and monthly 2SLGBTQIA+ meetups, only half of respondents had heard of the society's free membership program and monthly BIPOC / racialized ornithologist meet-ups (Table 4).

Table 4. Percentage of member survey respondents who reported awareness of activities and initiatives provided by the SCO-SOC.

Response	% of respondents
Mentorship program pairing students and early professionals with established ornithologists	80.0
Workshop series to support the career development of students and early career researchers	78.6
Monthly 2SLGBTQIA+ ornithologist meet-ups	74.3
Free membership program for people who self-identify as being from equity-denied groups	55.7
Monthly BIPOC / racialized ornithologist meet-ups	54.3
Ornithologist Features to showcase the work of ornithologists from equity-denied groups on social media	31.4
Not aware of any of the listed initiatives	2.9

ANALYSIS AND RECOMMENDATIONS

Representativeness

As in 2021, the results of this membership survey indicate that the SCO-SOC may lack diversity as compared to the Canadian public. In particular, the society's membership lacks ethnic and racial diversity. For example, about 30% of Canadians identify as members of minority ethnic groups¹, compared to only 10-13% of survey respondents. By contrast, compared to Canadian population averages for 2022, SCO-SOC has relatively robust representation from gender (e.g., 6% transgender and non-binary members compared to 0.33% in Canada²) and sexual identity (29% of members compared to 4% in Canada²) minorities. The SCO-SOC also has relatively strong representation of members with disabilities (15% of members compared to 22% in Canada³). There were higher proportions of respondents identifying as disabled, neurodivergent, or from minority gender and sexual orientation groups in the most recent survey as compared to 2021; however, the overall survey response rate was also lower this year, so these numbers may in fact be inflated compared to the general membership, if individuals from these more diverse groups were responding in larger numbers to ensure they were represented.

These demographics should continue to be monitored, ideally with the entire membership censused so that numbers can be compared to the broader demographics in Canada. In the absence of a full census but with knowledge that some identity groups (particularly racialized persons) are still underrepresented based on the data we do have, we recommend engaging in more specific research to see if people's identities impact their experiences as members of SCO-SOC. In addition, efforts are needed to understand whether the lack of ethnic and racial diversity in the SCO-SOC is generally reflective of the *ornithological* community in Canada, and work should be undertaken to encourage diversity at all levels within both our society and the broader ornithological community in Canada.

Improving as a society

When asked what activities respondents would like to see from SCO-SOC in the future, we received the following suggestions: Better engagement with Indigenous communities; discussion sessions or panels on decolonizing ornithology in Canada; establishment of an elders group for retired/70+ members, similar to the American Ornithological Society's "Golden Auks"; establishment of a youth committee to encourage younger members; hosting of a bird banding certification/workshop in Western Canada; hosting of webinars about current research, including those that fall outside of behaviour and ecology; hosting of more applied, technical, and non-academic workshops, and/or talks; increased communication with *Picoides*; and ensuring the SCO-SOC website is kept up-to-date.

Overall, many survey respondents expressed positive encouragement toward the steps the SCO-SOC has taken to improve equity, diversity, and inclusion efforts. Some respondents indicated that while they had not yet participated in newer EDI activities, such as the affinity groups, they are hopeful these activities are continued in the future so they will have an opportunity to participate.

Inclusion

One respondent indicated a lack of inclusion and lack of safety as the reason they are no longer an SCO-SOC member. Additionally, several respondents expressed concerns about the latest joint meeting, noting that they witnessed some negative comments directed toward presenters who did not present in English. It was suggested that encouraging bilingual presentation slides could assuage this in future.

The 2023 survey also included several questions regarding the format of meetings, and if the membership would like to see changes in the future. Eight respondents expressed interest in more hybrid or virtual meetings, either interspersed with in-person Society meetings or as additional networking/learning opportunities outside of the larger annual meeting. The reason most often provided for this was greater accessibility, but reduced environmental impact was also mentioned. Two respondents wanted to see meetings remain in Canada (rather than occurring in the U.S.), and one noted a desire to see meeting locations outside of Canada or the U.S.

Next steps

Recognizing there are financial barriers to implementing these and other changes within the SCO-SOC, the EDI Committee recommends the Executive Council address the lack of representation from the Francophone community, Indigenous

communities, and communities of other visible minorities. We received multiple comments from survey respondents who would like the affinity meet-up groups to continue; therefore, we suggest the continuation and enhancement of these groups be prioritized. Additionally, advertising of the various activities and initiatives the SCO-SOC provides, particularly the affinity groups and free membership program, should be strengthened to increase awareness of these important initiatives. A description of all initiatives listed in the survey is provided in Box 1. The EDI Committee also recommends the SCO-SOC offer a wider variety of workshops, with increased advertising to attract more participants. We are supportive of the establishment of both youth and “Golden Auk-type” groups and recognize that current membership numbers of students and youth are poor. The SCO-SOC should ensure the society provides year-round value to younger and student members in addition to our annual meetings. While the Mentorship Program has provided one excellent opportunity for this demographic, participation capacity is limited, and the society should seek to provide a greater range of opportunities open to larger numbers of students and early-career professionals.

Box 1: Recent activities and EDI initiatives provided by the SCO-SOC. Survey respondents were asked to identify which items they were aware of.

Free Membership Program

The SCO-SOC provides free membership to people who self-identify as belonging to an equity-denied group, including visible minorities (Black, Indigenous, and/or Persons of Colour), minority sexual orientations or gender identities (2SLGBTQIA+), and individuals with disabilities. This membership category can be selected on the online membership application form and can be renewed annually.

Mentorship Program

The SCO-SOC Mentorship Program has run for two consecutive years, with a third year anticipated to begin in the fall of 2024. The Mentorship Program pairs students and early-career professionals with ornithologists established in their careers for eight months. The mentor-mentee pairs enter into a semi-structured program aimed at enhancing mutual professional development.

Monthly 2SLGBTQIA+ meetups and BIPOC / racialized ornithologist meetups

Two networking groups have been run by SCO-SOC volunteers: one for 2SLGBTQIA+ ornithologists and allies, and one for BIPOC / racialized ornithologists. These affinity groups provide opportunities for networking, discussion, and presentations from professionals on topics related to the representation of equity-denied groups in ornithology and related fields.

Ornithologist Features on social media

The Ornithologist Features initiative was run on SCO-SOC social media platforms through 2021. Individual ornithologists from equity-denied groups were featured to showcase their skills and accomplishments and increase visible representation of their respective communities within ornithology.

Workshop Series

Two workshop series are offered by the society: The SCO-SOC Workshop Series is run by the Workshop Committee, where workshops are offered to membership periodically through the year. The Learning Sessions series is a newer program run in conjunction with the Mentorship Program to support the career development of students and early-career professionals. These sessions run periodically through the fall and winter, and are open to all SCO-SOC members, regardless of individual involvement with the mentorship program.

REFERENCES

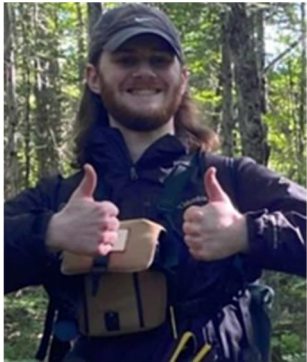
1. *Racialized groups - Canada at a glance, 2022*. (2022, November 23). Statistics Canada: Canada's national statistical agency / Statistique Canada: Organisme statistique national du Canada. <https://www150.statcan.gc.ca/n1/pub/12-581-x/2022001/sec3-eng.htm>
2. *LGBTQ2+ people - Canada at a glance, 2022*. (2022, November 23). Statistics Canada: Canada's national statistical agency / Statistique Canada: Organisme statistique national du Canada. <https://www150.statcan.gc.ca/n1/pub/12-581-x/2022001/sec6-eng.htm>
3. *Measuring disability in Canada*. (2022, December 2). Statistics Canada: Canada's national statistical agency / Statistique Canada: Organisme statistique national du Canada. <https://www150.statcan.gc.ca/n1/pub/11-627-m/11-627-m2022062-eng.htm>

2024 SCO-SOC Student Award Recipients



Nelsy Niño (Taverner Award): exploring the functional role of vocal mimicry behaviour in Colombian Seed eaters, under the direction of Dr. Dan Mennill and Dr. Oscar Laverde at the University of Windsor.

Nelsy Niño (prix Taverner) : exploration du rôle fonctionnel du comportement de mimétisme vocal chez les céphalophes de Colombie, sous la direction des docteurs Dan Mennill et Oscar Laverde à l'université de Windsor.



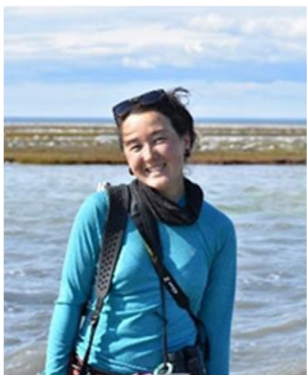
Connor Acorn (Student Discovery Award): examining vocal communication in Ovenbirds, focusing on how song amplitude is regulated depending on social context, under the direction of Dr. Dan Mennill and Dr. Jennifer Foote at the University of Windsor.

Connor Acorn (bourse de découverte pour étudiants) : examen de la communication vocale chez les oiseaux du four, en se concentrant sur la façon dont l'amplitude du chant est régulée en fonction du contexte social, sous la direction des docteurs Dan Mennill et Jennifer Foote à l'Université de Windsor.



Alysha Riquier (Taverner Award): examining how variation in weather affects invertebrate availability and Snow Bunting breeding phenology to ultimately determine whether Snow Buntings have the capacity to keep pace with climate change in a rapidly changing Arctic, under the supervision of Dr. Oliver Love at the University of Windsor.

Alysha Riquier (bourse Taverner): examiner comment les variations météorologiques affectent la disponibilité des invertébrés et la phénologie de reproduction du bruant des neiges afin de déterminer si ce dernier a la capacité de suivre le rythme du changement climatique dans un Arctique en évolution rapide, sous la supervision du Dr Oliver Love à l'Université de Windsor.



Rebecca Jardine (Fred Cooke Student Award): examining whether Snow Buntings (*Plectrophenax nivalis*) have the capacity to respond to increasing Arctic temperatures, under the direction of Dr. Oliver Love and Dr. François Vézina at the University of Windsor.

Rebecca Jardine (Prix Fred Cooke pour les étudiants) : examiner si le bruant des neiges (*Plectrophenax nivalis*) a la capacité de réagir à l'augmentation des températures dans l'Arctique, sous la direction des docteurs Oliver Love et François Vézina à l'université de Windsor.

Feature Articles

A New Risk Assessment for Field Methods in Ornithology

Brett K. Sandercock, Norwegian Institute for Nature Research (NINA)

Physical capture, handling, and marking of wild birds is required for research questions in ornithology, conservation biology, and wildlife management. Nevertheless, field methods often pose a risk of injury or adverse effects for wild birds. The risk of harm to animal welfare can be assessed with the 3R-model based on the key concepts of Replacement, Reduction, and Refinement. *Replacement* is usually not possible in ornithology because wild birds are typically the target of a scientific investigation. *Reduction* can be addressed with use of individual marking or different types of tracking devices which provide a wealth of data on behavior, demography, and movements, while reducing the total numbers of birds that need to be marked. *Refinement* is often the main goal because it is important for both science and animal welfare that birds recover quickly and behave naturally after handling by an observer. Information on best practices for safe capture and handling of wild birds are currently available from the North American Banding Council (2001), the Wildlife Society (Silvy et al. 2020), and the Ornithological Council (Fair et al. 2023).

In Norway, the Norwegian Food Safety Authority (Mattilsynet) is responsible for implementation of directives regarding use of animals in scientific research, whereas the Norwegian Environmental Agency (Miljødirektoratet) is the national authority for permits for bird banding and scientific purposes. The two agencies recently commissioned the Norwegian Scientific Committee for Food and Environment (Vitenskapskomiteen for mat og miljø or VKM) to complete an updated risk assessment of the methods commonly used for capture, marking, and tracking of wild birds (Eldegard et al. 2024). The risk assessment was prepared in English and has been published as a scientific report that is available for download from the VKM webpage (vkm.no/6646.html). The new report includes descriptions of new classes of tracking and biologging tags and has four sections presenting risk assessments of capture methods, handling or sampling techniques, marking for individual identification, and attachment methods for biologgers. Many of the techniques will be familiar to field ornithologists, including capture with mist nets, walk-in and nestbox traps, spot-lighting, and cannon nets, routine handling methods such as blood and feather sampling, individual marking of birds with coloured rings and flags, patagial wing tags and neck bands, as well as alternative methods based on glue, tape or harnesses for tag attachment. Each method includes a description of the technique and then provides advice for risk-reducing measures along with a set of key references. Qualitative risk assessments include the probability and magnitude of potential impacts on animal welfare for different groups of birds, along with confidence of each assessment. Quantitative analyses of effect sizes were also calculated for a subset of methods. One general finding is that methods that can be safely used with one group of birds can cause problems in other situations. For example, leg-loop harnesses are an effective method for tag attachment in shorebirds and songbirds, but can cause higher mortality in large-bodied woodpeckers that use their hindlimbs for foraging movements. Marking and tracking techniques are under continuous development as new information emerges from field studies of wild birds. The new risk assessments of the VKM report provide a current perspective on best practices in ornithology and will be a new resource for improving scientific research and animal welfare in field studies of wild birds.



An owl being released after handling. Photo: Katrine Eldegard.

References

- Eldegard, K., Furnes, M.W., Grainger, M.J., Moe, B., Sandercock, B.K., Sonerud, G.A., Ytrehus B., Rueness, E., Sayyari, A., Kirkendal, L., Granquist, E., and Kausrud, K. 2024. Effects of capture, marking, and tracking on the welfare of wild birds. Scientific Opinion of the Norwegian Scientific Committee for Food and Environment. VKM Report 2024:03. <https://vkm.no/6646.html>
- Fair, J., Paul, E., Jones, J., and Bies, L. (eds). 2023. Guidelines to the use of wild birds in research. Ornithological Council. <http://www.birdnet.org>
- North American Banding Council. 2001. The North American banders' study guide. Point Reyes Station, California, USA. <https://nabanding.net>
- Silvy, N.J. (ed). 2020. The wildlife techniques manual. John Hopkins University Press, Baltimore, Maryland, USA. <https://www.press.jhu.edu/books/title/11304/wildlife-techniques-manual>

The 'Marbled Murrelet' Nests and Eggs of Cox Island

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Although this is a common bird all along the coast from northern Washington to Unalaska, a fairly accessible region, its nest has never been found and the only authentic egg in existence was taken... from the oviduct of a bird shot in the Prince of Wales Archipelago on May 23, 1897... All other supposed eggs of this species which have come to the author's attention seem to have been wrongly identified.

– Arthur Cleveland Bent commenting on gaps in our knowledge of eggs,
1920.

Introduction

Through the early decades of the 1900s, the nest of the Marbled Murrelet (*Brachyramphus marmoratus*) remained unknown, a fact not lost on early naturalists and egg collectors, including several that lived in British Columbia. Among them, Solomon John Darcus (1886–1973) emigrated to Canada from Ireland in the early 1900s. Following service in the First World War and months-long stints in New Brunswick and Saskatchewan, where he collected his first eggs in Canada, and following temporary residence in Barkley Sound on the west coast of Vancouver Island, from 1923 to 1925, Darcus eventually settled near Penticton, in the southern Okanagan valley (Sealy 2022a). The abundance of Marbled Murrelets in the Sound prompted Darcus to think about the Marbled Murrelet's nest and collecting its egg. But his attempts to locate a nest through 1925 failed, despite hearing murrelets calling as they flew inland from the sea in the darkness. With his friend, Rev. C.J. Young¹, Darcus turned his attention northward the following year, and searched for the Marbled Murrelet's nest on the Queen Charlotte Islands (Haida Gwaii). On Cox Island (N54.2047°, W133.014°), a small islet off the southwest coast of Langara Island (Figure 1), Darcus (1927) believed wings scattered below a Peregrine Falcon's (*Falco peregrinus*) eyrie were those of the Marbled Murrelet. He was hopeful, and in a letter to James A. Munro, ornithologist and Federal Game Officer for the western Canadian Provinces at the time, Darcus mentioned that a Marbled Murrelet's nest was found in 1926, and also a few Ancient Murrelet (*Synthliboramphus antiquus*) nests² but discrepancies in the accounts of those discoveries, and others made the following year, emerged in letters and published observations.

Darcus visited Langara Island and Cox Island (Figure 2) again in 1927, but this time earlier in the season to increase the likelihood of finding a Marbled Murrelet's nest. He removed three eggs from burrows on Cox Island on 14 May and one egg from a crevice the following day. He identified them as eggs of the Marbled Murrelet. Perhaps feeling the competition, he rushed a brief description of those discoveries into print the same year (Darcus 1927), but in a follow-up article in which he reported on all birds observed during this visit, Darcus (1930) stated of the Marbled Murrelet only that it was, "Abundant; one breeding colony found. Observed in numbers, from April to August off the northern coast of Graham Island," Curiously, he did not mention eggs or adults removed from three of the 'Marbled Murrelet' nests, but he must have known the eggs were laid by the burrow-nesting Ancient Murrelet. He not only described that species, "... as the most abundant of the family on Langara Island, its nesting burrows being found as far as one-quarter mile from the sea," he collected its eggs in early May (Appendix I) before weather conditions permitted access to the slopes on Cox Island.

Darcus sold those eggs as Marbled Murrelet eggs, but they were actually Ancient Murrelet eggs, judged by several authors from their colour, descriptions of the nest sites and the species' natural history (e.g., Guiguet 1954; Drent and Guiguet 1961; Kiff 1981; Sealy and Carter 1984; Carter and Sealy 2005, 2010; also see Ruth 2005, Kaiser 2012). The whereabouts of the four egg sets labelled Marbled Murrelet was confirmed from searches of the literature and online museum holdings (eBEAC, GBIF, iDigBio, and VertNet). I received additional information from curators of several collections. In addition, I present new information that sheds light on the practices and preoccupations of these egg collectors and the provenance of their collections, in British Columbia and beyond.

Darcus's 'Marbled Murrelet' eggs

Darcus intended to sell eggs collected on Cox Island as those of the Marbled Murrelet, as well as eggs of other species, particularly the Ancient Murrelet. Deduced from correspondence and a published description of events that surrounded the collections, he set aside for

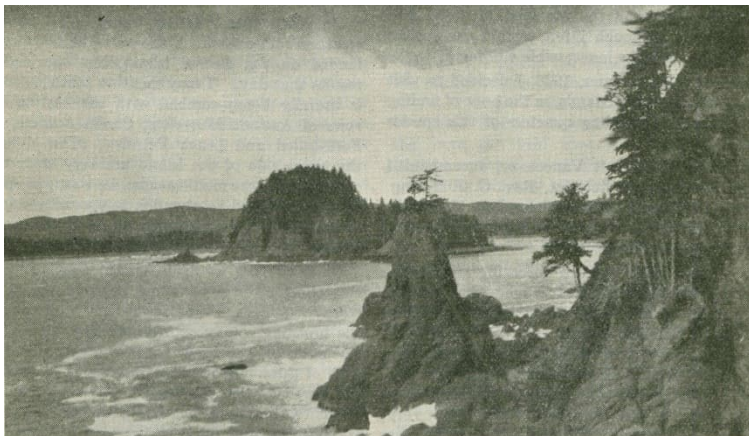


Figure 2. Cox Island photographed by S.J. Darcus from "Puffin Cliff" on Iphigenia Point, Langara Island, British Columbia, 8 June 1927. Reproduced by courtesy of the Ottawa Field-Naturalists' Club.

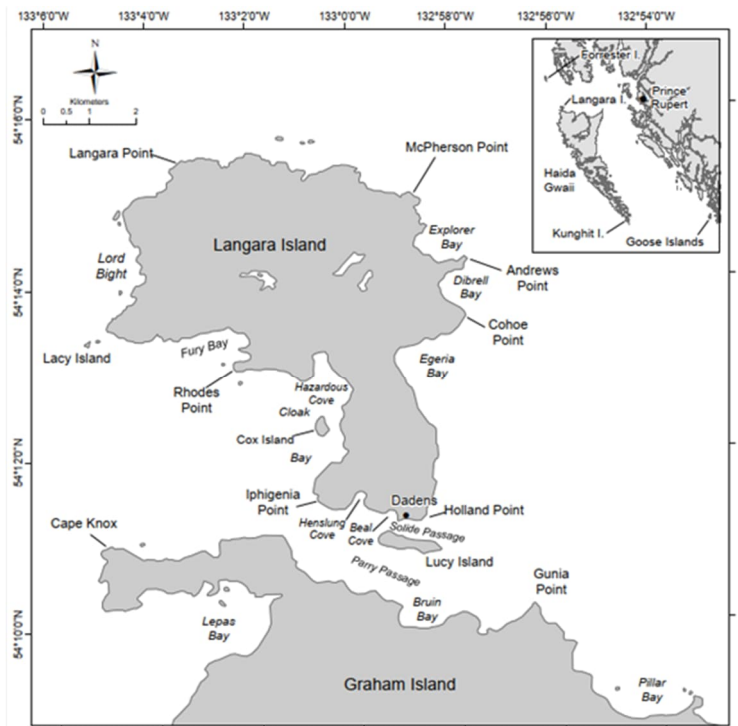


Figure 1. Map of Langara Island, Haida Gwaii (Queen Charlotte Islands), British Columbia, showing Cox Island where S.J. Darcus allegedly collected five eggs of the Marbled Murrelet, one apparently in 1926, the others in 1927. Darcus also collected Ancient Murrelet eggs on Cox Island and on the nearby slopes of Iphigenia Point and Henslung Point. Map prepared by Mapmonsters GIS Ltd, Victoria, BC.

sale four eggs labelled Marbled Murrelet, all held now in museums in Canada and the United States. He wasted little time spreading the word of the discovery among oologists and ornithologists, and soon negotiated sales of the eggs, some apparently pre-ordered based on knowledge of eggs discovered during the exploratory visit to Langara and Cox islands in 1926. In addition to word of mouth, Darcus was aware that some egg collectors advertised their wants and sales of egg sets in oological journals, although I found no evidence that he engaged in this practice (see below). Nevertheless, he apparently responded to ads published by other collectors. At least one 'Marbled Murrelet' egg was sold in less than a year to a British egg collector. Apparently two sets of Ancient Murrelet eggs (DMNS 154 and 155) were pre-ordered by Robie W. Tufts, author of *The Birds of Nova Scotia* (1962), whose ad for the sale of eggs had appeared in Barnes's (1922) exchange

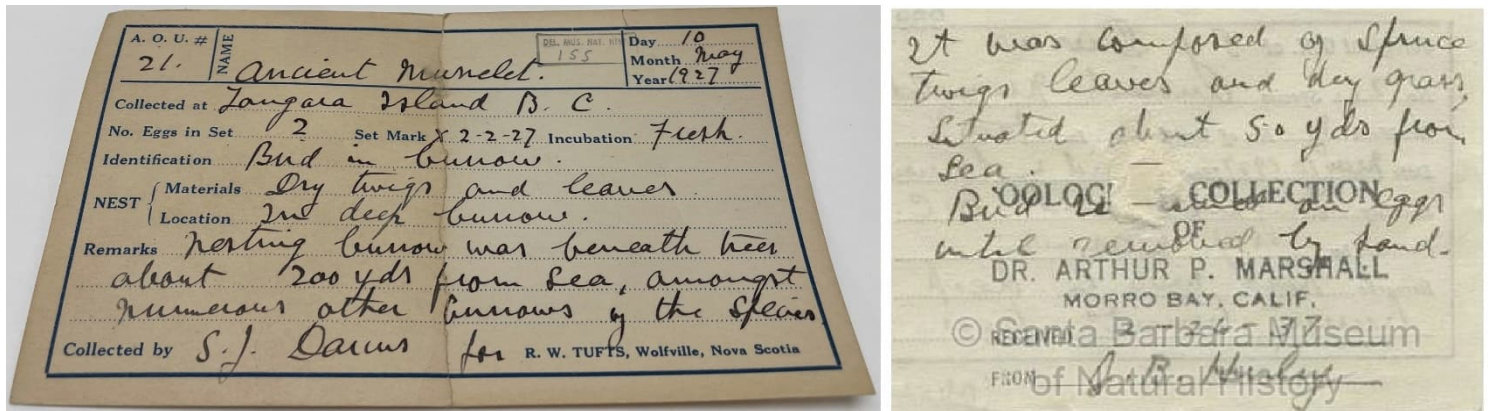


Figure 3. Data slips for Ancient Murrelet egg sets taken by S.J. Darcus on Langara Island, Haida Gwaii, 10 May 1927. Left, DMNH 155 collected for Robie W. Tufts, Wolfville, Nova Scotia; right, SBMNH 22995 (back of slip) taken for Arthur Marshall, Morro Bay, California. Photo credits: M. Halley and K. Fahy, respectively.

catalogue, and another (SBMNH 22955) for Arthur Marshall of Morro Bay, California (Figure 3). Darcus's field associates talked about the eggs when they returned from Langara Island, and doubt swirled around the authenticity of their identities. Within days of his return from Cox Island in 1927, Darcus continued his correspondence with Munro, updating him with news of his discoveries, but no plan was mentioned to sell the eggs.³ Darcus's note archived in the Royal Ontario Museum updated Young on the discovery:

I have four eggs of Marbled Murrelet.

The Marbled Murrelet were [sic] a good find. I found them nesting in a steep cliff face in burrows and apparently they produce one egg. ~~I think the reason~~ in the colony I located there were only about twenty pairs. I think the reason their eggs have not been taken before is because they nest in such inaccessible places on steep cliff faces in small colonies. I took the eggs fresh, May 15 [1 that day, 3 the previous day]. Cassin's Auklet is an early breeder. I took eggs as early as Apr. 20.

In the case of each 'Marbled Murrelet' egg examined below, I summarize information pertaining to the provenance of each of the four eggs Darcus labelled Marbled Murrelet, and track some of them as they were sold or exchanged between collectors. The eggs are held in the Delaware Museum of Nature and Science, American Museum of Natural History, Penticton Museum and Archives, and Royal Ontario Museum.

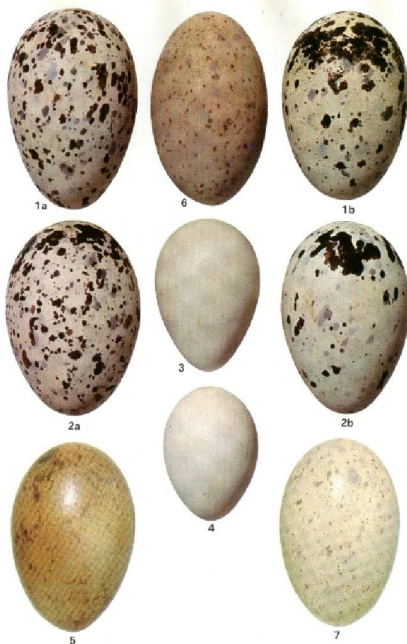


Figure 4. Auk eggs, figured in Harrison (1978, plate 47, p. 348): Ancient Murrelet (#6, top middle column), misidentified Marbled Murrelet (#7, bottom right).

'Marbled Murrelet' egg 1 (Delaware Museum of Nature and Science [DMNS #156])

Kiff (1981), in a summary of the status of known and suspected eggs of the Marbled Murrelet, referred to one of Darcus's putative eggs of this species held in the Delaware Museum of Nature and Science. He pointed out that Harrison (1978, plate 47, p. 348) figured this egg incorrectly, identified as a Marbled Murrelet egg (Figure 4), although the error was corrected in the Museum's ledger by curator David M. Niles, whose entry contained information from Darcus's original data slip (M. Halley, pers. comm., 12 December 2023). Written in Darcus's hand on the original data slip is the collection locality, given as "Queen Charlotte Islands" and the date of collection, 14 May 1927 (Figure 5). This is the date on which two additional 'Marbled Murrelet' eggs were collected, all removed from burrows on Cox Island, according to Darcus's (1927) description of their discovery. The lack of collection details provided for this egg, and the other 'Marbled Murrelet' eggs considered below, belies their unusual history.

Darcus generally labelled more precisely egg sets of other species taken on Cox Island or Langara Island. For example, Ancient Murrelet egg sets were labelled Cox Island (e.g., NYSM 14373, ROM 304342), or in most cases, Langara Island (e.g., RBCM E1436, ROM 504341, UBCBBM B020833), the latter island of which was ringed with active colonies of this species at the time (Drent and Guiguet 1961), rather than the more general Queen Charlotte Islands. Five eggs of

the Fork-tailed Storm-petrel (*Hydrobates furcata*) taken in 1927 were labelled Cox Island (e.g., CMNAV 45039, WFVZ 204404), whereas Cassin's Auklet (*Ptychoramphus aleuticus*) eggs were taken at both islands (e.g., RBCM E0245, E1531).

The penultimate owner of the Delaware egg was oologist Archibald D. Henderson, who homesteaded near Belvedere, Alberta, through the early decades of the 1900s (Houston and Bechard 1990). Correspondence related to Henderson's acquisition of this egg did not survive but information held with a copy of Henderson's original data slip shows the egg was eventually sold to Donald J. Nicholson⁴, who inscribed the following supplementary information on the original data slip, on 13 June 1962, the day he received the egg set:

This set of Marbled Murrelet was sent to me by A.D. Henderson [actually by Mrs. A.D. Henderson] on June 13, 1962 [one year before Mr. Henderson's death]

Henderson had this set since 1928!

I paid \$75.00 cash for this egg.

In March 1962 S J Darcus wrote me that he still had one set of one egg of those several sets he collected in the late 1920's.

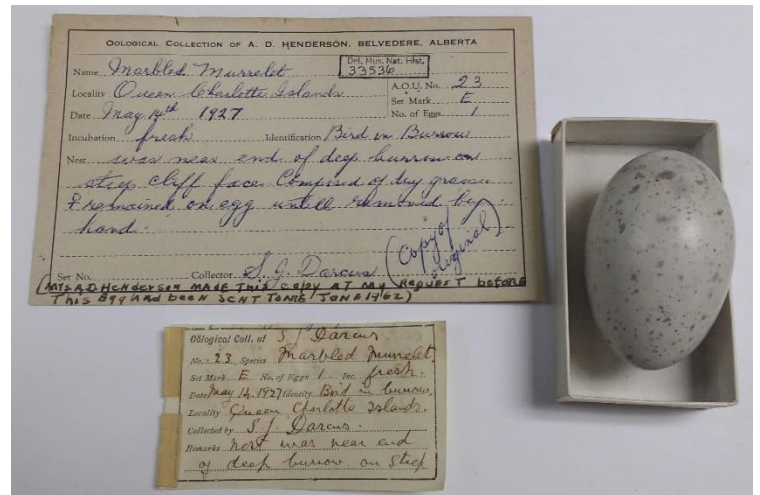


Figure 5. ‘Marbled Murrelet’ egg (DMNS 156), and S.J. Darcus’s handwritten label, is a misidentified Ancient Murrelet egg collected on “Queen Charlotte Islands,” determined to be one of three taken on Cox Island, offshore of Langara Island, 14 May 1927. Photo credit: M. Halley.

Appended to the above note, Nicholson, whose egg collection is held in the Delaware Museum (Kiff 1979), noted that, "Henderson got this set from the [Frederick C.] Hiden collection in England about [Oct.-Nov.] 1928"; thus, the egg exchanged hands within the first few months of its collection. Hiden was a little-known egg collector who advertised frequently in the *Oologists' Exchange & Mart*, mainly seeking to purchase egg sets of rare waders, his specialty (Cole and Trobe 2000). Darcus probably responded to the advertisement and

offered a 'Marbled Murrelet' egg for sale, but the price paid was not confirmed. The journal's editor nominated Darcus as a new subscriber to this periodical in 1920, while he still resided in New Brunswick (Anonymous 1920), and several years before his first visit to Haida Gwaii. His subscription was not renewed, however, and he moved to Saskatchewan later that year to work on his brother's-in-law ranch for a year (Sealy 2021a). He probably did not advertise sales of egg sets in this journal because he now dealt in eggs, which disqualified him, but this was not confirmed. Regardless, he did not advertise in other oology journals, although, again, he would have been aware of ads placed by other egg collectors, particularly Henderson.

Mention of Hiden's collection prompted me to examine Henderson's "Exchange Price List" of eggs available for sale or exchange, which is archived in the Muséum d'histoire naturelle de la Ville de Genève, in Switzerland, and where the bulk of his egg collection is held (Houston and Bechard 1990, Sealy 2022a), including one of Darcus's sets of the Ancient Murrelet (Appendix 1). In addition to a general list of eggs available with prices sought, the undated, 56-page list includes egg sets obtained from several well-known collectors, including Hiden and Nicholson, and several Canadian collectors, but Darcus's name was not among them. Among eggs listed of five species apparently obtained from Hiden, including duplicates (page 30), is a set of two eggs of the Ancient Murrelet (MNHG-OIS 004130), taken on 9 May 1927), and among five additional species listed on pages 32 and 33 is an egg of the Marbled Murrelet, listed for sale at \$100, but it was crossed out without explanation (Figure 6). Was this the Delaware egg, which changed hands among Darcus, Hiden and Henderson within the first year of collection? Henderson was

A. 24		315		100.00		XX		200.00	
<p style="text-align: center;"><i>Reaper</i></p>									
<p style="text-align: center;"><i>R. Leary</i></p>									
Set mark	Greenland White Tailed Eagle 1/2 -	Set	15	2.5					
730	Spotted Crane 1/4	Set	10	90					
475	Red necked Grebe 1/5	Set	5	00					
179B	America Water Pippit 1/4	Set	3	00					
<p style="text-align: center;"><i>C. H. Goodland</i></p>									
89	Greater Shearwater 1/4		14	55					
313.1	Rock Dove 1/2	.75 (set mark 2/3)	1	50					
313.1	" 1/2	(18 1/2") .75	1	50					
377	American Hawk Owl 1/5	9.00	45	00					
388.1	Great Crested 1/4 (set mark 1/4)	10.00	10	00					
<p style="text-align: center;"><i>Acacia's Bakes + Shakes in cement</i></p>									
388.1	Hymenogaster Cuckoo 1/4	10.00	10	00					
<p style="text-align: center;"><i>L. B. Hiden</i></p>									
Set mark	Woodcock 1/3	.96	2	88					
4	" 1/3	.96	2	88					
<p style="text-align: center;">Set mark</p>									
665	Set mark	100.00	100	00					
558.1	Lapp Owl 1/5	4.30	21	50					
	Murlet 1/5	1.00	5	00					
								346.96	

Figure 6. Page from A.D. Henderson's "Exchange Price List" of eggs, with egg of the Marbled Murrelet listed but crossed out. Courtesy of Muséum d'histoire naturelle de la Ville de Genève.

aware of the egg’s rarity and its value but held on to the egg for more than 35 years, apparently unaware that it was misidentified, before it was sold to Nicholson for a price less than originally listed.

‘Marbled Murrelet’ egg 2 (American Museum of Natural History [AMNH #EN 5978])

A purported Marbled Murrelet’s egg taken by Darcus on the “Queen Charlotte Islands” was accessioned by the American Museum of Natural History from the collection of Philip B. Philipp (Figure 7), an inaugural Fellow of the International Museum of Comparative Oology (Anonymous 1924).⁵ The date of collection on Philipp’s label was transcribed in error from Darcus’s original data slip as 11 (not the correct 14) May 1927 due to confusion in the way Darcus wrote the number 4 (compare hand-written labels for AMNH EN 5978 and NYSM 14373; Figure 8). The single egg, not 2 eggs as given on Philipp’s label, is one of the three ‘Marbled Murrelet’ eggs collected on Cox Island on that date (Darcus 1927). That the nest “was on face of sea cliff, about 200 ft. above [not from] the sea” confirms that the egg was taken on Cox Island, not on the adjacent slopes of Iphigenia Point on Langara Island where Darcus collected some of the Ancient Murrelet eggs. By contrast, Darcus specifically noted that Ancient Murrelet egg set NYSM 14373 was collected on Cox Island on 14 May 1927 (Figure 7) and is among several sets of this species collected there on that date (Appendix I). Lloyd Kiff, who identified this egg as an Ancient Murrelet egg in 1984, suggested the egg be compared to the photograph of a Marbled Murrelet egg removed from an oviduct near Vancouver Island, British Columbia, in 1934 (see Sutton and Semple 1941, also Figure 9).

‘Marbled Murrelet’ egg 3 (Penticton Museum and Archives [uncatalogued])

Although Darcus’s egg sets made their way to museums across North America and Europe, it was not surprising that many sets, including blowing tools, ended up, in 1974, in the Penticton Museum and Archives located in the southern Okanagan valley, where he lived most of his life. Among the many uncatalogued egg sets of many species are two of the Ancient Murrelet (Appendix I) and one set labelled Marbled Murrelet. The ‘Marbled Murrelet’ egg, which was taken on 14 May 1927 (Figure 10), probably was one of the three eggs taken on Cox Island on that date (see Darcus 1927) and maybe the egg Darcus mentioned to Nicholson that was still in his possession in 1962. Was a buyer not found for this egg? True to form, he gave the collection sites of the Ancient Murrelet eggs as Cox Island, and the origin of the Marbled Murrelet egg only as “Queen Charlotte Islands.” Darcus’s hand-written data slips with the Ancient Murrelet eggs noted that the sets, each with two eggs, were taken on 14 and 21 May 1927. However, only one of the possible four eggs from these sets (i.e., 2 clutches of 2 eggs [Sealy 1976]) survived, and it cannot reliably be linked with the data for either egg set.

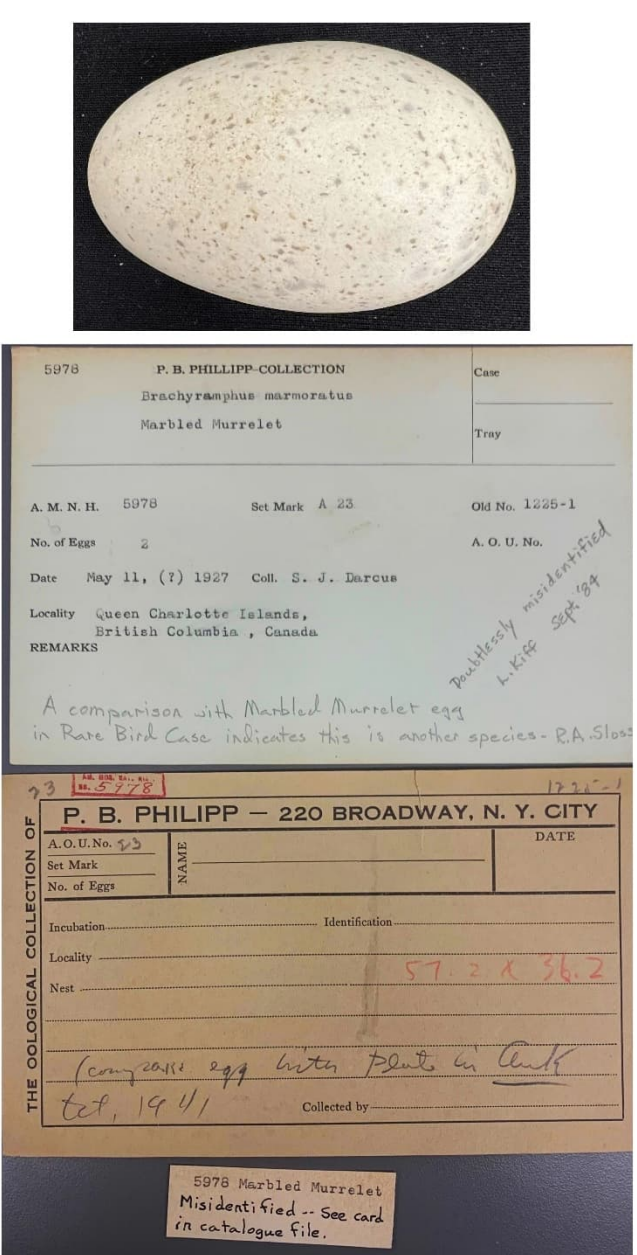


Figure 7. ‘Marbled Murrelet’ egg (AMNH EN 5978) and P.B. Philipp’s (correct spelling) label transcribed from S.J. Darcus’s hand-written data slip (see Figure 8). The set consists of one egg, not two, as originally transcribed. This egg was “doubtlessly misidentified” (L. Kiff in 1984). Photo credit: T. Trombone.

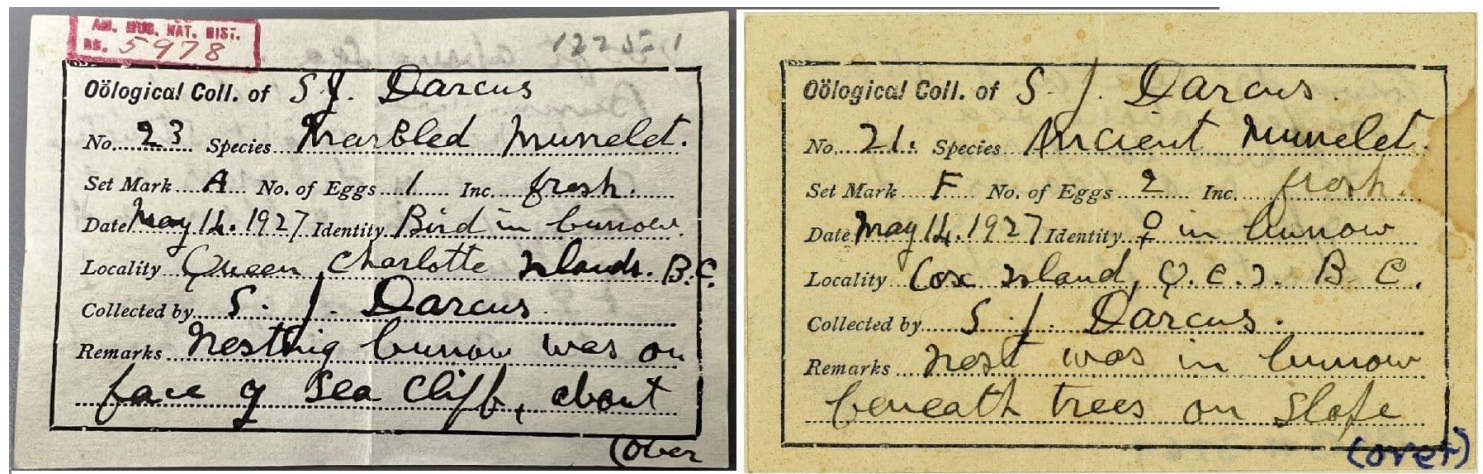


Figure 8. Examples of S.J. Darcus's hand-written labels: left, misidentified egg of the Marbled Murrelet (AMNH EN 5978); right, Ancient Murrelet eggs (NYSM 14373). Both sets were collected on Cox Island, Queen Charlotte Islands (Haida Gwaii), British Columbia, on 14 May 1927, not 11 May, as indicated on the transcribed data card for the former egg. Photo credits: T. Trombone and J. Kirchman, respectively.

'Marbled Murrelet' egg 4 (Royal Ontario Museum [ROM #506961])

In their catalogue of British Columbia seabird colonies, Drent and Guiguet (1961, p. 118) noted that a purported Marbled Murrelet egg collected in the Queen Charlotte Islands, which was donated without further details by Robert A. Cumming to the Royal Ontario Museum (Figure 11), may have been the mysterious "[C.F.] Newcombe egg" (RBCM E0236) (see Carter and Sealy 2010). However, scrutiny of archived correspondence and comparison of several Ancient Murrelet eggs in the Royal British Columbia Museum and in other collections led those authors to conclude that this egg is an Ancient Murrelet egg collected by Darcus in 1926 or 1927, on Cox Island or Langara Island. Those authors suspected that Cumming did not collect this egg but gave one of Darcus's misidentified eggs to Rev. C.J. Young for his collection. Young now owned eggs of both species of murrelet from British Columbia, the other a set of Ancient Murrelet eggs he collected on Langara Island on 17 June 1926 (ROM 504340, Figure 12) after he joined Darcus and longtime resident of Henslung Cove, Albert Peve, for work on Cox and Langara islands in June (Young 1927, Sealy 2022a). A "small collection" of Young's eggs from the Queen Charlotte Islands, which included one set of the Ancient Murrelet



Figure 9. Marbled Murrelet egg (CMNH E3188) removed from oviduct by George Miksch Sutton and John B. Semple near Mittenatch Island off the east coast of Vancouver Island, British Columbia, 23 May 1934. Photo credit: S. Rogers.

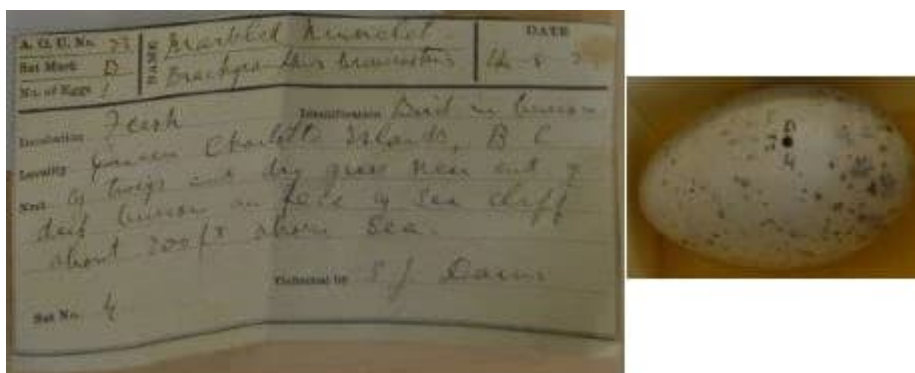


Figure 10. 'Marbled Murrelet' egg (PMA uncatalogued) collected by S.J. Darcus on "Queen Charlotte Islands," actually Cox Island, 14 May 1927, is a misidentified Ancient Murrelet egg. Courtesy of Penticton Museum and Archives.

and apparently this 'Marbled Murrelet' egg, was displayed at a meeting of the British Ornithological Club in London in 1931 (Shore Bailey 1931).

Carter and Sealy (2010) did not determine how Cumming came to acquire this egg in the first place, but it may have been one of the Marbled Murrelet eggs collected in 1926 to which Darcus referred in a letter written to Munro. A few weeks following that exploratory trip, Darcus stated, "I found the Marbled Murrelet common, especially in the vicinity of Cape Knox. A set of two eggs which I took from a burrow about three

R.O.M.Z. No. 3627	ROYAL ONTARIO MUSEUM OF ZOOLOGY.	SET No. 1
COLL.'S No.	A.O.U. No. 23	EGGS IN SET
SPECIES <i>Brachyramphus marmoratus</i>		
LOCALITY Queen Charlotte Is. B.C.		
DATE		
COLLECTOR R.A. Cumming		
NATURE OF SPECIMEN Egg		
INCUBATION		
IDENTITY		
REMARKS Willed by Rev C.J. Young		

ROM No.: 506961	Royal Ontario Museum	SET No.
Coll.'s No.:		EGGS IN SET
1		

Synthliboramphus antiquus
Canada; British Columbia; Skeena-Queen Charlotte Regional District; Queen Charlotte Islands

DATE

COLLECTOR: Cumming, R A

Nature of Specimen: eggs Previous No.

INCUBATION:

IDENTITY: re-identified from *Brachyramphus marmoratus* to *Synthlibora*

REMARKS:

bequest Young, C J, Rev



Figure 11. ‘Marbled Murrelet’ egg (ROM 506961, formerly 3627), initially acquired by R.A. Cumming with few details (probably collected on 15 May 1927), was identified as an Ancient Murrelet egg by Carter and Sealy (2010, p. 5). This egg was part of Rev. C.J. Young’s collection assembled after his early collection and journals were lost in a fire in 1920; the egg was eventually willed to the Royal Ontario Museum in 1937 (Baillie 1938). Photo credit: M. Peck.

end of Graham Island.” He collected birds at several sites along the north coast of Graham Island between mid-June and the end of July, and took adults, eggs (e.g., CMNH E6717) and downy young of the Ancient Murrelet on Lucy Island, and adult Marbled Murrelets near Langara Island. Curiously, Cumming did not mention Darcus’s discovery of nesting Marbled Murrelets on Cox Island reported three years earlier, despite apparently possessing one of the eggs. He stated only that, “[t]hough careful investigation was made, no evidence of [Marbled Murrelet] breeding was obtained.” Later, writing to Munro, he revealed his doubts of the authenticity of the egg’s identity, stating, “There are lots of angles why I should doubt [Darcus], but these can be talked over again some time later. He claims he got them on Cox Island.. taken on the 14th of May 1927.”⁶ Although Darcus collected three of the eggs on that date (Darcus 1927), Cumming was correct in his assertion that they were misidentified.

News of the discovery spread.

Within four months of Darcus’s return from Cox Island, the discovery of the breeding grounds of the Marbled Murrelet was announced in a paper read by Harrison F. Lewis⁷ at the 45th stated meeting of the American Ornithologists’ Union (AOU) held in Washington, DC in 1927 (Palmer 1928, p. 77).⁵ The announcement of this discovery was among the “outstanding” papers singled out in the report of the meeting, which stated, “... the eggs of this species have been sought ever since the species was described in 1789, but have remained undiscovered for 138 years until the nesting place was found in the cliffs of one of the rocky islands of the Queen Charlotte group.” Darcus had already informed C.J. Young of the pending paper, however, although it was several years later when Young, having left Victoria to return to Ontario, re-read and commented on the letters. On 20 July 1932, Young wrote to W.A. Newcombe, his friend in Victoria, quoting Darcus, who stated, “I have prepared a

hundred feet above the sea [on Cox Island] I believe to be of [the Marbled Murrelet]. The eggs had been abandoned and there was a wing of the Marbled Murrelet just outside the burrow. In the same burrow there were two eggs of the Ancient Murrelet, the bird being with them.”¹ Two eggs in the abandoned clutch should have suggested Ancient Murrelet, although the Marbled Murrelet’s one-egg clutch had not been confirmed (Sealy 1974). This egg cannot be located but may have been the one taken on Langara Island in 1926, to which Darcus referred only in the letter above, and the label of which was received by the Royal Ontario Museum with other eggs identified only by labels that formed part of C.J. Young’s collection (Figure 13).

Cumming (1931) could not have collected this egg, because he did not visit the Queen Charlotte Islands until 1930, “... mainly with the intention of investigating the nesting of certain sea birds on the extreme northwest

R.O.M.Z. No. 500	ROYAL ONTARIO MUSEUM OF ZOOLOGY.	SET No. 2
COLL.'S No.	A.O.U. No. 21	EGGS IN SET
SPECIES <i>Synthliboramphus antiquus</i>		
LOCALITY Tangara Island, B.C.		
DATE June 17, 1926		
COLLECTOR Rev C.J. Young		
NATURE OF SPECIMEN Eggs		
INCUBATION Far advanced		
IDENTITY Saw the birds		
REMARKS Eggs laid on twigs at end of burrow about 2 to 3 ft deep among spruce trees. Willed by E. Beaupre.		

Figure 12. Data slip for Ancient Murrelet egg set (ROM 504340, formerly 500) collected by Rev. C.J. Young on Langara Island, 17 June 1926. This set, acquired by Young’s friend, Edwin Beaupre, was willed to the Royal Ontario Museum in 1930 (Baillie 1938). Photo credit: M. Peck.

paper on the marble [sic] murrelet which will be read by ...Lewis at the A.O.U. meeting next month [Nov 1927]."⁸ Young need not have wondered whether the paper was ever read.

After the AOU meeting, word of this discovery was featured in newspapers across North America and in Europe, probably picked up from a press release at the close of the AOU meeting. The *Lethbridge Herald* noted this and other highlights of the paper sessions before the meeting was over (Anonymous 1927), and "... the most outstanding ornithological event of the year" was announced in the annual report of National Parks Canada for the year ending March 31, 1928 (Anonymous 1928, p. 31). Additional accounts of this discovery appeared in at least a dozen newspapers, from the *Victoria Times* to the *Miami News-Record*, between 5 May and 22 September 1929 (see MacDill 1929a). Sandwiched among them was a more detailed summary, first, of the long-awaited discovery by Joseph Dixon and George M. Wright of the nest of the Surfbird (*Calidris virgata*) in interior Alaska, but also discoveries by Darcus and O.J. Murie of nests of the Marbled Murrelet and Wandering Tattler (*Tringa incana*), respectively (MacDill 1929b). Her description mirrored Darcus's original account of events:

Two other birds... have had their nesting sites rounded up within the last five or six years... the marbled murrelet was just run to cover in 1926 [actually 1927] by a Canadian naturalist, S. J. Darcus, in the almost inaccessible cliff faces of the Queen Charlotte Islands... He found that these birds make burrows six feet or more into the surface of cliffs, while the particular colony from which he secured specimens eggs was 200 feet above the sea. The inaccessible regions where the burrows are made probably accounts for their not having been found before. The Canadian ornithologist believes that most of the breeding colonies are located in the coast mountains of British Columbia, possibly in altitudes as high as 4,000 feet.

An expanded account of the discovery of the Marbled Murrelet's nest appeared in a Scottish newspaper subtitled, "Hoodwinked Ornithologists" (Ritchie 1930). Also highlighted were J. Dewey Soper's discovery of the nesting grounds of the Blue (Snow) Goose (*Chen caerulescens*) and the Surfbird's nest. James Ritchie, who edited the *Scottish Naturalist* for 14 years (Younge 1958), probably read the newspaper accounts of this discovery, and augmented Darcus's (1927a) account of the events:

...There is an American bird related to our own guillemots, so common that in summer it sprinkles the sea margin of British Columbia, particularly about the Straits of Georgia, ... It is the marbled murrelet... That its nest remained so long undiscovered is almost unbelievable. When Mr. P. A. Taverner published his magnificent account of the Birds of Western Canada in 1926, he had to confess that the nest was unknown, and yet it was clear that the birds were breeding in the vicinity of their summer haunts... Birds containing eggs almost ready to be laid..., and a completely shelled egg was actually found in a bird taken in Southern Alaska. More than that, all along the coast birds had occasionally been seen flying... into the forests with fish in their beaks, as if making off to feed the young. Just as Taverner's book was being published, the long delayed discovery of the nest made in 192[7] by a Canadian naturalist, Mr. S. J. Darcus, in the almost inaccessible cliff faces of the Queen Charlotte Islands... [in] burrows six feet long or more [excavated] into the surface of the cliffs, and the particular colony from which he secured the first egg was 200 feet above the sea.

That is an example of a common bird which nested in seclusion beneath the very noses of the ornithologists.

An exorbitant price

An announcement of the sale of a Marbled Murrelet's egg for a purported huge sum turned up during my research that confirmed the value some egg collectors placed on rare eggs. In a letter to J.A. Munro on 1 April 1932, R.A. Cumming stated that, "Rev. C.J. Young showed me in the British Oologist [Cumming's emphasis], where [Darcus] had sold Marbled Murrelet eggs the first ever taken to an English collector, who beat "the American buyers to it", they offering \$1,000⁰⁰ for them (? it)."³ If a deal was closed, the purchaser's name and amount paid were not revealed, and Cumming did not remember whether one or two eggs had been sold. As there was no journal by the

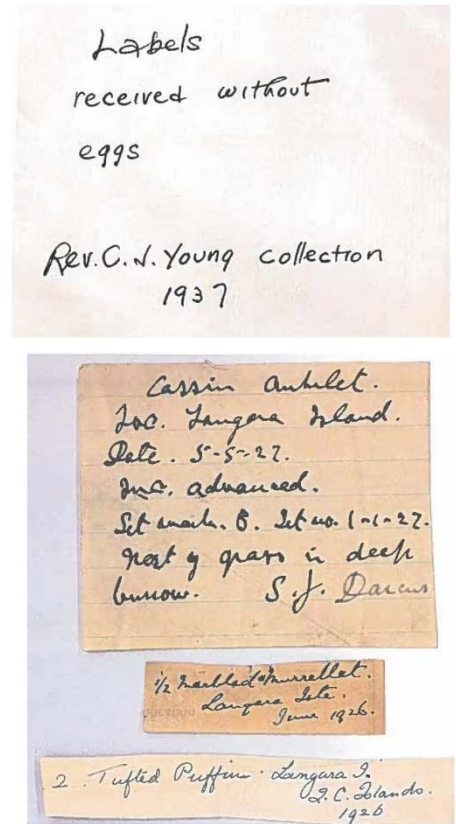


Figure 13. Labels for three egg sets without eggs, including one of the Marbled Murrelet, received by the Royal Ontario Museum with Rev. C.J. Young's egg collection. The data slip for Cassin's Auklet was written in Darcus's hand. Confusing the issue is the inscription of "1/2" on the label of the Marbled Murrelet egg, which was the oologists' notation that denotes 1 set of 2 eggs, in this case a typical clutch of the Ancient Murrelet. Courtesy of the Royal Ontario Museum.

name "British Oologist," I searched for this announcement in journals of the day that advertised the sale or exchange of egg sets but found none.

Cumming may have forgotten the name of the journal shown him earlier by Young and intended to refer to the *Bulletin of the British Oological Society* or *Bulletin of the British Ornithologists' Club*, the latter of which was on Young's mind at the time. Young had provided a selection of eggs, including one of the Marbled Murrelet, to be shown to a gathering of Club members (Shore Bailey 1931), despite his skepticism of the egg's authenticity (Young 1930). (The announcement did not appear in either journal.) In the end, only one of the 'Marbled Murrelet' eggs (DMNS 155) was traced to an English collector (F.C. Hiden), and there is no evidence that it sold for an outrageous price. That egg was sold again within a year to Henderson who listed its value at \$100, but later sold it for \$75 (see above).

Another British egg collector, Captain Vivian Hewitt, paid exorbitant prices for eggs, particularly of raptors, but also of seabirds (Hywel 1973). Indeed, he amassed a record collection of 13 eggs and four skins of the extinct Great Auk (*Pinguinus impennis*) (Birkhead et al. 2023), and undoubtedly, he would have paid \$1000 for a rare Marbled Murrelet's egg, but there is no evidence that he did. To fulfill his

obsessive need to collect objects such as stamps, coins and guns, and birds' eggs, Hewitt scrutinized periodicals for ads of the sale of eggs (Hywel 1973). Because Darcus apparently did not place such ads, it was likely that he responded to Hewitt's want ads published in successive issues of the *Oologists' Exchange & Mart* and *Oologists' Record* (Figure 14) at the time, but archived correspondence was not uncovered that confirmed negotiations had proceeded for the sale of a Marbled Murrelet's egg, or whether a deal was closed. Apparently, it was not, possibly because Hewitt "... would never buy eggs or skins without their accompanying data. Minute details were expected and, indeed, given, for the specimens were valueless without them. Such facts as exact location of bird and whether it was identified by the naked eye or through binoculars, whether alone or in a colony, and, with an egg, its state of incubation and whether it had been taken from a nest or found lying alongside were essential" (Hywel (1973, pp. 157-158). Most of this information was missing from Darcus's 'Marbled Murrelet' eggs. Much of Hewitt's egg collection was purchased by John du Pont, heir to the du Pont family fortune and founder of the Delaware Natural History Museum (Birkhead 2016), but the 'Marbled Murrelet' egg currently held there was acquired independently (see above).

C. H. GOWLAND,
Naturalist,
118, DEVONFIELD ROAD, ORRELL PARK, LIVERPOOL, N.

I have my own private collectors in all principal breeding grounds, and can always supply clutches of eggs of the majority of British, European and Indian birds. All sets with full data.
Clutch lists, giving details of all sets in stock, are issued periodically, and will be sent regularly on request.
Sets of rarities reserved on receipt of definite order.

COLLECTIONS PURCHASED.
ARTIST IN HIGH-CLASS TAXIDERMY.
Quotations and Price Lists on application.

WANTED

Sets of Accipitres, with data, from all parts of the world, also rare types of British breeding sea birds. Will pay cash or exchange rare material. Have many sea birds' sets on the British, American, Indian and Australian Lists to exchange for Accipitres.

CAPT. VIVIAN HEWITT, HOLMFIELD, RHYL, NORTH WALES.

W. F. H. ROSENBERG,
57, HAVERSTOCK HILL, LONDON, N.W. 3, ENGLAND.

Oologists should write for my Price List No. 29 containing over 700 species from all parts of the world. Large stock of Books, Cabinets, and every description of requisite for the Egg Collector.

Figure 14. Want ad for eggs of raptors and seabirds placed by Captain Vivian Hewitt in *The Oologists' Record* (1928).

myth in the making."¹¹ The alleged sale was not mentioned in the seabird colony catalogue (Drent and Guiguet 1961). Comments on this sale by Ruth (2005) and Kaiser (2012) were sourced from Cumming's letter cited above. The newspaper clipping apparently did not survive and I was not able to uncover the published announcement.

Young also informed Newcombe of Darcus's intent to sell Marbled Murrelet eggs to an American collector. He quoted Darcus, who stated, "The marble [sic] murrelet's eggs are going to Colonel [John E.] Thayer of Lancaster Mass... I am just waiting to close a deal with him..."⁸ The deal apparently was not completed, as a Marbled Murrelet's egg was not listed among those of several rare species Thayer donated to the Museum of Comparative Zoology at Harvard University in 1931 (Phillips 1934); ten eggs of the Great Auk were among them (Fuller 1999). It was not surprising, however, that Thayer sought the Marbled Murrelet's egg for his collection, as the Queen Charlotte Islands were among several places he sent collectors in search of eggs for his collection.

An egg collector's legacy

Despite his claim, Darcus did not collect Marbled Murrelet eggs on Cox Island. When he visited Langara and Cox islands again, in 1930 and 1936, it was early enough in the season only during the latter visit to collect Ancient Murrelet eggs (Figure 15). If Marbled Murrelet eggs were still on his mind, they were not mentioned in his field notes for either visit, although he observed adults and juveniles at sea. After being forced back to Langara Island by strong winds after rounding Cape Knox on 19 July 1930, Darcus alluded to his previous experiences on Cox Island, stating that, "...we decided to visit Cox Island..., this island is an old haunt of mine,"¹² in reference to the discovery there of the disputed Marbled Murrelet nests three years earlier. Following his visit to Langara Island in 1936, Darcus realized, or admitted, that Ancient Murrelet burrows that contained one egg would not be attended by an adult until the second egg was laid and incubation had begun.¹²

Had Darcus not continued to collect eggs for another 20 years, his reputation as an egg collector and naturalist would have remained sullied. Instead, his egg sets, which represent a broad range of species collected in New Brunswick, Saskatchewan, and British Columbia (Sealy 2021a), are preserved in museums, merged with the world's egg collections and the rich resource they provide for use by researchers (Marini et al. 2020). His egg sets provided important nesting records in British Columbia (e.g., Campbell et al. 2006), and sets of species parasitized by the Brown-headed Cowbird (*Molothrus ater*), with cowbird and host eggs kept intact, provided early host records in western Canada (e.g., Friedmann 1934, also Sealy 2021a). The 15 nests of the Ferruginous Hawk (*Buteo regalis*) discovered in the summer of 1920 in the Cypress Hills in southwestern Saskatchewan (Ingersoll 1929) revealed that region still supported "reasonable numbers" of the species (Houston and Bechard 1984). Egg sets of other seabirds provided early confirmation of nesting colonies compiled in Drent and Guiguet's (1961) catalogue of British Columbia seabird colonies. After settling down in the southern Okanagan, Darcus's conservation ethics came to the fore when he became guardian of the Vaseux Lake Bird Sanctuary (Anonymous 1932), which was established in 1923 and remains today. His expertise on a wide array of nature was eventually sought by others, among them, naturalist H.J. Parham, whose book, *A Nature Lover in British Columbia* (1937, p. 265), included reminiscences of Darcus's years in residence in the South Okanagan. Parham championed the study of living birds in their natural habitats, and his disdain for collecting pitted him against many of the collectors of the day.¹³ He was more accepting of egg collecting, however, and described Darcus as an "'Oologist', or 'a judicious egg collector', but an unwilling bird-taker." Darcus's reluctance to collect birds, or ill-equipped to preserve them, left unconfirmed the identities of adult murrelets removed with eggs from burrows on Cox Island, but he photographed places and other birds in the hand (Figures 2 and 16; also see Bent 1929, plate 64, p. 404;¹⁴ Sealy 2022b).

Epilogue

As for the Marbled Murrelet, Bent's (1920) plea for an accurate description of its egg remained unfulfilled until a nest and downy young were discovered in California (Binford et al. 1975) and a nest and egg in Alaska (Simmons 1980), several decades after Darcus's long-

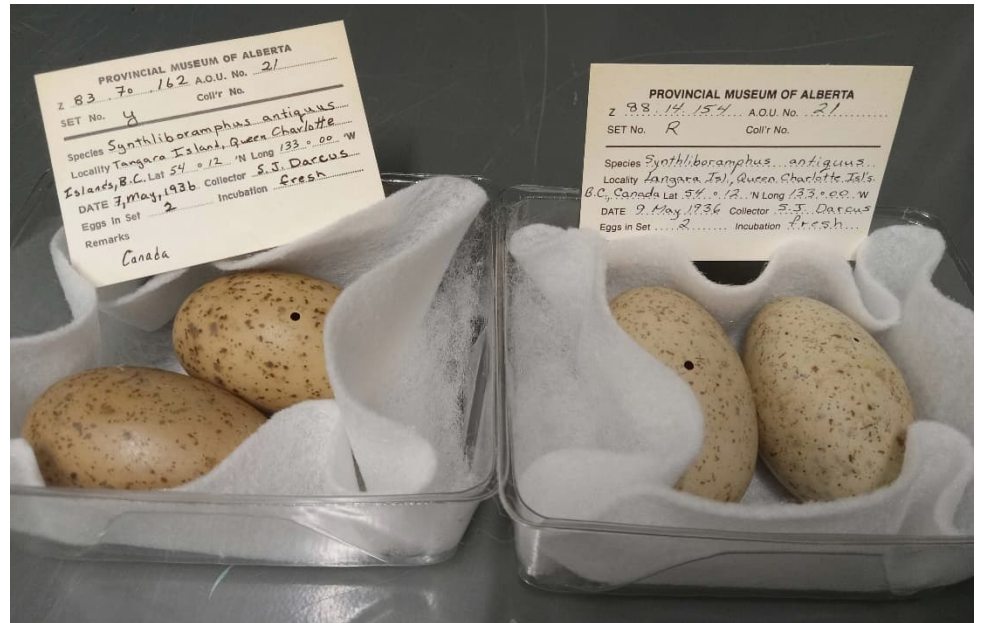


Figure 15. Ancient Murrelet egg sets collected by S.J. Darcus on Langara Island, 7 May 1936 (RAM Z83.70.162), and 9 May 1936 (RAM Z88.14.154). The Museum received the eggs from secondary collectors Jack A. Shier and Harold W. Pinel, Calgary, Alberta, respectively. Photo credits: J. Hudon and C. Scobie.

forgotten claim to have found its eggs on Cox Island. The Marbled Murrelet had now emerged as a focus of scientific interest and study, but in the ensuing years growing evidence of population decline and habitat degradation saw it listed as threatened within 20 years. This triggered a flurry of research, management, and politics (Ralph et al. 1995). John F. Piatt recently summarized the species' rise to iconic status, stating "It is a pretty amazing story... from [the California] nest and near absence of any data on breeding or habitat to one of the most studied species in the Pacific, with multiple large study efforts in [California to Alaska], gleaning a wealth of knowledge across the board on breeding and foraging habitat, biology, foraging behavior, and population distribution and abundance, and trends. From a species scarcely known to the public to a public icon of old-growth [forests] on the west coast and perhaps single greatest generator of new young seabird biologists in the Pacific. Who foresaw that?"¹⁵



Figure 15. Ancient Murrelet egg sets collected by S.J. Darcus on Langara Island, 7 May 1936 (RAM Z83.70.162), and 9 May 1936 (RAM Z88.14.154). The Museum received the eggs from secondary collectors Jack A. Shier and Harold W. Pinel, Calgary, Alberta, respectively. Photo credits: J. Hudon and C. Scobie.

As for Cox Island, Marbled Murrelets have not been recorded nesting there, but the Island historically supported four species of burrowing seabird (Drent and Guiguet 1961, Rodway et al. 2016). Darcus (1927a) described the Island as "literally honey-combed" with the nesting burrows of Ancient Murrelets, and also Cassin's Auklets, Fork-tailed Storm-Petrels and Leach's Storm-Petrels (*H. leucorhoa*). In 1952, Charles J. Guiguet noted that the base and top of Cox Island were perforated by Ancient Murrelet burrows¹⁶, but by 1971, when I visited the Island while conducting ecological research on murrelets, the burrowing seabirds were gone; only a few pairs of Pelagic Cormorants (*Phalacrocorax pelagicus*), Pigeon Guillemots (*Cephus columba*) and Tufted Puffins (*Fratercula cirrhata*) were apparently nesting (Sealy 2021b). These species were no longer nesting on Cox Island when last surveyed in 1988; abandonment was linked to devastation wrought on burrowing seabirds by rats on nearby Langara Island (Rodway et al. 2016). Cox Island awaits further surveys and the return of its burrowing seabirds.

Summary

For several days in June 1926, and from early May through mid-June 1927, Salomon John Darcus visited the Queen Charlotte Islands (Haida Gwaii) in search of the nest and egg of the Marbled Murrelet, which had eluded naturalists and ornithologists. Preliminary observations in 1926 led Darcus to concentrate his search on Cox Island the following year, an islet off the southwest shore of Langara Island. Eggs of the Ancient Murrelet and a putative Marbled Murrelet egg were collected in 1926, but the latter species' egg was later alluded to only in a letter and was not mentioned again. Darcus collected four eggs on Cox Island in 1927 he attributed to the Marbled Murrelet, but details were murky. Apparently feeling competition, he published a description of the discovery, and it was announced at the AOU meeting later that year. Scrutiny of the eggs and descriptions of the nest sites by numerous ornithologists, including this writer, resulted in the conclusion that the eggs were actually Ancient Murrelet eggs. Information associated with these eggs revealed in most cases their sale and passage from one collector to another, before becoming permanently deposited in the American Museum of Natural History, the Delaware Museum of Nature and Science, the Penticton Museum and Archives, and the Royal Ontario Museum. With the discovery of dozens of nests in recent decades, we know that Marbled Murrelets nest solitarily, most in trees, and sometimes on the ground, but not in burrows.

Acknowledgements

I thank the many museum curators and collection managers who confirmed information pertaining to egg sets uncovered during online searches, and in several cases provided photographs of eggs in their care: L. Beckman (Museum of Vertebrate Zoology, University of California, Berkeley), S. Brady and S. Rogers (Carnegie Museum of Natural History [CMNH]), A. Chinn (Royal British Columbia Museum), R. Corrado (Western Foundation of Vertebrate Zoology), K. Fahy (Santa Barbara Museum of Natural History), M. Halley (Delaware Museum of Nature and Science), J. Hudon and Corey Scobie (Royal Alberta Museum), J. Kirchman (New York State Museum), D. Ooman (Penticton

Museum and Archives), M. Peck (Royal Ontario Museum), G. Rand (Canadian Museum of Nature), G. Shugart (Puget Sound Museum of Natural History), C. Milensky (United States National Museum), M. Stervander (National Museums Scotland), C. Stinson (University of British Columbia Beaty Biodiversity Museum), P. Sweet and T. Trombone (American Museum of Natural History), and L. Vallotton (Muséum d'histoire naturelle de la Ville de Genève). Patrick Darcus provided copies of his grandfather's field notes, for which I am grateful. Lloyd Kiff has been a constant source of information on the activities of early egg collectors. Tim Birkhead, Alex Bond, David Clugston, and Douglas Russell provided information pertaining to several British egg collectors. Sheila Norton extracted information from the Royal British Columbia Museum archives. Noreen Sealy assisted with online searches. The Executive of the Ottawa Field-Naturalists' Club granted permission to reproduce Darcus's photograph of Cox Island published in the *Canadian Field-Naturalist*. The map was prepared by MapMonsters GIS Ltd. (Victoria, BC), with assistance from B. Calder. I benefited from many discussions with the late Harry R. Carter as we wondered where the elusive Marbled Murrelet nests. I thank the reviewers, Alan E. Burger, and Daryl S. Henderson, for constructive comments on the manuscript.

Endnotes

1. Rev. Charles J. Young observed birds in the vicinity of Masset in late May 1926 before joining Darcus who had spent two weeks on Langara Island (see Sealy 2022b). In addition to recording 22 species of birds, Young (1927) provided the first observations of colonies of Ancient Murrelet and Cassin's Auklet on the slopes that back dropped the Haida village of Dadens and on nearby Lucy Island (also see Drent and Guiguet 1961). Ancient Murrelets nested at Dadens through at least 1966 (Campbell et al. 1967), but by 1970, the colony was abandoned (Sealy 2021b). Young (1931) continued to study seabirds in British Columbia, in 1929 and 1930, and published the first detailed information on the breeding biology of the Rhinoceros Auklet (*Cerorhinca monocerata*).
2. Letter from S.J. Darcus to James A. Munro, 12 July 1926. Penticton Museum and Archives.
3. S.J. Darcus to James A. Munro, 13 July 1927. Penticton Museum and Archives.
4. Donald J. Nicholson's observations of a wide array of species in Florida (e.g., Nicholson 1929) provided data for Arthur Cleveland Bent's multi-volume series on the life histories of North American birds.
5. Philip B. Philipp served as president of Audubon Societies in Massachusetts and New Jersey. Field studies took him from the Carolinas (Philipp 1910) to New Brunswick in 1915 and 1916 (e.g., Philipp and Bowdish 1917). His work provided data for Bent's "Life History" volumes. In 1937, he was appointed Research Associate in Oology at the American Museum of Natural History, to curate the collection of eggs and nests. His personal collection of some 15,000 egg sets was integrated into that Department's collection (Lanyon 1995).
6. R.A. Cumming to James A. Munro, 1 April 1932. Penticton Museum and Archives.
7. Harrison F. Lewis served as Chief Federal Migratory Bird Officer and, as editor of the *Canadian Field-Naturalist*, received Darcus's manuscript, which he read at the AOU meeting in 1927.
8. C.J. Young to W.A. Newcombe, 20 July 1934. Royal British Columbia Museum Archives, Newcombe family papers, Series A, Volume 14, Folder 109.
9. Rudolf Drent to L.L. Snyder, 10 November 1960. Royal Ontario Museum, bird division archives.
10. L.L. Snyder to R. Drent, 23 November 1960. Royal Ontario Museum, bird division archives.
11. R. Drent to L.L. Snyder, 28 November 1960. Royal Ontario Museum, bird division archives.
12. S.J. Darcus. Unpublished field notes, Langara Island, British Columbia, 1930 and 1936. Courtesy of Patrick J. Darcus.
13. Parham's perception of the inadequate protection of birds, and Percy Taverner's responses to it, were discussed by Cranmer-Byng (1996, p. 169, 171-172).
14. Darcus photographed a nest and eggs of Black Oystercatcher (*Haematopus bachmani*) on the "Queen Charlotte Islands" on 26 May 1927, during the visit in which the putative eggs of the Marbled Murrelet were discovered. This photo was published in Bent's "Life History" volumes.
15. J.F. Piatt to S.K. Nelson, N.L. Naslund, S.G. Sealy, and G.B. van Vliet, commenting on progress made in the acquisition of knowledge of the biology of the Marbled Murrelet. 8 October 2023.
16. C.J. Guiguet. Unpublished field notes, British Columbia, 1945-46, 1952. Archived in Biodiversity Centre of British Columbia, Victoria, B.C.

References

- Ainley, M.G. 1995. The emergence of Canadian ornithology—an historical overview to 1950. Pages 283-322 in Davis, W.E., and J.A. Jackson, editors. Contributions to the history of North American ornithology. *Memoirs of the Nuttall Ornithological Club*, No. 12.
- Anonymous. 1920. New subscribers. *Oologists' Exchange & Mart*, 2nd year, No. 11, p. 88.
- Anonymous. 1924. By-laws of the International Museum of Comparative Oology: List of members. *Journal of the Museum of Comparative Oology* 1(1):49-58.
- Anonymous. 1927. Untitled. *Lethbridge Herald*, November 21, p. 10.
- Anonymous. 1928. Report of the Commissioner, National Parks of Canada, year ending March 31, 1928, Ottawa, ON.
- Anonymous. 1932. Custodian at Vaseux Lake gives illustrated lecture on local birds. *Penticton Herald*, March 10, 1932.
- Baillie, J.L. 1938. The museum's bird collection. *Contributions of the Royal Ontario Museum of Zoology* 12:7-15.
- Barnes, R.M. 1922. The American oologists' exchange price list of North American birds' eggs. Privately published, Lacon, IL.
- Bent, A.C. 1920. Gaps in our knowledge of eggs. *Journal of the Museum of Comparative Oology* 1(3-4):14-16.
- Bent, A.C. 1929. Life histories of North American shore birds, Part 2. *U.S. National Museum Bulletin*, No. 146.
- Binford, L.C., B.G. Elliott, and S.W. Singer. 1975. Discovery of a nest and the downy young of the Marbled Murrelet. *Wilson Bulletin* 87:303-319.
- Birkhead, T.W. 2016. The most perfect thing. Bloomsbury, London, UK.
- Birkhead, T.R., D.L. Clugston, and E. Fuller. 2023. The dispersal of Vivian Vaughan Davies Hewitt's collection of Great Auk (*Pinguinus impennis*) eggs. *Archives of Natural History* 50:191-206.
- Campbell, R.W. 1969. Spring bird observations on Langara Island, British Columbia. *Blue Jay* 27:155-159.
- Campbell, R.W., M.L. Preston, and L.M. Van Damme. 2006. British Columbia nest record scheme: 51st Annual Report – 2005 nesting season. *Biodiversity Centre for Wildlife Studies Report*, No.6.
- Carter, H.R., and S.G. Sealy. 2005. Who solved the mystery of the Marbled Murrelet? *Northwestern Naturalist* 86:2-11.
- Carter, H.R. and S.G. Sealy. 2010. Re-evaluation of the first three Marbled Murrelet nests reported in British Columbia. *Northwestern Naturalist* 91:1-12.
- Cole, A.C., and W.M. Trobe. 2000. The egg collectors of Great Britain and Ireland. Peregrine Books, Leeds, UK.
- Cumming, R.A. 1931. Some birds observed in the Queen Charlotte Islands, British Columbia. *Murrelet* 12:15-17.
- Darcus, S.J. 1927. Discovery of the nest of the Marbled Murrelet (*Brachyramphus marmoratus*) in the Queen Charlotte Islands. *Canadian Field-Naturalist* 41:197-199.
- Darcus, S.J. 1930. Notes on birds of the northern part of the Queen Charlotte Islands in 1927. *Canadian Field-Naturalist* 44:45-49.
- Drent, R.H. and C.J. Guiguet. 1961. A catalogue of British Columbia sea-bird colonies. *Occasional Papers of the British Columbia Provincial Museum*, No. 12.
- Friedmann, H. 1934. Further additions to the list of birds victimized by the cowbird. *Wilson Bulletin* 46:25-36, 104-114.
- Fuller, E. 1999. The Great Auk. Southborough, UK.
- Guiguet, C.J. 1956. Enigma of the Pacific. *Audubon Magazine* 58:164–167, 174.
- Harrison, C. 1978. A field guide to the nests, eggs, and nestlings of North American birds. Collins, London, UK.
- Houston, C.S., and M.J. Bechard. 1984. Decline of the Ferruginous Hawk in Saskatchewan. *American Birds* 38:166-170.
- Houston, C.S., and M.J. Bechard. 1990. A.D. Henderson, Alberta's foremost oologist, 1878–1963. *Blue Jay* 48:85-96.
- Hywel, W. 1973. Modest millionaire: The biography of Captain Vivian Hewitt. Gwasg Gee, Denbigh, UK.
- Ingersoll, E. 1920. Editor's note. Natural History Club [letter from S.J. Darcus]. *Family Herald and Weekly Star*, Montreal, 6 December, p. 40.
- Kaiser, G. 2012. The Marbled Murrelet: Little Lord of British Columbia's fiords. Privately published, Victoria, BC.
- Kiff, L.F. 1979. Bird egg collections in North America. *Auk* 96:746-755.
- Kiff, L.F. 1981. Eggs of the Marbled Murrelet. *Wilson Bulletin* 93:400-403.

- Lanyon, W.E. 1995. Ornithology at the American Museum of Natural History. Pages 113-144 in Davis, W.E., and J.A. Jackson, editors. Contributions to the history of North American ornithology. *Memoirs of the Nuttall Ornithological Club*, No. 12.
- MacDill, M. 1929a. And the male hatched the eggs. *High Point (North Carolina) Enterprise*, 15 May, p. 11; *Miami News-Record*, 11 June, p. 7; *Oakland Tribune*, 30 June, p. 10; *Salt Lake Tribune*, 22 September, p. 7.
- MacDill, M. 1929b. The father bird hatches the egg. *The Science News-Letter* 15(425):339-341.
- Marini, M.A., L. Hall, J. Bates, and others. 2020. The five million bird eggs in the world's museum collections are an invaluable and underused resource. *Auk* 137:1-7. DOI: 10.1093/auk/ukaa036
- Nicholson, D.J. 1929. Breeding of the Dusky Seaside Sparrow on the mainland of Florida. *Auk* 46:391.
- Palmer, R.S. 1928. The forty-fifth stated meeting of the American Ornithologists' Union. *Auk* 45:70-90.
- Parham, H.J. 1937. A nature lover in British Columbia. H.F. & G. Witherby, London, UK.
- Philipp, P.B. 1910. Birds observed in the Carolinas. *Auk* 27:312-322.
- Philipp, P.B., and B.S. Bowdish. 1917. Some summer birds of northern New Brunswick. *Auk* 34:265-275.
- Phillipps, J.C. 1934. [Obituary]. John Eliot Thayer, 1862–1933. *Auk* 51:46-51.
- Ralph, C.J., G.L. Hunt, M.G. Raphael, and J.F. Piatt. 1995. Ecology and conservation of the Marbled Murrelet in North America: An overview. Pages 3-22 in Ecology and Conservation of the Marbled Murrelet (Ralph, C.J., G.L. Hunt, Jr., M.G. Raphael, and J.F. Piatt, editors). *USDA Forest Service General Technical Report PSW-152*, Albany, CA.
- Ritchie, J. 1930. Elusive nests: Strange discoveries. *The Scotsman*, 28 May, p. 16.
- Rodway, M.S., R.W. Campbell, and M.J.F. Lemon. 2019. Seabird colonies of British Columbia: Haida Gwaii. *Wildlife Afield* 16:1-479.
- Ruth, M.M. 2005. Rare Bird: Pursuing the mystery of the Marbled Murrelet. Rodale Press, Emmaus, PA.
- Sealy, S.G. 1974. Breeding phenology and clutch size in the Marbled Murrelet. *Auk* 91:10-23.
- Sealy, S.G. 1976. Biology of nesting Ancient Murrelets. *Condor* 78:294-306.
- Sealy, S.G. 2021a. A naturalist's and an oologist's observations of cowbirds in the Cypress Hills, Saskatchewan. *Picoides* 34(2):10-22.
- Sealy, S.G. 2021b. Observations of birds at Langara Island, Haida Gwaii, British Columbia, 1970 and 1971, augmented by records of early naturalists. *British Columbia Birds* 31:2-25.
- Sealy, S.G. 2022a. Alberta's early resident naturalists and new cowbird host records. *Picoides* 35(3):6-22.
- Sealy, S.G. 2022b. Dispensing local knowledge: Decades with Albert Peve in Henslung Cove, Langara Island, Haida Gwaii. *Blue Jay* 80(1):12-20.
- Sealy, S.G. 2023. Ovaries and eggs as early proxies for clutch size and laying dates of the Marbled Murrelet. *Picoides* 36(1):7-15.
- Sealy, S.G., and H.R. Carter. 1984. At-sea distribution and nesting habitat of the Marbled Murrelet in British Columbia: Problems in the conservation of a solitarily nesting seabird. Pages 737-756 in Croxall, J.H., P.G.H. Evans, and R.W. Schreiber, editors. Status and conservation of the world's seabirds. *International Council for Bird Preservation*, Technical Publication, No. 2.
- Shore Bailey, W. 1931. On a collection of eggs from the Queen Charlotte Island, British Columbia. *Bulletin of the British Ornithologists' Club* 51:72-73.
- Simmons, T.R. 1980. Discovery of a ground-nesting Marbled Murrelet. *Condor* 82:1-9.
- Sutton, G.M., and J.B. Semple. 1941. An egg of the Marbled Murrelet. *Auk* 58:580-581.
- Tufts, R.W. 1962. The birds of Nova Scotia. Nova Scotia Museum, Halifax.
- Yonge, C.M. 1958. [Obituary]. Prof. James Ritchie, C.B.E. *Nature* 182:1483.
- Young, C.J. 1927. A visit to the Queen Charlotte Islands. *Auk* 44:38-43.
- Young, C.J. 1931. A study of the Rhinoceros Auklet and other birds in British Columbia, in 1929 and 1930. *Oologists' Record* 11:66-71.

Appendix I. Egg sets of the Ancient Murrelet collected by or with S.J. Darcus on Langara Island or Cox Island, Queen Charlotte Islands (Haida Gwaii), British Columbia, 1926, 1927 and 1936. Sets are held in the following collections: American Museum of Natural History (AMNH), Delaware Museum of Nature and Science (DMNS); Muséum d'histoire naturelle de la Ville de Genève (MNHG-OIS); National Museums Scotland (NMS); New York State Museum (NYSM); Penticton Museum and Archives (PMA); Royal Alberta Museum (RAM); Royal British Columbia Museum (RBCM); Royal Ontario Museum (ROM); Santa Barbara Museum of Natural History (SBMNH); Slater Museum of Natural History, University of Puget Sound [PSM]; University of British Columbia Beaty Biodiversity Museum (UBCBBM); University of Michigan Museum of Zoology (UMMZ); Western Foundation of Vertebrate Zoology (WFVZ); and Yale Peabody Museum (YPM ORN).

AMNH EN 5978 (14 May 1927 [Figure 7])^a

DMNS: 154, 155 (10 May 1927), 156 (14 May 1927 [Figure 5])^a

MNHG-OIS: 4130 (9 May 1927)

NMS: uncatalogued (15 June 1926)^b

NYSM: 14373 (14 May 1927)^c

PMA: uncatalogued (14 May 1927 [Figure 10])^a, 14 May 1927, 21 May 1927)^c

PSM-Bird: 14759 (10 May 1927), 14755 (19 May 1927), 14757 (7 May 1936)

RAM: Z83.70.162 (7 May 1936), Z88.14.154 (9 May 1936 [Figure 15])

RBCM: E1435 (17 June 1926), E0240 (11 May 1927)^c, E1436 (14 May 1927), E0241 (21 May 1927)^c

ROM: 504340 (17 June 1926 [Figure 12])^b, 504341 (5 May 1927 [Figure 11]), 504342 (1 June 1927)^c, 506961 (undated, probably 15 May 1927)^a

SBMNH: AV: 22954, 22955 (10 May 1927)

UBCBBM: B020834 (1 May 1936), B020833 (7 May 1936)

UMMZ: 191195 (12 June 1926)

WFVZ: 59193 (4 May 1927); 178406 (9 May 1927); 278, 277, 279, 117992, 117994, 117995 (10 May 1927); 28323 (12 May 1927); 11799 (21 May 1927); 278 (1 June 1927); 11800, 46433 (9 May 1936)

YPM ORN: 148013, 148014, 145998 (11 May 1927)^d

^a Single egg originally identified as a Marbled Murrelet egg.

^b Collected by Rev. C.J. Young, in the field with S.J. Darcus.

^c Collected on Cox Island; other sets were collected on Langara Island.

^d S.J. Darcus to L.B. Bishop/R.A. Cumming.

Ornithological News and Announcements

Nominations for Council and Executive

The SCO-SOC is soliciting invitations from members interested in serving on Council and Executive. Specifically, we have two open positions on Council, and openings for Vice-President/President-Elect and Membership Secretary. Members of council serve for two years and serve up to two consecutive terms. For all positions, no prior experience is required. Becoming a member of council or a member of executive is a wonderful way to support the SCO-SOC and help add your voice in shaping the direction of Canadian ornithology. The SCO-SOC is particularly interested in diversifying our council, so we strongly encourage applications from people that identify as being from underrepresented communities. If you are interested in becoming a member of council or joining executive, please submit a short paragraph about yourself, including why you would like to be on the SCO-SOC council and what you hope to bring to the position, along with a photo. These will be distributed to the membership prior to the election. Please send your applications and any questions or concerns to Danielle Ethier dethier@birdscanada.org by July 30, 2024.

Nominations pour le conseil et l'exécutif

La SOC-SCO sollicite des applications de la part de membres intéressés à siéger au Conseil et à l'Exécutif. Plus précisément, nous avons deux postes vacants au sein du Conseil, en plus Vice-présidente/Président élu et Secrétaire à l'adhésion. Les membres du conseil siègent pendant deux ans et remplissent jusqu'à deux mandats consécutifs. Tous ces postes ne requièrent pas d'expérience préalable. Devenir membre du conseil ou membre de l'exécutif est une merveilleuse façon de soutenir la SOC-SCO et d'aider à faire entendre votre voix pour façonner la direction de l'ornithologie canadienne. La SOC-SCO est particulièrement intéressée à diversifier le conseil, nous encourageons donc fortement les candidatures de personnes s'identifiant comme appartenant à des communautés sous-représentées. Si vous êtes intéressé.e à devenir membre du conseil ou à rejoindre l'exécutif, veuillez soumettre un court paragraphe sur vous-même, y compris pourquoi vous aimeriez faire partie du conseil de la SOC-SCO et ce que vous espérez apporter au poste, ainsi qu'une photo. Ces candidatures seront distribuées aux membres avant l'élection. Veuillez envoyer vos candidatures et toute question ou préoccupation à Danielle Ethier à dethier@birdscanada.org avant le 30 juillet 2024.



AFO-SCO-WOS 2024 Joint Meeting

July 29–August 1, 2024 | Peoria, Illinois

#AFOSCOWOS24



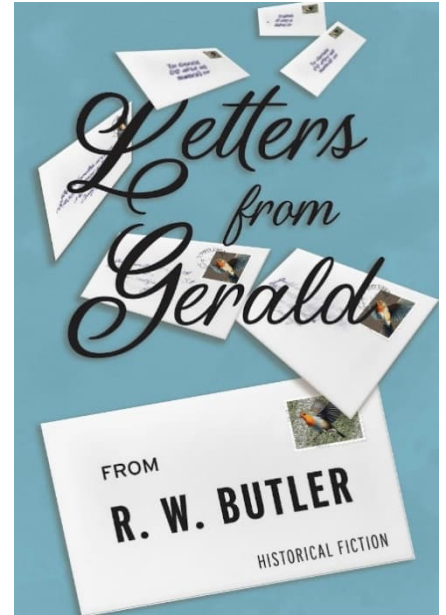
We're pleased to invite you to a joint meeting of the [Association of Field Ornithologists](#), the [Society of Canadian Ornithologists](#), and the [Wilson Ornithological Society](#), being held July 29–August 1 in Peoria, Illinois.

Nous sommes heureux de vous inviter à une réunion conjointe de l' [Association of Field Ornithologists](#) , de la [Société canadienne des ornithologues](#) et de la [Wilson Ornithological Society](#) , qui se tiendra du 29 juillet au 1er août à Peoria, Illinois.

<https://afoscowos2024.org/>

New Book from SCO-SOC Member Rob Butler Now Available!

Rob Butler, recipient of the 2022 Doris Huestis Speirs Award, has written an historical fiction novel that should appeal to many ornithologists. The story is set in post-war London during a period of social upheaval. A young Eleanor Hutchinson yearns to join the British Museum of Natural History as an ornithologist. Lacking education and social standing, Eleanor embarks on correspondence with a collector named Gerald who offers timely advice. However, the mysterious Gerald is not who he seems to be or who you might imagine. Ornithologists, and especially young women will find the story of interest as it delves into bird conservation in the UK and around the world, museums collecting and ornithological meetings. The book is available in hard cover, paperback, and as an eBook from [Amazon.ca](https://www.amazon.ca/) or [FriesenPress](https://www.friesenpress.com/). You can read the synopsis, see the trailer, and read the testimonials on Rob's website www.robbutler.ca.



Swainson's Hawk Population Modeling Project

A Swainson's Hawk Population Modeling Project is led by Christopher Vennum of New Mexico State University. The project is funded by the South-Central Climate Adaptation Science Center of the United States Geological Survey under a broader research initiative entitled Sustainable Raptor Take-or-Loss Limits in a Changing Climate. Chris Vennum and his research colleagues hope to make this a collaborative project with participation of researchers and banders of Swainson's hawks throughout North America.

A substantial body of research on Swainson's hawks also exists in Canada. In addition to data archived by the Bird Banding Office of the Canadian Wildlife Service, Environment and Climate Change Canada, there are detailed nest locations, data on reproductive failures and related trends that are held by the original banders. Josef Schmutz is a participant in the project and has contributed data on over 2,000 nests monitored in Alberta between 1975 and 2013. Joe is collaborating with Ed Rodger, Nature Saskatchewan, and Christy Morrissey, Department of Biology, University of Saskatchewan, to invite the help of students to summarize and eventually digitize the field records of the late C. Stuart Houston, whose complete set of field notes are held in the Archives Division of the University of Saskatchewan's libraries. Stuart has published and banded Swainson's hawks for over half a century in Saskatchewan.

Chris Vennum's project is promising at so many fronts including its focus on the entire North American Swainson's Hawk's breeding range. The project also will take stock of past trends and attempt to link these via integrated population models directly with climate variables and future climate scenarios to suggest a conservation scenario for the future.

The project is now underway but there is still time for other banders and researchers on Swainson's Hawks to join.

Bird Eggs of Canada – A new reference website for ornithologists in Canada

Ryan J. Fisher, Royal Saskatchewan Museum, Regina, Saskatchewan, Canada

There have been several amazing references developed to help individuals identify bird eggs, most notably the Peterson's Field Guide to North American Bird Nests (McFarland, Monjello, and Moskowitz 2021) and Nests, Eggs, and Nestlings of North American Birds, Second Edition (Baicich and Harrison 2005). Other well-known online resources such as Cornell's Birds of the World species accounts do sometimes provide photographs of eggs, but not necessarily for every species. While these reference guides have been essential for ornithologists over the last several decades they do suffer from some disadvantages. First, the *in-situ* photographs of nests provide excellent visual information on nest structures and egg colouration, however, these photographs can also suffer from inconsistent lighting, an inability to maintain consistency in terms of a camera's exposure and white balance, and an inability to include information such as scale bars. In light of these issues, the Royal Saskatchewan Museum decided to develop a new reference website (<https://birdeggsofcanada.ca/>) specifically to provide high-resolution and consistent colour photographs of the eggs of all the regular breeding birds in Canada using museum-grade egg specimens.

In 2021, we began by photographing the entire Royal Saskatchewan Museum's egg collection. This included 162 species, with a focus on mostly species that regularly breed in Saskatchewan. In 2022, we photographed an additional 152 species from the egg collection at the Royal Alberta Museum. This included additional prairie nesting birds, but also many boreal breeders (i.e., wood warblers) and seabirds. In 2023, we photographed eggs from the collection at the University of Saskatchewan, with a primary focus on wood warblers and also several seabirds. At this point we have photographs of 379 regularly breeding birds in Canada on the website.

Our website was launched in April 2024. The webpage for each species includes: 1 high resolution photograph (.jpg) of a single egg at rest on a standardized colour background, with scale bars and colour checker (Figure 1), 1 high-resolution photograph (.jpg) of a clutch of eggs at rest on a standardized colour background (Figure 2), and then some brief information on where the egg(s) used in the photographs are currently housed. We decided that adequate information on species' ranges, nesting structures, and clutch sizes is available elsewhere and so information on each species is kept to a minimum. Users are able to see a listing of available photographs within Orders or Families or use a text search option for Scientific or common names. Additional functionality includes: the ability to compare individual egg pictures of up to three species, information on how to get involved in various citizen-science activities, and a Contact Us page. The website is formatted appropriately for viewing on a desktop computer or mobile device. In addition to the photographs provided on our website, we have also provided all of the egg photographs for use in the Birds of the World species accounts which are now slowly being incorporated as individual species accounts are being updated.



Clockwise from top left: Clay-colored Sparrow (*Spizella pallida*) clutch, Killdeer (*Charadrius vociferus*) clutch, Vesper Sparrow (*Poocetes gramineus*) clutch, Western Meadowlark (*Sturnella neglecta*) clutch. All clutches held at the Royal Saskatchewan Museum. Photo credit: James Villeneuve (Merlin Images Inc).

We recognize the tremendous variability of bird egg colouration, size, and shape even within a species, but our goal is to provide a reference showing typical bird eggs from each regularly breeding species in Canada. In the future, we may consider additional photographs for each species. The website is focused on providing ornithologists and wildlife biologists with high-resolution standardized photographs of bird eggs, which are easily accessible while in the field and compliments information on bird eggs and nests that is available via other sources.

Acknowledgements

We would like to thank the Royal Saskatchewan Museum for funding the egg photography as well as website hosting. This work could not have been done without an amazing photographer, James Villeneuve. We would also like to thank Dr. Jocelyn Hudon and Dr. Corey Scobie (Royal Alberta Museum) and Dr. Tracy Marchant (University of Saskatchewan) for making their egg collections available for this endeavor.

Literature Cited

- [Peterson Field Guide to North American Bird Nests](#). McFarland, C. Monjello, M. & D. Moskowitz. 2021. HarperCollins Publishers, New York, New York, USA. 512 pages. ISBN 9780544963382.
- Nests, Eggs, and Nestlings of North American Birds; Second Edition. Baicich, P.J. & C.J.O. Harrison. 2005. Princeton University Press, Princeton, New Jersey, USA. 416 pages. ISBN 9780691122953.

Avian Conservation and Ecology Articles

Volume 19, Issue 1 May 2024 Continued

RESEARCH PAPERS

[Modeling Marbled Murrelet nesting habitat: a quantitative approach using airborne laser scanning data in British Columbia, Canada](#)

Cameron F. Cosgrove, Nicholas C. Coops, F. Louise Waterhouse, Tristan R. H. Goodbody

[Breeding season space use and habitat selection by Blue-winged Warblers in managed shrublands](#)

Kristin B. Fuoco, Darin J. McNeil, Cameron J. Fiss, Carol I. Bocetti, G. Burch Fisher, Jeffery L. Larkin

[Survival of fallen and returned rooftop nesting Least Tern chicks](#)

Elizabeth A. Forys, Marianne G. Korosy, Jeff S. Liechty

[Influence of human activity on gut microbiota and immune responses of Darwin's finches in the Galápagos Islands](#)

Jada N. Bygrave, Ashley C. Love, Maxine Zylberberg, Alyssa Addesso, Sarah A. Knutie

[Incorporating weather in counts and trends of migrating Common Nighthawks](#)

Stephen R. Kolbe, Gerald J. Niemi, Annie M. Bracey, Matthew A. Etterson, Alexis R. Grinde

[Field research guided by citizen science and monitoring data reveal a novel alpine breeding distribution and vegetation associations of a declining, habitat-specialist songbird in Colorado, USA](#)

Brett L. Walker, Aaron A. Yappert, Courtney L. Brennan, Christen M. Bossu, Andrew W. Jones

[Evaluating trade-offs in spatial versus temporal replication when estimating avian community composition and predicting species distributions](#)

Steven L. Van Wilgenburg, David A. W. Miller, David T. Iles, Samuel Haché, Charles M. Francis, David D. Hope, Judith D. Toms, Kiel L. Drake

[Effects of oil and gas development on duck nest survival in the Western Boreal Forest](#)

Matthew E. Dyson, Stuart M. Slattery, Bradley C. Fedy

[Geolocators, stable isotopes, and citizen science identify migratory timing, route, and spring molt of Smith's Longspurs](#)

Alexis Will, Heather McFarland, Christopher Latty, Abby Powell

[Abundance of Long-billed Curlews on military lands in the Columbia Basin](#)

Sharon A. Poessel, Elise Elliott-Smith, Sean P. Murphy, Susan M. Haig, Adam E. Duerr, Todd E. Katzner

[Intermittent and chronic noise impacts on hatching success and incubation behavior of Eastern Bluebirds \(*Sialia sialis*\)](#)

Kathryn E. Sieving, Yue Liu, Odile V. J. Maurelli

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SCO-SOC membership forms can be found at the link above. Current membership rates are provided below. SCO-SOC provides free membership to members of equity-denied communities. See our website for more information.

Student	\$15.00/year
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Retired	\$25.00/year
Regular	\$35.00/year (\$45.00/year international)
Sustained	\$75.00/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.

Please direct any suggested additions or edits to the website to the Society's webmaster, Jennifer Foote, at jennifer.foote@algomau.ca.

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 4-6 weeks later. Please send all submissions to Rob Warnock at warnockr@myaccess.ca. Disclaimer: *Picoides* is not a peer-reviewed journal; the publication of an article in *Picoides* does not imply endorsement by SCO-SOC.