BioLink

The Official Newsletter of the Atlantic Society of Fish and Wildlife Biologists

VOLUME 54, ISSUE 2 **December 2016**

Searching for Swallows and Swifts

Written by Amy-Lee Kouwenberg and Ally Manthorne

Who among you remembers when chattering swallows used to swoop out from under bridges or glide over the fields of your childhood haunts? It seems these memories are becoming more rare, given that aerial insectivores (swifts, swallows, nightjars), a group of birds specializing in a diet of flying insects, are declining more than any other bird group in Canada (The State of Canada's Birds, 2012). Over the last 40 years, three previously widespread species, Barn Swallow, Tree Swallow and Chimney Swift, have experienced population declines of 76%, 62% and 95%, respectively (Environment Canada – Breeding Bird Survey). Similarly drastic trends have been found in Atlantic Canada (2nd Maritimes Breeding Bird Atlas, 2015). The reasons behind these widespread declines are not fully understood but may include: decreasing availability of flying insects due to agricultural intensification, pesticide use and climate change; habitat loss; and human persecution due to concerns for health and safety (e.g. nests in chimneys, bird droppings, and perceived spread of pathogens).

Barn Swallow fledglings (Photos: Alison Patrick)

A common factor among Chimney Swifts and various species of swallow is that much of their nesting habitat is on private land. Unlike many other species at risk which might be rare and difficult to find, swallows and swifts can literally be found in our own backyards – and buildings! This means that landowners and communities can play an active role in conservation and recovery of these species. To this end, in 2015, Bird Studies Canada launched a new

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Don't miss this!

Do you have a research project, wildlife topic, event, photos, or other related information that you would like to see included in BioLink? If so, email Danielle Quinn (danielle.quinn@acadiau.ca) or Holly Lightfoot (hlightfoot@birdscanada.org)! We're always looking for content ideas and photos from our membership!

Swallows and Swifts *(continued)*

program providing information about swallows and swifts to the general public. This program includes an educational website, an online portal for reporting sightings and nests, and digital and print resources to support landowners in becoming good stewards for aerial insectivores. In the Maritimes, we also piloted a "Swallows and Swifts" survey which had two main goals: (1) to collect information about Chimney Swifts and swallows on private land, especially in barns and other structures used for nesting and (2) to gauge private landowners' knowledge and attitudes toward this group of birds. Also, reports of Chimney Swifts nesting in barns in southwestern Nova Scotia made us curious to investigate how widespread this phenomenon is, and why swifts are attracted to nest in barns. In the summer of 2016, we extended our pilot survey to a larger number of landowners and properties across a wider geographic area. In total, we visited 155 sites (42 in 2015 and 113 in 2016) around NS and southern NB.

Above: Through the scope, it's a Barn Swallow!

(Photos: Megan MacIntosh, Siobhan Darlington)

In both 2015 and 2016, our questionnaires revealed that most landowners were unaware of the conservation issues relating to aerial insectivores and that the

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We would like to thank all those who participated in the 2016 Spring Seminar. If you missed the day don't worry, see page 13 for a review. We look forward to the 2017 seminar!

We also want to thank all those who attended the 2016 Annual General Meeting in Summerside on PEI. If you have any have any photos to submitted from this even send them along to the Newsletter Editors!

Do you have a suggestion for the 2017 Spring Seminar theme? We'd love to hear from you!

The ASFWB Biolink is published twice a year. Articles and opinions do not necessarily reflect the views of the Society or its members. Thanks to all who have contributed photos and articles.

Visit our website at:
www.asfwb.ca

Swallows and Swifts *(continued)*

Chimney Swift is listed as a Species-At-Risk. However, the majority of respondents fostered a positive attitude toward swallows and swifts, and were enthusiastic about participating in their conservation. While over 80% of respondents reported having no concerns about swallows or swifts nesting on their properties, approximately half felt that "Chimney Swifts nesting in my chimney would be a fire hazard" (which is not the case). For those who did express concerns about swallows and swifts nesting on their property, it was almost always related to the mess associated with their feces. All landowners participating in the survey received a package with information about aerial insectivores, the challenges they face, and actions landowners can take to make their property more hospitable to these species. Given most landowners' positive and receptive attitude, we feel that more can be done to support landowners in stewardship for swifts and swallows.

Only one Chimney Swift nest was found in 2016 and none were found in 2015. In contrast, Barn Swallows were the most prevalent aerial insectivore found during both the 2015 and 2016 seasons. We collected detailed data on the characteristics of barns and surrounding habitat, order to better understand why some barns are chosen by Barn Swallows and some not. Despite the large variety of barn types, habitat and building features, one result stood out most clearly above all others: Barn Swallow nests were significantly more likely to occur in structures with at least one access point (e.g. doors, windows, large holes). Barn Swallows were also more likely to nest in large barns with metal roofing, but this seems to be because large, metal-roofed structures assessed in our study also had significantly more access holes.

Cliff Swallow nests (Photo: Megan MacIntosh and Siobhan Darlington)

If there is a take-home message from our results, it is this: landowners who wish to encourage swift and swallow nesting should keep barns open during the spring and summer! Also, we encourage landowners to continue searching for Barn Swallow and Chimney Swift nests in the peak or darkest, highest corner of their barns using a bright flashlight. Chimney Swifts are rarely heard or seen entering, so they are easy to miss! Your sightings will help us document and better understand populations of these lovely creatures.

Amy Lee and Ally (on mat. leave) work at Bird Studies Canada on aerial insectivores.

To participate in the landowner survey contact Amy Lee at:
marswifts@birdscanada.org

For more Information on Aerial Insectivores visit:
www.birdscanada.org/volunteer/ai

If you find a swifts or swallow (or any bird) nesting consider entering your data into Project NestWatch
www.birdscanada.org/volunteer/pnw/index.jsp

WE'VE MOVED!

Written by Danielle Quinn

The ASFWB executive committee is excited to announce the launch of our new Society website, found at *www.asfwb.ca*!

In April, 2016, we teamed up with Dalhousie University's Community Outreach Computer Science Course, a course designed to provide real-world experience for computer science students through projects submitted by community groups such as charities and non-profit organizations. In early May, we met with our student development team, (Eric, Carson, Charlotte, and Daniel), and discussed challenges with our previous website. We soon established the primary requirements that we wanted to meet, including: the implementation of a content management system, a re-design of the website, an updated payment system, a scholarship portal where scholarship recipients could post updates about their research, and the documentation and training that would be required for the Society to manage and maintain the website.

The past couple of months has seen our ASFWB Web Site Manager Greg Johnson hard at work editing and updating content, and launching the site publicly! Some of our favourite features of the new site include blog posts about recent events and research, and the ability to easily donate to the scholarship fund online!

We hope you all take a moment to explore the new, always changing, website. A huge thank you goes out to Dalhousie University, our amazing student development team, and Greg Johnson for all his hard work!

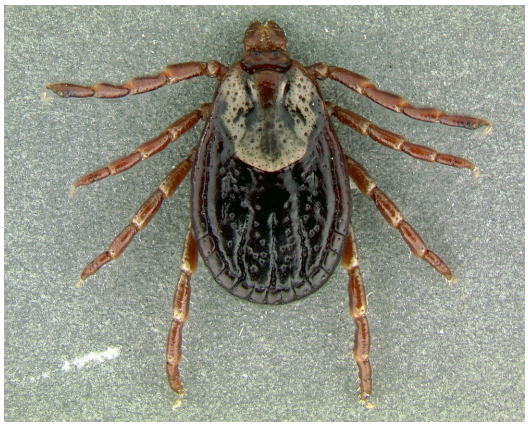
What's in your gut, leftovers or lunch?

Written by Kami Harris

I recently attended the ASFWB meeting in Summerside, PEI and had the honour of taking home the 2nd place prize student presentation for my talk "What's in your gut, leftovers or lunch? Determining if tick gut contents are blood meal remnants or a result of interrupted feeding." At Mount Allison University in Sackville, NB our lab receives hundreds of ticks per year as part of the surveillance program conducted by my supervisor, Dr. Vett Lloyd. While cataloging our wild-caught, unfed, unengorged ticks we noticed that some blood was visible in the gut of the ticks. After consulting with an entomologist we were told that since ticks use a blood meal to acquire the nutrients necessary to molt to the next life stage, some blood will remain in the gut after the molting process is complete. I found this explanation unsettling, and after reviewing the images in our tick bank, I figured out why. Our surveillance program relies heavily on community involvement and many of the ticks submitted are removed from pets and people. Unengorged ticks that were found attached and feeding on a mammalian host, ie: had lunch in their gut, were virtually indistinguishable from ticks that had leftovers in their gut. If we couldn't visually distinguish them, could we quantitatively distinguish between ticks that have previously fed and ticks that have molted but not yet fed? This is when I posed the question to my ticks – What's in your gut, leftovers or lunch?

Above: Black-legged Tick (Dermacentor variabilis; Photo: M.Smith)

Below: Wood Tick Ixodes scapularis; Photo: G.Alpert)



To contribute to Kami's research and the many other projects in the lab, visit :

www.mta.ca/Community/Research_and_creative/Tick_and_Lyme_disease_research/Tick_testing/Tick_testing/

Meet the new VP of Student Affairs

Lita O'Halloran is a Masters student at Acadia University in Wolfville, Nova Scotia studying the population dynamics of striped bass. She earned her undergraduate degree ('16) at Acadia in Biology. Previous to that she completed two diplomas in Ecosystem Management ('13 & '12) at Sir Sandford Fleming College in Lindsay, Ontario. Lita has a wide variety of interests in the environmental field and has worked on projects such as tallgrass prairie and sand dune restoration, invasive species outreach, and watershed management. In her spare time Lita can be found restoring classic cars and volunteering on the local search and rescue team.

The Importance of a Field Course

Written by Amy Prescott

Bon Portage Island (Photo: E. Vaasjo)

In my mind, I am the type of biology major who knows they are going to medical school. I am the type of biology major who has this deep, profound interest in microbiology rather than macrobiology. I am the type of biology major who is inclined to focus upon the complex and intricate world of tiny things as opposed to the way that multicellular organisms relate to one another. I am the type to pride oneself in the ability to distinguish between the convoluted biological processes of cellular communication as compared to the somewhat indeterminate science of how organisms relate to one another. Or so, I thought. Try as I might to ignore it, we exist in the world as it is, living, breathing, and decomposing. Though we cannot exist without our microscopic determinants – the large field is where we gain our credibility and therefore our existence. One tends to forget this, as we are focused in the academic pursuit of science and knowledge. As budding scientists, we have a tendency to focus more on smaller and smaller particles. However, science exists at all stages of complexity, whether it be the smallest stages of life, or the large, multicellular organisms that constitute the study of biology as we know it today. While it is important to understand our origins, we exist in a larger ecological picture, and we affect said environment as we move through our world each and every day.

I was first drawn toward the Bon Portage field course at the persuasion of a close friend. As BIOL 3013 counted as a full three hour a week class, an additional fall credit, and as it was apart of the biology core as a biodiversity course, what more could I ask for? All that was required of me was two weeks sacrifice of my summer, and the course enrollment fee. What I drew from the course was more than I had bargained for. Bon Portage renewed my passion in biology, the passion that had me signing up to dedicate 100+ hours to the course load. When you are removed from the real world experience, one tends to forget the real world applications of a biologist's actions. When thinking from a purely scientific approach, it is easy to remove yourself from the natural world. However when immersed in the field, one can visibly see the interactions between our objective understandings and the living, breathing

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Field Course *(continued)*

ecological world. The Bon Portage field course reminded me of the reasons why I fell in love with the scientific study of life in the first place.

Bon Portage gave me hands on experience to view biological processes that I would have only had the privilege of learning the theory of in class. Before, the idea of waking up before the sun to tag birds trapped in towering nets among the forest's understory would have unsettled me. I could not have pictured myself stomping through worn down mossy trails hunting mycorrhizal fungi fruiting bodies and actually enjoying myself. Never would I have seen myself reaching into a dark, damp, mysterious burrow in search of a fluffy petrel chick and measuring its physical properties for population estimates. Bon Portage showed me how to be comfortable sleeping in the confines of arachnids despite my initial unrest. The island taught me how to live without taking a shower for fourteen days and still remain completely at-ease in a worn out baseball cap and a sweater that I had not changed for three days on end.

Banding birds (Photo: H. Lightfoot)

I expected myself to finish the Bon Portage field course with an additional credit to my diploma and extra time on my fall course load agenda. Instead, the Bon Portage field course taught me how to remain immersed in the field as compared to comfortable in the realm of theory. For all Acadia Biology majors looking to extend their realm of understanding, I implore you to enroll. Bon Portage not only left me with a newfound understanding of my own environment, but with a renewed context of myself in relation to my environment.

Learning about Leach's Storm Petrels (Photo: E. Mills)

Source: The Athenaeum, Acadia's Student Newspaper

Information on Field Courses in the Maritimes:

Acadia University: www.acadiau.ca/%7Edshutler/PIsland.html

Dalhousie University: www.dal.ca/faculty/science/biology/seaside-program/program-details/list-of-classes.html

For more specific information contact your Course Advisor or Head of Biology

Recent Literature

Looking forward to getting cozy with a good read this winter? Keep up to date with fish and wildlife research publications from Atlantic Canada and beyond.

Adams, B. K., Cote, D. and Fleming, I. A. (2016), Stochastic life history modeling for managing regional-scale freshwater fisheries: an experimental study of brook trout. Ecol Appl, 26: 899–912. doi:10.1890/14-2379

Archibald DW, James MC (2016) Evaluating inter-annual relative abundance of leatherback sea turtles in Atlantic Canada. Mar Ecol Prog Ser 547:233-246 doi:10.3354/meps11648

Barry, Melanie, Richard Troy McMullin, Andrew Horn. 2015. Edge effects on the lichen genus *Lobaria* in Atlantic Canadian Forests. The Forestry Chronicle 91:534-540, 10.5558/tfc2015-092

Béguer-Pon M, Ohashi K, Sheng J, Castonguay M, Dodson JJ (2016) Modeling the migration of the American eel in the Gulf of St. Lawrence. Mar Ecol Prog Ser 549:183-198 doi:10.3354/meps11706

Boire N, Zhang S, Khuvis J, Lee R, Rivers J, Crandall P, et al. (2016) Potent Inhibition of Pseudogymnoascus destructans, the Causative Agent of White-Nose Syndrome in Bats, by ColdPressed, Terpeneless, Valencia Orange Oil. PloS ONE 11(2): e0148473. doi:10.1371/journal.pone.0148473

Bond, Alexander L. and Antony W Diamond. 2016. Aberrant Colouration in the Atlantic Puffin (*Fratercula arctica*), the Common Murre (*Uria aalge*), and the Thick-billed Murre (*U. lomvia*) from Atlantic Canada. Canadian Field-Naturalist 140(2):140-145.

Bond, Alexander L., Rebecca A. Standen, Antony W. Diamond, Keith A. Hobson. 2016. Sexual size dimorphism and discriminant functions for predicting the sex of Atlantic Puffins (*Fratercula arctica*). Journal of Ornithology 157(3): 875-883. doi:10.1007/s10336-016-1332-8

Broell, Franziska, Andrew D. Taylor, Matthew K. Litvak, Andre Bezanson and Christopher T. Taggart. 2016. Post-tagging behaviour and habitat use in shortnose sturgeon measured with high-frequency accelerometer and PSATs. Animal Biotelemetry 4:11 DOI: 10.1186/s40317-016-0103-

Cameron, Robert P. And Brad Toms. 2016. Population decline of endangered lichen *Erioderma pedicellatum* in Nova Scotia, Canada. Botany 94:565-571, 10.1139/cjb-2016-0052

Atlantic Puffin (Photo: A Kouwenberg)

Campana, Steven E. 2016. Transboundary movements, unmonitored fishing mortality, and ineffective international fisheries management pose risks for pelagic sharks in the Northwest Atlantic. Canadian Journal of Fisheries and Aquatic Sciences 73:1599-1607 10.1139/cjfas-2015-0502

Chalupnicki, Marc A. and Dawn E. Dittman. 2016. North American sturgeon otolith morphology. Copeia 104 (1): 260-266 doi: http://dx.doi.org/10.1643/CI-14-07

Chmura GL, Kellman L, van Ardenne L,Guntenspergen GR (2016) Greenhouse Gas Fluxes from Salt Marshes Exposed to Chronic Nutrient Enrichment. PLoS ONE 11(2): e0149937. doi:10.1371/journal.pone.014993

Clarke, C. N., Fraser, D. J. and Purchase, C. F. (2016) Lifelong and carry-over effects of early captive exposure in a recovery program for Atlantic salmon (Salmo salar). Anim Conserv, 19: 350–359. doi:10.1111/acv.12251

Cooke, S. J., Hogan, Z. S., Butcher, P. A., Stokesbury, M. J. W., Raghavan, R., Gallagher, A. J., Hammerschlag, N. and Danylchuk, A. J. (2016), Angling for endangered fish: conservation problem or conservation action? Fish and Fisheries 17: 249–265. doi:10.1111 /faf.12076

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Cooke, Steven J., Jake C. Rice, Kent A. Prior, Robin Bloom, Olaf Jensen, David R. Browne, Lisa A. Donaldson, Joseph R. Bennett, Jesse C. Vermaire and Graeme Auld. 2016. The Canadian context for evidence-based conservation and environmental management. Environmental Evidence 5:14

Cosham,Jessica, Karen F. Beazley, and Chris McCarthy. 2016. Environmental factors influencing local distributions of European green crab (Carcinus maenas) for modeling and management applications. Environmental Reviews 24:244-252, 10.1139/er-2015-0053

Photo: Oregon Sate University

Crewe, Tara L., Denis Lepage, and Philip D. Taylor. 2016. Effect of sampling effort on bias and precision of trends in migration counts The Condor 118 (1): 117-138. doi: http://dx.doi.org/10.1650/CONDOR-15-78.

Downie, Adam T., and James D. Kieffer. 2016. The physiology of juvenile shortnose sturgeon (Acipenser brevirostrum) during an acute saltwater challenge. Canadian Journal of Zoology 94:677-683, 10.1139/cjz-2016-0013

Dracup, Evan C., Daniel M. Keppie, Graham J. Forbes. 2016. The short-term impact of abundant fruit upon deer mouse (*Peromyscus maniculatus*), southern red-backed vole (Myodes gapperi), and woodland jumping mouse (*Napaeozapus insignis*) populations. Canadian Journal of Zoology 94:555-563. 10.1139/cjz-2015-0234

Drapeau, P., Villard, M.-A., Leduc, A. and Hannon, S. J. (2016), Natural disturbance regimes as templates for the response of bird species assemblages to contemporary forest management. Diversity Distrib., 22: 385–399. doi:10.1111/ddi.12407

Duquette, M.-C., Compérot, A., Hayes, L. F., Pagola, C., Belzile, F., Dubé, J., and Lavoie, C. (2016) From the Source to the Outlet: understanding the Distribution of Invasive Knotweeds along a North American River. River Research and Applications 32: 958-966. doi: 10.1002/rra.2914

Photo: H. Lightfoot

Falconer, C. Myles, Greg W. Mitchell, Philip D. Taylor, and Douglas C. Tozer, 2016. Prevalence of Disjunct Roosting in Nesting Bank Swallows (Riparia riparia) The Wilson Journal of Ornithology 128 (2): 429-434. doi: http://dx.doi.org/10.1676/1559-4491-128.2.429

Flockhart, D. T. Tyler, Greg W. Mitchell, Richard G. Krikun, and Erin M. Bayne. 2016. Factors driving territory size and breeding success in a threatened migratory songbird, the Canada Warbler. Avian Conservation and Ecology 11(2): 4

Forde, T.C., Nedimovic, M.R., Gibling, M.R. et al. 2016. Coastal Evolution Over the Past 3000 Years at Conrads Beach, Nova Scotia: the Influence of Local Sediment Supply on a Paraglacial Transgressive System. Estuaries and Coasts 39: 363. doi:10.1007/s12237-015-0016-6

Fournier, A. M. V. and Bond, A. L. (2015), Volunteer field technicians are bad for wildlife ecology. Wildl. Soc. Bull., 39: 819–821. doi:10.1002/wsb.603

Gallant, Daniel, Lisa Léger, Éric Tremblay, Dominique Berteaux, Nicolas Lecomte, Liette Vasseur. 2016. Linking time budgets to habitat quality suggests that beavers (Castor canadensis) are energy maximizers. Canadian Journal of Zoology, 2016, 94:671-676, 10.1139/cjz-2016-0016

Continued on page 10

Recent Literature *(continued)*

Giroux, Jean-François, Martin Patenaude-Monette, Florent Lagarde, Ericka Thériot, Pierre Brousseau, and Pierre Molina. 2016. The Rise and Fall of Ring-Billed Gulls (*Larus delawarensis*) in Eastern North America. Waterbirds 39 (sp1): 87-98 doi: http://dx.doi.org/10.1675/063.039.sp10

This is one of over a dozen Canadian gull papers in the special issue of the **WATERBIRDS** (April 2016)

Photo: M. Thompson

Guitard, Nicholas. 2016. The Lost Wilderness: Rediscovering W.F. Ganong's New Brunswick. Goose Lane Editions, Fredericton.

Kummer, Justine A. Erin M. Bayne, and Craig S. Machtans. 2016.Use of citizen science to identify factors affecting bird–window collision risk at houses.The Condor 118 (3): 624-639 doi: http://dx.doi.org/10.1650/CONDOR-16-26.

Lawrence, Elizabeth R., Anna Kuparinen, Jeffrey A. Hutchings. 2016.Influence of dams on population persistence in Atlantic salmon (*Salmo salar*). Canadian Journal of Zoology, 94:329-338, 10.1139/cjz-2015-0195

LaZerte, S.E. and D.L. Kramer. 2016.Activity of eastern chipmunks (Tamias striatus) during the summer and fall. Canadian Journal of Zoology, 2016, 94:685-695, 10.1139/cjz-2016-0064

Li, Jiabai, David Percival, Jeff Hoyle, Jin Yue, Jane White, Krista Head, Kris Pruski. 2015. Environmental effects on fruit composition of cloudberry/bakeapple (*Rubus chamaemorus* L.) grown in southern Labrador, Canada. Canadian Journal of Plant Science 95:1167-1175 10.4141 /cjps-2015-130

Lopez, Alfonso, Enrique Aburto, Kathleen Jones, William Robbins, and Gary Conboy. 2016. *Eucoleus bohemi* infection in the nasal conchae and paranasal sinuses of red fox (Vulpes vulpes) on Prince Edward, Canada. Journal of Wildlife Diseases 52 (2): 279-285.

MacDonald, Edward, Joshua MacFayden, and Irené Novaczek (editors). 2016. Time and a Place, an Environmental History of Prince Edward Island. McGill-Queens University Press, Montreal and Island Studies Press, Charlottetown 442 pages.

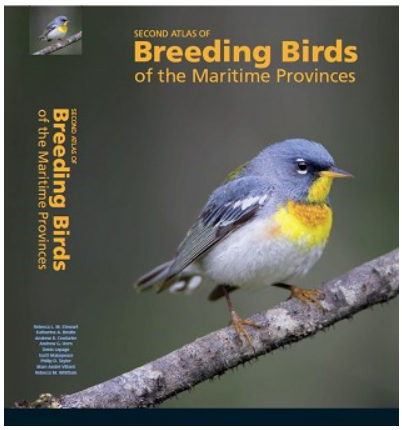
Mallory, Mark L., Mark F. Elderkin, Nora C. Spencer, Taylor A. Betsch, Amy C. Russell, and Pamela L. Mills. 2016. Diet of *Calidris maritima* (Purple Sandpiper) during the Winter in Nova Scotia, Canada. Northeastern Naturalist 23 (2): 205-210

Mason, Sara J. and Guy M. Narbonne. 2016.Two new Ediacaran small fronds from Mistaken Point, Newfoundland. Journal of Paleontology 90 (2): 183-194 http://dx.doi.org/10.1017/jpa.2016.14

McAlpine,Donald F., Jonathan Cormier and Isaac G MacLean. 2016. Second Report of the Gray Fox, *Urocyon cinereoargenteus*, in New Brunswick. Canadian Field-Naturalist 140(2): 164-166

Mechai S, Margos G, Feil EJ, Barairo N,Lindsay LR, Michel P, et al. (2016) Evidence for Host Genotype Associations of Borrelia burgdorferi Sensu Stricto. PLoS ONE 11(2): e0149345. doi:10.1371/journal.pone.0149345

Quick Tip: To find an article, paste the DOI in your browser.



Its here! After a long wait, the Second Atlas of Breeding Birds of the Maritime Provinces has been printed and distributed. Well attended book launch events were held in all the Maritime provinces allowing individuals to pick up their copies and to celebrate the culmination of lots of hard work! If you didn't get a copy there are a few French versions of the book left for sale (contact: ltranquilla@birdscanada.org) or visit: **www.mba-aom.ca/jsp/toc.jsp** for the online version!

Thank-you to all the volunteers for your hard work!

Recent Literature *(continued)*

Milton, G. R., Iverson, S. A., Smith, P. A., Tomlik, M. D., Parsons, G. J. and Mallory, M. L. (2016), Sex-specific survival of adult common eiders in Nova Scotia, Canada. Jour. Wild. Mgmt., 80: 1427-1436.

Miranda, Brian R., Brian R. Sturtevant, Isabelle Schmelzer, Frédérik Doyon, Peter Wolter. 2016. Vegetation recovery following fire and harvest disturbance in central Labrador - a landscape perspective. Canadian Journal of Forest Research, 2016, 46:1009-1018, 10.1139/cjfr-2015-0516

Mojica EK, Watts BD, Turrin CL (2016) Utilization Probability Map for Migrating Bald Eagles in Northeastern North America: A Tool for Siting Wind Energy Facilities and Other Flight Hazards. PloS ONE 11(6): e0157807. doi:10.1371/journal. pone.0157807

Nadeau Fortin, Marie-Audrey, Luc Sirois, Martin-Hugues St-Laurent. 2016. Extensive forest management contributes to maintain suitable habitat characteristics for the endangered Atlantic-Gaspésie caribou. Canadian Journal of Forest Research 46:933-942 10.1139/cjfr-2016-0038

Namayandeh, Armin. 2016. Re-description of the female of *Meropelopia flavifrons* and *Chaetocladius perennis*, and larvae of *Chaetocladius perennis* (Diptera: Chironomidae), with new geographical records from Atlantic Canada. J. Acadian Entomological Soc. 12: 7-21 http://www.acadianes.org/journal.php

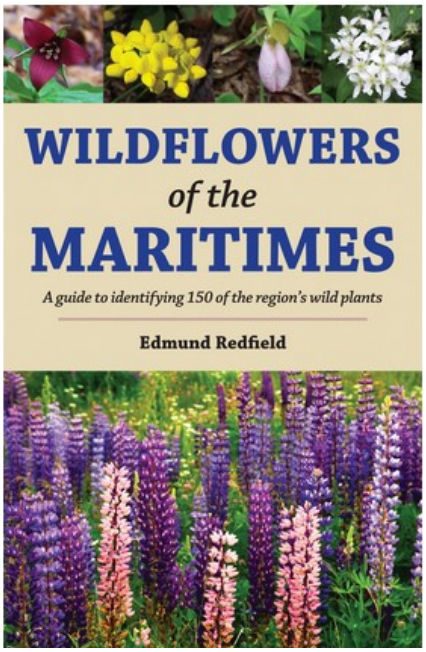
Nisbet, I.C.T. and R.R. Veit, 2015. An explanation for the population crash of Red-necked Phalaropes *Phalaropus lobatus* staging in the Bay of Fundy in the 1980s. Marine Ornithology 43: 119-121.

Olafsson, Kristinn, Sigurdur M. Einarsson, John Gilbey, Christophe Pampoulie, Gudmundur O. Hreggvidsson, Sigridur Hjorleifsdottir, and Sigurdur Gudjonsson. 2016. Origin of Atlantic salmon (Salmo salar) at sea in Icelandic waters**.** ICES J. Marine Science 73 (6): 1525-1532 doi:10.1093/icesjms/fsv176

Paxton, C. G. M. (2016), Unleashing the Kraken: on the maximum length in giant squid (Architeuthis sp.). J Zool, 300: 82-88. doi:10.1111/jzo.12347

Redfield, Edmund. 2016. Wildflowers of the Maritimes. Nimbus Publishing Halifax.

Ringelman, K. M., Williams, C. K., Devers, P. K., Coluccy, J. M., Castelli, P. M., Anderson, K. A., Bowman, J. L., Costanzo, G. R., Cramer, D. M., Dibona, M. T., Eichholz, M. W., Huang, M., Lewis, B., Plattner, D. M. and Yerkes, T. (2015), A meta-analysis of American black duck winter habitat use along the Atlantic Coast. Jour. Wild. Mgmt., 79: 1298-1307. doi:10.1002/jwmg.958



Recent Literature *(continued)*

Robertson, Gregory J. and Keith G. Chaulk. 2016. Colony Dynamics of Large Gulls Nesting in Labrador, Canada. Waterbirds 39 (sp1): 36-43 doi: http://dx.doi.org/10.1675/063.039.sp11

Ronconi, Robert A., Jessica R. Stephens, Zoe J. Crysler, Ingrid L. Pollet, Danielle T. Fife, Andrew G. Horn, and Philip D. Taylor. 2016. Distribution, Abundance and Trends of Gulls and Terns Breeding on Sable Island, Nova Scotia, Canada. Waterbirds 39 (sp1): 44-56. doi: http://dx.doi.org/10.1675/063.039.sp11

Sheffield, Cory S., Leif Richardson, Syd Cannings, Hien Ngo, Jennifer Heron, Paul H. Williams. 2016. Biogeography and designatable units of Bombus occidentalis Greene and B. terricola Kirby (Hymenoptera: Apidae) with implications for conservation status assessments. J Insect Conservation 20 (2): 189-199. doi:10.1007/s10841-016-9853-2

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Photo: C. Pytlak

A Friendly Reminder: We are still raising funds for the Gilbert R. Clements Scholarship

If you would like to donate to the scholarship you can do so:

Online: www.hollandcollege.com/alumni-and-friends/give-to-holland-college

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By phone: 902-566-9590

Cheques are payable to the Holland College Foundation. Please include a note and/or indicate the award name in the cheque memo.

A Review of the 2016 ASFWB Spring Seminar: "Environmental Assessments"

Written by Danielle Quinn

The 2016 ASFWB Spring Seminar was held on April 21 at Mount Allison University in Sackville, New Brunswick. Nearly 80 people attended the day-long seminar, which focused on the theme of "Environmental Assessments". A diverse list of speakers presented their perspectives on environmental assessments, including the role that consultants play, and the roles and responsibilities of provincial and federal government in the environmental assessment process.

In the morning, Eric Tremblay reviewed the major infrastructure investment and subsequent environmental assessment of the repair of nearly 24 km of Highway 117, which runs through Kouchiboguac National Park, New Brunswick. He spoke of the major challenges involved in the project, including the removal and replacement of 28 culverts, relocation of 6 beaver colonies, and installment of amphibian crossings (tunnels) which aim to reduce the risk of amphibian mortality on the highway.

David Mazerolle joined us from the Atlantic Canada Conservation Data Center to discuss its contribution in the environmental assessment process. With nearly 1.3 million records of terrestrial species in the Maritimes alone, including almost 300,000 records of rare species, the Center facilitates by assembling appropriate data and providing information and expertise on plants, animal, and ecological communities associated with the project.

After lunch, Rachel Gautreau from the Canadian Wildlife Service (CWS) highlighted the roles of the organization, including expertise in migratory birds, terrestrial species at risk, and wetland conservation.

The ASFWB want to thank all those who came out to the seminar and look forward to seeing everyone again next spring!

Rehabilitation of Highway 117, November 2015. (Photo: Parks Canada)

CONSERVATION NEWS FROM SOUTHERN NOVA SCOTIA

A new population of Blanding's Turtles

Following a tip from local fishermen last fall, volunteers with the Mersey Tobeatic Research Institute found a new population of the endangered Blanding's Turtles in southern Nova Scotia! This discovery is the fourth known population in NS and could be between 100 and 200 adults which represents a significant find.

There are four species of turtles in Nova Scotia, Snapping Turtles, Wood Turtles, Painted Turtles; however, Blanding's are most at risk. Adult Blanding's are vulnerable to roadside accidents, and eggs to predation by racoons and heat. Furthermore, Blanding's don't reach maturity until they are 20, meaning they have to survive a long time before they can reproduce. However, they can live and stay reproductive into their 70's.

Looking for turtles can be "painstakingly slow". MTRI and other conservationist have been monitoring Blanding's Turtles in SW Nova for close to 30 years. This summer MTRI volunteers used visual surveys, live-trapping, and radio-tracking to begin to understand this population's range and size. As of October 40 adult Blanding's Turtles were identified in this new population!

Photo: H. Lightfoot

Adapted from CBC News Article and MTRI Summer Newsletter.

A glimmer of hope for Nova Scotia's bat population

The discovery of a large colony of healthy little brown bats is a "glimmer of hope" for the Nova Scotia bat population that has been devastated by white-nose syndrome. Mark Elderkin, the provincial species at risk biologist with NS Department of Natural Resources, said over the past five years, the disease has killed an estimated 98 per cent of bats from major winter hibernation sites on mainland

However, this summer a colony of more than 350 bats (females and young) were found in an area in the southwestern part of the province. This area was historically home to bats, but given the dwindling population across the province, this discovery was really quite unprecedented.

White-nose syndrome was introduced from Eupope and is now wide spread across eastern North America. It was also reported for the first time west of the Rockies this spring in BC. White-nose is a fungal disease which causes bats wake up early from hibernation leaving them exposed to dehydration, starvation and the elements.

Because of the rapid decline in bat populations, Nova Scotia's three species of bats, Little Brown Bats, Northern Long-eared bats and Tri-coloured Bats, were added to NS's protected species list in 2013. Elderkin said this discovery, which is the largest known maternity colony in the province, is a sign of hope for the struggling bat population.

Photo: Ryan von Linden/ New York Department of Environmental Conservation

For the last three years, NS DNR has been encouraging the public to report bat sightings. These records provide valuable information on the current distribution and some sites will be visited next summer, to see if other colonies are surviving.

Adapted from CBC News Article

To report a bat sighting visit www.batconservation.ca or call 1-866-727-3447

BECOME A MEMBER TODAY!

The Atlantic Society of Fish and Wildlife Biologists

H Lightfoot

Regular Membership: $20/year

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Use PayPal and become a member online at

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or contact the Society's Treasurer for other payment options!

- Network of professional contacts, including biologists, professors, managers and researchers from across Atlantic Canada
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Name:
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ASFWB Fish and Wildlife Research Grant

The **ASFWB Fish and Wildlife Research Grant** was established in the fall of 1994 to assist members who are conducting or supervising wildlife or fisheries research in Atlantic Canada. The grant provides funding up to $500 annually for research projects. Any aspect of fish and wildlife research will be considered, but projects with applied management goals will receive preference. Applicants must be members of ASFWB. Projects that are largely government sponsored or funded are not eligible for this award. For more information, go to:

http://asfwb.ca/the-asfwb-wall-of-fame/asfwb-fish-wildlife-research-grant/

Upcoming Events

December Christmas Bird Counts: To participate in North America's longest-running Citizen Science project visit www.birdscanada.org/volunteer/cbc/ for a count circle near you!

November – early April: Project Feeder Watch, a winter long survey of the birds that visit your feeders. For more information or to participate visit: www.birdscanada.org/volunteer/pfw/

Every year, Ducks Unlimited Canada holds hundreds of fundraising events that are open to the public, and encourage everyone to attend. For more information, go to www.ducks.ca/events

Stay tuned for information on the ASFWB Spring Seminar!

ASFWB MEMBERSHIP APPLICATION / RENEWAL FORM

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I would like to receive newsletters, notices, announcements, etc. by email ☐ regular mail ☐

Visit our website (www.asfwb.ca) to with PayPal. For other options please contact the Society's Treasurer Lee Millett (l_millett@ducks.ca or 902-667-8726).