

Ontario Chapter TWS Newsletter - December 2018

PRESIDENT'S MESSAGE

Peter Hettinga
Longbow Lake, Ontario

Greetings fellow wildlifers! I hope this newsletter finds everyone in good health and even better spirits. This is the second newsletter produced by the Ontario Chapter TWS since all the Executive Committee positions were filled in June 2017. This newsletter is intended to bring the Ontario Chapter membership up to speed with what has occurred in the chapter this past year and encourage new members to become interested in the Ontario Chapter and what it has to offer.

At the time this newsletter is being written, we are up to 50 members with different backgrounds studying wildlife and/or playing a role in wildlife management. Most chapter members permanently or temporarily call Ontario home and have interests in wildlife populations that occur in or extend beyond Ontario's provincial boundaries.

With the potential for chapter members to have research priorities as unique and varied as Ontario's many wildlife species, the philosophy uniting many TWS members is our commitment to developing scientific expertise around the study and management of wildlife species in Ontario.

In Spring 2018, the Ontario Chapter awarded its first student travel grant followed up by a second travel grant which was awarded in Fall 2018. The recipients of these travel awards are some of the newest Ontario Chapter members and will be making use of these awarded funds to present their research findings at different scientific forums. Their research topics are also showcased in this newsletter in the form of the abstracts that were submitted in their awards applications. It is the intention of our Awards Committee to make another student travel grant available sometime in mid to late 2019.

The Chapter Executive has completed its review and preparation of amendments to the Ontario Chapter bylaws. First developed in 2009, the chapter bylaws were the subject of some review

and revision in 2010 which we have considered and carried forward as well as introduced several more revisions and edits. For those interested in reviewing the chapter bylaws they are available on the Ontario Chapter website at www.octws.ca/bylaws. Some of the important changes to the bylaws are identified later in this newsletter but include introducing the ability for chapter members to vote electronically in elections and limiting the term of the president position to a single year. For the proposed bylaw revisions to go forward, there needs to be a 2/3 vote in favour. So please, vote now! <https://www.surveymonkey.com/r/2G8RNH7>.

The Ontario Chapter continues to play a role within the Canadian Section TWS and participates in regularly held Executive Committee meetings as well as Standing and Ad-Hoc committees requiring chapter level representation. Further information on the Canadian Section and its committees can be found at www.cstws.ca.

Looking forward at future initiatives, the Ontario Chapter will be holding elections for the chapter Executive Committee roles of President-Elect, Secretary, Treasurer and Board Member. If you or someone you know might be interested in putting their name forward as a candidate to serve in 2019-2020 please notify us at info@octws.ca. Alternately, if you are interested in participating in a committee that is run at the Chapter or Section level that can also be arranged as we would be happy to have the extra help.

The Ontario Chapter wishes to continue facilitating scientific discussions on wildlife issues in this coming year. To do this in a manner that suits the membership we would like to hear from you on what you feel we should pursue. This can include more of the same or ideas we have not yet considered. Please let us know at info@octws.ca.

Best wishes for the New Year!

ONTARIO CHAPTER EXECUTIVE COMMITTEE

Peter Hettinga – President

Danielle Ethier – President-Elect

Neil Dawson – Past-President

Morgan Hawkins – Secretary – Treasurer

Emilie Kissler – Board Member

Matt Dyson – Board Member



Red fox off Highway 105

Spring 2018 Student Travel Award Winner

Kelly McLean, University of New Brunswick

The role of wetland buffer width in maintaining American Black Duck populations in New Brunswick commercial forests

Commercial forestry is an important industry in New Brunswick (NB), Canada, and should balance high economic yield with a strong environmental responsibility. One way to achieve this is to forgo harvesting in forested zones (buffers) around waterbodies. Buffers are important to the industrial forest as they



Kelly McLean with a northern pintail

can reduce the negative effects of land uses adjacent to aquatic systems. In NB, forestry operations must maintain $\geq 30\text{m}$ buffers around waterbodies. However, except for fish, there has been little empirical examination of the wildlife response to NB's $\geq 30\text{m}$ buffer requirement. Waterfowl are potential indicators of ecosystem health in eastern North America because they experience perturbations in both terrestrial and aquatic ecosystems. The American Black Duck ("black duck"; *Anas rubripes*) is a socially, economically, and ecologically important waterfowl species in NB. However, midwinter inventories conducted on black duck wintering grounds in the United States demonstrated a $>50\%$ decline in black duck populations from the 1950's to the 1980's. Management has increased black duck populations in some areas, except in the commercially forested region of interior NB where they exhibit notable local extirpations. We examine the role of wetland buffer width in the persistence of black duck populations.

We used a geographic information system to overlay forest harvest data with georeferenced black duck observation data from 1996-2017 in 13 plots surveyed by the Canadian Wildlife Service. Plots are 25km^2 and surveyed in a rotational schedule (among years). Preliminary results suggest that a smaller mean distance to harvest from a wetland edge has a negative influence on the number of black duck observations. We will use these results to develop a dynamic model to determine the optimal buffer size to maintain black duck populations in NB and conduct field experiments to assess the effects of buffer width on black duck nest success and susceptibility to anthropogenic disturbance.



Kelly and Matt at TWS 25th Annual Conference in Cleveland, Ohio

Fall 2018 Student Travel Award Winner

Aleksandra Dolezal, Department of Integrative Biology, University of Guelph

Local and landscape factors drive arthropod assembly in agricultural landscapes



Honey bees on globe thistle

During this past decade, we hear the story of crashing arthropod populations globally. Arthropods are critical components of terrestrial food-webs and provide vital ecosystem services relating to pollination services, biological control, nutrient cycling and provide a food source to higher trophic levels. Agricultural intensification is thought to be the number one driver of this collapse.



Aleksandra Dolezal

However, the extent of these losses and the causes of the declines in agricultural landscapes are not fully understood, and not representative of entire arthropod communities. In Canada, most of the works have been carried out mainly in natural areas, such as forest ecosystems. There is no existing published data found in agricultural landscapes in Ontario in relation to local and landscape drivers. Yet, such information is important for arthropod biodiversity conservation especially in terms of management of insect herbivores. My MSc research with Andrew MacDougall fills these research gaps as we investigate the drivers of whole arthropod communities operating at three spatial scales: local-scale, farm-scale and landscape-scale. We assemble an extensive data set of arthropods in 22 study sites in southern Ontario with a gradient of land use type to determine what drives abundance and richness of important arthropod groups and the factors that drive these responses.



Cabbage white on verbena (pink variety)

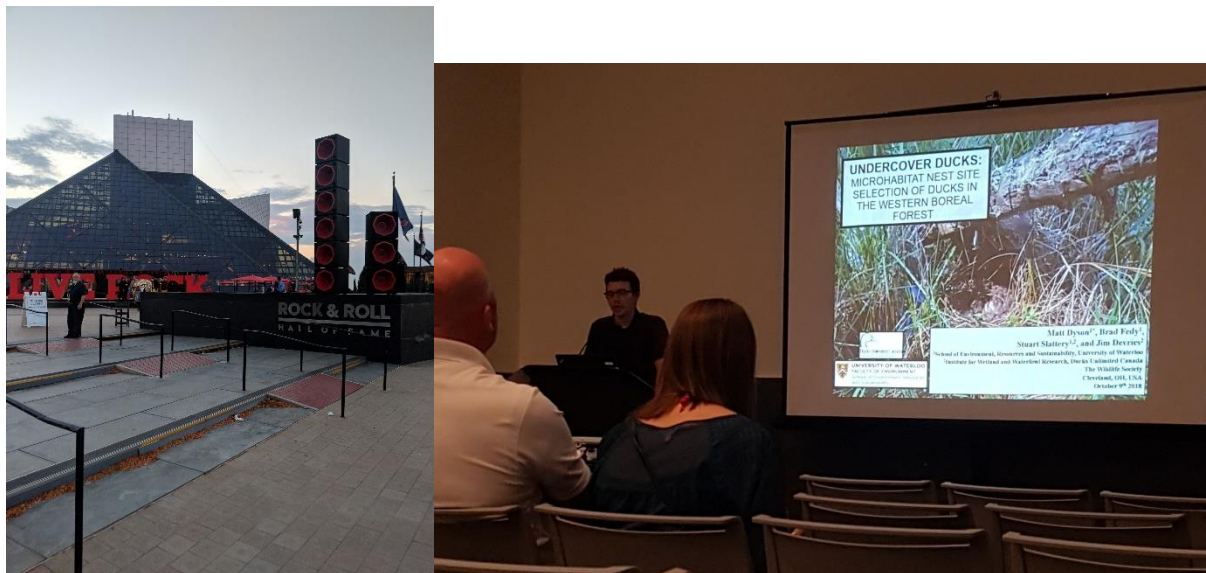
Board Member reflections on attendance at 25th Annual General Meeting of The Wildlife Society

I attended the 25th Annual General Meeting of the Wildlife Society in Cleveland, OH from October 7th – 11th. I primarily attended, because I had the opportunity to present some of my PhD research, but I also knew that the conference would also provide so much more than that. I study waterfowl ecology in the boreal forest, so it was great to catch up with some other waterfowl research happening across North America during the session that I presented in, but also at other related talks scattered throughout the week. In addition to getting to see numerous talks from my field, it was great to learn about some of the innovative analytical techniques in development to tackle wildlife management issues in the bioinformatics sessions throughout the week (kudos to those working groups for putting on some fantastic sessions).

It was also fun to attend the Canadian Section reception and meet other Canadians that attended the meeting. The conference also provided a unique venue for the networking event, where we got the run of the Rock and Roll Hall of Fame for the evening. Finally, the plenaries were enjoyable and inspiring, particularly Dr. Wini Kessler's Aldo Leopold Award lecture.

Overall, the conference was a great opportunity to network with other professionals and become more informed about current research happening in the field of wildlife ecology. This was my third TWS conference that I have attended (Portland and Pittsburgh before). I think the conference offers something for just about everyone at any stage of their career as I have attended as an undergrad, masters student, and now during my PhD. One of the best things about these conferences are that they are very student friendly in that there is often a large undergraduate student component including resume workshops and of course, the Quiz Bowl. These conferences also provide an opportunity to network outside academia, with numerous biologists and practitioners that work government agencies, non-profits, and consulting in attendance. I encourage members of the Ontario Chapter to consider attending one of these conferences if you have the opportunity to go in the future.

Matt Dyson, University of Waterloo



(Left) The Rock and Roll Hall of Fame was the venue for the Opening Night Mixer, which included exclusive access to the entire venue for TWS members. (Right) Matt presenting some of his PhD research on boreal duck nest site selection

Proposed 2018 changes to the Ontario Chapter bylaws

The Executive of the Ontario Chapter of The Wildlife Society has proposed some amendments to the Ontario Chapter bylaws. If you are an Ontario Chapter member please review the following and vote yay or nay at <https://www.surveymonkey.com/r/2G8RNH7>.

A copy of the current and proposed bylaws can be found on our website at <http://www.octws.ca/bylaws>.



Brief history

- Ontario Chapter bylaws first organized June 15 2009;
- Changes to the bylaws require a 2/3 vote by the membership;
- Objectives stated in bylaws include:

People: Focus on students, practitioners, academics, and professionals, working or studying in the fields of wildlife management, conservation biology and wildlife science, thereby contributing to theoretical and applied knowledge.

Communication: Provide a professional venue for communication among students, practitioners and scientists, and with the public.

Education: Provide a networking tool that is especially valuable for young professionals entering a wildlife career, and encourage public interest and involvement in wildlife related issues.

Accomplishment: Generate interest in the wildlife field and encourage people to join the profession and to promote stewardship and wise use of our natural resources.

Conservation: Focus attention on our diverse ecosystems and associated wildlife issues in Ontario and promote sound wildlife management.

Proposed changes to 2009 bylaws

- Divides the secretary and treasurer roles into two positions and provides a description of the responsibilities for each;
- Reduces the term of office for President, Past-President and President-Elect to a single year from two years;
- Implements the ability for chapter members to vote online in chapter elections;
- Allows any member of the Parent Society and Ontario Chapter or, Ontario Chapter, to vote in elections;
- Adds the Awards Committee as a standing committee;
- Adds sections on Dissolution of the Chapter under Article IX.

Thanks for your review. Now go [vote!](#)

MEMBER SUBMISSIONS

Arthropod Ecosystem Services and Key Players in Agroecosystems

Aleksandra Dolezal, University of Guelph

The preservation of biodiversity appears to be the highest priority among biologists, ecologists and entomologists in the present time, when alarming rates of species extinctions continue to rise. These scientific disciplines understand the negative impact human activities have on biodiversity, but lack focus on how biodiversity loss results in loss of ecosystem function in landscapes. In particular, the value of arthropod ecosystem services in agricultural landscapes. Arthropods are incredibly important. They comprise the most diverse group of multicellular organisms on the planet and are critical components of agricultural food webs, providing valuable ecosystem services such as nutrient recycling, pollination, biological control, and providing a food source for higher trophic levels. These ecosystem services, which are defined as “the free benefits people obtain from ecosystems” (Ramankutty et al., 2018), perhaps have the greatest value in agroecosystems where their services produce benefits in yield quantity and quality (Balvanera et al., 2006). Since arthropods in agricultural areas are typically perceived as pests or potential pests, this ecological importance goes unnoticed. Understanding the function of arthropods in ecosystems will enable us to recognize their importance in the sustainable functioning of our agricultural systems and their role in future food security. Three ecological functions that arthropods provide in agroecosystems I want to highlight are pollination, predation/parasitism, and decomposition.

Pollination services is the most widely recognized role of arthropods and has generated the greatest attention. Pollinators are critical to 35% of global crop production (Klein et al. 2007; Klatt et al. 2014). Klein et al. (2007) found that, for 87 out of 115 leading global crops, fruit, seed numbers, and quality are increased through pollination. In many agricultural systems, pollination is actively managed through the establishment of populations of domesticated pollinators, particularly the honeybee (*Apis mellifera*). However, the importance of wild pollinators for agricultural production is being increasingly recognized (e.g. Westerkamp and Gottsberger 2000; Kremen et al. 2007) and wild pollinators may also interact synergistically with managed bees to increase crop yields (Greenleaf and Kremen 2006). Furthermore, a diverse assemblage of native pollinators provides insurance against year-to-year population variability or loss of specific pollinator species (Ricketts 2004; Tscharntke et al. 2005). Increasing evidence indicates that conserving wild pollinators in habitats adjacent to agriculture improves both the level and stability of pollination services, leading to increased yields and income (Klein et al. 2003). Not only has it been found that pollinators increase yields through sufficient pollination services, but also the service of natural biological control by safeguarding crops from herbivore damage.

Natural enemies contribute to a type of pest regulation referred to as natural biological control. Natural enemies responsible for 35% of the natural pest control in cultivated systems, which is estimated to be worth 4.5 billion annually to the US agriculture industry (Losey and Vaughn 2006). In agricultural landscapes, natural enemies have the potential to prevent crop pests from reaching economically damaging levels. Predators and parasitoids can suppress or delay pest population growth by contributing to pest mortality, causing high pest pressure to be asynchronous with the crop growth

stages that are most vulnerable to herbivore damage (DeBach and Rosen 1991). The effectiveness of natural enemies on farms could reduce our reliance on pesticide application methods, which have cascading beneficial effects to biodiversity such as birds, reptiles and mammals. This management of pests is expected to be more in demand in the future as climate change brings new pests and increases the susceptibility of species to parasites and predators where chemical methods may not be fast enough to respond.

The last role of arthropods in agricultural systems I want to highlight is decomposition. Arthropods also are instrumental in the development of soil fertility and structure. Decomposition of plant and animal detritus is necessary for release of nutrients that become available for new growth of plants (Wood et al., 2009). The incorporation of organic matter into soil has been found to improve soil texture and water-holding capacity (Eldridge et al., 2009; Brody et al., 2010). Termites and dung beetles, provide a valuable agricultural service by removing and burying livestock dung, thereby preventing fouling of pasture forage by dung accumulation, increasing carbon and water storage in soil, and reducing nitrogen loss via erosion. An interesting study by Losey and Vaughan (2006) found that dung persistence translates into a 19% decrease in lost beef, and the per-animal loss would be 6.18 kg each year because of forage fouling. No matter what the final figures of the total contribution of agroecosystems to human welfare would be, agricultural biodiversity is what supports the ecosystem services that we depend on.

Arthropods are major contributors to ecosystem services in agricultural landscapes and are critical to the functioning of food support systems. We need to manage agricultural systems in such a way that arthropods performing these valuable ecosystem services form a fundamental part of the system. Future research on sustainable agriculture should, therefore, focus on the role of arthropods and incorporate studying the function they provide to ecosystems as well as their biodiversity assessment. With this knowledge, we can then accommodate these arthropods in agricultural systems by changing the management practices to increase both their biodiversity and their functional diversity to combat food security and conservation issues.

"The struggle to maintain biodiversity is going to be won or lost in agricultural ecosystems"
-McIntyre et al., 1992

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CANADIAN SECTION NEWS

PRESIDENT'S MESSAGE

Rick Baydack, CSTWS President, Professor and Chair, University of Manitoba

The Fall (or maybe Winter?) season has descended upon many areas of our country over the past several weeks, and as we begin to consider settling into another 'real' Winter, I wanted to update our members about the activities in which your Section has engaged. Since our last Newsletter, the Canadian Section has continued to make great strides in advocating for and promoting the efforts of all Canadian wildlife biologists, managers, and planners in furthering our Mission....'to foster excellence in wildlife stewardship through science and education among wildlife professionals in Canada'....

So what have we been up to? Firstly, we are proceeding with incorporation of the Canadian Section as a Charitable Organization in Canada. Although this process will no doubt take some time and will cost us some dollars, your Executive has voted to proceed with this very important initiative. We have hired a lawyer who is an expert in this area of legal practice, and she has advised us that our application has a very good chance of acceptance by the Canadian Revenue Agency. This initiative will enable us to upgrade our presence in many areas, including fundraising, influence with government agencies, and recognition as a force to be reckoned with in the Canadian wildlife conservation community. If successful, our efforts will likely allow not only our Section but also all affiliated Chapters and Student Chapters to gain the benefits that flow from being 'charitable.' Stay tuned as we work through the administrative bureaucracy of this important endeavor!

Secondly, several Canadian members attended the 25th Annual Conference of The Wildlife Society in Cleveland in early October. Conference attendance reached about 1650, and attendees were provided with a wide range of keynote speaker presentations, workshops, symposia, contributed papers and posters, working group meetings, networking and socializing events, a great Welcome Reception at the 'Rock and Roll Hall of Fame', and a Closing Reception at the Trade Show as a 'Thank You' to our sponsors, partners, and exhibitors. Suffice to say that 'a great time was had by all' who attended, and Canadian representation was evident in virtually all aspects of the Conference. In particular, the Canadian Members and Friends Reception, graciously supported once again by Lotek Wireless, was a highlight of the evening of Networking Receptions, and allowed the Canadian Section to stand proud among other Conference events. Our student travel award winners developed an outstanding 'Biologist Bingo' that served as an icebreaker at our Reception. Many Conference attendees commented on the fact that they are always sure to attend the Canadian event since it consistently has an interesting associated activity that stimulates their thinking, and also allows for optimal networking and identification of additional professional contacts.

Thirdly, several members of the Canadian Section Executive have been actively involved in planning for the Annual Conference and General Meeting of the Canadian Section that will be held in Canmore, Alberta from March 21-24. Our 2019 Annual Conference and General Meeting will be jointly hosted by the Alberta Chapter of The Wildlife Society, and their expertise and commitment to organizing a first-rate event is very much appreciated! More details about the Conference and its various activities can be found in other sections of this Newsletter.

And finally, your Canadian Section Executive is actively working toward involving members in the further advancement and implementation of our Strategic Plan (<http://cstws.ca/about/cstws-strategic-plan-2018/>) that was developed about one year ago at the Winnipeg Conference. We are planning a pre-Conference session on March 22 at which members will have the opportunity to voice their suggestions and provide possible revisions to the Plan that can be incorporated into its structure. The overriding concept for our Plan is that it is a dynamic document that will evolve with the wishes and aspirations as expressed by our members. So please plan to attend and participate in this important session in Canmore. In addition, I have appointed an Ad Hoc 'Strategic Visioning' Committee that I have asked to identify and prioritize a diversity of possible ideas and directions for the Section that would serve as targets to guide us as we move forward in the short, medium, and long-term. Once again, involvement of the Canadian Section membership is not only encouraged but required, if we are to make the forward strides that we need to advance the future of our Section. So once again, please plan to attend on March 22.

In closing, I am looking forward to seeing you all in Canmore, and working for the continued advancement of the Canadian Section of The Wildlife Society...

PARENT SOCIETY NEWS

November Issue of The Journal of Wildlife Management now available online

The next issue of The Journal of Wildlife Management is now available on early view through The Wildlife Society's new journal [hub](#).

With online access included as a membership benefit, TWS members are increasingly engaging with the latest research findings in wildlife science and management. Simply login to [Your Membership](#) directly through the hub to access the latest content or browse archive issues of *The Journal of Wildlife Management*, *Wildlife Monographs*, and the *Wildlife Society Bulletin*.

Not a member of TWS? You can still access abstracts and some full studies through the hub. In fact, during the month of November everyone can access—[Survival and cause - specific mortality of desert bighorn sheep lambs](#)—a study with important management implications and difficult data to obtain



Transforming Science Communication and Literacy **A new report from Wiley sheds light on one of our profession's biggest challenges**

By Cameron Kovach
TWS General Manager

We live in interesting times... I could stop there, link the report, and call it quits, but I'm not going to because I'm fascinated by the topic of science communication. In fact, nearly a decade ago I altered my career from studying wildlife to studying new frontiers in wildlife conservation. I say new frontiers because our profession is increasingly operating in uncharted territories. The world is changing, public attitudes are shifting, and skepticism towards science is increasing.

Gone are the days when we could produce a standalone scientific report, retreat to the field, and expect society to exhibit a heightened level of deference towards our research. Some may point to partisan politics or blame millennials because that seems to be a thing, but perhaps, we as a profession have failed to keep pace with the changing times. Our science may reach other scientists but is seemingly lost in the glut of information available to policy-makers and the public.

So, what's the solution? Unfortunately, there's no simple answer to that question, but Wiley's report—[*To Know the World: Transforming Science Literacy and Communications to Improve Research Impact*](#)—touches on several timely and thought-provoking concepts including:

- Recognizing the need for “translated” scientific information;
- Fostering curiosity and improving scientific literacy by inspiring others to ask questions and seek science-based answers;
- Making science relatable and the profession welcoming to all through providing diverse portrayals of scientists and by highlighting the personal stories of scientists;
- Contextualizing science and the scientific process; and
- Developing innovative ways to expand the audience and understanding of research.

This is not about becoming activists or about attacking the messaging of others. It's about improving our own messaging, becoming better storytellers, and figuring out ways to enhance our communication while still preserving the depth and integrity of our work. How can we as individual wildlife professionals shape our own personal networks, touch the lives of those around us, and inspire the next generation? Not every aspect of Wiley's report is relevant to wildlife professionals, but I hope the report sparks dialogue within your Section, Chapter, or Working Group while demonstrating that, while these are interesting times, we face boundless opportunity to forage new paths through the unknown.

What do you think? Is the increased skepticism towards science a good thing? What role should wildlife professionals play in communicating science? How do you share your science? Share your thoughts with us on social media @wildlifesociety or #wildlifesociety.

Wiley is the publisher of TWS' three premier wildlife journals—*The Journal of Wildlife Management*, *Wildlife Monographs* and the *Wildlife Society Bulletin*.

Ontario Chapter of The Wildlife Society



2018 Membership Renewal/Application

Join online at TWS's secure website at: <http://wildlife.org/join/> (Parent TWS membership required also)

OR

Join online from the Ontario Chapter website <http://www.octws.ca/membership/> (Chapter membership only)

OR

Complete this form and return with your payment (cheque) to:

Secretary Treasurer, The Wildlife Society – Ontario Chapter, 3517 B-Line Road Pembroke, ON K8A 6W7

OR

Complete this form and contact Morgan (Secretary Treasurer) at info@octws.ca for other payment options

Last Name

First Name

Address

City

Province

Postal Code

Telephone (daytime)

Email Address

Annual Fees:

\$10.00 Regular

\$5.00 Student

Academic Institution: _____

Please make payment out to: TWS Ontario Chapter

Please Note: The Wildlife Society – Ontario Chapter will not share your information with third party organizations, although your information may be shared with The Wildlife Society parent organization for records management. The Wildlife Society – Ontario Chapter may contact you from time to time with updates on Chapter events and activities.