

The Entomological Society of Manitoba *Newsletter*



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About the ESM Newsletter

The Entomological Society of Manitoba Newsletter is published three times per year. It is a forum whereby information can be disseminated to Society members. As such, all members are encouraged to contribute often. The Newsletter is interested in opinions, short articles, news of research projects, meeting announcements, workshops, courses and other events, requests for materials or information, news of personnel or visiting scientists, literature reviews or announcements and anything that may be of interest to ESM members.

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Editors' Comments

Happy New Year 2017! This year will be an important one for the ESM because we are hosting the **Joint Annual Meeting of the Entomological Society of Canada**.

It will be held at the Fairmont Hotel in downtown Winnipeg on October 22-25. The theme is "**Small is Beautiful**".

The keynote speaker will be Angela Douglas of Cornell University who will speak on the interface between insects and bacteria. Six symposia are being organized.

Visit the meeting website at:

http://home.cc.umanitoba.ca/~fieldspg/ESC_ESM_meeting_webpage/index.html

Mark your calendars, and see you there in October!

Marjorie Smith & Jordan Bannerman



President's Message

Social Insects and Entomological Societies: Where Would They Be Without Workers.

I've always been fascinated with social insects (bees, wasps, ants, termites). My experience as a hobby beekeeper for several years enabled me to observe the workings of insect societies. Not only are they good at making honey, which I would then take from them, but also good at fixing up the mess I would make when I would remove frames to inspect the hive. And in trips I have made to Central America and Brazil I have always been fascinated watching leafcutter ants parading bits of leaves back to their nest so they could grow a garden of fungus as food. For those of us that work in agriculture, it is humbling that ants had figured out how to grow their own food before humans (this mutualism between ants and fungi is thought to have originated in the basin of the Amazon rainforest 50–66 million years ago). Keeping these insect societies going strong requires constant work and dedication to the cause. The same thing can be said about our entomological societies.



At the recent Entomological Society of Manitoba Business Meeting we paid tribute to 3 individuals who have provided many years of service for our society, and are leaving their roles as committee chairs. Joel Gosselin has been the chair of the fundraising committee since 1993, a total of 24 years. This fundraising helps enhance the society's activities and enables us to provide high quality annual meetings. Thank you Joel for your many years of service in this role.

Lisa Capar started as chair of the social committee in 2010, and has been involved in organizing many ESM social functions. The work from the social committee is vital for making the society both a great venue for sharing knowledge of insects, as well as getting to know fellow entomologists. So thanks for helping to make these events possible Lisa.

David Wade took over the secretary position in 2011. His work as secretary has helped the society function and provide quality service to its members. Thank you David. And welcome to Sarah Semmler as the new secretary of the ESM.

So for any members of our society who may be looking for an opportunity to assist in the functioning of the society, we are looking for new chairs for the fundraising and social committees. The previous chairs are willing to work to ensure a smooth transition of duties. Please contact myself or the previous committee chair if you are interested in either of these opportunities.

Enjoy the winter. And for those entomologists who may not be migrating south for the winter, be like the snowflea (*Hypogastrura nivicola*) and get out and enjoy those warmer winter days.

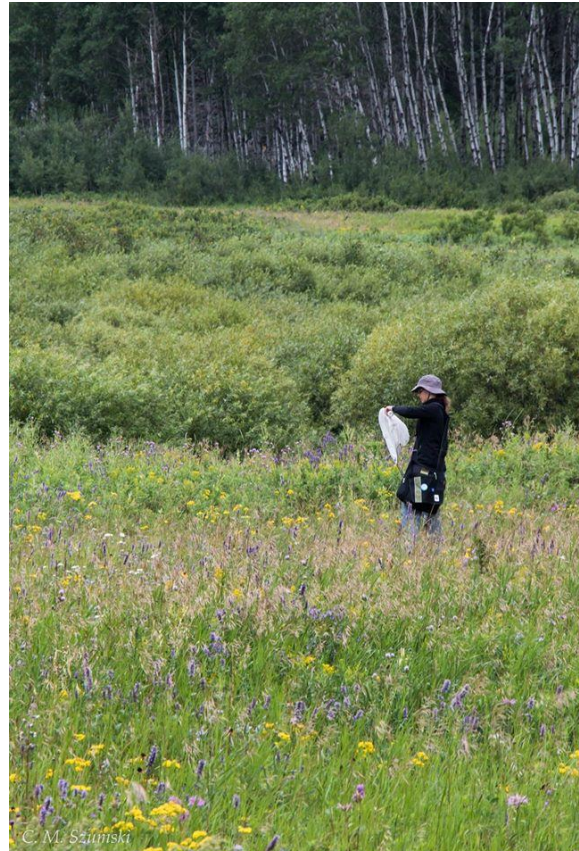
John Gavloski

New ESM Secretary

Hello everyone! My name is Sarah Semmler, and I'm your new ESM Secretary.

For those who don't know me, I'm currently the director and entomologist at the Living Prairie Museum on Ness Avenue in Winnipeg. As an entomologist, I'm particularly interested in pollinating insects such as bees, flies, butterflies, moths, and beetles, especially those within prairie habitats. Over the last three years, I've been sampling the pollinators found in Winnipeg's tall grass prairie remnants in order to create a baseline collection of our local species. I've also been working on an exhibit dedicated to our prairie pollinators that should be launching this spring.

I completed a MSc. at the University of Manitoba and a BSc. Hons. at the University of Winnipeg. My graduate research focused on the structure of pollination networks following fire in tall grass prairie. The project was part of the Canadian Pollination Initiative, an NSERC strategic network that led nation-wide assessments of pollinator communities across Canada. For my honours thesis I studied the nectar preferences of the Poweshiek Skipperling, a threatened tall grass prairie obligate butterfly.



Sarah sampling pollinators in the Lake Audy bison enclosure, Riding Mountain National Park (with a permit!)

I currently serve on three other committees in Winnipeg, two of which are insect-related. I've also been accepted onto the COSEWIC (Committee on the Status of Endangered Wildlife in Canada) Arthropods Specialist Sub-committee, with my term beginning this January.

I'm particularly excited about working with the ESM. I've been a part of the society since 2009, have enjoyed many conferences and get-togethers, and was even granted a Student Achievement Award and Graduate Student Scholarship. I feel like I have a lot to give back to a group that has given me so many excellent opportunities.

I'm looking forward to meeting and working with everyone this year!

Committee Chairs Needed

Chairs are needed for both the **Fundraising and Social Committees of the ESM**. If anyone is interested in either of these positions, please contact John Gavloski at:

John.Gavloski@gov.mb.ca

The roles for both of these committee chair positions are described on the ESM website: <https://home.cc.umanitoba.ca/~fieldspg/commit.html>, click on the link that says “social” or “fundraising” and the details of what is required is explained.

The outgoing chairs of these committees, Joel Gosselin for Fundraising and Lisa Caper for Social, are willing to work with interested members who may be interested in becoming chairs of these committees to transition them in to the role.

John Gavloski
ESM President

From the Regional Director

The board of the Entomological Society of Canada (ESC) is examining ways to increase membership in the Society and retain existing members. Any ESM members who are not members of the national society or those who have let their membership lapse should seriously consider rejoining. It is a perfect time to do so, with the Joint meeting between ESC and ESM being in Winnipeg in the fall of 2017.

Rob Currie
Regional Director to the ESC

72nd Annual Meeting of the ESM

The 72nd Annual Meeting of the Entomological Society of Manitoba was held in Winnipeg at the Freshwater Institute, Fisheries and Oceans Canada on 28 October, 2016 and at the Entomology Department, University of Manitoba on 29 October, 2016. The theme of the meeting was “Harnessing the benefits of natural enemies in agroecosystems”.

Friday began with the keynote address entitled “Impacts of land use change on insect food webs: implications for conservation and agriculture”, given by Dr Tatyana Rand of the USDA Agricultural Research Laboratory, Sydney, Montana. This talk was followed by 14 submitted paper oral presentations (8 in the student competition), and 6 submitted poster presentations (4 in the student competition).

As in other years, the “Meet-the-Speakers Mixer” was held Friday evening, generously hosted by Pat MacKay and Bob Lamb, where ESM meeting attendees and friends gathered for refreshments and conversation. The ESM student awards were presented at the gathering.

The meeting continued on Saturday with four symposium speakers:

- “Biological control of Prairie crop pests with parasitoids; and predators?” by Héctor Cárcamo of the Lethbridge Research Centre, AAFC in Alberta.
- “Finding dinner by sight or scent: studies of sensory cue use by predatory insects” by Neil Holliday of the Department of Entomology, University of Manitoba in Winnipeg.
- “The story of the cereal aphid dynamic action threshold (DAT) project” by Tyler Wist of the Saskatoon Research Centre, AAFC in Saskatoon.
- “Two steps forward, one step back: challenges for IPM in Prairie agriculture” by John Gavloski of Manitoba Agriculture in Carman, Manitoba.

The symposium was followed by a catered lunch and the Annual General Business Meeting.

There were 54 paid attendees at the Scientific Meeting, of whom 37 were regular registrations (one was a single day registration), and 17 were student registrations. A total of \$1,550 was received in donations and \$825 in registration fees were generated from the meeting.

ESM 2016 Programme Committee:

Chair: Alejandro Costamagna

Past Chair: Steve Whyard

Members: Ahmed Abdelghany, Jordan Bannerman

Fund Raising: Joel Gosselin

Social/Refreshments: Ahmed Abdelghany

Venue: Cheryl Podemski

Registration: Kathy Cano, Sheila Wolfe

ESM Student Awards, 2016: And The Winners Are...

The winner of the **ESM Student Achievement Award** was **Justis Henault**. Justis is completing his fourth-year honours degree in the Department of Biology at the University of Winnipeg. He worked for several summers assisting graduate students on insect related projects in both forest and prairie ecosystems. Justis has shown exceptional interest in Entomology through developing a collection and a special interest in taxonomy, and intends to pursue graduate studies.

The **Orkin Award** was won by **Crystal Almdal**. Erin worked as a student research technician during summers and part time during the school year in the Department of Entomology at the University of Manitoba on projects including research on flea beetle management. She presented a poster on “Variation in the number of mature ovarioles in *Coccinella septempunctata* (Coleoptera: Coccinellidae) in relation to habitat type” at the 2016 ESM Annual Meeting. Crystal has been involved in activities in the Department of Entomology including as a teaching assistant.



There were two **ESM Graduate Scholarship** awards in 2016. The winners were **Jesse Rodgers** and **Arash Kheirodin**.



Jesse is an MSc candidate in the Bioscience and Technology Program in the Department of Biology at the University of Winnipeg, supervised by Mr. W. Watkins and Dr. Richard Westwood. Jesse's research focuses on the impact of livestock grazing on the vegetative and insect diversity of alvar habitats in Central Manitoba. She is investigating the diversity of grazed and ungrazed sites. Jesse presented a paper entitled "The effects of livestock grazing the diversity of Lepidoptera in imperiled alvar sites in Manitoba's interlake." at the 2016 ESM Annual Meeting.

Arash is enrolled as a PhD candidate in the Dept. of Entomology at the University of Manitoba and is being supervised by Dr. Alejandro Costamagna and Dr. Hector Carcamo. Arash's research focuses on the effect of agricultural landscape structure on the abundance of the cereal leaf beetle and its natural enemies. He presented a paper entitled "Does landscape structure influence cereal leaf beetle abundance through increasing the parasitism rate of its specific parasitoid *Tetrastichus julis*?" at the 2016 ESM Annual Meeting.



The **President's Prize for best oral presentation** at the 2016 Annual Meeting was presented to **Jesse Rodgers** for her paper "The effects of livestock grazing on the diversity of Lepidoptera in imperiled alvar sites in Manitoba's interlake." The paper described work Jesse completed for her M.Sc. degree at the University of Winnipeg, in the Department of Biology.

The **President's Prize for best poster presentation** at the 2016 Annual Meeting was presented to **Thais Guimarães** for her poster "Landscape effects on flea beetles in the Canadian Prairi



The International Congress of Entomology

Below is a link to a summary of some of the oral and poster presentations from the International Congress of Entomology which was held last September in Orlando, Florida. Material for the summary was selected based on its relevance to farmers and agronomists in Manitoba.

There were many concurrent sessions at these meetings, so only a small portion of presentations could be attended. So material in the summary is a combination of notes from the meetings and material from presentation abstracts. Presentations that were summarized are categorized by commodity or subject, which will hopefully make it easier for those interested in specific commodities or disciplines.

<http://www.gov.mb.ca/agriculture/crops/insects/pubs/int-congress-of-entomology-2016-summary.pdf>

Compiled by John Gavloski

Incredible Creatures Cicadas, what a trill

By John Gavloski

Ed's note: John writes a monthly article called "Incredible Creatures" for Pembina Valley's local weekly newspaper, the Valley Leader. They are written at a very basic level to introduce people to some of the common yet often not well known insects of Manitoba. This was published in August, so put up your feet and pretend it's warm outside.

It's a hot day in late-summer. You're sitting enjoying a cold drink. All of a sudden there is a loud, long buzzing noise that starts high above you. What is this sound: a) the hydro lines making some weird noise, b) a cicada announcing their presence, or c) a neighbor's drone spying on you. The answer is b, a cicada, although many people mistakenly assume it is the hydro lines that make this high pitched buzzing in late-summer.

As long as there are trees around, you will likely hear cicadas in late-July and August in Manitoba, although you will be lucky to see them. The young live underground and feed on the roots of trees. This does not seem to hurt the trees; research has shown that even quite large numbers of cicadas feeding on tree roots doesn't seem to hurt the tree. The adults like to hang out high in the canopy of the trees.

The guys are the loud ones

The males are the ones making all the noise. They are doing this mainly to get the attention of any nearby female cicadas, although they can also make noise to signal danger if necessary. The females do not make the loud buzzing noise. To help you remember this, for your next game of trivial pursuit or amusing campfire conversation, there is a poem from the ancient Greek writer Xenarchus that goes: "Happy are cicadas' lives, for they all have silent wives." I'm guessing Xenarchus had to sleep in the garage for a couple of week after writing this, but good for him for bringing cicadas into the world of poetry.

So how do they make that sound

Male cicadas make the loud buzzing by vibrating a pair of drumlike organs, called tymbals, in the cicadas thorax, which is the middle of the three sections an insect has. The male abdomen is largely hollow, and acts as a sound box. This connects to the outside by a pair of tiny holes. Cicadas can also modify the song by positioning the abdomen toward or away from the surface they are on. So you could say the trill created by the male cicada is a way of getting things off his chest.

Cover your ears when you sing this loud

Both male and female cicadas can hear sounds using membraneous structures called tympana; the equivalent of having ears. Males disable their own tympana while calling, preventing damage to their hearing. They do this by covering the tympana with flaps on their abdomen, called opercula. This is necessary because some cicadas produce sounds up to 120 decibels, which is among the loudest of all insect-produced sounds. The songs of these species are loud enough to cause permanent hearing loss in humans should the cicada sing just outside the listener's ear (don't try this).

The dog-days are here

There are 170 species of cicadas in Canada and the United States, although just four of these species occur in Manitoba. The sounds produced do differ for different species of cicadas, which can sometimes be identified by the sound. One of our more well known species here is called the dog-day cicada, so named because they emerge in late-July and August. This species has been described as sounding like an angle grinder tool. For those who can't get enough of serenading cicadas, check out InsectSingers.com for websites that have sound recordings of Cicadas from North America and around the world.



Dog-day cicada

Doing things together

Another amazing attribute of cicadas, is how long some can live. In eastern North America there are seven species of cicadas known as periodical cicadas, three of which can live for 17 years and four species that can live for 13 years. The 17-year cicadas are generally more northern, and the 13-year cicadas more southern. None of the periodical cicadas are found in Manitoba though. They are called periodical cicadas because even though they live underground as juveniles for almost all of their 13 or 17 years, the development in these species is synchronized so all

individuals of a species within a region emerge as adults all at once in the same year. Sometimes tremendous numbers will emerge. Cicadas of all other species are not synchronized, so some adults emerge each summer while the rest of them continue to develop underground. Many people refer to these non-periodical species as annual cicadas since some are seen every summer.

After almost 13 or 17 years as juveniles, the adults of periodical cicadas are active for about 4 to 6 weeks, usually from about late-May until mid-July in the more northern areas where they are found. Male periodical cicadas typically form large aggregations that sing in chorus to attract females. Within two months of them starting to emerge, the lifecycle is complete, the eggs have been laid, and the adult cicadas are gone for another 13 or 17 years. There are different “broods” of periodic cicadas, which emerge in different years. The Onondaga brood of a 17-year species of periodical cicada last emerged in 2001 and is expected to emerge again in 2018. Their range covers parts of New York state and Ontario. But take note, the great eastern brood, the largest of all 17-year periodical broods, next emerges in 2021 in the eastern United States. Mark this into your bucket list. It will be quite a trill.

MEETING ANNOUNCEMENTS*

The 5th International Forum for Surveillance and Control of Mosquitoes and Mosquito-borne Diseases

Nanjing, China, 22-26 May 2017

www.mosquitoforum.net

The Third Hemipteran-Plant Interactions Symposium

Madrid, Spain, 4-8 June 2017

<http://www.hpis2017.csic.es/>

IOBC-WPRS working group: Integrated Control in Protected Crops, Temperate Climate

Niagara Falls, Canada, 4-8 June 2017

<http://iobccanada2017.ca/>

Society for Invertebrate Pathology, 50th Anniversary Meeting

San Diego, California, 13-17 August 2017

Contact: Surendra Dara skdara@ucdavis.edu

Entomological Society of Canada Joint Annual Meeting 2017: Small is Beautiful

Fairmont Hotel, Winnipeg, 22-25 October 2017

The meeting will be held in conjunction with the Entomological Society of Manitoba

<http://www.esc-sec.ca/annmeet.php>

Entomological Society of America Annual Meeting 2017: Ignite, Inspire, Innovate

Denver, Colorado, 5-8 November 2017

<http://www.entsoc.org/events/annual-meeting>

*If you have a meeting you would like listed in the next ESM Newsletter, contact Marjorie Smith or Jordan Bannerman with the details by **15 May 2017**.

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