

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.

Marjorie Smith, Editor¹
Jordan Bannerman, Editor²
Dept. of Entomology,
University of Manitoba
Winnipeg, Manitoba
R3T 2N2

¹Ph. 204-233-5856
marji_smith@mymts.net

²Ph. 204-480-1021
jordan.bannerman@umanitoba.ca

Editors' Comments

It's been quite a summer, eh? Good weather to be outdoors, working, collecting research data. And relaxing, of course. Now, in less than two weeks, we have the opportunity to attend the ESC-ESM Joint Meeting. This year it's conveniently located in Winnipeg, held at the Fairmont Hotel on 22-25 October.



On Saturday evening (21 October) Pat MacKay and Bob Lamb are hosting their annual Mixer. This year the members of the ESC Governing Board are invited, so you have the chance to meet with them. Details are on page 3 of this Newsletter.

Next month on 21 November (11:00 AM to 1:00 PM) the ESM will hold their Annual Business Meeting at the Freshwater Institute. Come and find out what your Society is up to and share your ideas. Lunch provided by the ESM.

See you at the Fairmont!

Marjorie Smith & Jordan Bannerman

President's Message

Entomologists and Treehoppers: Both Masters of Communication.

Insects have many fascinating ways of communicating. Many are familiar with the dance language of bees, and the sounds made by cicadas, crickets, katydids and other insects. But one form of communication I find very intriguing is substrate vibrations used by treehoppers. As explained by Rex Cocroft from the University of Missouri "The insect uses muscles in its thorax and abdomen to shake the abdomen, which vibrates rather like a tuning fork.

These vibrations are transmitted to the stem

through the insect's legs, and then travel out in both directions along the stem, where they can be picked up by any other treehopper within a meter, or so, on the same plant." There is almost no airborne sound produced with these vibrational signals. This treehopper version of Morse Code can be used to warn of nearby predators, attract mates and even disrupt the signals of rivals.

Effective communication, in whatever form it may take, is so important for a species to thrive. And it is also a critically important skill for entomologists as we make observations, produce publications, and share our findings, ideas and enthusiasm for insects with other entomologists. And to facilitate such information exchange is our annual Entomological Society meetings.

Don't forget that the Entomological Societies of Canada and Manitoba will be jointly having their annual meeting at the Fairmont Winnipeg from October 22-25, 2017. With a great diversity of sessions to choose from, this is a great opportunity to learn, inform, and meet other entomologists. The early registration deadline was September 11th. If you need more information – check out the [meeting's webpage](#).

Thanks to the entomologists that helped out at the BioBlitz's this summer. These are a great way to add extra purpose to your insect collections and observations. Have a great fall, and hope to see you at the joint meetings of the Entomological Societies of Canada and Manitoba in October.

John Gavloski



John assessing insect sample, Roseisle, Manitoba, 22 July 2016.



From Sunday October 22 to Wednesday October 25
The Entomological Society of Manitoba
Hosts
The 2017 Annual Meeting of
The Entomological Society of Canada

The Board of the Entomological Society of Canada arrives in Winnipeg a day
early for Board meetings on Saturday October 21

That evening, the ESM invites its members to a Mixer to meet the ESC Board

Who: ESM Members and Significant Others

What: An evening of conversation and refreshments

When: 8:00pm, Saturday October 21, 2017

Where: 291 Wildwood Park, Section I

(call Pat MacKay and Bob Lamb at 204 452 4025 if you get lost) Email
lambmack@mts.net if you need directions &/or a map

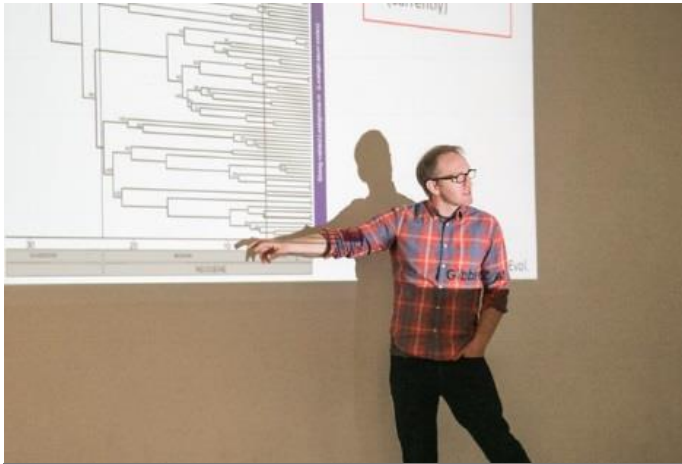
ESM New Members Social

By Gina Karam
Chair, ESM Social Committee

The 2017 ESM New Members Social luncheon was held on June 1st at the Richmond Kings Community Centre in Winnipeg. Last year's pizza lunch followed by a presentation was very successful and the same format was followed this year. We had the pleasure of hosting 27 ESM members and friends, and happily welcomed three new student members to the ESM this year at the social: Jamie Everhart, Reid Miller and Gina Karam.

After the pizza and lunch conversation,

Dr. Jason Gibbs was invited to give his presentation. Jason is the Department of Entomology's new insect systematics and taxonomy professor and his talk was about his research on wild bees. He explained the complex and ever-changing relationships between taxonomy, evolution and bee ecology and how taxonomy and systematics can be applied to aid in bee conservation efforts. Jason also provided the audience with some interesting details of his research projects, including methods for trapping bees using different coloured dishes and soapy water. After the presentation, the audience provided twenty



Dr Jason Gibbs presenting his research on wild



New Members, from left to right: Jamie Everhart, Gina Karam and Reid Miller.

minutes of perceptive and insightful questions about bees and the research that has been conducted thus far. It was a well-received talk and the ESM looks forward to hearing updates on Jason's research projects!

Sincerest thanks to Dr. Jason Gibbs for his wonderful presentation, and thank you to all of the members and friends in attendance at this year's social. As a new member myself, I was very grateful for the help I received in the planning of this event.

As for future ESM events, if anyone has any suggestions or ideas, please don't hesitate to get in touch with me.

Incredible Creatures

Invasion of the Painted Ladies

By John Gavloski

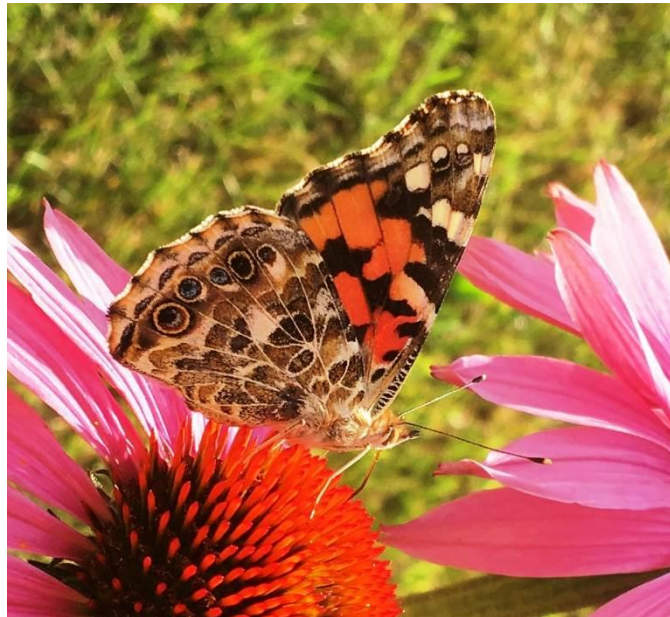
Ed's note: John Gavloski is an entomologist living in Carman, Manitoba. He writes a monthly article called "Incredible Creatures" for Pembina Valley's local weekly newspaper, the Valley Leader. They are written at a basic level to introduce people to some of the common yet often not well known creatures in Manitoba, and hopefully enhance appreciation for wildlife. The following article was published in August 2017.

Many know of the annual migrations of Monarch butterflies. But there are other butterflies that can also have quite impressive migrations. In this month's Incredible Creatures we will explore a colourful butterfly that travels a long way to get to Canada, and this year has arrived in impressive numbers in Manitoba. This is the painted lady butterfly (*Vanessa cardui*). Whether driving down the road or working in your garden, you can't miss seeing a lot of these orange, black and white butterflies this year.

The Incredible Journey

Painted ladies are attractive orange, black and white butterflies. When they perch and fold their wings the undersides of the wings are also quite interesting, with the hindwing having a row of 5 eye-spots. Sometimes small blue pupils are even present in these eyespots. Birds intent on eating them may try to peck those eyes instead of the body, which is less damaging to the butterfly.

Painted lady butterflies are known for their distinct migratory behavior. Adults migrate into the Prairies from overwintering sites in the southwestern U.S. and Mexico. They often arrive in June, although in some years they can be entirely absent. Periodic increases in populations of these butterflies at their overwintering sites can initiate mass migrations of adults northwards. This year the migration north was very large.



Painted Ladies have tremendous powers of flight and individuals are capable of flying a thousand or more miles. So the butterflies can rapidly repopulate most of Northern America during spring and early summer.

These northern migrations appear to be partially initiated by heavy winter rains in the desert where rainfall controls the growth of larval food plants. Painted lady migration patterns are highly erratic and they do not migrate every year. Some evidence suggests that global climatic events, such as el Niño, may affect the migratory behavior of the painted lady butterflies, causing large-scale migrations.

There is evidence of possibly some degree of return migration in the fall. One study described their migrations as potentially strong in the spring in years when populations are high, and weak or not at all in the fall. There is no evidence that they can survive our cold winters.

Painted lady butterflies will feed on nectar from many plants including thistles, sunflowers, pearly everlasting, burdock and knapweed. We often see them feeding on the flowers of the purple coneflower plants we have in our yard.

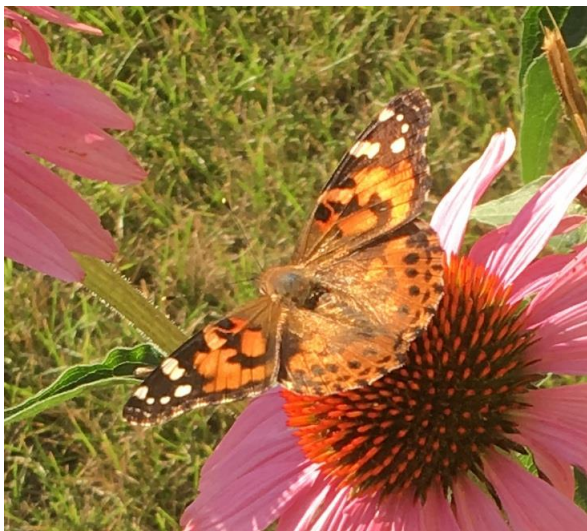
Thistle munching caterpillars

The larval stage of painted lady butterflies are called thistle caterpillars. One of their preferred things to live on and eat is thistles. They will feed on many other plants as well, occasionally getting to noticeable levels in crops such as soybeans and sunflowers. When they first hatch from the eggs these caterpillars are small and black, and will begin to eat immediately. As they grow they will shed their skins three times, this is called a molt. Each stage in between a molt is called an instar. So thistle caterpillars have 4 instars. At each instar the caterpillar will need much more food as it has expanded in size. If under stress they will sometimes shed into a fifth instar, which is a very large caterpillar. A fifth instar is a sign that something is not ideal, such as what they are eating. The molted skin sometimes appears as a black speck, which looks like dirt, near the caterpillar. Occasionally the molted skin will look like an entire, dead, caterpillar, as snake's skin does.

Larvae build a nest by producing a loose webbing which at times may result in the leaves being folded or tied together. The larvae have long spines on each segment of the abdomen. These spines do not contain poison and are not sharp.

Once the caterpillar stage is complete they will spin a patch of silk and attach their hind end to the silk. It then begins changing internally and becomes a chrysalis. The chrysalis can be dark or light colored depending on conditions during development of the caterpillar. It takes 7–11 days for the chrysalis to turn into a butterfly. There are two generations of this butterfly in Manitoba.

Winged Livestock



Painted lady butterflies are quite easy to raise. This has resulted in businesses being established that rear and sell painted lady butterflies that can be purchased and released at events such as weddings, birthdays and memorials. And caterpillar kits can be purchased for classrooms and home schooling. One such business is Lucy's butterfly farm based in Ontario. There are also places that do annual releases of painted lady butterflies as part of festivals and other events.

I had fun rearing some of these butterflies in my lab this year from caterpillars collected off crops. When the butterflies emerge there is a red liquid that is present in the cage that looks like blood, but it is not. This red liquid is called meconium, and the butterflies use this fluid to pump up their

wings. They need to pump up their wings and dry them before they are fully functional. So for anyone who may enjoy rearing caterpillars at home, don't be alarmed when you see this red liquid as the butterflies emerge.

So watch for these colourful butterflies, they shouldn't be hard to find. You are witnessing the descendants of what was quite a spectacular migration this year. It is a rare event to see them in numbers like we have this year. They could be around until about early-October. So enjoy this spectacular natural phenomenon.

MEETING ANNOUNCEMENTS*

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>

23rd Biannual international Plant Resistance to Insects Symposium

Rothamsted, United Kingdom, 7-9 March 2018

<https://www.rothamsted.ac.uk/events/23rd-biannual-international-plant-resistance-insects-symposium>

Ninth international IPM Symposium: Improving Health, Environment and Global Sustainability

Baltimore, Maryland, 19-22 March 2018

<https://ipmsymposium.org/2018/>

XV international Congress of Acarology

Antalya, Turkey, 2-8 September 2018

<http://www.acarology.org/ica/ica2018/>

*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 December 2017**.

ESM EXECUTIVE 2017

POSITION	PERSON	EMAIL ADDRESS
President	John Gavloski	John.gavloski@gov.mb.ca
Past President	Paul Fields	Paul.fields@agr.gc.ca
President-Elect	Mahmood Iranpour	iranpour@cc.UManitoba.ca
Representative to ESC	Rob Currie	Rob_Currie@umanitoba.ca
Member-at-Large	Megan Colwell	meganjcolwell@gmail.com
Secretary	Sarah Semmler	ssemmler@winnipeg.ca
Treasurer	Kathy Cano	Kcano@pcocanada.com
Proceedings Editor	Terry Galloway	terry_galloway@umanitoba.ca

ESM COMMITTEE CHAIRS 2017

Endowment Fund	Richard Westwood	r.westwood@uwinnipeg.ca
Finance	Kathy Cano	Kcano@pcocanada.com
Scientific Program	ESC-ESM JAM 2017 Meeting: Rhéal Lafrenière	Rheal.lafreniere@gov.mb.ca
	Scientific program: Paul Fields	Paul.fields@agr.gc.ca
Newsletter	Marjorie Smith	Marji_smith@mymts.net
	Jordan Bannerman	jordan.bannerman@umanitoba.ca
Youth Encouragement	Arash Kheirodan	Kheirdoa@myumanitoba.ca
Archives	Rob Currie	Rob_currie@umanitoba.ca
Common names	Terry Galloway	Terry_galloway@umanitoba.ca
Scholarships & Awards	Richard Westwood	r.westwood@uwinnipeg.ca
Fund-Raising	Vacant	
Nominating	Richard Westwood	r.westwood@uwinnipeg.ca
Membership	Desiree Vanderwel	d.vanderwel@uwinnipeg.ca
Scrutineer	Colin Demianyk	colin.demianyk@agr.gc.ca
Web Page	Rob Currie	Rob_Currie@umanitoba.ca
Social	Gina Karam	geckaram@gmail.com