

The Entomological Society of Manitoba *Newsletter*



Volume 40 Number 3

ISSN 0836-5830

Spring 2014

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

In this issue of the ESM Newsletter, our **President, Robbin Lindsay**, updates us on recent decisions of the Executive, including a move to using e-mail to save on mailing costs of ESM publications. Robbin also outlines the theme and likely dates (mid- or late October) of the **Annual Scientific Meeting**. Stay tuned for further details as well as information on participating in the oral and poster presentations.



Many of you remember **Joanne Buth**, a long-time member of the ESM, who was appointed as a member of the Senate in 2012 by Prime Minister Stephen Harper. Joanne recently stepped down as Senator and accepted the position of CEO of the Canadian International Grains Institute. Our best wishes to Joanne on her new appointment.

On a sad note, former ESM member **Lloyd Dodsall** died on 12 June in Edmonton after a battle with cancer. Lloyd worked briefly as a research associate in the Department of Entomology at the University of Manitoba in the late 1980s working on biting flies. Most recently, Lloyd was a Professor in the University of Alberta's Department of Agriculture, Food and Nutritional Science. More details will be provided in the next issue of the ESM Newsletter.

Marjorie Smith & Jordan Bannerman

From the President

Summer is finally here and this is the best and busiest time of year for us entomologists. Field work can now dominate our agendas and the brutally long winter of 2014 is but a distant memory. Some of us may have been worried that the polar vortex that engulfed Manitoba for the better part of 5 months might have inflicted unusually high rates of mortality on our favourite arthropods. Alas, the biting types that I work on seem to have come through winter more or less unscathed (unlike the water lines in some Winnipeg residents including many of my neighbours



Robbin releasing a deer mouse collected as part of a tick study in Nova Scotia.

in Fort Rouge). American dog ticks and blacklegged ticks are active and at numbers typical of early summer in Manitoba, and for several weeks we have been pounded by a multitude of spring *Aedes* mosquitoes and amused by the slow and lumbering *Culiseta inornata* mosquitoes that have been attacking us (these large females tend to “perch” rather than land, they are so large and clumsy). Other biting flies are now also joining these familiar Diptera and we should all try and enjoy them, as

when they are gone, so is our short summer.

On a more official front, the ESM executive met in late May and discussed a number of important topics. In recent years, the society has spent an inordinate amount of money to mail out (via Canada Post), this Newsletter, the ESM proceedings and ballots for the ESM elections. In the interest of cost savings, it was decided that the Newsletter and Proceedings will now only be mailed out to individuals who do not have an email address registered with the society. It was also suggested that the ESM elections could be conducted “electronically”. This objective may take longer to accomplish as we will need to modify the Society’s by-laws to facilitate “on-line voting” and we will need to find a software package that will allow us to conduct a fair and transparent electronic electoral process. The move to electronic voting is a logical one and somewhat overdue given the money that is spent (wasted?) to mail out ballots. Please stay tuned for more on this topic and if have not registered an email with the Society, please do.

The dollars saved from moving away from traditional mail outs of ESM documents (as well our earlier decision to no longer hire an auditor to annually review the Society’s financial records) means that more monies can be made available to our greatest asset, our students. The Executive has decided in light of these savings to increase the graduate award to \$1500 from \$1000, as well

as increasing the monetary price for the best oral presentation at the ESM annual meeting to \$150 from \$100. Finally we also decided to create a \$100 prize for the best poster at the annual meeting. I am sure the students can put these funds to better use than Canada Post!

Finally the Executive also discussed the upcoming 2014 ESM meeting. I volunteered to chair the Scientific Organising Committee for 2014, and the Executive agreed that given the retirement of Terry Galloway from the department, a meeting themed on Medical and Veterinary Entomology would be fitting. Although the Scientific organising committee has yet to meet to hammer out the meeting details, it is likely the meeting will be held jointly at the Freshwater Institute and the Department of Entomology on either the 17th and 18th or the 24th and 25th of October, so please hold those dates. It is anticipated that we will be able to recruit some excellent speakers from the Med-Vet community in Canada and the USA. I am excited about the challenge that organising the annual ESM represents and look forward to providing more updates as the meeting details are finalized. I look forward to seeing all of you in October and until then, enjoy the insects and pass the repellent.....

L. Robbin Lindsay
President, ESM

From the Regional Director

Greetings all!

As the Regional Director for the Entomological Society of Canada (ESC), I would like to extend the official invitation to participate to the upcoming joint meeting of the Entomological Societies of Canada and Saskatchewan. The meeting will be held at the Radisson Hotel in Saskatoon, from Sunday, September 28 to Wednesday noon, October 1, 2014. This year's theme will be *Entomology in a Changing World* and will include a keynote presentation by Professor Barry Pittendright of the University of Illinois on Scientific Animations without Borders: the making available of scientific knowledge to low-literate learners.

Other program highlights and meeting details can be found on the Joint Annual Meeting website, www.entsocsask.ca/esc/esc-ess.html.

The deadline for paper and poster submission, as well as early registration is August 1!

Kateryn Rochon

NEW MEMBER PROFILES

Mahsa Hooshmandi

University of Winnipeg, Bioscience, Technology and Public Policy Master's student



I am a passionate Entomology and Environmental Science student looking forward to an active and rewarding academic career in the Sciences. After finishing my B.Sc. in plant pathology and M.Sc. in Entomology in 2012 at Shiraz University in Iran I decided to widen my academic and research training and education by coming to Canada. I've always been eager to study in an international language such as English and also wanted to experience living in a foreign country much different from my native country, Iran. In fact, I've been very lucky to get a University of Winnipeg Graduate Scholarship in fall 2013, and will start my first summer of research under the supervision of Dr. Richard Westwood, University of Winnipeg, Department of Biology. My research focus is on Poweshiek skipperling (*Oarisma poweshiek* Parker 1870) a small butterfly listed as an endangered species in Canada in 2003. It is

found in "native tall-grass prairie", a habitat that has almost disappeared from North America. Research objectives include understanding of the effects of existing prairie management activities on skipperling survival and development of more effective conservation methods for future improvements in planning to enhance and stabilize critical habitat. Proximity relationships between skipperling microsite use and coarse habitat structure and the influence on adult skipperling distribution within microsites will be determined based on Geographical Information System (GIS) analysis. I am looking forward to successfully developing my career which I hope will lead me to many future opportunities in research and academia.



Ishan Samaranayake

I am from Sri Lanka, the "Pearl of the Indian Ocean", which is a world renown biodiversity hotspot. Since I was young, I have been thinking about nature and its creations, and I have been puzzled with the phenomena that I encountered in day to day life. Nature is beautiful, complex and diverse. Biology, the central science studying nature, appreciates its richness and diversity. So, I have dreamed of being a biologist to understand the natural concepts and to create a better world since my childhood.

During my undergraduate studies, I was interested in herpetology and ecology. However, when I was doing my undergraduate thesis project at the University of Peradeniya during my final year, I studied plant-animal interactions in Kandyan Home Gardens, and I started to love insects. After finishing my bachelor's degree, I worked as graduate teaching assistant at the University of Peradeniya and had the chance to teach entomology in lab classes for undergraduates. This opportunity really helped to further my interest and understanding of insects. I came to Winnipeg with my wife Udari for her Master's degree at the University of Manitoba and I started my first job as a research technician at the Aphid Ecology Lab, at the Department of Entomology, in 2013. Currently, I am an MSc student under supervision of Dr. Alejandro C. Costamagna in the same lab at the University of Manitoba. I am working on soybean aphid suppression and natural enemy movement in agricultural landscapes in Manitoba.

Furthermore, in my free time I am interested in hiking and camping. I had this passion since my childhood, when I was a President Boy Scout. I am currently complementing this with learning wildlife photography.

Udari Wanigasekara



My interest in entomology dates back to my years in high school, where I excelled in biology, chemistry and physics. When I was in grade thirteen, I took an invertebrate diversity course and got chance to handle bees, butterflies and beetles. It made me interested on insects, especially bees and wasps. After completing high school, I was selected to attend the Faculty of science, University of Peradeniya, Sri Lanka, a prestigious university in my country. For my bachelor's degree research, I investigated

bees visiting flowers of the vegetable crop, *Solanum violaceum*, and the efficiency of buzz pollination by bees on fruit and seed production in Sri Lanka. I graduated from the University of Peradeniya in 2010 with a first-class Honors degree in Zoology. After the completion of my undergraduate degree, I worked as a research and development executive in one of the most reputed agrochemical companies in Sri Lanka for one year. Then, I received a scholarship from the University of Manitoba to become a graduate student at the department of Entomology. Currently, I am a Ph.D. student working with Dr. Barb Sharanowski in the Department of Entomology at the University of Manitoba. For my Ph.D. research, I am assessing the efficacy of biological control agents of cutworms (Lepidoptera: Noctuidae) in Canola. The overall goal of this study is to develop sustainable pest management strategies using parasitoids, entomopathogens and habitat management.

My long-term goal is to bring the knowledge I learn in Canada to my home country to continue to research and develop integrated pest management strategies that ensure long-term sustainability of food production with limited environmental impact.

Dr. Terry Galloway Retires

Dr. Terry Galloway has been an active member of the ESM for four decades and is an entomologist in the broadest sense, with a wide range of interests in the natural world. Terry retired from his position as Professor in the Department of Entomology at the University of Manitoba at the end of 2013.

On 13 June a large group of Terry Galloway's friends and colleagues, both past and present, came together in the Entomology building courtyard to celebrate his long career and wish him a long, enjoyable retirement.

Thank you to Miles Zhang of the Department of Entomology for supplying the photos.



Rob Currie, Head of the Department of Entomology, presented Terry with a “high D session pennywhistle made by Ronaldo Reyburn, in a walnut baton box”. Enjoy Terry!



The celebratory cake was made and decorated by Terry's wife, Carol Galloway. As Terry said, he will miss teaching and interacting daily with students (“Boo-hoo!”) but is enjoying retirement. (“Yippee!”).

Charles (Chuck) H. Buckner (1928-2014)



We are sorry to report that Charles (Chuck) H. Buckner died in May this year in Ottawa at the age of 85. There aren't many ESM members who would remember Chuck. I met him only once at a Joint Annual Meeting of the ESM-ESC in 1977. He was a mammalogist who received his Honour's Bachelor's Degree from the University of Toronto, his M.Sc. in Zoology from the University of Manitoba and his Ph.D. from The University of Western Ontario. Chuck was recruited into the Canadian Forestry Service and moved to Winnipeg to become involved with the multidisciplinary study on the larch sawfly which was emerging as a serious forest pest in boreal Canada. In 1952, he became part of a large research group, the Forest Entomology Laboratory, interested in developing life tables for larch sawfly, a popular approach for pest management at the time. Chuck's expertise in mammals was important in the assessment of vertebrate predation on sawfly larvae in cocoons during winter on the forest floor. He contributed to many research publications and reports (<http://cfs.nrcan.gc.ca/authors/read/12415>) in the early years of their study at Red Rock Lake, Manitoba. His interests were quite broad, and he published the only summaries of fleas specifically known to occur in the province. He became an active member of the Entomological Society of Manitoba in 1952, contributing to annual meetings and meeting symposia. He was Editor of the Proceedings of the ESM and the Manitoba Entomologist from 1967 to 1969, and served as the society Librarian in 1967. He was a Life Member of the ESM. He and his family moved to Ottawa when the Forestry Lab in Winnipeg was closed in 1969-1970, where he continued his research in forest entomology, but more focused on the application and impacts of insecticides for the control of forest defoliators. We extend our condolences to his family and friends.

Terry D. Galloway

Hot Days in March

By Dr. Robert E. Wrigley

As I finish this article on March 10, 2014, I just returned from skiing in Assiniboine Forest, and there is one-metre of snow in my yard. The jet stream continues to pull frigid Arctic air south into Manitoba and the American mid-West, making it hard to believe that the Spring Equinox will occur on March 20. I cannot help but reminisce about March 16 to 23, 2012, which were exceptional days in southern Manitoba -- old record-high temperatures were exceeded by well over 10°C, climbing to 20-25°C in the afternoons. In most years, the average low/high at this time of year is a frosty -7°C/+1°C, many centimetres of snow still cover the ground, and the record low dipped to -26°C. But in mid-March, 2012, the snow had melted away and flocks of Canada Geese, raptors and songbirds were already arriving. The jet stream had suddenly swept north, drawing warm southern winds into the province.

I wondered how significant these unusually warm temperatures would be to insects, spiders and other critters, so I decided to find out by heading to several of my favorite collecting grounds --

the Mixed-grass Prairie and Spruce-Oak-Aspen Savanna of the Carberry Sandhills, the Boreal Forest east of Seddons Corner (near Beausejour), and the Pembina River south of Darlingford.



Carberry Sandhills Pond.

Arriving in the Carberry Sandhills by noon on Friday, March 16, I saw that the sandhills were completely devoid of snow cover, with the only patches of white lingering on in the bush and along shaded trails. Stopping by a couple of the road-cuts along Highway 5, I picked up four species of grasshopper nymphs, one species of bee, three species of spiders, three species of flies, and I caught a quick glimpse of a small gray moth and several small, fast-flying, orange and black butterflies, which deftly avoided my net (see foot note). No ants, wasps, tiger beetles, or other insects, which I usually find here in spring and summer,

made an appearance. The sand surface was warm to the touch, and moist below, but a metre below ground, where many species of arthropods were hibernating, I presumed it was still cold. In past years, I had not found spring tiger beetles (*Cicindela formosa*, *C. lengi*, *C. tranquebarica*, *C. repanda*) active in the Sandhills until the third week of April.

I concluded I would see more action in a nearby aquatic site -- a shallow pond nestled at the base of a sand-extraction pit. I arrived to see that ice still covered two-thirds of the pond. I stepped in with my aquatic net at the ready, only to find that one of my rubber boots had sprung a leak, and ice-cold water began to seep between my toes, soon soaking my sock. Oh well, the sun was shining and it felt like summer, so what did a little soaker matter? Since the pond was of fairly recent origin, there was little organic matter on the bottom, so visibility was excellent as I scanned the shallows for insects. I knew from past experience that by July, this warm pond water would be swarming with aquatic insects.

Dipping for bugs, I suddenly had a flashback to one of my 1967 ecology field trips in central Illinois with my University of Illinois Professor Dr. Charles Kendeigh -- author of the classic "Animal Ecology" textbook. Each year he took his ecology class to study the succession of pond life inhabiting coal strip-mining burrow pits of known age -- 20, 40, 60, 80, and 100 years of age. Not unexpectedly, we found that the older the pond, the greater the diversity of plant and animal life that had arrived by various means.

Back at the pond, with each step, water boatmen of two species suddenly burst from their hiding places on the pond bottom or amid cattail stems, and I was able to scoop them up with the net. Then a 13-mm predacious diving beetle appeared, swimming rapidly away, about 25 cm below the surface. Again I was able to maneuver the net below it, and to lift it clear of the water. I found a 30-mm Predacious Diving Beetle (*Dytiscus*) dead on the ice surface, and added it to my collecting jar.

By the end of the day, I had managed to collect nice series of about eight species of aquatic beetles and bugs. I headed home, thankful for another beautiful day in the Sandhills. I concluded that this was my favorite location in the province, even though I have had the opportunity to study wildlife in over 100 locations from Manitoba's barren-ground and coastal tundras to the prairies and mixed forests of the south. The Sandhills must hold a special fascination for me, since I have travelled there from one to six times a year for the last 42 years, investigating first mammals (with research published in *The Canadian Field-Naturalist* and the *Journal of Mammalogy*) and more recently, studying arthropods.

I spent Saturday doing yard work, wishing I was still out in the field, and that evening received a call from my fossil-hunting colleague Andrew Fallak. He had been out scouring the gravel beds along the Pembina River, finding elk, wolf and bison bones and teeth. He was struck by the huge numbers of water boatmen literally covering the quieter eddies. Many flew up into his face and into his hair as he strode along the shore. He also observed two green ground beetles at the base of cut-banks, and concluded they were a fast-running species of *Chlaenius*. A small species of orange and black butterfly was also present in good numbers.

The morning's forecast for Sunday March 18 was cloudy, but with temperatures expected to hit 22°C again, I thought it might be interesting to compare the Carberry prairie pond with a boreal pond, so I drove out to the gravel pit at Julius Road (Agassiz Forest Reserve), east of Seddons Corner. About 20 years ago, Dr. Ken Stewart had directed me here when I had asked him where I could see Blue-spotted Salamanders. He said to visit the ponds in April, when there was still some ice present, and to start looking at night when it was completely dark. So there I was in April, by myself in the dark, in the middle of a gravel pit, standing knee-deep in frigid pond water, bent over and peering with a headlamp into the depths for this elusive amphibian. The only signs of life were large *Dytiscus* beetles, rowing around in search of something to devour. I wondered how any salamander (especially its eggs and larvae) could co-inhabit the ponds with these predators; likely the salamander's defensive secretions are involved. Then around 1:00 AM, when I was tired and just about to give up (I had to get up for work in six hours!), I saw one -- a slim, delicately built Blue-spotted Salamander, crawling slowly over the bottom. In the next half hour, I discovered five more. After spending the winter hibernating in terrestrial burrows, they were gathering here in this pond to mate and lay eggs, in spite of the water being 0°C. Amazing little creatures.

Back to the task at hand, I walked across some thick ice and stepped into open water. This pond was different than the Carberry pond in that the bottom was covered in a 30-cm-thick layer of dormant and decomposing aquatic vegetation. Only an occasional aquatic bug appeared in the bright light, so I had to force my net into the thick mat to drive bugs and beetles into view. Swirls of smelly black silt drifted up, but a number of insects were captured this way, including several kinds of wriggling larvae (dragonflies, damselflies, and other insects).

Another younger pond nearby had a sandy bottom, and collecting was much easier. Several species of predaceous diving beetles, water scavenger beetles, whirligig beetles, and water striders were scooped up. Several species of spiders were captured while running on the water surface, or scurrying over the moss-covered shore. On the way back to the car, I looked under a number of rocks, boards, and a deer carcass, but no other insects were found. Still too early I suspected. I walked back to the car, greeted by the sharp crack of a high-powered rifle, the

annoying roar of several ATVs, and the drone of power saws -- all now too-common disturbances in the boreal forest.

It was also shocking to see the changes in this area -- one of my favorite collecting sites for early spring Cowpath Tiger Beetles, *Cicindela purpurea* (including black morphs). Heavy excavation equipment and trucks had devastated the site, leaving vertical embankments 5-metres high. Massive boulders were perched in or had tumbled out of the banks of fine sand, deposited by Glacial Lake Agassiz. One could only imagine the powerful forces of glacial ice and flowing water that had deposited this deep layer of till and beach sand over 12,000 years earlier. Added to this, loggers had cut down much of the surrounding coniferous forest. Sadly, I hardly recognized the place. I suspect this loss of special natural areas is a common experience for those



Pembina River in 2012

who love the outdoors. Driving home to Winnipeg, I was quite satisfied with my past-two days in the field, and with my catch of about 150 specimens of two-dozen species.

March 23 was cloudy with an anticipated high of 20°C, and presented another opportunity to head into the field. Andrew Fallak, my son Mark, and I drove to the exposed gravel and mud flats of the Pembina River, south of Darlingford. Parking the van at the end of a farm road, we had a grand view of the Pembina Valley, clothed in Oak-Ash Forest and cattle pastures, and with occasional exposed steep cliffs of dark-

gray Odonah shale. Few Manitobans have any idea of the beauty of this valley, even without leaves on the trees. The quiet river eddies and isolated ponds contained large numbers of water boatmen, and two small species of ground beetles were picked up on drier sediments. Around 2:00 PM, still with cloud cover, I observed four Bronzed Tiger Beetles (*Cicindela repanda*) -- the earliest spring emergence I have ever found. No *Chlaenius* were seen, and only two butterflies (the same fast flying orange and black species) were noted.

While few insects were active, spiders were seen in the hundreds -- a small black species running rapidly over the rocks and cut-banks. Several were saved for later identification. Birds seen and heard were Canada Geese, American Crow, and flocks of blackbirds. We counted four large Leopard Frogs along the beach, and I reported these sightings to the Manitoba Herp Atlas, since frogs are not usually out of hibernation this early.

We spent most of the time searching for and picking up bones, antlers, horn cores, and two-dozen teeth of Bison, Elk and Moose, and beautiful, large unionid clam shells which often littered the shoals of the river. The highlights of the trip were unearthing two relatively complete Bison skulls (a male and female), with horn cores still attached. At one site on the beach, we noted an Aboriginal person's recent arrangement of Bison bones surrounded by a 1-metre-diameter fence of little sticks, and wondered about the significance of the ceremony.

These several hot days in mid-March were a real gift I will never forget, and they certainly had a dramatic effect on emergence dates for hibernating insects, spiders and frogs. It will be interesting to see if this becomes a more-frequent occurrence with climate change.

Foot Notes:

Dr. Richard Westwood responded to my enquiry about the possible identity of the butterflies noted above, and his opinion was that: "... it was *Polygonia satyrus* which has been recorded in Manitoba in mid-April, and March in eastern Canada, or *Polygonia progne* which has been recorded in Manitoba in late April to early May, and is also on the wing in March in eastern Canada."

Polygonia satyrus (Satyr Comma) hibernates over-winter as an adult and has been reported active on warm winter days in more-temperate regions, such as Vancouver and Victoria (Guppy, C.S. and J.H. Sheppard. 2001. Butterflies of British Columbia). This species also has the reputation as being wary, with a swift and erratic flight, often found along the edge of water -- all of which fit with my observations. This appears to be the earliest-recorded emergence of a butterfly in Manitoba.

William Preston (1982. Amphibians and reptiles of Manitoba) stated that; "Leopard Frogs have been observed out of hibernation in early April in some years." It seems there are no records in March for this frog. I checked with Doug Collicutt, who operates the Nature North website and the Manitoba Herp Atlas, and he also observed Leopard frogs at Star Lake on March 23, 2012, plus had other records on March 26 and 31. These appear to be the earliest sightings of the frogs on land; Doug noted another sighting of this species under the ice.

The earliest I have observed tiger beetles in previous years was mid-April, and colleague Todd Lawton mentioned his earliest records are early April, so the March 23 sighting of the Bronzed Tiger Beetle is worthy of note. I also happened to mention these early dates to my friend Larry de March, and he suggested I contact Deanna Dodgson, whom he knew had been photographing insects during this warm spell. She kindly responded with the following observations:

March 17, Birds Hill Provincial Park -- nymph of the Coral-winged Grasshopper (*Pardalophora apiculata*).

March 18, Mars Sand Hills -- Cowpath Tiger Beetle (*Cicindela purpurea*), Speckle-winged Rangeland Grasshopper nymph (*Arphia conspersa*), Mourning Cloak (*Nymphalis antiopa*).

March 22, Sandilands Forest Reserve -- the geometrid Infant Moth (*Archiearis infans*), Awl-shaped Pygmy Grasshopper adult (*Tetrix subulata*), the tachinid fly *Gonia*.

MEETING ANNOUNCEMENTS*

70th Annual Meeting of the Entomological Society of Manitoba

Medical and Veterinary Entomology

Winnipeg, Manitoba, 17-18 October or 24-25 October 2014 (to be decided)

ECE X (Tenth European Congress of Entomology)

York, UK, 3-8 August 2014

www.ece2014.com

Joint Annual Meeting of the Entomological Societies of Canada and Saskatchewan

Entomology in a Changing World

Saskatoon, Saskatchewan, 26 September – 1 October, 2014

Fourth International Entomophagous Insects Conference (IEIC4)

Fundamental and applied topics related to arthropod natural enemies

Torre del Mar, Spain, 4-9 October 2015

Webpage: <http://www.ihsm.uma-csic.es/IEIC4/index.html>

XXV International Congress of Entomology

Entomology without Borders

Orlando, Florida, 25-30 September 2016

*If you have a meeting you would like listed in the next ESM Newsletter, contact Marj Smith with the details by 30 September 2014

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