

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

Here we are well into 2014 already, and with two months of hard winter behind us, we are no doubt hoping for an early spring (groundhog prognostications notwithstanding). Now you have the opportunity to grab the beverage of your choice, get in a comfortable chair and read about the interesting activities your fellow members have been up to.



First off, we have a **new Co-Editor, Jordan Bannerman**, who is an instructor in the Department of Entomology, University of Manitoba. Inside, he introduces himself and his entomological background.

Secondly, you will find an **updated ESM Membership list** which is included with the Newsletter. Well, partly updated – some of you will need to update your information, so please check to see if addresses, e-mails or phone numbers need changing and notify Jordan or me.

We also have ESM President Robbin Lindsay's message, 2013 ESM Annual Meeting news including Student Awards recipients, Bill Preston's obituary, two QE II Diamond Jubilee recipients, and much more.

Marjorie Smith & Jordan Bannerman

From the President

Unlike many members of the Entomological Society of Manitoba (ESM), I did not have a particular fascination with insects when I was a youngster. In fact, my only memories of an entomological nature were bad ones. The near unbearable itchiness that resulted from stings from honeybees (a condition that I still suffer from as an adult) and the grotesque welts that I would occasional experience from horse fly bites are about the sum total of what I remember about insects as a boy growing up in Manitoba. However, I did eventually catch the insect “bug”, but not until I was an undergraduate student at the University of Winnipeg. I credit, John Conroy, water mite expert and University of Winnipeg Professor for sparking my interest in entomology. Taking his taxonomy course in entomology made me realise that insects were highly important from an agricultural and human health perspective, and given this importance, there might be jobs for under graduates interested in working with insects. I really had no idea that the days I spend as an MSc. student combing fleas from Richardson’s ground squirrels would actually lead to gainful employment, it was just a very exciting project on a little studied group of insects. However, serendipity, some hard work and a PhD later I landed my dream job with Health Canada as a research scientist working on vector-borne diseases.



Robbin dipping for mosquito larvae in a ditch near Windsor, Ontario.



Getting ready to sample overwintering mosquitoes in the sewers of Windsor.

Throughout my university career and once graduated, the Entomological Society of Manitoba was an important component of becoming an entomologist. Like most students, I learned to deliver effective oral presentations, during the annual ESM meetings and got to listen to and meet entomologist from across the region. I have not been part of the ESM executive prior to my nomination as President this year, though I have served on a few ESM committees over the years.

Taking on the reins of the ESM as President has provided me with an opportunity to give back to the discipline that I owe so much to and I am looking forward to the challenges this will present. The first challenge will be to try to match the performance of our out-going President, Bob Lamb. Bob did

a wonderful and thorough job of steering the society in 2013 and I may lean on him as past president in 2014. My tenure as president started after the 2013 ESM annual meeting, which again was a success, despite the forced venue change (thanks a lot Winnipeg Blue Bombers). The meeting was held on November 1 and 2, and celebrated entomology at the Cereal Research

Centre. In fact, Day two of the 2013 meeting was held at the Centre and sadly this would be the last significant entomological meeting to occur that this storied facility, as it has now closed. This closure highlights the challenges that entomologist can face in these times of government restructuring and changing priorities. I hope that the ESM can remain strong in the years to come, despite these types of setbacks, and I am excited to get to work on behalf of the Society to ensure it does.

L. Robbin Lindsay
President, ESM

Introducing Jordan Bannerman, ESM Newsletter Co-Editor

How did I get to where I am today?

Ten years ago if you had asked any of my family or friends what I would end up doing when I finished school, most if not all would have probably predicted that I would be a biologist working with fish in some form or another. So how did I

end up with a career in entomology?



Rainbow trout food: A recently emerged *Callibaetis* mayfly on the surface of a small BC interior lake.

My interest in insects (and fish) began well before I was considering my future career path; it came as I became increasingly focused on my favourite hobby, fly fishing. Where I grew up in the interior of British Columbia, fly fishing for trout is an obsession of many, including myself. In the world of fly fishing for trout, knowledge of the insects that you are imitating correlates strongly with success. From the age of 14, I began the lifelong process of learning about the biology and ecology of insects that inhabit moving and still-waters, and how best to imitate them to catch fish. However, it would be a while longer before I considered working with insects as a viable career choice.

My first opportunity to work with insects came when I was hired on as a coddling moth release driver for the Sterile Insect Release program in Kelowna BC after my second year of university. The following summer, I was lucky enough to secure a summer job with Dr. Bob Lalonde at UBC Okanagan, where I was encouraged to develop and carry out my own insect focused ecological research. During that summer I undertook an independent research project on gall wasp parasitoids, and also dabbled in a number of insect related side projects.

It is funny how one small decision can snowball and influence the course of one's career. My experience working for Dr. Lalonde that summer solidified the career path that I would pursue. By the following spring, with the generous assistance of Dr. Lalonde, I had found co-supervisors for my Masters in Pest Management, Dr. Bernie Roitberg and Dr. Dave Gillespie, at Simon Fraser University in Burnaby BC. Upon completion of my Master's thesis, which examined the influence of extreme temperature events on aphid-parasitoid dynamics, I moved on to a position at Douglas College in New Westminister BC where I investigated the potential of several new biological control agents of interest to greenhouse pepper growers. That was the final position I held before taking my current position, as an instructor in the Department of Entomology here at the University of Manitoba.

William Burton Preston (1937-2013) – One of a Kind



The Entomology Society of Manitoba has lost a longtime member with the passing of Bill Preston at St. Boniface Hospital on October 11, 2013; he was 76. Bill grew up happily exploring the desert, grassland and forests of the Okanagan Valley, where he developed his love of nature and of rattlesnakes in particular. After graduating from the University of British Columbia with BSc and MSc degrees in wildlife management, Bill married Willetta, and the couple moved to Norman, Oklahoma, where he completed his PhD in Zoology, studying water snakes. He also spent many pleasurable days collecting and studying the rich insect fauna of the region. While living there, they were able to explore many parts of the southern United States, Mexico and St. Lucia.

Returning to Canada in 1969, he accepted the position of Curator of Reptiles, Amphibians and Fishes at the newly opened Manitoba Museum of Man and Nature in Winnipeg. During his 28 years with the Museum, he enjoyed numerous opportunities to explore the province and to travel to other countries. He was a man with a wide range of interests about the natural world, and became a passionate entomologist, amassing an extensive insect collection for the Museum and his own personal research. The study of butterflies, tiger beetles, spiders and ants drew his attention, and he had plans to publish a number of papers on these subjects. Bill was always generous with his time and expertise, and often helped friends and students with troublesome identifications for the species he knew best. He will likely be notably remembered for his book on "The Reptiles and Amphibians of Manitoba" -- part of the provincial fauna that had received little previous attention. He also co-authored "The Butterflies of Manitoba" and contributed articles to "The Encyclopedia of Manitoba."

Bill loved field work and was elated to discover the first Manitoba records of the Great Plains Toad and a species of ant. He walked frequently down to the Red River behind the Museum during his lunch hours, and faithfully recorded notes on the appearance and habits of butterflies. He never lost his "little boy" excitement about learning new things regarding the natural world,

and he just had to discuss these observations with his Museum colleagues. In fact, it was impossible to walk past the open door of his office without being invited in for a lengthy conversation. Bill was also notorious for his quirky sense of humour, and often he could barely complete a joke without losing his voice as he broke out in laughter.

He loved showing youngsters the many critters in his laboratory, ranging from a Hognose Snake to a giant, one-eyed Snapping Turtle that he rescued from the Assiniboine River. Bill was an active participant in the ESM Youth Encouragement and Public Education Committee, when it was revamped under the president-ship of Ron Sinha in 1973. The group organized numerous field trips and workshops in the ensuing years, to LaBarrière Park, Sandilands Provincial Forest, and to the newly developing outdoor education facility at Fort Whyte. Bill was always keen to go out on these adventures, and he loved to share his knowledge and experience with all the keen young entomologists. For a number of consecutive years, the Youth Encouragement Committee conducted a week-long display on insects at Polo Park Shopping Mall, and later at the newly opened St. Vital Mall. There were all manners of insects, alive and dead, on offer to the public. Bill was the only person who always attended all day every day of the exhibit. He loved to talk about insects, and there was hardly a better opportunity for non-stop conversation than at the entomology display. He could never understand the concern of the Polo Park manager when someone had laid a drinking straw to breach the petroleum jelly barrier that was meant to contain the thatching ant colony. Many of the ants had gone walkabout in the night and were found by disgruntled shop keepers the next morning. Bill just couldn't see the problem; to him they were harmless ants.

Bill was also interested in photography, astronomy, geology, theatre and electronics, and recently built himself a computer. He belonged to a number of associations including the Canadian Entomological Society, Manitoba Entomological Society, Manitoba Naturalists Society, Winnipeg Amateur Movie Makers, and the Manitoba Rock and Mineral Society. He served in various capacities within these groups for which he received several awards. He was a member of several government committees such as the Endangered Species Advisory Committee, and attended meetings regarding the snake pits at Narcisse. Bill had the well-earned respect from his many friends and colleagues, due to his broad knowledge, developed over his long career at the Museum.

In later years, Bill's health deteriorated to the point where he could no longer participate in field activities, but with the loving support of Willetta, he maintained a positive attitude about life and his passion for nature to the end of his days. Bill cared deeply about educating the public about the need to conserve biodiversity. He will be missed by many people, and his legacy lives on through his books, exhibits, and collections.

Robert Wrigley and Terry Galloway

Manitoba's New Endangered Species and Ecosystems Amendment Act

By Dr. Robert Wrigley

On April 22, 2013, I was invited to speak (representing the Manitoba Endangered Species Advisory Committee) at a news conference, called by Minister of Conservation Gord Macintosh, regarding a new piece of ground-breaking legislation -- Bill 24; the Endangered Species and Ecosystems Amendment Act. This is a highly significant Amendment for it:

- expands the role of the Manitoba Endangered Species Advisory Committee to include endangered or threatened ecosystems on Provincial Crown Lands (Manitoba is among the first jurisdictions in North America to do so.),
- adds a "Special Concern" category and requires recovery plans,
- empowers Conservation Officers with authorization to issue protective orders to pre-emptively halt any activity that may damage habitats and ecosystems on Provincial Crown lands, and
- increases fines and penalties for those found to be in violation of the Act.

Minister Mackintosh also pointed out that Manitoba will follow the International Union for the Conservation of Nature's (IUCN) standard criteria in assessing species at risk. As part of the Province's Green Plan, a 7-million-dollar grant is being provided to the Nature Conservancy of Canada, Manitoba Region's Natural Areas Conservation Program, which protects lands and wildlife in eight areas of southern Manitoba. This amount is being matched by the Federal Government and private sector, generating a total of \$21 million for wildlife conservation in Manitoba. Two endangered ecosystems have been identified to date -- the Tall-grass Prairie in southeastern Manitoba, and the Alvars in the southern Interlake area.

On October 29, 2013, after the first and second reading at the Legislature, the Standing Committee of the House invited the public to comment on this new Act. The following is my oral presentation at the news conference on April 22, and my written submission on October 29, outlining the significance of the new Act.

Minister Mackintosh and special guests, thank you for the opportunity to point out the significance of this new Endangered Species and Ecosystem Amendment Act.

Several years ago I asked a number of my colleagues to assist me in preparing the first inventory of wildlife species in Manitoba. From microscopic cells to massive life forms, such as the Bowhead Whale, Moose and Cottonwood tree, we attempted to determine the number of species in our marine, freshwater and land ecosystems. This information is vital for the Department of Conservation and Water Stewardship to manage wisely the phenomenal diversity of living things in the province.

This bio-inventory, as we called it, produced some truly astounding results. To give only a few examples, we determined there were known and estimated: 88 species of mammals, 391 birds, 8 reptiles, 16 amphibians, 132 freshwater and marine fish, 170 clams and relatives, 25,000 insects and related groups, 2433 flowering plants and ferns, 800 lichens, 733 mosses, 3000 fungi, 26,000 algae, and likely hundreds of thousands of minute life forms such as single-celled organisms, bacteria and viruses. Many of these species have not been discovered or described to date. No

one, even specialists in the many fields, has any idea of the total number of species in our province, but it no doubt surpasses a quarter million. Manitoba is truly buzzing with life during all seasons, even under the ice and snow.

And lest people think that the smaller life forms are insignificant to our lives, they in fact generate the oxygen we breathe, they help cleanse our water, maintain productive topsoil for agriculture and gardens, form the basic levels of food webs, breakdown organic debris and wastes into natural fertilizer for new plant growth, and keep life-support systems operating. Our economy and lifestyle are completely dependent on these species, since they are the very foundation of healthy ecosystems.

The Government of Canada has so far listed 649 species at risk or already extinct, and this number keeps rising. Manitoba's official list currently stands at 61, and at least 10 species have been lost. In reality, these are only preliminary estimates, because determining the status of species at risk is a costly, time-consuming and daunting task requiring study by numerous biologists. It must be obvious that all these species cannot be managed on an individual basis; hence the need to care for their combined habitats within all provincial ecosystems.

Conservation organizations such as the Nature Conservancy of Canada, Ducks Unlimited Canada, Manitoba Habitat Heritage Corporation, and Nature Manitoba are acquiring private lands as reserves for wildlife. Manitoba Conservation and Water Stewardship manage Crown lands and freshwaters in an extensive program of parks and other protected areas. Fisheries and Oceans Canada manages fisheries and the marine ecosystems in Hudson Bay. These private and government partnerships are essential for successful wildlife conservation in the province, and with this proposed new legislation, the future looks more optimistic.

Mr. Minister, you and your staff have been given the awesome responsibility and opportunity to preserve this wealth of life in our province -- a natural heritage that has taken hundreds of millions of years to blossom. A comprehensive Endangered Species and Ecosystems Amendment Act will provide another instrument, and additional funding, for your Department to identify, manage and safeguard our biodiversity, at both species and ecosystem levels. On behalf of all Manitobans, I applaud the Government's wisdom in developing this Act, and wish your Department consummate insight in making sound, long-term decisions. When passed, this Act will mark a major milestone in the progress of wildlife conservation in Manitoba.

CONGRATULATIONS!

Recipients of the Queen Elizabeth II Diamond Jubilee Medal

This item is an excerpt from an article that originally appeared in the *Bulletin of the Entomological Society of Canada*, Volume 45(2), June 2013. Reprinted with permission of the Editor.

*ED'S NOTES: You can read the complete article and much more by joining the **Entomological Society of Canada** and receive the Bulletin as one of the many benefits of becoming a member of the Society. Go to their website at <http://www.esc-sec.ca/> and check it out!*

Many of you may remember Steve Pernal, who was a member of the ESM as a student at the University of Manitoba. He earned his MSc under the supervision of Dr. Neil Holliday, and his PhD working on honey bees with Dr. Rob Currie.

Stephen F. Pernal (Research Farm, AAFC, Beaverlodge)

Stephen's entomological interests concern honey bees and native pollinators. He has performed research examining the detection and treatment of bee pathogens and parasites, as well as maintaining long-held interests in nutrition, foraging behaviour and semiochemistry. Stephen was also instrumental in establishing the recently-opened National Bee Diagnostic Center at AAFC's Beaverlodge Research Farm.



Pat Mackay (Department of Entomology, University of Manitoba)

Pat continues her interests in insects and things ecological in retirement. With her husband, Bob Lamb, she spends much time on their joint aphid project, on the population dynamics of *Uroleucon rudbeckiae*, a beautiful big red aphid on the native wildflower *Rudbeckia laciniata* or tall coneflower. She also continues to be active in the Department where she is a Senior Scholar, as well as in the Entomological Society of Manitoba. She is a Commissioner on the Clean Environment Commission, an arms-length body of the Government of Manitoba, and recently finished 10 weeks of hearings to provide advice to the Provincial Government on licensing a Manitoba Hydro project.

ESM Awards, 2013: And The Winners Are...

The winner of the Entomological Society of Manitoba Student Achievement award was Ms. Zoe Rempel. Zoe has developed a diverse experience in entomology having worked on parasites of birds, stored product pests, pests in agricultural systems and parasites in bees for a variety of faculty at the University of Manitoba. Zoe is currently working towards a minor in Entomology and has taken a significant proportion of the courses offered in the Department of Entomology.



The Orkin Award was won by Ms. Whitney Lodge-Zaparnick. Whitney has been a teaching assistant for entomology courses at the University of Manitoba and has worked in the Department of Entomology on parasitoid taxonomy and biological control of insect pests. Whitney has worked on the Bugline insect identification service and has volunteered to provide entomology demonstrations to school-aged children.

The ESM Graduate Scholarship was awarded to Ms. Alexandra Grossi. Alexandra is enrolled as an MSc candidate in the Department of Entomology at the University of Manitoba and is being supervised by Dr Terry Galloway. Alexandra's research quantifies the infestation parameters of chewing lice on Canada geese and mallards, including prevalence, mean intensity, sex ratio and seasonal population fluctuations.



Miles Zhang received the student paper award for his paper, "Small wasps, big problems: resolving the *Peristenus pallipes* species complex using molecular techniques", presented at the ESM Scientific Meeting. Miles is a PhD candidate with Dr. Barb Sharanowski.

Congratulations to the ESM's Newest Honorary Member!



In 2013, Joel Gosselin was elected as an Honorary Member of the Entomological Society of Manitoba. Joel is a long-standing member of the Society and has served as Chair of the Fundraising Committee since 1993. In 1986, as owner of SWAT Professional Exterminators, Joel initiated the SWAT Award (now called the Orkin/SWAT Award), designed to encourage interest in Entomology including natural methods of insect pest control and is presented annually to an undergraduate student. At last fall's Annual Meeting, the President, Bob Lamb, presented Joel with a plaque acknowledging his service to the Society. Congratulations, Joel!

MEETING ANNOUNCEMENTS*

North Central Branch of the Entomological Society of America
Des Moines Marriott, Des Moines, Iowa, March 9 – 12, 2014

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

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 or Jordan Bannerman with the details by 30 April 2014

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