

# 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**

Summer officially begins in less than two weeks, so hopefully you will have many relaxation breaks to enjoy the fine weather.

Prairie Originals has extended a special invitation to their Pollinator Party on 24 June! They are looking for volunteers to help with pollinator identification and other activities. See page 3 for details.

Long-time ESM member, Dr Sam Loschiavo, died on 9 April 2018 at the age of 93. Sam's work in stored product entomology brought him international recognition. An obituary will appear in the next issue of the ESM Newsletter.

This year's ESM Annual Meeting will be held on Friday and Saturday, 19 and 20 October, so save the dates!

Marjorie Smith & Jordan Bannerman



## President's Message

I hope you all had a wonderful spring and are getting ready for summer. I would like to thank you all, executive members, committee chairs, and all volunteers working collectively for the society. We still need to encourage students, faculty members, and others working in the field of Entomology to become active members of the Entomological Society of Manitoba.

In May, we had a couple of weeks of dry and hot weather in southern Manitoba, which has probably caused some impacts on insect pests. Mosquitoes will definitely be one of the pests that will be affected by low precipitation. It will probably be one of the summers with low mosquito populations in southern Manitoba. So enjoy your time on the deck and backyard at least for now. I heard from Manitoba Agriculture that flea beetles feeding on canola have been abundant in some areas. Some fields have had insecticides applied, and in some instances canola has been reseeded. Cutworms are being noticed in many fields as well, but as of the end of May only a few fields have been treated to control cutworms. This summer, Manitoba Agriculture will be looking for some insects not known to occur in Manitoba, or recent arrivals. Last year a few specimens of cabbage seedpod weevil, *Ceutorhynchus obstrictus*, were found in southwest Manitoba. This year, Manitoba Agriculture will be taking sweep net samples in canola fields to determine the distribution of cabbage seedpod weevil in Manitoba. This can be a significant pest of canola. In addition, pheromone-baited traps will be set up to see if western bean cutworm, *Striacosta ablicosta*, has arrived in Manitoba. This can potentially be a pest of corn and dry beans, but has not yet been found in Manitoba. Thanks to John Gavloski for the update on agricultural pests in Manitoba.



The 2018 Joint Annual Meeting of Entomological Society of America (ESA), Entomological Society of Canada (ESC), and Entomological Society of British Columbia (ESBC) is going to be in Vancouver, BC from November 11<sup>th</sup> to 14<sup>th</sup>, 2018. It is anticipated that over 3000 scientists from all around the world will be attending this meeting and exchanging their research findings and experience. More information about this event can be found at the [meeting page](#).

ESM is going to be held on Friday October 19<sup>th</sup> and Saturday October 20<sup>th</sup>. The theme of the meeting tentatively will be “Invasive species: Impacts on forestry to managed pollinators”. I wish you all enjoyable summer and productive field season.

Mahmood Iranpour

# A ROCHA PEMBINA VALLEY INTERPRETIVE CENTRE BIOBLITZ: ARTHROPOD SURVEY (2–3 June 2017)

By Robert E. Wrigley, Reid Miller, Jason Gibbs and John Gavloski

The authors were invited to participate in the Pembina Valley Bioblitz, which was held at the A Rocha Pembina Valley Interpretive Centre (24 km southwest of Morden, Manitoba; 49.013, -98.277) from 2–3 June 2017. ( <https://arocha.ca/where-we-work/pembina-valley/> ). Specimens were collected with sweep nets, aquatic nets, transects using a total of 50 bee bowls (with a water-detergent solution), and a mercury-vapour light for two hours after dark. Habitats included oak-aspen forest trails, deciduous-forest swamp, meadows, cattail pond,



The A Rocha Pembina Valley Interpretive Centre (photo by Jamie Fox)

and creeks. We have attempted to identify each species to family, genus and species levels, but this was not possible with some groups, as specialists will be required. The number in parentheses refers to the number of specimens preserved (where recorded). These will be deposited in the J.B. Wallis-R.E. Roughley Museum of Entomology, the Manitoba Museum, and the Canadian National Collection of Insects, Arachnids and Nematodes in Ottawa. Most species listed here may be viewed on the [bugguide.net](http://bugguide.net) website.

We hope these results will prove useful for the Centre's education program, wildlife inventory, and for comparison with future surveys. We greatly appreciated the invitation to participate in the bioblitz, and for the generous and warm hospitality offered to us, particularly by our hosts Director Jamie Fox and Volunteer Paul Goossen. The Centre's nature trails, guest-house accommodations, and meals were outstanding.

## Ephemeroptera

Undet. sp. (Mayflies)

## Orthoptera

GRYLLIDAE (True Crickets)

*Gryllus veletis* Alexander & Bigelow 1960, Spring Field Cricket

## Hemiptera

### MIRIDAE (Plant Bugs)

*Lygus lineolaris* (Palisot de Beauvois 1818) (7) Tarnished Plant Bug

*Lygus* sp.

### REDUVIIDAE (Assassin Bugs)

*Zelus* sp. (4)

### NABIDAE (Damsel Bugs)

Undet. sp.

### PENTATOMIDAE (Stink Bugs)

*Cosmopepla lintneriana* (Kirkaldy 1909) (1) Twice-stabbed Stink Bug

*Euschistus servus* (Say 1832) (14) Brown Stink Bug

*Euschistus politus* Uhler 1897

### MEMBRACIDAE (Treehoppers)

Undet. sp. (1)

### APHROPHORIDAE (Spittlebugs)

Undet. sp. (1)

Undet. sp. (4)

## Neuroptera

### CHRYSOPIDAE (Green Lacewings)

*Chrysopa* sp. (1)

### HEMEROBIIDAE (Brown Lacewings)

Undet. sp.

## Coleoptera

### CARABIDAE (Ground Beetles)

*Calosoma frigidum* Kirby 1837 (1)

*Bembidion quadrimaculatum dubitans* (LeConte 1852) (1)

*Anisodactylus discoideus* Dejean 1831 (1)

*Agonum placidum* (Say 1823) (1)

*Platynus decentis* (Say 1823) (1)

### DYTISCIDAE (Predaceous Diving Beetles)

*Agabus* sp. (2)

Undet. sp.

### SILPHIDAE (Burying Beetles)

*Nicrophorus pustulatus* Herschel 1807 (2) Sexton Beetle

STAPHYLINIDAE (Rove Beetles)

*Stenus flavicornis* Erichson 1840 (2)

*Dinothenarus badipes* (LeConte 1863) (2)

*Tachinus* sp. (1)

LAMPYRIDAE (Fireflies)

*Ellychnia corrusca* (Linnaeus 1767) (9) Winter Firefly

CIIDAE (Minute Tree-fungus Beetles)

*Cis* sp. (1)

ELATERIDAE (Click Beetles)

*Melanotus* sp. (1)

*Ampedus apicatus* (Say 1839) (1)

Undet. sp. (1)

Undet. sp. (1)

BUPRESTIDAE (Metallic Wood-boring Beetles)

*Brachys aerosus* (Melsheimer 1845) (2)

*Dicerca divaricata* (Say 1823) Flat-headed Hardwood Borer

NITIDULIDAE (Sap-feeding Beetles)

*Epuraea* sp. (2)

PHALACRIDAE (Shining Flower Beetles)

*Olibrus vittatus* LeConte 1863 (1)

LATRIDIIDAE (Minute Brown Scavenger Beetles)

*Melanophthalma* sp. (4)

COCCINELLIDAE (Lady Beetles)

*Hippodamia parenthesis* (Say 1824) (1) Parenthesis Lady Beetle

*Adalia bipunctata* (Linnaeus 1758) (1) Two-spotted Lady Beetle

*Harmonia axyridis* (Pallas 1773) (2) Multicoloured Asian Lady Beetle

*Hyperaspis conviva* Casey 1924 (3)

ANTHICIDAE (Antlike Flower Beetles)

*Anthicus* sp. (1)

PYROCHROIDAE (Fire-coloured Beetles)

*Pedilus elegans* (Hentz 1830) (5)

BOSTRICHIDAE (Bostrichid or Horned Powderpost Beetles)

*Amphicerus bicaudatus* (Say 1824) (1) Apple Twig Borer

SCARABAEIDAE (Scarab Beetles)

*Phyllophaga rugosa* (Melsheimer 1846) (10) June Beetle  
*Phyllophaga* undet. sp. (3)  
*Phyllophaga* Undet. sp. (1)  
*Dichelonyx kirbyi* Brown 1946 (2)  
*Aphodius* sp. (1) dung beetle  
Undet. sp. (1) brown dung beetle

CERAMBYCIDAE (Long-horned Beetles)  
*Molorchus bimaculatus* Say 1824 (1)

CHRYSOMELIDAE (Leaf Beetles)  
*Aphthona nigriscutis* Foudras 1860 (3)  
*Phyllotreta pusilla* Horn 1889 (5) Western Black Flea Beetle  
Undet. sp. (1)

CURCULIONIDAE (Snout Weevils)  
Undet. sp. (2)  
Undet. sp. (1)  
Undet. sp. (1)  
Undet. sp. (1)

BEETLE  
Undet. sp. (1)

## Trichoptera

HYDROPSYCHIDAE (Netspinning Caddisflies)  
Undet. sp. (1)  
Undet. sp.

## Lepidoptera

NYMPHALIDAE (Brush-footed Butterflies)  
*Vanessa atalanta* Red Admiral

GEOMETRIDAE (Geometrid Moths)  
*Nemoria mimosaria* (Guenée 1858)  
White-fringed Emerald Moth  
*Lambdina fervidaria* Hübner, 1827  
Curve-lined Looper

LASIOCAMPIDAE (Tent Caterpillars)  
*Malacosoma disstria* Hübner, 1820  
Forest Tent Caterpillar Moth



Curve-lined Looper Moth (Photo by John Gavloski)

## Diptera

LIMONIIDAE (Limoniid Crane Flies)

*Epiphragma* sp.

Undet. sp. (1)

TIPULIDAE (Large Crane Flies)

Undet. sp.

CULICIDAE (Mosquitoes)

Undet. sp.

STRATIOMYIDAE (Soldier Flies)

*Actina viridis* (Say 1824)

SYRPHIDAE (Syrphid Flies)

*Sphaerophoria contigua* Macquart 1847

*Helophilus latifrons* Loew 1863

*Toxomerus marginatus* (Say 1823)

*Eumerus strigatus* (Fallén, 1817) (1)

*Eristalis dimidiata* Wiedemann 1830 (1)

*Eristalis stipator* Osten Sacken 1877

ANTHOMYIIDAE (Root Maggot Flies)

Undet. sp.

HYBOTIDAE (Hybotid Dance Flies)

*Tachydromia* sp.

BOMBYLIIDAE (Bee Flies)

*Bombylius pygmaeus* Fabricius 1781

OTHER DIPTERA (Flies of various families)

Undet. sp. (12) (shiny blue)

Undet. sp. (3)

Undet. sp. (2)

## Hymenoptera

TENTHREDINIDAE (Common Sawflies)

*Paracharactus rudis* (Norton 1861)(1)

Undet. sp. (1)

ICHNEUMONIDAE (Ichneumon Wasps)

*Ophion* sp. (2)

Undet. sp. (1)

FORMICIDAE (Ants)

Undet. sp. (2)

Undet. sp. (1)

VESPIDAE (Potter and Pollen Wasps)

*Ancistrocerus adiabatus* (de Saussure 1852)

ANDRENIDAE (Mining Bees)

*Andrena dunningi* Cockerell 1898 Dunning's Miner Bee

MEGACHILIDAE (Mason and Leafcutter Bees)

*Osmia atriventris* Cresson 1864 (1) Small Black-bellied Mason Bee

APIDAE (Bumble and Honey Bees)

*Apis mellifera* Linnaeus 1758 (2) Honey bee

### Arachnida

SALTICIDAE (Jumping Spiders)

Undet. sp.

OTHER ARANEAE (Spiders)

11 species (17 specimens)

IXODIDAE (Hard Ticks)

*Dermacentor variabilis* (Say 1821) (4) American Dog Tick

TOTAL NUMBER OF SPECIES: 104

TOTAL NUMBER OF SPECIMENS PRESERVED: 170

### MEETING ANNOUNCEMENTS\*

**Joint Meeting of the Entomological Society of Canada, the Entomological Society of British Columbia and the Entomological Society of America**

Vancouver, 11-14 November 2018

[Meeting Page](#)

**Joint Meeting of the Entomological Society of Canada, the Acadian Entomological Society and the Canadian Society for Ecology and Evolution**

Fredericton, 18-21 August 2019

**26th International Congress of Entomology (Entomology for our planet)**

Helsinki, Finland, 19-24 July 2020

[Meeting page](#)

\*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 September 2018**.



## Bears and Beetles in the American Southwest

By Todd Lawton



A major male *Phanaeus amithaon* from Madera Canyon, Arizona. (Todd Lawton photo)

In mid-July of 2017 I packed-up my car and set off for a three week insect collecting trip to the American Southwest. It had been 14 years since my last visit to SE Arizona and I was eager to search for *Scaphinotus* and other *Carabidae* at high elevation sites throughout the state. My itinerary was demanding, often I could only spare one day for each of the species or subspecies I sought. First I had to find and access roads which would take me to areas with appropriate habitat and elevation. Then I would try to locate specimens by turning all the wood debris I encountered. If I was successful, I would then narrow my search to specific microhabitats. At night I generally placed banana bait trails in the areas where I had found specimens. I've found that I can spend the entire day hand collecting *Scaphinotus*, perhaps capturing ten specimens, often less, yet with a bait trail, and some luck, a dozen specimens can be captured in an hour. In exceptional circumstances I

may attract forty or more! Unfortunately it's not unusual to encounter monsoons in the evening and this can be disruptive, fortunately *Scaphinotus* remain active if the rain isn't too heavy and there isn't significant cooling.

Arizona received near record rains in the summer of 2017; during my first two weeks there were periods of rain every day. Fortunately this kept conditions pleasant, there were only a small number of uncomfortably hot days. Road closures due to flash floods and fires were frequent; plans and routes often had to be changed or abandoned. I spent a couple days in the Willcox area, collecting tiger beetles and other insects. My black light brought in good numbers of *Chrysina*, all three of the Arizona species, as well as other insects, in Madera Canyon. I did well with *Scaphinotus* collecting, acquiring *S. kelloggi*, *S. snowi snowi*, *S. snowi roeschkei*, *S. petersi catalinae*, *S. petersi biedermani* and *S. petersi corvus*. My plan was to set traps, (and I had a car full of them), but because the roads were so poor due to the heavy rains I wasn't confident I'd be able to reaccess areas to retrieve my traps. My low elevation dung traps were quite successful and I acquired large numbers of *Dichotomius*, *Canthon* and *Onthophagus*; I was very fortunate to also catch a good series of both *Phanaeus quadridens* and *P. amithaon*, including several major males. The 2017 Lepidopterist meeting was held in Tucson in late July and I encountered insect collectors, and birders, wherever I went in southern Arizona.

Due to the heavy rains it became routine to stop the car, get out and check the depth of small monsoon-fed streams that crossed the unpaved roads. The trick was to determine what speed was ideal for crossing. Momentum was necessary to ensure my car made it across without sinking but if rocks were present too much speed could result in serious damage to my car.

I had been warned about the Carr Canyon Road before I arrived, it was classified as dangerous because it's extremely narrow and rocky with hair-pin curves and relatively heavy traffic. When I inquired at the local forestry office they advised against attempting it in a passenger car. A sign at the beginning of the road stated that passenger cars were "not recommended," a warning I should have heeded. But I attempted it and managed to get up to the campground by slowly



The narrow and rocky Carr Canyon Road. (Todd Lawton photo)

maneuvering the deep ruts and rocks. I immediately made camp and then set out to search for beetles. I flipped a large log on open dry ground and found four *Amblycheila baroni*, a large flightless tiger beetle! Under a near-by log there were three more. I had searched for this species many times in the past, I couldn't believe my good luck! Then a sprinkle of rain gradually became a downpour. By the time I made it back to camp I was soaked. And the rain didn't stop, it roared on for over an hour. I watched a stream below my camp swell and creep closer to my tent but what really concerned me was the heavy rains were probably damaging the road. I had barely reached the top, could I get back down? After the rain abated I checked the road, a stream was now rushing over it, exposing rocks. With a laugh, I pictured relief workers pitching rations to me across a deep scar in the road. But getting back down the mountain was a problem for the following day; I hiked up the main road in search of pine woods. I found a promising location and started to flip wood debris, I found a *Scaphinotus petersi biedermani* on a north-facing slope and narrowed my search, I found seven more near by as well as another *A. baroni*!

When I awoke the following morning I laid in my tent listening to vehicles as they rattled up the road; I heard a truck slow, cross the creek and proceed up the mountain, this was encouraging. I broke camp and rounded the bend to the creek crossing. It didn't look good, several vehicles were parked on the far side, it seemed the drivers weren't confident they could safely cross. The stream looked shallow but my small car has very low clearance, I hit speed bumps at low speed! I moved the large rocks from my path and contemplated my next move: a slow advance with the possibility of getting stuck? Or a lunge which would hopefully carry me to the far side? I decided to proceed slowly. As my car dropped into the bottom of the streambed it ground to a halt with an impact that rattled the entire car. I panicked, threw it into reverse and managed to back out. I decided to remove all the rocks in my path and prepared for my next attempt. I advanced slowly, again there was the jarring sound of metal against solid rock but I slid forward this time and managed to get traction on the far side. I DID IT! I drove down the mountain relishing my good

luck but aware that I hadn't really learned anything. I knew I would try something like this again, and I did on Bill Williams Mountain near Flagstaff.

One of the chief objectives of my trip was to find *Scaphinotus petersi kathleenae* on Mount Wrightson, the peak that towers above Madera Canyon. The hike is about 11 miles with an elevation gain of 4000'. To condition myself, I took the stairs at work for several months; I doubted if this did much to prepare me. On my first day at Madera Canyon I didn't see many flying insects so impulsively I decided to attempt the climb a day early despite the fact that it was already 10 AM and the heat was building. The first two miles were relatively easy, unfortunately the trail then became much more steep and I had full sun exposure. I took more and more frequent rest breaks; I started to feel nauseous, I couldn't keep food down. By the time I reached 8800' I was utterly exhausted. *S. p. kathleenae* can be found under wood debris but the high slopes are very steep and the trees are small in diameter, there was little ground cover to move. Not surprisingly, I found none.

I returned 13 days later for a second attempt. I started out at 6:30 am and half way up I attempted a longer but less steep alternate trail. It was still extremely difficult and it was humbling that a couple other hikers were gliding past. A bait trail at night would have been ideal but I saw numerous fresh bear scats; I also didn't like the idea of making the long descent in full darkness, it would be easy to get lost or fall. Again, I reached the proper altitude and began to flip debris. I made a brave attempt but eventually had to concede that I would not be taking a specimen home. I committed to return in 2018 and set traps instead, or perhaps try a bait trail if I had a partner to assist by watching for bears.



Relatively lush high altitude forest on Mount Lemmon near Tucson. (Todd Lawton photo)

The following evening I decided to run a bait trail out the back of my campsite in Madera Canyon. I set out a pound of hamburger over a 1/8 of a mile of trail at dusk hoping to attract *Amblycheila baroni*. I sat on a rock overlooking a draw and waited for darkness. I heard heavy steps on dry leaves, which was odd, it was late for someone to be hiking that far from camp. About five minutes later there was more rustling in the leaves and I directed my flashlight in that direction, seeing only the imposing Blair Witch landscape. It was almost completely dark when I saw a large shadow moving in the draw next to me. I flashed my light and locked eyes with a startled bear. In a moment I was on my feet, hurrying down towards camp, not happy that I was forced to surrender my bait trail to a large hungry carnivore. It was then that the realization struck, the hamburger lead straight to my tent!

## Ex-situ Grassland Butterfly Conservation Program at Assiniboine Park Zoo

By Laura Burns

Conservation Research Specialist, Assiniboine Park Zoo

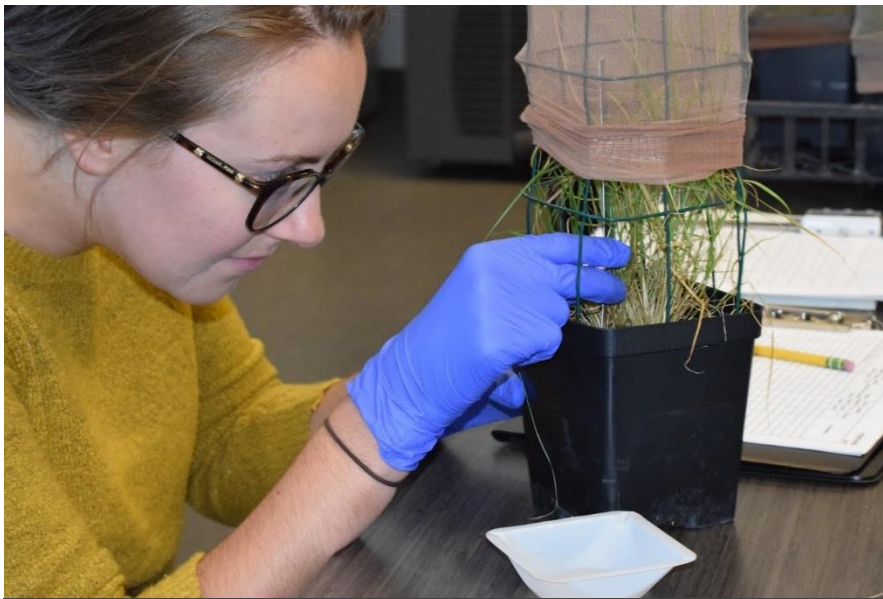
The Endangered Poweshiek skipperling (*Oarisma poweshiek*) was formerly one of the most frequently encountered grassland butterflies in the Midwest, but populations of this small butterfly have collapsed in the last 20 years across its range for largely unknown reasons (although habitat loss, climate change, and pesticide use have been implicated). Recent estimates put the worldwide population of this tall grass



S. Semmler 2017

Poweshiek female (Sarah Semmler photo).

prairie specialist at fewer than 500 individuals. Due to extirpation at nearly all sites across its former range, one of the only extant sites is within a 40 km<sup>2</sup> area of the Nature Conservancy of Canada's Tall Grass Prairie Preserve in southern Manitoba. Despite low population counts in recent years, these grasslands of southeastern Manitoba represent one of the species' last strongholds – and the only location in which they still exist in Canada.



Laura Burns measuring Poweshiek Skipperling larvae (Assiniboine Park Zoo photo)

While previous *O. poweshiek* conservation initiatives have focused on *in-situ* conservation tools such as habitat management, the Assiniboine Park Zoo in Winnipeg, Manitoba is developing an *ex-situ* conservation program for *O. poweshiek* through a 'headstarting' captive rearing program. Headstarting programs aim to give wild animals a 'head start' in life by bringing them into captivity through critical

life stages in order to increase survival. For the *O. poweshiek*, gravid females are captured in the Tall Grass Prairie Preserve and brought back to the zoo to oviposit for up to 72 hours before being returned to their capture sites. Their eggs then hatch and the larva are reared on native prairie grasses throughout the summer at the zoo within protective enclosures. In the fall, the larva go into diapause and are moved indoors to a -4°C incubator. In the spring they are placed on grasses again to grow and pupate, at which point they are released into the wild.

The Zoo's Conservation and Research team hope to increase annual recruitment in the wild by using human care to rear through their vulnerable larval stages prior to wild release; these efforts will continue until the remnant populations have increased to sustainable levels. The summer of 2017 was the first time this initiative was attempted, and after a successful first season, the summer of 2018 will be the first time ever that captive-raised Poweshiek skipperlings will be released into suitable habitats at the Tall Grass Prairie Preserve in southern Manitoba.

This program will not only increase wild population levels, but also provides unique research opportunities. *O. poweshiek* larvae are extremely difficult to detect in the wild, and this zoo-based conservation approach provides the ability to study larval stages. Collaborations with the University of Winnipeg are taking advantage of this opportunity with a new graduate student who is looking at factors that affect larval development and survival.

The conservation program also benefits from the high public profile of Assiniboine Park Zoo in the community of Winnipeg and among other accredited zoo facilities across Canada. Visitors to the zoo can learn about *O. poweshiek* and grassland conservation through hands-on volunteer-run interpretive stations. The social media outreach of the zoo currently reaches over 30,000 followers, which has been harnessed to teach people about the importance of insect conservation.

This program run by Assiniboine Park Zoo has only been made possible by supportive collaborators in Canada and the US, including the Minnesota Zoo, the University of Winnipeg, the Nature Conservancy of Canada, the Living Prairie Museum, Manitoba Sustainable Development, and the US Fish and Wildlife Service.

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