



PRAIRIE BREEZE

THE LIVING PRAIRIE MUSEUM NEWSLETTER

WINTER 2015

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WINTER INTERPRETIVE CENTRE HOURS

Open for Snowshoe
Sundays: First and last
Sunday from Jan-March,
10-4pm

NEW EVENING HOURS

Our bookstore has great
gifts for naturalists. New
stocking stuffers from
Lone Pine!
See p. 4

Get the latest news here:

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@LivingPrairie



facebook

Wishing Kyle a Fond Farewell

After many years as museum director, Kyle has moved on to a new position with the city. Kyle contributed a great deal to Living Prairie Museum, so we wanted to thank him by sharing some of the highlights from his 10 year career on the prairie.

After working as a gardener at Assiniboine Park, Kyle made the move to LPM in 2005. He worked as an Education Coordinator for four years before taking over as Museum Director in 2009.

Kyle saw the completion of many important projects. He was instrumental in forming the Friends of Living Prairie Museum group; a group that supports our major projects, grants, and community events. He directed the construction of the Nature Playground in 2011, as well as our sustainably sourced pergola/ outdoor workshop in 2013. His favourite achievement was Seeds of Diversity, where he secured funding for the establishment of seed plots used to produce native prairie seed. Initiated in 2011, this project is still going today, providing a much needed source of seed for tall grass prairie restorations and urban gardens. Kyle collaborated with the International Institute for

Sustainable Development on the production and use of the biofuel pellets which warm our interpretive centre in the winter. Our giant museum sign located on Ness was thanks to Kyle, and our tiger salamander Steve was raised by Kyle from a tadpole to adult.

Kyle has a lot of favourite moments to carry with him. He enjoyed building a curling rink for winter day camps, collecting seed from rare plants, and rejuvenating the prairie through managed fires. But what he might remember most was the enjoyment of just being out in the tall grass prairie that he worked so hard to protect.

Perhaps the most important part of Kyle's LPM career was the number of students he entertained and educated at the museum. So many young minds have Kyle to thank for their first introduction to the prairie and their new interest in nature.

We wish Kyle all the best in his new role with the city. We know he'll bring a great deal of knowledge and character to whatever comes his way. We'll miss him!

If you'd like to say thanks and farewell, visit our Facebook page and post in our Kyle's Last Day event.

Monarch Research Round-up

Monarch butterfly conservation has received a lot of attention over the last year. We thought we should provide you with some highlights, including links (click to follow!) to more information for your interest.

1) Avoid releasing farmed or commercially produced monarchs

Releasing farmed monarchs does more harm than good, as was stated in a letter by 10 prominent monarch biologists last October. The letter, published by the Xerces Society for Invertebrate Conservation, outlined the pitfalls of importing and releasing monarch butterflies across North America.

Commercially produced monarchs are bred and raised in close quarters, which increases infection and transmission of disease. A parasite called *Ophryocystis elektroscirrha* kills or weakens monarchs, and a greater incidence of highly virulent parasites exists in captive bred populations. Infected monarchs transmit the parasite to wild populations once released, which results in mass die-offs.

The authors' recommendations: Use a small number of local caterpillars for educational purposes instead of ordering farmed monarchs, and skip the butterfly release following events like weddings.

Links:

<http://www.takepart.com/article/2015/10/13/releasing-captive-bred-monarch-butterflies-wild-more-harm-good>

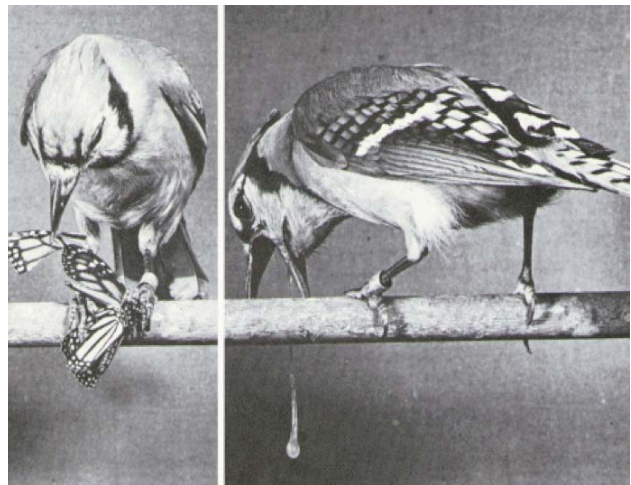
<http://www.xerces.org/blog/releasing-monarch-butterflies-is-not-a-good-conservation-strategy/>

2) Fungi linked to healthier butterflies

Arbuscular mycorrhizal fungi grow in and around plant roots. The relationship between

the fungi and plant is symbiotic, meaning that both of the species involved benefit from the partnership. The plant receives disease-killing or growth-stimulating compounds from the fungi in exchange for sugar, water and nutrients.

Recent research has shown that mycorrhizae can actually help monarchs resist or tolerate the parasite *O. elektroscirrha*. Depending on the species, milkweed will produce different concentrations of cardenolides in their leaves when the roots are inoculated with the fungi.



The “barfing bluejay”, made famous by Dr. Lincoln Brower. Cardenolides taste terrible and induce vomiting in some predators.

Cardenolides protect monarchs from predators by making them unpalatable, but they also appear to protect monarchs from infection. Depending on parasite load, monarchs will self-medicate by choosing to lay eggs or feed on plants with higher concentrations of cardenolides.

This study showed the importance of considering the fungi present in soil when attempting to conserve individual species and ecosystems. There is certainly more going on below our feet than we realize.

Monarch Research Round-up, continued...

Links:

<http://wildlife.org/monarch-study-shows-good-habitat-may-be-all-in-the-earth/>

<http://rspb.royalsocietypublishing.org/content/282/1817/20151993>



A monarch butterfly enjoying the nectar of meadow blazing star. Photo: LPM staff

3) Butterfly gardens are helpful

Good news: Planting milkweed in your backyard is helping monarch butterflies.

A recent study in Pennsylvania compared the abundance and survival of monarchs in natural habitats to that of milkweed plantings in urban flower beds. More eggs were laid on garden plants, and the survival rates in natural areas and gardens were similar.

The authors determined that gardens produced bigger, more appealing milkweed. Gardens were generally protected areas with fewer stressors, meaning that garden-grown milkweed could grow taller and produce larger leaves more easily. Wild milkweed was competing with other plants for resources and was exposed to more challenges like drought

and pests, so more resources were allotted to survival instead of size.

While the gardens supported similar numbers of butterflies compared to wild areas overall, they were still frequently used by monarchs for laying eggs and finding nectar. This showed that in absence of natural areas, gardens are extremely important for monarch survival.

Link:

<http://www.ncbi.nlm.nih.gov/pubmed/26314013>

4) We can make a difference

Are our efforts to create habitat and protect monarchs from disease having an effect? It will take time, but reports are promising. Mexican Environment Secretary Rafael Pacchiano stated that three times the amount of monarchs are expected to return to Mexico this year, compared to last. However, these estimates will need to be supported with more observations and monitoring. Illegal logging in the area will also need to be strongly controlled if the returning monarchs are to have ample habitat to overwinter.

Link:

http://www.tulsaworld.com/news/usworld/mexico-hopes-to-see---times-more-monarch-butterflies/article_ffa922db-825d-5c9c-bdf9-4-dc1f50f5373.html

Based on the current research, our best plan of action is to continue to do our part to protect monarchs from disease, and provide the host plants required for development. Being cautious about releasing farmed monarchs will limit the spread of infectious parasites. Creating new habitat with native species of milkweed will ensure that food and protection is available for developing larvae. Finally, conserving natural habitat will provide the nectar sources and milkweed necessary for monarchs to thrive.

EVENING HOURS

We're here to provide you with gifts for the naturalists in your life!

Holiday Hours:

Tuesday, Dec. 15
Thursday, Dec. 17

Open 9 am to 8 pm

New: Lone Pine Quick Reference Guides to animal tracks, mammals, birds, trees, wildflowers, knots, and constellations. At the size of a brochure, they make a great trail companion. Friends members receive a 20% discount on all bookstore items!

MUSEUM STAFF

Danielle Trudel
Sarah Semmler



Thank you for receiving your newsletter electronically.



UPCOMING EVENTS

Winter Speaker Series

We've got another interesting series ready to get you through the winter! Presentations take place on **Tuesdays, 7:00 - 8:30 pm**. Admission is free, but donations are gladly accepted. Space is limited so call us to reserve your seat. See our website for speaker summaries.

January 19th: Understanding and protecting Canada's endangered bats. Dr. Craig Willis, University of Winnipeg

February 2nd: Building a better "barcode of life" at the Living Prairie Museum. Dr. Jeffrey Marcus, University of Manitoba

February 16th: With a little help from their friends: Reliable information in Richardson's ground squirrel alarm calls. Dr. James Hare, University of Manitoba

March 1st: The not so common cattail: How this wetland plant is being used for bioenergy in Manitoba. Karla Zubrycki and Dr. Richard Grosshans, International Institute for Sustainable Development

March 15th: If we build it, will they come? Conservation of grassland birds and their habitats. Dr. Nicola Koper, National Resources Institute, University of Manitoba

Prairie Life: A 2016-2017 16 Month Calendar

We've created our first ever 16 month wall calendar! Each month features seasonal photographs of the plants, animals, and insects of Living Prairie Museum. We've also included dates for our special events and workshops. Contact us to arrange pick-up of your free calendar!

Snowshoe Sundays!

Join us for free snowshoeing, January to March, on the first and last Sunday of each month. Sizes available for 4 yrs and up. Open 10-4 pm.

LIVING PRAIRIE MUSEUM

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