



# PRAIRIE BREEZE

THE LIVING PRAIRIE MUSEUM NEWSLETTER

SUMMER 2018

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10 - 5 PM daily  
July and August

## UPCOMING EVENTS

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Festival

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## Thatching Ants Up Close



Though insect diversity abounds at the Living Prairie Museum, perhaps none make a more apparent impact on the physical landscape than colonies of thatching ants. Their thatch mounds are easily visible from the observation deck, yet the fascinating activities of these social insects are less obvious to the untrained eye.

Of the many ant species in the genus *Formica*, upwards of 20 live here in Manitoba. They range from 2-7mm in length with a red to brown thorax and darker gaster (the rear body segment). Their nests, partially above ground, are built with accumulated plant material such as twigs and grass segments (thatch). The domed architecture of this structure is thought to regulate temperature within the nest, including the retention of early spring warmth that kick starts the seasonal activity of the colony.

### Clever Chemists

A portion of thatching ant diet is made up of other insects. The task of food collection is delegated to worker ants that put to use a toolbox of chemical compounds. Live insect prey is subdued with formic acid sprayed from specialized venom glands. For spoils too large to carry to the nest

alone, ants will lay a chemical trail to their prey that other workers will follow in order to assist.

### A Different Kind of Ant Farm

Aphids contribute significantly to the diet of the colony yet not in the way you might think. As many gardeners know, aphids will colonize plants in order to feed off the sugar rich fluids flowing through their stems and leaves. When tapped in, the aphids excrete a sweet substance called honeydew which is a valuable and concentrated source of amino acids, sugars and water. Thatching ants and aphids will form a fascinating mutualistic relationship. Like farmers tending their flock, the ants will fiercely protect the aphids from other insect predators. In return, the ants take honeydew back to the nest where (after consumption and regurgitation by one or more ants) it is fed to developing larvae in the chambers of the colony.

The constant travel of ants between the nest and a honeydew source is often apparent as narrow 'highways' of cleared prairie soil. On your next visit to the prairie, keep a lookout for these trails often radiating from nests to nearby snowberry bushes. The leaves will be curled where aphids have gathered.

## Prairie Lilies - Flowery flames on the prairie

### A little about lilies

Whether you call it a Wood Lily, Philadelphia Lily, Prairie Lily, Western Red Lily or by its Latin name, *Lilium philadelphicum*, this vibrant prairie plant is currently in full bloom and putting on a show. Growing up to 60 cm tall, this perennial forb boasts large hand-sized, red-orange flowers atop of a single whorled-leafed stem. These brilliant blossoms, up to five per plant, can be seen punctuating the prairie landscape in mid to late June. In general, *L. philadelphicum* can be found in dryer, well-drained, full sun prairie settings, but is also found in partly shaded open woodlands.

As with many prairie plant species, the Western Red Lily was once more widely abundant. The above ground portion of this plant is food for deer and the bulbous root can be eaten by rodents. However, their reduced numbers are due to more than grazing wild animals. Over the years, a combination of agricultural production, over-grazing by livestock, urban development, wild harvesting by humans, and the loss of tall grass prairie habitat has led to a decline in numbers across the Prairie Provinces. Overall, *L. philadelphicum* is still found across Canada, from BC to Quebec, and across most of the United States. According to Manitoba Conservation this species has an S4 designation in Manitoba. This means that it is secure throughout the province (with over 100 occurrences) but that it is of long-term concern.

Lily growth and reproduction can be quite slow and low. Lilies require cross-pollination from insects or hummingbirds. Therefore, solitary plants that are spread far apart, even on our prairie, have lower rates of viable seed production. Flowers that are hand-pollinated by prairie technicians often produce a greater amount of seed. *Lilium philadelphicum* also grows very slowly from seed, often taking five

years to establish and flower.

Given its relative rarity and difficulty/investment to propagate, it's not likely this species will be offered by your local native plant nursery any time soon. But, as much as you would like to include this species in your plantings, it isn't recommended that you remove it from its natural habitat. It's understandable that the public desires to contribute to conservation efforts by digging up these lilies from seemingly unideal locations, hoping to transplant them in backyard butterfly and prairie gardens. Unfortunately these actions disturb delicate native and wild ecosystems, ultimately leading to decreased available habitat, food sources, and biodiversity. Removing a lily from the wild could even unintentionally lead to a population decline in a given area due to the resulting lack of available lily pollen required for reproduction.



A lily in bloom at LPM. Photo: S. Semmler



## Prairie Lilies - Flowery flames on the prairie (cont.)

Conservation is still very much welcomed in a variety of forms. If you are lucky enough to have a Prairie Lily existing on your property, congratulations and welcome to the wonderful world of prairie plants! Depending on your level of commitment there are a few ways you can help your lily. You can humbly watch it grow every year, protecting it from mowing and grazing. You can expand the amount of land you have dedicated to your native plants and hope that over time the lilies spread. Or, you can go deep, learn all you can, and try your hand at pollinating and growing a new lily from seed.

Beyond personal lily stewardship you can support tall grass prairie conservation, restoration and research efforts across the municipal, provincial and federal levels in a number of ways. You can let your public representatives know how important and precious this ecosystem is. Make a donation of time/money to a prairie-focused non-profit organization. Educate yourself and others, especially children. Build a native plant garden at home. And, last but not least, just spend time among the lilies, as it will help to maintain and further cultivate a sense of wonder and appreciation for Manitoba's natural spaces!



Prairie lily with two blooms. Photo: J. Sparling

### Scarlet scourge

Museum staff often receive questions about the susceptibility of wild lilies to scarlet lily beetles. *Lilioceris lili* has become the scourge of many a home and professional gardener across Canada. This species of beetle was unintentionally introduced to North America from bulbs imported from Europe and Asia. This beetle has continued to spread across the continent since the 1940s. Lily beetles can fly from plant to plant, so very few lily gardens are safe.

According to a study out of Carleton University by Ernst et al. 2007, there were no reports of infestations of the beetle on wild populations of *L. philadelphicum* at that time. That said, it's still possible that this voracious feeder could begin to threaten prairie lilies. A related wild species, the Canada Lily, is used as a host by the beetle.

A great way to help monitor the spread of lily beetles is by sharing your observations as a citizen scientist. Professor Naomi Cappuccino, also of Carlton University, maintains a website where you can report any findings. Early observations could help conserve the beautiful lilies that still remain on our prairies.

Share your observations:  
<http://lilybeetletracker.weebly.com/>



Scarlet lily beetle. Photo: D. Nicholls

## Save the Date

Our annual Monarch Butterfly Festival will be held on Sunday, July 15th!

This free, family event has crafts, guided hikes, booth displays, face painting, live butterflies, and more.

Hope to see you there!

## Volunteers Needed

Want to volunteer at the festival?

Send an email to [friendsoflpm@gmail.com](mailto:friendsoflpm@gmail.com)

## MUSEUM STAFF

Sarah Semmler  
Lois Grieger  
Kelly Ferrand  
Jennifer Sparling  
Josh Pearlman



Thank you for receiving your newsletter electronically.



FRIENDS OF THE  
LIVING PRAIRIE  
MUSEUM

## UPCOMING EVENTS

### Monarch Butterfly Festival

Join us for the Living Prairie Museum's 12th annual Monarch Butterfly Festival!

**Sunday, July 15th, 12:00 to 4:00 PM**, rain or shine. Admission is free.

This all-ages event has many activities to enjoy. Presentations by local scientists, storytelling, displays of live monarchs, crafts, guided hikes, a native prairie plant sale with Prairie Flora and more!

Receive one free milkweed per family while quantities last.

Be sure to bring a t-shirt to silk screen our newest festival design!

### Thursday Theme Days

Free, family Theme Days take place on Thursdays, 10:00 to 11:00 AM. Activities include a presentation on a prairie topic followed by an activity. Our one-hour programs are best suited for ages 5 - 11. Please dress for the conditions!

Registration is available two weeks prior to each Theme Day. Friends of the Living Prairie Museum members may register at any time.

July 5th - Outstanding Owls  
July 12th - Ludicrous Lepidoptera  
July 19th - Super Powered Species  
July 26th - Invasive Investigation  
Aug 2nd - Burgeoning Birders Blitz  
Aug 9th - Brilliant Bison Behaviour  
Aug 16th - Citizen Science  
Aug 23rd - Magnificent Microbes

More information can be found on the Friends and museum websites. Happy learning!

**Friends of the Living Prairie Museum**

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