



PRAIRIE BREEZE

THE LIVING PRAIRIE MUSEUM NEWSLETTER

FALL 2021

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INTERPRETIVE CENTRE HOURS

September
Sundays
10:00 - 5:00 pm
Masks and Proof of
Immunization Required

UPCOMING EVENTS

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Harvesting
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The Summer in Short

This was another unusual summer for Living Prairie Museum. The extended lock down of museums kept us from opening our doors, and re-opening was delayed while health orders changed.

The silver lining was that our work could be fully focused on the habitat for another season. And, we did get to host some events and volunteer activities to help with that. Here's the short version of our summer story.

Invasive species management:

Staff and summer students successfully carried out targeted mowing and hand-pulling of thistle and vetch. Brome was attacked with mowing and very selective herbicide. We developed a plan for aspen suppression, and tested our a new fungal treatment for aspen suckers. Even with the drought, the prairie looks amazing.

Poweshiek Conservation:

We continued our partnership with Assiniboine Park Zoo and their Poweshiek Skipperling headstarting program. This endangered prairie butterfly feeds on prairie dropseed, so we provided about 300 plugs to use as host plants.

Milkweed Giveaways:

The Friends hosted one event, and later the museum was able to host another. Thank you the Friends for finding a location to support the first event while the museum was unable to host visitors. In all, about 260 plants found new homes.

Sheep and Goats:

Our grazing project continued for a third year, this time targeting vetch and brome on the east side of the preserve. Goats were included for the first time. They did a great job eating invasive plants and we hope to have grazers back again next year. Thank you to the Friends for partially funding this project!

Volunteer Thistle Pull:

We were joined by three gov't agencies from the U.S. Consulate in Winnipeg for a big thistle pull. We removed two pickup trucks of these non-native thistles, giving the local species a better chance at regaining a foothold in the area.

Harvesting with Master Gardeners:

Manitoba Master Gardeners joined us at our seed plots to help harvest the early rounds of prairie grasses and wildflowers. We're on track for a great harvest and happy to have the help!

Understanding the World of the Wasp

Our Nature Education Coordinator pulled together a lot of information on social wasps to help you understand these ornery creatures.

In backyards, on patios, and working on the prairie these final days of August we wonder as we are chased inside by those striped stingers – “Why are yellow jackets such jerks?” Through the pain of a sting I need more than the vague understanding that everything has its place in the ecosystem. What good are yellow jackets anyway?

1. Who are Yellow Jackets?

They belong to the order Hymenoptera < GK Hymen – membrane + pteron – wing. They’ve got 4 membranous wings, complete with little hooks called hamuli to join front and rear wings so that they function in unison. Secondly, they have the characteristic narrow waist dividing thorax from abdomen. Their common name “yellow jacket” aptly describes their dorsal striped patterning.

Along with other eusocial insects like ants and bees - yellow jackets form complex colonies. Eusocial means forming large, multigenerational communities where divisions of labour prevail according to size, sex and sometimes shape. According to noted biologist E.O. Wilson “in all of the animal species that have attained eusociality, altruistic cooperation protects a persistent, defensible nest from enemies.”

According to function: queens lay eggs; female workers build, feed and defend the colony; male drones produced late in the season mate and die.

2. Yellow Jacket Lifecycle

Yellow jackets undergo complete metamorphosis – egg to larvae to pupae to adult, all in a single season. This is significant, first because the colonies are annual – only the mated queens

overwinter, and also because the helpless larvae demand a lot of work to raise. For humans, it takes a village to raise a child. For social hunters like yellow jackets, it takes a colony.



Yellow jackets (a) make tear-drop shaped paper nests, but some species nest in the ground. Image: Andrew Reading. Paper wasps (b) are more slender and create umbrella-shaped nests with exposed cells (no paper envelope) Image: Tom Bently.

Consider that each fall the successful yellow jacket colony collapses. Build and collapse is success. Not only that - it takes the entire colony’s focus to achieve. Each new, frantic season’s aim is to carry forward the gene line. In spring the queen rebuilds the nest by laying, then raising the first generation of workers, until the workers can take over. She does it all – a single parent busy making paper, building the nest, laying the eggs, feeding the larvae, defending the nest.

As workers’ numbers increase these sterile

continued...

females help grow the colony exponentially. With their venomous sting, they kill insects and bring protein and whatever they can scavenge back to the nest to feed the larvae and themselves. Trophallaxis (> Gk. – food exchange) is the process of exchanging protein for the sugars secreted by the larvae. The workers feed protein to the larvae who excrete sugars to feed the workers.

Trouble arises in fall when food sources like insects and flower nectar become scarce. Larval production slows, and workers begin hunting and scavenging for whatever they can find outside the nest to keep themselves fed. Too often, conflict with humans results as desperately hungry workers cannot resist anything sweet. Finally, as the worker population wanes, workers lose their purpose. In preparation for winter the queen switches from laying worker eggs to laying a few male eggs and new queens – no need for more worker larvae now. As the colony winds down, all that defined workers' lives disappears. Redundant, the unemployed workers become mercenaries hunting for survival.



Yellow jacket stinger. Image: Geir Drange.

3. Strategies to Stay Safe

The yellow jackets' mandate is to defend the nest. Since some nests are located underground in abandoned burrows, we humans aren't aware

of the nest until we step on them. Watch where you step, look up in the trees, and recognise the tell-tale trickle of yellow jackets from a pile of leaves or hole.

Avoid swatting in a panic. Remember, yellow jackets are not honeybees, so they can and will sting multiple times without dying. When angered, they may also release a chemical signal that encourages others to join in the attack. This natural communication is a means of rallying the troops in defense of the nest.

Seal up any areas where wasps were nesting once the colony has gone in fall. Holes in siding, spaces in roofs, crevices under the sidewalk, are all enticing for cavity-nesting yellow jackets. In spring, remove hanging nests as early as you can while they're still small. The queen can find a new location elsewhere.

If the nest is in a safe location where they won't be a problem, leave them be, and give them their space to do their work.

So, what good are yellow jackets? Believe it or not, they are pollinators, particularly later in the season when prey is declining. They are also powerfully driven hunters. Imagine our gardens, parks, agricultural crops, and forests overtaken by munching caterpillars - predation by wasps is part of Nature's checks and balances. They also reduce insects we may consider pests at home, like aphids, flies, moths, and many others.

We humans are often unaware of the ways we clash with nature. Fortunately, we have the ability to learn. By understanding that to be a yellow jacket is to defend the colony, and further understanding how this mandate reaches crisis proportions as summer winds down – enables us to keep safe while giving yellow jackets a way to keep to themselves and their duties. Now if it weren't for that sting...

Accessing the Interpretive Centre

Please note that as of Sept. 7th, guests entering the interpretive centre must wear a mask and provide proof of COVID-19 immunization. You will be asked for ID to confirm your name.

Children unable to be immunized may be accompanied by a fully immunized adult.

MUSEUM STAFF

Sarah Semmler
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Thank you for receiving your newsletter electronically.



UPCOMING EVENTS

Volunteer Seed Harvesting

**Tuesday, Sept. 14th
6:00 pm to 7:30 PM**

Call the museum to register for volunteer seed harvesting! The seeds we collect are used to improve low quality habitat, for full reconstructions, or to improve the genetic diversity at our native prairie seed plots.

You can keep some of what you collect.

Registered guests are asked to pre-screen for symptoms of COVID-19. If you are unwell, please stay home.

Volunteer opportunities are posted on social media. Be sure to follow us on Twitter, Facebook, or Instagram!



Be like the coyote.

The coyote only plays with the coyotes it lives with and only communicates from afar.

Practice social distancing.

Visit winnipeg.ca/COVID-19 or contact 311 for updates



Please visit Winnipeg.ca/livingprairie for updates.

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