



PRAIRIE BREEZE

THE LIVING PRAIRIE MUSEUM NEWSLETTER

WINTER 2021

INSIDE THIS ISSUE:

- New Prairie Entryway Complete 1
Are those crop circles??... 2
How snow protects the plant monarchy 3
Upcoming Events 4

INTERPRETIVE CENTRE HOURS

By appointment or public event.

Masks and Proof of Immunization Required

UPCOMING EVENTS

Winter Speaker Series
Snowshoe Sundays
p. 4

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New Prairie Entryway Complete

The Living Prairie Museum now has a new and inviting entryway on the west side of the preserve.

The west entryway has been problematic in the past. Pedestrians often circumvent the trail system by hopping the chain bollards or veering off path to create their own walkways. This has caused considerable scarring on the prairie, which allows non-native plants to invade. Despite our best efforts to add signage, blockades, and restore desire paths, it never seemed to improve.

LPM was successful in acquiring funding through the Province of Manitoba's Building Sustainable Communities grant. The funding allowed us to work with local landscape architects and city planners to design and install a welcoming and functional entryway. The new entryway helps us conserve our fragile habitat for the future and creates a beautiful point-of-interest for guests to enjoy.

The entryway features designs that are continuous with our trail markers and annex. The steel is reclaimed and will naturally oxidize in the elements. An interpretive panel introduces the site with historical

and ecological information. Wood slats guide guests to the designated trails. On the slats, translations can be found: Living Prairie Museum, Prairie Crocus, Big Bluestem, and Savannah Sparrow have been translated to French, Dakota, Ojibwe, Cree, and Ojibwe.

Part of this project was also refurbishing the remaining bollards. Bollards were painted black - the black colour helps the bollards disappear from view when looking out onto the prairie from the trails.

LPM also thanks the Friends of the Living Prairie Museum for contributing 10% of the project funds, Councillor Gillingham, and the City of Winnipeg for additional project support.



Photos don't do it justice! Be sure to take a look during your next visit.

Are those crop circles?? No, just prairie management.

Has Living Prairie Museum become a landing pad for wayward UFOs? Despite the circles you may be seeing, no, we haven't had the opportunity to welcome any alien guests to our hiking trails. News of Star Attraction status in Manitoba doesn't make it to the actual stars!

What you're seeing is prairie management in action. If you remember our summer edition on aspen, we introduced some of the ways we work to reduce aspen encroachment on the prairie. This included girdling and the application of a fungal control paste on cut stems. However, smaller aspen suckers are just too numerous to control with these very hands-on methods in some areas of the prairie.

Stands of wispy aspen, particularly on the west side of the prairie, were cut down with a sickle bar mower. While we know that aspen will recover from mowing and continue to grow, this does cause the plant to utilize additional energy to regrow in spring. Just as the suckers are attempting to recover from the fall cuts, we intend to hit this area with a spring burn, adding another round of forced resource use to regenerate. If we can keep this pressure on for a few seasons, whether by continued mowing or other means, we should be able to reclaim a large area of prairie habitat from the encroaching forest.



The aspen suckers had shaded out much of the vegetation around them. We are using this to our advantage - it gives us some bare soil for seeding. Staff developed a seed mix that we're hoping will be a good fit for these areas. We targeted fast growing species (ex. *Rudbeckia hirta*) that can quickly colonize an area after disturbance, and species that can fill in bare ground quite densely (ex. *Galium boreale*). We also included species that we think can handle repeated mowing for weed control (ex. *Symphyotrichum ericoides*). In total, 29 species were seeded into the west prairie.



The encroachment in the area also protected a rather robust community of creeping thistle. This non-native species, also known as Canada thistle, is native to northern Asia and Europe. It's been present in North America for about 400 years and has found a home in almost all of the grassland habitats we see in Manitoba. There will no doubt be a flush of this plant as the seed bank gets access to lots of sunlight. But, that's where more mowing, burning, spot-treatment herbicide, and hand-pulling comes into play. The plant doesn't spread as readily by seed as it does by root, so keeping it from maturing is very important for control. We're also hoping our seed mix will take hold and fill in the spaces left behind as the thistle is removed. We'll be keeping a close eye on these areas.

How snow protects the plant monarchy.

“Let it snow. Let it snow. Let it snow. Please more snow!”, is what I’m hearing from plant people. Besides contributing to much needed soil moisture, snow is a fantastic insulator protecting the crowns of dormant tall grass prairie grasses and forbs. How does it work? It’s all about timing.

First, what’s a crown? Traditionally, a monarch or “crown” ruled. Similarly, the plant crown is the central point of energy exchange and growth on a plant. The plant crown is where the above and below soil realms meet (stem and leaves join the roots). The crown is more than a secret bunker / meeting place, it also contains meristematic tissue - the supercomputer growth hub of the plant. Meristematic tissue is the plant equivalent to human stem cells. No wonder it must be protected. But isn’t that hard to do when above ground tissues are frozen?

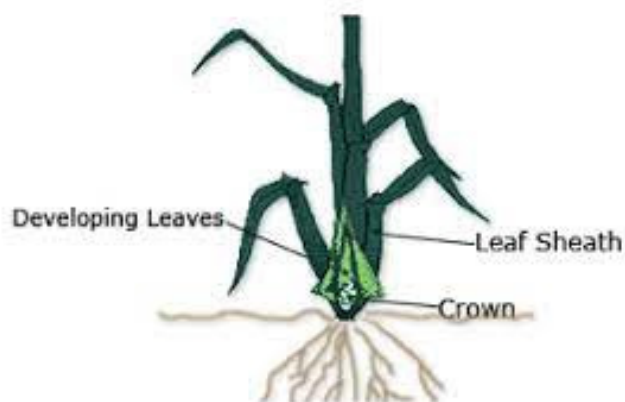


Image: Penn State College of Agricultural Sciences

All growing season the above-soil parts of the plant dedicate themselves to photosynthesis – taking in sunlight, water and CO₂ to make food, and sending the overabundance to the roots for storage. Those stalks and leaves grow and become the biomass that will shelter the crown. Even before the first snow, notice how the dead leaves cover and blanket the crown? Later, the upright stalks act as a snow fence to catch and

create a drift. Allegiance is deep. Even dead, the leaves and stems serve and protect the crown.

Timing is essential to form the subnivean zone. “Niv” is the Latin word for “snow” and “sub” means “below”, or at least it did before it became synonymous with the sandwich. If the first snow falls on plants when they are already becoming dormant, they have enough rigidity to hold the snow’s weight. They are also dry enough to prevent water from expanding as it freezes, shattering their cell walls. With subsequent snows, their narrow tips fold under the snow forming an umbrella-like shelter. It is this subnivean zone that forms the void between the surface of the soil and the bottom of the snowpack. Prairie mammals like mice, voles and other rodents traveling here will create the tunnels and runaways we see when the snow melts.

The plants manage to synchronize their hardening off with the first snowfall because they rely on the decreased daylight hours, not temperature to set their dormancy clocks. Unless untimely snow falls early, plants are far along in the dormancy process to resist harm. Dormancy involves moving nutrients and water from exposed leaf and stem tissues down into thicker, woodier root tissues. As a result, the leaves become less green and less pliable – literally hardened off. Once the green pigment chlorophyll has drained out, broken down, and is stored away in roots, the yellows and reds of the other pigments like carotenes and xanthophyll can shine through. Laying close to the insulating soil and sheltering under the subnivean zone, the crown is protected from bitter temperatures.

So, while some grumble about the first seasonal blizzards, we have to remember that a white blanket of insulation is important for protecting life and the crown. “Let it snow!”.

Accessing the Interpretive Centre

Please note that as of Sept. 7th 2021, 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 under 12 may be accompanied by a fully immunized adult.

MUSEUM STAFF

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Thank you for receiving your newsletter electronically.



UPCOMING EVENTS

Winter Speaker Series

The Friends of the Living Prairie Museum will host the Winter Speaker Series on Zoom. Online registration will be available January 10th. Presentations take place 7:00-8:30 pm.

While registration is free, donations are welcomed to help support future speakers.

Jan 28 - The Wild Bees of Manitoba.

Feb 8 - Prairie Birds of Manitoba.

Feb 22 - Modular Prairie Design: Applying Ecosystem Principles to Prairie Restoration.

Mar 8 - Winnipeg is Indigenous Land.

Mar 22 - The Splendour of Manitoba's Orchids.

More information will be available on our website soon!

Snowshoe Sundays

Snowshoe Sundays were planned to resume at the end of January. However, in the interest of safety and changing Public Health Orders, we are waiting to confirm these plans until after January 11th.

Wishing you a safe and happy new year!

Please visit Winnipeg.ca/livingprairie for updates.

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