

THE LIVING PRAIRIE MUSEUM

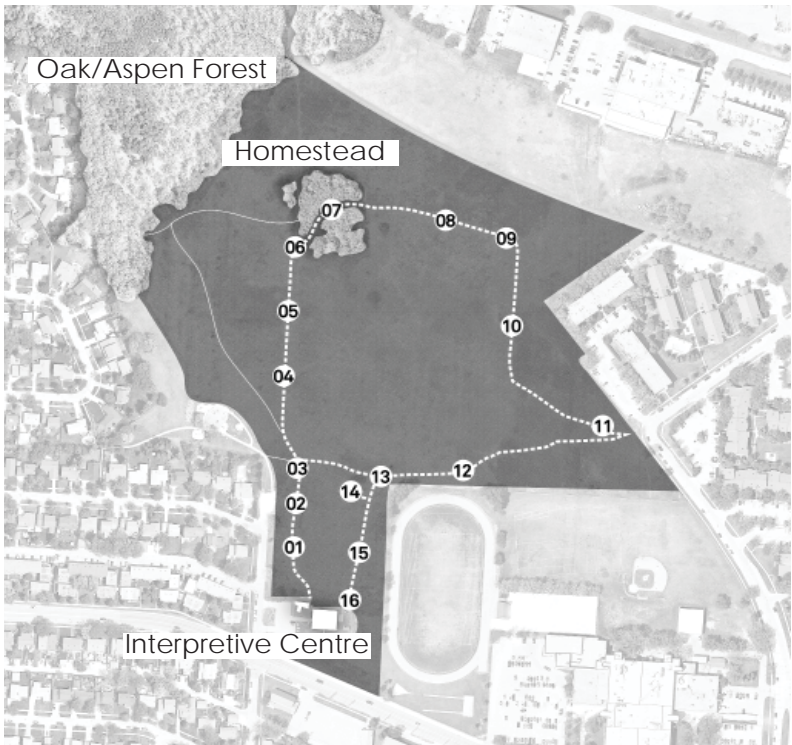
Self-guided Trail



THE SELF-GUIDED TRAIL

The self-guided trail begins at the west side of the Interpretive Centre. You have the option of taking the long path (about 1 km in length) or the short path (about 1/4 km in length) as you discover the secrets of the tall grass prairie.

PRAIRIE KIDS! Nature Backpacks can be signed out from the Interpretive Centre. They are full of fun things to do during the self-guided hike, including an activity workbook. *Please remember to put everything back in the backpack and check-in at the Interpretive Centre before you leave.* This guide can be returned for re-use, but kids are welcome to take their workbook home.



START

Welcome to some of the rarest habitat in the world: the tall grass prairie. This site is a glimpse into the past, revealing a landscape before European settlement brought unprecedented change.

Tall grass prairie once extended from southern Manitoba to Texas. Less than 1% remains in North America today.

In order to assist us in maintaining this rare landscape, we ask that you stay on the designated trails, and take only photos and memories as a memento.

We hope you enjoy your hike through Manitoba's ecological heritage!

1. INSECT GALLS

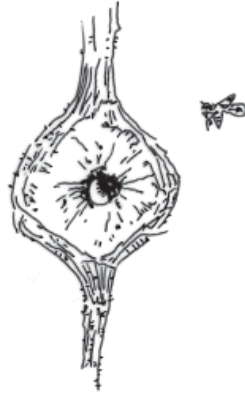
Have you noticed ball-like swellings on the stalks of certain plants in this area?



These are actually insect homes called galls. In early summer, goldenrod gall flies (*Eurosta solidaginis*) lay their eggs near the buds of goldenrod plants. Once the egg hatches, the larva burrows into the stem. This causes the plants to grow a ball-like swelling that acts as a larval home.

Goldenrod (*Solidago canadensis*) with gall

The gall fly larvae feed on plant tissues until overwintering within the gall. The fully developed adult fly will emerge from the gall in spring. Gall larvae are an important food source for winter birds.



Gall with fly larva inside

2. WHAT'S UNDERGROUND?

Prairie plants have a lot more to them than meets the eye. How far do you think they reach below the soil surface? A general rule is that 1/3 of the plant is above the ground while at least 2/3 of the plant exists below the surface as roots.

Most prairie plants are perennial. This means that each plant will grow back from its roots in spring. One of the plants in front of you may be growing from roots that are more than 50 years old!

Many years ago, an ice rink was constructed on the prairie. If you look to your right, you can still see remnants of disturbed prairie forming a ridge where the boards were inserted into the ground. Perennial roots, and the seed bank in the soil, helped this section of the prairie recover.



Low prairie rose,
Rosa arkansana

3. A SEA OF GRASSES

Big bluestem (Andropogon gerardii) with roots



Big bluestem is the dominant grass of the tall grass prairie. By the end of summer, big bluestem attains heights of 1 to 2 meters. Early settlers often referred to big bluestem as 'turkeyfoot' because its seedhead branches out like the foot of a turkey. Big bluestem was voted Manitoba's provincial grass in 2010.

Other common native grasses include side oats grama, spear grass, prairie dropseed, and green needlegrass.

Not all grasses on this site are native (endemic). Human activity has introduced problematic invasive species, such as smooth brome and Kentucky bluegrass, that can overtake prairies if left unmanaged.

4. SILVER HEIGHTS

As you walk, you may notice a number of prairie plants that are silver in colour. These plants have small white hairs covering their stems and leaves. The silver colour is an adaptation to the hot, and sometimes dry, prairie. Silver reflects sunlight, helping the plant stay cool and retain moisture.

This part of Winnipeg earned the name *Silver Heights* due to its high elevation and the silvery colour of local prairie plants.

There are three silvery species on this prairie:

- 1) Wolf willow, a shrub with yellow flowers in spring.
- 2) Silverleaf scurfpea, a prairie tumbleweed with purple flowers.
- 3) Prairie sage, a plant used in smudging ceremonies, and one of four plant medicines sacred to Indigenous people in Manitoba.



Silverleaf scurfpea,
Pedimelum argophyllum

5. CLONES ON THE PRAIRIE

The northwestern side of the preserve contains trembling aspen (*Populus tremuloides*). These are fast growing native trees that form stands by sending up suckers from their shallow root system. A stand of trees that has grown from a single parent is called a clone.



Trembling aspen,
Populus tremuloides

Aspen clones often cover very large areas as they grow. When bison grazed and fires regularly blazed hundreds of years ago, aspen trees never had a chance to dominate. Today, aspen must be carefully controlled near prairie habitat, or we lose grassland to advancing clones.

6. MANAGING OUR PRAIRIES

Fire is a natural part of the prairie ecosystem. Hundreds of years ago, fires occurred on the prairies during lightning storms. They were also set by Indigenous people to attract bison to feed on the fresh shoots, or to encourage the growth of edible and medicinal plants. Prairie plants have adapted to these fires over thousands of years through perennial growth: They grow back from their roots after fire, grazing, and winter.

Fires have many benefits. They reduce annual leaf litter, release nutrients in ash, and allow sunlight to warm the soil which encourages seed germination. Deep roots hold enough energy to send up new shoots in only a few short days following a fire. Burning also discourages non-native plant species and trees from invading the prairie.

Today, prairie managers try to burn small sections of this tall grass prairie preserve each year. Sections of the prairie that were recently burned differ in their abundance and diversity of plant species compared to unburned areas. The density and vigor of the big bluestem can be quite obvious after a managed fire. You may be able to see a burn from the trail - the soil will be visible (not hidden under leaf litter) and the big bluestem will be plentiful.

Mowing and haying are also ways of managing the tall grass prairie community. In terms of natural disturbance, these management activities are similar to thousands of bison trampling and grazing the prairie.

7. THE PRAIRIE HOMESTEAD

Houses have stood inside this shelter belt of trees and shrubs in the past. Many families have lived on this homestead since St. James was settled, with the last being the Watson family in 1963. You can view the recent history of homesteaders at the front entrance of our Interpretive Centre.

The house and families are gone, but the large Manitoba maple, American elm, and chokecherry are still growing. The non-native honeysuckles, lilacs and caragana shrubs have remained and provide habitat for a variety of birds and small mammals.

8. BIRDS OF THE TALL GRASSES



Because trees are few on the prairie, many prairie birds have adapted to nesting on the ground. Their courtship displays and songs are mostly performed in flight rather than from a tree. Some of the birds you may see or hear

on the prairie are savannah sparrows, clay-coloured sparrows, meadowlarks, or bobolinks. Mallard ducks also build their nests on the prairie where the tall grasses provide some protection from predators.

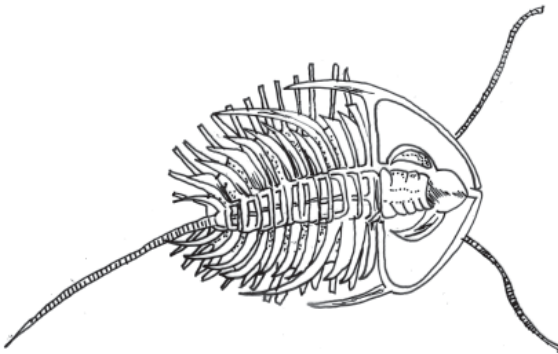
Unfortunately, grassland bird populations are rapidly declining. Free roaming feral and domestic cats, off-leash dogs, habitat loss, and pesticides are all a significant threat to nesting prairie birds.

9. LAYERED LIMESTONE

If you look to the right of the prairie path near the apartment buildings in the distance, you will see large blocks of stone. These are actually boulders of limestone that were excavated when the apartments were built.

Limestone is the type of rock that lies underneath the prairie. It was formed over 400 million years ago when a huge tropical sea covered this area. As the prehistoric fish and plankton died and fell to the bottom of the sea, they formed layers of debris and sediment. Over thousands of years, the pressure of the water and subsequent glaciers created the sedimentary rock known as limestone. Evidence of these sea creatures can be found as fossils.

Limestone is quarried in Manitoba and is used as a building material.



A trilobite fossil.

10. PRAIRIE HITCHHIKERS

The tall, red-stemmed plants along this trail belong to wild licorice (*Glycyrrhiza lepidota*). The seeds of this

plant are contained in a barbed pod called a bur. Burs have tiny hooks that allow the seeds to spread by hitchhiking on the fur of passing animals. Burs were the original inspiration for Velcro!



The roots of wild licorice are edible. They were chewed like candy or used in a tea for sore throats. The licorice-flavoured roots were harvested in the late fall when the starches and flavours had peaked.

11. ILLINOIS IN MANITOBA

Although the majority of this preserve is remnant prairie (never plowed), the section you are walking through was cultivated as cropland in the past. This area was restored in 1977 by seeding it with tall grass prairie wildflowers and grasses.

As there were no local commercial seed sources at the time, seeds were brought from Illinois, USA. Some of these species are not native to the tall grass prairie in Manitoba including rosinweed, prairie dockweed, and grey coneflower. A small number of native species also re-established in this restoration including big bluestem, smooth aster, and purple prairie clover. Restorations are complex and success rates can vary as invasive species are hard to control in disturbed areas.

12. THE PRAIRIE MONARCHY

Our prairie has some very important plants for royal insects - milkweed host plants (*Asclepias* spp.) for monarch butterfly caterpillars (*Danaus plexippus*).

There are seven species of milkweed in Manitoba, and four can be found on this site. The plants have bitter-tasting natural chemicals in their leaves that make the caterpillars and butterflies taste horrible. The bright colours of the monarchs warn predators to leave them alone!

Monarchs are declining, and one of the causes is a lack of milkweed. Protecting natural areas like Living Prairie Museum, and planting milkweed at home, can help this species recover.



13. DEER CANDY

The small shrubs you see to either side of the path are western snowberry (*Symphoricarpos occidentalis*). This shrub is native to the prairies and is characterized by its numerous pink flowers that bloom in July. Early settlers referred to snowberry as “badger bush” because it grew in the exposed soil around badger holes. The shrub is home to our resident hares and its berries are a favourite food of white-tailed deer.

While too many shrubs can reduce the diversity of the tall grass prairie, a few shrubs are excellent habitat for birds and mammals. Shrubs are periodically reduced by managed fires.

14. BISON WALLOW

The depression in the ground before you was probably once a plains bison (*Bison bison*) wallow. Here, bison would have rolled around in the soil to keep cool, protect their skin from sun and insects, and remove their winter fur in spring.

Bison were present in large numbers just 300 years ago. This ecologically and culturally important grazer maintained grassland diversity and helped support Indigenous ways of life. Bison provided food, building and crafting material, seed dispersal, tree control, and nutrient cycling for the prairies and its people. The culling of bison by European settlers brought immense changes to life and landscape, and the species was nearly lost from the prairies.

An effort to save the bison began in 1873. Three calves were captured during a hunt in Saskatchewan by James McKay, who brought the animals back to Winnipeg to raise. His herd grew, and was later sold and shared. Descendants of this herd can still be seen at the Assiniboine Park Zoo in Winnipeg.

While the numbers of farmed bison have grown,



wild plains bison and wood bison represent a fraction of their original numbers and are federally protected as Species at Risk. Wild Canadian plains bison are only found in national parks.

15. PRAIRIE DEPARTURE

As you walk the last steps of your hike, take a moment to consider the habitat that you have just experienced. This prairie has existed since the last Ice Age. It has supported countless plants, a diversity of wildlife, and Indigenous cultures that have existed for thousands of years. Though it is surrounded by an expanding city, this site continues on as a representation of prairie heritage, providing refuge for urban wildlife, opportunities for education, and a place to connect with nature.

16. LAST STOP

As you leave the prairie trail, you'll notice two large boulders on your left. These are bison rubbing stones that were found in Morden, Manitoba. Bison would use these stones to scratch, and over time the coarse hair of millions of animals smoothed the surface of this extremely hard granite. You are welcome to feel these stones, and even have a little back scratch of your own, just as the bison did long ago.



END

INTERPRETIVE CENTRE

Would you like to learn more about the tall grass prairie? Our interpretive centre has information for all ages, including hands-on learning for kids. Naturalists will be available to answer your questions about this rare ecosystem.

Our interpretive centre includes our Prairie Bookstore. Here you'll find field guides, restoration manuals, resources for native plantings, and prairie seeds for sale.

POLLINATOR GARDENS

The gardens around our interpretive centre have been planted with native prairie wildflowers and grasses.

Wildflower gardens can be found on the east, west, and south sides of the interpretive centre. There is also a large garden in the parking lot that includes a wood-chipped path.

A display bed containing native prairie grasses can be seen on the east side of the building.

These plantings help show the beauty of native perennial gardens. All plants were grown from local seed, and support a variety of bees, butterflies, birds, and more. Ask us about gardening with native species! You can also visit www.BeeBetterMB.ca.

The self-guided trail is at its end. We hope you enjoyed your walk through the tall grass prairie. We look forward to your next visit.

You can learn more about tall grass prairie at:
winnipeg.ca/livingprairie
livingprairie.org

For more information, please contact:
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Face masks are strongly recommended for the public. Please avoid visiting if you are feeling unwell.

