

# An Endangered Habitat: Bringing back the Tallgrass Prairie



## What are tallgrass communities?

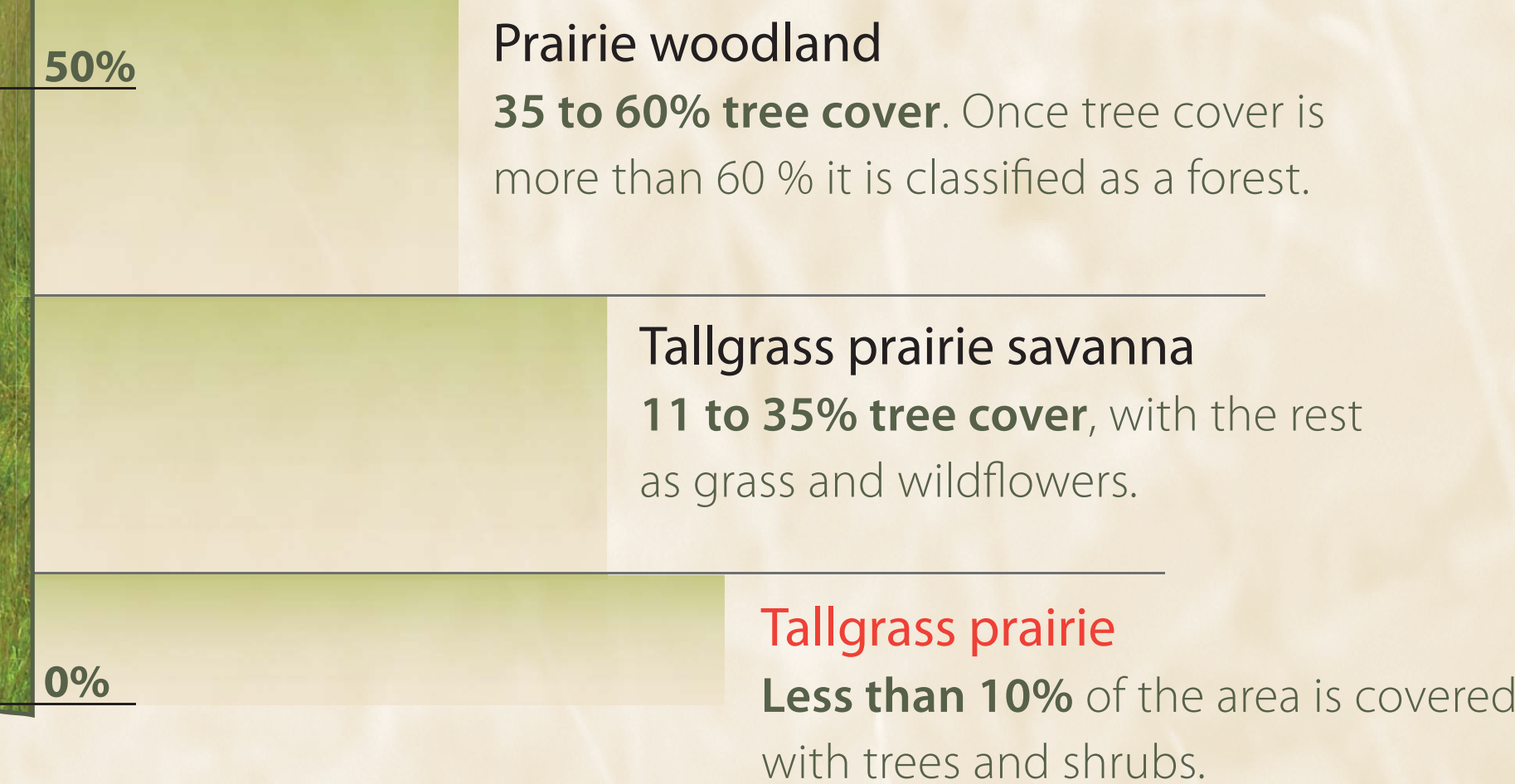
Tallgrass communities include tallgrass prairie, tallgrass prairie savanna and prairie woodlands.

- Prairie is the French word for meadow.
- The soil is usually deep (greater than 25cm) because the roots reach deep into the earth.
- In Canada, the word “prairie” most often brings to mind images of vast agricultural land in Alberta and Saskatchewan, but historically it was also an important habitat in Ontario.
- Tallgrass communities are a habitat made up of specific species of grass and wildflowers and some trees.



## Types of tallgrass communities

Tallgrass communities are subdivided based on tree cover. “Tallgrass prairie” is the type seen here at Brant Conservation Area.



Immediately after a prescribed burn

A trained specialist sets a controlled burn



## Tallgrass prairie and fire

### Before European settlers

The Grand River valley was covered with forests, with patches of tallgrass prairie. It made ideal farmland, because settlers didn't need to clear the trees before planting and the soil is deep. Originally the tallgrass prairie may have been created by lightning strikes that caused fires, and Native land-use practices using fire, such as land-clearing and hunting.

### Fire is the guardian of tallgrass prairies

Fire kills plants that are fire-intolerant, including most trees, grasses and wildflowers that are not part of the tallgrass communities. It also vaporizes nitrogen, creating low-nitrogen conditions that are ideal for prairie grasses. Early spring fires enhance growth, root production and abundant flowers and seeds.

Tallgrass prairie plants have extensive root systems, sometimes several feet deep, that allow them to literally rise from the ashes when above-ground plant material is burned.

### Controlled burns

Just as fire experts have the technology to put out fires, they also can set a controlled (prescribed) burn with a little help from Mother Nature. On a dry spring day before the landscape has become green, trained specialists set a fire in this area on purpose.

When creating or restoring a tallgrass prairie, prescribed burns may need to occur annually for approximately three years, but once the tallgrass prairie community is more robust, they can take place every five to seven years.

## Where were tallgrass communities?

- Tallgrass communities were once found in southern Ontario, Manitoba and throughout the central United States.
- They covered about 90 million hectares, an area the size of British Columbia. Now only about 1% remains.
- In southern Ontario, they covered approximately 1,000 square kilometres.
- Most tallgrass communities have been lost over the past 200 years due to human use of the land for agriculture and urbanization.
- By 1992 only about 21 square km of tallgrass prairie, savanna and prairie woodland remained in southern Ontario and only a tiny fraction of that is in the Grand River watershed.
- Historical records from the 1800s reveal that tallgrass communities may have been close to lakes Erie, Ontario, St. Clair and the southern part of Lake Huron. They were also inland around London, St. Thomas, Delhi, Simcoe, Brantford, North and South Dumfries Townships, Lake Simcoe, Rice Lake and Peterborough.



Black oak

### What is oak savanna?

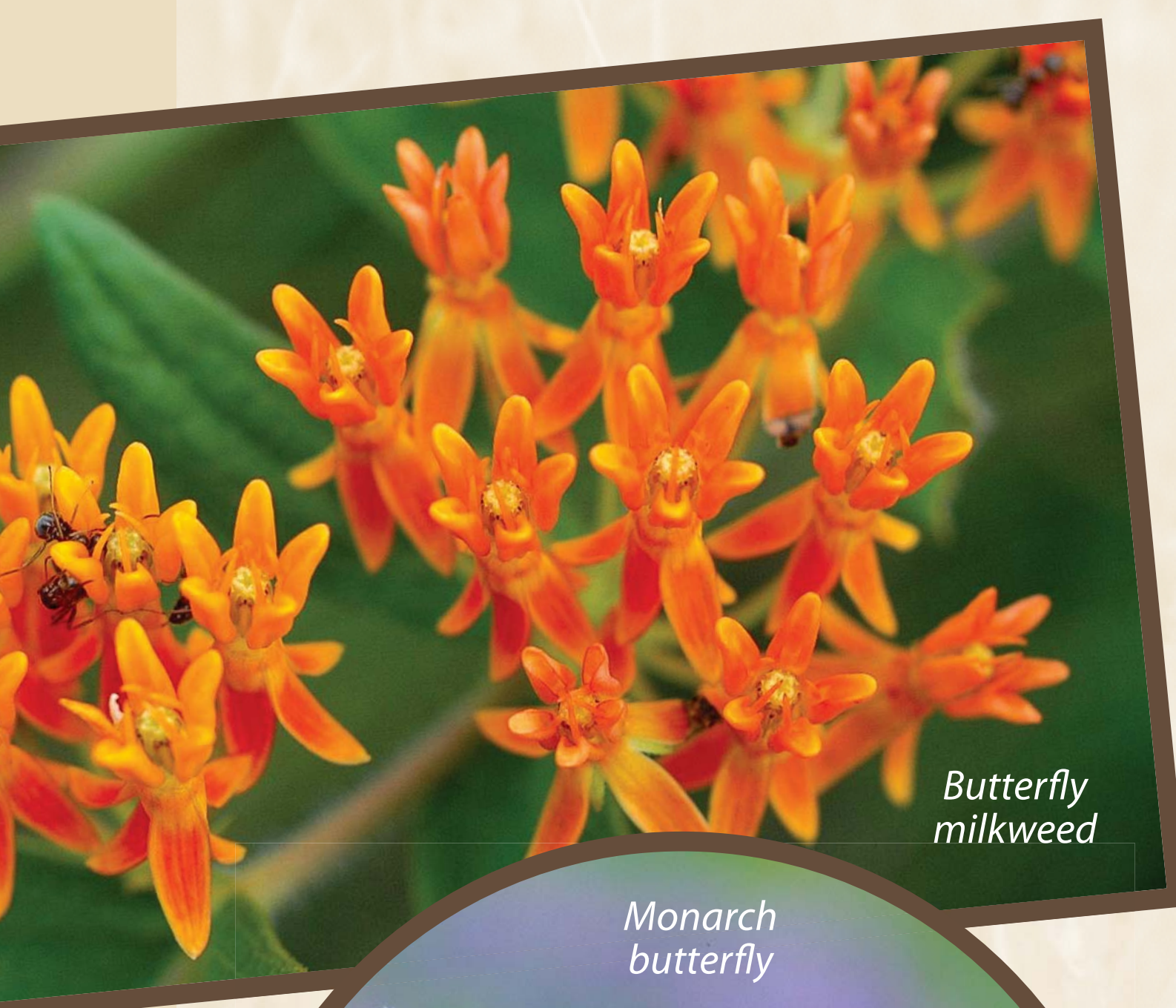
This type of savanna is dominated by oak trees, especially black oak. There is oak savanna directly across the Grand River at Brant Golf and Country Club. The GRCA has a restored black oak savanna near Apps' Mill Nature Centre, west of Brantford. Savannas are usually associated with tallgrass prairie communities because they need similar soil and a history of fire.



### How does wildlife survive the fire?

Fire is a natural process in a prairie. Animals can sense fire early and move out of danger. Mammals, such as deer and rabbits, will run from the flames in a prescribed burn faster than the fire can approach them, while birds will fly away.

Mice and snakes escape underground where they are protected by the cool spring soil. Fire moves over the surface fast enough that the soil does not get hot enough to bother these animals hiding from the fire.



Butterfly milkweed



Monarch butterfly

## Why are tallgrass communities important?

- About 20% of Ontario's rare plants are found in tallgrass communities.
- More than 150 plants associated with tallgrass communities have been officially designated rare at the global, national or provincial level.
- Birds that depend on tallgrass prairie habitat have been in sharp decline.

### American Badger



Historically the **American badger**, now endangered and protected, may have lived at Brant Park, but have not been seen in decades. They still live in tallgrass communities in very

low numbers within the southern Grand River watershed, including Brant County. Less than 200 badgers are thought to live in Ontario.

Photo: Richard Klafki



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## The tallgrass community at Brant Conservation Area



### Tallgrass prairie restoration

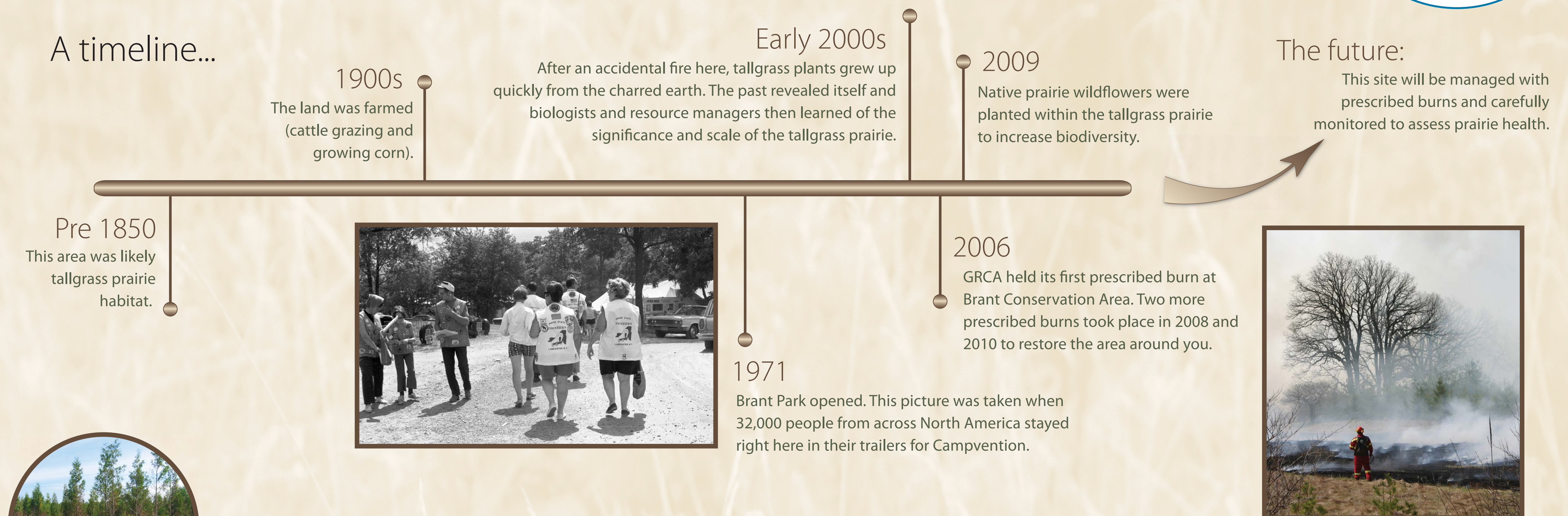


Please respect this natural area so it can remain open in the future.

- Don't leave anything but footprints and take only pictures.
- Stay on the trails to protect the prairie habitat and because of the presence of metal stakes that mark monitoring sites.
- Keep your pets on a leash at all times and please clean up after them.



## A timeline...



**1971**  
Brant Park opened. This picture was taken when 32,000 people from across North America stayed right here in their trailers for Campvention.



## Monitoring tallgrass restoration

In late summer or early fall each year, GRCA restoration specialists check this prairie area. They mark out a few five-metre square plots and block out four one-metre squares. Each and every plant is counted, noting the species. The goal is to ensure there are more than 50% native tallgrass prairie species here.

If other plants take over, another controlled burn will take place to improve the prairie. Each time a burn is held, the prairie habitat will come back more quickly and completely.

The GRCA is saving and planting native tallgrass prairie seeds.

## Who is working to save tallgrass in Ontario?

- World Wildlife Fund Canada and the Ontario Ministry of Natural Resources have developed a recovery plan for Ontario's tallgrass communities. Local groups and individuals are working to save and recover tallgrass and educate people about this habitat.
- An organization called Tallgrass Ontario is helping create this habitat in Ontario.
- The GRCA's restoration team is also bringing back tallgrass prairie.

## Plants and birds in the tallgrass prairie at Brant Conservation Area

Since tallgrass prairies are rare, the plants and animals that live there may also be rare.



**Little Bluestem**  
(*Schizachyrium scoparium*) is the dominant tallgrass prairie plant in this habitat. Although it has a blue tint in the spring, in fall, its predominant colour is red.



**Clay-coloured Sparrow**  
Uncommon in Ontario, this species has suffered due to reduced grassland. It is rare in this watershed, and now lives in abandoned farm fields. Breeding pairs have been seen at Brant Conservation Area in recent years.



**Wild Bergamot**  
(*Monarda fistulosa*)



**Hoary Vervain**  
(*Verbena stricta*)



**Smooth Aster**  
(*Aster laevis*)



**Eastern Meadowlark**  
In 2011 the eastern meadowlark was federally listed as nationally threatened and is also protected under Ontario's Endangered Species Act. It is a ground-nesting grassland bird. Pastures and hayfields became an alternate habitat, but since the 1950s, this habitat has also declined.

**Native invaders:** Local Ontario plants that would not normally grow in a tallgrass prairie community include St. John's Wort, Cyprus spurge and bedstraw.

**Non-native invaders:** have come from outside this area, such as European plantain, sweet white clover, dandelion and creeping thyme. These have come from other countries and they have naturalized, often making it hard for native communities of plants to survive.

## Eastern Bluebird

Known for its beautiful song, this small shy bird was common until the 1930s and 1940s and declined dramatically until it nearly disappeared due to competition for nest sites and pesticides. But the numbers are once again on the rise.



## INVADERS!