



# PRESCRIBED BURN PROGRAM

## Prescribed burn program at Royal Botanical Gardens

Royal Botanical Gardens' burn plans are approved by local fire departments and governments. Burns take place under the supervision of prescribed burn specialists to ensure they are conducted safely and controlled conditions are maintained throughout the course of the event.

As steward of these imperiled vegetation ecosystems Royal Botanical Gardens is committed to their sound restoration. Monitoring and reporting are important components of the prescribed burn program. Information collected will assist us in determining the success of our tallgrass recovery and restoration work and prescribe future management actions.

**You can do your part** in conserving these rare vegetation communities by staying on marked trails. Going off trail facilitates the spread of invasive plant species and disturbs important wildlife species that are dependent upon these ecosystems. **Staying on marked trails and off of closed trails** is also vital for your safety. Hazard trees may result from a prescribed burn in a wooded area like Sassafras Point. In order to protect you and the natural habitat, Sassafras Point Trail has been permanently closed.

**For more information** on Royal Botanical Gardens' prescribed burn program and prairie and savannah recovery activities, visit [www.rbg.ca](http://www.rbg.ca) or contact us.



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## References and additional sources of information

Goodban, A.G., W.D. Bakowsky, B.D. Bricker. 1999. The historical and present extent and floristic composition of prairie and savanna vegetation in the vicinity of Hamilton, Ontario. *Fifteenth North American Prairie Conference Proceedings*. The Natural Areas Association.

### WEBSITES:

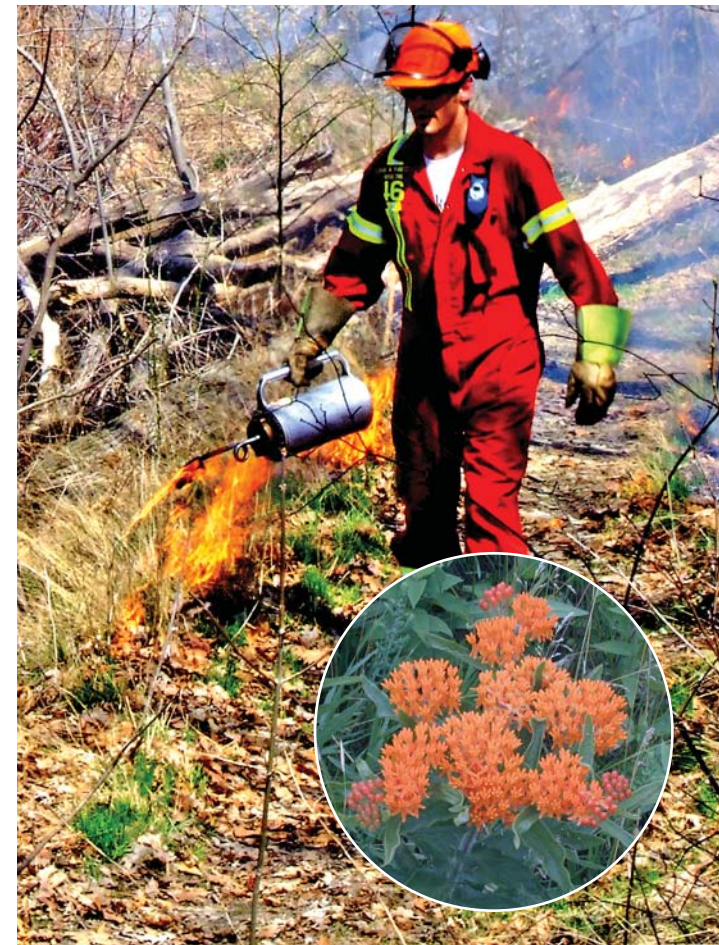
- Tallgrass Ontario, <http://www.tallgrassontario.org>
- Natural Heritage Information Centre (NHIC), [http://nhic.mnr.gov.on.ca/nhic\\_cfm](http://nhic.mnr.gov.on.ca/nhic_cfm)
- Carolinian Canada, <http://www.carolinian.org>

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PHOTOS: All species images from Wisconsin State Herbarium photographers unless otherwise noted.

ILLUSTRATION: *Aster laevis*, USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. *Illustrated flora of the northern states and Canada*. Vol. 3: 420.



## RESTORING TALLGRASS PRAIRIE, OAK SAVANNAH AND WOODLAND ECOSYSTEMS



## National, provincial and local rarity

Tallgrass prairies and savannahs are some of the most endangered ecological communities in Canada, with approximately one percent of their original area remaining.

Tallgrass communities once covered a significant part of southern Ontario's landscape. According to Tallgrass Ontario, less than three percent of the pre-settlement extent of tallgrass prairie remains in Ontario today.

Early land surveyors, explorers and settlers described and documented tallgrass prairie and oak savannah communities around the western end or "head" of Lake Ontario. It is estimated that close to 6,000 hectares of tallgrass prairie and oak savannah covered the Hamilton area (Goodban *et al.* 1999). Today, less than one percent of Hamilton's prairies and savannahs remain.

## Prairie, oak savannah and woodland habitat at Royal Botanical Gardens

Remnant prairies, oak savannahs and woodlands exist within Royal Botanical Gardens' nature sanctuaries. These remnants remind us of what was found here in pre-settlement times. Unfortunately, like most other prairie and savannah remnants in southern Ontario, these natural communities have been degraded due to lack of fire disturbance and pressures from the surrounding built environment and are overgrown with shade tolerant species.

**Prairie and savannah plant species rely on periodic disturbances such as fire and drought to flourish.**

Over the past century, wildfires have been suppressed in order to protect human life and minimize resource loss. Meanwhile, what remains of the fire-dependent tallgrass and savannah communities has been rapidly declining.



## Native plants that depend on our prairies and savannahs



Butterfly weed –  
*Asclepias tuberosa*

PAUL E. BERRY



Big bluestem –  
*Andropogon gerardii*

KENNETH J. SYTSMA



Little bluestem –  
*Schizachyrium scoparium*

JENNIFER ANDERSON  
@ USDA-NRCS PLANTS Database



Indian grass –  
*Sorghastrum nutans*

THOMAS GIVINSH

## About tallgrass prairie, oak savannah and oak woodland ecosystems

Tallgrass prairie, oak savannah and oak woodland are unique terrestrial ecosystems that develop on sites with dry, sandy soils which are subject to environmental stresses, typically fire, drought, and warm local climates.

A **prairie** is a natural community that is dominated by sun-loving grasses and wildflowers. An **oak savannah** is a community of scattered oak trees (*Quercus* spp.) above a layer of prairie grasses, wildflowers and associated vegetation. The trees are spread out enough that the canopy remains open and the ground flora receives plenty of sunlight.

**Oak woodlands** are similar to savannahs but commonly have a higher density of canopy trees and a larger number of shade-tolerant plants. Savannahs typically have 10 to 35 percent tree cover while tallgrass woodlands have between 35 and 60 percent tree cover.



— Sassafras Point and Princess Point prescribed burn area

## Restoring tallgrass prairie and savannah ecosystems

The goal of Royal Botanical Gardens' prescribed burn program is to protect and renew declining tallgrass prairie and savannah ecosystems by promoting natural regeneration of oak and tallgrass species and controlling invasive species. This will allow us to restore conditions necessary for rare and diverse species and foster their return to the region.

Prescribed burning is commonly used as one of the most natural, successful and cost-effective methods of restoring these **fire-adapted** ecosystems. Oak and prairie grasses have evolved to be resilient to fire — oaks have thick bark that protects them while prairie grasses have deep root systems that allow them to regrow after a disturbance. Without periodic fires, shrubs, tree saplings and invasive species take over, shading out and eliminating the prairie grass and wildflower species — effectively replacing prairie and oak savannah with a woodland habitat.

Certain invasive species are only effectively controlled by repeated burns. Likewise, native species may need multiple burns to respond favourably, especially after a long period of burn suppression. Royal Botanical Gardens has committed to a multi-year burn program that involves burning remaining oak savannah and tallgrass prairie habitats at Sassafras Point, Princess Point and York Boulevard Prairie. Past prescribed burns at Royal Botanical Gardens have included Sassafras Point, York Boulevard Prairie, Bulls Point and a portion of Princess Point oak savannah.



— York Boulevard Prairie prescribed burn area