



**Bay watch** | EVERY THURSDAY THROUGHOUT THE SUMMER WE UNCOVER THE HIDDEN WONDERS OF HAMILTON HARBOUR

# Rich legacy of native plants

Nearly all of the 800 native plant species that once thrived in the Hamilton and Burlington area can be found today. Despite the problems of urban development and pollution, efforts to restore plant life in the bay area are paying off

BY ADAM BUTTON

The Hamilton area was once a natural paradise. Mammals, birds, insects and aquatic animals thrived due to the splendid plant life and abundant marshes and swamps.

"Hamilton would have been a radically different place from a plant perspective," said Royal Botanical Gardens field botanist Carl Rothfels.

In the late 1700s, Lady Simcoe, the wife of Ontario's first lieutenant-governor, travelled to the western end of Lake Ontario. In her diaries she described the land as having large expanses of grassy areas with a few scattered oak trees.

What she described is now a rare geographical landform called oak savannah or tallgrass prairie. It once surrounded most of Hamilton Harbour.

This landform has been devastated Canada-wide. It

once covered an area about the size of British Columbia but only about 1 per cent remains. The fertile, easy-to-plow soil made the area once so beloved by animals attractive to humans for colonization.

More than 5,000 hectares of savannah once covered Hamilton. Today the small quantities of savannah totalling less than five hectares are found in Ancaster southeast of Copetown, Dundas Valley, Christie Conservation Area and Princess Point.

This landform thrives when it is burned every 10 to 15 years. Fire thins the underbrush and deters nonsavannah species. Traditionally, fires were set by lightning or native populations. Today, the remaining savannah is purposely burned.

The vast wetlands in the harbour have also been lost. Originally, the bay would have been significantly larger. Most of the land north of Barton Street was once

swamp, marsh and open water — providing nesting, breeding and feeding areas for mammals, birds, fish and reptiles. It was filled in for industry and development.

On the other hand, there would have been far less open water in Cootes Paradise.

"People think Cootes Paradise is a lake. It's a marsh," said Rothfels.

Historically, it would have been covered in vegetation, with very little open water. Sewage, human-caused flooding, pollution and invasive species caused a gradual reduction in marshland.

Still, nearly all of the 800 native plant species that lived in the Hamilton and Burlington area can be found today. While humans have begun to preserve the historical remnants of plant life, some of the greatest threats come from exotic species brought by gardeners from Europe and elsewhere.

**Here is a sample of some of the best-known trees, flowers and plants in the Hamilton Harbour area. Some of the prized species include the Eastern white pine, the red mulberry, the white trillium and the New England aster, among others.**

## Eastern White Pine

The provincial tree of Ontario and was once far more prominent in the harbour area. The broad coniferous trees grow to more than 30 metres tall (100 feet) and live for 200 to 350 years. They are particularly susceptible to deforestation because they don't produce seeds until they are 20 to 30 years old. In colonial times they were used for ship masts and some stands were declared property of the Royal Navy. The branches make important perching and nesting locations along the shoreline, while the seeds provide food for a variety of mammals and birds. The Eastern white pine was featured in many Tom Thompson paintings, including West Wind.



CATHIE COWARD, THE HAMILTON SPECTATOR



## False Foxglove

A plant that is now rare in Ontario, it once thrived in the bay area. Now, it is only found in Cootes Paradise and Grindstone Creek. It is a highly parasitic species that flowers from August to September. It's characterized by very lacy, fern-like leaves and fuzzy, sticky stems. The bushy plant, with many flowers, bonds to oak trees and draws energy from them. They declined rapidly in numbers mostly due to deforestation.



## Fig Buttercup

This invasive species is beginning to raise alarm. Also called lesser celandine, pilewort and figwort, it is an ephemeral plant that lives for only two months in the spring. It is an aggressive colonizer in low-lying wet soil and can out-compete native species like trilliums, trout lilies and violets. The fig buttercup has small yellow flowers that greatly contrast with the glossy green leaves. It is very difficult to identify and eliminate because the plant dies in April or early May and survives in underground tubers. In small areas it can be eliminated with thorough hand-digging, while herbicides are used to control large areas.

## New England Aster

This late-blooming flower will usually appear from August to October. Growing in damp thickets and meadows throughout North America, it's often seen on roadside shoulders and ditches. It grows up to two metres high and can have up to 100 flowers. Each head is about 1½ inches wide with 40 or more bright purple, petal-like ray flowers surrounding a yellow disk. Occasionally, the New England aster also produces a white flower (as shown). Roughly 18 other types of aster can be spotted in the fall, most with similar, but less dense flowers. They range in colour from pink to blue but most are white. Mice and deer eat the flowers and plant.



## Red Mulberry

Ontario's largest remaining population of this endangered species is found on Royal Botanical Gardens property. Other pockets of this once-abundant tree exist in the eastern United States and southern Ontario. In the fall, these trees are easiest to find because they are among the last to lose their lime-green leaves. The abundant and mildly sweet fruit attracts many birds and mammals. The trees were devastated by deforestation and cross-breeding with Asian white mulberry trees. The white version was introduced to Canada in a failed experiment to raise silkworms. It looks substantially different from the red



mulberry but cross-pollinates very easily. As white and hybrid trees encroach on remaining populations, the pure red mulberry becomes increasingly threatened.

## Oak

Traditionally, oak trees were the backbone of the Hamilton Harbour environment. The immense trees provide shade and nesting areas in the summer, and the acorns are a valuable food source for animals prior to the winter. Parasitic flowers attach themselves to all kinds of oaks. Deep roots make them resistant to the short, hot fires that swept through the savannah landscape. In the autumn oak leaves are colourful, changing to yellow, orange and reddish-purple. Common trees found in the area are the bur oak, red oak and white oak.



CATHIE COWARD, THE HAMILTON SPECTATOR

Black oaks once populated the savannah areas of Hamilton, but today they are uncommon. All oaks are in high demand for furniture, wood flooring and wine barrels.



## White Trillium

It's the provincial flower of Ontario. It blooms from early to mid-May and grows from 15 to 50 cm high. It takes six years for a seed to grow into a plant and store enough energy to produce a flower. The three petal flower is widespread across Ontario and is becoming increasingly popular in gardens. Also found in the harbour area is the red trillium, slightly smaller and pungent-smelling. Native Canadians used both red and white trilliums for medicine. They used a tea made from trillium roots to help with menstrual disorders and induce childbirth. Many animals snack on trilliums, especially the white-tailed deer.



## Purple Loosestrife and European Manna Grass

These two plants have devastated much of the wetlands of southern Ontario. Purple loosestrife is the most talked-about invasive species in Ontario. It was introduced from Europe as a decorative plant and has the ability to choke all other life out in a swamp. No native insects feed on the purple flowers, so in an effort to curb their expansion the Ministry on Natural Resources introduced European beetles in the late 1990s. The gamble appears to have paid off. The harbour area is relatively free of purple loosestrife, but fellow invasive European manna grass has colonized nearly all of Cootes Paradise and much of the bay to the exclusion of all other species. The flowers and stems are useless to insects and animals — they don't know how to use them. Meanwhile, they have destroyed important populations of swamp milkweed and southern wild rice.

