

TORONTO ONCE HAD A PRAIRIE!

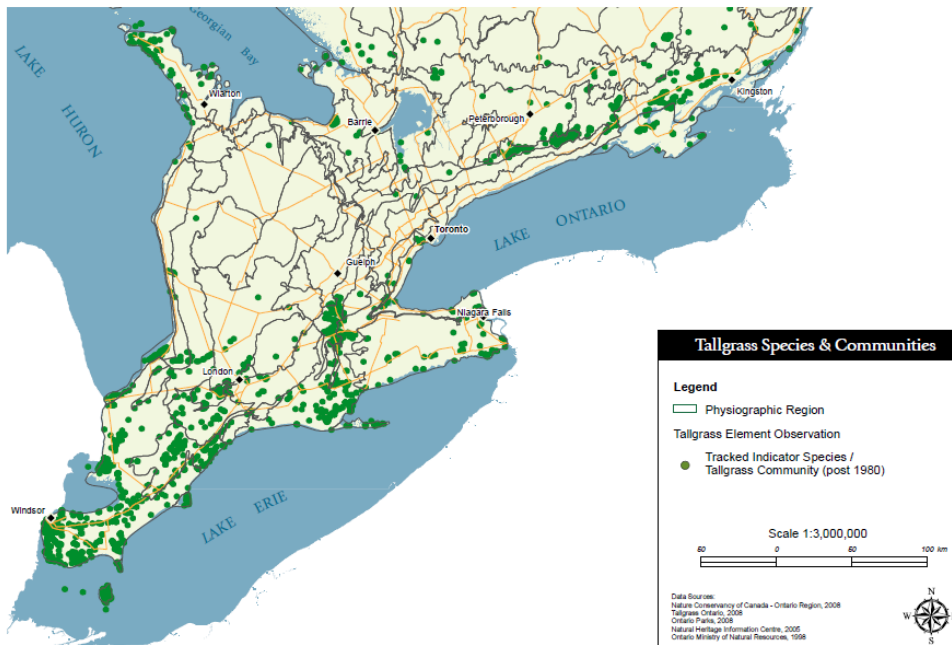
Toronto once had a small prairie! While woodlands and forests were more common in southern Ontario, prairies occupied sandy areas in scattered patches. A remnant still exists in Lambton Park, though it is difficult to imagine what it was once like, even while standing in its open areas, because of invasion by other plant species. Large prairie remnants near Toronto are at Alderville (20 ha) and Bronte Creek Provincial Park. The largest and best known Ontario sites are at Windsor and Walpole Island.

“A sea of prairie flowers lapped at the stirrups of the pioneer.” While conservationist Aldo Leopold was referring to a part of Wisconsin, the description was just as apt in sandy areas of southern Ontario where *tallgrass communities* (so-called because they are dominated by grasses that grow 2.5 m tall such as big bluestem and Indian grass) were common. There are a lot of wildflowers in tallgrass communities too. You can see a colour guide

to 200 species at www.tallgrassontario.org/summer_flowers.html.

Some tallgrass communities are prairies; a lack of soil moisture and nutrients limits colonization by woody species. After all, they are sitting on sand deposits from the last Ice Age, 13,000 years ago. The sand would have been first revealed as post-glacial lakes began to get smaller, or as moraine meltwater separated sand from gravel. But on some sites, shrubs and conifers soon followed, and, once it was more temperate, deciduous trees too. But, by 4,500 years ago, it became so warm and dry (even more so than today) that the ranges of many trees contracted somewhat, thereby allowing prairies to reach their maximum extent. Certainly the 3 – 4 m deep root systems of some of the tallgrass species helped.

In some prairies, the drought tolerance of trees like oak and pine enabled them to survive. In the prairies of the



Left: Map of tallgrass species and communities in southern Ontario. Courtesy Tallgrass Ontario

Below left: Butterflyweed, *Asclepias tuberosa*. Photo courtesy Sharon Lovett

Below middle: Indian grass, *Sorghastrum nutans*. Photo courtesy Tallgrass Ontario

Below right: Big bluestem, *Andropogon gerardii* (grows up to 2.5 m high). Photo courtesy Sharon Lovett



Toronto area, black oak was the most common tree. Its saplings require full sun, so trees were widely spaced. Where the tree cover is more than 20%, the resulting vegetation community is more aptly called *savannah*. In High Park, savannah occupies 26 ha, while in Lambton Park it is much less. Under the oaks, the ground has a somewhat higher proportion of wildflowers, and occasionally shrubs such as New Jersey tea and upland willow.

In order for prairies and savannahs to maintain their structural integrity, i.e. their species balance and abundance, fire is needed. It burns up the accumulating litter, which would otherwise choke off the groundcover. It releases nitrogen, which promotes growth. It may favour simultaneous flowering, thereby enhancing fertilization and seed set. It blackens the soil, thereby warming it and promoting germination and re-growth. It encourages oak regeneration.

But, while aboriginal communities did use fire in a deliberate way, it has otherwise been suppressed. To maintain prairies and savannahs, prescribed burns are now carried out. At High Park, there have been 13 in different areas since 1997, setting back some undesirable invasive species at the same time. There have also been a few at the Lambton site.

Prairies provide habitat for many animals. The sturdy grass stems (which remain standing throughout winter, even with heavy snow accumulation) are ideal for jumping mouse, meadow vole, common shrew, long-tailed weasel and red fox. Waterfowl and ground-nesting birds find plenty of cover there in early spring, e.g. eastern meadowlark, grasshopper sparrow, bobolink and northern bobwhite. Many butterflies are found in prairies and savannah; twenty of High Park's 40 species are found only in those habitats because of the reliance of part of their life-cycle on a single food source.

Several prairie restoration efforts are underway across Ontario. A 2-hectare tallgrass site will be created in Downsview Park; it will help people understand and appreciate biodiversity. Prairie openings can also be seen in High Park (east of the tennis courts, north of Grenadier Restaurant, west of West Road, and just north of Spring Road).

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Frank has an ecology degree and is the Secretary of the *High Park Natural Environment Committee*, a 23-year old group that does stewardship of the park's natural legacy. To learn more, visit: www.highparknature.org



Top: Cup-plant, *Silphium perfoliatum*. Photo courtesy Tallgrass Ontario

Right: Cylindrical blazing-star, *Liatris cylindracea*. Photo courtesy Karen Yukich

Left: Prairie wildflowers including spiked or dense blazing-star (*Liatris spicata*). Photo courtesy Karen Yukich