



the Bluestem Banner

Summer 2007

Tallgrass Ontario

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*To achieve the
identification,
conservation,
management and
restoration of tallgrass
prairie, savanna and
related ecological
communities in Ontario*

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Silphiums of the Ontario Prairie

Prairie Dock (*Silphium terebinthinaceum*) and Compass Plant (*S. laciniatum*) are two of the largest, most distinctive and best indicators of good quality prairie in Ontario and throughout the tallgrass region. Another member of this genus, Cup Plant (*S. perfoliatum*), is also a prairie indicator but more apt to be found along wet hollows, prairie streams and woodland edges. All three *Silphiums* are members of the sunflower family, with large, showy, radiating yellow flowers and large, distinctive leaves.



A typical Silphium flower and buds

The name *Silphium* relates to its resinous character, referring to the gummy material often found along the upper part of the stem when the plant is in flower. Native and pioneer children sometimes used this material as chewing gum. The eloquent natural history author John Madsen, in his 1982 book *Where the Sky Began: land of the tallgrass prairie* admitted to trying this as gum. However, he concluded that it was “surely the stickiest stuff in all creation and I literally had to clean it from my teeth with lighter fluid.” Given the health risks of doing that, it would not be recommended as a substitute for modern day chewing gum enthusiasts.

Prairie Dock (*Silphium terebinthinaceum*)

In Ontario this species is restricted primarily to some of the best quality, deep soil prairie remnants of Brant, Essex and Lambton counties, particularly in the

Brantford, Ojibway Prairie and Walpole Island areas. It has huge basal leaves that often reach a metre or more in total height, with the stiff, upright, spade-shaped blade itself being 40 cm or more in length. When growing in the open, the leaves of both Prairie Dock and the next species are often oriented in a north-south direction, to enable the maximum exposure to sunlight. Both sides of the Prairie Dock leaf are like coarse sandpaper so in spite of its potential appeal, I can guarantee it was not used as toilet paper even in an emergency, at least not more than once!

By early July, a single rigid, shiny stalk arises from the centre of the cluster of basal leaves to a height of 1.5-3 metres or more culminating in a cluster of one to several flower heads. Each flower head is 5-8 cm wide and has 12-25 yellow ray flowers that surround a cluster of sterile disk flowers.



Prairie Dock

Compass Plant (*Silphium laciniatum*)

The origin of this species on Ontario's prairie remnants is not nearly so clear as the previous one. Compass Plant is currently known from railway prairie remnants in Essex, Chatham-Kent and Elgin. Perhaps it was there all along and the railways were established through these prairie remnants. Or perhaps railway cars

carrying cattle or hay from the midwest dropped seed of this species as they traveled through these remnants. There is some justification for both positions, but likely neither will ever be conclusively proven. Regardless, these populations are well established. The population in Chatham-Kent was estimated to be at least one thousand stems, but is somewhat tenuous because the railway line is or may become abandoned. At that point it could easily be disposed of or converted to other uses.



Compass Plant

Compass Plant also has very distinctive leaves. With all of their lobes and indentations, they are sometimes described as a giant oak leaf. The entire basal leaf is easily over 60 cm in total length. A stout, hairy stalk arises in mid summer, and may grow to a height of 2.5 metres. A cluster of one to several flower heads are



Cup Plant

borne at the top, each one being from 6-10 cm in diameter, and having 20-30 yellow ray flowers surrounding a cluster of disk flowers.

The roots of Compass Plant are extensive. In the more arid mid-west, they have been documented to a depth of at least 4.25 metres! And the above ground stalk is rigid and persistent. Early pioneers were known to tie bits of cloth to the upper parts of the stalk to mark trails around wet spots or holes.

Cup Plant (*Silphium perfoliatum*)

This species is locally common in the wetter parts of midwestern tallgrass prairies. In Ontario, it is locally common as well, found primarily along wet prairie or woodland edges. One of the best areas for it is along portions of the Thames River, especially in the Chatham area where tallgrass prairie was historically quite extensive.

Whereas the previously described species had basal leaves that were distinctive, the distinctive leaves of Cup Plant are cauline, meaning growing along the main stem. As shown in the photo, these large, coarsely toothed, upper leaves grow opposed to each other and are joined at the base, forming a cup. These cups often hold water, and birds have been seen drinking out of them.

The square stems of Cup Plant may reach 2.5 metres high, with several flowering branches extending from the upper part of the plant. Each head may be 5-8 cm in diameter, and consist of up to 40 yellow ray flowers surrounding the sterile disc flowers.

The *Silphiums* could be considered a ready made medicine cabinet. Native people and early settlers alike used them for many things, including treating rheumatism, scrofula and glandular enlargements, as an expectorant, an emetic, for treating coughs and intermittent fevers, as an antispasmodic, to clean teeth and sweeten breath and even for deworming horses!

Aldo Leopold speculated in his 1949 classic *A Sand County Almanac* : "What a thousand acres of *Silphiums* looked like when they tickled the bellies of the buffalo is a question never again to be answered, and perhaps not even asked." Clearly *Silphiums* are an integral part of tallgrass prairie. With some of the mega restoration projects going on in the Midwest that even include the repatriation of bison to the landscape, perhaps this question can not only be asked, but answered in the future. Fortunately these three species persist at some of Ontario's best prairie sites as well, although since bison were never conclusively documented in this province, it is unlikely this question will ever be answered on Ontario soil.

Article and pictures contributed by Allen Woodliffe.

News from the Field

Carbon Sequestration

Project QUEST “Quest for Understanding Ecosystem Services of the Tallgrass Prairie”

Quest for *Understanding Ecosystem Services* of the Tallgrass Prairies (Project QUEST) is a new collaborative project started in May 2007 between the Walpole Island First Nation, Tallgrass Ontario, and The University of Western Ontario. The intent of this project is to measure the carbon budget in a range of tallgrass prairie habitats of different ages (e.g., naturally regenerating grasslands of 5, 10, 50 and 100+ years) to provide information on the ability of prairies to store carbon and to demonstrate the relative importance of a tallgrass prairie for carbon sequestration.

Why we should care about carbon storage

Concern is mounting about the rapid buildup of greenhouse gases in the atmosphere due to human activities such as fossil fuel consumption and deforestation. Carbon dioxide (CO₂) is considered to be one of the leading greenhouse gases contributing to climate change. It is because of this effect on the climate that it is so important for us to reduce these emissions.

One way of reducing CO₂ emissions is by enhancing CO₂ uptake by terrestrial plants and sequestering (storing) carbon in the soils. Forests provide one method for sequestering CO₂, but prairie grasslands may provide an important alternative. Prairie



Tracy with the gas sampler

grasslands have high levels of soil organic matter which have been formed from the decomposition of

plant material. This has the capability of storing carbon for a long period of time. The high root production of grasslands has potential to increase this soil organic matter. High rates of plant activity occur underground; the prairie grasslands, with their perennial deep-rooted plants, also contribute to below ground carbon buildup.

Sample Collection

Carbon sampling is being conducted in the tallgrass prairies of Walpole Island within 6 sites representing a range of prairie habitats of different ages:

- Site 1: Active agricultural field
- Site 2: 5 year abandoned agricultural field
- Site 3: 20 year regenerated prairie
- Site 4: 50 year regenerated prairie
- Site 5A: Natural prairie - Dry
- Site 5B: Natural prairie - Mesic
- Site 6: Natural prairie – Wet

Carbon fixation is measured from the total amount of carbon in the soil and in the plant material. The amount of carbon lost from the soil is also being considered – an important part of the equation. Gas efflux (emission) from the soil is measured by taking air samples at regular intervals during the growing season. To facilitate this, at each site, 5 replicate collars have been installed in the ground so that the top of the collar is a few centimeters above the soil surface.



Gas sampling collar

During sampling, a chamber (or cap) is temporarily fitted over the collars and air samples are collected every 15 minutes for 1 hour to measure the levels of carbon efflux from the soil. Any new vegetation growth inside the collars is clipped approximately 48 hours prior to sampling, so that measurements will not

be affected by CO₂ given off during plant respiration. Soil moisture and temperature are also collected each sampling period. Carbon measurements are being taken on a weekly basis from May through September, to collect baseline data. A set of soil samples will also be collected once throughout the growing season and will be measured for bulk density and analyzed for carbon content.



Mallory and Ryan of the Q.U.E.S.T. research team



Clint Jacobs and Irena Creed with a collar on Walpole Island

Benefits

By learning more about the contribution of tallgrass prairie to the carbon budget, there is the possibility of future studies demonstrating that traditional prairie management practices, such as burning, benefit the environment through more carbon sequestration. The prairies on Walpole Island are burned every spring. When plant biomass is heated without oxygen at low temperatures, it produces Bio-char (biomass derived from black carbon), which can be used to sequester more carbon in the soils. Bio-char provides a greater increase in carbon content than ordinary biomass does,

as well as locking up rapidly decomposing carbon in plant biomass into a more durable form. It can also improve soil fertility and increase crop production. With knowledge of the prairies and the use of proper burning techniques, burning of the grasslands can benefit not only that particular prairie, but the global environment as a whole.

In addition to benefiting the environment, increasing carbon sequestration in the prairies could provide benefits to the people with prairie on their land. There is a market emerging for environmental credits for carbon sequestration and knowledge of prairie contributions to the carbon budget could provide the opportunity to participate in environmental credit regimes. A "credit" is earned by doing something that reduces harm or protects the environment. Credits can provide an opportunity for the people to gain financially from grassland preservation. Benefits could include government purchase of credits and increased funding for carrying out traditional practices (such as burning to produce bio-char).

Carbon sequestration plays an important role in the global carbon cycle. By learning more about the prairies and their contribution to the carbon budget, there is the potential for maintaining traditional practices while providing benefits to both the environment and the community.

Who is involved?

This is a joint project between the Walpole Island Heritage Centre, The University of Western Ontario and Tallgrass Ontario. Dr. Irena Creed is directing the project in close collaboration with Dr. Jane Bowles and Dr. Hugh Henry and their Honors undergraduate students and with Mr. Clint Jacobs of the Walpole Island Heritage Centre.

Would you like to support Project Q.U.E.S.T.?

Tallgrass Ontario, the University of Western Ontario and Walpole Island First Nation have each made very significant financial contribution towards Project Q.U.E.S.T.. Tallgrass Ontario felt that this project was so important that the board directed that the funds be taken out of the operating funds of the organization. Since this money is urgently needed to keep the organization operating, it is very important that it be replaced. If you or your organization is in a position to make a contribution to Tallgrass Ontario, please consider making a charitable donation towards Project Q.U.E.S.T. Tallgrass Ontario and partners are also seeking new sources of funding to keep the project going in 2008. There is a form you can clip out or copy and send in to Tallgrass Ontario.

The article and photographs were submitted by Tracy Malakoff of the Q.U.E.S.T. research team

Lyme Disease

The following article is not to be taken as medical advice. It is merely a description of the author's first hand experience with this insidious and gradual disease.



American dog tick (enlarged)

Ticks are more common and widespread across the landscape than they have ever been. Migrating birds are known vectors, while pets and people are traveling more than ever. All help in the spread of ticks. Anyone interested in exploring prairie and savanna is

bound to be in an area infested by ticks at some point. Unless you are exploring in the dead of winter, with temperatures below freezing, you may encounter ticks. I have seen them in all months from March through October. With global warming, ticks may even be out and about during warm periods earlier and later than those months.



Black-legged or deer ticks against a dime

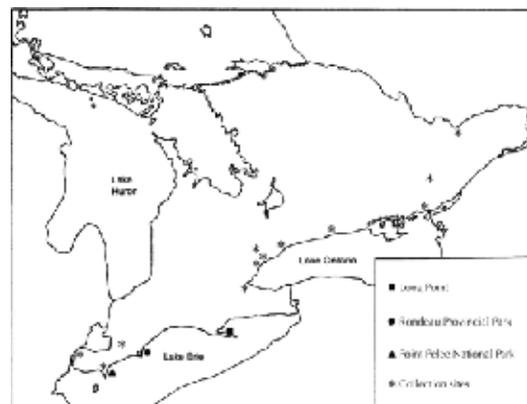
Even when venturing out into territory known to be inhabited by ticks, unless one actually finds a tick crawling on ones clothes or skin, the thought of Lyme disease (LD) and its consequences is given very little thought. However the danger isn't in the ticks one can see—it is in the ticks one can't. In most cases the ticks one can see is the American Dog Tick (*Dermacentor variabilis*). It is the most widespread of ticks in Ontario, and to date, is not known to carry the spirochete that causes LD. However the smaller of the Ontario tick species is the Black-legged Tick, also known as the Deer Tick (*Ixodes scapularis*). They are about the size of ground pepper and are very easily

missed! The deer tick is the main vector of the Lyme Disease (LD) spirochete. For many people, the mention or thought of Lyme Disease (LD) causes a momentary bit of concern, but it quickly fades.



Black-legged or deer tick (enlarged)

There are over 65 locations across Ontario (as of the end of 1999) where deer ticks have been found and documented. There is the misconception that the deer tick is found only along the north shore of Lake Erie, primarily at Long Point. However, from 1984 to the end of 1994 there were 105 cases of Lyme disease contracted from within Ontario. Of these only 14 of the patients had been at Long Point, which is a known endemic area for Lyme disease. An article published in the Canadian Medical Association Journal (2000) notes that as of 1999, deer ticks, including those that have been confirmed as carrying the LD bacterium, have been collected from dogs and humans in a range of areas including LaSalle, Point Pelee, Long Point, Rondeau, Chatham, Bramalea, Hamilton, Mississauga, Scarborough, Coburg, Kingston, Prince Edward County, Brockville, Ottawa and Westport and even as far north as Thunder Bay and Kenora..



Cases of Lyme disease in southern Ontario, 1999

In general, the species is expanding as people, dogs, other mammals and birds continue to move around. Undoubtedly, in the almost ten years since that study, deer ticks have expanded even more.

Deer ticks are very small; consequently, once they are on your clothing or skin, they eventually may make it into places on your body that you can't see. There, they begin the process of sinking their mouthparts just below the skin's surface to find some of your tiniest blood vessels where they engorge themselves. If successful, they eventually balloon to several times their original size, the blood providing the necessary proteins to enable them to carry out the next phase of their life cycle. Normally it will take several hours for a deer tick to obtain enough blood. It is during this time that the bacterium or spirochete *Borrelia burgdorferi* that may be in the tick's system could be transferred to its host. Not all deer ticks carry the LD spirochete, but it is with increasing regularity that they do.

Once the LD spirochete has been transferred to the host, it may be several days before the first stage symptoms appear. There may be a red rash, warm but not itchy. It may gradually get bigger and as it does, the centre may clear, giving a bull's-eye appearance. However not all victims are aware of a tick bite, and only about 30% notice any rash. Much more common in the first stage of LD is moderate to severe flu-like symptoms: aching, fever, light sensitivity, stiff muscles and joints and a noticeable malaise or lethargy. Experiencing flu-like symptoms at a non-flu time of year, i.e. May through October, is good reason to suspect LD.



Bulls-eye Rash, an early symptom of Lyme Disease

The majority of people know very little about this disease. That includes the medical profession and public health units as well, unfortunately. If you have reason to suspect you have LD you may need to be very persistent with your own doctor or even find another. Some are just unaware and others are very skeptical. The symptoms are not always obvious and later stage LD has often been misdiagnosed.

The first stage symptoms, even if left untreated, will gradually disappear. Nevertheless, the spirochete then goes deeper into a person's system and can affect the numerous systems. Unless there is a convincing rash along with flu-like symptoms, many doctors may rely on positive blood tests to diagnose LD (assuming they suspect it at all). Since most of the blood tests used to determine if the spirochete is present are unreliable at best, it is very difficult to get a proper diagnosis. Moreover, even if it is determined that the spirochete is present, most medical practitioners prescribe two weeks of an antibiotic. Most LD specialists, however, recommend a minimum of four weeks of treatment. LD is slow to respond and two weeks of treatment is just enough to get rid of the first stage symptoms, but the spirochete just goes deeper into the victim's systems. Second stage symptoms, and chronic LD, can be very serious if left untreated and are capable of affect individuals in myriad ways. For more details on those symptoms and many other details on this enigmatic disease, check out the web site of the Canadian Lyme Disease Association: www.canlyme.org. There are excellent links to other informative sites as well.

There are things that one can do proactively to avoid contracting LD. The most important thing is to be aware.

- The best defensive practices are:
- Wear light coloured and unpatterned clothing as ticks will show up better;
- Tuck pants into your socks;
- Spray a deet-based repellent around your pant cuffs and socks;
- Ensure you keep an eye open on your traveling companion's clothing for any ticks;
- As soon as possible after your prairie foray, do a complete tick check and have a shower.

If you do find a tick attached to your skin and partly engorged, do not squeeze its body or use a match. That will cause it to disgorge whatever is in its gut, including the bacterium, if present, into your bloodstream. Instead, use a pair of fine tweezers, grasp the head of the tick as close to the skin as possible and gently but firmly pull until the tick releases its hold. Put an antiseptic on it and save the tick in a vial for future testing to determine if it does in fact have the LD spirochete.

Don't let a fear of LD spoil your interest in exploring prairie, savanna and other great natural areas. But please be aware and stay alert!

This article was submitted by Allen Woodliffe

Tallgrass Habitat Management Regional Updates

EASTERN TALLGRASS REGION

Central Ontario's Hog-nosed Snake Project

The summer of 2007 offers a chance to gather data on a relatively unstudied population of Eastern Hog-nosed snakes (*Heterodon platirhinos*). Through funding from Environment Canada's Habitat Stewardship Program, we are able to educate local communities about the snakes and conduct field surveys to estimate population density.

The sandy habitat, occurring in the Rice Lake Plains of Central Ontario, offers an ideal home for Hog-nosed snakes. The range of this species is limited, in part, because they require open sandy habitats for many life-functions such as nesting. However, the snakes are also prevented from moving long distances because the natural areas they inhabit are bordered by farms and other rural land use operations.

Historical records for this population are few and far between, most being several years old. Discussions with landowners have revealed that snakes have been recently sighted, though these are not reported. Through outreach programs we hope to let people know that this isn't just any snake; it is a species requiring some special attention.



Eastern Hog-nosed Snake

Photo Credit: Michigan Department of Natural Resources

The defensive display of the harmless Hog-nosed snake has led to many landowners killing them on site, mistaking them for puff adders or cobras. When threatened, the Hog-nosed snake will hiss loudly, lift up the front half of its body and flatten its neck in a cobra-like display. This harmless snake tends to strike with its mouth closed; nevertheless, its overall appearance is that of a venomous snake. If these

defences fail to deter predators, the snake will roll over and "play dead" as a last resort.

On May 30th we found our first Hognose of the project on a sandy back road. It was a large adult female looking to be in great shape for the upcoming breeding season. We are continually checking various sites for more animals, and have started making contact with landowners to report their sightings.

This is a joint project with the Nature Conservancy of Canada, Ganaraska Region Conservation Authority and Alderville First Nation. Things are off to a great start here in Central Ontario and people seem to be falling in love with the endearing features of the Eastern Hog-nosed snake.

Article submitted by Crystal Robertson,
crystal.robertson@natureconservancy.ca

CENTRAL TALLGRASS REGION

Natural Connections Program Update

In May the Natural Connections Program completed three tallgrass habitat restoration prescribed burns by low complexity prescribed burn (LCPB) workers. All three burns were also overseen by Graham Buck, as part of his LCBB fire boss mentoring with the Ministry of Natural Resources. For all but one of the seven volunteers, these were their first prescribed burns since completing the LCPB training. It was a difficult spring for burning, since the weather fluctuated from being cool and rainy to hot with too little humidity. Both of these conditions were unsuitable for burning: the former prevented wildfire from spreading enough, while the hot weather might provide circumstances where fire could get out of control.

Thankfully, May 3rd and 4th provided a small window of opportunity to complete the burns. Due to this late date, we had to modify our burn plan boundaries due to the emergence of significant plants. On a positive note, the fire significantly inhibited the growth of many exotic grasses and aggressive shrubs that had leafed out. Following these successful burns, Graham passed the mentorship part of the training and became certified as a fire boss for three years.

One of the prescribed burns helped in our efforts to restore a population of the endangered American columbo (*Frasera caroliniensis*). Since 2005, the Natural Connections Program has worked with the landowner where this species is found to reduce the savanna's shrub understory through burning and selective cutting. The thick growth of tartarian honeysuckle, gray dogwood and choke cherry provide

too much shade for the columbo. Once removed, we recorded a 90% increase plants in the columbo population. This project has important implications for the recovery of American columbo elsewhere, because its restoration has not always been linked with wildfire or prescribed burning. Through our work, it appears that fire may play an important role in its recovery.

At a second site another endangered species, birdsfoot violet *Viola pedata*, is still struggling after years of shading under European buckthorn and Autumn olive. Despite eliminating these alien species, birdsfoot violet populations are not yet burgeoning. Nevertheless, oak savanna habitat where it resides is showing signs of improved health. The dense shrub thickets have given way to patches of big bluestem, woodland sunflower and smooth sumac in their place. We have also found evidence that American badger may have been investigating some groundhog dens.



Birdsfoot Violet
Photo credit: Larry Lamb

To complement our restoration projects, we have also encouraged creation of new prairie and oak savanna where it occurred within its former range. This spring, a landowner planted 10 hectares (25 acres) of tallgrass prairie near a natural prairie near Glen Morris. For this initiative, we were able to contribute locally collected grass seed to make up 50% of the total seed mix needed for the project. The collection, purchase and planting of the seed were made possible by the Shell Environment Fund, National Wild Turkey Federation Super Fund and Habitat Stewardship Program.

Summer brought difficult growing conditions for tallgrass species in Brant County. Lack of rain was especially hard on species planted that were under 2 years old. Even established veterans showed signs of dormancy before flowering. Prairie plants grown from locally collected seeds by the Nith River Native Plants, City of Brantford and Canning Leek Farm were planted in newly created prairies to improve their character and provide seeds for future creation projects. It was challenging to keep the plants living through the long periods without rain. A special thanks to the

nursery/greenhouse operators who donated their staff time and facilities and the Ontario Stewardship Rangers who planted the plants.

Submitted by Graham Buck

Branchton Railway Prairie Prescribed Burn

For the second year in a row a prescribed burn was completed within the Branchton Railway Prairie. The 3 kilometer railway prairie, with its hundreds of hectares of adjacent old fields, makes the area one of the best places to recreate a functioning tallgrass ecosystem in southern Ontario. A 10 hectare section of the prairie was burned by Lands and Forests Consulting. Although the burn was delayed and the site had greened up, the 25% relative humidity created excellent burning conditions. It appears that the burn was very successful in disrupting the growth of the non-native species, while promoting the growth of the prairie plants.

Submitted by Graham Buck

Recovery efforts Underway for the Endangered Hoary Mountain Mint (*Pycnanthemum incanum*)

Hoary Mountain Mint is only known from a few locations in Canada and all are within a couple kilometres of each other. Over the last five years, declines were noticed at several of the locations, as invasive species and shrubs encroached, displacing some of the plants. At one location, there was a 70% reduction in the stem counts since 1997. As suggested in the Draft Hoary Mountain Mint Recovery Strategy, a prescribed burn was planned for this site. It is located on the top of a bluff and supports many prairie and savanna indicators including: Little Bluestem, Butterfly Milkweed, Sky-blue Aster, and Black Oak.

Several partners were approached to assist with this project and support was readily offered. They include Halton-Peel Woodlands and Wildlife Stewardship Council, Brant Resource Stewardship Network, Hamilton-Wentworth Stewardship Council, and Environment Canada (through HSP funding). The private landowner is agreeable with the protection and management of this species, including a prescribed burn.

The site has been burned twice now in the spring of 2006 and 2007. Monitoring has since occurred and the site has responded very well with not only an increase in the number of stems of Hoary Mountain-mint but also in the other prairie-affinity species found on site.

Submitted by Emma Followes

Ask the Gardening Gurus

Everything you've always wanted to know about tallgrass gardening . . . but didn't know who to ask! Our gardening gurus are tallgrass green thumbs here to help with this new feature of the *Banner*. They are devoted to responding to your burning questions (and any others you might have) about gardening with prairie and savanna species.

Thanks to Jeff Thompson of Native Plant Source for his assistance with these answers.

Q: My yard is made up of clay and nothing grows well here. Someone suggested that native plants would be in order. Can you suggest 4 or 5 native plants that will grow with full sun in clay soil?

A: There are a wide variety of common meadow and prairie species to choose from when selecting native plants for clay. These would include, but would not be limited, to the following:

- New England Aster *Symphyotrichum novae-angliae*
- Smooth Penstemon *Penstemon digitalis*
- Black Eyed Susan *Rudbeckia hirta*
- Wild Bergamot *Monarda fistulosa*
- Indian Grass *Sorghastrum nutans*
- Big Bluestem *Andropogon gerardii*



Indian Grass *Sorghastrum nutans*
Photo by P.A. Woodliffe

These species are some of the most resilient and common species of meadows and tall grass prairies in Ontario

Q: I would prefer to grow seeds local to my area, but can't find anyone selling the species I'd like to



try growing. Is there anything wrong with buying my seed from Wisconsin?

A: Seed from Wisconsin may be the same species; however, they may be from a distinctly gene pool or recognized gene-type. The seed from this area will have adapted to the climate, biotic pests and soils of Wisconsin.

The risk is that the seed will not germinate well in Ontario, may create plants that are unable to cope with the conditions found here and if permitted to pollinate and cross with our native Ontario species may result in contaminating the genetic resources of the true native plants in southern Ontario.

Q: My garden is not in southwestern Ontario, and a lot of "prairie" plants are not native to my region. I would like to garden in an ecologically correct fashion but wonder if there are risks associated with gardening with native plants not indigenous to my area?

A: Plants native to Ontario may not be indigenous to your specific area and thus would be considered alien species (species that are not indigenous to the general area before European contact). Gardening ecologically includes selecting plants that are native to your area of Ontario in addition to the site conditions of your yard (i.e. sun, soils and moisture).

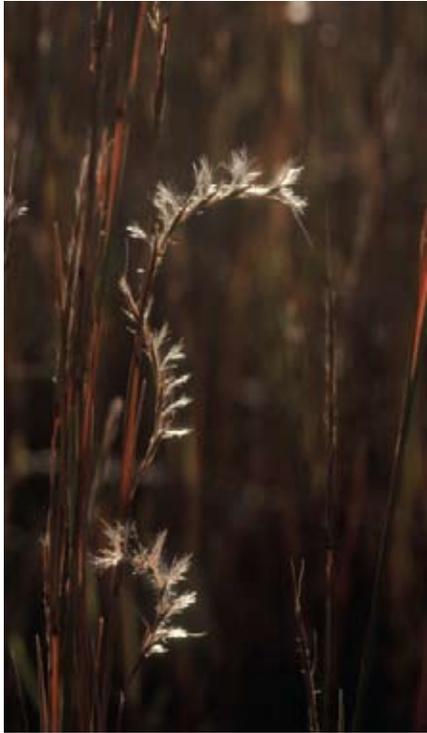
The best clues to selecting plants for your garden are to wander through local natural areas and get a sense of the common plant species and the communities near you. With over 4,000 species of plants native to Ontario, there is a huge selection of species to choose from. No need to degrade the environment with weedy non-natives.

Q: I find tall grasses a bit daunting, but want to include Ontario native grasses in my garden. Can you suggest a few of the shorter ones that I could try?

A: There are numerous shorter grasses that are available and can create a dramatic effect for a garden. The following is a common species found throughout Ontario

■ Little Bluestem – *Schizachyrium scoparium*

This very distinctive grass changes from a blue –green in spring to a chestnut color by late summer to a tan color by winter. It forms a dense clump of feathery spike by August with a height of 60 cm.



Little Bluestem – *Schizachyrium scoparium*.
Photo by P.A. Woodliffe



Do you have questions for us? We'd like to hear from you! Drop us a line by e-mail (info@tallgrassontario.org) or by snail-mail (120 Main St Ridgeway ON. N0P 2C0). We will try to answer your questions. Letters or e-mails may be condensed for publication.

The next three grasses are excellent choices too but since they are very rare in Ontario they should not be permitted to be introduced into the wild without the advice from an expert.

■ Sideoats Gramma – *Bouteloua curtipendula*

This grass is a single spike rising from the foliage at the base in mid-summer (40 – 50 cm in height). The unique spike flower is not unlike the eagle's feathers along the ceremonial staff of the Great Plains Indian.

■ Prairie Dropseed – *Sporobolus heterolepis*

This grass has a fountain like appearance (40 – 50 cm in height) creating a head of fine arching foliage. It is excellent for filling in a bare spot or creating an impact along a boarder. This grass is very rare in Ontario and should only be introduced into the wild where it is appropriate, with the advice of an expert.

■ June Grass – *Koeleria macrantha*

This small tuft of green (30 cm in height) is one of the first grasses to green-up in the spring and flowers by June. The seed heads create copper colored spikes. This can be scattered in among plants such as violets and wild columbine to create a spring impact.

Native Plant Source is located between Kitchener and Guelph along Highway 7. Owner Jeff Thompson has operated it for 12 years and is responsible for the design and construction of several award winning landscapes. For more information contact Jeff at 1098 Wurster Place, Breslau, ON. Website: www.nativeplantsource.com. Tel. (519) 748-2298. Fax (519) 748-2788.

Tallgrass Ontario News

Tallgrass GIS Mapping Project

Tallgrass Ontario and the Nature Conservancy of Canada are embarking on the creation of a new map of tallgrass habitats (tallgrass prairie, oak savanna and oak woodland) of southern Ontario. The first map was created in the late 1990s following extensive field work by Wasyl Bakowsky. The new map will be an update of the status of tallgrass in southern Ontario, and will include new mapping completed by Tallgrass Ontario, Nature Conservancy of Canada, Ontario Ministry of Natural Resources (including Ontario Stewardship groups and Ontario Parks) and Conservation Ontario over the past decade. This project is being supported by the Ontario Ministry of Natural Resources Species at risk Fund

Tallgrass Networks Project

Tallgrass Ontario will be using the new mapping right away in order to complete analysis for the existing networks of tallgrass habitat in southern Ontario. The identification of tallgrass habitat networks will be very useful in directing the recovery efforts of people, groups and agencies to the areas where their efforts will have the most impact.

The direction to create a system of networks of linked tallgrass habitats comes out of the 1998 tallgrass ecosystem recovery document created by World Wildlife Fund, which led to the eventual creation of Tallgrass Ontario in 1998. This document outlines that a system to recover tallgrass habitats and species must be put into place that builds upon the efforts to:

- Amass complete information regarding all tallgrass community remnants in southern Ontario.
- Establish and expand a network of protected tallgrass community remnants.
- Encourage protection of tallgrass remnants through sound management.
- Encourage restoration and habitat creation initiatives where appropriate to enlarge existing remnants, make linkages and create new habitat.

Environment Canada's Habitat Stewardship Fund is providing the funding in order to complete the project. One of the most exciting outcomes of the project will be the creation of fact sheets that will describe each of the recovery areas. Some of the information that maybe included is special geological features, descriptions of the tallgrass habitats found in the area, as well as a list of the species that make the area important, including species at risk.

PROJECT Q.U.E.S.T

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I wish to support Tallgrass Ontario and Project Q.U.E.S.T. by contributing \$ _____

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