



the Bluestem Banner

Winter 2005

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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Photo above by Allen Woodliffe of White Sage (*Artemisia ludoviciana*),
Nine Mile Prairie, Nebraska.

You can download a copy of the Bluestem Banner in colour from
www.tallgrassontario.org

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Fairfield Museum - Building in the past

As one of the original settlements in Chatham-Kent, the site of Fairfield Museum and National Historic Site (on Longwoods Road, near Bothwell) is a worthwhile visit. Although the settlement was destroyed in 1813, the museum celebrates the first settlers and their contribution to the area. With its 200th anniversary coming soon, plans are underway to upgrade this site and make it additionally noteworthy to present-day residents and tourists. More information can be obtained at

- www.chatham-kent.ca/recreation+and+tourism/heritage+and+museums
- www.uccanlonconf.org/divisions/F%20&%20A/fairfld.htm
- www.waynecook.com/achatham-kent.html

Early in 2005, a triad consisting of Tallgrass Ontario, Fairfield Museum, and Ridgetown College received funding from the Ontario Trillium Foundation, for improvements to the site. For more information about this project, go to www.tallgrassontario.org/Publications/BluestemBannerSummer2005.pdf



Ridgetown students hard at work

A major portion of this will be a half-hectare tallgrass prairie restoration, in front of the museum building and in full view of passers-by. Other components include a site master-plan of the thirty-five acres, a regional trail connection along the river, information pamphlets, and a walkway/stairway connection from the lower trail area to the upper level. The first three of these components will be commenced in 2006.



The Finished Product

This Fall, work was begun in the walkway/stairway. The landscape construction classes from Ridgetown college took on the building of over 20 levels of steps – with the ramped sections, that's over 20' of height – and a length of over 60'. In about 5 half-days, braving cold weather for two of these, the group rallied and put together a connection to the lower levels in a manner similar to what might have been built in 1800. Large logs were milled on two sides to about a 6" thickness, then dug into the ground and stacked, with steel pins inserted as fastening both to the ground and between layers. Photos show some of the process and finished product.

While modern tools were used, there are no visible attachments or braces, and the clear stone fill will hold travelers but not water. Very little disturbance of the forest floor, tree roots and habitat was created – in all, with weathering, this structure should appear quite antique by next year. Students will also be involved in the prairie habitat restoration and site master planning exercises next year.

Text and photos by Ken Nentwig, MLA, CLP, Ridgetown College

The 4th Tallgrass Prairie and Savanna Forum: Old Prairies and New Prairies

On September 21st and 22nd people came from across the province to learn about restoring old prairies and creating new prairies at the 4th Tallgrass Ontario Forum. The host facility was Tim Horton's Charity Children's Camp - Onondaga Farms.

This facility located in St. George is more accustomed to housing young campers but came through as an exceptional conference host. Before the breakout sessions the Brant Resource Stewardship Network, the host group, provided a brief introduction to the area referred to as the Grand River Plains. The more than 100 hectares of prairies and savannas remnants still found in this area are unique drought tolerant grasslands on deep sand and gravel substrates.



The sessions that followed were made up a diverse bunch of speakers which stimulated discussion on restoration and creation techniques. Lively discussion followed the restoration presentations, sometimes even into breaks, about the correct use of fire, grazing, seeds, plants, herbicide and other tools in the tallgrass restoration tool box. The creation stream was equally as lively with people debating about the definitions of native plants, seeds and plant sources, growing tallgrass outside of the natural range and the use of rare species.

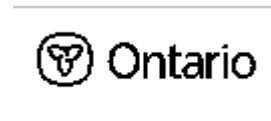
In the evening the Green Ribbon initiative wowed the group at the banquet with staggering numbers and long lists of accomplishments, rare species and acreages. Just across the border in Toledo Ohio this collection of groups are well on the way towards conserving 20,000 acres of tallgrass in an urban environment. In just another 10 years it is felt the initiative will have achieved the acreage total due because the land securement

opportunities will be gone. It gave all the people conserving tallgrass in an intensely urban environment something to think about.

On September 22nd the tours provided the people a chance to experience the Grand River Plains first hand. The creation tour went to two projects in Six Nations south of Brantford, one garden in King William Park, St. George and a corporate landscaping project at Union Gas in Brantford. The other tour visited 4 remnants; dry prairie and savanna remnants along the Grand River and the Brantford Golf and Country Club, a white oak savanna with American Columbo at Blue Lake, St. George and a spectacular 10 hectare big bluestem-Indian grass prairie overlooking the Grand River south of Cambridge.

In the all, those who came left feeling the conference facility, sessions, banquet and tours were excellent. The old prairies and new prairies theme provided an opportunity to pause and consider the tools and techniques being using to create and restore tallgrass ecosystems. Prairie and savanna habitats in Ontario are so rare active restoration and creation tempered with a caution, consideration and patience was the message delivered at the forum.

Thanks go out to Christine Elliott, of Tallgrass Ontario, Pam Charlton, Rob Wallis, Graham Buck, the Brant Stewardship Resource Network and Tim Horton's Onondaga Farms for pulling off a very successful conference in St. George. Many Tallgrass Ontario members volunteered their time and expertise in planning the forum. Special thanks to the Ontario Ministry of Natural Resources for providing funding for the Forum.



For an album of photos from the Forum please turn to pages 4 and 9. Tallgrass Ontario wishes to express its gratitude to the Bradley Family of Fertile Meadow Farm for allowing us the use of their photograph of Bruce Bradley, 1914. No reproduction of the photo may be used with out the express permission of the Bradley Family.

Graham Buck found time to snap a few pix in between presentations, seminars, tours...



Tallgrass prairie and savanna restoration is serious business....



Oak savanna on the Old Prairies field trip



A view of one of the seminar rooms



New Prairies field trip at Union Gas in Brantford



Forum organizers Rob Wallis (center) and Graham Buck (second from right). with Cathy Quinlan, TGO President on the left.

Prairie Winter: the quiet season *text and photos by Allen Woodliffe*

Most of us enjoy prairies for the ever-changing array of orange, blue, yellow, purple and white flowers interspersed with the green vegetation that we see throughout the growing season. Or where opportunities arise, the sheer vastness of the landscape. Few of us take time to appreciate the less obvious and often tranquil beauty of a prairie in winter. Instead of the bright, vivid colours of spring and summer we have the mousy gray of dried milkweed pods, the russet brown stems of little bluestem, the rich dark brown of tough prairie dock stems, the deep red of red-osier dogwood—certainly a tapestry of more subtle hues.

Grasses appear to dominate even more in winter than summer, with less vivid colours to compete with. A robust stand of tawny grasses should remain upright throughout the winter, except under the strain of heavy wet snow or fierce wind. The advantage to the ecology of tallgrass prairie of remaining upright is two fold: firstly, they trap more snow which not only provides greater insulation during the intense cold, it also provides greater moisture when the snow eventually melts, percolating through the snow crystals to ground level. This recharging of the ground water is especially important in areas of prairie where moisture may otherwise be in short supply during the growing season. Secondly, the upright stems dry out to a much greater extent than if they were flattened on the ground and remaining moist. Cold air holds much less moisture than warm air. Over the winter the moisture content of last year's stems is reduced significantly. By early spring, as the weather gradually warms the earth, it is the season for one of the most dramatic and important events in the life cycle of prairies—fire. The very dry stems are the fine fuel necessary to carry an intense, roaring fire, allowing it to sweep across the landscape. Fire, as you undoubtedly know, recycles the nutrients from previous year's growth; it suppresses competing woody or other non-prairie vegetation; the black ash residue on the ground soaks up the strong sunlight energy of spring, causing the soil temperature to warm up to the threshold that gives prairie species the competitive growing advantage. *Continued on page 6.*



Prairie Winter – *continued from page 5*

Cold is a feature of winter at this latitude, regardless of the habitat one is in. Tallgrass prairie experiences the severity of winter, with blowing snow and fierce winds that can create blizzard like conditions. Yet snow can be a moderating influence to the severity of the cold. One of the best types of insulation is still air. One of the best sources of still air is fresh fluffy snow. The larger the snowflakes and the gentler it falls to the ground, the greater are the interstices that trap air, providing insulation. The coldest temperatures are at the interface of snow and air, but it can be several degrees warmer just a few centimetres below. As the snow ages, it can go through a process called sublimation, whereby a solid goes directly to a vaporous state without going through, or at least remaining for very long, in the liquid state. The snow sublimates and changes shape, settles and becomes more crystalline. At this point

it loses much of its ability to hold air, making it less valuable as insulation.

During winter the sun is at a lower angle to the earth surface in northern latitudes, causing a greater amount of sunlight energy to reflect off of the earth's atmosphere before it reaches the ground. The bright white of clean snow reflects the vast majority of what little sunlight energy does reach the ground. Yet some light energy makes it through the snow to the darker ground surface below and is absorbed. This energy plus the radiant heat from underground can provide enough heat to keep it above freezing, especially if the snow arrives before intense cold freezes the soil surface. Also, darker material such as woody stems, dirt or other debris, will absorb a bit more sunlight energy, causing a microclimate of warmth and melting of immediately adjacent snow.



Prairie Winter continued from page 6



Mammals are more in evidence during winter, not because they are any more plentiful or out and about any more than at other times of the year. Most are nocturnal, but in their travels, they leave tracks. Healthy prairies have a high population of mice, voles and shrews. Sometimes one can see tunnels just below the snow surface which are typical of meadow voles or shrews. These small rodents feed on a wide variety of berries and seeds, and they in turn are fed upon by the predators higher up the food chain, such as red fox, coyote, short-tailed weasel, hawks and owls. There are some excellent guides to animal tracks available, and it is highly recommended to obtain a copy and explore a prairie near you, to see what types of fauna are present.

Follow some of the tracks to see just what these nocturnal, secretive critters are up to in their daily lives. You probably will discover patterns of activity, and eventually see the results of an interaction between one or more species. One of the more common interactions to observe is where a mouse has been running along the snow surface and the tracks suddenly end. However you may see where a set of fox tracks has intersected that of the mouse. Or a pair of bird wing prints straddling the trail of mouse tracks, each feather clearly outlined in the soft snow. Probably a hawk or owl with their exceptional hearing and eyesight has pounced on the unsuspecting mouse. *Continued on page 8.*

Winter Prairie *continued from page 7*

One of the most devastating events of winter for wildlife is an ice storm. Under normal conditions most species can survive the cold, if there is adequate food. However an ice storm encrusts the limited winter food sources, making it unavailable for wildlife until it melts. More damage to wildlife can be done from a single ice storm if the ice lasts more than a few days, than the rest of the winter combined. However some species that spend most of their time beneath the snow, such as voles, may actually benefit, since foxes, hawks and owls have a difficult or impossible time breaking through the icy crust.

You might see a black-capped chickadee picking spiders from under a piece of shaggy bark of an oak. Or you might see a downy woodpecker drilling into a small spherical part of a goldenrod stem. This globular growth is the result of the goldenrod gallfly. During the early part of the summer an adult gallfly has laid an egg on a growing goldenrod stem. The egg hatches and the tiny larva burrow into the stem, creating a chamber from which they feed on the goldenrod tissues. Inside the stem they are protected, and their activity irritates the stem, causing it to grow abnormally and resulting in the gall. If the larva over winters successfully, it will chew a small hole to the outside of the gall and then return to the chamber to pupate before emerging as an adult in the spring. These galls are quite common and typically do not harm the host plant from producing its own flowers and seeds.

Most of the summer time grassland birds are at their wintering grounds hundreds or thousands of kilometres south by now. Insects are scarce of course, and the few bird species present are seed eaters or flesh eaters. Small flocks of tree sparrows flutter in a patch of grasses, bending their tops while they feed on still attached seeds. Or they may hop on the snow surface, jumping up to the seed. An occasional song sparrow or field sparrow or a few dark-eyed juncos may be present with the tree sparrows. American goldfinches, meanwhile, in their more drab olive green winter colours, compared with their bright yellow of summer, can be seen plucking the seeds out of the heads of some of the tall sunflowers or prairie dock.

If you are lucky enough to explore a prairie where northern bobwhite still persist you may see their tracks running along in the snow, feeding on the seeds of grasses or wildflowers. The seeds of legumes, in particular the bush-clovers, are said to be some of the most nutritious for the bobwhite. This species travels in small groups, called coveys, of usually 10-15 birds. At night, or sometimes if they feel threatened, they will huddle in a tight circle, facing outwards. This proximity to each other helps them conserve heat energy. A little circle of bird droppings indicates where a covey has stayed for awhile. If they are disturbed they will flush quickly heading in every direction, causing confusion for any predator. Eventually, after communicating with soft calls, they will regroup again.

Winter doesn't have to be a time of staying close to the fireplace and patiently waiting until the spring returns. This winter, bundle up and explore a prairie nearby! You may be surprised just who your neighbours are and how busy they can be.

Contact Tallgrass Ontario

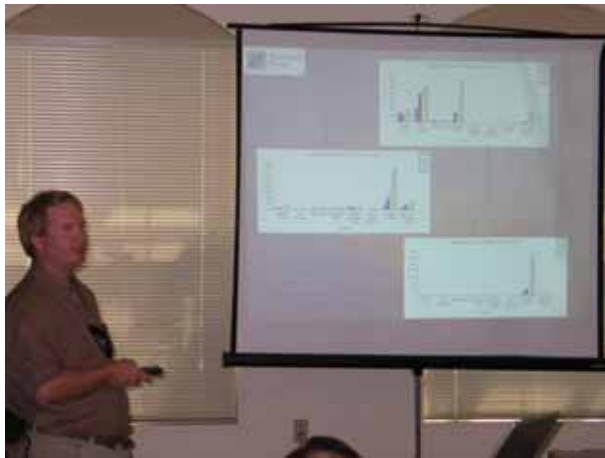
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Our Roving Reporter, Allen Woodliffe, took these photographs of Forum 2005 participants. Copies of many of the presentations are available at www.tallgrassontario.org.



Sandy Dobbyn



Jane Bowles & Ron Gould



Onondaga Farm



Gil Henderson



Mathis Natvik



Lorraine Johnson

Tallgrass Management Guide for Landowners now available

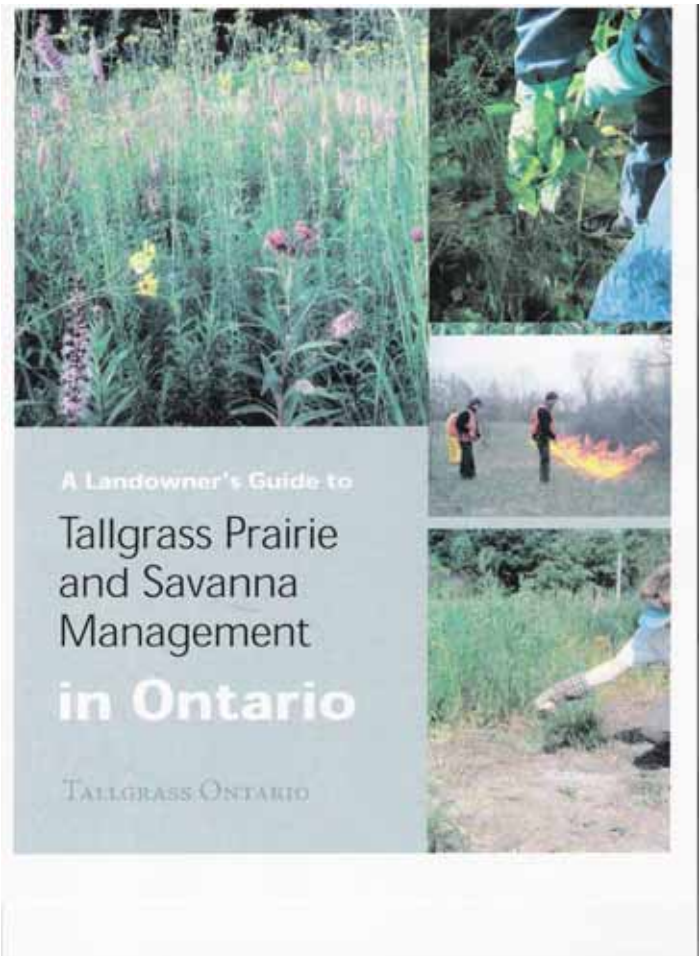
Tallgrass Ontario has just published a 46 page guide titled *A Landowner's Guide to Tallgrass Prairie and Savanna Management in Ontario*. This guide is written for landowners whose property contains native tallgrass prairie and savanna. It describes many practical management techniques that can be used to keep these habitats healthy and diverse.

"Many landowners are unfamiliar with tallgrass prairie and savanna and even less familiar with how to manage and restore them" said Cathy Quinlan, author of the Guide. "Historically, grasslands were shaped by fire, drought and grazing by a large number of mammals and insects. Today, prairies and savannas exist as small remnant patches within urban and rural landscapes. A great many of these sites have been left idle and are turning into scrubland and woodland. We need to bring back or mimic the historic disturbances to keep the trees out and the sun-loving plants in."

The guide describes several management and restoration techniques including prescribed burns, livestock grazing, mowing and haying, controlling problem plants, interseeding and planting, and restoring natural drainage. The information focuses on the hows and whys. For example, there is a chapter that describes why prescribed burns are beneficial to tallgrass habitats, how often they should occur and what time of year to produce the desired result.

Tallgrass Ontario wanted to produce an easy-to-read guide that summarized the vast and, sometimes contradictory, information that exists on how to manage prairies and savannas.

"Restoration is a young science and many prairie managers are still learning from their own experiences and the experiences of others" noted Cathy Quinlan. Where the issues are complex, this guide directs the reader to other places and people that can help. The information allows the landowner to see the range of options available and do what is practical and feasible for them.



Print copies are limited, but the entire guide can be downloaded from the Tallgrass Ontario website: please go to www.tallgrassontario.org/Publications.

North American Prairie Conference 2006

Good news! The venue and date of the 2006 North American Prairie Conference has been announced. It is being held July 23-27, 2006 at the University of Nebraska at Kearney. Kearney is a city of about 28,000 situated on the Platte River and has a mean July temperature of 75.5 F (and it's a dry heat!). The Platte River and the various western trails have made this an important historical travel route as the American west was opened up in the 1800s.

Kearney is about as far west as one can go and still be within the range of tallgrass prairie. Closeby are the Nebraska Sandhills (see front page illustration) , the loess hills (see photo below) , the mixed-grass prairie and the sage prairie. The last time this conference was in Nebraska was in 1988, at the University of Nebraska (Lincoln). Several Ontario prairie enthusiasts attended that conference and have great memories. The vastness of these wide open spaces is accentuated by the enormous distances between ranches, especially in the Sandhills region north of the Platte River.

To keep abreast of the developments on this conference, visit the web site at www.napc2006.org.



Prairies of the Loess Hills *photo by Allen Woodliffe*

Don't forget to go to www.tallgrassontario.org/publications to view the Bluestem Banner online and see this photograph in colour

