



the **Bluestem Banner**

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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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The 3rd Tallgrass Prairie and Savanna Forum Peterborough, Ontario, September 12 & 13, 2003

Cohosted by the Peterborough County Stewardship Council and Tallgrass Ontario, the objective of the forum is to provide for the exchange of information and ideas related to issues focusing on Ontario's tallgrass prairies and savannas. It builds upon the 2001 forum held at Ridgetown College. The forum has a casual, personal atmosphere to encourage dialogue and sharing.

We are planning approximately 21 concurrent sessions, three running simultaneously at any one time, lasting 30 minutes each. Sessions can take a range of formats, including presentations, debates, panel discussions and workshops. A poster session in which exhibits are presented will run all day Friday. Fieldtrips will take place on Saturday September 13th to local prairie and savanna sites. There will be a banquet and guest speaker on Friday night.

The three concurrent sessions will represent the following themes :

1. Scientific/Professional
2. Practical/On-the-Ground and
3. General.

Proposed topics include: species recovery plans and species research, soil research, restoration of remnants, re-creation projects on marginal land, preservation stories and issues, prescribed burning, education, landowner contact projects, First Nations experiences, GIS mapping projects, arts/crafts/medicinal uses, Ecotourism & agriculture.



Burnie the Badger

If you are interested in more information about the 2003 Tallgrass Forum please contact tallgrassontario@hotmail.com or info@tallgrassontario.org or check out www.tallgrassontario.org

Gate of Heaven Cemetery Meadow Project *by Paul O'Hara*

The Gate of Heaven Catholic Cemetery is a 110-acre property on well-drained clay loams located in the Aldershot area of Burlington, just south of Waterdown. The 9-acre meadow project is located on either side of the main 'Gate' off Snake Road, an old pioneer road and once a trail for Native Peoples of the area.

The first volunteer seeding occurred on June 1, 2002. Thousands of seedlings of grasses and forbs germinated despite the intense summer drought. Indian Grass (*Sorghastrum nutans*), Sweet Ox-eye (*Heliopsis helianthoides*), and Swamp Milkweed (*Asclepias incarnata*) were among the best performers flowering the same year - it was quite amazing to see a wet meadow forb like Swamp Milkweed thriving in the dry, cracked clay in the heat of July. Other seedlings included Big Bluestem (*Andropogon gerardii*), Switch Grass (*Panicum virgatum*), Wild Bergamot (*Monarda fistulosa*), Black-eyed Susan (*Rudbeckia hirta*), Butterfly Milkweed (*Asclepias tuberosa*), and Hairy Aster (*Aster pilosus*).

Management included giving the mustards and goosefoots, our spontaneous cover crop, a haircut in mid-summer to keep light levels on the ground for the slower-growing natives. As well, persistent perennial weeds like bindweed (*Convolvulus arvensis*) and Canada Thistle (*Cirsium arvense*) were selectively treated with a glyphosate-based herbicide.

A second volunteer seeding was planned for Saturday, March 22, 2003 but was cancelled because of the rains. So I ended up seeding it myself the week after. Over twenty-five meadow/prairie grasses and forbs native to Hamilton and/or Halton Regions are now on the ground. All seed sown is of Southern Ontario provenance, much of it collected within 10 km of the project site.

New species added this year include Showy tick-trefoil (*Desmodium canadense*), Round-headed bush-clover (*Lespedeza capitata*) and Blue Vervain (*Verbena hastata*).

I am hoping on a lot of seed germination this year. I think I will still have to keep much of the field cut to keep light levels on the ground. In addition, the Quack Grass (*Elymus repens*) will have to be controlled - I can see tillers now in position to inflict some major havoc.

We are hoping that this project will bring comfort to the families using the cemetery and serve the many kinds of wildlife who depend on native grasslands for survival, species that are having a tough time of it considering the rapid 'suburbanization' of our rural lands here at the 'Head of the Lake.'



Prairie Summer - Check out all the great activities in, around and about tallgrass prairie & savanna sites in Ontario. For more information, check the websites noted below or www.tallgrassontario.org. **Just to tempt you:**

www.serontario.org

June 8 – Cameron Ranch Exploration

July 19 – Massassauga Point C. A.

www.ontarionature.org

July 18-20 – Wide Open Spaces, Alderville First Nation

October 17-19 – Discovering Hidden Beauty, oak savanna (Quinte)

October 18 – Another Roadside Attraction, tallgrass prairie (Cambridge)

www.pinerypark.on.ca

July 19 – Savanna Festival (The Pinery)

www.ojibway.ca/events.html

Prairie Days at Ojibway (Windsor)

July 31 – Bugs & Blooms

August 28 – Bats and Blacklights

Small White Lady's-slipper (*Cypripedium candidum*)

An endangered species in Ontario by Allen Woodliffe

Orchids have a particular appeal to naturalists. Endangered prairie orchids are especially esteemed.

Small White Lady's-slipper is one of the most restricted orchids in Ontario and is currently found, in Canada, only in the provinces of Ontario and Manitoba. It has declined significantly from its original range, as has its prairie habitat, to the point that in Ontario it only occurs in Lambton, Norfolk and Hastings counties. In Norfolk County the population, when last checked, was down to a single plant in the Turkey Point area, and in Hastings County a very small population occurs in the Stoco Fen. Only the Lambton County populations, all on private lands where prairies are managed with regular fire, are considered healthy. In fact of the several sites where they occur, it is not uncommon to see dozens or even hundreds of these delicate plants swaying gently in the spring breezes.

Shortly after the spring fire season, the stem and leaves of this long-lived perennial begin to emerge above the ash covered ground in early May. Sometimes a dozen or more stems will arise from a single rhizome, reaching heights of 36 cm, although 20-25 cm is more typical. The three or four erect leaves are obviously folded at the mid vein. Above the leaves at the top of the stem is a single, small flower, a bright white inflated pouch about 2.5 cm in length, resembling that of a slipper. The genus *Cypripedium* comes from an incorrect interpretation of Greek words meaning

'Venus's shoe', and the species name *candidum* means 'white'.

This pouch is sometimes finely veined or spotted with purple around the opening in the top, with heavier spotting visible inside. The 'slipper' is actually a modified petal. There are two other petals, occurring as twisted, greenish-yellow parts extending laterally on either side of the pouch. Often they are slightly tinged with brown or purple. Three similarly coloured sepals are also present, one extending upwards above the pouch and the other two extending downwards. In southern Ontario, Small White Lady's-slipper flowers from about mid-May until early June.



photo by Allen Woodliffe

The Small White Lady's-slipper is pollinated by insects, often small bees. Because this plant blooms early in spring, cool weather often hinders insect activity and therefore pollination. Also, late spring frost or fire can prevent proper flower development and so typically only

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a small number of flowers produce seed. Orchid seeds are very numerous, usually thousands per seed capsule, but small and very light, relying on wind dispersal. Germination is usually quite low.



photo by Allen Woodliffe

Sometimes occurring in the same location as the Small White Lady's-slipper is the much more common and widespread Small Yellow Lady's-slipper (*Cypripedium parviflorum*). The latter species typically flowers a bit later in the season, but where they occur in close proximity to the former, and if the flowering period overlaps, interesting hybrids can occur. Depending on the genetic lineage, various combinations of white slippers, pale yellow slippers, greenish sepals or very purplish sepals will occur. These hybrids are actually much rarer than the Small White-lady's-slipper and it is always a delight when searching for and finding this endangered species to discover what colour combinations exist in a population.

Most prairie plants benefit from the regular occurrence of fire, and the Small White Lady's-slipper is no exception. Obviously the main threat to this species would be conversion from prairie to agriculture, urban development or some other unnatural land use. However even restricting the use of fire, which results in vegetation succession to more shaded, shrubby conditions is also a factor in its decline. If fire is resumed as a land management practice, the species can usually regain its position in the natural landscape. Disturbances such as foot or vehicular traffic can also cause decline.

Small White Lady's-slipper, as well as the other *Cypripediums*, have been considered sedative, antispasmodic medicines. Pioneers used the powdered root to treat insomnia.

Are there opportunities for the Small White Lady's-slipper to be discovered in new places in Ontario? With the resurgent interest in prairie protection and management, plus the effort going on to discover new remnants, there is always hope. But the likelihood of finding high quality wet-mesic prairie habitat required by this species will probably be very small. If the species didn't occur there in the first place, the chances of new seeds finding these sites are probably as miniscule as the seeds themselves.

Photographs of the Small White Lady's-slipper (Cypripedium candidum) on pages 3 and 4 are courtesy of Allen Woodliffe

Tending the Home Fires in London *by Bonnie Bergsma & Don Gordon*

Near perfect conditions allowed us to burn the tallgrass prairie "garden" that we have been nurturing on the boulevard in front of our home in downtown London.

A propane torch on a broom handle, a few shovels and rakes to give the appearance of emergency preparedness and away we went. The garden area is only 35m² but we still backburned it in strips so as not to have too great a conflagration. It was all over in less than 10 minutes with no unwanted visits from the police or fire services.

The freshly blackened surface will now heat the soil to spur new growth. Our garden is deliberately heavy on forbs and light on grasses in an attempt to appeal to urban aesthetics, and while not everyone likes it there is a lot of curiosity expressed.



photo courtesy of Don Gordon

When we established the garden we secured a consent from the City of London under their naturalization by-law. Since then we have not had to water or mow the garden but we have hand tended it to keep out unwanted species.

High Interest in Low Complexity Prescribed Burns *by Tony Jovan*

The first Low Complexity Prescribed Burn Worker Course, presented in March, 2003, in Wallaceburg, Ontario, was a project of the Ontario Forest Fire Management Learning Network in partnership with the Rural Lambton Stewardship Network. The curriculum consisted of modules taken from the S-100 Forest Firefighter Training Course. Modules included Introduction to S-100 Forest Firefighting, as well as personal safety, fire behaviour, fireline construction, mop-up and hand held burnout operations.

The course was well received by all participants. It was a practical learning experience for all, especially for those whose closest encounter to flame comes with birthdays. The course provided an opportunity for the practitioner to experience the basics of PB ignition and submission. This satisfies a goal that emerged from the Tallgrass Ontario Prescribed Burn Workshop 2000.

Most certainly, the participants left with a heightened sense of familiarity with fire. This is not, however, to say that the participant left with the capabilities of firefighting, nor to providing the services to conduct a PB. For those, it is recommended the participant continue their education and start with the S-100 course.

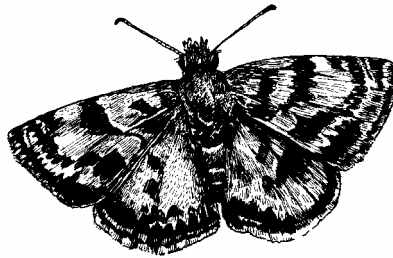
Based on the enthusiasm, optimism and suggestions of the participants, there is a possibility that the same course (with some minor tweaks) may be offered again soon. Another module, one based on the preparation of a PB plan, was recommended as well. Last but not least, the insurance issue was discussed. If you'll pardon the pun, this "hot" item still requires much investigation. The MNR representatives were very receptive and candid. It is expected that a new and streamlined prescribed burn guideline will be available sometime this summer. Well done!!

Update on the Pocket Prairie GIS Project *by Will Wilson*

Geographic Information Systems (GIS) are powerful computer tools that are being used to further conservation projects around the world. Briefly, GISs act like maps with many overlays, with the computer adding values of different combinations of overlays to identify and analyse important sites. For instance, a GIS can help predict the impacts of pesticide spraying under different climatic conditions; or, suggest which of several pieces of land adjacent to a prairie remnant Tallgrass Ontario should focus its efforts on to best conserve the Henslow's Sparrow; or, it can help to identify the best way to link separate patches of tallgrass prairie and savanna. A GIS can also tell us the exact size and shape of different parcels of land and serve as a database of records for previous burns, species sightings, and restoration efforts.

The Pilot Phase of the Pocket Prairie GIS Project, generously funded by the **George Cedric Metcalf Charitable Foundation**, constructed a GIS for Tallgrass Ontario that will be used to further management and restoration goals for remnant patches of prairie and savanna in southern Ontario, from Windsor to the Bay of Quinte and Lake Erie to Georgian Bay.

Because less than 1% of the original extent of these habitats remains intact, they are ranked as G-1 and G-2 (globally threatened) by conservation authorities.



Mottled Duskywing, J. Shore

These habitats are equally threatened in the United States. In Canada, tallgrass prairie and savanna is critical habitat for several endangered or currently extirpated species including Henslow's Sparrow, American Badger, Prairie Chicken, Northern Bobwhite, Mottled Duskywing (illustration by Judie Shore, above), Eastern Fox Snake, and many species of plants. In addition, tallgrass prairie and savanna offers vital warm season pasture to domesticated animals, including several rare breeds of sheep and cattle.

The Pilot Phase of the Pocket Prairie GIS Project was lead by myself (Bioregional Associates, Ltd.), and a co-op group of GIS students from Sir Sanford Fleming College in Lindsay. Support with airphotos and data was provided by MNR, NHIC, Essex County, Ontario Parks, the Ausable Conservation Authority, and the Grand River Conservation Authority. The pilot version of the GIS contains information on tallgrass sites at Dunwich, Brantford, Branchton, Holland's Landing, and in Rondeau and Pinery Provincial Parks.

The next step in the development and use of this GIS will be taken this summer as we gather, input, and analyse data from remaining sites across Ontario. This new phase of the project will be combined with the new phase of SOS III (Save Ontario Savannas – phase 3 of Tallgrass Ontario's landowner contact program) creating an exciting synergy. Anyone who is interested in participating in this project over the next several months can contact Tallgrass Ontario. A full presentation of the GIS project will be made at the Tallgrass Forum in September at Peterborough.

Congratulations to:

Barry King, active in the Russ' Creek Tallgrass Prairie Project, has been awarded a Certificate of Achievement from the Ontario Heritage Foundation.

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On the Move:

Dr Will Wilson, founder of Bioregional Associates & formerly of Trent University has accepted a position as conservation geographer at Lakehead University.