

By FIDJI GENDRON First Nations University of Canada

The Native Prairie Area at the First Nations University of Canada on the University of Regina campus is a 6,000 square metre restoration project that was initiated in the fall of 2003, when the area was seeded to native grasses and forbs.



PHOTO BY FIDJI GENDRON Bergamot in the Western "red" quadrant of the Medicine Wheel.

The area is now a mature and successful native prairie containing over 25 native forbs, 12 native grasses, and 10 native trees and shrubs that are used to educate people about native plants and their traditional uses.

In 2007, we established a tree and shrub bed, a Demonstration Garden, and a windbreak. Our big project for the summer of 2008 was the establishment of a Medicine Wheel. The design of the area was the result of several meetings with Elders and one female Elder shared with us the design for our four-directions Medicine Wheel.

The wheel is 20 metres in diameter with four

quadrants containing plants of different colours. The eastern quadrant has yellow flowers to symbolize the sunrise, while the southern quadrant has green and blue plants to symbolize the water during summertime.

Continued on Page 6

<image>

PHOTO BY FIDJI GENDRON

Students from W.S. Hawrylak Schook in Regina tour the new Medicine Wheel at the First Nations University of Canada, located on the campus of the University of Regina during the summer of 2008.

FEATURED FLORA: Mysterious Thismia Americana



5 Using botanical common 'scents' to locate plants 2009 NPSS AGM registration form and information

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Native Plant News is a quarterly publication of the Native Plant Society of Saskatchewan (NPSS) and is one of the benefits of membership. Members are invited to submit articles, news, views, photographs and comments. Views expressed by the authors are not necessarily those of the NPSS.

Submission Deadlines:

Winter Issue:November 15Spring Issue:March 1Summer Issue:June 1Fall Issue:September 1

Membership Dues (Year End November 30th) Individual \$30 Family \$45 Student/Low Income \$15 Corporate \$200 Life \$500

Please contact the NPSS office for information about the lifetime membership instalment payment option.

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President's Address

Greetings NPSS members, I hope that you have had a good summer and fall and are now set to work through the rest of a Saskatchewan winter.



The Society has been busy with project work and I know that our Executive Director, Chet Neufeld, has been in contact with many groups and individuals trying to deal with our newly developed Saskatchewan Invasive Species Council. The work that the NPSS has done with respect to invasive species is commendable and without Chet at the helm of this initiative I do not believe

that we would be where we are today. Chet has the ability to facilitate multiple partners from government, NGO's, and industry to get all involved stakeholders at a table to discuss invasive species, something that needed to happen. We should also be thankful to our two hired contractors, Debbie Nordstrom and Angela Salzl, who worked diligently to further the NPSS Invasive Alien Plant Program.

The Rare Plant Workshops were another tremendous success this year. Along with our rare plant identification workshops, we had Dr. Darcy Henderson provide a course on Rare Plant Survey Techniques. The two day course was oversubscribed, which indicates to the board that we should be looking at trying this again next year. We even had people attend the course from as far away as Oromocto, N.B. Thank you, Darcy, for your hard work and time putting together and offering this course.

Our Annual General Meeting will be held March 6-7 in the Faculty Club at the University of Saskatchewan in Saskatoon. If you are interested in serving on the board of directors please forward your name to any member of the current board of directors.

I welcome any of our members to contact myself or Chet if you have any suggestions about what the NPSS could be doing, or if you have any questions. I wish you all the best. Michael Champion 😵

Upcoming Events

March 2009

Seedy Saturday March 14 11:30 a.m. to 5 p.m. Princess Alexandra School, 210 Ave. H, Saskatoon (306) 655 5322

June 2009

2009 Native Prairie Appreciation Week (NPAW) June 23 – 25 Moose Jaw Daryl Nazar (306) 569-0424 Trevor Lennox (306) 778-8294 *GARDENSCAPE 2009* March 27 – 29 Prairieland Park, Saskatoon http://www.saskatoonex.com/ (306) 931-7149

July 2009

4th National Stewardship & Conservation Conference July 8 – 11 www.stewardship2009.ca University of Calgary, Calgary, Alberta

To submit your native plant related event to our events list, send your information (including date, contact, phone number and location) to info@npss.com.

FEATURED FLORA

Mysterious Thismia still incognito

By CHET NEUFELD NPSS Executive Director

I'm always a sucker for interesting trivia and bizarre stories of the science world and one of my favourite stories from the world of plants is about a little (and little known) species called *Thismia americana*.

In 1912, a graduate student from the University of Chicago named Norma Pfeiffer was walking near Lake Calumet on the south side of Chicago when she saw a tiny plant hidden amongst the tall grasses of the wet prairie. Not knowing what it was, she collected a specimen and brought it back to the botany faculty for identification. Surprisingly, they didn't know what it was either, so Norma decided to make it the subject of her PhD. research.

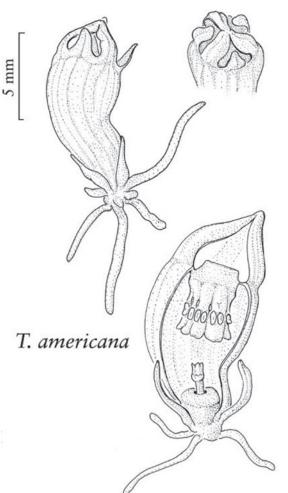
What she found was astonishing. First, the plant lacked chlorophyll (responsible for photosynthesis, which is how most plants survive) and was mostly translucent. It lived most of the year underground and survived by parasitizing nearby plant roots, obtaining nutrients through fungi in its own roots. In midsummer it grew to its full height of one inch, although only a quarter to a half inch of the plant extended above the soil surface. This exposed part of the plant was



its flower — a single, fused, tube-like structure rimmed with three petals that were fused at their tips to form an arch. All of these features are fairly unusual by themselves, not to mention combined in a single plant.

But wait, there's more.

Despite searching neighbouring areas for the plant, it could not be found outside the small area where it was



first found. I don't mean that it was elsewhere in Illinois or somewhere else in North America, I mean that aside from this tiny little patch on the edge of Chicago, there was nowhere else on earth that this species existed!

Taxonomic research done by Norma revealed that the plant belongs to a family of tropical orchids. The most closelyrelated species, fairy lantern (*Thismia clavarioides*), grows in Australia and New Zealand thousands of kilometres away!

In 1916 after five seasons of studying *Thismia americana*, Norma moved on to other things and no one has seen a living specimen since. In 1949, Norma sent a map of Thismia americana locations from her office in New York to a group of botanists of the Chicago Field Museum, but they were unable to relocate any. Sometime after this search, the area of Norma's original discovery was

developed and has since been covered by fill. Some claim that another nearby area that contained some of Norma's study specimens is now under a Ford Motors factory. The loss of these populations isn't surprising, given that little protection was given to plants in the early 1900's and that they occurred on the edge of a rapidly-expanding industrial city like Chicago.

However, remnant pockets of wet prairie similar to where Norma found *Thismia americana* still occur around the Lake Calumet region.

In the early 1990's, a team of botanists was assembled to search 22 likely sites for Thismia americana. Although no one involved in the search had ever seen a live specimen, they used photos and models of the plant to build their search image. They also randomly scattered small beads resembling Thismia flowers throughout the search area to evaluate the chance of finding Thismia with even a targeted search. Although the team found 17 species not previously recorded for the Calumet region, they didn't find a single Thismia. Interestingly, they didn't find a single bead either until searchers were told exactly where they were and even then, many of them remained

lost. The results of this search weren't a total loss; a proposed airport development was halted as a result of finding the 17 previously unrecorded species, preserving the remaining biodiversity. Also, the missing beads are an indication that *Thismia* could still be out there, but that no one is seeing it.

Subsequent searches have been mounted for *Thismia*, the most impressive to date being a group of 150 scientists who combed a large tract of wet prairie, but none have been able to locate a single plant. Locals still hope that an isolated pocket exists somewhere, but over 90 years have passed since the last *Thismia* was seen in the wild. Still, there are cases of "living fossils", species considered extinct that are suddenly rediscovered by accident every now and then. I'm a glass-halffull person, so I hope it's the latter. **\$**



Seeds of success beginning to bloom

By DEANNA TROWSDALE-MUTAFOV PlantWatch Co-ordinator Nature Saskatchewan

Another year of PlantWatching has passed, and to date 12 PlantWatchers have submitted a total of 85 bloom records from the spring and summer of 2008. These records are very appreciated, and they have been entered into the PlantWatch database at www.plantwatch.ca. This information will aid in climate change research, and phenology studies (the seasonal timing of lifecycle events).

A random prize draw was held for those who submitted data this year. Congratulations go to Helen Griffin of Regina, Daisy Meyers of Leader, Dianne Allen of La Ronge and Delwyn Jansen of LeRoy who won some great Nature Saskatchewan prizes!

Here's a quick glance at what PlantWatch accomplished this year. In the spring of 2008 I gave more than 20 Plant-Watch and Climate Change presentations to seven Regina and area schools and several local nature societies. Plant-Watch also distributed 50 Saskatoon (Amelanchier alnifolia) seedlings in the spring to schools and community groups. The Saskatoon is a PlantWatch species, so hopefully some of these schools will be able to watch the blooming of their shrubs in future years. A news release was sent to over 120 media sources in the spring, and PlantWatch had significant media coverage over the spring and summer. This included articles in Nature Saskatchewan's Nature Views newsletter, the NPSS's Native Plant News, the Western Producer and the Sunday newspapers in Regina and Saskatoon. Also, three radio interviews were given — two on CBC radio, and one on a Regina station — and links were made available on the Nature Saskatchewan, Climate Change Saskatchewan, and Saskatchewan Boy Scout websites.

PlantWatch sent out a colourful spring newsletter to all participants (now at 160, including 25 schools), and also sent out many brochures, posters, wall charts and *Canada in Bloom* booklets. PlantWatch materials were also available at many events throughout the year. I am hoping to design and print a new *Saskatchewan in Bloom* booklet in 2009, if funding becomes available. Also, I am hoping to take the PlantWatch message into schools in other parts of the province.

If you know of a school or community group that would be interested in receiving information or a presentation, or know of someone who would be interested in being a presenter for PlantWatch, please give me a call at 1-800-667-4668, e-mail me at plantwatch@naturesask.ca or go to www.naturesask.ca/ ?s=education&p=saskatchewanplantwatch.

Native plant news from around the world

Two plant species thought to be extinct were rediscovered in northern Queensland, Australia, in April.

The first species, *Rhaphidospora cavernarum* is a herb about 1.5 meters tall that was last seen in 1873. The second species, *Teucrium ajugaceum*, is a type of mint that was last seen in 1891. Both inhabit eucalypt forests.

T. ajugaceum was found when scientists were studying the effects of road construction on native habitats. While it is adapted to thrive in its surroundings, including growing a large tuber to help speed recovery after dry seasons and brush fires, its biggest threat may be road construction and gravel removal for road construction. *R. cavernarum* is a much less known and exotic species. Cattle grazing and brush fires are thought to threaten its survival.

http://www.reuters.com/article/newsOne/ idUSSYD22254520080412

A new orchid species was recently discovered in California's Yosemite National Park.

Platanthera yosemitensis, or Yosemite bog orchid, is the only orchid species endemic to the Sierra Nevada Range in California and is found in only nine locations growing in spring-fed areas from 6,000 to 9,000 feet in altitude.

Botanist Alison Colwell found the orchid not by sight but by smell. She recalls walking through a meadow and then being hit by the stench of smelly feet. She was quoted in one article as saying "It smelled like a horse corral on a hot afternoon". The smell lures pollinators such as flies, but is unlikely to attract many females if used in a bouquet.



http://www.msnbc.msn.com/id/19797088/

In January 2008 a new palm tree was discovered in Madagascar. The palm is bizarre for a number of reasons. First, the tree can grow to a height of 18 meters with fronds as long as 5 meters. This not only makes it the largest palm tree species in Madagascar, but among the largest flowering plants in the world. Now that scientists have had a chance to describe it, they have found it so completely different from other palm species that they have given it its own genus and species classification, *Tahina spectabilis*.

As if this weren't enough, the tree takes approximately 100 years to bloom. It produces an asparagus-like shoot whose branches are covered in tiny white flowers oozing nectar. The plant expends so much energy to flower and produce fruit that a few months later it collapses and dies. Scientists estimate that there are only about 100 plants left. Madagascar has some 10,000 plant species, 90 per cent of which are endemic.

> http://www.abc.net.au/news/ stories/2008/01/17/2141127.htm

Using botanical common scents

By TARA SAMPLE NPSS vice-president

When compared to our birder friends, those of us with our eyes firmly planted on the ground may sometimes feel a little inferior.

Accomplished birders do not depend solely on their vision for identification. More often than not, it is their sense of sound that alerts them to the presence of a certain species. While we are on our hands and knees trying to determine if the plant in front of us has ovate or obovate shaped leaves, birders stand tall, rattling off the names of the owners of the little songs they hear.

Even though visual cues are more often than not required for accurate identification, "botanizing" can still be a multi-sensory experience. Considering the number of species brought into cultivation for their fragrant qualities, it should come as no great surprise that one's nose can be a helpful aid in identification.

Many of our native plants can be sniffed out long before they can be seen. Sweet grass (*Hierochloe odorata*), is one such plant. Because sweet grass blooms early in the spring, identification later in the season could be difficult if it were not for its characteristically sweet smell, which is readily released when this plant is stepped on. Coumarin, a natural — but potentially toxic — anticoagulant produced by this grass, is the compound responsible for the smell. Sweet grass loses its fragrance soon after the first frost.

Occasionally the scents of certain native plants can have unpleasant associations for some. While many people claim to enjoy the strong, sweet smell of wolf willow (*Elaeagnus commutata*) blossoms, many more swear that it has an uncanny resemblance to the smell of horse urine. Personal preferences aside, once experienced, the smell of this plant is immediately identifiable!

Generations of berry pickers have let their noses guide them. It is truly remarkable how the strong, delicious smell of ripe wild strawberries (*Fragaria virginiana*) can hang in the air on a particularly warm summer's day. The skunky smell of low-bush cranberry (*Vi*-



PHOTO BY DAVID FREEMAN

Skunky smelling low-bush cranberries sporting their colourful fall foliage.

burnum edule) fruits definitely indicates that fall is around the corner.

Although scents may be a useful aid in identification, they can seldom be relied upon alone. Plants such as narrow-leaved milk vetch (*Astragalus pectinatus*) and two-grooved milk vetch (*Astragalus bisulcatus*) share the same strong, sometimes unpleasantly sweet odour of selenium. The presence of either of these species is a good indicator of seleniferous soils, which can be potentially toxic and a concern when grazing livestock.

Finally, other senses may not, on

their own, be useful for identification. Nevertheless, in combination with sight they greatly enhance "botanizing" as a hobby. After all, how often do birders get to hold a bird in their hand? How many can distinguish one bird from another based on the roughness of their flight feathers? And, how many really know what a sparrow smells or even tastes like? Well, you get the picture.

So, next time you're out strolling across native prairie or exploring the underbrush, let your sense of smell guide your path. You might be surprised by what you'll smell — and find.



PHOTO BY FIDJI GENDRON

A monthly workshop was held at the site to teach people about the benefits of planting prairie plants in their urban gardens.

Medicine Wheel brings learning full circle

Continued from Page 1

The western quadrant has red and purple flowers to symbolize the sunset and, finally, the northern quadrant has white flowers to symbolize winter. There is a buffalo rock in the middle and seven stones that serve as benches, on the outside of the wheel.

The buffalo rock has several meanings, but one Elder told us that it symbolizes education. The seven stones illustrate the seven values. The four pathways were established with rocks of different colours – white, red, yellow and black – and represent the four colours of human race. We also planted seven tamaracks.

This project was very labour intensive — we planted 2,500 seedlings! — but it was, most of all, the perfect occasion to involve the community. My research assistant, Michelle Biden, and I met with Elders on several occasions. During a series of interviews, the Elders shared with us the meaning of the Medicine Wheel, its different colours and designs, the number seven, and stories about some plants. They also guided us during the design of the booklet that was produced after the interviews. This was a truly unique experience and the booklet is now available on site.

Many people are interested in native plants and we often toured the area with groups. The most important group was during the New Dance Horizon Secret Gardens Tour when around 250 participants explored the site. Members of the AIDS Programs South Saskatchewan and the Red Feather Spirit Lodge and students from Thom Collegiate helped Michelle and I plant some of the seedlings in May for the Medicine Wheel. We also had students from the W.S. Hawrylack school who learned about native and invasive plants and helped us with seed collection in September. Malin Hansen and I organized monthly workshops to provide information on the benefits of growing native plants, how to design a native prairie garden, what plant species to use, where to obtain plants, how to collect seeds and how to plant and maintain native plants. Between 15 and 25 participants attended these workshops. Thanks to these workshops, I think we will have more native plants in Regina backyards next summer!

What I like the most about this project is to hear about people who tell me how they use and enjoy the area. For instance, I was giving a tour of the area to Caring for Mother Earth workshop participants and one of them told me that he had not seen some of these species since he was a little boy growing on a farm.

Copies of the Medicine Wheel booklet are available at fgendron@ firstnationsuniversity.ca.

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March 6-7, 2009 University of Saskatchewan, Faculty Club 101 Administration Place Saskatoon, Saskatchewan

Friday, March 6th

6:45 p.m. Registration

- 7:00 p.m. Keynote Address: "Native Aquatic Plants the heart of our wetland", Heinjo Lahring, Bearberry Creek Water Gardens
- 8:00 p.m. Wine and Cheese Reception Slide Show (open to all, bring your slides)
- 8:45 p.m. Presentation of Volunteer of the Year awards
- 9:00 p.m. Resolution Meeting (if needed)

Saturday, March 7th

- 7:30-8:30 a.m. Registration & Breakfast
- 8:00 -9:45 a.m. **Opening Remarks and Annual** General Meeting (during breakfast)
- 9:45-10:00 a.m. Coffee break and networking
- 10:00 a.m. Panel Discussion: "Case Studies in Riparian Area Management" (Luc Delanoy, Meewasin Valley Authority; Bob Wills, Wakamow Valley Authority; additional panel speaker TBA)

12:00 p.m. Lunch and Closing Remarks

Keynote Address: "Native Aquatic Plants — the Heart of Our Wetlands" Join Heinjo Lahring, author of Water & Wetland Plants of the Prairie Provinces, in a discussion and slide presentation highlighting our native aquatic plants. Featured topics will include hunting for native aquatics, understanding their role in wetland communities, and propagating them for reintroduction. Heinjo and Jan Lahring, owners of Bearberry Creek Water Gardens, are now in their 27th season of growing aquatic plants in their foothills nursery west of Sundre, Alberta.

Panel Discussion: "Case Studies in Riparian Area Management" Panel members will discuss projects dealing with various aspects of riparian management, such as site remediation techniques. Audience members will have a chance to engage the panel with questions and discussion at the end of the presentation.

What is the NPSS?

The NPSS is a non-profit organization founded in 1995 with the mission to increase awareness about native plants by facilitating education, communication, and research. By doing so we hope to increase interest in native plants, their sustainable use, and conservation of their habitats.

Registration Form

Registration deadline is Feb. 20, 2009.

Mail or fax this form & mail payment by cheque to: Native Plant Society of Saskatchewan P.O. Box 21099 Saskatoon, Sask. S7H 5N9 FAX: 306-668-3940

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Registration Fees:

Saturday Breakfast, Panel Discussion and Lunch	
NPSS Member	
Non NPSS Member	

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Non NPSS Member	\$50
Student	\$15

\$10

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Other.	
Individual 1-Year Membership	\$30
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Please note that the member rate is applicable only to PAID members. Memberships purchased at the time of registration entitles individual to membership rates.

For More Information Contact: Chet Neufeld, NPSS Executive Director Phone and Fax: (306) 668-3940 email: info@npss.sk.ca. Website: www.npss.sk.ca

The 14th Annual NPSS AGM is quickly approaching. It is being held this year March 6-7 at the Faculty Club, University of Saskatchewan, Saskatoon, Sask. The board decided to keep the format for the AGM this year that was begun at last year's event.

We hope to see all of you there, and are interested to know your feelings on this format and reduced cost to members.

As a reminder, the board decided at a meeting in the spring of 2006 that resolutions that are sensitive and pertaining to complex issues, including any directive not strictly that of the NPSS or pertaining to its activities, must be submitted in writing to the NPSS Board of Directors a mini-mum of two weeks prior to the AGM. The resolution must include adequate background information for Board review and a clear indication of why the proposed resolution should come from the NPSS.

Board Member Profile

Kerry Hecker works for Environment Canada – Canadian Wildlife Services, managing the Last Mountain Lake National Wildlife Area and Migratory Bird Sanctuary (LML NWA).

This is a highly varied job that includes living on-site to



keep an eye on things, native prairie restoration, range assessments, bird and mammal monitoring and overseeing research projects.

Kerry developed a love of the prairies early, spending summers exploring on the family farm near Maple Creek, and wandering around the Cypress Hills on weekends.

She earned a B. Sc in Biology from the University of Regina in 1996 and an M. Sc in Biology from Carleton University in 1999. During her university

education, summer jobs consisted of assisting with research on cool critters in an array of marvellous places. She started "real work" with the Saskatchewan Wetland Conservation Corporation in the Native Prairie Stewardship Program.

After a brief stint in her own business, she jumped at the opportunity to work with Dean Nernberg doing native prairie restoration at the LML NWA, and has been there ever since.

In her spare time she enjoys leading a choir, hunting, distance running, photography, writing, and canoeing and camping with her husband Lowell Strauss. For Kerry, one of the most satisfying things about working with plants is the ability to glance around and identify everything around her!

Kerry was previously a board member of the NPSS for four years (2001-2004) and is quite happy to be serving the Native Plant Society of Saskatchewan again.

Membership fees are due

Well it's that time of the year again. For those of you paying by the year, your NPSS membership fee is now due.

Please use the form included on the previous page even if you're not attending the annual general meeting as it also doubles as a membership renewal form. Membership fees are also listed on the form. If you need additional forms, you can download them from our website.

We are still working on setting up our website to accept credit card payments, so for now you'll just have to send a cheque via snail mail.

Thank-you to all who supported the NPSS in 2008 with membership dues and donations of your time and money!

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