



Native Plant News

Vol. 13, No. 3

Fall 2008

Pure prairie paradise



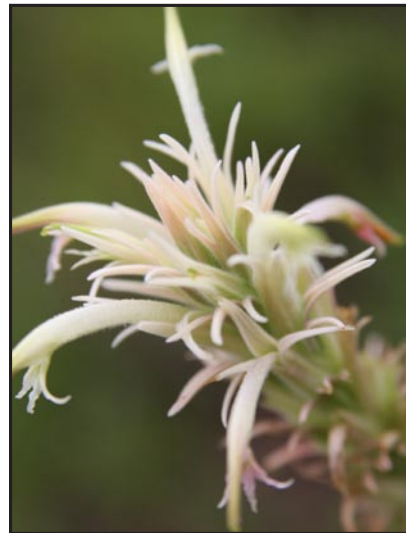
By *TARA SAMPLE*
NPSS vice-president

This year's Annual NPSS summer field tour was one of the best so far. A record number of participants assembled to explore the exceptionally beautiful Cherry Lake area with pristine native prairie, aspen forest and boggy wetland. Our tour leader, Dr. Rob Wright, jointly owns the quarter section of land with two other families.

The first day got off to a slow start, primarily because of a thunderstorm that settled in for a couple of hours.

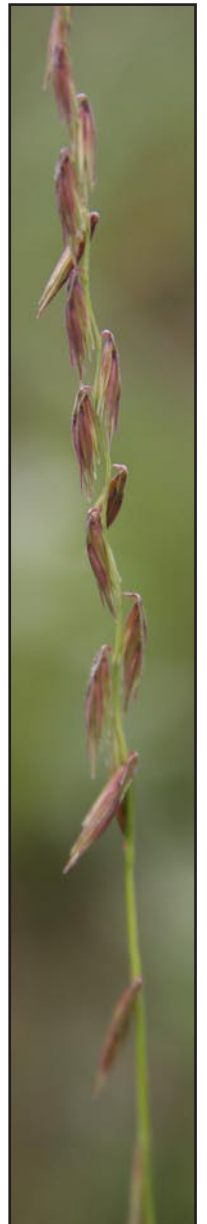
The weather finally broke and a colourful group dressed in an

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PHOTOS BY DAVID FREEMAN

(Above Left) Common blanket flower (*Gaillardia aristata*) in the foreground with field tour participants blurred in the background. (Above right) Purple prairie clover (*Dalea purpurea*). (Right) Sideoats grama (*Bouteloua curtipendula*). (Right-centre) Downy paintbrush (*Castilleja sessiliflora*). (Below) Smooth green snake.



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Rare Plant Rescue making some progress

By LACEY WEEKES

Rare Plant Rescue

Summer Assistant,

Nature Saskatchewan

Nature Saskatchewan's Rare Plant Rescue (RPR) crew visited several areas of the province during the 2008 field season to search for new occurrences of plant species at risk, as well as to monitor known populations.

Searches were conducted for slender mouse-ear cress (*Transberingia bursifolia*), western spiderwort (*Tradescantia occidentalis*), hairy prairie clover (*Dalea villosa* var. *villosa*) and buffalograss (*Buchloë dactyloides*), yielding several new occurrences of the latter three species.

The RPR crew also collected data for the purpose of monitoring known populations of spiderwort, hairy prairie clover, and small-flowered sand verbena (*Tripterocalyx micranthus*). During the field surveys, incidental occurrences of plains grape-fern (*Botrychium campestre*), small lupine (*Lupinus pusillus*), and beaked-annual skeletonweed (*Shinnersoseris rostrata*) were also discovered.

The RPR crew also had the chance to participate in a Piping Plover and Loggerhead Shrike census, and be a part of Native Prairie Appreciation Week (NPAW) in Esterhazy.

Through the course of the field season, many landowners were visited as the Rare Plant Rescue crew spread information about plant species at risk and habitat stewardship.

As a result of the field season, RPR has welcomed two new participants into the program – bringing the total to 69 – and has added approximately 500 acres (200 hectares) of land to the stewardship side.

If you would like more information about the Rare Plant Rescue Program at Nature Saskatchewan, call our toll-free line at 1-800-667-4668 (Saskatchewan only) or visit our website at www.naturesask.ca.

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NPSS Workshop popularity growing

By CHET NEUFELD

NPSS executive director

Well another summer has come and gone again.

My question is: what happened to it? I guess it's because we were so busy with all of our summer activities here at the Native Plant Society of Saskatchewan (NPSS) that time seemed to fly by.

Once again, the NPSS held its rare plant identification workshops. These workshops are designed to give people the skills they need to look for provincially and nationally rare plants, regardless of their level of expertise. This year's workshops were held in Saskatoon, Regina and Val Marie and attracted more than 60 participants. The workshop in Val Marie also allowed for a short field trip to Grasslands National Park, where participants could apply the skills they learned.

Every participant was encouraged to go and search for rare plants in native habitats and return the reporting forms, regardless of whether or not they found any rare plants. To date, approximately 30 forms have been returned and more come in every day. Surveys have been completed in locations ranging from Hudson Bay to Webb and have found rare plants such as small lupine (*Lupinus pusillus*), closed gentian (*Gentiana andrewsii*) and ram's-head lady's-slipper (*Cypripedium arietinum*).

The NPSS also introduced a new course this year designed to give professionals in-depth understanding of the survey techniques related to rare plant surveys. The course was started in an attempt to standardize the methods used for rare plant surveys, as past search efforts have varied so widely that it has been difficult, if not impossible, to compile historical data for analysis.

We were extremely fortunate to get Dr. Darcy Henderson to teach the course, as he is the Species at Risk Biologist for the Prairie and Northern Region of Environment Canada/Canadian Wildlife Service.

The course was a 2 ½ day format, with the first and last day taking place in the classroom and the second day being spent at the Dundurn PFRA pasture surveying the federally-threatened hairy prairie clover (*Dalea villosa* var. *vil-*



PHOTO BY CHET NEUFELD

Rare plant survey techniques workshop participants get a chance to put their newly acquired skills to the test on the Dundurn PFRA pasture in August.

losa).

The course was so popular that it was overbooked and we had to turn some people away. We had a total of 25 participants coming from various points in Saskatchewan, Alberta and Manitoba and from as far away as New Brunswick and Ontario. To my knowledge, this is the only course of its kind in Canada so it is something we are really proud of and would like to hold again.

Switching gears from rare plants to ones that are all too common, the NPSS also tackled invasive alien plant issues through a number of projects.

Through a federal grant, we were able to lead the charge in forming the Saskatchewan Invasive Species Council, a provincial body that will coordinate efforts across jurisdictions, agencies and geographical regions. The benefits from having a provincial council such as this are many, including increased efficiency, improved communication and enhanced effectiveness when dealing with invasive species.

The council also serves as the link in the chain of provincial invasive species councils collaborating across Canada. A website for the council (www.saskinvasives.ca) will be operational by the end of this year.

Another initiative of the NPSS was the invasive alien plant workshops that were held in Regina and Saskatoon. These workshops, which were also held in 2007, were once again wildly popular and attracted approximately 50 people. In these workshops participants learned how to identify many of the invasive alien plants (shrubs, forbs, grasses and



PHOTO COURTESY SMITHSONIAN INSTITUTION

Ram's-head lady's-slipper (*Cypripedium arietinum*).

aquatic plants) either in Saskatchewan or those threatening to invade. Photos, herbarium specimens and fresh (previously frozen) plants were all available to aid in the exercise.

By far, the largest project that the NPSS has regarding invasive species is the Invasive Alien Species in the Community program. This is a collaborative effort with the Saskatchewan Ministry of Environment started last year to give funding to individuals and groups that took a direct, grassroots approach at addressing invasive species. This year we had more applicants than we could award funding to, but managed to fund 19 groups with projects ranging from sheep grazing leafy spurge to developing educational curricula for schools and distribution of bio-control agents.

This year is the last year for the program, but I'm working on solutions to continue a similar program in some capacity in the future.

If you weren't able to attend the rare plant workshops or the invasive alien plant workshops and would like copies of the materials distributed to participants, please contact me at info@npss.sk.ca or (306) 668-3940. 🌱

Guide filling watery niche

By *KERRY HECKER*
NPSS board member

Water and Wetland Plants of the Prairie Provinces • Heinjo Lahring
Canadian Plains Research Center, University of Regina, 2003
Softcover, 326 pages, \$34.95 • ISBN 0-88977-162-6

Water and wetland plants are often overlooked, even when they are *looked at*. They typically don't have brilliant blossoms, they grow in mosquito- and black-fly-infested areas, and you risk getting your feet wet to get close to them. Besides, even if you yank up a macrophyte, or part of one, the structure is difficult to see once out of its watery home – they all look like green slime!

Or so I used to believe.

Heinjo Lahring has put together a wonderful field guide to water and wetland plants from Manitoba, Saskatchewan, Alberta, and the northern United States. In his preface, he speaks of early experiences and growing fascination with watery vegetation. These experiences are cosily related with something suspiciously akin to affection. This gentleman really appreciates water and wetland plants! And his interest in soggy flora is contagious – the species are laid out neatly with intriguing details, clear line drawings, and beautiful photos. In my experience, this is the first really good guide to aquatic and emergent vegetation in our area.

Water and Wetland Plants of the Prairie Provinces contains 271 pages of actual species descriptions, featuring one major species on every page or so. Often, other closely related species are described on the same page. In total, there are 140 major entries, as well as more than 100 minor entries listed in this book. Inside the sturdy covers are illustrations of leaf arrangements, leaf types, and leaf shapes (front cover) and

illustrations of monocot and dicot flowers, ovary location, and inflorescence types (back cover and last page).

There are many features to this book beyond the basic content of species descriptions. Appropriately enough, the cover and pages of this book are water-resistant. The size of the guide is small enough to fit in a large jacket pocket or backpack, and it is small enough to be handy.

Looking inside the book, the photos are good quality and plentiful, and line drawings are also used to give clear illustrations.

The photographs in this book are a good blend of close-ups of the plant, and pictures showing the habitat in which it lives.

This is sometimes difficult to accomplish for partly or

entirely submerged plants,

but the author has good photos through the water surface for many species. As a pleasant addition, the three-dimensional structure of some plants is shown with underwater photography.

Once get into the species descriptions, the top of each page is colour coded to assist with quick location of your particular plant type. The colours correspond to the fern allies, monocots (general), monocots (grasses/sedges/rushes), dicots (shrubs), and dicots (herbs). Along with the key to families, there are also keys to *Potamogeton* (Pondweeds), *Eriophorum* (cotton-grasses), *Scirpus* (bulrushes), and *Myriophyllum* (milfoils). These are quite helpful. All in all, this field guide was put together with meticulous attention to detail, and has all of the standard features of a field guide, along with a few neat

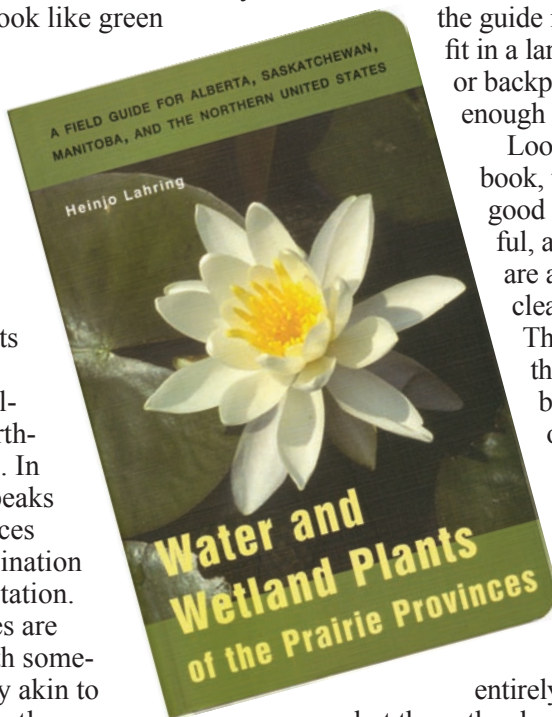
little bonuses.

An interesting feature of this field guide is the bibliography. I have not noticed such a thing in any other field guide I have used. This particular bibliography is categorized into “Floras and descriptive references”, “edible, medicinal, and historical references”, and “ecology, physiology, and wetland references”. This is quite useful for those of us who wish to delve into more detail.

The one major drawback of this book is that the “minor” species are not presented as extensively as the more common and widespread species. There are too few photos of the species in the same genus, especially for the species that may be easily confused. However, in defence of the author and publisher, if they had included such details, this book would have doubled in size and possibly price.

I have one suggestion for future versions of this book, or other books on this topic. For those of us who wish to keep or make specimens of the water and wetland plants, a short section on methodology would be appreciated. Really, just how does one ‘press’ a wet and squishy plant? How does one lay out a hornwort to appropriately show the structure, when being out of water does strange things to the three-dimensional arrangement of these plants? If I wish to preserve a specimen for later perusal when I have a field guide in my hands, can I freeze it in water for the short-term?

Overall, this field guide is a delight – especially since it fills a niche of prairie flora that is under-represented in the literature for naturalists. It will be an excellent resource for experienced amateurs through to professionals. One caution; I would recommend that beginners learn the features of more easily accessible and definable plants before tackling this particular group. There is nothing as frustrating as being confronted with innumerable sedges, willows, or polygonums when one is just grasping the basics of morphology and taxonomy. ✿



UPDATE: Newest waterlily species turns up in Manitoban marsh too

EDITOR'S NOTE: FOR THOSE OF YOU WHO READ THE ARTICLE "NEW WATERLILY SPECIES SURFACES" IN OUR SUMMER 2008 EDITION, YOU MAY BE INTERESTED TO LEARN THAT THE NPSS HAS RECEIVED AN UPDATE ON ITS STATUS. DR. JOHN WIERSEMA, THE AMERICAN RESEARCHER WHO CONFIRMED THE LOCATIONS IN SASKATCHEWAN IN 2007 HAS VENTURED INTO THE WILDS OF MANITOBA TO TRY AND CONFIRM ADDITIONAL LOCATIONS OF THIS NEWLY-DISCOVERED HYBRID WATERLILY SPECIES. IN AUGUST, HE SENT THE FOLLOWING COMMUNICATION:

Dear All:

I thought I should inform you on the outcome of Diana and my expedition earlier this week in search of the new waterlily species at the only known potential site in Manitoba. Our suspicion that this plant occurred there was based on a 60-year-old collection, with imprecise locality information ("Minago River near Hill Lake"), that I had tentatively assigned to this taxon several years ago.

Thanks to the excellent support and assistance of the Jenpeg Manitoba Hydro Generating Station staff, we were able to spend two very productive days on the Minago River in the vicinity of Hill Lake. I am delighted to report to you that the target plant of our quest



PHOTO BY BARRE HELLQUIST

John Wiersema

continues to survive there! Although it is far from abundant, it occurs sporadically along one side of the river for a distance of a few miles or more, suggesting that it has spread downriver from some initial stand. Although the water level was quite high due to recent torrential rains, with most plants in around 3 meters of water, making a search for seedlings all but impossible, we did observe some younger plants nearer to the shore in water about 1 ½ metres deep, confirming that new plants have become established from seed.

Plants of the new species were flower-



PHOTO BY BARRE HELLQUIST

The flower of a recently discovered waterlily species in Saskatchewan and Manitoba.

ing freely, and insects were observed visiting several flowers. Judging from the limited progress of fruit maturation, it can be estimated that flowering had commenced no more than 10-14 days earlier.

This is in line with our observations from Saskatchewan. By comparison, we were able to find nearly mature fruits for both of the other species in the Minago system, *Nymphaea leibergii* and *Nymphaea tetragona*, despite some difficulty finding their fruits in the deeper, more turbid water (fruits are retracted underwater by extensive coiling of the peduncle when mature), so those species must have initiated flowering much earlier. The other two species are largely confined to, and penetrate well into, tributary inlets along the river, with *N. leibergii* venturing out only slightly along the main channel and *N. tetragona* found only in quieter inlets protected by beaver impoundments. By contrast, the new species exists only at the mouth of larger inlets and along the margins of the main channel, never straying too far from the deeper water.

We also found at least two (believed to be) sterile hybrids between *N. leibergii* and *N. tetragonain* in two different

places, similar to those found in Berry Creek elsewhere in Manitoba, and found possible evidence of introgression of the new species with its maternal parent *N. leibergii*. Pollen analysis of floral specimens will help to sort this out, as well as the molecular DNA evidence from the six leaf samples we collected which should now be enroute to Berlin for testing. It will be interesting to see how genetically uniform the material of the new species is in relation to the Saskatchewan plants.

The trip provided an excellent opportunity to preserve some nice comparative specimens of the observed waterlilies as well, and for Diana to take numerous digital images, all of which will facilitate painting a clearer picture of their differences and promoting their recognition by others.

For all this success, we are exceedingly grateful to the staff at Manitoba Hydro's Jenpeg Station for providing us this opportunity!

Best regards,

John Wiersema
Gambrills, Maryland✱



PHOTOS BY DAVID FREEMAN

(Left) Fruit of the Indian bread root (*Pediomelum esculentum*). (Above) Pasture sage (*Artemisia frigida*) on the left and moss phlox (*Phlox hoodii*) on the right.

Summer field tour

Continued from Page 1

assortment of rain suits, garbage bags and rubber boots climbed the hillsides to explore the native grasslands around Cherry Lake.

Almost immediately the pace slowed as people started taking notice of the diversity of plants found on the hill sides. Here we found our first rare plant of the day, downy paintbrush (*Castilleja sessiliflora*). Rob explained that it was

a hemiparasite, meaning that it derives some of its nutrition from other plants.

At the top of the hill, we had an excellent view of Cherry Lake. One of the participants shared with the group a picture she had taken from the same hill years ago when the lake had turned a pinkish hue, which it does from time to time without explanation.

The top of the hill also provided a good view of an old buffalo pound site. This site is even the subject of a diorama at the Royal Saskatchewan Museum depicting the use of a buffalo pound by First Nation peoples. Rob explained that artefacts have been found in the area, but they had not come across anything on their quarter section. However, by the end of the day this had changed as NPSS executive director Chet Neufeld found a teepee ring.

We also encountered the first of several smooth green snakes. As the weather was still cool from the rain, everyone got a good look at the slow moving fellow. A garter snake was found on day two sunning himself on a trail.

Rob keeps an inventory of

Continued on Page 7



PHOTO BY DAVID FREEMAN

Rob Wright (above) digs up a specimen of shrubby evening primrose (*Calylophus serrulatus*) for his collection.



PHOTOS BY DAVID FREEMAN

Participants (above left) examine jewelweed (*Impatiens capensis*) — flower depicted in inset photograph — at the edge of a beaver pond. (Centre) bishop's cap (*Mitella nuda*). (Right) wild bergamot (*Monarda fistulosa*) flower.



PHOTOS BY DAVID FREEMAN

(Left) Seaside arrow-grass (*Triglochin maritima*). (Right) Field tour participants dressed in rain gear brave the weather to get a glimpse of some rare prairie plants.

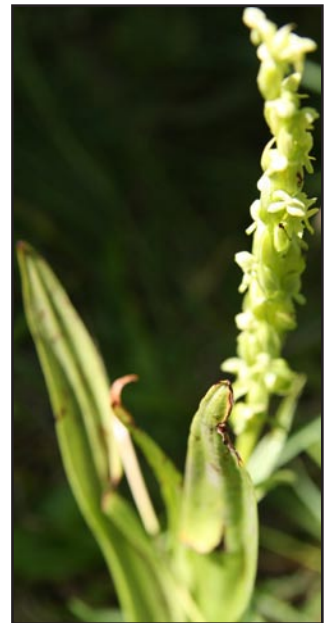


PHOTO BY DAVID FREEMAN

Long-bracted orchid (*Coeloglossum viride*).

Continued from Page 6

the plants that occur on the property.

The discovery of shrubby evening primrose (*Calylophus serrulatus*), a new plant for Rob's inventory of the property, allowed the participants a chance to watch Rob collect a specimen – which was later pressed for his collection.

The group learned a lot about edible native plants found in the Cherry Lake area. There was a tremendous crop of berries such as Saskatoons, chokecherries and blueberries to munch on as we walked around. Rob, and others in the group, shared their ethnobotanical knowledge and convinced the group to taste liquorice-flavoured giant hyssop (*Agastache foeniculum*) flowers, peppery hot wild bergamot (*Monarda fistulosa*) flowers and chew on the gum-like vascular tissue of Canada violet (*Viola canadensis*) petioles. Rob even dug up an Indian breadroot plant that we sampled both cooked and raw on day two.

Those who camped out had a wonderful evening. There were plenty of discussions, plant related or otherwise, over supper. Some cheered on the

Riders, listening to the game over a radio that cracked and popped as even more thundershowers came and went. A large, brave group hopped onto what could only be described as a canoe raft – a platform straddling two canoes. The bravest jumped into the lake for a swim. The evening was capped off by eating popcorn and hanging around a campfire before finally going to bed.

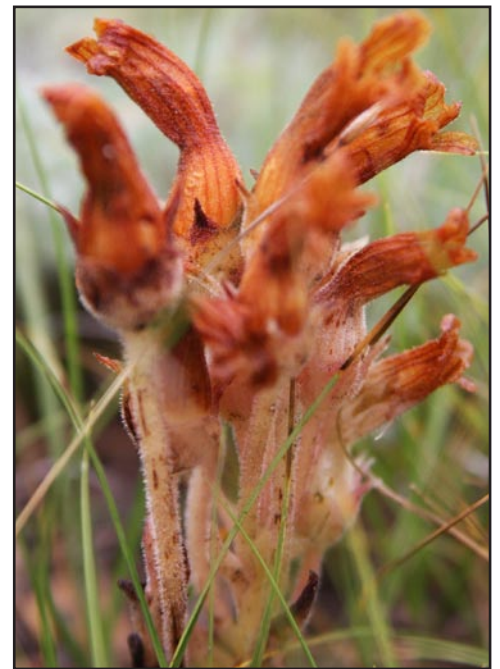
The weather cooperated better on the second day. It was amazing how different the vegetation was in the wetland and riparian areas.

Sometimes we saw vegetation changed by human influence, pastures planted to tame species, areas invaded by burdock (*Arctium lappa*), ornamental geraniums escaped from an old home-stand. Other times we saw vegetation

altered by native inhabitants, such as the habitat created for jewelweed (*Impatiens capensis*) by beaver activity.

One of the most unforgettable parts of the trip was exploring the floating bog. It was fun watching the ground move like jelly when we jumped on it! That is until Rob went right through the matt to his knees.

After lunch, people packed up, taking with them wonderful memories to tide them over until the next NPSS tour. You can find and share photos from the tour at <http://picasaweb.google.ca/david.b.freeman/NPSSSummerField-Tour>.✿



PHOTOS BY DAVID FREEMAN

Left to right: Scarlet gaura (*Gaura coccinea*), dotted blazing star (*Liatris punctata*) and clustered broomrape (*Orobancha fasciculata*).

Board Member Profile

Marty Lelliott is the Manager of SaskPower's Shand Greenhouse and has been involved with the project since its inception. He started in the operations and production end of the operation in 1991 and in 2003 made the switch to Manager.



Marty graduated from Lakehead University in 1987 with an HBSc in Forestry. He then settled in Northern Manitoba where he worked as a Silviculture Technician for one season and then as a Grower at the Clearwater Forest Nursery before moving up to be the Labour Supervisor.

While working at Clearwater Marty began initiatives to communicate with local school and interest groups to educate about environmental issues and environmental management. When the opportunity arose with SaskPower that required the combined skills of a grower, production manager and environmental educator it seemed a good fit and Marty moved to the prairies.

For Marty, working with the NPSS is an excellent opportunity to network with like-minded conservation and environment management professionals from across Saskatchewan. It is a great way to learn about the many issues relating to native, endangered and introduced plants and to be involved with the preservation of what remains of that once vast prairie ecosystem.*

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