



Native Plant News

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www.npss.sk.ca

Fall 2015

Summer Field Tours Had Fun in Fens

Oftentimes the NPSS uses its field tours to go to some really beautiful places and look for rare plants and this year was no different with one exception: the habitats that we visited were themselves a rarity. Fens make up less than one percent of the habitat in Saskatchewan and are similar to the much more common and well-known bogs, but with a few differences. Fens are mineral rich and have an alkaline pH while bogs are low in minerals and acidic. Because of these unique characteristics, they also host a very unique and specialized plant community.

The first fen we had the pleasure of visiting was Little Boggy Creek Fen in Duck Mountain Provincial Park on June 27-28, 2015. The park is a mix of different habitat types that include lakes, creeks, forests, grasslands and fens. It is located against the Manitoba border and so some of the species in the plant communities are decidedly more eastern in origin. This means that there

are few other places in the province to see some of the species that we found. Little Boggy Creek Fen is tucked away in the southeastern corner of the park and is approachable from the road, but

we were led to the backside of the fen through a much more interesting route by Rob Wright and Glen Longpre, both who work for the Ministry of Parks, Culture and Sport, and by Glen and Maureen Lee who have visited the park many times. Along the way we saw many beautiful wildflowers including Blunt-leaved Bog Orchid (*Platanthera obtusata*), Northern Green Bog-orchid (*Platanthera aquilonis*), Round-leaved Orchid (*Orchis rotundifolia*),



English Sundew (*Drosera anglica*).

PHOTO BY CANDACE NEUFELD

Continued on Page 4

2 New Moonwort
Found in
Saskatchewan

6 Brightwater
Healing Garden
Created

7 Harvesting
Seeds

8 Renew Your
Membership &
Win a Prize!

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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.

Deadlines:

	Submission	Publication
Winter Issue:	November 1	December 15
Spring Issue:	February 1	March 15
Summer Issue:	May 1	June 15
Fall Issue:	August 1	September 15

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New Moonwort Found in Saskatchewan

By SARAH VINGE-MAZER

Provincial Botanist -

Saskatchewan Conservation Data Centre

The Saskatchewan Conservation Data Centre set out to explore the diversity of Moonwort (*Botrychium*, sometimes also called Grape-ferns) species in the Cypress Hills during the 2015 field season. Collectively, Moonworts in Saskatchewan are rare, with many ranked as S3 or less and having a global rank of G3 or less (see the SKCDC website www.biodiversity.sk.ca for information on what the ranking means). In addition, most species have not been recorded in Saskatchewan for some time (>15 years). The Cypress Hills has records of a number of Moonwort species from the past and so made a natural place to begin a concentrated search effort to update our data.

Moonworts are vascular plants that reproduce by spores and are related to ferns. Their life cycle involves both a gametophyte (which grows underground) and a sporophyte, which is the part that we see above ground. These plants also rely on a relationship with mycorrhizal fungi to survive. The name “*Botrychium*” refers to the grape-like clusters of sporangia that the plants produce (hence also the common name “Grape-fern”). Folklore indicates that these plants are thought to have magical powers.

While the genus is readily identifiable, placement to species is found by many to be difficult since individuals within a species can be highly morphologically variable. Recent DNA research on these plants has made it much easier to determine which characteristics are most useful in identification and therefore confidently place plants to species. Taxonomic keys based on the more recent work make it much easier to determine the correct species identification.

Our searches led us to collect a new Moonwort species record for Saskatchewan: Daisy-leaved Moonwort (*Botrychium matricariifolium*). Another species we found that is fairly new to the taxonomic world (its name has not even yet been validly published) was Michigan Moonwort (*B. michiganense*). This species was likely known to Moonwort experts to occur in Saskatchewan, but as it was not included in the Flora of Saskatchewan Ferns and Fern Allies of Saskatchewan (2011) we believe that it was not known to local experts to occur here. Specimens of both of these species have been deposited with the W.P. Fraser Herbarium in Saskatoon to serve as a permanent record of the finds. Other observations included Pale Moonwort (*B. pallidum*), Western Moonwort (*B. hesperium*), Upswept

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Continued on Page 3



PHOTO BY SARAH VINGE-MAZER

***Botrychium lunaria*.**

Moonwort (*B. ascendens*), and Common Moonwort (*B. lunaria*).

These exciting finds confirm that you never know what you might find out there in this wonderfully diverse province of ours!

References:

Farrar, DR and SJ Popovich. 2012. Ophioglossaceae. Pages 24-35 and 388-91 in: Weber, WA and RC Wittmann. Colorado flora, eastern slope: a field guide to the vascular plants. 4th edition. University Press of Colorado, Boulder.

Farrar, D. 2011. Moonwort (*Botrychium*) Systematics. Ada Hayden Herbarium. <<http://www.herbarium.iastate.edu/botrychium.html>>. Accessed 16 September 2015.

Harms, VL and AL Leighton. 2011. Ferns and Fern Allies of Saskatchewan. Flora of Saskatchewan Association and Nature Saskatchewan Special Publication No. 30. Regina, SK. *

Upcoming Events

2015

6th Annual Canadian Forage and Grassland Association Conference

November 17-19, 2015

Saskatoon, SK

www.canadianfga.ca

Prairie Conservation & Endangered Species Conference

February 16, 17 & 18, 2016

Saskatoon, SK

www.pcesc.ca

19th International Conference on Aquatic Invasive Species

April 10-14, 2016

Winnipeg, MB

www.icaais.org

Society for Ecological Restoration - Western Canada Chapter

Rebuilding Resilience: Restoration in the 21st Century

May 12-15, 2016

Victoria, BC

<http://chapter.ser.org/westerncanada/>

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





PHOTO BY CHET NEUFELD

Rob Wright showing the difference between Common Bladderwort (left) and Lesser Bladderwort (right).

Violet (*Viola nephrophylla*). Once at the fen though, we began to see the rare plants that have adapted to this harsh environment. Plants such as Butterwort (*Pinguicula vulgaris*), an S3, were very common and we were able to see some in bloom. We also saw Slenderleaf Sundew (*Drosera linearis*) (S1) and English Sundew (*Drosera anglica*) (S3) in abundance. In fact, it was much more difficult to see the common Round-leaved Sundew (*Drosera rotundifolia*) than either of the two rare Sundews! We were also

Spotted Coralroot (*Corallorhiza maculata*), Western Red Lily (*Lilium philadelphicum* var. *andinum*), Pink Wintergreen (*Pyrola asarifolia*) and Bog

of flowering specimens of Lesser Bladderwort (*Utricularia minor*), yet another rare plant (S2S3)



PHOTO BY CHET NEUFELD

Participants dwarfed by the Giant Reed Grass (*Phragmites australis*).



PHOTO BY CHET NEUFELD

Participants relaxing on the recently restored tallgrass prairie.

Fortunately, we were able to find Common Bladderwort (*Utricularia vulgaris*), it's larger relative, for comparison. All of these fen species, aside from being adapted to the harsh conditions of the fen, have another thing in common: they are all carnivorous. While their methods of catching prey differ (Butterwort and the Sundews have sticky leaves while the Bladderworts have tiny underwater traps), they do it to supplement the lack of nitrogen in their diet.

Later in the day we visited a remnant patch of tallgrass prairie that has been restored through fire and other management techniques over the past decade. The area had been suffering from severe woody growth encroachment for decades so it was nice to see how diverse and prairie-like it has once again become. Big bluestem (*Andropogon gerardii*) in particular has responded particularly well in this area.

Continued on Page 5



Western jewelweed (*Impatiens noli-tangere*).

PHOTO BY CHET NEUFELD



PHOTO BY CHET NEUFELD

Smooth Monkeyflower (*Mimulus glabratus*), an extremely rare (S1) little wildflower.



PHOTO BY CHET NEUFELD

Hops (*Humulus lupulus*).

The next day was supposed to include a visit to an island in the park that has the only known location of Showy Lady's-slipper (*Cypripedium reginae*) in Saskatchewan, but recent flooding in the lake resulted in a ring of dead trees that made landing on the island dangerous, and may have wiped out the population itself. Because of this, it was decided to do a driving survey of the highway just inside the Manitoba border to see if we could spot a plant or two in the ditch, as they are known to grow along roadsides in this area of Manitoba. We drove approximately 20 km and saw other orchids such as Yellow Lady's-slipper (*Cypripedium parviflorum* var. *makasin*), but Showy Lady's-slipper proved to be too elusive, so we will save it for another time. Nonetheless, a great time was had by all!

Thanks to Bob Wright, Glen

Continued on Page 6

Continued from Page 5

Longpre, and Glen and Maureen Lee for helping to lead the tour.

On August 23, 2015, we visited another fen. This time it was in a Nature Saskatchewan sanctuary in the Qu'Appelle Valley near Crooked Lake. Though it occupies just a small corner of a larger field, the sanctuary is densely vegetated and quite diverse. As one of the participants put it, "it's thick as the jungles of Borneo in here!". The fen itself was quite open, but the area surrounding it is fed by a spring and supported dense stands of Giant Reed Grass (*Phragmites australis*) and Common Cattail (*Typha latifolia*). Amongst the dense vegetation, participants found a number of rare plants including Western Jewelweed (*Impatiens noli-tangere*) (S2S3), Smooth Monkeyflower (*Mimulus glabratus*) (S1) and what we believe is a new occurrence of Lesser Bladderwort (*Utricularia minor*) for the fen. Other more common wildflowers included Fringed Gentian (*Gentianopsis crinita*) and Kalm's Lobelia (*Lobelia kalmii*). We also saw Hops (*Humulus lupulus*), which is common in the Qu'Appelle Valley, but uncommon in the rest of Saskatchewan. And on those Hops and a number of other nearby plants, we found an unknown species of Dodder (*Cuscuta* spp.). Dodder is an

uncommon, parasitic plant that germinates from seed but doesn't produce roots.

Instead, it finds a host plant and sinks its teeth-like protrusions into the plant to feed off its nutrients. In addition to the fen, we visited a nearby gravel pit to see the rare Clammyweed (*Polansia dodecandra*) (S1S2) as we couldn't pass up an opportunity to see it flowering with it being so close by.

Thanks again to Glen and Maureen Lee for navigating the group to the rare plant locations, and for Nature Saskatchewan and their steward, Boyd Metzler, for allowing us access to the property.

For more photos from our field trips, go to our Facebook page at www.facebook.com/npss. sk. 🌱



PHOTO BY CHET NEUFELD

Clammyweed (*Polansia dodecandra*).

Brightwater Healing Garden Created

The NPSS strives to fulfill its goal of educating people about the importance of native plants and habitats and, in doing so, hopes to build a greater appreciation and enhanced conservation. Our main conduit of native plant education is through our Native Plants in the Classroom program, funded by SaskPower. Through this program, we lead nature hikes and other outings, provide educational resources to schools and supply schools and other learning centres with native plants and seeds in order to establish native plant teaching gardens. Not to brag, but we've been involved with so many schools, it's hard to keep track of them all. That's why it's nice to get updates from our partners once in a while.

Recently, I received an e-mail with photos from Terri Clark who is one of the instructors at the Brightwater Science and Environmental Centre. The NPSS recently provided a few kilograms of seed to the centre, whose students grew the seed into hundreds of plugs that were transplanted to create a native plant healing garden at the Centre's grounds near Beaver Creek (south of Saskatoon). If you or anyone you know of is interested in receiving educational resources or native plants or seeds, please let us know. 🌱



PHOTO BY TERRI CLARK

Transplanting wildflowers into the Brightwater Healing Garden.

Harvesting Seeds

By CHERRY DODD

(Reprinted with permission from the *Wildflower News*)

September is the main seed harvesting month and you will find that with a bit of practice it is easy to save the seeds from your favourite plants. Not all seeds ripen at the same time, so look at the stems and seed heads to determine if it's harvest time. The seed head should look dry and beige or brown, and sometimes the stem will look dryer or brown too. Of course there are exceptions to this rule.

Giant Hyssop seed heads often look purple, and tinged with patches of brown or green - very confusing. But if you just shake the seed head over your hand and you can see the tiny seeds, they are ready to collect.

You can use this method to test most plants with capsule seed heads. These species include Slender Blue Beardtongue (*Penstemon nitidus*) and other penstemons, Wild Bergamot (*Monarda fistulosa*), and Harebells (*Campanula rotundifolia*). In some species with a capsule type of seed head, such as Blue-eyed Grass (*Sisyrinchium montanum*), Nodding Onion (*Allium cernuum*), and Wild Blue Flax (*Linum lewisii*), the capsule will open when it is mature and you will be able to see the seeds inside, but they do not fall out easily. In the case of the violets (*Viola* spp.), the capsules pop out the seeds shortly after they open, so it is best to pick the closed capsules and let them open in a bag. Immature violet capsules are nodding and point towards the ground. Mature capsules point straight up in preparation for opening, so these are the ones you should pick.

Fluffy seeds are the easiest to collect. Daisy-like flowers such as the Asters, Arnicas (*Arnica* spp.) and Fleabanes (*Erigeron* spp.) all have fluffy seeds. The Goldenrods (*Solidago* spp.), Blazingstars (*Liatris* spp.), Groundsel (*Packera* spp.), Hairy Goldenaster (*Heterotheca villosa*), and Pussytoes (*Antennaria* spp.) also have fluffy seeds. The seeds are ripe if they detach easily from the plant, so just gently pull them off and put them into a paper bag.

Grasses and sedges can usually be tested by pulling gently along the seed head. The seeds will detach easily when they are mature. Then just cut the stalks and place them in a paper bag.

A lot of species have unique seed heads. Low Milkweed (*Asclepias ovalifolia*), for example, has big fat pods which split open to reveal tightly packed white silken parachutes, each attached to a flat brown seed. Heart-leaved Alexanders (*Zizia aptera*) are members of the carrot family and the seed heads look a bit like dill. The flower stem ends in a cluster of smaller stems pointing straight up. These smaller stems each support a cluster of seeds, also pointing straight up. The seeds are ripe when they are brown and detach easily. Gaillardias' (*Gaillardia aristata*) seed heads form balls which are not particularly brown or dry. When the seeds are ripe they will begin to detach and can be seen lying on top of the ball. The whole seed head can then be cut off, but be careful - Gaillardia seeds can be a bit prickly. Later in the season, when the Gaillardia seed head has lost the remains of the flowers and only the seeds are left, the seed head will finally be dry, and will look like a smaller silvery ball.

Gumweed (*Grindelia squarrosa*) lives up to its name. The seeds are hidden inside an aromatic brown cup that is gummy and very sticky. The seeds are mature when the stem is starting to brown and dry. The whole seed head can be cut off and put in a paper bag to dry. The Buttercups (*Ranunculus* spp.) have relatively large seeds that are often bright green or yellow when they are ripe, but they are also sometimes brown. Run your fingers over the seed head. If the seeds fall off they are ready.

Put your collected seeds into paper bags so that they can finish drying naturally. Sometimes it's easiest to cut off the whole seed head. Sometimes you can just shake the seed head over the paper bag. Use a different bag for each species, and be sure to label them or you will end up with "mystery seeds." It's important to use paper so the seeds can dry properly before storage. Once you have collected your seeds, let them dry for a few weeks before cleaning them and storing them.

Editor's note: If you want to learn more about harvesting and growing native seed, there is an excellent book entitled "Cultivating Our Roots: Growing Authentic Prairie Wildflowers and Grasses" by NPSS member and native plant and seed grower Nora Stewart. Her book is available in most bookstores as well as our online store at <http://www.npss.sk.ca/?s=8> *



PHOTO BY KEITH BARR

Wild seed collecting.

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Do you want to avoid having to remember to pay altogether? Why not buy a lifetime membership. It's cheaper, in the long run, and you can pay in installments if you can't afford, or don't wish to pay, a lump sum. All those who renew their memberships by November 30, 2015 (online or postmarked) will be entered to win "Blue Grama", a new book by Saskatchewan author Heather Peat-Hamm.

Thank you for supporting the NPSS in 2015 with your membership dues and donations of time, labour and money! We are extremely grateful that we are your charity of choice.

NOTE - As we are now a registered charity, your donations to the NPSS are now tax deductible. *



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