



# Native Plant News

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Winter 2017

## Update: Flowering Rush Eradication

By CHET NEUFELD

NPSS Executive Director

Flowering Rush (*Butomus umbellatus*) is an exotic, invasive plant that was sold for use in water gardening up until the summer of 2010, but is now prohibited by law in Saskatchewan. Its invasive characteristics are similar to the better-known Purple Loosestrife (*Lythrum salicaria*) in that it invades wetland edges and slowly displaces native species, forming a monoculture and ultimately killing the wetland.

In 2002, a single population was found in a wetland in Saskatchewan but remained largely unknown until 2008. This was the first and only known escaped population of flowering rush that has established in Saskatchewan.\* Recognizing the danger of letting it spread to other nearby wetlands, the NPSS launched a project to map and eradicate the flowering rush in this wetland. Every year in August, the wetland is mapped to determine the current waterline as well as the extent of the spread of flowering rush. At the same time, plant counts and other data are collected, photos are taken and all flowering rush are manually removed using protocol developed by the NPSS.

If eradication of flowering rush is successful in this wetland, it will be one of the first successful early detection, rapid response and eradication efforts against a new invasive species in Saskatchewan (and one of the first in Canada as well).



Flowering Rush.

PHOTO BY CHET NEUFELD

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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:**

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

**Membership Dues** (Year End November 30)

Individual \$30	Non-profit organization \$100
Family \$45	Corporate \$200
Student \$15	Life \$500

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

# NPSS Receives Major Grant

The NPSS has just received confirmation of long-term funding to continue its highly successful Rare Plants and Ranchers program. Environment and Climate Change Canada, through the Habitat Stewardship Program (Species at Risk Stream) is contributing \$228,450 over the next 3 years to help protect plant species at risk (SAR) through the implementation of site specific beneficial management plans using an ecosystem-based, multi-species approach.

The plans are produced by collecting data via landowner interviews and a site assessment incorporating range and riparian health assessments, species compositions, photo plots, invasive species assessments, and visits to SAR populations for enumeration and mapping.

Ongoing logistical support and dollar for dollar cost sharing from the NPSS helps the landowner implement the plan's recommendations and actively manage for SAR. After the recommendations have been implemented, ongoing monitoring reassesses the land and SAR populations to determine the effects of the recommendations on the SAR populations and habitat, and management practices are adjusted accordingly.

Since the program's launch in 2012, over 80,000 acres of the province's most beautiful, intact and important habitats are being administered by NPSS beneficial management plans. The scope and scale of this program make it the largest in NPSS history. The program directly manages six plant species at risk and indirectly addresses another two. Additionally, dozens of new species at risk locations have been found and protected, as well as the locations of many provincially-rare plant species.

Environment and Climate Change Canada has been a long-time supporter of the Rare Plants and Ranchers program, having funded it since its inception. Provincial support from the Saskatchewan Ministry of Environment has also been crucial. Nature Saskatchewan continues to be a valuable partner and has been involved since the beginning. Finally, our landowners are amazing to work with and are truly dedicated to conserving SAR and the vital habitat that they depend on. Our sincere thanks to everyone who continues to make this program so successful.

For more information on the program or to participate, visit our website at:

<https://www.npss.sk.ca/news-and-events/projects/8> ✪



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In the past, the NPSS has received funding for this project, but in recent years we have been unable to obtain funding to continue this program. However, our commitment to eradicating Flowering Rush remains unwavering, so we have been relying on donations of time and money in order to continue the program, and have made up for any shortfalls with our reserve funds.

This past August our surveys detected only 45 Flowering Rush plants. Of the plants that were removed in 2016, there were 22 failed removals and 99 successful removals. This represents an 82% success rate. The 45 Flowering Rush were removed in one day; in past years, removal has taken up to 2 weeks and has removed as much as 5 tons of material.

Water levels, while still above average for the wetland, have come down to the point where it is once again easier to access the entirety of the wetland and more effectively remove the plants. The dry summer of 2017 has certainly helped this, and if this trend continues it will benefit removal efforts in 2018. In 2008 it was estimated that eradication would take approximately 10 years, and the NPSS is still on track to accomplish this.

*\*Author's note:* An additional Flowering Rush population was found in 2016 in east-central Saskatchewan in a dugout, and eradication efforts were immediately implemented by local authorities. It is expected that this population will be eradicated within a few years. As this newsletter was going to press, the NPSS received confirmation of additional populations of Flowering Rush on the shores of the South Saskatchewan River near the Saskatchewan-Alberta border which was initially reported in 2016. Nicole Kimmel, Weed Specialist with Alberta Agriculture and Forestry, confirmed the population along the South Saskatchewan River in Saskatchewan while conducting a survey of Flowering Rush that started on the Alberta portion of the river and lead into Saskatchewan as she followed the infestation. She observed several hundred locations of Flowering Rush in the Saskatchewan portion of the South Saskatchewan River before she had to turn back.



PHOTO SUPPLIED

### Flowering Rush Map - South Saskatchewan River.

There are undoubtedly more Flowering Rush plants further downstream in Saskatchewan from where Nicole turned back, and the NPSS, the Saskatchewan Invasive Species Council and relevant stakeholders have met to discuss the next steps for this worrying development. There are plans to map the full extent of Flowering Rush in the Saskatchewan portion of the South Saskatchewan River and control options are being discussed, but eradication is likely not feasible given the size of the population and the threats of reinfestation from upstream in Alberta (Nicole surveyed 500 km of the Bow and South Saskatchewan Rivers and found 3970 locations of Flowering Rush). Nicole had this to say: "These numbers are a devastating blow to any plan we had in mind for the area. This is significantly higher than we anticipated. We are still brainstorming control ideas, but our eradication hope has definitely been challenged." Even containing it to the South Saskatchewan River basin or portions thereof would at least help keep the rest of Saskatchewan's aquatic habitats safe. We will continue to work with Alberta to coordinate our efforts.

For those interested in Flowering Rush distribution in Saskatchewan, all our data and the Saskatchewan portion of Nicole's data can be viewed on the provincial invasive species database and

mapping system at [www.imapinvasives.org](http://www.imapinvasives.org) (requires a free user account to view maps and data).

Many thanks to the Leslie family for granting us access to the wetland,

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## Upcoming Events

### *Native Prairie Restoration/ Reclamation Workshop*

February 7-8, 2018  
Saskatoon, SK

For more information, go to  
<http://www.pcap-sk.org/upcoming-events-workshops/2018-nprw>  
or call (306) 352-0472

*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](mailto:info@npss.sk.ca).*





PHOTO BY CHET NEUFELD

**Manual removal of Flowering Rush.**

NPSS Project Coordinator Natasha MacKintosh, various volunteers, Nicole Kimmel (Alberta Agriculture and Forestry) and the staff of Last Mountain

Lake National Wildlife Area (Canadian Wildlife Service – Environment and Climate Change Canada). ✳

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# Rare Plant Needles in Prairie Haystacks

By SARAH VINGE-MAZER  
*Saskatchewan Conservation Data Centre*

This year we embarked on two needle-in-a-haystack search efforts. While the probability of locating our target species was low, the impact of finding them would be high! The Saskatchewan Conservation Data Centre (SK CDC), in partnership with the Canadian Wildlife Service – Environment and Climate Change Canada (CWS) and Rare Plant Rescue – Nature Saskatchewan, and with volunteers Glen and Maureen Lee, set out to attempt to locate Small White Lady’s-slipper (*Cypripedium candidum* listed as Threatened under the federal *Species At Risk Act*). The SK CDC and

CWS also attempted to locate Fascicled Ironweed (*Vernonia fasciculata*, COSEWIC status of Endangered).

Both of these high priority species are currently considered historical in the province of Saskatchewan. Small White Lady’s-slipper has not been seen since 1895, and Fascicled Ironweed hasn’t been seen for over 60 years. The location information on the herbarium sheets for which the Saskatchewan reports are based is vague, therefore searching for these species has been considered a daunting task. This year, the Saskatchewan Ministry of Environment developed predictive

distribution models for both species in Saskatchewan using data from Manitoba sites, allowing us to narrow down our searches. Within predicted areas, we used habitat preferences and records of co-occurring species to further narrow down potential sites to search.

While we can use habitat descriptions from neighboring jurisdictions to help us better understand where these plants might like to grow, we have no information about their habitat specific to Saskatchewan. We did find what appeared to be suitable habitat for both species but were not

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PHOTO BY SARAH VINGE-MAZER

**Small White Lady's-slipper (taken in Manitoba).**

successful in observing either. In the process we did find some really interesting habitat types (including prairie fens) and as always added some incidental rare plant observations to the SKCDC database including Prairie Ragwort (*Packera plattensis*), Bird's-eye Primrose (*Primula mistassinica*),

Pale Bulrush (*Scirpus pallidus*), Yellow Star-grass (*Hypoxis hirsuta*), Western False Gromwell (*Onosmodium molle* var. *occidentale*), Garber's Sedge (*Carex garberi*), Rigid Sedge (*Carex tetanica*), Glaucous Grass-of-parnassus (*Parnassia glauca*), Aster-like Boltonia (*Boltonia asteroides* var.



PHOTO BY SARAH VINGE-MAZER

**Creek views while searching for Fasciated Ironweed.**

*recognita*), Tall Beggar's-ticks (*Bidens frondosa*), Bushy Cinquefoil (*Potentilla supina* ssp. *paradoxa*), Pepperwort (*Marsilea vestita*) and both varieties of Yellow Lady's-slipper (*Cypripedium parviflorum*).

We intend to continue our searches in future years as there is still a lot of potential ground to cover. Let the haystack digging continue!

Many thanks to the landowners who graciously allowed us to access their land!

If you have a rare species sighting to report, please contact the Saskatchewan Conservation Data Centre. The information is used to inform conservation of the province's flora and fauna. 🌿



PHOTO BY SARAH VINGE-MAZER

**The search crew takes on challenging, hummocky terrain to search for Small White Lady's-slipper.**

# Plains Rough Fescue – Now a Tracked Species

By SARAH VINGE-MAZER  
Saskatchewan Conservation Data Centre

The Botanical Assessment Working Group (BAWG) recently completed subnational rank reassessments of five vascular plant taxa. All five were added to the provincial tracking list: *Carex sterilis* (S1S2), *Cerastium brachypodum* (S3), *Cuscuta gronovii* var. *gronovii* (S1), *Festuca hallii* (S3), and *Cuscuta gronovii* var. *latiflora* (S1), which is also a new addition to the provincial species list.

The rank reassessment of *Festuca hallii* may be of particular interest. This taxon, which is currently a medium assessment priority for the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) was previously ranked as S5 in Saskatchewan. In the past, the majority of subnational ranks in Saskatchewan have been based on abundance and distribution information, and the previous rank reflected this. More recently (since approximately 2010) the SKCDC has regularly factored threats into any rank reassessment calculations. Trends are also part of the assessment

methodology (Master et al. 2012), but this is the first time that trend data has been available for a plant reassessment. Using abundance, distribution, threats and trends information via the rank calculator (NatureServe 2015), the subnational rank of *Festuca hallii* has been calculated as S3.

*Festuca hallii* is a widespread species in Saskatchewan, ranging from the Cypress Hills to the Manitoba border, and north to Meadow Lake and Candle Lake. It is often abundant where it is found; however, data suggests that over any 20 year period in the last 100 years the species has experienced a decline of >30%. The threat level for this species has been calculated as high, to which the following threats contributed: agriculture (annual crops and livestock ranching), invasive and problematic species (invasive species and problematic native species), and pollution (air borne-pollutants).

BAWG has also reassessed the *Cuscuta gronovii* varieties. All *Cuscuta* species, with the exception

of *C. umbrosa*, are now tracked in Saskatchewan. Saskatchewan material was formerly often placed within *C. gronovii* but has since been revised and mostly placed to *C. umbrosa*. As a result, both varieties of *C. gronovii* are much more rare in the province than previously thought. *Cuscuta* species in general are poorly documented in Saskatchewan. The SKCDC welcomes submissions of any observations of this group. BAWG will be posting a key to the Saskatchewan *Cuscuta* species to the SKCDC website soon.

For more information on the ranking process, please see the SKCDC website at [www.biodiversity.sk.ca](http://www.biodiversity.sk.ca).

For more information on the Botanical Assessment Working Group, please see the SKCDC website at <http://biodiversity.sk.ca/partners.htm>

The Botanical Assessment Working Group would like to thank Darcy Henderson for providing detailed information for the *Festuca hallii* reassessment. ✨

## NPSS Membership Contest Has a Winner

**The NPSS membership contest winner was Dawn Loewen.**

For renewing her membership early, Dawn won a free one-year NPSS membership extension. Thanks to Dawn and all of the other members who renewed their membership before the expiry date of November 30<sup>th</sup>.

*Renewing your membership on time saves us money in reduced administration costs, which allows us to put more time and money into our conservation and education programming.*

**For those who haven't renewed yet, you can still do so at:  
<https://www.npss.sk.ca/store/membership>**

# South of the Divide Action Plan Posted

Environment and Climate Change Canada recently posted the final South of the Divide Action Plan on the Species at Risk Public Registry on Nov 20, 2017. This plan targets multiple species at risk in a very large area in southwestern Saskatchewan, and is relatively unique in its approach and scope, as most action plans target single species. While no plant species at risk occur within the South of the Divide area and are therefore not covered in the action plan, the document nonetheless affords protection to the native prairie areas that the 9 named animal species at risk depend on. Additionally, many of these native prairie areas also harbour provincially-rare plant species. The action plan was completed after a lengthy and intense planning effort lead by Environment and Climate Change Canada, but involving many different stakeholders including ranching groups, individuals, multiple levels of government, industry and environmental non-profit organizations, including the Native Plant Society of Saskatchewan. A copy of the final South of the Divide Action Plan is now available on the Species at Risk Public Registry here:

[https://www.registrelep-sararegistry.gc.ca/document/default\\_e.cfm?documentID=2923](https://www.registrelep-sararegistry.gc.ca/document/default_e.cfm?documentID=2923) \*

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## Native Prairie Continues to Vanish

The World Wildlife Fund recently released the 2017 Plowprint Report. Some of the findings from this year's report include:

- From 2015 to 2016, 2.5 million acres were lost to crop production across the Great Plains.
- WWF estimates that keeping 25 million acres of grasslands intact could prevent 1.7 trillion gallons of water—along with tons of sediment and fertilizer—from washing into rivers, streams, lakes, and, ultimately, the Gulf of Mexico.
- Six songbird species that are only found in the Great Plains continue to be in perilous decline. Populations have declined by as much as 65-94% since the 1960s.
- Since 2009, nearly 8 percent of the landscape has been plowed for crops, leaving about 54 percent of the Great Plains grasslands intact.

For full details and to read the report, go to

<https://www.worldwildlife.org/projects/plowprint-report> \*



PHOTO BY CHET NEUFELD



# Cryptantha Mystery Solved

By SARAH VINGE-MAZER

Saskatchewan Conservation Data Centre,  
on behalf of the  
Botanical Assessment Working Group

The Botanical Assessment Working Group (BAWG) has been working on placing Saskatchewan's two perennial *Cryptantha* species since around 2011, following many questions and confusion from the local botanical community. The use of the name *Cryptantha macounii* was the source of much of the confusion, for which an explanation is now provided. The name *Cryptantha macounii* (= *Oreocarya macounii*) is a true synonym for *Cryptantha celosioides*. In Saskatchewan (and apparently Montana) this name has instead been applied to *Cryptantha spiculifera* material. Furthering the confusion, the name *Cryptantha nubigena* has been applied to both *C. spiculifera* and *C. celosioides* in Saskatchewan and appears regularly in older taxonomic keys. These two perennial species are currently retained in *Cryptantha* but are expected to be moved under the genus *Oreocarya* in the upcoming Flora of North America treatment.

BAWG has compiled a taxonomic key to the Saskatchewan *Cryptantha* which can be found on the SKCDC website [www.biodiversity.sk.ca/Pubs.htm](http://www.biodiversity.sk.ca/Pubs.htm) under the Taxonomic Resources heading. The inflorescence type (appearing racemose vs. with scorpioid racemes), once thought to distinguish material in Saskatchewan, is not diagnostic in differentiating between *Cryptantha spiculifera* and *C. celosioides*. The *Manual of Montana Vascular Plants* (P. Lesica, 2012, BRIT Press) contains species descriptions for all species found in Saskatchewan, although the nutlet measurements may not match our material.

The SKCDC plant species list reflects the corrected names and confirmed ranks. Please visit [www.biodiversity.sk.ca/SppList.htm](http://www.biodiversity.sk.ca/SppList.htm) to access the latest species list. \*✳

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