

Native Plant News

Vol. 21, No. 3

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Fall 2016

Rare Plants and Ranchers Update

By *DANIELLE LEVESQUE*
NPSS Project Coordinator

Greetings NPSS members,
My last fieldwork update left off in Caron, SK, where Inger Pors, Erin McKlusky, and myself were monitoring and mapping patches of Hairy Prairie-clover (*Dalea villosa* var. *villosa* – S2). The ranches we visited here provided a fascinating case study in contrasting management practices in the face of invasion by the noxious weed Leafy Spurge (*Euphorbia esula*). The two adjacent pastures featured different livestock selections (goats vs. cattle). The cattle pasture contained a pretty

severe spurge infestation with tall, multi-branched, flowering plants encroaching heavily into the Hairy Prairie-clover populations in the dunes. Just across the fence, the goats were doing a commendable job in reducing the spurge population to short, single-stemmed, non-flowering specimens. Although it is nearly



PHOTO BY CANDACE NEUFELD

Hairy Prairie-clover.

impossible to completely eliminate such an extensive spurge infestation, we were able to observe firsthand how effective goats can be in keeping it under control. Well done, goats!



PHOTO BY CHET NEUFELD

Hairy Prairie-clover patch outlined with pin flags.

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Shelly Heidinger 306-634-9771

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Dale Gross 306-347-0447

Andrew Stewart 306-227-0640

Wade Sumners 306-250-6659

Joanne Marchand 306-960-9313

Executive Director:

Chet Neufeld 306-668-3940

NPSS Address:

Native Plant Society of Saskatchewan

P.O. Box 21099, Saskatoon, SK S7H 5N9

Phone: (306) 668-3940 Fax: (306) 668-3940

E-mail: info@npss.sk.ca Website: www.npss.sk.ca

Twitter: [@NPSS_SK](https://twitter.com/NPSS_SK) www.facebook.com/npss.sk

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

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.

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PHOTO BY CHET NEUFELD

Goats grazing to manage Leafy Spurge and maintain Hairy Prairie-clover habitat.



PHOTO BY CHET NEUFELD

Buffalograss patches (light-coloured mats of grass).

Advertising In Native Plant News

Rates: \$50 for 1 issue, \$175 for 4 issues

Contact the NPSS for more details.

Ph: (306) 668-3940 E-mail: info@npss.sk.ca

After completing our work in Caron, we took some time to address an invasive species problem which, so far, is only known to have occurred in one wetland in Saskatchewan. Flowering Rush (*Butomus umbellatus*) is a pretty but aggressive aquatic plant that used to be sold as a water garden ornamental but is now prohibited in Saskatchewan.

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Luckily, early detection of this single infestation has prevented its spread to other wetlands, and the NPSS has been working since 2008 to further control and hopefully eliminate the problem. Since chemical controls such as herbicides are especially undesirable for use in healthy wetlands, this has meant yearly removal sessions wherein NPSS members and volunteers get together to locate, manually dig up, and bag Flowering Rush plants for disposal. Thanks to the efforts of our hardworking volunteers, the population is reducing in size every year!

Our last major trip was down to Estevan, SK, where we worked to monitor and census populations of the rare Buffalograss (*Bouteloua dactyloides* – S1). In its green, vegetative state this grass can be difficult to tell apart from its relative, Blue Grama (*Bouteloua gracilis*). However, closer to the end of summer, the mat-forming, dioecious Buffalograss takes on a distinctive golden colour and produces tiny, distinct male and female flower heads that are held very close to the ground. In addition to Buffalograss and Blue Grama, we also encountered a third *Bouteloua* species: Side-oats Grama (*Bouteloua curtipendula* var. *curtipendula* – S3), as well as some provincially-rare forbs: White Milkwort (*Polygala alba* – S3), Whorled Milkwort (*Polygala verticillata* var. *isocycla* – S2), Whorled milkweed (*Asclepias verticillata* – S1), and Prairie Birds-foot Trefoil (*Lotus unifoliolatus* var. *unifoliolatus* – S2).

All in all, it was a great summer in which the three of us were very excited to have seen so many new-to-us species, and contribute to the continued success of the Rare Plants and Ranchers program, and assist in ongoing invasive species monitoring and control.

Finally, the Rare Plants & Ranchers crew would like to extend special thanks to the program participants who have granted access to their beautiful land and shared with us their insights about the responsibilities and rewards of habitat stewardship.

Thanks to our funding partners:

Part of the National Conservation Plan, this project was undertaken with the financial support of the Government of Canada.

Dans le cadre du Plan de conservation national, ce projet a été réalisé avec l'appui financier du gouvernement du Canada.

This project was also financed in part by the Saskatchewan Ministry of Environment's Fish and Wildlife Development Fund. ♻️



Buffalograss male (left) and female (right) flowering heads.

PHOTO BY CANDACE NEUFELD

Upcoming Events

2nd Annual Transboundary Grasslands Workshop

January 11-13, 2017

Swift Current, SK

To register, go to <http://www.albertapcf.org/grassland-events/transboundary>

Native Prairie Speaker Series - Webinar - Current SK Ministry of Environment Landcover and Species-habitat Modelling Initiatives

January 23, 2017

For more information or to register, go to <https://attendee.gotowebinar.com/register/362016780825916417>

Invasive Plant Management Workshop

Feb. 7, 2017

Middle Lake, SK

For more information or to register, contact Charlotte Gayler at (306) 752-1270 or crwatershedaegp@gmail.com

2017 Native Prairie Restoration & Reclamation Workshop - Reclaiming Spaces - Restoring Species

February 8-9, 2017

Regina, SK

For more information or to register, contact Kayla Balderson Burak at (306) 352-0472 or pcap@sasktel.net

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.



New Moonwort Found in Saskatchewan

By SARAH VINGE-MAZER
Saskatchewan Conservation Data Centre

A new species of moonwort for Saskatchewan has been confirmed as a result of this summer's NPSS workshop in the Cypress Hills. Genetic testing by Dr. Don Farrar has confirmed that *Botrychium furculatum* Popovich & Farrar ined. was indeed found. This first record for Saskatchewan represents a significant range extension for the species. In addition, it may suggest a site for the possible formation of the species, which is a derivative of hybridization between *Botrychium pallidum* and *Botrychium "pseudomontanum."* The Cypress Hills is only one of two locations from which it is known to occur with *Botrychium pallidum* and there is great potential for *B. "pseudomontanum"* to be found there as well!

Our visiting experts Dr. Don Farrar, Steve Popovich, and Dr. Cindy Johnson were hopeful that *B. "pseudomontanum"* had been found during the workshop, however, specimens that were tested turned out to be *B. pallidum*, *B. "furculatum,"* or *B. simplex*. The collected plants were very tiny and were difficult to distinguish from the other species. Despite not

finding *B. "pseudomontanum"* this year, it remains likely that this species exists in the Cypress Hills and further surveys in the area are warranted.

Other species that were confirmed include *B. michiganense*, *B. neolunaria*, and *B. matricariifolium*. Those specimens of suspected *B. tenebrosus* that were tested turned out to be *B. simplex* var. *simplex*.

The Cypress Hills remain a hotspot for *Botrychium* diversity with potential for new discoveries! Thank you to all the participants who helped in the searches for *Botrychium* this summer. The 2016 growing conditions may result in 2017 being an exceptional year for *Botrychium*. We hope to continue searching for *B. "pseudomontanum"* and welcome interested volunteers to contact Sarah at sarah.vingemazer@gov.sk.ca. For information on identifying *Botrychium "furculatum,"* see the *Colorado Flora: Eastern Slope Fourth Edition* as well as in the *Flora of the Pacific Northwest Second Edition* (still

in draft, expected publication in early 2018). Don't forget to practice your *Botrychium* identification! *

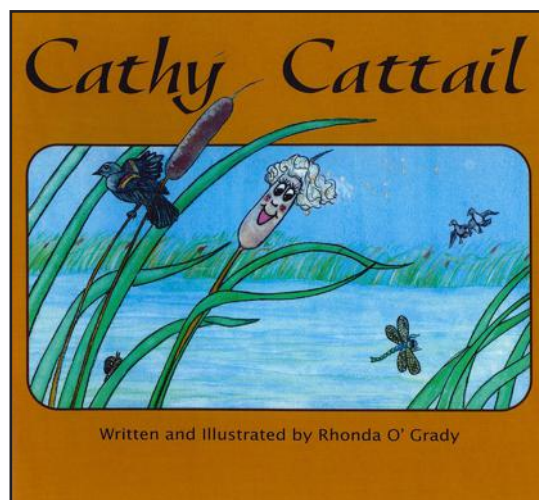
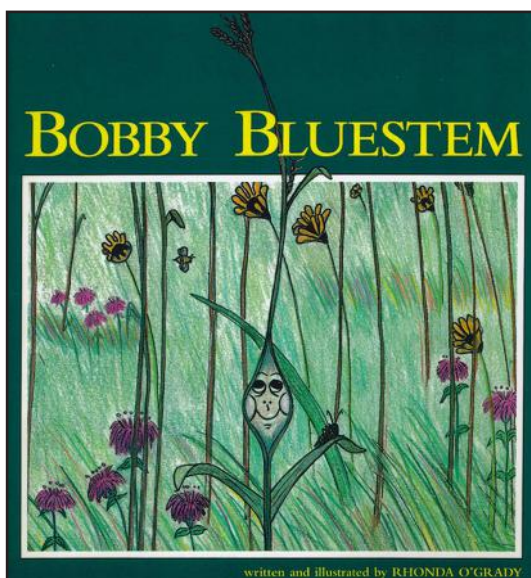


PHOTO BY SARAH VINGE-MAZER

Botrychium lunaria.

Give the Gift That Keeps on Giving

Are you busy with Christmas shopping but can't find the right gift for your friend, co-worker or family member? Why not get them something from the Native Plant Society of Saskatchewan. We've got memberships starting from \$15 for students, a selection of great



books (including two great children's books!), as well as clothing such as t-shirts and toques. You can also make a tax-deductible donation in someone's name. The best part is that no matter what you choose to do, the money will go toward important native plant education and conservation projects. Just visit our online store on our website (www.npss.sk.ca) and get started. Thanks for your support! *

The Importance of Collections

By SARAH VINGE-MAZER
Saskatchewan Conservation Data Centre

Plant collections, centrally housed in herbaria, are the main resource for the study of plant taxonomy and distribution. Plant collecting seems to have fallen out of favour in recent years with the introduction of high quality digital photography. While photographs suffice in certain circumstances, and are perhaps preferred for certain taxa that are very rare, they can never replace the value provided by collections. The Saskatchewan Conservation Data Centre (SKCDC), with the support of the members of the Botanical Assessment Working Group, would like to encourage appropriate plant collection for a number of groups that require more information for study.

Collections provide permanent records that remain available for additional study as knowledge changes over time. Not only can they be used to help determine the best taxonomic classification (whether through

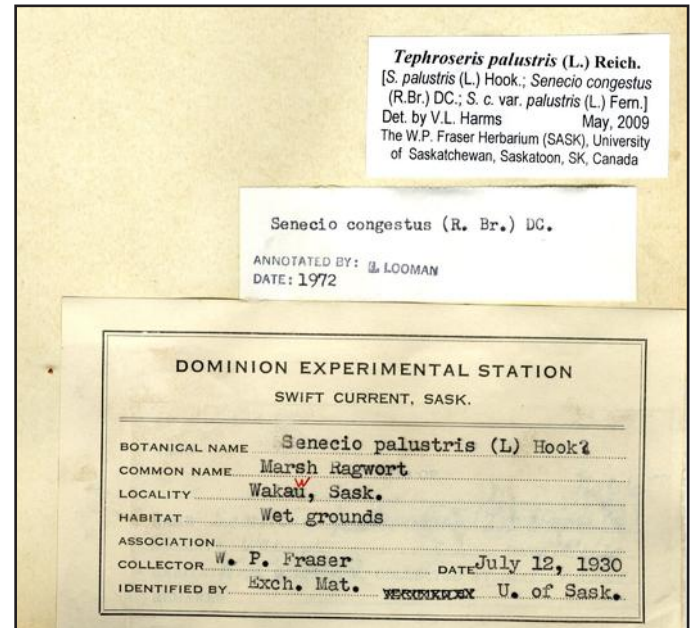
morphological or molecular studies), they serve as a learning resource once those classifications have been determined. They also provide a permanent record of the existence of that taxon at a particular site.

The SKCDC makes use of collections in its ranking process, as those collections provide data on the distribution of taxa and how common or rare they might be. Specimens provide the best support for a particular subnational rank as they can be easily verified. For more information on ranking, see the SKCDC website.

Because they are a form of destructive sampling, collections must be conducted in an appropriate manner so as not to impact the taxon or habitat it creates or is found in. The Ministry of Environment, in its Rare Prairie Plant Species Detection Protocol (2015), uses the 4% rule as a cutoff for plant collections, that is, there must be at least 25 individuals at a site so that collection of one individual will result in the loss of 4% (or less) of the local population at that site. There are cases, however, where the removal of part of the plant does not kill the individual, and therefore may not be subject to that rule. This may include shrub species, where a branch can be removed but the individual remains, and perennial species if the roots are left intact. For an annual species, if its propagules have already been dispersed, then the individual has already fulfilled

its life cycle and collection may only impact the habitat from which it's taken (of course, flowers and fruits are usually the most important identifying features of a plant and generally need to be collected to make the specimen most useful). *Botrychium* individuals may be collected if their spores have been dispersed and their stems are cut at ground level.

Assistance with collecting for the following groups is being encouraged: members of the *Crataegus* (especially from southwestern Saskatchewan and the Cypress Hills area), *Botrychium*, and *Potentilla* genera. Collections of *Carex tenera* from southeastern Saskatchewan, as well as *Cryptantha celosiodes* (*Oreocarya celosiodes*) and similar taxa (but not *Cryptantha minima*) are also sought. Collectors should use the most up-to-date taxonomic classification (e.g., the *Flora of North America* in many cases) when identifying their material before submitting it to the herbarium. Collectors should also follow appropriate steps to collect, preserve, identify and submit their material to the herbarium in a standardized manner. Collections made in Saskatchewan



COURTESY OF W.P. FRASER HERBARIUM

Inset of herbarium labels.



COURTESY OF W.P. FRASER HERBARIUM

Herbarium specimen labels reflect changes in knowledge of taxonomic classification over time.

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should be sent to the W.P. Fraser Herbarium (SASK) at the University of Saskatchewan. Submissions must adhere to proper standards – contact the herbarium for more information.

Readers should note that if they are collecting plants in the course of their

business (e.g., research or field surveys in advance of potential development projects), they may be required to obtain a permit from the Fish and Wildlife Branch, Ministry of the Environment.

Collections are an invaluable resource in the study of our flora and

the conservation of our natural history. Conducted appropriately, they will not negatively impact the local population being sampled yet provide a wealth of information for posterity. ✱

Wetlands: Part of the Carbon Solution - Greenhouse Gas Storage and More

By MICHAEL CHAMPION, P.A.G. - HEAD OF INDUSTRY AND GOVERNMENT RELATIONS, SK Ducks Unlimited Canada

In the current round of discussion regarding carbon taxes, caps and credits, carbon storage, greenhouse gas (GHG) emissions and GHG storage or sinks, there has been little to no mention of the role that wetlands play in the fight against climate change. Although the calculations are complex, and research is ongoing with respect to carbon sequestration and storage in prairie wetlands, there is agreement that wetland drainage results in the loss of significant amounts of carbon that had been accumulating in wetlands for centuries, if not millennia. Preserving existing wetlands keeps carbon out of

the atmosphere in the amount of up to 89 tonnes per hectare. The unmitigated loss of 4,000 hectares of wetlands each year is not sustainable.

In addition to carbon storage, wetlands provide several other environmental advantages such as flood mitigation and regulation of water flows. Wetlands also have a cooling and humidifying effect on regional climate and therefore help moderate the impact of climate change. They are equally important in ensuring that non-point source pollution does not end up downstream. Wetlands offer habitat for species of wildlife, including many

rare and endangered animals. Livestock producers can benefit as well from the water resources wetlands supply. Lastly, wetlands provide numerous recreational opportunities for outdoor enthusiasts.

Wetlands are critical to the future health and sustainability of our province's environment and economy. When you consider all the advantages of wetlands, including the recreational and aesthetic values to the public, you have a very impressive list of reasons why the retention and restoration of wetlands makes sense. ✱



Prairie pothole wetlands.

PHOTO COURTESY OF U.S. FISH AND WILDLIFE SERVICE

Register Now for the NPSS Annual General Meeting and Conference

Plan now to attend the upcoming NPSS annual general meeting and conference on January 27-28, 2017 at Wanuskewin Heritage Park in Saskatoon. This year's theme is "Native Plants in a Working Landscape" and looks at the various roles and interactions native plants have in our modern landscapes. Our keynote speaker will be Colorado State University PhD candidate Andrea Borkenhagen, who will be talking about her cutting edge research in a presentation entitled "Lessons in establishing plant communities on constructed fens for oil sands mine reclamation".

2017 will see the return of the two day format of our annual general meeting as we host a workshop on Friday. We will deliver the Citizen Science learning module of our Saskatchewan Master Naturalist program which was developed and delivered earlier this year. The Citizen Science module forms part of the core competencies of the program, so anyone wanting to attain their Saskatchewan Master Naturalist designation must take it. The Citizen Science module will guide participants through the scientific method in a fun and informative way, teaching them about topics such as data collection and navigation. Some of the activities will take place in the adjacent natural area so dress appropriately!

Saturday will look much the same as it has in past years, beginning with breakfast and the business portion of our meeting, and then transitioning to a set of great presentations. In addition to our wonderful keynote speaker, we will have presentations on topics such as native seed bank research, surveys for a previously-unknown species for Saskatchewan (*Amelanchier sanguinea*) and results from a comprehensive survey on the Wanuskewin Heritage Park habitat.

We are keeping our costs extremely low for this two day event in the hope that as many people as possible will be able to attend. You will not find a better deal anywhere! As you'll notice in the registration form, there is an option to attend only one of the two days but attending both days gives you a discount, as does being an NPSS member. Memberships purchased at the time of registration will allow you to register for the NPSS member rate. You can either fill in the registration form included in this newsletter or do it all online on our website at <http://www.npss.sk.ca/store/events/2017-npss-annual-general-meeting-and-conference> *



NPSS AGM and Conference Registration Form

Registration deadline is January 20, 2017

Mail this form with payment by cheque to:
Native Plant Society of Saskatchewan
P.O. Box 21099
Saskatoon SK S7N 5N9

Please Note: You can register for the AGM and/or renew your membership with your credit card through our store on our website at www.npss.sk.ca

Name _____

Organization _____

Address _____

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Registration Fees:

NPSS Member..... \$70
(Friday only = \$30, Saturday only = \$50)

Non NPSS Member..... \$80
(Friday only = \$30, Saturday only = \$60)

Student..... \$40
(Friday only = \$20, Saturday only = \$30)

Special Dietary Needs:

Other:

Individual 1-Year Membership..... \$30

Family 1-Year Membership..... \$45

Student 1-Year Membership..... \$15

Non-profit 1-Year Membership..... \$100

Corporate 1-Year Membership..... \$200

Individual/Family Lifetime Membership..... \$500

TOTAL ENCLOSED: \$ _____

Please note that the member rate is applicable only to PAID members. Memberships purchased at the time of registration entitle you to membership rates.

For more information, please contact:

Chet Neufeld, NPSS Executive Director
Phone/Fax: 306-668-3940
Email: info@npss.sk.ca
Website: www.npss.sk.ca

As a reminder, the board decided at a meeting in the Spring of 2006 that resolutions that are time 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 minimum 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.

Renew Your Membership on Time and Win a Prize

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

Go to our online store at our website (www.npss.sk.ca) and pay with any major credit card. It's fast, easy and secure. However, if you still want to mail a cheque you can do that, too. 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 online by December 31, 2017 will be entered to win back their membership dues.

Thank you for supporting the NPSS in 2016 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 a registered charity, your donations to the NPSS are tax deductible. *

NPSS Membership Renewal

First Name _____ Last Name _____ Company _____

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- _____ \$30 for 1-year Membership
- _____ \$45 for 1-year Family Membership
- _____ \$15 for 1-year Student Membership
- _____ \$100 for 1-year Non-profit Membership
- _____ \$200 for 1-year Corporate Membership
- _____ \$500 for Lifetime Individual Membership (can be paid by installments – contact the office for more information)
- _____ Donations (All donations are fully tax deductible and the money will be directed toward our membership activities and conservation programs)

IMPORTANT: Even if you wish to receive a paper copy of the *Native Plant News*, please provide an email address if possible so that we are able to contact you at short notice with event announcements.

- _____ I would prefer to receive an electronic copy of the *Native Plant News* (don't forget your email address!)
- _____ I am interested in volunteering with the NPSS

Send this completed form and your payment to:
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P.O. Box 21099
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You can also renew your membership with your credit card through our online store at www.npss.sk.ca

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