

Newsletter of the Native Plant Society of Saskatchewan



R O O T S

Vol. 25 No. 3

Fall 2020



Viola canadensis

Western Canada Violet
Photo credit: Candace Neufeld

Native Plant Society of Saskatchewan

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Roots 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 30th)

Individual \$30 Family \$45

Student \$15 Non-profit \$100

Corporate \$200 Life \$500

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

Get your photo on the cover of... ROOTS!

Submit your Saskatchewan native plant photos for future cover consideration to: info@npss.sk.ca

President's Message - Looking Back

Shelley Heidinger

I have been involved with the Native Plant Society board of directors for almost 12 years and as I step back from my board membership and presidency, I'd like to reflect back on a few things that stand out to me.

The NPSS membership is a diverse and engaged group of people who care deeply about native plants and doing what needs to be done to preserve our natural areas. Without membership, we wouldn't be able to achieve as much as we have to date by working together, learning and sharing our knowledge. Those who volunteer are the folks who help get things done where our boots hit the ground!

Those I've served with on the board throughout the years are exceptional people! They work hard to ensure the NPSS is on the right path and to provide the best guidance and direction at all times. As we move through our current unprecedented times, I'm sure that they will continue to keep the society on track.

An extra special thank-you to Chet who is a superhero for native plants and all their parts! As the Executive Director for the NPSS, he has worn many hats in many groups in the fight to preserve the integrity of native plant communities in our corner of the world. It is through his hard work and perseverance that we have come as far as we have since he stepped into this role within the NPSS. While the list of his accomplishments is long, to name a few, he has grown membership, helped develop an outstanding newsletter with a quality far beyond that of many others, increased visibility of the society throughout not only Saskatchewan but far beyond and provided stability and security in uncertain times. His work with youth and classroom activities is helping teach the upcoming generation about their impact on nature, both positive and negative, and what they can do to preserve this dwindling resource.

I have greatly enjoyed the opportunity I've been given to be involved at this level in the NPSS, to be part of such a dedicated group and to have learned as much or more than I have given at times. As we move forward with Andrew Stewart as your new President, I know that the NPSS will continue to grow and expand both our and others appreciation for native plants and all their beauty and importance.



NPSS Receives Funding

Rare Plants and Ranchers

Chet Neufeld, NPSS Project Coordinator

The Native Plant Society of Saskatchewan's flagship conservation program, Rare Plants and Ranchers, has just received funding from Environment and Climate Change Canada in an agreement worth \$265,576 over 3 years. The goal of the program is to conserve plant species at risk by working with landowners to develop site-specific beneficial management plans using an ecosystem-based, multi-species approach.

The program, now in its ninth year, covers 133,022 acres (53,832 ha) of habitat with species at risk management plans. Last year alone, 5,280 acres (2,136 ha) were added to the program, and 11,861 acres (4,800 ha) of species at risk habitat was monitored. This is no small task, as over a thousand hours are put into the planning, execution and reporting phases of the program each year, and surveyors can walk up to a hundred kilometers in a season.

The result, however, is worth it. Among the achievements of the program since its inception, 835 plant species at risk occurrences have been found or monitored, 323 occurrences of 13 provincially rare plant species were found, and 294 occurrences of 15 invasive species have been found and addressed.

"We're so grateful to Environment and Climate Change Canada, who recognized the importance of our program when we initially proposed it in 2012, and has been supporting us every step of the way", says NPSS Executive Director Chet Neufeld. He added, "With their generous contribution, we have the financial stability to continue to deliver critical conservation programming for our most at-risk plant species for years to come, helping to ensure their survival."

For more information on our program, visit: <https://www.npss.sk.ca/news-and-events/projects/8>

Right: One of the beautiful ranches participating in the Rare Plants and Ranchers Program, providing high-quality habitat to plant species at risk. Photo by Chet Neufeld.

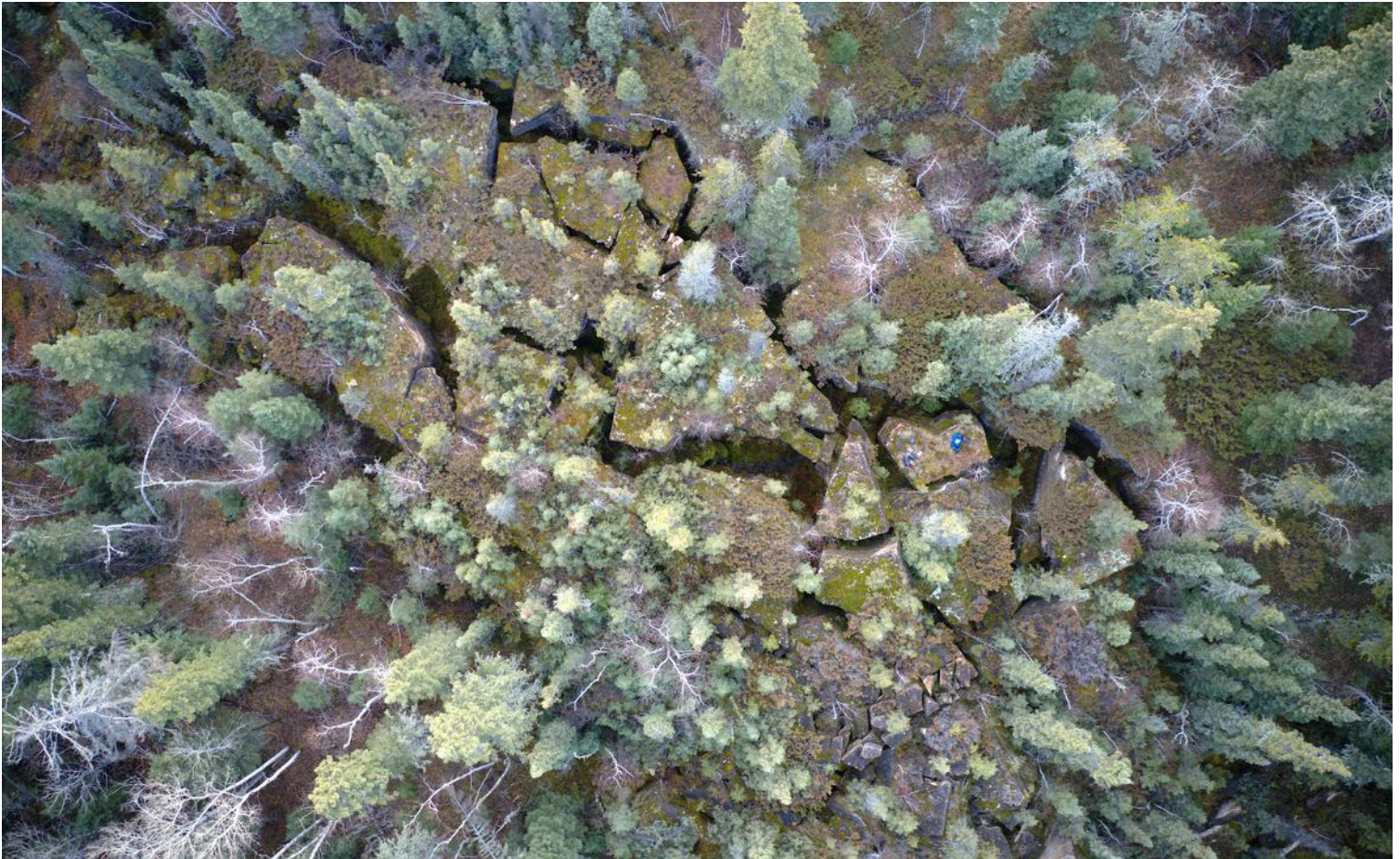


Upcoming Events

Save the Date for the NPSS Annual General Meeting

Although we would have loved to see everyone in person, COVID-19 had other plans. Nonetheless, we are proceeding with our annual general meeting and conference on February 27, 2021 via Zoom. This year's theme is "Nature to the Rescue". In these unprecedented times during a global pandemic, people have been forced to slow down, travel less, and socially distance, which has resulted in many people focusing more on their home areas (including nearby nature) for many of their needs. The topics of our event will address this new reality by discussing how we can be more involved with nature on a local scale, from creating or enhancing backyard habitat to foraging for wild food and medicines. If you've been to one of these events in the past, you know that it is top-notch. If you've never been to one, you don't even have to leave home this time – it couldn't be easier! For those of you not familiar with Zoom, you can participate without downloading any special software. We simply send you a link to click on and you're connected to our event! Speakers and registration details will be released soon.

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.



Above: Drone shot of the crevices. Photo by Michael Rudy.

Creighton Crevices are Saskatchewan's Newest Important Plant Area

Chet Neufeld with nomination form text from Michael Rudy

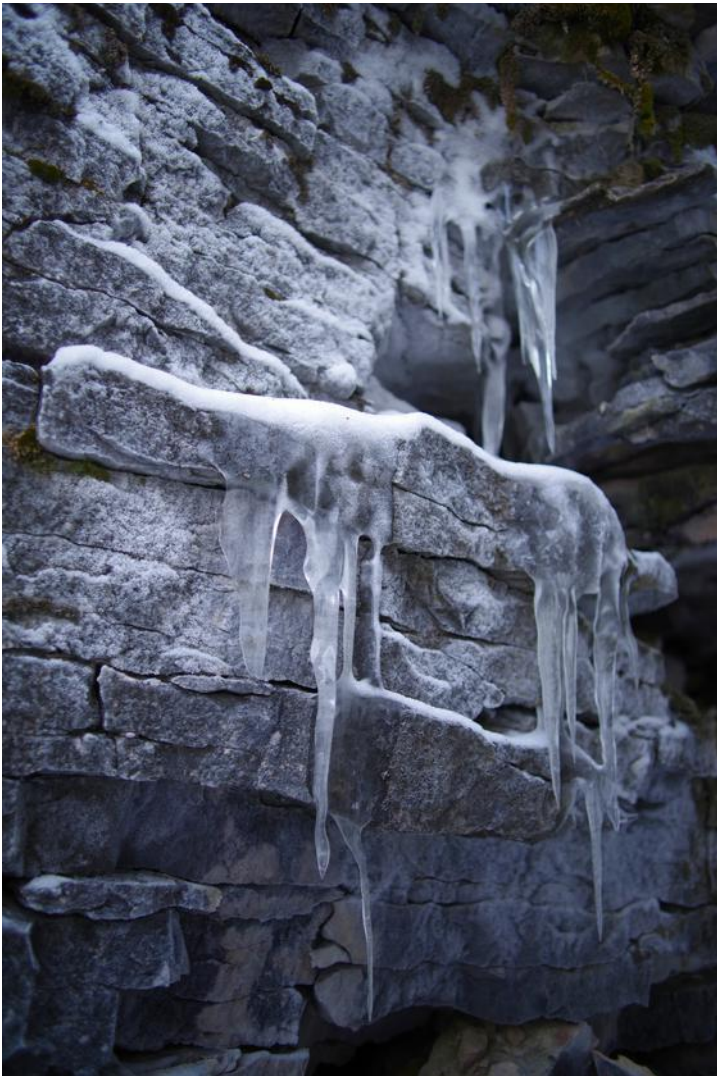
At the most recent meeting of the Botanical Assessment Working Group, of which the NPSS is a member, a submission was received and accepted as the newest addition to the Vern Harms Important Plant Areas of Saskatchewan program. The addition of the Creighton Crevices brings the total Important Plant Areas (IPAs) in the province to nine. Michael Rudy, who works for the Saskatchewan Conservation Data Centre and is proficient in moss and lichen identification, recently visited the site to collect data and submitted the nomination.

The Creighton Crevices occur within the Meridian Creek Recreation Site, adjacent to Amisk Lake in the boreal forest, approximately 30 kilometers southwest of Flin Flon, Manitoba.

Geologically, the site is highly unique, as it features dramatic limestone rock fissures 5-10 m deep, with a rich array of micro habitats and variation in environmental factors. Limestone rock is very rare in Saskatchewan, with limestone bedrock comprising only about 1.2% of the province's area, and exposed rock faces are even rarer. This crevice feature

appears to be one of only a handful in Saskatchewan, the rest of which have not been visited but are only inferred from satellite imagery.

The Creighton Crevices likely have Saskatchewan's most concentrated rare plant species diversity, as the preliminary surveys (plus the three legacy records) have so far confirmed a total of 20 rare species for the rock crevices and immediate vicinity, which is nearly 13 rare species per hectare (as the crevices cover only 1.6 ha). These 20 species represent almost 20% as many rare plant species as are known from Athabasca Sand Dunes Provincial Park (109 species), an area nearly 130,000 times larger. Additionally, the site visits have confirmed a total of five new species for Saskatchewan, one new genus for Saskatchewan (*Lempholemma*), and one of only two known Saskatchewan populations of the Small Limestone Mosses (*Seligeria donniana* and *tristichoides*). These mosses are uncommon to rare wherever they occur according to COSEWIC, and both species are represented by fewer than 20 sites in BC, where bryophyte surveys have been very extensive, and the availability of habitat is far greater. The finding of *Seligeria tristichoides* represents a new species for Saskatchewan, and the population is nearly 1,000 kilometers from the closest known records, while *Seligeria donniana* represents the rediscovery of the plant family Seligeriaceae from Saskatchewan, as it was first collected in 1989 but has somehow been a forgotten part of



Above: Limestone face in the crevices. Photo by Michael Rudy.

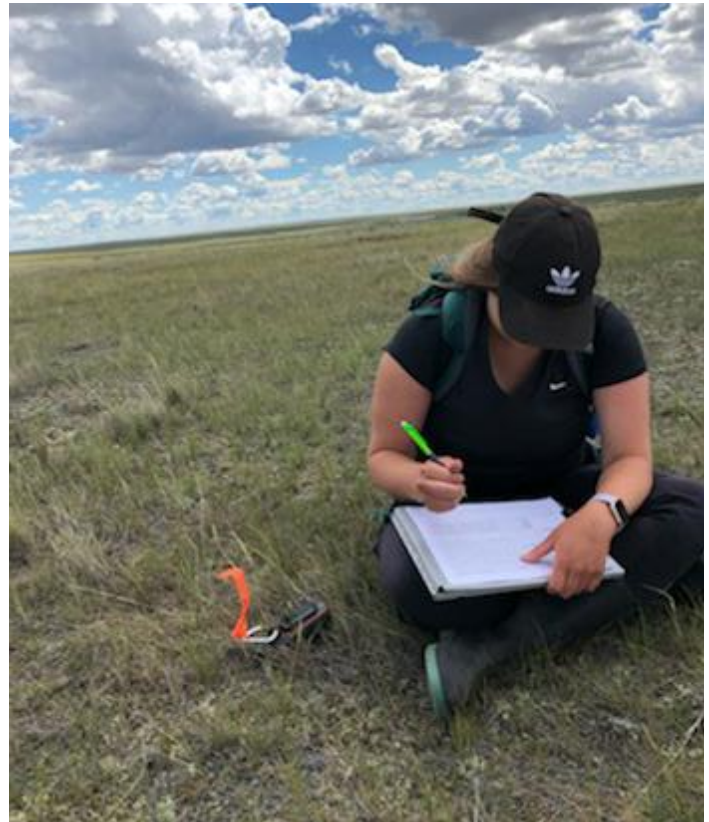
Saskatchewan’s flora for over thirty years.

Do you know of a botanical site in Saskatchewan that deserves official recognition as a provincial Important Plant Area? The Vern Harms Important Plant Areas of Saskatchewan project will be reviewing nominations for new IPAs and any submissions received will be considered at the next meeting. If you would like to submit a nomination for the program, please visit <https://www.npss.sk.ca/news-and-events/projects/292> for details on site eligibility, the nomination form, and sites that have already been designated.

Fall 2020 Project Update

Hilary Pinchbeck, NPSS Project Coordinator

For the last few months I have been working on compiling all of the data Heather Peat-Hamm and I collected over the summer from the Nashlyn Pasture. I have been working on entering data, creating maps in ArcGIS, sorting and labelling photos, and trying to write a management plan for



Above: Hilary taking notes in the field. Photo: H. Peat Hamm
Below: Nelson’s Saltbush (*Atriplex gardneri* var. *aptera*), ranked as S1. Tiny projections called tubercles help to identify between species of Saltbush and a microscope is often needed. Photo: H. Peat Hamm.



the pasture, encompassing all of our findings. I have been working on comparing rangeland health assessment data from 2003 with the data I collected in 2020. The comparisons will allow us to be able to evaluate the native pasture range condition and we’ll be able to make practical grazing management recommendations for the future. Office work is never quite as exciting as being out in the field; however,

it has been incredibly satisfying to reflect over all the data that we were able to collect despite Covid-19 setting the field season back. In total, this summer we surveyed 133 upland transects, 99 wetland searches, and 52 transects (520 quadrats) for rangeland health assessments were completed. We found 16 provincially rare plant species and 1 plant species at risk (Dwarf Woolly-heads).

While we were searching the wetlands among the pastures, we were on the hunt for two rare mosses to Saskatchewan, Alkaline Wing-nerved Moss (*Pterygoneurum kozlovii*) and Rusty Cord-moss (*Entosthodon rubiginosus*). Unfortunately, we were updated with the results from all the photos we captured this summer and, we did not come across these species. On the bright side, we were able to get the mosses we did find identified and it has definitely sparked a new reading interest for the winter on identifying mosses!



Above: Common Squirrel-tail (*Elymus elymoides* ssp. *elymoides*), ranked as S3. Photo: Hilary Pinchbeck

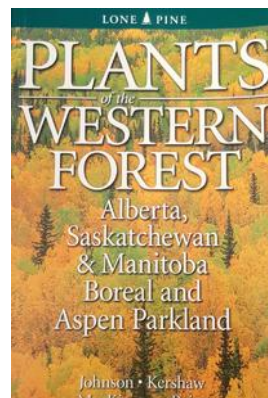
SCIENTIFIC NAME	COMMON NAME	PROV'L RANK
<i>Alopecurus carolinianus</i>	Carolina Foxtail	S2
<i>Astragalus purshii</i> var. <i>purshii</i>	Pursh's Milk-vetch	S3
<i>Atriplex gardneri</i> var. <i>aptera</i>	Nelson's Saltbush	S1
<i>Danthonia unispicata</i>	Few-flowered Oat-grass	S3
<i>Elymus elymoides</i> ssp. <i>elymoides</i>	Common Squirrel-tail	S3
<i>Eremogone congesta</i>		
var. <i>lithophila</i>	Rocky Ground Sandwort	S3
<i>Festuca hallii</i>	Plains Rough Fescue	S3
<i>Myosurus apetalus</i> var. <i>borealis</i> *	Awned Mousetail	S2
<i>Myosurus minimus</i>	Least Mousetail	S3
<i>Navarretia saximontana</i>	Rocky Mountain Pincushion-plant	S3
<i>Oenothera caespitosa</i>		
ssp. <i>caespitosa</i>	Gumbo Evening Primrose	S3
<i>Picradeniopsis oppositifolia</i>	Opposite-leaf False-bahia	S2
<i>Plantago patagonica</i>		
var. <i>spinulosa</i>	Spinulose Plantain	S2
<i>Psilocarphus brevissimus</i>		
var. <i>brevissimus</i>	Dwarf Woolly-heads	S1
<i>Schedonnardus paniculatus</i>	Tumble Grass	S3
<i>Stephanomeria runcinata</i>	Runcinate-leaved Skeleton-weed	S1
<i>Orobanche ludoviciana</i>	Louisiana Broom-rape	S3

Table 1. Rare plant species found in Nashlyn Pasture.

**Myosurus apetalus* var. *borealis* could not be confirmed to variety. *Myosurus apetalus* var. *borealis* and *Myosurus apetalus* var. *montanus* are very similar. The distinction relies on the number of veins on the sepals (1-veined is var. *apetalus* and 3-veined is var. *montanus*) and it was too dry to see the veins under a microscope.

New Books and Old Favourites

The NPSS online store has added some great new titles to its inventory, and has restocked some old favourites.



Plants of the Western Forest: Alberta, Saskatchewan and Manitoba Boreal and Aspen Parkland, long a staple in almost every botanists backpack, had a revised edition printed only a few years ago, but quickly sold out. We're happy to say that the publisher, Lone Pine, has printed more copies and we have them for sale in our online store. This beautifully illustrated, easy-to-use field guide provides detailed information about plants in the boreal and aspen

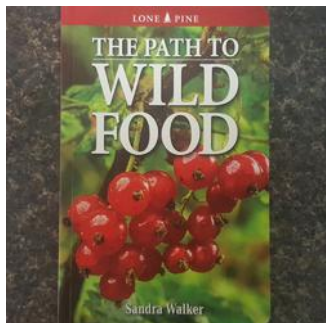
parkland regions of Alberta, Saskatchewan and Manitoba. Whether you are a naturalist, a day hiker or an armchair adventurer, you can explore these regions with this handy reference in your backpack or library.

This excellent resource includes:

- more than 800 colour photographs
- almost 900 line drawings
- colour photo guide to wildflowers
- clear species descriptions to help identify plants
- intriguing notes about edible plants, Indigenous uses of plants and origins of plant names

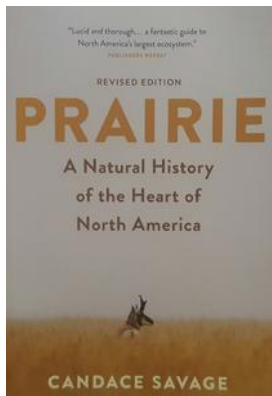
Another favourite that is back in stock is Sandra Walker's *The Path to Wild Food*. Recently published, we quickly sold out but now have plenty of copies available for purchase.

Taking a refreshing and practical approach, *The Path to Wild Food* is an ethical field guide and recipe book that promotes respect for the natural world and for the cultures



that use it effectively. Written by an accomplished ethnobotanist and educator, this book rekindles an interest in natural foods, including taking advantage of “nature’s pharmacy” for medicinal plant use. Learn about the variety of plants around you and what to do with them once you have harvested them. This book:

- Rekindles an appreciation for the adventure of collecting wild plants for food and flavours
- Includes various plant types from trees and shrubs to herbs and wetland plants
- Provides recipes using many of the species identified
- Highlights some of the ethics and risks of wild crafting
- Identifies poisonous plants to avoid
- Explores the wisdom of Indigenous Knowledge



An instant classic when it was published a few years ago, and a new addition to our online store is *Prairie: A Natural History of the Heart of North America* (revised edition) by award-winning author Candace Savage. This book is simply the finest of its kind ever written, and deserves a place on the shelf of biologists and avid naturalists alike.

Lyricaly written and impeccably researched, *Prairie* guides readers through the grasslands, wetlands, river and woodlands of the North American plains, exploring the physical forces and life forms that make the region intriguing and unique. This revised edition features a new preface along with up-to-date information on the potential of grassland conservation to help reverse the biodiversity crisis and mitigate the effects of climate change.

Illustrated with exquisite black-and-white line drawings and colour maps, this award-winning book is a fascinating and highly readable guide to one of the world’s most vulnerable - and resilient - ecosystems.

As an added bonus, all copies of *Prairie* purchased through our online store are autographed by the author!



Plants Growing Along the River is a brand new, full colour field guide that contains 23 common plants (all but one of them native) important to Métis culture that can be found

growing along the South Saskatchewan River near Batoche. Each species contained in the guide has its own double-sided page, with two photos of the plant, along with English, Michif and scientific names. A description accompanies each plant, along with traditional uses and comments from Métis Elders. The guide is made of plastic, so it is waterproof, and bound so that pages can be added. Its small size (slightly larger than a deck of playing cards) means that it can easily fit into almost any pocket for excursions into nature.

To purchase any of the books above, go to our online store at <https://www.npss.sk.ca/store/publications> All proceeds fund our conservation and education programs.

Behind the Scenes: Faces of the NPSS



Hello NPSS members! My name is Jacey Bell and I have been a part of the NPSS board of directors since 2014. I initially started as secretary and then transitioned to treasurer in 2017. I am currently leading the Saskatchewan Mycological Working Group to help catalogue the mycoflora of the province and promote learning about fungi. I grew up in the city of Saskatoon but have always been fascinated by nature. I spent much of my childhood outdoors playing in city parks, fishing and catching insect sat Anglin Lake, and exploring the South Saskatchewan riverbank. I studied general biology, chemistry, and education at the University of Saskatchewan and have held various plant-related job titles since then, including botanist, market gardener, and lab instructor. I live in Saskatoon with my husband and a variety of pets. When I am not in the lab with my students, you can most likely find me gardening, hiking with my dog, or making some kind of art.

This issue's COVER PLANT –

Viola canadensis var. *rugulosa*

Often overlooked when not in bloom, Western Canada Violet really catches the eye once its cheery little flowers start to burst. Native to Canada from Ontario westward and north to Yukon and the Northwest Territories (and also found in parts of the U.S.), Western Canada Violet is a member of the Violet Family (Violaceae). It is a perennial that prefers part to full shade, spreading locally via rhizomes to form patches, while its seeds are able to travel greater distances (the seeds pop out of the dry capsules, but are also helped on their journey by ants, which are attracted to them for their oily coating). It occurs in wooded areas and grows quite low to the ground, typically reaching a height of approximately 30 cm (1 foot) or less. Flowering in May just as earlier violet species are beginning to set seed, Western Canada Violet can keep blooming through June and even into early July, if conditions permit. Its flower colour ranges from white to light pink. Equally at home in urban areas, Western Canada Violet is a welcome addition to any yard due to its many attributes; it is easy to grow, produces many flowers, and forms a nice ground cover with its big, heart-shaped leaves. All parts of Western Canada Violet are edible. The flowers contain a beneficial compound called Rutin, and make an attractive garnish for salads. The greens can be cooked as a potherb, and are very nutritious. They contain more vitamin A than an equal amount of spinach and a half cup of violet leaves contain about as much vitamin C as four oranges! Some violets also contain up to 4000 parts per million of salicylic acid (similar to aspirin), although it is not known exactly how much Western Canada Violet contains. Interestingly, the stringy, inner core of the leaf petiole (stem) tastes mildly minty when chewed. Extracts of the plant have also been used in perfumes, lotions, skin creams and other cosmetics.

This project was undertaken with the financial support of:
Ce projet a été réalisé avec l'appui financier de :



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Climate Change Canada

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Canada North Environmental Services



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