

Newsletter of the Native Plant Society of Saskatchewan



ROOTS

Vol. 28 No. 1

Spring 2023



Astragalus gilviflorus

Cushion Milkvetch

Photo credit: C. Neufeld

Executive Director's Message Chet Neufeld

Happy spring everyone! As a botanist, nothing makes me happier than saying goodbye to winter. Depending on where you live, spring has come either early or late, or has come and gone about three times! The southern part of the province was able to get some added moisture from the late (and fairly significant) snowfall, while the central and north parts of the province are drier than usual.

With the recent heat, the plants have really come on strong and we are well into the wildflower bloom. In response, we've once again posted our "What's Blooming" list on our website. It lists all the species currently blooming across the province and is a handy reference to see what you might find flowering when visiting a natural area. We're constantly updating the list as the season progresses, so let us know if you saw anything that's not currently listed, and we'll be sure to add it. At the time of writing, we had over 50 wildflowers listed, with more being added everyday.

With summer just around the corner, we're also gearing up for a very busy field season. We are extremely fortunate to have long-term funding to carry out our very large and ambitious projects across Saskatchewan. I want to personally thank Environment and Climate

Change Canada, the Saskatchewan Ministry of Environment, and our donors for their unwavering support over the years. You have helped us accomplish so much! You can read more about our summer plans in Hilary Pinchbeck's spring update article and our article on our South of the Divide Invasive Alien Species Strategy. Being so busy, we have added a new person to our team to help manage the workload. Reed Lewko is from Saskatoon and is eager to get started. She will be assisting us in the field in her role as Project Technician and will help with office work once the field season is done. You can get to know a little more about her in her article in this issue. Welcome Reed!

Finally, what good is the nice weather if you don't get out to enjoy it? Once again, we have an offering of field tours outlined in this newsletter that take us to places that you otherwise wouldn't be able to access on your own, as most are on private land. You're guaranteed to see lots of interesting plants and beautiful landscapes and have a great time while doing it. Details on all our field tours are in the field tour article in this issue.

Have a great summer and I hope to see you out in the field!

Experience Saskatchewan's Sunny South with the NPSS This Summer

With wildflowers in full bloom, it's time to announce our first two summer field tours. Saskatchewan's southern region is full of beautiful native prairie, and we have some great spots to explore. The only way to see some of the areas we'll be visiting is with the NPSS, as it is private land, and we have exclusive access! Tours will go rain or shine, unless extremely inclement weather is imminent. Please bring appropriate clothing (including a hat and study boots/shoes), sunscreen, water, and bag lunches. All tours are free for NPSS members but require registration by contacting Chet at info@npss.sk.ca or (306) 668-3940.

Cactus Hills/Dirt Hills (Spring Valley, SK)

Date and time: 10 am on Saturday, June 24, 2023
10 am on Sunday, June 25, 2023

Meeting location on June 24: Elaine Scheller's farm, 2 miles north of the village of Spring Valley on grid road 715. Elaine's farm is on the west side of the road. GPS coordinates = 49.97313963758208, -105.39627117529237

Meeting location on June 25: Claybank Brick Plant National Historic Site

Considered some of the largest glacial push hills in the world, the Cactus Hills and Dirt Hills were created between 10,000-12,000 years ago, rise as high as 880 meters above sea level and cover an area of approximately 1,000 square kilometers. First settled by Indigenous groups (with tipi rings, medicine wheels and other evidence still in existence), the area was also used by the North West Mounted Police (NWMP) and was eventually permanently settled, but remains sparsely populated with lots of native prairie. The morning will be spent visiting various points of interest throughout the area, stopping to botanize along the way. We will have lunch at Oro Lake, home to the NWMP Camp Norris outpost and subject of research by the University of Regina's Dr. David Sauchyn who recently spoke at our annual general meeting. During our time there, we will explore the native prairie surrounding the lake. In the afternoon we will visit a privately held prairie pasture and spend the afternoon looking for interesting plants. The pasture has never been surveyed before, so there's no telling what we might find.

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

Native Plant Society of Saskatchewan

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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 info 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

On Sunday, we will spend the day exploring the Massold Clay Canyons. This area was mined for the clay used to make the bricks at the nearby brick plant, but many areas remain in pristine condition. It contains badlands, native prairie, and treed coulees, offering a wide variety of plant life for us to discover. We will be close enough to the Bunkhouse Café at the brick plant for anyone not wanting to pack a bag lunch this day, and we will leave time at the end of the day to tour the buildings of the Claybank Brick Plant National Historic Site for anyone wishing to do so.

Rose Creek Ranch (Eastend, SK)

Date and time: 8:30 am on Saturday, July 8, 2023

Meeting location: Jack's Café in Eastend (we will caravan out to the ranch from here)

The Rose Creek Ranch is on private land and encompasses 2,266 hectares (5,600 acres) of native prairie and has high biodiversity, providing varied habitat for a multitude of species including species at risk and provincially rare plants. The topography and habitats are equally diverse, with lush valley bottoms, rolling grasslands, treed coulees, steep slopes, and exposed ridges. At its heart is a beautiful creek that divides the property roughly in two equal halves. The ranch also has its share of Leafy Spurge (*Euphorbia esula*) and has been practicing conservation grazing using goats to control the spurge. The NPSS has been working with the ranch for several years in an effort to protect the species at risk and beautiful habitats. In the morning we will see the goats in action as they graze Leafy Spurge. We will chat with the shepherd and participants can ask questions. We will also visit some data collection plots where NPSS Project Coordinator Hilary Pinchbeck has been busy and watch her conduct a habitat assessment. We will spend the rest of the morning botanizing along the creek before stopping for lunch. In the afternoon, we will explore the hillsides and will undoubtedly encounter provincially rare plants, including small pockets of fescue grassland. The tour will wrap up between 4 and 5 pm.



Badlands near the Claybank Brick Plant National Historic Site.
Photo by Chet Neufeld



Rose Creek Ranch.
Photo by Hilary Pinchbeck

Although the Rose Creek Ranch tour is only one day, we encourage everyone to stick around on Sunday as well to check out the many points of interest in the area, including the T. rex Discovery Centre, Jones Peak, Pine Cree Regional Park, Chimney Coulee, or just stroll along the Frenchman River.

Spring Update

By Hilary Pinchbeck, NPSS Project Coordinator

The winter is always too long of a season for a botanist! However, it's never less busy organizing projects for the upcoming field season and from the previous field season. Over the winter and early spring, I've been working on finishing up reports for our Rare Plants and Ranchers program and contacting properties for the upcoming season. In the 2023 season we'll be spending a lot of time in sand dune habitats in the Cabri, Dundurn, and Burstall areas of Saskatchewan looking for Slender Mouse-ear-cress (*Crucihimalaya virgata*), Hairy Prairie-clover (*Dalea villosa* var. *villosa*), and Smooth Goosefoot (*Chenopodium subglabrum*). We'll also monitor a beautiful prairie area near Leader, SK for Tiny Cryptantha (*Cryptantha minima*), and may return to collect habitat data on the Soapweed (*Yucca glauca*) population near Rockglen, SK we worked on last year. Of course, we're also sure to find other species of interest during our surveys.

We had an interesting find this winter. While I was going through field photos from 2022, we were able to get a moth identified from a sand dune property that turned out to be a provincially rare species,

Schinia verna (S1). When we received this identification, I realized we had seen a similar species in 2021 on the same habitat type. The moth we had found in 2021 turned out to be *Schinia meadi* (S3) and we were able to give this species a label. Although the focus is on plants when out in the field, when you are staring at the ground all day you tend to find a lot of other interesting critters!

On top of our Rare Plants and Ranchers project, we will also be spending time monitoring the effects of goat grazing on Leafy Spurge (*Euphorbia esula*) for the third year in a row, in June and September. Being able to see the changes in the amount of Leafy Spurge year to year is almost unbelievable! The NPSS will be offering a field tour this year to see the goats in action and it is not something to miss! Another one of our projects I've been working on is mapping previous routes and locations of Flowering Rush (*Butomus umbellatus*) along the South Saskatchewan River, and of course planning for this year's efforts. The field season will be starting shortly, and I cannot wait to get outside and to get started on these projects!



Schinia verna.
Photo by Hilary Pinchbeck



Schinia meadi.
Photo by Hilary Pinchbeck



Slender Mouse-ear-cress.
Photo by Hilary Pinchbeck

NPSS Forges Future

As many of you may know, the NPSS recently finalized its strategic plan which will guide the society to 2030 and beyond. In our almost 30 years of advocating for native plants, we have evolved to meet the changing demands. The last decade has been our strongest yet, and we continue forward with a positive trajectory. Nonetheless, it's always prudent to take a good, hard look at ourselves and reflect on what has went right and what needs to be improved upon. With Erin Campbell-Howell as our facilitator and several sessions spent workshopping ideas, we came up with a robust and detailed plan that will guide our society.

The plan is very prescriptive, with specific goals, actions to meet each goal, and timelines to accomplish the goals within. The strategy also takes stakeholders, and current and future trends into consideration. Some goals are an extension of what we're already doing, while others are completely new. We also challenged ourselves by setting some lofty goals that will be difficult to achieve, but we felt that these goals would challenge us to grow in new and different ways. While most of the document is meant to be internal, we also worked on more public aspects; tweaks were made to our Vision and Mission, and we added a set of Values so that everyone knows exactly who we are and what we do.

Our Vision

Creating a future where native plants and their ecosystems thrive.

Our Mission

Conserving Saskatchewan's native plants and their ecosystems through collaboration, education, and engagement.

Our Values

1. Stewardship: We conserve native plants and their ecosystems through evidence-based solutions.
2. Passion: Our unique dedication and enthusiasm for native plants and conservation defines us throughout our organization.
3. Integrity: We are accountable to members and partners to champion native plants and their ecosystems.
4. Transparency: A personal commitment to open and clear communications about our activities, objectives, and finances.

We're very excited and have already begun implementing our strategic plan. We're confident that it will result in a stronger society and a better future for native plants and ecosystems.

NPSS Welcomes New Project Technician

As our society moves into its busy season, and with more and larger projects than ever before, we recently hired a Project Technician to assist with all our projects. Reed Lewko will be busy this summer collecting field data, then spending the off-season helping with data entry, mapping, and report writing. She will also be busy with other initiatives and events from time to time. Now a few words from Reed:

I grew up in Saskatoon, where I studied at the University of Saskatchewan for two years in the college of Agriculture and Bioresources, during which time I was a summer student in horticulture and conservation at Meewasin Valley Authority. In this position, I learned a lot about native plants in and around Saskatoon's river valley and became very interested in conserving their habitats and learning more about them.

I eventually transferred to the University of British Columbia and graduated with a Bachelor of Science, majoring in Environmental Sciences and minoring in Applied Plant and Soil Biology. While living in Vancouver, my interest in environmental stewardship really blossomed. During my time at UBC, I volunteered with a student-led sustainability group called Common Energy, where I primarily worked in single-use item waste reduction. My focus was primarily on encouraging the use of reusable coffee cups, which is something I continue to be passionate about.

I recently moved back to Saskatoon, where I find a lot of joy in caring for my houseplants, gardening, and taking nature walks by the river.

I am excited to be involved with the Native Plant Society of Saskatchewan as a Project Technician.



NPSS Members Get a Discount on FLORA ID

Flora ID is a software-based plant identification system, with the goal to encourage, promote, and facilitate botanical education, research, and awareness. It runs on Windows and Android platforms (sorry Apple users) and is available in both app and desktop software versions.

Their Windows-based plant identification software is relevant for 99+% of the vascular plants known to grow wild in each of 18 states and 4 Canadian Provinces. The two Android app versions have similar functionality; one version includes about 90% of wildflowers, and the other includes all the vascular plants. The keys have been continuously updated, most recently in May 2020.

The software is designed to accommodate even those with more basic plant knowledge, as it allows the user to input the characteristics they do know (i.e., plant colour, leaf shape, etc.) and then provides a selection of potential plant species based on the input.

Features of the software:

- Fast and easy to use
- Color photos for over 99% of species
- All native and naturalized vascular plant species known in each state/province or region – everything that grows wild including weeds, grasses or grass-like plants, conifers, flowering plants, and spore-bearing plants
- Terms defined and illustrated

- Well over 50 menus of plant characteristics
- Program Help and User's Guide with Tutorial
- Available for 18 western and central states and 4 Canadian southwest provinces
- Listings for each species from over 130 printed or online regional references, with page numbers
- Clickable graphical interface for marking characteristics

For those wanting the apps, they may be obtained from the Google Play Store or the Amazon store. There is no discount for these apps.

For those wanting the desktop software, single or multiple copies can be purchased, with a single copy of the key for Saskatchewan flora (containing 1,656 species) available for \$35 US plus \$20 US shipping. The key will be shipped on a flash drive. For businesses like consulting companies, a 10-license copy is \$120 US plus \$20 US shipping.

For Native Plant Society of Saskatchewan members who buy the keys through our organization there is a 30% discount on the software, bringing the purchase price to \$24.50 US plus \$20 US shipping for a single license.

For more information on the system, go to <https://flora-id.org/>

To order through our organization and qualify for the discount, contact the NPSS at info@npss.sk.ca

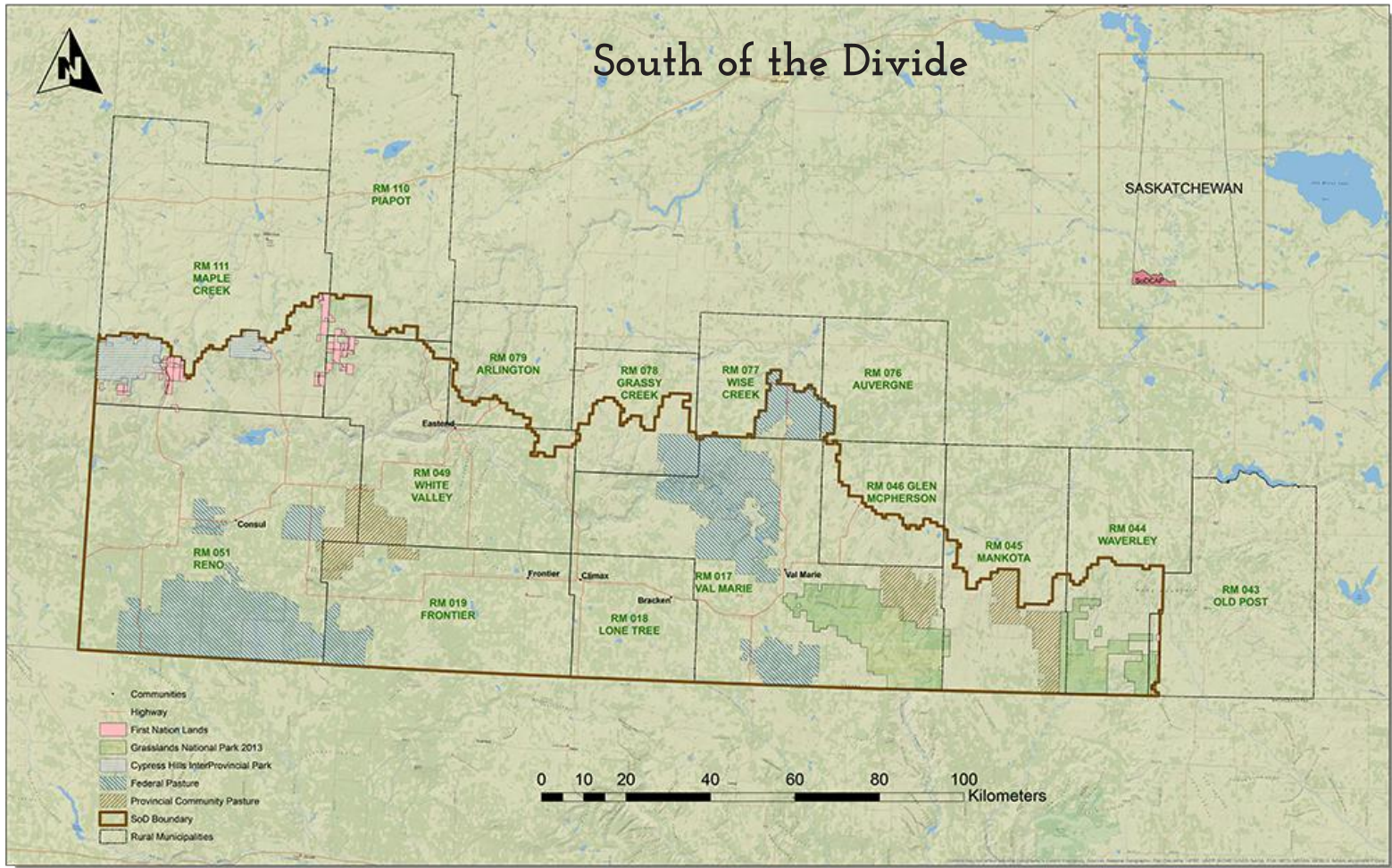
Calling All Community Scientists!

If you live in the South of the Divide region or plan to visit the area, we encourage you to help us with our project. All you need to do is use the iNaturalist or iMapInvasives apps (free download wherever you get your apps), add our project, and record your invasive species sightings. Even if you aren't sure about your identification, you can take a photo as part of your observation, and we will confirm its identity.

Our project on iNaturalist and iMapInvasives is called South of the Divide Invasive Species Mapping and can be found through the Projects tab on the apps. The links for the desktop versions are:

<https://www.inaturalist.org/projects/south-of-the-divide-invasive-species-mapping>

<https://imapinvasives.natureserve.org/imap/services/page/Project/1117.html>



NatureForAll Update

The Canada page on the #NatureForAll website has been updated, and it now includes a chat function! Please feel free to use it, share what you are up to, ask questions, seek connections and more. You don't need to create a login for it. You just type in a username and start chatting! It's simple, and hopefully can be a useful tool to stay connected.

<https://natureforall.global/canada>

<https://www.backyardbio.net/resources>

There are great resources on both websites for teachers and parents, or for anyone looking for different ways to connect with nature.

Executive Director's note: The NPSS is a #NatureForAll partner.

This issue's COVER PLANT

Astragalus gilviflorus

Cushion Milkvetch is a diminutive but striking perennial wildflower common to dry prairies. Found in Alberta, Saskatchewan, and Manitoba in Canada, and from the eastern edge of the Rockies to the Missouri River and south to Oklahoma in the U.S., it is truly a plant of the Great Plains. Occurring at the northern edge of its range in the Prairie Provinces, it is locally common in southern Saskatchewan, while Manitoba and Alberta rank is as rare (S1 and S3, respectively).



Cushion Milkvetch is a member of the legume family and, true to its common name, grows in a low mound resembling a small cushion. Mature plants are only a few centimeters tall and perhaps 15-20 cm in diameter at their largest. Easily recognizable and almost unmistakable, Cushion Milkvetch is comprised of a compact tuft of leaves, each with three leaflets. The plant is densely covered in silvery hairs, giving it a grey-green appearance. If the foliage alone was not eye-catching enough, in spring it produces dozens of white flowers with magenta keels (the bottom petal of a legume flower). The flowers are held amongst the foliage at ground level and are likely visited by terrestrial insects in addition to flying pollinators. It is one of our earlier flowering plants, often blooming just after Crocuses (*Anemone patens*) have finished. Once pollinated, it forms upright pods held low in the leaves. The pods contain many small seeds and ripen by mid-summer, splitting and dispersing their contents shortly thereafter.

Cushion Milkvetch is extremely drought tolerant and grows in short grassland communities where taller plants cannot shade it out. Its habitat includes dry hilltops and ridges, eroded slopes, badlands, stony/gravelly areas, and barren knolls. Its relatively long, woody taproot enables it to access moisture in otherwise dry conditions.

Ecologically, Cushion Milkvetch is important because it mitigates erosion on exposed soils both by covering small surface areas and anchoring subsurface soil particles with its roots. As a legume, it also helps to provide nitrogen to the poor soils it grows in by hosting nitrogen-fixing bacteria in root nodules. Perhaps most importantly, it provides an early season source of nectar to hungry pollinators that need something to tide them over until the next suite of wildflowers blooms. Bumblebee queens and some butterfly species like Mourning Cloaks (*Nymphalis antiopa*) overwinter and rely on species like Cushion Milkvetch to feed them once they emerge.

Cushion Milkvetch would be a welcome addition to any garden with full sun and dry soil, and would work particularly well in a rock garden, so it's curious that no commercial sources of this species are known to exist in western Canada. Anyone wanting to grow it would have to judiciously collect seed from the wild in jurisdictions where it is not rare and grow it out. Like all legume seeds, germination would be enhanced by breaking the seed coat; one of the easiest ways is by lightly scuffing it with sandpaper.

This project was undertaken with the financial support of:
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Environment and
Climate Change Canada

Environnement et
Changement climatique Canada



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