

Newsletter of the Native Plant Society of Saskatchewan



R O O T S

Vol. 25 No. 4

Winter 2020

Mertensia paniculata

Tall Lungwort

Photo credit: C. 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



Executive Director's Message

Chet Neufeld

Well, we made it through another winter, although I think we're into our third or fourth spring where I live (why can't it just stay warm?). The past year around the world has been interesting to say the least and not necessarily one I care to repeat. It was a great year for the Native Plant Society of Saskatchewan, however, even with the pall of COVID-19 overshadowing us. One of the silver linings of the pandemic was that it forced us to find new ways of connecting with each other and with nature; ways that I think will persist after the pandemic is over.

With warmer temperatures in the forecast, we're busy gearing up for another busy field season. Our Rare Plants and Ranchers program continues to forge ahead with Hilary Pinchbeck, our Program Coordinator, leading the charge. Now in its eleventh year and with over 133,000 acres currently enrolled in the program and continued funding from both the federal and provincial governments, we have the opportunity to make a tremendous positive impact for plant Species at Risk and their habitats. By directly working with landowners to give them the expertise and funding to manage for plant Species at Risk, we find win-win solutions for both the plants and the ranches to ensure that both continue to thrive long into the future.

Another one of our major projects is the South of the Divide Invasive Alien Species Strategy. Now in its second year and fueled by federal funding, this project aims to tackle the incredibly complex issue of the threat posed by invasive species on Species at Risk. This alone would be enough, but to do it in a region the size of a small island nation (over 15,000 km²) is even more difficult. Components of the project include ground surveys, risk assessments, modeling, mapping, and eradication initiatives with the goal of developing an invasive species strategy with measurable results. A large portion of the project

will focus on local stakeholder input and will have a significant citizen science, education, and outreach component. To this end, we have contracted Melanie Toppi of the local Frenchman Wood River Weed Management Area to act as a liaison, as well as Ken Donnelly of Beyond Attitude Consulting. Ken has extensive experience in using a combination of behaviour change, community engagement, communications, and strategic planning to ensure that invasive species projects reach their full potential.

Finally, our commitment to addressing the threat posed to our aquatic habitats by Flowering Rush (*Butomus umbellatus*) remains undiminished. In fact, our efforts this year may be our most ambitious yet. Driven by the momentum of our successful eradication of a Flowering Rush population from a wetland near Watrous, SK, we plan to survey nearly 150 km of the South Saskatchewan River from the Alberta border to Cabri Regional Park. We have previously surveyed a large portion but will re-survey the area and add a new section, as spring floods transport plants downstream and our aim is to create a Flowering Rush free buffer to protect the rest of the river. We will map and eradicate what we find. This is a large endeavour, and we are partnering with the South Saskatchewan River Watershed Stewards, Meewasin Valley Authority, Ministry of Agriculture and Ministry of Environment, and have secured funding from the Ministry of Environment and SaskEnergy. We will also monitor the wetland near Watrous, SK to ensure that our eradication efforts were successful and, in partnership with the Ministry of Environment, will visit the Cutarm Creek near Esterhazy, SK to determine the extent of, and possible solution to, an infestation of Flowering Rush.

These are just the major projects – we have many other smaller (but just as important) projects! I also continue to provide free educational resources and native seeds to schools, attend various committee meetings, respond to an increasing number of native plant gardening requests, and occasionally find time to get out and smell the flowers myself.



Native prairie in the South of the Divide region.
Photo: Hilary Pinchbeck

Participants Needed for Research Survey

My name is Ashley Rohde, and I am a graduate student at Utah State University. I invite you to participate in a study that I'm conducting as part of my dissertation research. I am reaching out to researchers, land managers, and conservation volunteers who actively participate in conservation actions. I am contacting you because you have direct experience working on and thinking about conservation issues.

Specifically, I would like to know how the results of different types of scientific studies are put into action for conservation. I will compare how conservation practitioners use the results of molecular-based studies and abundance-based studies to inform conservation actions. This study is of particular interest to me because, as a scientist, I want to be confident that the limited resources available for conservation research are used as efficiently as possible. Molecular techniques are used by researchers more and more to answer questions about species of conservation concern, but their results may be difficult for practitioners without molecular training to interpret and implement. You do not need to have experience with molecular methods to take this survey! I hope to gather information about the perspectives of people with many different experiences.

If you are interested in participating in the study (which I hope you are), please follow the link included below to complete a short survey. It should take about five minutes. Your answers are confidential, and you will not be asked to provide your name. Please only complete the survey one time. The Institutional Review Board (IRB) for the protection of human research participants at Utah State University has reviewed and approved this study as protocol #9724.

Thank you very much for contributing to this study! Every response provides the perspective of a person with unique experiences and opinions; I am happy to be able to include yours.

Survey Link: https://usu.co1.qualtrics.com/jfe/form/SV_0wUwGmCL4jRcGxf

Ashley Rohde
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AGM Samples Local Flavours

For the first time ever, the Native Plant Society of Saskatchewan hosted an online annual general meeting and conference on February 27, 2021 via Zoom. We wanted to provide the same quality experience that people have come to expect from our events; although we succeeded, it wasn't without a steep learning curve and a lot of work! This year's theme was "Nature to the Rescue!" and featured interesting topics and speakers.

2020 was an unprecedented year, fraught with so many changes and uncertainty. However, nature persisted and provided an outlet to explore and learn new things. One silver lining of the pandemic is that it forced us all to slow down and look for local opportunities, and many came away with a better appreciation of just how much we have all around us. Our virtual event highlighted many topics that can easily be pursued in your own backyard, from local foraging and ethnobotany to gardening with native plants.

Following lively discussions from the business portion of our annual general meeting, NPSS Executive Director Chet Neufeld gave a presentation highlighting the society's many projects and initiatives, as well as its involvement with partner organizations. The rest of the event was then turned over to our guest presenters, arranged in three sessions: Foraging, Ethnobotany and Gardening.

Jacey Bell began the Foraging session with her talk, "Making Connections: The Amazing Relationships Between Fungi and Plants", followed by an engaging presentation by Donovan Thiesson entitled "Edible Mushrooms of Saskatchewan". Jacey's talk revealed many fascinating details, such as how Yellow Lady's-slippers (*Cypripedium parviflorum*) need a fungal partner to infect their seed and provide nutrients, but if done improperly, the seed will either consume the fungal partner or vice-versa, leading to the theory that this relationship might still be evolving due to its relative instability. Donovan also had some interesting revelations, such as the fact that even most "edible" wild mushrooms are somewhat toxic and need to be cooked to neutralize them.

The Ethnobotany session began with Métis teacher and businesswoman Carrie Armstrong and her presentation called "Indigenous Healing Plants". Following Carrie, a presentation by Brenda Holder called "Mâyimitos – Black Poplar – Pharmacist of the Forest" enlightened attendees on the many uses of Black Poplar (*Populus balsamifera*) and how important it is to Indigenous culture. Brenda is of Cree/Iroquois lineage and is a Traditional Knowledge Keeper of plant medicine from her Cree side. One fun fact that was revealed during this session was that Carrie and Brenda are cousins, and that neither knew the other was going to be presenting until just before the



Carrie Armstrong.
Photo: Supplied



Brenda Holder.
Photo: Supplied

session started. Saskatoon-based ethnobotanist and teacher Sandra Walker rounded out the session with her talk entitled "Foraging Adventures". This was perhaps the most unique presentation of the day, and a fan favourite, as Sandra hosted a cooking show from her kitchen and taught us all how to make Cattail (*Typha latifolia*) pollen biscuits, telling stories and answering questions while they baked. This is definitely something that couldn't be replicated at a traditional annual general meeting! You can purchase Sandra's book, "The Path to Wild Food" on the NPSS website at <https://www.npss.sk.ca/store/publications>

Finally, the Gardening session capped off the event with a presentation by Chet Neufeld entitled "Creating an Edible Landscape", where he talked about his experiences with native plant gardening in his Saskatoon yard, and the many edible native plants that he and his wife have included in their "snackable" landscape. The timing of the presentation was ideal as people were starting to plan their gardens for the coming season.

Overall, it was another great event, and garnered many positive comments from attendees. This year, the tickets were sold by donation, and raised just over \$1,600 for our education and conservation programs. Online attendance was capped at 100 people, and we nearly reached that mark. Thanks to all the organizers, presenters and attendees who made this event possible!

For those who missed the event, you can find a recording on our YouTube page at: <https://www.youtube.com/watch?v=G8VujdPnvUw&t=1021s>

Call to Action for Outdoor Learning to be Part of Reopening Strategies of Canadian Schools

Pamela Schwartzberg, President and CEO – Learning for a Sustainable Future

A recent article in The Guardian, *Scotland eyes outdoor learning as a model for reopening schools*, reveals that Scotland's school authorities are exploring using outdoor space to optimize physical distancing.

Departments of Education and school boards across Canada should be exploring this opportunity as well.

Using outdoor space would allow a greater number of students to be accommodated at school while maintaining physical distancing requirements.

Outdoor learning also allows for physical distancing to happen more naturally than confining students to their desks, and managing infection risk of COVID-19 is better outdoors.

A recent report from the Children and Nature Network documents the benefits of learning outdoors including:

- enhanced physical wellbeing including reduced rates of diabetes, heart disease, and other chronic diseases
- enhanced mental wellbeing including reduced levels of anxiety and depression (critically important at this time)
- children are more engaged in learning (88%), are better able to concentrate (68%), and are better behaved (65%)
- positive associations between the greenness of school landscapes and academic performance, such as standardized test scores and rates of graduation

Experience in Scotland demonstrates that “there are not many things you can’t teach outdoors, you just have to think creatively.”

COVID-19 presents an opportunity for Canadian schools to embed learning outdoors as part of our culture of education, both for the short-term benefits of better infection control and the long-term benefits of outdoor learning for our children’s

physical and mental health and academic success.

Teachers will need support and resources to return to school following post COVID-19 closures. Why not invest in supporting schools with training and resources to support outdoor learning? Teachers could be supported with professional development and classroom resources that help them reframe existing curriculum and lessons in the context of outdoor learning. Schools could be supported with funding to create outdoor areas more suited to outdoor learning.

Learning for a Sustainable Future (LSF) is well positioned to help with professional development, classroom resources and Step Outside resources. LSF is currently supporting outdoor learning through our Learning Inside Out at-home learning program. All LSF programs are available in both English and French.

Please do not hesitate to contact me at pam@LSF-LST.ca to discuss opportunities.

For more information on Learning for a Sustainable Future or our programs, please visit www.LSF-LST.ca



Do you Know of Soapweed (Yucca) Sites?

The University of Lethbridge is conducting a biogeography study of where Yucca (*Yucca glauca*), commonly known as Soapweed, and Yucca Moth, the pollinators, are found in Canada. We have surveyed and mapped this plant in the past, and we now request your help to update the database of locations of Yucca plants, whether they bear pods after flowering, and what years pods were formed. This plant is an interesting and durable member of plantings, easily recognized, and long-lived. Mapping their approximate locations and whether they form pods will tell us if the associated special pollinator is doing well, or even expanding its range.

Any answers or partial answers would be useful to us.
We can provide you a report.

1. Have you seen, planted, or found Yucca Plants? If you answered yes:
2. What is the approximate location of this plant (town or general site)?
3. About how many Yucca plants are present in this location?
4. Have these plants flowered in the past?
5. Have these plants produced pods, and what years, if known?
6. Would you like to be named as a data contributor in a report?

THANKS!

Please send survey responses to: yucca@uleth.ca
Calvin Cooley (Environmental Science student
Univ. Lethbridge) calvincooley5@gmail.com

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Saskatchewan's Native Irises

Anyone who knows anything about gardening can probably identify an iris. They are a beautiful and long used species in our horticultural landscapes. But how many gardeners know that we have native irises? We don't have many - on the Prairies there are really only 5 main species - but what they lack in numbers, they make up for in looks.

In Manitoba and Saskatchewan, Blue Flag Iris (*Iris versicolor*) is a showy but extremely rare (S1) plant that grows in wetlands. It looks very similar to the blue-purple horticultural irises; it grows about the same height, has the same sword-shaped leaves and its flowers are light purple with darker purple veins. It is tolerant of flooding and our cold winters and is very well suited to water and bog gardens that receive full sun. I've successfully grown these plants in my bog garden for over 10 years and they never fail to add a very attractive punch of height and colour.

Alberta and British Columbia have a very similar iris, commonly known as Western Blue Flag (*Iris missouriensis*). Think of it as the western version of the Blue Flag Iris. This iris species is also quite rare, so you're unlikely to run across it in just any wetland. For gardening purposes, this iris looks very similar to Blue Flag Iris, and can be used in the same manner. It should also be mentioned that these irises make a fine substitute for Yellow Iris (*Iris pseudacorus*) which is an introduced and aggressive plant that is invading lakes and wetlands across Canada and should not be used for gardening of any kind.

The other type of iris we have in the prairies is the aptly named Blue-eyed Grass (*Sisyrinchium sp.*), of which there are three species. This diminutive plant grows about 15 centimeters tall and for much of the season is a compact bunch of grass-like leaves. However, in mid-summer it transforms into a firework display of dozens of dime-sized, star-shaped flowers, giving the appearance that the "grass" has blue eyes.

The Common Blue-eyed Grass (*Sisyrinchium montanum*) is, as its name implies, our most common species of Blue-eyed Grass. It is a sun loving, drought tolerant plant that can be found in most of our natural areas, from the United States border north to the Canadian Shield and even as far north as Lake Athabasca! These little plants are a great addition to any yard and are especially useful in dry, full sun beds or rock gardens. They can be used on their own or in combination with other low growing plants. For a unique look, you can even hide them in turf grass. Provided that you don't mow the grass, your lawn will eventually sport little blue flowers, giving it the appearance of a wildflower meadow. I have low growing native grass in my yard which I don't mow, so this technique works very well for me.

Another very similar looking (and closely related) species is Needle-tip Blue-eyed Grass (*Sisyrinchium mucronatum*). It is so named because of its needle-tipped spathes (the leaf-like structure at the top of the plant near the flower). It is much less common (S3) and more of an eastern species; Saskatchewan marks its westernmost occurrence.

Northern Blue-eyed Grass (*Sisyrinchium septentrionale*) is also rare (S3) and doesn't have blue eyes at all! It has white flowers but is otherwise very similar in appearance. Its range is mainly restricted to moist grasslands and aspen parklands of Alberta and Saskatchewan, with a few populations in Manitoba and British Columbia.

Our hardy and beautiful native irises deserve a place in your landscape. Blue Flag Iris and Common Blue-eyed Grass are commercially available from certain native plant retailers; contact the Native Plant Society of Saskatchewan for a list of sellers. Also, as many of our irises are rare, please do not dig any of them up from the wild - enjoy them where they grow.

To learn more about our native irises, you can purchase the Flora of Saskatchewan's *Lilies, Irises and Orchids of Saskatchewan* from our online store at <https://www.npss.sk.ca/store/publications>



Iris versicolor. Photo: C. Neufeld.

Introducing Nature Companion: An Entry-Level Nature App for Canada's Four Western Provinces

"Be an explorer of your own streams and oceans . . . It's not what you look at that matters, it's what you see."

Henry David Thoreau

You're walking in a park or by a river and you spot a small frog, an orange butterfly, a bird pecking on a tree, or a shrub with red berries. What is it? Is the animal you spotted from a distance a coyote or a cougar? What is the tall yellow flower growing beside the road?

Four years ago, Andrew McKinlay was hiking in Big Bend National Park in Texas and was frustrated. He was seeing all sorts of interesting plants, insects, trees, and other wildlife but was struggling to identify them. "What I need is one app that lists the most common plants, trees, animals, insects, reptiles, and birds that I'll find in a particular area," he said. "There are lots of specific bird, flower, or insect guides, but nothing together in one convenient package that I can download on my phone for easy access."

And so began a new EcoFriendly Sask project. Developed for curious observers, people who are interested in nature, the Nature Companion website/app will help you identify plants and animals in your community or as you travel in Canada's four western provinces. In just one app, you'll find basic information about over 300 common plants, trees, birds, animals, insects, reptiles, and amphibians.

Scroll through the colourful photographs and short descriptions to find out more about nature in your community and enjoy the unexpected details in the *Did you know?* section at the end of each description.

Nature Companion is free (no ads or sign up). It can be accessed either on or off line and can be installed on your phone or tablet.

Whether you're travelling in another province, an expert on birds but not on reptiles, young or old, or a newcomer to Canada, we hope you will find Nature Companion a useful guide as you explore the natural world.

If you know someone - or many - who might be interested in Nature Companion, please share it with them.

A huge vote of thanks to our early reviewers who provided so many helpful suggestions that we've done our best to incorporate into Nature Companion. Please email us your feedback at ecofriendlysask@gmail.com - we'd love to hear from you.

PS Check the Help (the ? at the top right) for assistance in installing the app. The initial download may be slow, but the app should be faster after that.

"The lasting pleasures of contact with the natural world are not reserved for scientists but are available to anyone who will place themselves under the influence of earth, sea and sky and their amazing life." Rachel Carson





This issue's COVER PLANT– *Mertensia paniculata*

A common and beautiful wildflower of forest understories, Tall Lungwort occurs in the temperate zone of North America from Quebec to the west coast, and from the northern United States to Yukon and the Northwest Territories. It is a perennial and member of the Borage family and grows about knee high, with a very leafy, almost shrubby, appearance. From June to July, it begins to flower, with clusters of drooping blossoms that often begin pink and then darken to blue as they mature. Generally, this species is mid-successional, meaning that it is most abundant in plant communities that are still changing and moving toward a climax, or final, stage. However, it has been seen colonizing early successional areas such as those that have been recently burned or logged (although it is apparently intolerant of new logging activities in an area where it is already established). In fact, it likely benefits from light to moderate fires, as are common in the boreal forest, due to its ability to quickly resprout. Tall Lungwort spreads by seed and rhizomes, though not aggressively, and is generally balanced with moderate competition from other plants. Tall Lungwort provides valuable nectar for pollinators, particularly bees, and elk, bear and snowshoe hare include it in their diets; in particular, Tall Lungwort was found to be the main component of snowshoe hare diets in Yukon. Traditional uses include cooking the greens as a potherb and using the dried leaves in a tea to treat respiratory conditions. Tall Lungwort is a great garden addition for yards with shady spots. Although they tend to do better in moister soils, they are tolerant of dry soils and often just a layer of mulch is all that is needed to maintain sufficient soil moisture. Germination from seed may be difficult, so it is best to purchase this species as seedlings. To find sources for Tall Lungwort, consult our Native Plant Material and Services Supplier List on our website at: https://www.npss.sk.ca/docs/2_pdf/Native_Plant_Source_List_2013_-_revised.pdf

Corporate Members and Partners

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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Changement climatique Canada



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