



WILDFLOWER NEWS

'Growing Nature's Garden'

MARCH 2022



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Monarda fistulosa, wild bergamot, beebalm, seedlings. Feb. 22, 2022.

From your editor:

Welcome to the Wildflower News for March. Spring is on the way...time to dream and think about what native plants to put in the garden this year!

In Calgary, the annual Prairie Crocus Hunt on Nose Hill is set for March 24th.

Calgary usually warms up ahead of us, but it will be Edmonton's turn soon. If you discover a Prairie Crocus in bloom in March in the Edmonton area send us a pic!

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LETTERS:

Another great edition. (February 2022)

The conservation groups in Edmonton should help promote this newsletter! Thanks.

Rocky

WN: Thanks Rocky. Please feel free to share it!

Thank you for your dedication to educating and encouraging us to grow native plants. I moved away last summer from a large garden full of pollinator-friendly food and habitat. My new home is a ground floor condo with a very large south-facing patio, most of which gets sun and light shade sometime in the day. I have several trough planters and would love to grow native gardens to feed and shelter pollinators through spring, summer and fall. (I think it would be too exposed for winter habitat.) Where can I get ideas for growing native plants in containers?

Bonnie

WN: If you insulate the containers and add a thick layer of leaves in the fall for winter protection, native plants will survive. Be sure to shovel some snow onto the containers every so often. Start with a tough species like Giant Hyssop. It blooms in summer, bees love it and it is edible too!

Add Smooth Aster if you want fall flowers.

Thanks for another great article on grasses, "Grasses of the Edmonton Region. Part 2". It was well researched and very enjoyable to read. And thanks for the link to D. Johnson's article on meadow foxtail which included shocking photos from Beaverhill Lake by Ksenija Vujnovic. I can't wait for Part 3.

Jiri Novak

WN: Thanks, Jiri. Part 3 coming right up!

My sister is a member of the Edmonton Native Plant Society and has been forwarding me your Newsletter over the past year. I live in Ottawa and have always been interested in native plants and grow many in my gardens at home. I have really enjoyed reading the articles in your newsletter and been very impressed with the knowledge and writing skills of your writers. And have also enjoyed the photographs very much.

I have visited Alberta many times over the years and love the native prairie plants.

Claudia Burns

WN: We're very happy to hear that you enjoy it. Thank you, too, for becoming a member and for letting us know of your appreciation for our wonderful volunteer writers and photographers.

Native Plants in Local Gardens

From Patrick Kyle:

Results of second germination test: *Gaillardia aristata* (Gaillardia, blanketflower). 12 of the 30 seeds germinated = 40%. Now growing.

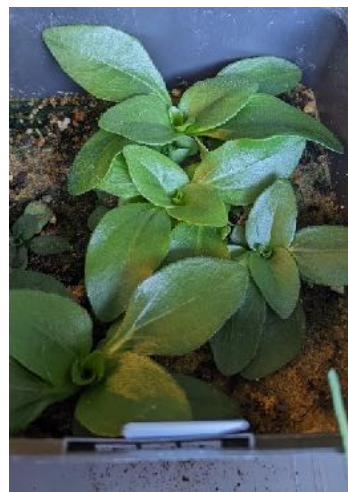


WN: Yes, *Gaillardia* can be tricky to grow from seed. Congratulations on achieving 40%!

From Manna Parseyan:

Some photos of my newly germinated seeds for this year. Yes, it is obvious...I am in trouble already. They need attention and potting up!

Meadow blazingstar, *Liatriis ligulistylis*; golden-aster, *Heterothea villosa*; rhombic-leaved sunflower, *Helianthus pauciflorus* subsp. *subrhomboideus*; wild blue flax, *Linum lewisii*.



WN: Wow! What tremendous and healthy germination.

EVENTS - if you would like to post an event that involves native plants, please email us at engedmonton@gmail.com

Saturday, March 12 - 2022 Alberta Native Plant Council Virtual Workshop **Growing Native Plants.** Here you will learn



from expert growers and restoration professionals presenting on successful native plant gardening and restoration projects. Presentations will touch on seed collection and propagation, considerations for planting sites such as soil, moisture and sunlight, as well as choosing appropriate native plant species. Through case studies, presenters will highlight the benefits of using native plants species, including water conservation and the creation of wildlife and pollinator habitat. Opportunities for open discussion, photo sharing and fun activities will also be provided.

Time: 8:30 am to 4:30 pm

Information and registration: https://anpc.ab.ca/?page_id=7032

Monday, March 21 - ENPS presentation **The Life of Soil.** Something that tends to get overlooked, and is getting more attention in horticultural and naturalist circles, is the role of soils in native plant success. Not just soil's structure, but the interdependent associations that are vital to the soil food web, including soil mycorrhizae, microbial ecology and the plant roots themselves.

Time: 7:00 pm

Please register in advance: <https://us02web.zoom.us/meeting/register/tZcvdO6gpzIqHtDuZc5SiwECi2anW3HIRzBa>

After registering, you will receive a confirmation email containing information about joining the meeting.

NEWS... *If you have a news item involving native plants that you would like posted, please email us at engedmonton@gmail.com*

River Valley Planning Modernization Project by Patsy Cotterill

At the end of February City ecological planners wrapped up Phase 2, public engagement, of a project first brought to the public in 2018, to further the planning done on the southwest and northeast stretches of river valley and ravines that fall within the Ribbon of Green boundary. In 2021 the project was extended to include examination of the River Valley Area Structure Plan (ARP), a statutory bylaw that guides decision-making with respect to development and protection of the river valley.

To date, a number of documents have been placed online to aid the consultation process (Google 'River Valley Planning Modernization').

The Ribbon of Green work involves classifying all land falling within in it into Preservation, Conservation or Active/Working Landscape zones based on the land's natural values, existing human uses of it or those that will be permitted in the future. The (virtual) consultation meetings were largely pre-empted by the issue of mountain biking in the river valley, a contentious debate inflamed by the media and social media. We presume that the mountain bikers took one look at the map provided online and panicked, because the riparian areas were all shown as Preservation zones, which would have shut down many of their bike trails. For their part, conservationists panicked at the idea of short-cutting the decision-making process in the ARP, allowing administration to make decisions, thereby by-passing Council agendas and diminishing the ability of the public to have their say in public hearings. In both cases, the truth, or the end-result, may lie somewhere in between.

We feel it is vital that citizens take a look at the sections of river valley they are familiar with through an ecological lens and think about what current use and, in some cases, abuse is doing to the river valley as a natural environment, a habitat for plants and animals, a corridor for movement of the same. Think also about how it might look in the future, as the population of Edmonton grows, possibly doubling by 2040 or 2050. If you have concerns, please express them to your councillor. The mountain biking lobby is a powerful one and its voice must be counterbalanced by the voice of those who believe the human footprint must be tempered in favour of the ecological welfare and resilience of the river valley and ravines.

If you would like to delve deeper into this issue, Google the City's 2018 Ecological Resources Overview document at https://www.edmonton.ca/public-files/assets/document?path=PDF/RibbonOfGreen_EcologicalResourcesOverview.pdf.

Of particular interest is the Existing Ecological Network on page 26 of the document, followed by the Recommended Ecological Network.

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AWA and CPAWS Concerns with the Additional Sale of Public Lands to Mackenzie County, February 14, 2022

On October 25th 2021, the Minister of Alberta Environment and Parks reaffirmed the Government of Alberta's intent to sell 15,000 acres of publicly owned land to Mackenzie County in northern Alberta. AWA does not support the sale of public lands,

especially when it will destroy native boreal habitat by converting this land into new agricultural space. "The public lands within Mackenzie County serve important ecological services by providing habitat and movement corridors for wildlife in the area," said Phillip Meintzer, AWA Conservation Specialist. "The sale and conversion of these public lands could have severe impacts on species at risk within the region."

Chris Smith, Conservation Analyst with CPAWS Northern Alberta says "The boreal forest plays a crucial role in retaining some of the largest carbon stocks in the world, and the permanent removal of large tracts of forests will be detrimental to Alberta's work on addressing climate change." Both AWA and CPAWS strongly oppose this sale.

For more information please contact:

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A Plant For Every Reason, Part 4. Photographed, researched and written by Wayne Oakes, Edmonton

In this edition I'll look back on some of my observations involving another of our rather large tree species, the White Spruce, *Picea glauca*. This evergreen conifer is native to northern temperate and boreal forests ranging from Alaska, all across Canada to Newfoundland and Labrador's Avalon Peninsula. Over time it has become naturalized into many of the northern United States. This is the only native evergreen that I've seen growing along Whitiemud Creek North, contributing to a treasured forest environment.

When I say, "rather large", it can grow up to 130 feet tall or about 40 meters and the trunk can span just over three (3) feet or a full meter in diameter. In good healthy years the majority of White Spruce will produce a reasonable crop of seed producing cones. Starting in early summer the cones are light green green and not fully ripened and will be about the size of your little finger, swelling as they ripen and turn brown. In late July Red Squirrels will start biting off and dropping these somewhat slimy looking green cones to the ground. As the summer progresses they will be gathered up and stored in various ground level middens or caches as the squirrel's primary winter food source.

Cone production can vary greatly from year to year and can be greatly impacted by environmental conditions, especially moisture. In 2015 our area experienced its last 'mast seed production'. This is a somewhat occasional occurrence when virtually every tree produces massive quantities of cones. That year every tree was absolutely laden with cones. This last mast event came on the heels of several years of extremely dry conditions which may have caused a stress reaction triggering a natural need to ensure adequate reproduction, thus ensuring continuation of the species through new growth.

In addition to food for Red Squirrels these cones are a favourite for White-winged and the less common Red Crossbills. Both of these bird species have specialized beaks that enable them to easily pull the fine seeds from between the cone's scales. Often on winter walks one can see a fresh array of older, mature cones covering the snow. This results from the feeding activities of both species of Crossbill. Chickadees, Juncos, Pine Siskins and several other bird species along with Mice, Shrews and Voles eagerly eat the fine seeds that have been released from the cones and fallen to the ground.



A nature's delight Mar 4, 2018.



Young seed cones Jun 27, 2018.

Despite their spectacular height these are very shallow rooted trees which makes them somewhat vulnerable to being blown over. Even healthy, vibrant trees are susceptible! In open areas one can sometimes see root balls four to five meters in diameter completely uprooted with the attached tree laying prone on the ground. And in some cases, as noted below, occasionally the trunks will shatter as the trees falls.



Impressive root system May 19, 2016.



Mother nature wins May 25, 2017.

In the early to mid spring new needle buds are formed that are sometimes mistaken for seed cones. These cone-like structures soon shed their brown husks revealing a new flush of tender young needles. Like all of our evergreens White Spruce produce an abundance of pollen. While I'm sure many folks will state otherwise, I've read that White Spruce pollen causes no documented allergic reactions. The vast array of other pollen producing vegetation may well be the primary contributing factor(s). In the right conditions the air and everything around can turn a brilliant green from their pollen which is produced by the reddish looking male pollen cones. It is after both of these initial two process that the seed cones really begin to set and take shape.



Last year's cones & new needle buds May 15, 2016.



New needle buds May 28, 2021.



Male pollen cones Jun 3, 2021.



New seed cones Jun 23, 2021.



Squirrel dropping cones. Aug 25, 2019.

Squirrel's midden. Feb 28, 2020.

Squirrel enjoying a cone. Dec 15, 2020.



Red Crossbills eating seeds.
Our last 'mast year' Nov 7, 2015.

White-winged Crossbill, female.
Note the special beak Mar 29, 2016.

White-winged Crossbill, male.
Eating the seeds Feb 17, 2019.

Another fascinating thing that I've noticed is that some 'healthy looking' trees can be very deceptive. Some Spruce can experience dead centers resulting in an infestation of Carpenter Ants. These voracious eaters will chew their way into the dead centers and happily eat away in almost complete privacy; almost complete. Ants are the number one food source for Pileated Woodpeckers which can hear the Carpenter Ants as they chew away at the tree's dead center. The Pileated starts by pecking of either a square or rectangular hole, then going deep enough to access to tasty meal awaiting deep inside.



Top left: Pileated Woodpecker hole Aug 8, 2016.

Middle: Carpenter Ant Jul 25, 2017.

Top right: Seeking ants in a root Feb 17, 2017.

Bottom left: Fallen weakened tree Oct 18, 2017.

Spruce Trees are typically not used by Beavers either as food or as building materials. However, very rarely, the odd large Spruce and some smaller trees will be targeted.



Large felled Spruce, some bark eaten.
Nothing else was used Oct 13, 2018.



These two young Spruce were both felled.
Nothing eaten or used Sep 14, 2018.

The White Spruce provides ample food sources while they are living, and long after individual trees have died through Mother Nature's active recycling activities.



American Three-toed Woodpecker,
male eating larvae Mar 13, 2019.



Black-backed Woodpecker
male eating larvae Mar 12, 2018.



Hairy woodpecker,
male eating larvae Jan 19, 2018



Northern Flicker, yellow-shafted
male eating larvae Oct 23, 2018



Decades of various Woodpeckers
feeding on larvae and ants Mar 28, 2016.



Brown Creeper
feeding on larvae Feb 24, 2018.



Shelf Fungus from top left to right: Sep 28, 2016, Aug 04, 2016, Nov 03, 2016.

Bottom: Moss & Mushrooms Aug 06, 2016.

All my activities conducted while researching and taking photographs for all of my articles was completed while traveling on the maintained trails within the Whitemud Ravine Nature Reserve in the area commonly referred to as Whitemud Creek North.

Grasses of the Edmonton Region, Part 3. by Patsy Cotterill. Photos by author unless otherwise noted.

Some Woodland Grasses

In this issue I am going to feature three native grass species that occur in woodland or forest habitats. Other species occur here too, such as the non-native smooth brome which does well under aspen, or marsh reedgrass in moister forested sites. Generally, however, woodlands are noted for their diversity of trees, shrubs, forbs and mosses rather than grasses. Perhaps, and I speculate here, this is because the majority of grasses flower later in the season, and shade does not promote flowering; as well, the existence of tall plants such as shrubs and trees with lots of foliage hinders pollination and seed dispersal by wind.

Purple false-melic, or purple oatgrass (*Schizachne purpurascens*)

Purple oatgrass, the favoured common name locally, is a perennial grass of woodlands and woodland edges, on soils that tend to be dry. Locally, it often occurs on sandy soils, under deciduous trees or, more frequently, mixed deciduous-coniferous and coniferous stands. The only member of its genus, it is easy to recognize by its graceful, erect at first but later arching and drooping panicle bearing purple-coloured, long-awned spikelets. In June and July it sends up slender flowering stems to a height of 50-80 cm from conspicuous tufts of basal leaves that are flat, bright green and relatively broad (2-4 mm in width). The stalked spikelets are borne on single or paired branches and are long (11-17 mm), narrow and slender, each containing 3-5 florets above a pair of glumes. The latter are thin, transparent at the edges and purplish below, giving the spikelet most of its purple colour. The lemmas are 8-11 mm long with 5-7 distinct veins, and have a tuft of hairs at the base. A long awn, often bent at maturity, extends from a notch below the pointed lemma teeth. The spikelets turn brown at maturity, a signal to seed-collectors that it might be time to harvest the shiny, reddish-brown grains.

Schizachne purpurascens occurs widely across Canada and the central and eastern U.S., and also in Eurasia. Locally, it can be seen in Bunchberry Meadows, especially in the jack pine areas, and in Halfmoon Lake Natural Area where it is abundant and often co-occurs with white-grained mountain rice.



Left: Purple oatgrass plant growing in Bunchberry Meadows, 2021.06.11.

Right: Panicle of purple oatgrass. Photo by J. Derek Johnson, location and date not recorded.

Hairy wildrye, *Leymus innovatus*

Leymus species belong to the wheat tribe of grasses, Triticeae, characterized by having the spikelets clustered into a narrow spike. In older manuals hairy wildrye was named *Elymus innovatus*, but it was fairly recently transferred into a new genus, *Leymus*, the name created by a transposition of the first three letters of *Elymus*. (Two species of *Elymus* that will likely be familiar are Canada wildrye, *Elymus canadensis*, easily seen on the bentonitic slopes of the river valley, and the ubiquitous weedy quackgrass, *E. repens*.) Alternative common names for this forest species are fuzzy wildrye, very descriptive of the greyish-green, softly hairy inflorescence of this grass, and downy lymegrass.

It is a perennial, tufted, but also forming slender, creeping rhizomes. The leaves are flat, 2–5 mm wide, inrolled at the edges and a little rough on the upper surface, sometimes with a bluish tinge. The flowering stems rise 40–100 cm tall, each bearing a single spike 4–10 cm long that has 2–3 spikelets at each node. The spikelets are 10–18 mm long and bear 3–7 florets each. The glumes are very narrow and rigid; the lemmas are 7–12 mm long, with veins covered densely by soft hairs, and have a short awn at the tip.

Native to North America, hairy wildrye is widely distributed across Canada and Alaska and occurs in appropriate habitat in a few northern States. It is not very common in Edmonton, but can be found on dry, wooded escarpments in the river valley, usually in association with white spruce. It is, however, common in the jack pine woods of the sandhill natural areas north of the city, such as Halfmoon Lake and Northwest of Bruderheim Natural Areas. As a boreal species it is fire-tolerant and spreads rapidly by rhizome sprouts and seed after a forest fire. It is really abundant in the lodgepole pine forests of the mountains and, when in flower in July and August, its spikes covered in dangling anthers, it is a splendidly attractive grass.



Left: Spike in flower at Watson Creek Provincial Recreation Area (near Cadomin), 2010.07.27.

Middle: older spike at the former Astotin Natural Area, 2009.07.15.

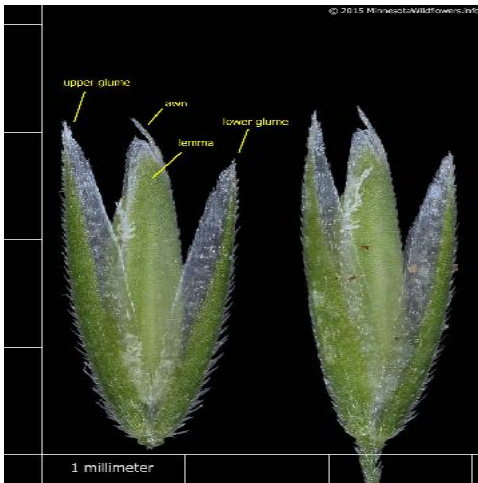
Right: hairy wildrye growing after a fire in open jack pine woods at NW of Bruderheim Natural Area, 2010.08.07.

Drooping woodreed, *Cinna latifolia*

This tall, perennial grass is the latest of our three species to flower. In mid to late summer its long, green, drooping panicles with small, slender, light-green spikelets clustered on the branches stand out above the vegetation of the wet woods and swamps that are its habitat. However, its clusters of very broad leaves (5–12 mm wide) can be recognized well before flowering time. (Note that all these woodland species possess relatively broad, flat leaves. Shade is conducive to the production of such leaves which capture sunlight, as is adequate moisture.)

Stems reach 60–120 cm tall and bear several wide, flat stem leaves as well as the panicle, which is 10–30 cm long. The spikelets are thin, narrow, 2.4–4 mm long and contain a single floret. This floret contains only a single anther, an uncommon feature in grasses which usually have three anthers. The glumes are mostly transparent with green keels that bear short hairs, and are 2.5–4 mm long. The lemmas are slightly smaller than the upper glume, three-veined, keeled and tipped with a tiny awn. Spikelets are brown at maturity and fall off the branch stalk completely, unlike in the other two grasses where the florets fall off leaving the glumes behind.

Drooping woodreed is a circumboreal species occurring widely across Canada and much of the U.S., as well as across northern Eurasia. It is the only member of its genus in Alberta. Locally, it is common in the swamps (treed marshes) of Wagner Natural Area and Elk Island National Park.



Left: Image of spikelet from Minnesota Wildflowers website.

Middle and right: *Cinna latifolia* growing in moist woodland in Marten Mountain campground, Lesser Slave Lake Provincial Park, 2009.07.28.

References:

Canadensys Vascan

Flora of North America, Volume 24. *Schizachne* (page 103); *Leymus* (page 366); *Cinna* (page 774).

Moss, E.H. 1983. *Flora of Alberta*. 2d ed. edited by J.G. Packer. Toronto, University of Toronto Press.

Various online sources and herbarium specimens.

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HELP!!

The ENPS needs a new website as our current platform will no longer be supported later this year. Therefore, we need help with set up, design and on-going maintenance for a new site. If you have experience in this area and are able and willing to offer advice, please contact us at enpsvolunteer@gmail.com. Help us make our website a key resource for native plant information in the Edmonton area.

Websites of the Month:

Are larger patches better when planting for pollinators?

When it comes to planting for pollinators or gardening for pollinators, the traditional advice has always been to plant larger patch sizes or clumps of plants. The thought is that the larger patch sizes will be easier to see and more attractive to pollinators than smaller clumps or patch sizes. But saying that assumes that all pollinators are attracted to the same thing and that they respond to different species of plants in the same way.

<https://www.backyardecology.net/are-larger-patch-sizes-better-when-planting-for-pollinators/>

Mosses and liverworts...



Those with a taste for the finer (or, smaller) things in life enjoyed bryologist Brittney Miller's virtual presentation, hosted by the ENPS, on February 21st. She profiled a number of local mosses and liverworts before leading us on a virtual tour in Edmonton to find some of these diminutive, microhabitat-specific, non-flowering plants. And believe it or not, Edmonton can boast two rare liverwort species! Brittney is currently working on a field guide to 170 species of bryophyte, with more species to be included eventually. With more knowledge of this group of plants she hopes to be able to get a better handle on their distribution in Alberta.

For now, check out the following identification resources:

Free guide to peatland mosses and liverworts through NAIT:

<https://www.nait.ca/docs/BRI-Field-Guide-Mosses-Liverworts-Alberta-Peatlands.pdf>

British Bryological Field guide:

<https://www.britishbryologicalsociety.org.uk/publications/field-guide/>

ABMI Biodiversity browser:

<https://www.abmi.ca/home/data-analytics/biobrowser-home/species-list?groupId=5>

Rare Mosses and Ferns of the Arid Dry Grass Prairie.

This must be the month for mosses! Here's a presentation given to the Society of Grasslands Naturalists by Ron and Cathy Linowski, retired environmental scientists.

https://drive.google.com/file/d/1E-egtYa8701ix1hiRNqX1SRBblqi_W60/view?fbclid=IwAR2hyrq_qry7wdhMwazjFi9alcfMkmOhvJ9Mfwr_SM0gy22Ge2McYpONiq0

Something Different:

Nature Alberta Guides and Checklists

These can be viewed on line as a flip book or downloaded as a pdf from <https://naturealberta.ca/guides-checklists/>

Supporting Nature and Biodiversity in Urban Yards

A Homeowner's Guide to Protecting Birds of Alberta

Important Bird and Biodiversity Areas of Alberta

Exploring the Science Behind Citizen Science: Recording Now Available

Did you miss Dr. Richard Schneider's presentation on Exploring the Science Behind Citizen Science? You can watch it on [YouTube!](#)

Lifetime ENPS Membership

You can now become an Edmonton Native Plant Society member for life. Memberships are \$20 and can be purchased by emailing enpgmembership@gmail.com or visit one of our booths at plant events in your area.

Aims of the Edmonton Native Plant Society:

- ❖ Promote knowledge of the Edmonton area native plants.
- ❖ Conserve our native plant species and their habitats.
- ❖ Preserve native plant species and habitat for the enjoyment of present and future generations.
- ❖ Educate individuals, business and local governments about native plants.

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To unsubscribe, or subscribe, email engedmonton@gmail.com

Cherry Dodd, editor

Judith Golub, publisher

www.edmontonnativeplantgroup.org



First seed sale of the season!

ENPS table set up and ready to go at the Sakaw Gardens Seedy Saturday, Millhurst Community League, February 12.