Edmonton Native Plant Group

Wildflower News

'Growing Nature's Garden'

August 2022

Fireweed (*Chamaenerion angustifolium*), July 2022.

From your Publisher:

Welcome to the Wildflower News for August. Please consider responding to the survey on the proposed Big Island Provincial Park; the link is in the News section. This ecologically sensitive area should see conservation of the ecological heritage as being the primary objective. ENPS has been keeping an eye on this area for quite a number of years and monitoring the abundance of native species to be found here. It seems that human interactions must be restricted to walking based activities along designated trails with minimal infrastructure and facilities as being the best proposal.

In This Issue:

Native Plants in Local Gardens and Natural Areas

From Margriet van Laarhoven - Not a bad view from my kitchen window.

Clockwise from top are giant hyssop, gaillardia, three-flowered avens and wild blue flax.

From Sue Panteluk - from my garden - combining lovely native plants with non-natives - fireweed *(Chamaenerion angustifolium*) and delphiniums and yellow evening primrose (*Oenothera biennis*) and veronica; from Bunchberry Meadows - giant hyssop (*Agastache foeniculum*) amongst Philadelphia fleabane (*Erigeron philadelphicus*).

From Manna Parseyan - the bouquet in my garden.

The white flower is Yarrow (*Achillea borealis*).The yellow on the right is Western Canada Goldenrod *(Solidago lepida*). The yellow on the left is Yellow Evening Primrose (*Oenothera biennis*). The pink is Wild Bergamot/Native Beebalm (*Monarda fistulosa*). The light purple in the middle is Smooth Aster (*Symphyotrichum laeve*).

From Alan Jones - my boulevard patch in July - complete patch facing east; wild bergamot, (*Monarda fistulosa*); showy aster, (*Eurybia conspicua)*.

WN: What beautiful native plant gardens you all have. Such a treat to see them!

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

Wednesday, August 3, Celebrating River Relationships!
The Edmonton River Valley Conservation Coalition in partnership with Swim Drink Fish is hosting an evening in the park to celebrate the natural diversity of Edmonton's river valley and promote connection to nature within our local community. ENPS will have an information table there and you may bring photos for ID of what you think might be a native plant. Following the opening ceremony at 5:00 PM, enjoy interactive displays from local organizatons, snacks and refreshments, a water park, and a solar gazebo while deepening your understanding of water and wildlife in Edmonton's river valley. Please register for the event here.
Time: 5:00 to 8:00 pm
Location: Riverdale Solar Gazebo, 9231 100 Avenue Northwest Edmonton.
Admission: Free, but please register.

Wednesday, August 10 - Nature Alberta's Family Nature Nights: Wetland Champions hosted by Alberta Amphibian and Reptile Conservancy, BLESS and Nature Alberta. For more info: Wetland Champions
In this festival-style event, families will explore the nature stations at their own pace. Complete your passport by visiting all activity stations and earn a prize! ENPS will be there. Will run rain or shine. In the event of extreme weather, notice of cancellation will be posted on the NA Facebook page and in the Facebook Event Discussion.
Only a limited number of families can be accommodated at these events. Be sure to arrive early to secure your family's spot.
Time: 6:00 to 8:30 pm. Registration from 6:00-7:00 pm.
Location: Lois Hole Centennial Provincial Park, 400 Ray Gibbon Dr., St. Albert
Admission: Free, but please register. Donations are appreciated!

Tuesday, August 16 - Forest Walk in Whitemud Ravine Park South
Join tree expert and forester Toso Bozic for a walk in Whitemud Ravine Park South. The trip will focus on urban forest ecology and, with Toso's guidance, we will examine tree health and pathology, and community processes such as disturbance, erosion, invasive plants, succession and regeneration. We can discuss management issues in urban forests. In the event of heavy rain being forecast, we will re-schedule but otherwise the walk will go ahead.
Time: 10:00 am to 1:00 pm.
Location: Park and meet in the Snow Valley parking lot.
Admission: Please register by emailing enpsvolunteer@gmail.com.

Sunday, August 21 - **Garden Festival** - ENPS will be in attendance with plants and seeds for sale.
Time: 11am - 4pm
Location: Parkdale/Cromdale Community Hall, 11335 85 Street NW, Edmonton.

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

Proposed Big Island Provincial Park Survey
The Alberta Government in cooperation with the City of Edmonton and the Enoch Cree Nation are looking for your feedback on a proposed new Provincial Park within Edmonton. Even if you don't call YEG'ville home but live in Alberta, you are encouraged to have your say. **The consultation closes August 21,2022**. Please consider a focus on conservation efforts when responding to the survey: http://sapaastewards.com/.../12/your-big-say-on-big-island/

Big Island is an ecologically sensitive area which has seen considerable disturbance over the years. As a result, the primary objective of the park should be conservation of the ecological heritage. Human interactions must be restricted to walking based activities along designated trails with minimal infrastructure and facilities. This will best protect Big Island's habitat. There will be demands for other recreational opportunities in particular mountain biking. In addition to the erosion and disturbance, such trails tend to proliferate when mountain bikers create off-shoot, informal routes. This and like activities results in diminished protection and increased habitat fragmentation.Human interactions must be restricted to walking-based activities along designated trails with minimal infrastructure and facilities. This will best protect Big Island's habitat and rare species.

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Farewell to Katrina (Kate) Wilson

Regrettably, this month we say farewell to Kate Wilson, who will be returning to her home base of Peace River. ENPS offers her many thanks as she has been a valuable member of the ENPS since 2014 and for the last two years has worked hard to keep the Society's books in order, taking over from Trudy Haracsi as treasurer. In this capacity she has managed the Society's Creative Sentencing grant for the Wagner eco-islands project, as well as general society financial matters. ENPS is pleased to announce that an existing board member, Patrick Kyle, has kindly agreed to take on the substantial role of treasurer on Kate's departure. Thank you Patrick!

Kate loves hands-on work with plants (as she indicates in her message below) and has also been a regular volunteer at Fort Saskatchewan Prairie for several years. She also enjoys writing and communicating the work of ENPS, and has worked on poster and presentation development for the Society.

We wish her well as she settles in and becomes a volunteer in a new community, where no doubt she will be looking for similar native plant projects to get involved in. She promises to return to Edmonton occasionally to visit and see how her native beds are coming along.

Kate says: "Since my first encounter with Edmonton Native Plant Society eight years ago, at the Bloomin' Garden sale, I've learned so much about our prairie species. But more than anything, I've valued this amazing group of dedicated and hard-working stewards of our natural heritage, not to mention the friendships.

Two native beds I started: I wanted to add to the network of native wildflower species that are important for the urban ecology. So, with retrievals from McLeod Creek, Old Man Creek nursery and plants grown by ENPS, I started the Alberta Avenue community garden native bed. It's now flourishing with monarda, meadow blazing star, wild geranium and many more, including a few stand-out grass and *Carex* species. The *Artemisia ludoviciana* is especially popular with gardeners, for its fragrance and ceremonial uses.

Eastwood Community League, just six blocks to the east along 118 Avenue, has a micro-park where people can take a break amongst a small collection of raised beds. I've converted two of the beds to wildflower beds, and added signage to let passers-by know the significance of what they're stopping to enjoy.

If anyone wants to take on some maintenance at the Alberta Avenue bed, get in touch with me and I'll set up a time with Alberta Avenue Community League. I can be reached at katewilson@telus.net."

Alberta Avenue community garden native bed with meadow blazingstar, *Liatris ligulistylis,* and Eastwood Community Wildflower Bed. Photos by Kate Wilson, July 2022.

ENPS: Because Kate is leaving us, ENPS is now a board member down and will be looking to recruit a replacement at the next AGM in the fall. Please consider joining our Board!

Field Trip to Everything Prairie by Liz DeLeeuw

On Sunday, July 10th Cherry Dodd and myself, Liz Deleeuw, led a walk of about 8 people to Everything Prairie which is located east of Fort Saskatchewan. Everything Prairie is one of a number of prairie remnants found within sight of a rail line. These remnants likely survived because of the rolling terrain, the sandy soil, and their proximity to the rail line.

The area has a lot of oil field and pipeline activity. The land is likely leased or owned by the oilfield companies but we are unsure of ownership. We only venture onto land that is not fenced and is accessible from the road.

We met at a roadside pullout at noon and explored for a bit at what we call Railway Prairie. Railway Prairie is the area that was first discovered by early members of what was then the Edmonton Naturalization Group. They noticed native grasses growing along the roadside and when they explored the area they found intact prairie. Since that time parts of these intact landscapes have been disturbed by pipeline building activity. Some were bulldozed for pipeline installation. Some succumbed to excess piles of fill material being dumped on them. Nevertheless some still survive.

The walk to the prairie is challenging because of uneven ground, dense vegetation, and a big population of Reed canary grass to get through. The grass reached the top of our heads at times. When we got to the prairie some rested, some wandered around and more than a few expressed their disbelief at all of the species with many individual plants spread across the area. That is why we call it Everything Prairie. Gaillardia, False dandelion, Purple prairie-clover, Wild bergamot, White evening-primrose, Low milkweed, White cinquefoil, Spear grass, Needle-and-thread grass, June grass, Meadow blazingstar, Harebell, and Kinnikinnick are some of the species I remember.

Some of the group were busy finding the Prairie crocus plants and found a whole bunch. Early spring would bring all of those into bloom.

The Wild bergamot was especially special. It was everywhere. The Indigenous people say that every plant has a year when it thrives. This year is Wild Bergamot for sure.

The prairie is an invaluable seed source for us as it provides genetic diversity from which to collect seed. The government of Alberta needs to amp up its protection of these special landscapes as presently there are very little protections in place. Development proceeds with very little consideration of the rarity of these special landscapes.

I always think about how the Indigenous people and early settlers saw the land in the past. This prairie gives us a brief glimpse. About four hours after we started we were back in the parking area and on our way out of the past and back to the present.

L. There was a lot of super tall non-native Reed Canary Grass to wade through. Photo: N. Stairs.
C. Wild bergamot, *Monarda fistulosa*.Photo: M-J Gurba-Flanagan.
R. A true wildflower meadow. Photo: N. Stairs.

Field Trips to Gibbons Prairie, July 10 and 15 by Kathleen Mpulubusi

The Gibbons Badlands Prairie is located on the west bank of the Sturgeon River, opposite the town of Gibbons. It is about a 1km stretch of native prairie grassland with exposures of the Edmonton formation which is the same rock seen in the Badlands further south. It's a little slice of Badlands here in the Edmonton area which makes it very unique and special.

The trip leaders were myself, Cherry Dodd and Kate Spencer. Altogether there were 25 participants for both trips. The plant stars of this area are the prairie plants. Chief among them is the Fragile Prickly Pear (*Opuntia fragilis*). It grows along the rock faces where it is the hottest. As the name implies the little pads break off easily and you can get souvenirs in your shoes if you are not careful. Fragile Prickly Pear is the northernmost cactus growing in North America also found here up in the Peace River area. On the Sunday trip, the cactus was not in bloom but on the Friday trip it was with its beautiful yellow flowers. Other flowers of note blooming were as follows:

Prairie Cinquefoil (*Potentilla pensylvanica*)
Curly-cup Gumweed (*Grindelia squarrosa*)
Shining Arnica (*Arnica fulgens*)
Prairie Sage (*Artemisia ludoviciana*)
Narrow-leaved Collomia (*Collomia linearis*)
Philadelphia Fleabane (*Erigeron philadelphicus*)
Dogbane (*Apocynum androsaemifolium*)
White Cinquefoil (*Drymocallis arguta*)
Spiny Iron Plant (*Xanthisma spinulosum*)
Pasture Sage (*Artemisia frigida*)
Scarlet Mallow (*Sphaeralcea coccinea*)
Northern Bedstraw (*Galium boreale*)
Smooth Fleabane (*Erigeron glabellus*)

Among the colourful wildflowers on the badlands slopes at Gibbons Prairie we observed several grass species present, including the particularly attractive blue grama and June grass.

On the moister banks close to the Sturgeon River and in the drainages in the gullies a variety of shrubs grow, including Wolf Willow (*Elaeagnus commutata*), Buckbrush (*Symphoricarpos occidentalis*), Saskatoon (*Amelanchier alnifolia)* and Narrow-leafed Meadowsweet (*Spiraea alba*).

The Gibbons prairie is a wonderful gem in the Edmonton area. Native grassland is one of the most threatened ecosystems in North America and vitally important as a place of carbon storage.

This land is owned by the Town of Gibbons. Unfortunately the fence is broken down in many places and the signs stating this is a protected area have been removed. ENPS will be contacting the Town to state our concerns and hope that the fence and signage can be repaired.

“Of all the paths you take in life, make sure a few of them are dirt.” - John Muir





Badlands Plants: Fragile Prickly Pear (*Opuntia fragilis*) in full bloom and fading; the prairie with Green Needle Grass; Scarlet Mallow (*Sphaeralcea coccinea*); and Gumweed (*Grindelia squarrosa*). Photos by K. Mpulubusi (cactus in full bloom); the others by K. Spencer, July 2022.

Second Pollinator Field Trip at Bunchberry Meadows

Seven people attended the second pollinator field trip at the nature reserve on the evening of July 22, led by Meghan Jacklin of the Alberta Native Bee Council with members of the ENPS present. Bees, wasps and cleverly concealed spiders were scrutinized, with the flowers of the newly established beds close to the parking lot providing the focus of interest, both botanically and entomologically. Again, creatures were netted and briefly confined in a glass bottle for examination and photography.

Oleskiw Observations: Bedstraws, Poison Ivy and Others by Hubert Taube. All Photos by author.

In the September 2021 issue of the Wildflower News I reported on my observations of fthree native bedstraw species: *Galium boreale, G. triflorum, G. trifidum* and the non-natives *G. verum and G. mollugo,* the last one being a tentative identification.

I can now add the non-native cleavers bedstraw, *G. aparine,* and the native Labrador bedstraw, *G. labradoricum*, to my lifelist.

I found *G. aparine* in built-up neighbourhoods close to my house: one in Oleskiw Park, a city designated tableland natural area, presumably an escape from a neighbouring garden and another along a fence line separating a residence and a sidewalk.

On a trip to Kilini Creek Natural Area (PNT), walking towards Golden Pond, I had my first encounter with Labrador bedstraw (also called bog bedstraw), *G. labradoricum*. This species closely resembles three-petal bedstraw, *G. trifidum*. A distinguishing feature is the number of petals: three for *G. trifidum* and four for *G. labradoricum*, although on some occasions the reverse can also be true.

Cleavers bedstraw,
G. aparine, Oleskiw Park, 22 06 15


L. Labrador bedstraw, *G. labradoricum*, patch, Kilini Creek NA, 2022 07 04

R. Labrador bedstraw, *G. labradoricum*, detail, Kilini Creek NA, 2022 07 04

I'm keeping a close eye on the so-called *G. mollugo* observations in my neighbourhood; in particular, on the Wakina patch and on a new quite extensive patch on the Oleskiw Slope trail.

Currently (end of July 2022), the Oleskiw Slope patch shows prolific flowering and fruit development while the Wakina patch (being in a dark, less exposed area) has no signs of flowering.

The River Valley Oleskiw area (between the Ft. Edmonton and Terwillegar footbridges, on the "northside" of the river) appears to be host for a number of rare-to-Alberta invasives: Burnet saxifrage, *Pimpinella saxifraga*, Lady's bedstraw, *G. verum*, and the presumed hedge bedstraw, *G. mollugo*. We (Patsy Cotterill and myself) speculate that these weeds were introduced by the former Oleskiw hayfield farmer having hayseed imported from England.

L. Burnet saxifrage, *Pimpinella saxifraga*, Oleskiw gravel trail, 2022 07 23.

Above and R. Hedge bedstraw, *G. mollugo*, Oleskiw dirt trail, leaf arrangement, flower heads, and young seedheads, 2022 07 23.

I distinguish three parts in the Oleskiw area: Oleskiw Woods, the tree covered area along the river; Oleskiw Meadows, the wide-open abandoned hayfield to the west; and Oleskiw Slopes, located between the Ft. Edmonton footbridge and Wolf Willow Creek.

The initial observations of *G. verum* and *P. saxifraga* were along the edge between the Oleskiw Woods and Meadows; but now I see them also on the Oleskiw Slopes and beyond on top-of-bank locations. As a matter of fact, I have seen both species in River Valley Cameron on trails near the E L Smith Water Treatment Plant, an area now made inaccessible by the Solar Farm; and I believe there are also reports from Terwillegar Park.

And now to observations of the poison ivy:

When talking about poison ivy, *Toxicodendron rydbergii* (also called *T. radicans*) to Edmonton residents, who have some acquaintance with southern Manitoba, you frequently hear the comment: "Aren't we are lucky that we don't have poison ivy here". Examination of iNaturalist records for Alberta seem to confirm this.

This assessment was generally true for myself as well … until the fall of last year. Now, however, I no longer agree and I feel that Oleskiw is a veritable hotbed for this species of concern. I'm very surprised that I haven't noticed this during all my wanderings through the Oleskiw valley in last 20+ years.

Anyway, I made one observation late last year and then I followed up with further investigations during July 2022. I noticed there is extensive spread all along the Oleskiw slopes: from the uplands near Woodward Crescent, along the gravel track into the valley and, in particular, an almost continuous spread along the Oleskiw Slopes trail (recently cut by a mountain biking group, unauthorized?).

The question arises if the mountain biking activities have in fact contributed to this extensive invasion. If so, some limitations should be placed on further expansion of mountain biking trails.

Poison ivy, *Toxicodendron rydbergii,*

L. mature seedhead, Oleskiw dirt trail, 2021 11 06.

R. leaves-of-three, Oleskiw top of bank, 2022 07 14.

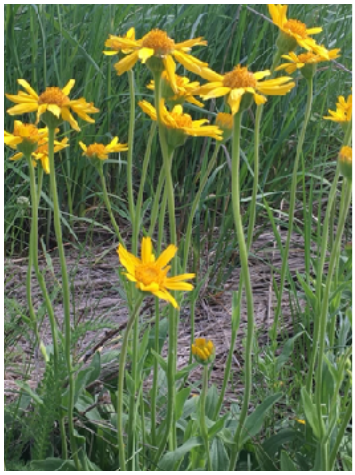
L. extensive spread, Oleskiw dirt trail, 2022 07 14.

R. young fruit, Oleskiw dirt trail, 2022 07 14.

As before I encourage all readers to provide comments to the WN editor; in particular, about the “discovery” of *G. mollugo* as a new species for Alberta.

The Low-down on Those Darned Arnicas! by Patsy Cotterill. Photos by author unless otherwise noted.

In the July issue of WN, a population of Arnica in photos taken in Nisku Prairie was wrongly identified as shining arnica, *A. fulgens*. In fact, it appears that the populations of Arnica in Nisku seen so far are all leafy or Chamisso’s arnica, *A. chamissonis*. There has been some confusion between the two species, including plants that have been transplanted into gardens. There are 11 species of Arnica in Alberta as a whole, although most of them grow in the mountains. We have two lowland species locally, the aforementioned *A. fulgens* and *A. chamissonis,* the latter being by far the more common and widely distributed across the province, including in the mountains. With *Arnica* having an excellent blooming year, now seemed like a good time to revisit some sites and clear up the confusion.



One of the pictures shown in the July issue of Wildflower News identified as shining arnica. It is leafy arnica, but it does show some characteristics of shining arnica, in not having particularly leafy stems, and single heads. Nisku Prairie, 2022.06.22.

In attempting to distinguish between related species it is important to look at the key characters that are considered to reliably separate them, such as are indicated in keys in plant guides and floras. Kershaw and Allen’s key in the Vascular Plant Guide, following the key in Flora of Alberta, separates the two on number of pairs of stem leaves: if the plant has 5-12 pairs, this leads to *A. chamissonis*; if it has 1-4 pairs, the key leads to *A. fulgens*. A problem can arise, however, when a specimen of leafy arnica (*A. chamissonis)* only has 4 pairs of leaves, especially if its lowermost leaves have withered by flowering time.

More reasonably, the key to Arnica in Flora of North America (FNA) separates out the two even more simply: if the leaves are mostly basal you quickly arrive at *A. fulgens*; leaves mostly on the stem (cauline) leads to *A. chamissonis*.

You don’t even have to count the number of leaf pairs on the stem. In the field, this character difference means that the two species look strikingly different. *A. fulgens* presents with straight, upright, bare-looking flower stalks, with only a pair of reduced stem leaves and the main leaves confined to prominent rosettes at the base. In contrast, the flower stems of *A. chamissonis* present as incredibly leafy, with large, toothed or toothless, stalkless leaves that often appear to weigh down the stem, causing it to bend over or become semi-prostrate. There are other differences too. *A. fulgens* usually bears a single composite flower head, whereas in *chamissonis* the top of the stem is branched and bears several large flower heads, making it the showier plant. Several other differences are less obvious. The FNA key notes that the basal leaf blades of *A. fulgens* have 3 or 5 subparallel veins, which are lacking in *chamissonis.* The tips of the involucral bracts in the latter should have discernible tufts of white hairs, although these are not always easy to make out on the generally hairy involucre.

L. Typical leafy arnica (*Arnica chamissonis*) in Nisku Prairie, 2022.07.03.
L.C. Shining arnica (*A. fulgens*) past flowering in Gibbons Badlands Prairie, 2022.07.09. The photo shows the reduced stem leaves, persistent basal leaves and single flower heads.
R.C. Basal leaves of shining arnica showing prominent parallel veins. Lowest basal leaves and the stem bases bear tufts of brown hairs. Gibbons Badlands Prairie, 2022.07.25.
R. Fruiting heads of shining arnica, with basal leaves dried up. Gibbons Badlands Prairie, 2022.07.25.

In addition, *A. fulgens* has tufts of brown hairs in its lower leaf axils and around its base, although seeing this character may require pulling the shoot out of the ground; *A. chamissonis* does not. This character is more important, however, in distinguishing *fulgens* from its sister and look-alike species, *A. sororia*, a denizen of Alberta's more southern prairies.

So why all the confusion? Some of it has to do with the key: the strict cut-off between 1-4 and 5-10 pairs of stem leaves may not always hold. The fact that we don't often find the two species together on the same site does not allow for a direct comparison. The two species do co-occur at Gibbons Badlands Prairie, although *A. fulgens* is by far the more common there, and I suspect this is because the badlands represent a more southern grasslands flora. If people do come across *A. fulgens* elsewhere in the Edmonton to Red Deer area I'd be interested in hearing about it.

Another source of local confusion may be that the population of leafy arnica in the middle field in Nisku Prairie is not typical. The population in the south field is very typical, leafy and multiple-headed, whereas that in the middle field has fewer leaf pairs and mostly single-headed flower stalks, and so approaches *A. fulgens* more in appearance. The basal shoots I have examined do, however, appear to lack any brown hairs, which should be present if the species is *A. fulgens*.

The literature gives no hint of hybridization, but FNA had the following of interest to say about the genus Arnica: "*Arnica is circumboreal, predominantly montane, and exhibits maximum species diversity in western North America. It includes common and very widespread species as well as relatively uncommon, narrow endemics. Polyploidy and apomixis are common in the genus, resulting in considerable morphologic variability. Arnica montana from Europe has been used medicinally for centuries, and unsubstantiated claims have been made regarding the medicinal properties of some North American species."* Note the point about morphologic variability.

Incidentally, I'm reminded from the citations that some taxonomists at the University of Alberta worked on Arnica in the late 1980s and early 1990s: Steve Downie, William Gruezo, Steven Wolf and Keith Denford. Their specimens are in the U of A herbarium, indicating the importance of herbaria to the progress of taxonomy.

I should note that the populations in Nisku have appeared in considerable numbers this year after removal (by herbiciding) of invasive meadow foxtail (*Alopecurus pratensis/arundinaceus*), which occupies the lower, moister spots in the Prairie, microsites also favoured by *Arnica*. Without any further intervention on our part, these areas have been colonized by natives such as leafy arnica, woolly yarrow, narrow-leaved meadowsweet and even prairie onion over the last couple of years. It has been heartening to see!

Additional notes:

- Both species are rhizomatous perennials, with A. *chamissonis* having the longer rhizomes.

- In leafy arnica the broadly lanceolate, entire or toothed stalkless leaves occur in 4-10 pairs along the stem. Ray florets are yellow and the pappus is straw-coloured. The species also occurs in both the lowlands and the mountains; it can reach heights of up to 160 cm on the moist subalpine slopes near Cadomin, for instance. It is widely distributed across Canada (except the Maritimes) and the western U.S.

- Shining arnica has 3-5 pairs of stalked, narrowly oblanceolate to oblong, toothless leaves, mostly confined to the base of the plant, reduced in size and distantly arranged upwards. Ray florets are more orange-yellow and the pappus is lighter in colour. A grassland plant that also occurs in the foothills, it has a western North American distribution that reaches only as far as Manitoba in Canada.

References:

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Grasses of the Badlands. Part 8. By Patsy Cotterill.

In this session I will take a look at some of the grasses that occur in our badland habitats, geological formations of clay and sand that have been formed by erosion of geological strata by rivers. They provide an opportunity for the expression of a grassland flora that is more characteristic of the southern prairies, and that is more particularly confined to clays slopes. I'll make particular reference to a local badlands escarpment which we've named Gibbons Badlands Prairie, but some of these species can also be found in the North Saskatchewan River valley in Edmonton.

Blue grama, *Bouteloua gracilis*

Blue grama (*Bouteloua gracilis*) at Gibbons Badlands Prairie, 2022.07.25. Photos: Manna Parseyan.

Let's start with an easy one first. Blue grama is so distinctive that most people can recognize it immediately by eye. It is a low, tufted perennial with rhizomes that allow it to form a dense, lawn-like sod in suitable habitats. Its narrow leaves characteristically curl, giving it another moniker as a main component of "prairie wool" in which it constitutes an important forage grass, tolerant of grazing. The flower stalks bear one or two spikes at the tip, which are comb-like, 1.5-4 cm long and usually purplish. The hairy, 4-6 mm, spikelets are densely packed in two rows on one side of the horizontal spike stalk, giving rise to the popular name of "eyelash grass," although in fact they look more like tiny brushes. The spikelet looks purple because of the long, pointed upper glume, and each contains one fertile floret with a membranous lemma of 3.5-6 mm, whose five lobes are capped by tiny purple awns and which is white-hairy at the base and along the midvein, and one (sometimes two) sterile floret(s) with a lemma that is shorter, but whose three purple awns are longer, as are the basal hairs.

Western wheatgrass, *Pascopyrum smithii*

Left: western wheatgrass (*Pascopyrum smithii*) colony on grassland slope in Gibbons Badlands Prairie, 2022.07.25. Photo: P. Cotterill.

Right: single spike of western wheatgrass In same area. Photo: Toni Ross.

This is a distinctive, grey-blue-coloured member of the wheatgrass tribe (Triticeae) that readily colonizes badland slopes, gullies, and other ground with diminished vegetation by means of rhizomes. It is a conspicuous presence in Gibbons Badlands, and flowers in July, its long (4 mm) anthers dangling attractively from blue-green spikes held up to 60 cm above a tuft of similarly coloured flat or inrolled leaves. The spikelets on either side of the (5-17 cm) spike stalk are rather closely arranged and overlapping, each about 2 cm long and consisting of 6-10 florets. The glumes are about 10 mm long, narrow, rigid, stiff, keeled, prominently nerved, broadest towards the base, straight-sided and tapering gradually to a point, with the midvein curved to one side; each is only somewhat shorter than the adjacent lemma. The lemmas are usually hairless if a bit rough to the touch and usually have a short awn at the tip. I dwell on these characters of the glumes and lemmas because they can be important in distinguishing western wheatgrass from another common grass of badland habitats, **northern wheatgrass** or northern wildrye, ***Elymus lanceolatus***. This grass can have bluish foliage, but its spikes appear less congested and thinner as the spikelets are more loosely arranged and have generally fewer florets (4-8). Its glumes of 5-8 mm are in contrast flat or rounded on the back, broadest above the middle from which they taper more abruptly to a point, with a straight midvein, and are mostly about half to three-quarters the length of the lemma. The lemmas are awnless to short-awned and can vary from hairless to densely hairy depending on which of the three recognized subspecies the plant

belongs to. These are subtle differences between the two species that require some magnification and experience to interpret. I suspect there may be differences in flowering time at Gibbons Badlands Prairie which could be worth investigating as an aid in identification.

Both are wide-ranging species across North America in appropriate habitats, although they may be more abundant in the West.

Sandgrass/prairie sandreed/sand reedgrass, *Calamovilfa longifolia/Sporobolus rigidus*

Left: sandgrass, *Calamovilfa longifolia*, colony on badland slope,Gibbons Badlands Prairie, 2022.07.25.
Photo: Manna Parseyan.

Right: close-up of panicle branches of sandgrass showing open flowers with stamens and stigmas. Photo: P. Cotterill.

I personally continue to use the scientific name *Calamovilfa longifolia* for this species. This is a break with my usual practice, which is to follow the Canadensys Vascan database, and hence the Kershaw/Allen key guide which is based on it, where these differ from the Flora of North America treatment (which in this case retains *C. longifolia*). This name is descriptive, even the “Calamo” portion suggesting a similarity of the delicate panicle of sandgrass to that of *Calamagrostis*, but more than this, the plant is so distinctly different from the species of *Sporobolus* that I know, *S. cryptandrus*, sand dropseed, that it stretches credulity to believe they are in the same genus, at least morphologically. Likely this is an example of nostalgia rather than good science, but some of these taxonomic name changes are indeed shocking!

Sandgrass is a perennial grass that sends up its tall fertile shoots in late summer but can be recognized much earlier by the distinctive, bluish-green colour of its abundant, long leaves that tend to bend over. It spreads chiefly by elongate rhizomes which bear shiny, hard, scale-like leaves and allow the plant to form colonies on the sandy soils it favours or on sandy outflows in badlands terrain. It functions as a binder of sand dunes. The branches of the panicle (up to 30 cm long) are erect or ascending, and support narrow, awnless spikelets that contain a single floret. The thin glumes, pale at first but later becoming purplish or brownish, roughly equal in size and at 4-7 mm long similar in length to the lemma and palea, have prominent midveins (perhaps the source of its new species name?). A dense tuft of white hairs at the base of the floret persists in the grain, aiding seed dispersal.

Sandgrass occurs across Canada from the west as far as Ontario, and in the central U.S. except for the southeast and southwest. Locally it is common in Fort Saskatchewan Prairie and on the badland slopes in Gibbons Prairie. A wish of mine is that all the smooth brome in Fort Saskatchewan Prairie could be replaced by sandgrass, a restoration project that might even be feasible given the resources. Unfortunately, things tend to go the other way. A dense stand of sandgrass was removed when a portion of the asphalt surrounding trail was constructed. The sandgrass did not recover and was replaced immediately by, guess what, smooth brome, a grass that takes advantage of the slightest disturbance!

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Websites of the Month:

A New Facebook Page - Friends of Fort Saskatchewan Prairie Started by volunteer Sheldon Helbert, the Friends of FSP

is a group dedicated to the people of the City of Fort Saskatchewan and others in the region that support the City's goal of preserving this remnant grassland prairie ecosystem and that may also participate as part of the community in achieving this goal. Whether you are an occasional walker of the FSP, someone that regularly recreates in the FSP, love the diversity and flowers that many of the 150+ species of plants have to offer, the FSP and this group is for you.
Feel free to post photos and follow this Group to keep up to date with FSP activities. With your help these activities and events will bring people together and conserve the inherent ecological values of the FSP.
If you wish to volunteer please post on this group page and we will answer your questions and help get you oriented on what we do. If you see an event planned that you would like to volunteer for then contact us to sign up.
This is a new Group and the page will evolve over the next few months. Friends of Fort Saskatchewan Prairie

***Supporting Nature and Biodiversity in Urban Yards* booklets from Nature Alberta** You can protect nature in your own backyard. *Supporting Nature and Biodiversity in Urban Yards* shows you how, with tips and resources to attract pollinators, landscape for biodiversity, live with urban wildlife, and more.
Online flip book: https://online.fliphtml5.com/ffxrj/lwob/#p=60
Download: https://naturealberta.ca/wp-content/uploads/2020/10/Urban-Nature-Checklist.pdf
Purchase a print copy: https://nature-alberta.square.site/product/supporting-urban-nature-and-biodiversity-in-urban-yards/34?cp=true&sa=false&sbp=false&q=false&category_id=4

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Something Different:

EALT Identification Guides Want to learn more about nature and wildlife? Edmonton and Area Land Trust has created a series of guides to learn about creatures big and small. They include Bees, Butterflies, Moths, Bats, Owls and Species at Risk in Alberta. Keep in mind that they are by no means comprehensive, but make a good starting point for those wishing to learn about our different species. The 2-page guides can be printed to take along with you on your walks.
https://www.ealt.ca/identification-guides

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Cherry Dodd, editor
Judith Golub, publisher
www.edmontonnativeplantgroup.org

Bunchberry Meadows Conservation Area wetland bed - wild bergamot and gaillardia.