

WILDFLOWER NEWS "Growing Nature's Garden"



From your editor:

First, a big welcome to all the new ENPS members we have recruited in the last few months!

Well, the summer solstice is past, and Edmonton's "second season" has so far been one of heat, fire, smoke and flood, affecting growth in our gardens and natural areas. Some plants have flowered early and sparsely; some not at all. While some species have fared poorly others, such as the marsh ragwort (which benefits from lake draw-down) and the dogbanes and low milkweed, have done well. We watch with interest what July and the rest of the summer will bring.

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Marsh ragwort or marsh groundsel (*Tephroseris* palustris) appearing in large numbers along muddy shorelines due to low water levels. Big Island Lake near Sherwood Park.

Photo L. Derksen

Reports

River Valley Planning Modernization - Ribbon of Green

By Patsy Cotterill

The public engagement sessions are now over, but the City of Edmonton planning team is still accepting input until July 4th at https://www.edmonton.ca/city_government/initiatives_innovation/ribbon-of-green-public-engagement

The question posed for this third phase of the planning process has been:

"How will we ensure that the River Valley, the backbone of our open space network, remains vibrant and ecologically resilient as the city grows?"

However, from the stakeholder meeting I attended, my impression is that the City does not want to talk about ecological resilience at all. Instead it seems focussed on how the public should be consulted about developments in the river valley. For instance, there is no attempt to deal with the plethora of illegal trails in the river valley, largely created by mountain bikers, nor with recreational over-use in general.

Considering how many thousands of people use the river valley the attendance at these engagement sessions is ridiculously, undemocratically low, confined to people with special interests. But if you do have something to say, please speak up now. There is still an opportunity to nominate ecologically sensitive areas in the river valley, for instance.

The final phase, "Confirm our Plan," is scheduled for the winter.

Pollinator Week Presentation

ENPS board member and keen native plant gardener Patrick Kyle gave a presentation entitled "Pollinators and Native Plants" on June 24 at the Sherwood Park location of the Salisbury Greenhouse, as part of their celebrations of Pollinator Week, June 19-25. Although the greenhouse location was not ideal for a Powerpoint Presentation, ENPS looks forward to future cooperation with the Salisbury Greenhouse in promoting native plant awareness.

ENPS Native Plant Sale

On June 25, ENPS held a second, nearly sold-out (!) native plant sale at the Orchid Resource Centre. Our thanks to ORC for hosting this event, to the many volunteers who made it all possible, and especially to the many customers who went out of their way to pay with cash, to reduce customer wait times. This certainly helped speed up the check-out process! We hope to hold another native plant sale sometime in August....

Events

Title: ENPS Project - Mill Creek Thistle Patrol

Dates: Every Tuesday, starting June 27 until September, from 7 pm to 8 pm

Location: Mill Creek Ravine

Content: This group works to manually remove the many patches of creeping (Canada) thistle from different areas in Mill Creek Ravine. The group meets weekly at 7 p.m. for an hour on Tuesday evenings until September. Long pants, long sleeves and thistle-resistant gloves are recommended. Please email volunteer@enps.ca if you would like to help out. Once you have registered, you will get a weekly notification of the exact location. Ed Retzer, the leader, has been participating in the Thistle Patrol for years and has managed to greatly reduce the number of thistles in this part of our city!

Price: Free

Title: Golden Ranches Weed Warriors with Nature Conservancy Canada

Dates: Wednesday, July 19 from 9 am to 12 pm; Wednesday, July 26, from 9 am to 3 pm

Location: Golden Ranches Conservation Area, Sherwood Park, AB (GPS coordinates: 53.421861, -112.975972):

Content: Help remove invasive plants from an important conservation area east of Edmonton. From the Nature Conservancy website, "Golden Ranches Conservation Area features 354 hectares of wetlands, mature aspen forest, and open grassland. The area serves as a vital link in creating a conservation corridor connecting other nearby protected areas."

Price: Free. Register here for the 19th and here for the 26th

Title: Whitemud Park South Walk with ENPS

Date: Monday, July 10 from 6:30 pm to 8:30 pm

Location: Whitemud Park South

Content: Meet in the Rainbow Valley parking lot.
(After turning west off 119 Street, the parking lot is at the bottom of the hill, on your left, BEFORE you pass under the freeway to reach Snow Valley Ski Club.) Leader: Patsy Cotterill.

Price: Free. Register at volunteer@enps.ca

Title: Gibbons Badlands Prairie Walk with ENPS

Date: Wednesday, July 12 from 6:30 pm to 8:30 pm

Location: Gibbons Badlands Prairie

Content: Meet at Glen Echo Park in Gibbons. (If you are heading north on Hwy 28 take the turn-off road to Gibbons, and cross the river. The Park is on your left on the town side of the river.)
Leaders: Kathleen Mpulubusi and Patsy Cotterill.

Price: Free. Register at volunteer@enps.ca

Title: Riverlot 56 Natural Area Walk with ENPS

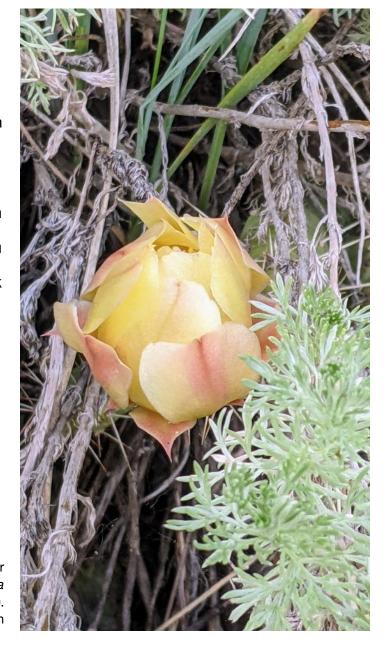
Date: Sunday July 23 beginning at 2 pm Location: Riverlot 56 Natural Area (https:// www.albertaparks.ca/parks/central/ riverlot-56-na/)

Content: Meet at the parking lot on Poundmaker Road, St. Albert. Leader: Kathleen Mpulubusi.

Price: Free. Register at volunteer@enps.ca

Flower of *Opuntia fragilis* (brittle prickly pear cactus), getting ready to open, and *Artemisia frigida* (pasture sage), Gibbons Prairie, 2023-06-30.

Photo M. Parseyan



For these three ENPS field trips, be sure to wear sturdy footwear and dress appropriately for bush-walking. Registrants will be advised of the leader's contact details for enquiries and any last-minute changes, e.g., due to inclement weather.

News

By Patsy Cotterill and Rachel Brown

ENPS goes to the Zoo!

The Conservation Coordinator at Edmonton Valley Zoo, Catherine Shier, has reached out to the ENPS with the idea of cooperating to incorporate more native plantings within the Zoo property. First up might be providing relevant native plants and landscaping for an interpretive exhibit of Alberta's species of ground squirrels. However, the Zoo seems to provide unlimited scope for ENPS to help them go botanically native!

ENPS board members and volunteers.
Photo K. Spencer



ENPS Website

Unfortunately, the ENPS website is still under reconstruction. The good news is that we are working hard on the re-build! If you need help with anything in the meantime, please send an email to info@enps.ca

Book Announcement

Well-known biologist and outspoken conservationist Lorne Fitch from southern Alberta will be releasing his book *Streams of Consequence: Dispatches from the Conservation World* in October of this year. Naturalists are eagerly looking forward to it. Learn more at rmbooks.com/book/streams-of-consequence/ and get your order in!

Give Your Thoughts on Canada's 2030 Biodiversity Strategy

The government of Canada is working on a strategy "to halt and reverse biodiversity loss by 2030, and put us on track to living in harmony with nature by 2050." They are collecting views and perspectives from the public via a survey until July 14. We encourage all ENPS members to visit the site and give their input to the government's strategy.

Interesting Link

This link to an online bee identification app was provided by Maya Evenden, an entomologist at the University of Alberta. You'll find it useful for identifying your bee photos.

https://beemachine.ai/

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, businesses and local governments about native plants.

Advocacy

Protecting Trees in Edmonton

By Patsy Cotterill

Bylaw to Protect Trees on Private Property

On June 13 Edmonton City Council voted 6-6 not to proceed with a bylaw that would have seen trees protected on private property during development and infill (a tie vote means the vote is lost). According to an *Edmonton Journal* report on June 15, "The draft bylaw would have been accompanied by a suite of other options council would have reviewed at a later date, including other regulations or policies, community outreach, education to promote compliance, and a plan to roll it out in phases." ENPS sent a letter to Council supporting the proposal for a draft tree protection bylaw. Passing up an opportunity to educate the public on the importance of trees and encourage voluntary compliance seem particularly significant omissions.

Two councillors supporting the draft bylaw, Andrew Knack and Tim Cartmell, both made a reference to the fact that lack of a bylaw could impede public acceptance of other things the City wants to do such as zoning bylaw renewal. Uh-uh! Such zoning changes are designed to facilitate development in general and infill in particular and send a red flag to those of us concerned about the city's natural environment. (See the final paragraph of this article.)

Expansion of Tree Planting

At the same time the City is undertaking urban tree canopy expansion, with a plan to plant two million new trees by 2050. This will consist of maintained trees, i.e., those planted in boulevards, medians and parks, and trees in natural spaces that are not maintained, planted through the naturalization process. See https://www.edmonton.ca/residential_neighbourhoods/gardens_lawns_trees/trees_urban_forestry/urban-tree-canopy-expansion

Can the City Maintain its Existing Trees?

However, questions arise as to whether the City is capable of looking after ("maintaining") the trees it already has, even protecting the trees on City-owned land from development and renovation (Hawrelak Park is a case in point). Many trees are planted in less than ideal circumstances, constrained by concrete and other infrastructure, Combatting disease from invasive insects is a constant battle for Parks staff as well.

Jim Hole, well-known horticulturalist, submitted the following information recently to the Integrated Pest Management Advisory Committee, a group of citizens and specialists with interests in IPM, of which he is a member:

Construction impacts are cumulative. Trees do not heal, they just compartmentalize damage (wall it off). Each event adds up over time (demolition, grading, construction). Cumulative damage sends trees into a 'death spiral.'

Tree preservation requires space. Compacting soil around trees with construction equipment will cause serious damage. Tree roots don't grow like carrots. They [the roots] spread wide and most are in the top two feet of soil. Most fine roots are in the top 18 inches. Compaction reduces water infiltration and dramatically reduces oxygen infiltration.

Tree root zone volumes and soil consistency are critical. Two cubic feet of 'structured soil' for every square foot of crown projection at maturity is needed for healthy trees. Crown projection is the area under the dripline of a tree.

So, if you think of a circle of foliage and do the math, a canopy diameter of 20 feet would be around 300 square feet and require 600 cubic feet of good soil.

The typical urban tree pits in concrete sidewalks might have a volume of 100 cubic feet. Tree roots are unable to grow properly in these 'tree coffins' and are, invariably, short-lived. Each successive replacement tree will also be short-lived. Costs in the long term are higher and environmental/ aesthetics losses are also high.

Working at Cross Purposes

Both infill development and the very high density at which new subdivisions are built these days mean loss of private garden space and room for trees, as well as the connectivity of greenery that is seen in older

neighbourhoods. Some councillors seem to think that the tree expansion initiative can mitigate or compensate for this. But the City will have to be extremely careful in how and where it plants its trees if it is not to waste money through excessive mortality. The City is chronically short of money and tree planting (with the required aftermaintenance), to achieve the goals of ecological connectivity and mitigation of climate change, will take funding. (Apparently, Administration recommended against the proposed private tree bylaw because it does not have the funding resources to manage its current responsibilities let alone extend them.) Edmonton will find that so-called "smart growth" and a viable urban green canopy are not compatible without resources.

Another perspective

The City of Fort Saskatchewan is also expanding its urban forest. Check out this link for more information: https://mysay.fortsask.ca/urban-forest

Urban tree canopy on private property in Edmonton.
Photo P. Cotterill



Articles

My Native Gardening Adventure

By Margriet Van Laarhoven

This is a short account of my "adventure" with native plants in my garden. I learned about all the positive attributes of creating a native plant bed from Manna Parseyan of Arnica Wildflowers. These include benefits to our local birds and native bees, not needing to water very much at all, and the abundance of beautiful plants to choose from.

Two years ago, I started by removing some lawn from a sunny area in my backyard and consulted with Manna about the plants that might be appropriate there. I hoped to get something to bloom throughout the season and I wanted some shorter and taller plants. I ended up planting: rosy pussytoes, blanketflower/gaillardia, three-flowered avens, prairie crocus, wild blue flax, blue giant hyssop, stiff goldenrod, low goldenrod, slender blue beardtongue, rhombic-leaved sunflower, common tall sunflower, yarrow, smooth aster and flat-top white aster. Since then, my native plant bed has matured nicely and has given me all I hoped for.

Last year I added some more shade tolerant plants to another area of the yard. I planted: tall lungwort, Lindley's aster, false dragonhead, early blue violet and Joe Pye weed.



Wild blue flax (*Linum lewisii*) makes an excellent native garden component.

I have seen many beautiful pollinators and birds feeding on my native plants including Dark-eyed Junco and Rubythroated Hummingbird.

Native plant gardening is addictive!!! You are always looking for more opportunities to plant!

Editor's note: We invite other readers to send in their feedback on their gardening adventures, including their experiences with growing individual natives. Send your information to info@enps.ca



The native garden bed at the beginning. (Ed. Smart to choose a small manageable area to begin with.)



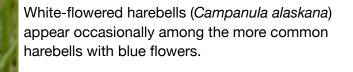
Margriet's native garden as of last season.

Photos M. Van Laarhoven

Native Plants in the Wild

By Patsy Cotterill

Here are a few native plants you can expect to see in various natural grasslands in July.



Wild bergamot (*Monarda fistulosa*) attracts pollinators, looks beautiful and smells nice. It makes a good garden plant.



White evening-primrose (*Oenothera nuttallii*) is at its flowering best in the evenings and attracts a special visitor, the primrose moth.

All photos M. Parseyan, taken at Fort Saskatchewan Prairie.

Meadow blazingstar (*Liatris ligulistylis*) can be a common late summer flower in local prairie grasslands.

Plant Profile - Our Local Members of the Dogbane Family

By Patsy Cotterill

In this article I'll take a look at the three species of the dogbane family (Apocynaceae) that are all currently in bloom (as I write in the third week of June) in some of our local natural areas.

Spreading dogbane – common locally in well-drained soils

Spreading dogbane (*Apocynum androsaemifolium*) is a branched, perennial herb growing 20-100 cm tall. Its reddish stems bear paired, opposite, oval, smooth-edged leaves. The pink or pink-striped flowers (6-9 mm) are bell-like with a tubular corolla and five spreading corolla lobes. They are borne in pairs in nodding clusters at the ends of the branches. There are two ovaries per flower and they form twin, narrow, reddish seed pods which at maturity can be up to 12 cm long. Each pod contains numerous seeds, each equipped with a tuft of silky white hairs that aids in dispersal.

The plant exudes a sticky, milky white latex when conducting tissue from stem and leaves is broken. This contains organic compounds called cardiac glycosides toxic to most animals; in the right amounts, however, they can be used therapeutically to treat heart disease. (What doesn't kill you makes you stronger?!)

Spreading dogbane occurs in a variety of habitats including open forests, grassland and roadsides, but definitely prefers well-drained, sandy soils. It is rhizomatous, forming open patches, especially where disturbance has occurred. It has a wide distribution across North America.



Spreading dogbane in road allowance, Acheson Industrial Area, Parkland County, 2021-07-04.



Flowers of spreading dogbane, Fort Saskatchewan Prairie, 2023-06-12. Photos P. Cotterill



Pods of spreading dogbane, Fort Saskatchewan prairie, 2021-08-28.

The family name Apocynaceae is derived from the genus *Apocynum*, in turn coming from two Greek words meaning "away" and "dog" because the milky latex present in nearly all of its members was used as a dog poison. Other members of the family besides the dogbanes and milkweeds include the periwinkles (*Vinca*), and the common house plant, waxflower (*Hoya carnosa*). Visitors to warmer climes and gardeners may be familiar with oleander (*Nerium oleander*) and frangipani (*Plumeria*). *Strophanthus sarmentosus* is the source of cortisone.



Hemp dogbane (Indian hemp) in the North Saskatchewan River Valley

Its relative, hemp dogbane or Indian hemp (*Apocynum cannabinum*), occurs mostly in woods near shores, and is common in certain parts of Edmonton's North Saskatchewan River valley. It can be distinguished easily from spreading dogbane when in flower because its flowers are white or greenish-white and smaller (2-4 mm), with erect lobes, so appear much less showy than those of its congener.

Indian hemp gets its common name from the strong fibres in the stems used by Indigenous people. A hybrid of these two species also occurs naturally.

Apocynum cannabinum (hemp dogbane), Edmonton river valley, 2022-07-30. Photo P. Cotterill

Spreading dogbane is flowering profusely in Fort Saskatchewan Prairie

Spreading dogbane is having an exceedingly good year in Fort Saskatchewan Prairie, having appeared in large numbers in its open woods and grassy areas this summer. We attribute this to the clearing of smooth brome grass and other non-native ground cover that has been done in the last two years, both through herbiciding, and AltaLink's maintenance of their powerline right-of-way. Spreading dogbane is an early successional species so creation of disturbed, more open ground gives it an advantage. However, other factors may also be at play in its current spread and copious flower production. About three years ago I was seriously concerned that we were losing our populations of the species. Change is a constant in plant populations, but this change is striking.

Low milkweed – also in high numbers

Low milkweed (Asclepias ovalifolia), is also having an excellent year of growth and expansion in Fort Saskatchewan Prairie and, no doubt, elsewhere.

It is related to spreading dogbane and hemp dogbane and has several characteristics in common with these species. It was once in its own family, the milkweed family, Asclepiadaceae, but this has now been transferred to the Apocynaceae as a sub-family, Asclepiadoideae.

Of the three milkweed species in Alberta, low milkweed is the only one that grows in our area. It can grow to 60 cm tall as an unbranched perennial forb, and has opposite, ovate-lanceolate, dark-green, shortly hairy leaves. The flowers are in flat-topped clusters and are small and white or yellowish-white with a beautifully intricate structure based on flower parts in fives. The dual ovaries give rise to characteristic large, soft, ovoid or spindle-shaped, pointed pods in pairs, although one pod often aborts. The pods split open to release flattish brown seeds each with an attached tuft of pure-white, silky hairs.



Above: Low milkweed, Fort Saskatchewan Prairie, 2023-06-02. Photo P. Cotterill

Below: Pods of low milkweed, Fort Saskatchewan Prairie, 2017-09-15. Photo M. Parseyan



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Low milkweed (indeed all the milkweeds) exude the same sticky, white, toxic latex as the dogbanes, which serves to deter herbivores. (See the note below on the use by the Monarch butterfly of the defensive potential of cardiac glycosides.)

We attribute its prominence in Fort Saskatchewan Prairie to the same recent clearing activities, as well as other possible environmental factors. Low milkweed spreads readily by rhizomes so is favoured by disturbance and reduced competition, and thrives in coarse-grained, sandy soils. Our hope is that its high numbers this year will attract Monarch butterflies; indeed, serendipitously, a university student is monitoring several patches in the Prairie this year for caterpillar activity.

Fun Insect Facts

The dogbane beetle (*Chrysochus auratus*) has evolved an adaptation whereby the dogbane's toxic glycosides (cardenolides) don't bother it and, reversing the tables, it can use them as a defense against its own predators. (It might be worth looking for these shiny, "metallic" beetles this season!)



Dogbane beetle, Chrysochus auratus.

Photo S. Lynn

The caterpillars of the Monarch butterfly (*Danaus plexippus*) are known to be able to sequester the cardiac glycosides in their bodies without harm to themselves, but which cause vomiting in birds that try to eat them. This defense mechanism persists in the adult butterfly, whose brilliant colours serve as a warning of its toxicity to would-be predators.



Monarch butterly larva, Oldman Creek Nursery, 2012-07-14.



Adult Monarch, Oldman Creek Nursery, 2012-07-28. Photos P. Cotterill

Lifetime ENPS Membership

You can now become an Edmonton Native Plant Society member for life. Memberships are \$20.

Purchase by email: membership@enps.ca

or visit one of our booths at plant events in your area.

ENPS members are also eligible for a free Lifetime Membership with Nature Alberta.



Canada swallowtail

butterflies are common locally in our natural areas, usually appearing in June. This photo of the larva was taken in the planted flower bed at Bunchberry Meadows; the adult was captured on low milkweed at Fort Saskatchewan Prairie.

Larva photo M. Van Laarhoven

Butterfly photo M. Parseyan



Please send compliments, concerns and questions to info@enps.ca
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Wildflower News editorial board:

Rachel Brown, Patsy Cotterill, Liz Deleeuw and Susan Neuman

Patsy Cotterill, editor I Susan Neuman, publisher

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