



# WILDFLOWER NEWS

## 'Growing Nature's Garden'

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### From your editor:

Welcome to the Wildflower News for January and welcome to a new year of adventures with native plants.



Indian pipe, *Montropa uniflora* - Photo by Sue Panteluk. Wooded area near Bunchberry Meadows

# Memories of Judith

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## Judith and the Gaillardia Seeds

*By Cherry Dodd*

Judith did a lot of seed planting each spring, and one year she was all set to sow some gaillardia seeds. She had 2 bags to choose from. One contained native seeds that she had collected from her garden. She emptied some out and looked at them. They were beautiful seeds - large and plump. She looked at the seeds in the other bag. She had collected these seeds from a sandy remnant prairie. These were sad looking - small and skinny. They looked like they did stand much of a chance. However Judith liked to experiment so she planted a tray from each bag.

When the seedlings appeared it was the remnant prairie tray that had good germination and vigorous plants. The garden seed tray did much worse with poor germination and ho-hum plants. Judith concluded that plants growing in difficult conditions produced superior seeds to ensure the population would survive. Plants growing in lush conditions didn't need to put a lot of energy into seed growth, and sometimes seeds that looked superior to our eyes were actually inferior botanically.



*Gaillardia aristata* seedlings in foreground. Photo by Liz DeLeeuw

## Member Feedback

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“Tim and Vivien here, now living in Nanaimo, BC We would like to thank you and your staff that we continue to receive those so- informative issues of Wildflower News. We have great memories of our volunteer times with you and the others there. We continue the practices we learned there in our yard here in Nanaimo. Great to hear of all the good stuff happening in the Edmonton area.”

*WF News: It's great to hear from you. I am glad you are still enjoying the Wildflower News.*

Please send compliments, concerns and questions to [engedmonton@gmail.com](mailto:engedmonton@gmail.com)

## Events

### January 7 – Fort Saskatchewan Prairie: Our Local Parkland Gem

Patsy Cotterill and Manna Parseyan of Friends of Fort Saskatchewan Prairie will take a look at the history, management and flora and fauna of the City's grassland reserve. Please join us for this free presentation and an opportunity to learn more about this valuable natural resource on the city's doorstep.

**Place:** Fort Saskatchewan Public Library

**Time:** 2:00 - 4:00 pm

**Cost:** Free. 20 seats available.

[Click here to register](#)

### January 19 – An insight into the value of forested wetland ecosystems (swamps) as natural climate solutions

Ducks Unlimited Canada webinar, presented by Dr. Scott Davidson from University of Plymouth.

**Place:** Online

**Time:** 12:00 - 1:00 pm

**Cost:** Free

[Click here to register](#)

### January 23 – ENPS Online Presentation: My Life with Plants

ENPS Online Presentation Series starts up again in January with Liz DeLeeuw giving a talk titled, "My Life with Plants: A Little Knowledge (Learning) is a Dangerous Thing"

**Place:** Online on Zoom

**Time:** 7:00 - 8:30pm

**Cost:** Free

[Click here to register](#)

### January 24 - Local Native Plants for the Home Gardener

Natasha Stairs will introduce a selection of local native plants suitable for growing in urban gardens and will discuss the benefits they bring to the environment. January 24 from 7-8:30 p.m. at the Strathcona County Library. Register through the library at the link below.

**Place:** Strathcona County Library

**Time:** 7:00 - 8:30 pm

**Cost:** Free

[Click here to register](#)

If you would like to post an event that involves native plants, please email us at [engedmonton@gmail.com](mailto:engedmonton@gmail.com)

## News

### New Year – New Plans

*by Cherry Dodd*

This year we are inviting feedback from readers. What would you like to see on these pages this year? What new content would you like to see? Is there any content that you would like to see more of?

Is there anything you don't want to see? We are not planning on adding paid advertising, and this newsletter will always be free. Please email us at [engedmonton@gmail.com](mailto:engedmonton@gmail.com) and let us know.

### Website update

*by Natasha Stairs*

The website is now up and running at [www.edmontonnativeplantsociety.ca](http://www.edmontonnativeplantsociety.ca).

We hope you find it useful and informative. Please contact us directly through the website if you have questions about content or functionality. Check out the Events page for upcoming talks and presentations. New events will be added as they come to our attention. Work is ongoing in other areas of the website, so we ask for your patience as we continue to update and add content. It is a time consuming task!

### Natural Area Reserve funded, River Valley Trail Strategy not

*from December 22 Edmonton River Valley Newsletter*

City council voted to keep funding the Natural area Reserve Fund, but decided not to fund the River Valley Trail Strategy. [Full article here](#)

### Making sense of COP 15

*by Cherry Dodd*

The David Suzuki Foundation has produced a good summary of the results from COP 15, high points, low points and next steps. Link to full article: <https://tinyurl.com/hsptudca>

If you have a news item involving native plants that you would like posted, please email us at [engedmonton@gmail.com](mailto:engedmonton@gmail.com)

## Remembering Summer

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It has been 4 years since ENPS lost our garden plot at Old Man Creek Nursery. Safety regulations were updated with the result that only staff could work there. I miss it as it was a wonderful spot. However, the timing was good because that year I was offered the restoration plot at Bunchberry Meadows. It would have been impossible to take care of 2 large plots of land, even with my great volunteer team, and there was no-one who had the time to take over the management in my place. Here are a few pics of the many species of native plants that grew there.



From left to right: tall meadowrue, *Thalictrum dasycarpum*; Joe Pye weed, *Eutrochium maculatum*; shining arnica, *Arnica fulgens*. Photos by Cherry Dodd, Old Man Creek Nursery

## Articles

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### Three Easy to Grow Flowers and One Challenging Flower

By Cherry Dodd

This article is the first in a series to help people decide which native plants to add to their gardens this year. Three species will be featured each month with the article outlining the advantages and disadvantages of each and also their special features. A challenging species has been added for those of you who are looking for a challenge or something new. For people who don't want to grow plants from seed, we will have these plants for sale in the spring.

Three easy to grow flowers: meadow blazingstar, giant hyssop, and gaillardia. All of these species have seeds that can be planted in spring without any special treatment. All three species attract and feed bees, butterflies, other pollinators and birds. These flowers are all perennials. Native plants in general bloom in the second year, but could bloom in the first or third year in some instances. Native plants do well in Edmonton garden soil without a lot of amendments added. Some of them may benefit from a small amount of compost added to soil. They don't need to be watered once they are established unless there is a drought.

#### **Meadow Blazingstar, *Liatris ligulistylis***

Meadow blazingstar is our local species of *Liatris*. Further south it is replaced by Dotted blazingstar, *liatris punctata*, a species with a deep taproot more suited to drier conditions. The *liatris* sold in garden centres under the name of Gayfeathers are cultivars of *liatris spicata*, a native species from Manitoba.

Back to meadow blazingstar - what a plant! It has a slender stately shape with narrow grass-like leaves and bright pink flowers that are a butterfly magnet. If there is a butterfly in the vicinity it will find this flower. The leaves are upright giving the plants an onion or lily appearance. These plants have a bulb-like corm and they will slowly add a new corm or several every year, so that a mature plant will have several flowering stems.



Meadow blazingstar, *Liatris ligulistylis*.  
Photo by Cherry Dodd



Meadow blazingstar, *Liatris ligulistylis*  
and butterfly. Photo by Teresa Stieben

### Advantages of Meadow blazingstar

- Meadow blazingstars can be planted close together in groups of 5 or more. One plant will stand out in your garden, but a spread of these beautiful flowers, or a large patch of them looks wonderful.
- Even the seed heads are attractive, large fluffy balls tinged with purple. The seeds are large compared to most seeds, and birds love them.
- Meadow blazingstars self-seed freely so you will have plenty of seedlings to add to your collection or give away.

### Disadvantages

- Meadow blazingstars like sun and don't do well in shade.
- In the wild they only grow in sand, but they will do well in any soil so long as it is well-drained. If you have clay, mix some gravel below and around the root zone before planting to improve drainage. I find that meadow blazingstar self-seeds most abundantly right next to my sidewalk where the subsoil is gravel.
- They don't like being overshadowed by taller plants, they prefer a nice open space.
- The seedlings look just like tiny blades of grass, and so they are often weeded out by accident before they are big enough to be identified.

### Fascinating Facts

- Amazingly, these plants are not frost-hardy, so seeds planted outside won't germinate until May and mature plants might not appear until late May. Be patient in the spring.
- Even the smallest seedling will have a tiny, already formed bulblet attached

### Nuts and Bolts

**Height** - an average of 60 cm. The height of native plants always depends on the amount of sun or shade available, and soil and moisture conditions.

**Distance between plants** - 20 cm.

**Bloom time** - July and August.

**Seed time** - August and September. The seeds will detach easily from the seed head. Each small, long and narrow seed will have a small fluff attached. Take the fluff off when planting.

**Growing conditions** - sun and well-drained soil. Regular moisture.

### Giant Hyssop, *Agastache foeniculum*

Giant hyssops are the workhorses of the perennial patch. Their specialty is attracting all the bees in the neighbourhood. They are great for attracting bees to your vegetable patch. They have other virtues. They are tall bushy plants, with an abundance of attractive purple-blue spikes of flowers. They are tough, hardy and adaptable to most conditions.

Cultivars of this species are sold in garden centres under the name anise hyssop. These cultivars are usually grown in B.C., shipped to Alberta in large trucks, unpacked and put on the shelf. Very few garden centres grow their own plants. Often these imported plants are contaminated with neonicotinoid pesticides (neonics). These are systemic pesticides that make sure the shipment isn't contaminated with any insects by killing any insect that ingests any part of the plant. The pesticides work by being present in all parts of the plant, leaves, flowers, pollen and nectar. Unfortunately they are also deadly to bees. If you buy any plants from a garden centre check the label to make sure they haven't been treated with neonics. (All the plants that the Edmonton Native Plant Society sells are organic and grown from local seeds.)



Giant hyssop, *Agastache foeniculum*.  
Photo by Cherry Dodd

### Advantages of giant hyssop

- The leaves and flowers are edible, both raw in salads or as an herbal tea. Use them fresh in summer and dry them for winter use.

### Disadvantages

- Giant hyssops do like to self-seed abundantly, so you might end up with more seedlings than you can give away. However the seedlings have small fibrous roots and they can be easily weeded out.

### Fascinating facts

- I find that there is a huge genetic diversity amongst these plants, especially with taste. While the species in general has a pleasant anise taste, individual plants will differ, some having a stronger taste than others. Experiment with tasting each plant you grow to find your favourite.
- Because of the great amount of genetic diversity the seed heads can be different colours. Some are the regular brown, but some are an attractive blue and some even white and green. To find out if the seeds are ripe for collecting, just bend the seed head over your hand and see if the tiny dark seeds fall out.

### Nuts and Bolts

**Height** - an average 60 to 90 cm

**Distance between plants** - 40cm

**Bloom time** - July and August

**Seed time** - Depends on the plant and can vary, but usually sometime in September

**Growing conditions** - sun or semi-shade, all soils but not too dry



Giant hyssop, *Agastache foeniculum*.  
Photo by Liz DeLeeuw

### Gaillardia or Blanket Flower, *Gaillardia aristata*

I love gaillardia plants. They are so showy with their large daisy-like yellow flowers. They look great planted in front of giant hyssop as they are shorter, 50 cm on average, and you get a lovely two-tiered effect of blue and yellow.

The reddish centres are composed of dozens of separate flowers, tightly packed, each one with its own store of nectar. Only the outer flowers in the circle have a petal, so the effect is of one flower rather than the reality of the dozens of flowers available to passing bees. The open centre acts as a landing pad for butterflies, bees and other pollinators, and as a bed and breakfast for bees when the nights start to get cool.

### Advantages of gaillardia

- So showy that the neighbours won't realize they are a native plant. They will quickly grow into a larger clump and they self-seed a little. These flowers also look great interplanted with Harebells.

### Disadvantages

- Gaillardia is another species that is not cold hardy, so mature plants won't appear until sometime in May and seedlings shouldn't be left outside if frost is forecast.
- They have a deep taproot so transplant young plants. They are very easy to grow from seed, but don't transplant into the garden until the end of May at the earliest.

### Fascinating facts

- Local gaillardias tend to cross with garden cultivars, so if you collect seeds and grow them out, and your new plants produce flowers that have a lot more red than the parent, the plants may be crosses of cultivars. They will be attractive, but no longer pure local natives.



Gaillardia (blanket flower), *Gaillardia aristata*. Photo by Cherry Dodd



Result of a cross between a native and a cultivar is a lot more red in the petals. Photo by Cherry Dodd

- Speaking of cultivars, there are so many different ones of Gaillardia for sale. They have all been bred from Gaillardias found in the southern United States. Our native Gaillardias are quite variable with a small splash of red or orange added to the yellow sometimes, but the cultivars mostly have a lot of red or orange in their petals and very little yellow.

#### **Nuts and Bolts**

**Height** - an average of 50 cm

**Distance between plants** - 30 to 50 cm, depending on whether you prefer them tightly packed or spread out a little

**Bloom time** - July and August, but some plants will carry on blooming till frost

**Seed time** - collect them when the seeds detach easily from the seed head. The seeds are small, spiky and angular

**Conditions** - sun or a small amount of shade, all soils but not too dry

#### **One Challenging Flower - Prairie Crocus, *Pulsatilla nuttalliana* (Used to be called *Anemone patens*)**

Who doesn't love prairie crocus, the first flower of spring. It often pops up through the snow. prairie crocus flowers are ready for harsh spring conditions. Each flower is a little solar energy collector that follows the sun. The petals, actually sepals, reflect the sunlight towards the centre, warming it by as much as 10 degrees above the surrounding temperature.

However, this beautiful plant is challenging to grow. I have killed off countless seedlings with too much care. They need a very well-drained soil, but enough water to grow, and that is a hard balance to achieve when looking after tiny seedlings in tiny pots. They have a good germination rate after stratification, so I suggest using the narrow and deep plug trays that the professionals use.

Prairie crocuses like space for the deep woody taproot root they are developing. Put about 5 or 6 seeds in each pot and you will get an average of 3 or 4 seedlings. They don't mind being planted out in a clump so don't thin them. Some will disappear the first year anyway. Plant them out in the garden when they have 5 or 6 true leaves.

Put them in a spot where they will get the spring sun. They prefer a slope if possible and they don't like to be overshadowed by other plants. Add lots of gravel and coarse sand to the soil under the planting hole. There is little top growth for the first couple of years because their energy goes into first developing a strong root system, and they usually don't bloom until the third year or later.

Prairie crocus have the discouraging habit of disappearing over winter, or sometimes a plant will stay dormant under the ground for a year and then appear the next spring as if nothing has happened. But mostly, in my garden, the population just keeps shrinking. This could be because these plants have a symbiotic partnership with mycorrhizae in the soil and the mycorrhizae might be missing. I'm not sure.

If you are determined to have prairie crocus, make a habit of growing a few more each spring to add to the population. If you already have some plants you can collect seeds as soon as they ripen - they detach easily from the plant - and plant them right away. Only seeds that have been dried and stored require stratification.

Here are links to 2 excellent articles on prairie crocus to learn more about this interesting species.

[http://naturenorth.com/spring/flora/crocus/Prairie\\_Crocus2.html](http://naturenorth.com/spring/flora/crocus/Prairie_Crocus2.html)

<https://www.mgmanitoba.com/2020/03/04/manitobas-provincial-flower-the-prairie-crocus/>



Prairie crocus, *Pulsatilla nuttalliana*.  
Photo by Liz DeLeeuw



Prairie crocus, *Pulsatilla nuttalliana*.  
Photo by Liz DeLeeuw



Reed canarygrass, *Phalaris arundinacea*. Photo by Natasha Stairs



Reed canary grass forming dense monotypic stands in Shonsee Natural Area, NE Edmonton, where the ground has been heavily disturbed. Photo by P. Cotterill

## Reed Canarygrass – A “Cryptic Invader”

By Patsy Cotterill

It's official! The reed canarygrass (*Phalaris arundinacea*) that you see along the roadside ditches, alongside lakes and ponds, around City wetlands and even in relatively dry grasslands, indeed just about everywhere where there is a moisture supply, is non-native. In a report to Parks Canada University of British Columbia botanists Diana Percy, Edward Sun and Quentin Cronk describe their research and conclusions using ribosomal DNA analysis to distinguish between the native and non-native genotypes of this species. They used herbarium specimens from various sources and fresh material growing in Elk Island National Park (NP).

The non-native material, verified by genotypic comparison with European material and agricultural cultivars, is by far the more abundant. It is strongly rhizomatous, aggressive and invasive, often forming large monotypic stands. Polyploidy may also have contributed to its vigour. It has been introduced across North America as a forage grass and for revegetation, and has since invaded natural riparian and wetland habitats.

It may well have replaced the native genotype, which tends now to occur sparingly in remoter, natural communities, far from human disturbance. Interestingly, the authors consider that the native genotype is exclusive to northwestern North America.

The researchers found that all the material they examined in the northern part of Elk Island was of the non-native type, but a few native plants did exist, along with the non-native, in the part of the park south of the Yellowhead Highway. Hybrid material also appeared to be present there. They recommend rigorous control of the grass in the north, while admitting that the situation is a little more complex in the south. Nevertheless, they suggest that attempts should be made to preserve the native genotype by reducing the non-native populations in the south. Unfortunately, DNA analysis is not a practical method for field identification, and the two types cannot be distinguished by appearance.

Repeated cutting has proved to provide good control of reed canarygrass. But is control worth the trouble? Do we care if the non-native genotype has overwhelmed the native, if the two cannot be told apart and presumably the non-native is performing similar ecological services? I say we should care. Replacement of native genotypes or alteration by hybridization is a form of extinction, or extirpation. (After all, we take care to maintain the purity of the two bison races in Elk Island, the woods bison and the plains bison, by keeping them separate.) The aggressive behaviour of the non-native type is undesirable, causing a loss of biodiversity as its large stands elbow out other species. Further, it seems to me that parks and other official preserves are perfect places in which to try to maintain the indigenous flora, even if in the human-dominated world outside the invaders prevail.

This phenomenon, of cryptic invasion, in which the invading species is indistinguishable from the native one or is closely related, is not uncommon. At the very least we should be aware of it and its anthropogenic causes. In general, agriculture and horticulture have a lot to answer for in terms of invasive species that have had profound effects on indigenous ecology: Kentucky bluegrass, common reed (*Phragmites australis*), reed canarygrass, smooth brome, the hugely problematic annual brome grasses of the south... and many others.

Many thanks to Chris Saunders, entomologist and Integrated Pest Management specialist, for drawing my attention to this paper:

Reed canary grass at Elk Island National Park. Report to Parks Canada. Contract No. 085-5P426: Genetic analysis of Reed Canary Grass (*Phalaris arundinacea*) in Elk



*Next month in the Wildflower News:* More easy-to-grow native flowers, plus Sowing Seeds in February - which species need stratification and different stratification methods.

### **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.

### **Lifetime ENPS Membership**

You can now become an Edmonton Native Plant Society member for life. Memberships are \$20. Purchase by email: [enpsmembership@gmail.com](mailto:enpsmembership@gmail.com) 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.

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