WILDFLOWER NEWS

'Growing Nature's Garden'

DECEMBER 2020

Young white spruce, *Picea glauca. Photo:* Benjamin Oro

Welcome to the Wildflower News for December.

Although this will be a Christmas unlike those of the past, ENPS wishes you as very safe, masked, and social distanced

Merry Christmas!!

and *Happy Holidays!!* to you all!

Leave a little sparkle - not a virus - wherever you go!

In This Issue:

LETTERS:

I'd like to send a big warm thank you for this [November] newsletter! Opening it is always such a treat. I've wondered all summer about the white, fungus-like growths I was seeing wrapped around some branches, and this month I have the answer - wooly aphids. What a treat, knowing that is, not the aphids.
Again, thank you,
Anna Mioduchowska

WN: Thank you Anna, glad we solved a puzzle for you! Woolly aphids are quite fascinating, and this seemed to be a good year for them as there were lots on the alder trees in the river valley and elsewhere.

The Devon Nature Club is still enjoying your monthly newsletter. I paste it on our Devon Nature Club facebook page which now has 400+ members and still growing.
I want to let you and Patsy Cotterill know that I will be happy to post information about the Edmonton Native Plant Group native plant sale on our website.

We had a presentation from Patsy and Mana in Devon a few months ago and there was good attendance. People asked where they could get native plants. I mentioned regular greenhouses are not the best as I have purchased some "native" alpines" from places like Greenland Garden Center that have a very good reputation but found upon researching them they are native to Europe.
So I thought it would be helpful to people interested in "going native" and a reputable source would be your plant sale.
Karen Macaulay
President, Devon Nature Club

WN: Thank you Karen - that's awesome that you share our WN on your page! If and when this COVID thing allows us to hold seed and plant sales again, we will definitely share that info with you. Yes, most greenhouses that advertise 'native' plants that may resemble what we have here, aren't aware that locally sourced plants are best!

Just to say thank you for the extremely interesting and informative November Wildflower News.
I love the reading suggestions and have requested one book through the EPL.
....also thank you for a great native plant gardening season.
Hope you are keeping well
Cheers
Jill MacKenzie

WN: Lovely that you appreciate the reading material. Feel free to recommend native plant books you like as well. Yes, we did cope quite well this season, considering all the COVID regulations we had to follow! Kudos to all our volunteers that came out to help.

Good grey morning. Thank-you for sending the November wildflower News. I enjoy each newsletter as it comes. I did want to ask if I need to renew my subscription and if so, how much. It has been a long year because I stay indoors except for the gardening I did this past summer. Our small wildflower bed did well and I have a fairly large patch of milkweed. Thank-you for your anticipated reply. Sincerely, Jeanne

WN: The Wildflower news is free, but if you like you can get a membership with the Edmonton Native Plant Society. It is a lifetime membership so you don't have to renew it and it will give you a discount at some gardening stores. Do you have photos of your wildflower bed that you would like us to publish?

Native Plants in Local Gardens

WN: Keep sending us pics of your "natural" flower beds and yards that include some or a lot of local Edmonton native wildflowers. We love 'em! Overviews of the beds, close-ups of the flowers, and winter photos would be lovely.
ENPG always indicates photographer, if known, for any photo we use.
Send your photos to engedmonton@gmail.com

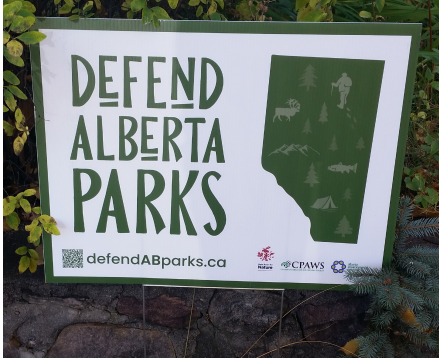
EVENTS - if you would like us to list your event that involves native flowers, please email us at engedmonton@gmail.com by the 20th of the previous month.

Due to COVID-19 restrictions ENPS has no events planned,

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

Update on Alberta Parks Closures by Hubert Taube
You may recall that the Alberta Government announced in late February of this year that substantive changes to the Parks system were in the works; roughly summarized as "closure/delisting of 184 parks". Popular Edmonton area "parks" on the delisting schedule are Strathcona Science Provincial Park, Riverlot 56 Natural Area (NA), Sherwood Park NA, NW of Bruderheim NA, and JJ Collett NA.
Initially, transfer of parks to "partnerships" was proposed for the beginning of May; but, in practice , nothing has happened except for an arrangement for track setting of cross-country ski trails in a particular Kananaskis location. The Canadian Parks and Wilderness Association (CPAWS) and the Alberta Environmental Network (AEN) have

opposed the park closure initiatives in a number of zoom meetings/webinars while the Minister held a townhall in the middle of November.
To briefly summarize these meetings: the future of the Alberta Parks remains in a state of uncertainty.
To influence the decisions that will be affecting our parks system, you might consider participating in the Defend Alberta Parks campaign; e.g., spreading the message by a sign on your lawn (order the sign from CPAWS/AEN at "defendabparks.ca/lawn-sign").
I have had mine up for about four weeks; the sign is quite attractive and provided positive engagements with neighbours.



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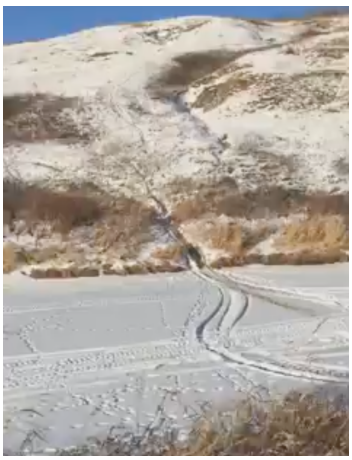
News from Gibbons re Badlands Prairie and OHVs by Tiana Scott



I went to a council meeting on November 25 and there was quite a bit of discussion around OHV complaints by one of the council members. There is a review of the Parks and Recreation Master Plan coming out on Dec 3 (I think) with a survey. I'm eager to see what made it to this draft. I am in the process of asking council regarding more signs in the Badlands Prairie. I have also formed a Stewardship for the River Valley. Winter suddenly happened and there is lots of deterioration of the cliffs in the Gibbons River Valley on the town side. I would like to believe this town is beginning to get on board as far as OHVS go. There is always those residents who care less, and feel because they live in a rural community, they can do what they want, but the town is beginning to understand the problem as more and more are complaining. I encourage it every chance I get!
(WN: If you're on Facebook, check out Tiana's page - Gibbons Sturgeon River Valley Trail, https://www.facebook.com/groups/398595620728621)

The disrespectful are at it already. Photo taken by Tiana Scott of OHV tracks accessing the Badlands Prairie by crossing the frozen Sturgeon River from the town side.

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The ENPS 3rd Annual General Meeting was held November 4, 2020 - a report by Judith Golub
All went swimmingly, we accomplished all we set out to, we enjoyed a president's report in the form of a slide presentation of the past year's accomplishments and on-going projects, we learned we're in a healthy financial state and we ratified the changes in our bylaws, while welcoming a full slate (of eleven) directors.

We wish to thank out-going board members Barry Storeshaw and Treasurer Trudy Haracsi for their contributions and time given to the board, as well as Adrian Jones who resigned from the board earlier. We know they will continue to contribute as volunteers on various projects.

ENPS also heartily welcomes 4 new board members, Patrick Kyle, Natasha Stairs, Patti Szkwarok, and Kate Wilson, all of whom over the years have volunteered and contributed in a number of ways to ENPS activities.

Everyone on this board has personal strengths, skills, and interests and joined because we each believe in, and have much to contribute in a meaningful way to, fulfilling our mission - native plants everywhere!!

ENPS is very fortunate to have board members and volunteers who give of their time to enhancing and enriching our goals.

Planting Your Pollinator Bed by Cherry Dodd

There are so many native flowers to choose from that I am going to give you an overview of the different species of flowers, and then go into more detail about a couple of them each month. I will start with species that are easy to grow and prefer sun. It is easiest to use seedlings or mature plants in your bed. Seeds have a very poor germination rate if planted straight into a bed, and native seedlings are very slow growers the first year, so they tend to get accidentally weeded out. If you want to grow from seed, it is best to start the seeds in pots and transplant them once they are big enough to see.
If your bed gets sunshine for at least half the day, these species will thrive. I usually put the taller plants at the back of the bed, then the medium sized ones in the middle and the shorter ones at the front. If your bed is out in the open, put the taller flowers in the middle.

Flowers for a sunny bed with regular moisture and soil conditions:

Gaillardia, *Gaillardia aristata*. A bushy plant with large colourful daisy-like flowers. It looks like the garden cultivar of the same name, but the flowers are mostly yellow with a rusty red centre. Gaillardias are medium height, 30 to 60 cm, but they tend to sprawl. Give this plant more room than you would expect it to need. All types of bees and other pollinators love the flowers because they are large and provide a good landing pad for insects and also lots of nectar. Gaillardias bloom in July and August and new flowers can appear until frost. Self-seeds a little.

Giant Hyssop, *Agastache foeniculum*. For some reason this flower attracts the most bees. It's a tall, bushy vigorous plant, 80 to 120 cm with spikes of blue/purple flowers. As an added bonus the flowers and leaves are edible. It self-seeds abundantly.

Harebell, *Campanula alaskana*. Give this plant lots of space so that its lacy foliage and delicate bell-shaped flowers can be appreciated. The flowers come in various shades of blue. Blooming season is long, from June to after the first frosts. Harebell is a medium sized plant, 50 to 60 cm tall and will often self-seed.

Golden-aster, *Heterotheca villosa*. This is not an aster in spite of its name. It's a short plant with grey/green leaves that likes to sprawl and cover the ground, so it looks and acts like a ground cover. It has lots of cute little yellow daisy-like flowers that bloom in July and August. It's drought-tolerant and sometimes self-seeds.

Meadow Blazingstar, *Liatris ligulistylis* is my favourite. In August the showy spikes of vibrant pink flowers are a butterfly magnet. Even the fluffy seed heads are attractive and they stay on the plant into winter. Meadow Blazingstar is a medium tall species, 40 to 70 cm. The leaves are narrow and grass-like so the plants looks best in groups of 3, 5, or 7 plants. Meadow Blazingstar self-seeds abundantly so you should have more seedlings of this beautiful flower the following year.

Arctic Aster, *Eurybia sibirica*. This aster is unusually short. Most asters are medium tall but this one is only 30 cm on average. Like Golden-aster, it looks and acts like a ground cover. But whereas Golden-aster sprawls to achieve the ground cover effect, Arctic Aster spreads by short rhizomes into a dense mass of foliage covered with plenty of small pinkish purple daisy flowers. Flowering time is mid-summer to fall. Self-seeds a little.

Low Goldenrod, *Solidago missouriensis*. The flowers look like Canada Goldenrod; they are short, plump spikes composed of hundreds of tiny yellow flowers crammed together. However this species is a lot shorter than Canada Goldenrod at 30 to 40 cm, and better behaved. Your plant will slowly spread into a bigger patch, but it won't try to take over the whole bed. The flowers are dense with nectar and very popular with pollinators. Low Goldenrod doesn't seem to self-seed, but it can be grown from seed.

Stiff Goldenrod, *Solidago rigida*. If you want a goldenrod that doesn't spread into a patch, try this one. It's a nice sturdy plant with leaves that are a little bit fuzzy and soft. The flowers are flat-topped providing a good landing pad for butterflies and other insects. Height 50 to 60 cm. Stiff Goldenrod self-seeds a little.

Smooth Fleabane, *Erigeron glabellus*. A short plant with low, neat-looking foliage and small, attractive daisy flowers. The flowers come in shades of purple and sometimes pink. All types of daisy flowers are very attractive to pollinators because the centre of the flower consists of tightly packed florets - tiny flowers without petals that still provide lots of nectar. The shape of the flowers provide a nice flat surface for insects to land. Smooth Fleabanes tend to attract the tiny native bees.

Monarda (Wild Bergamot), *Monarda fistulosa*. This is another tall, bushy plant, 80 to 100 cm. It has beautiful showy pink flowers in July and August that attract hummingbirds as well as bumble bees. The flowers and leaves are edible and the seed-heads have a lovely scent when dry. It's only drawback is that it is sometimes susceptible to powdery mildew. It self-seeds a little.

Slender Blue Beardtongue, *Penstemon procerus*, is a small and welcome spring bloomer flowering in May and June. They are a favourite of bumble bees and it's fun to watch these large bees hanging off the tiny flowers. The flowering spikes have a wide range of blue, purple and violet shades and the plants often flower again in the fall. Since the plants are small and bushy, they look best planted in a group of 3 or 5. Slender Blue Beardtongues self-seed abundantly. Height 20 to 40 cm.

Early Blue Violet, *Viola adunca* is another welcome spring flower. It's a tiny plant with small blue flowers and can be overlooked. It will mix happily with various ground covers such as Pussytoes, and it will self-seed abundantly. Height 10 to 15 cm. Bloom time is May and June.

Pussytoes, *Antennaria parvifolia*. We have several different species of Pussytoes, but this is the best one for a sunny bed. Pussytoes is another spring bloomer that will make a lovely ground cover at the front of a bed, as it spreads by short rhizomes. It has tiny, silver grey leaves, small white flowers and lots of fluffy seeds. It's only 10 to 20 cm tall and rarely self-seeds.

Three-flowered Avens, *Geum triflorum.* This lovely ground cover doesn't self-seed although the seeds can be grown out. It has short, fern-like foliage and rose pink bell-shaped flowers that look like buds. The foliage stays green under the snow all winter - what a welcome sight to see some green when the snow melts. The flowers appear in May and June, followed by attractive fluffy seed heads tinged with pink. In a prairie the massed seed heads look like smoke on the ground, giving this plant its other common name, Prairie Smoke. Height is 30 to 40 cm.

These descriptions should get you started on figuring out what flowers you prefer. Most of these flowers are adaptable and will also grow in semi-shade. Next month I will talk about more flowers for semi-shade and shady conditions.
In the meantime, you can search the internet for more interesting information. There are some good sites out there. Remember to enter the Latin name and not the common name as plants usually have several common names. It can get confusing!

In order to view photos and descriptions of the above wildflowers, you can also visit Dropbox:
https://www.dropbox.com/s/aaasaj5kpb959ra/Common%20Wildflowers%20-%20Edmonton%20area.pdf?dl=0

Perspective on Non-native Plants: Part One by Patsy Cotterill. Photos by author.

Weeds, the good and the bad

One good thing about winter is that, as people who frequently have their hands in soil, we get a break from weeds. Of course, not all weeds are created equal. People will have their own weedy bêtes noires depending on whether they are farmers, gardeners or involved in ecological restoration. My nemesis is smooth brome. Probably few people who see this tall, sprawling grass everywhere in waste ground, along roadsides, in fields, and in regenerating or disturbed woods, recognize that it is actually a non-native. It is not officially recognized as a weed because it was introduced as a forage grass in the early days of settlement and is still sown for hay. Yet it invades natural plant communities and dominates all human-disturbed land in our neck of the woods. If its origin and nature was more widely understood it would be condemned as the eco-imperialist and colonial usurper that it is.

Smooth Brome, *Bromus inermis* subspecies *inermis*, is a tall grass with relatively broad leaves that have a characteristic V-shaped crimping on the blades. It grows in a variety of disturbed habitats where it can form extensive patches by means of rhizomes.

Still, one needs to be discriminating about weeds. My interest in ecology was first stimulated when my biology teacher pointed out the clever strategies of weeds for survival, their adaptations to their habitats. Perennial lawn weeds such as dandelions put out rosettes to prevent the grass encroaching and produce lots of seeds with ingenious dispersal mechanisms. Alternatively, like common groundsel (*Senecio vulgaris*) or stinkweed (*Thlaspi arvense*), they are annuals with short life cycles and copious seed production and germination in continuously disturbed ground. For botanical education weeds make great subjects; they are abundant and ubiquitous and removing them from their habitat will do no harm. They can be used to study plant morphology, anatomy and taxonomy. As the first responders to ground disturbance, the pioneers in the early stages of succession to a more stable, consolidated plant community, they have sometimes been somewhat romantically called healers. However, where the desired end is a crop or a horticultural or a diverse natural community of plants, there is a problem. The annual weed seeds that are blown or otherwise carried

in initially are merely replaced by perennial weeds if there is no further disturbance. This is particularly true of sites within or adjacent to human settlement where there is little or no native seed source. Without further intervention, perennials such as smooth brome, quackgrass and timothy can persist for a very long time.

A very large proportion of the plants we consider weeds in Canada are non-natives that have been introduced from elsewhere, often outside the country. However, it should be borne in mind that even some native species can have weedy characteristics such as efficient reproduction by seed or vegetative means, wide dispersal, and a propensity to grow in disturbed habitats, which makes them a nuisance in cultivated land or natural communities.

The control of weeds has been legislated in many parts of the world because of the economic losses they cause or threaten to cause. In Alberta weeds are classified as: prohibited noxious (small infestations, often recently arrived, that it may be possible to eradicate before establishment) and noxious (must be controlled, although already so widespread that eradication is likely impossible). There is also a category of weeds recognized as mere nuisances, that are not provincially regulated but can be blacklisted by municipalities depending upon how much of a problem they are at the local level. Earlier on, the focus was entirely on economic loss caused by agricultural weeds, but more recently the harm done to natural environments by some weeds has been recognized and they have been included in legislated lists. In addition, there are many non-native species that are not in any way regulated (smooth brome being a case in point) and are even deliberately planted, but are undesirable from an ecological point of view. These include perennial species with highly invasive characteristics, and I'll refer to them later.

Weeds are tied to human activity, and weeds have increased in number and diversity over the years due to more widespread cultivation and urbanization, and increased travel around the globe. Correspondingly, so have our efforts to control them. These include the use of herbicides which, because they are regarded as environmental pollutants and dangerous to human health, has prompted a push-back against weed (or non-native) control. In some cases, the opposition has come from local communities who protest against the removal of local non-native vegetation, as was the case with the Million Trees movement in California. This group fought to retain Eucalyptus forests when the local land authorities planned to replace them with a native oak-savanna community. Sometimes this opposition amounts to a complete denial that invasive species (whether of plants or animals) do any harm at all, but are rather products of nature. This push-back can have important consequences. I repeat, not all weeds are equal; in our attitudes towards non-native species it is important to be discriminating and to evaluate different situations on their own merit.

Prohibited noxious weed, Garlic Mustard, *Alliaria petiolata.*

This has become established in the Mill Creek Ravine area since the early years of this century, probably escaping from a local garden whose owner had travelled in eastern Canada. An introduction from Europe, it has allelopathic properties, meaning that it secretes substances into the soil which prevent the germination of other species. This has allowed it to form extensive colonies in the moist forests of northeastern North America. (This photo was taken in Great Smoky Mountains National Park, Tennessee.) A biennial, seedlings establish one year and grow to flowering maturity the next. Hand pulling of the flowering shoots, leaving the seedlings, has not proven effective for removal in the Edmonton area.

Noxious weed, Yellow Toadflax, *Linaria vulgaris*, photographed at Pigeon Lake.

It "became a significant problem in the prairies in the middle of the 20th century...considered by the Alberta Weed Advisory Committee to be the most serious perennial broad-leaved weed in Alberta." This is because it invades both annual and pasture crops, forming extensive patches by means of shoots produced on creeping roots. It is a major problem in open, grassland nature reserves, for example, Fort Saskatchewan Prairie, on whose sandy soils it often grows amidst northern bedstraw, which has similar linear leaves.

Rosette and flower-head buds of Common Dandelion (*Taraxacum officinale*) in June in the mountains. Dandelion qualifies as a nuisance weed, and municipalities may ignore it or subject it to mowing to reduce seed production.

A case study for the perfect weed, dandelions are cosmopolitan and too abundant to be eradicated. Someone once said: “The sun never sets on the empire of the dandelion.”

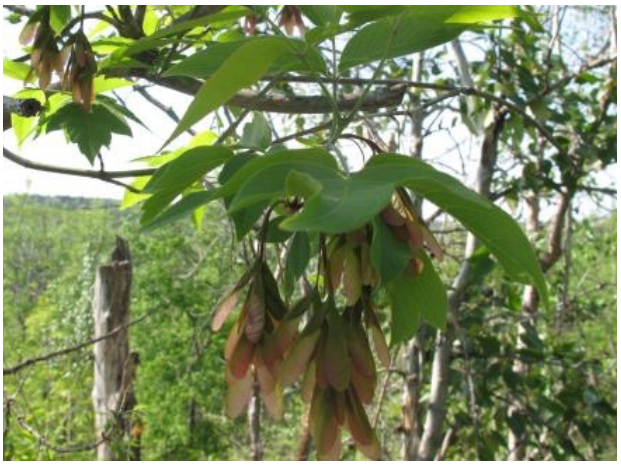
Native, naturalized, non-native and invasive: some definitions.

But let’s move on from the legislated aspect of weeds to consider ecological weeds, which concern us as botanists, native plant gardeners, stewards and volunteers. The terminology shifts a bit here, the distinction being not on how noxious they are in economic terms, but on native versus non-native (introduced) and the plant’s behaviour in ecosystems.

> Native plants are those that have evolved in the area in question, and in North America the term usually refers to the plants that existed on the continent before human colonization.
>
> Non-natives are called alien or exotic, and have arrived from elsewhere. Douglas Tallamy in his excellent book “Nature’s Best Hope” says that he dislikes the word ‘alien’, because it sounds too much like scary science fiction, and ‘exotic’ seems too optimistically romantic, so he prefers the word ‘introduced’. Indeed, almost all non-natives have been introduced and, in many cases, spread by human agency.

It is among the introduced species that the most undesirable property, that of invasiveness, is likely to be found. Author Erich Haber of National Botanical Services in Ottawa defines invasive plants as “species that are not native to a region or country but have the ability to compete with and replace native species in natural habitats.” Of non-natives in general he goes on to say that most, in the northern latitudes of North America, have come from Europe or Asia where the climate is similar to that in their adopted homelands. Those alien species that are able to adapt to their new environments and extend their range beyond their initial points of introduction are considered to be naturalized components of the flora. Only some naturalized species become invasive. Others even settle in and behave like natives. Haber gives as an example of a naturalized species the helleborine orchid (*Epipactis helleborine*) of eastern North American woodlands, which has become widespread but intermingles in the natural community as individuals or in small groups. Some naturalized species add to the biodiversity of a region and are accepted as natural by the fauna that feed on or otherwise use them. The flora of the British Isles, for example, impoverished by glaciation, has been greatly increased by a naturalized flora.

A further thing to note is that an introduced species need not necessarily have come from another country. Manitoba maple *(Acer negundo*) is native in eastern North America and does not naturally extend this far west as a native; in Alberta it is alien, naturalized, and invasive. (All occurrences in the province are thought to be garden or farm escapes, and because it can form extensive populations in river valleys and on floodplains replacing native species, it is classed as invasive.) Some regional plant manuals (floras) state that a plant is non-native if it has not originated in the geographic area covered by the manual. In formal descriptions, therefore it is important to be precise about where a species is native to



Female Manitoba Maple, *Acer negundo*, tree in Edmonton River Valley, showing developing samaras (fruits) and young leaves.

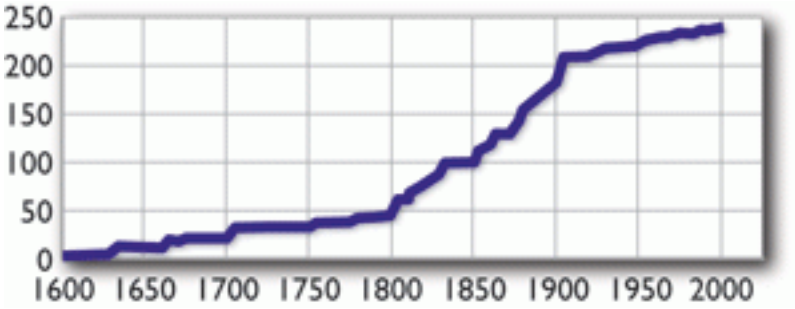
The problem of invasives.

Invasives that threaten populations of rare plants, or that hybridize with a native species to overwhelm it genetically and lead to its loss as a separate species, are a particular concern. I believe that another problem is the poor understanding of the dangers of ecological weeds or invasives by the general public. Coupled with a popular distrust of herbicides, which can lead to the kind of push-back I mentioned earlier, this may well be impeding our ability to preserve biodiversity and ecological integrity on larger, landscape scales.

According to the BioDiv Canada link below (centuries along the x axis), approximately 1,229 (24%) of the 5,087 known plants in Canada are not native. Of these, 486 are considered weedy or invasive (see link below).

Invasive non-native plants in Canada

Cumulative number of species, 1600 to 2005:



In a second article I will discuss some of our local invasives, including the problem of distinguishing between native and non-native populations of the same species, and the implications they have for our natural plant communities.

References

Weed Identification Booklet:
https://www.edmonton.ca/documents/PDF/Weed_Identification_Book.pdf

Statistics on exotic plant species in Canada:
https://biodivcanada.chm-cbd.net/ecosystem-status-trends-2010/invasive-non-native- species#:~:text=Approximately%201%2C229%20(24%25)%20of,are%20considered%20weedy %20or%20invasive.&text=This%20line%20graph%20displays%20the,native%20plant%20speci es%20in%20Canada

Tallamy, Douglas W. 2019. Nature's best hope: a new approach to conservation that starts in your yard., Portland, Oregon. Timber Press.

Website of the Month:

The Xerces Society for Invertebrate Conservation is an international nonprofit organization that protects the natural world through the conservation of invertebrates and their habitats. As a science-based organization, they both conduct their own research and rely upon the most up-to-date information to guide their conservation work. Key program areas are: pollinator conservation, endangered species conservation, and reducing pesticide use and impacts. Learn more about their work and sign up for their enewsletter: http://www.xerces.org
It's lovely way to spend and hour or so browsing through all they have to offer!

Nature Alberta booklet on urban biodiversity:
https://fliphtml5.com/ffxrj/lwob/basic
One of our members, Trudy Haracsi, has a photo of her native butterfly plants front garden in it!

Something Different:

What does the Earth ask of Us? This is a webinar on Youtube presented on November 12 2020 by Dr. Robin Kimmerer, author of *Braiding Sweetgrass*.
https://www.youtube.com/watch?v=ybYrCC2YPrc&fbclid=IwAR06sICND1I_blEQcHV0zezzeFAZaC97R3I2GbUhryaj3f96IzZa0WVxnWQ

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Kinnikinnik and reindeer lichen at Halfmoon Lake