

Newsletter of the Native Plant Society of Saskatchewan



R O O T S

Vol. 26 No. 4

Winter 2021



Townsendia exscapa

Low Townsendia

Photo credit: Chet Neufeld

Richard St. Barbe Baker Afforestation Area Needs Your Help!

The goal of the Friends of the Saskatoon Afforestation Areas is to protect the 326-acre Richard St. Barbe Baker Afforestation Area and the 148-acre George Genereux Urban Regional Park in the City of Saskatoon. The first park has a wetland in it also. They were both afforested in 1972, so the native aspen bluffs have had a chance to mature and expand. As part of the master plan which the City of Saskatoon and the Meewasin Valley Authority seek to address, one of our missions is to document the biodiversity in these two afforestation areas. Can you help? It is also hoped that participants would exchange and share information and observations about various taxonomic groups, field tactics and techniques so we can move forward with group events.

We look forward to hearing from you.

Julia Adamson
(306) 380-5368

iNaturalist Afforestation Area Eco-Quest - download the iNaturalist app on your smart phone, add one or both of the projects below and start taking pictures of plants and animals!

<https://www.inaturalist.org/projects/baker-area-eco-quest>

<https://www.inaturalist.org/projects/genereux-park-eco-quest>

The Unexpected Butterfly Garden - By Ingrid Thiessen

On March 21, 2012, the third day of spring, my casual interest in butterflies began. It was a beautiful warm day and amongst the leaf litter I saw a butterfly and thought, "wow – that is early! Is this a sign of global warming?" I posted the Compton Tortoiseshell (*Nymphalis vaualbum*) photo on e-butterfly thinking 'some scientist' might be interested. A few weeks later, I bought some flowers for Easter and placed them temporarily on a picnic table when a Milbert's Tortoiseshell (*Aglaia milberti*) appeared. In that same year, a teacher librarian friend of mine from Winnipeg showed me her Monarch (*Danaus plexippus*) habitat where she was raising Monarchs for use in the classroom. Consequently, in 2012, I bought my first Swamp Milkweed (*Asclepias incarnata*) plant complete with caterpillar. But then I started a new job and time to indulge in butterflies became but a distant thought.

Fast forward to 2020, the start of the pandemic allowed me to work from home. We had bought a window bird feeder and realized there was quite a bit of nature action in the backyard. I joined The Nature Conservancy of Canada (NCC) Backyard BioBlitz through the iNaturalist app which records sightings. It does a great job "guessing" your observations and others can chime in if they agree. In 2021, I joined the Canadian Wildlife Federation's City Nature Challenge and again recorded the nature

in my backyard via iNaturalist. But it was only this fall, when I ran a filter of my insect observations, that I realized I had 17 different butterfly species and 7 moths posted: all in our yard! It dawned on me - I had a butterfly garden and didn't know it.

With the exception of the milkweed, we never set out to attract butterflies. Why did they show up in our yard? It appears that we can check off many of the criteria needed for a butterfly garden as determined by many nature organizations, including:

1. Many native plants to our area or native to neighbouring provinces. Many nectar plants that bloom over a long period of time.
3. Host caterpillar plants specific to some, but certainly not all the butterflies.
4. Both overwintering and summer habitat. We leave the leaf litter on our shrub beds, and we don't cut most of the perennials back until late spring. We have some sunny areas – though not as many as we would like. Our yard is slightly messy.
5. We should, but don't, have mud puddles; we do have a fountain/pond and a dry creek bed at a downspout, but I have never seen a butterfly amongst the wet mud of the marginal/shallow potted pond plants.

Roots is a quarterly publication of the Native Plant Society of Saskatchewan (NPSS) and is one of the benefits of membership. Members are invited to submit articles, news, views, photographs and comments. Views expressed by the authors are not necessarily those of the NPSS.

Deadlines: Submission Publication

Winter Issue: November 1 December 15
Spring Issue: February 1 March 15
Summer Issue: May 1 June 15
Fall Issue: August 1 September 15

Native Plant Society of Saskatchewan

P.O. Box 21099, Saskatoon, SK S7H 5N9
Phone: (306) 668-3940 Fax: (306) 668-3940
E-mail: info@npss.sk.ca Website: www.npss.sk.ca
Twitter: @NPSS_SK www.facebook.com/npss.sk

Membership Dues (Year End November 30th).

Individual \$30 Family \$45 Student \$15
Non-profit \$100 Corporate \$200
Life \$500 Please contact the NPSS office for info about the lifetime membership instalment payment option.

Get your photo on the cover of... **ROOTS!** Submit your Saskatchewan native plant photos for future cover consideration to: info@npss.sk.ca



Echinacea and Purple Prairie-clover with Monarch. Photo by Ingrid Thiessen

6. We don't use pesticides 99.9% of the time; our grass is weeded by hand.

Let's delve into these criteria a bit further as it relates to our yard.

NATIVE PLANTS

Of all the criteria mentioned above, my hypothesis is that native plants are the major attraction. Our native plant inventory includes: 6 grasses, 2 sedges, and about 30 forbs with half being on site for 15-20 years; the other half relatively new (2 to 10 years). We also have Saskatoons (*Amelanchier alnifolia*), and a few native trees such as American Elms (*Ulmus americana*), Green Ash (*Fraxinus pennsylvanica*) and a Bur Oak (*Quercus macrocarpa*). I should note that we also like our geraniums and petunias, but I have never seen a butterfly on either of them. It's the native plants that are preferred nectar plants of the butterflies (and bees too).

The native plants make up 20% of the yard or about 80-room²; even a small number of native plants matter.

NECTAR PLANTS, TREE SAP, and ROTTING FRUIT

The top nectar plants where I have seen butterflies are Swamp Milkweed (*Asclepias incarnata*), Echinacea (*Echinacea angustifolia*, more recently referred to as *Echinacea pallida* var. *angustifolia*), Dotted Blazing Star (*Liatris punctata*), Joe Pye (*Eutrochium purpureum*), and asters. Goldenrod (*Solidago* sp.), fleabane (*Erigeron* sp.) and dogbane (*Apocynum* sp.) are other native nectar plants often cited by the literature, but we don't have those plants in our yard. Please note that *Echinacea angustifolia* is native to Saskatchewan, as opposed to *E. purpurea* sold by nurseries, which is often short lived. In addition to nectar, many butterflies such as the tortoiseshells, Mourning Cloaks (*Nymphalis antiopa*) and Red Admirals (*Vanessa atalanta*) like tree sap and rotting fruit. Most

of us clean up our rotting fruit to prevent wasps from taking over our yard but remembering to leave just a few for the butterflies and birds is a good idea. No doubt the old Manitoba Maple (*Acer negundo*) in the neighbour's yard also attracts some butterflies especially in the spring when the sap is running.

CATERPILLAR HOST PLANTS

I came across a handy and extensive list of host and nectar plants for each butterfly in the Nature North magazine <http://www.naturenorth.com/summer/bgarden/bttgrdF2.html>. The butterflies were specific to Manitoba but many of the same butterflies are here in the Regina area. A similar list is on the iNaturalist website <https://www.inaturalist.org/posts/45055-spring-butterflies-in-manitoba>; the butterflies and moths website is also helpful in identifying hosts. Rather than repeat this excellent information I will highlight a few of the butterfly and plant needs specific to our yard.

MONARCH

Most of us know that Monarch caterpillars need milkweed (*Asclepias* sp.). We have Swamp Milkweed, which is native to Manitoba but not Saskatchewan. It grows 60-90cm tall. We use it because it is the least aggressive in our area, acting like a typical clump perennial. It does not need wet soils, but it does need some moisture in a drought. We recently planted Whorled Milkweed (*Asclepias verticillata*) which is native to Saskatchewan and will see how it does in a garden setting. The Common and Showy Milkweeds (*Asclepias ovalifolia* and *A. speciosa*) are also native to our area but can take over a garden without the harsh growing conditions of a dry native prairie. Both are tall and beautiful.

MILBERT'S TORTOISESHELL and RED ADMIRAL

The tortoiseshells overwinter as adults and must find our yard welcoming because of the wood pile, sap from the neighbour's maple tree and the compost with the fruit. We see them in May and October. We do have some early blooming native plants such



Mourning Cloak. Photo by Lawrence Baschak



Greater Fritillary (*Speyeria* sp.). Photo by Lawrence Baschak

as Three-flowered Avenas (*Geum triflorum*), Saskatoons, Marsh Marigold (*Caltha palustris*), Canada Anemone (*Anemone canadensis*) and columbine (*Aquilegia* sp.), but we have not seen the Milbert's tortoiseshell on any of them. Both the Milbert's Tortoiseshell and the Red Admiral require nettles (*Urtica* sp.) as its host plant. To lay their eggs they have to go into our park system since we have none in our yard. The Red Admiral migrates from the southern USA and is a common urban butterfly. These butterflies are frequently seen in our yard and maybe they are coming for the nectar, though we mostly see them sunning themselves on the garage wall, walkways and our apple tree.

COMPTON TORTOISESHELL and MOURNING CLOAK

Trees are the host for Compton Tortoiseshell and Mourning Cloak. The Compton Tortoiseshell is the one I saw in March 2012 which overwinters as adults, as does the Mourning Cloak. The host trees are similar. Poplars (*Populus* sp.), willows (*Salix* sp.), and Paper Birch (*Betula papyrifera*) are desired by both. None of these trees are in our yard. The Mourning Cloak likes elms. With such a common host, we should all be familiar with this butterfly. When

they overwinter, they need nooks, crannies, wood piles or leaf litter. We think this is why they are in our yard; it's their winter home.

FRITILLARIES

It was only two years ago that I realized that that there was a connection between the fritillaries, violets (*Viola* sp.), and leaf litter. The yard came with violets when we bought the house 26 years ago. They multiply profusely. If we were sure they were the native Early Blue Violets (*Viola adunca*), we would have let them go a long time ago. At some point we gave up. Now we have lots of violets which have invaded the lawn and shrub beds and we let them be. This rewarded us with three days of fritillary butterflies showing up during the heat of the day every half hour for about three days. It is important to note that three of the fritillary identifications were verified / corrected by experts via iNaturalist. I remain confused at how one can tell the difference between the fritillaries, though size and colour are apparently two factors. According to a few websites the caterpillars lay their eggs in the leaf litter. They hide there during the day and feed on the



Satyr Comma on milkweed. Photo by Ingrid Thiessen

violets during the night. We also have a Western Canada Violet (*Viola canadensis* var. *rugulosa*) and a Northern Bog Violet (*Viola nephrophylla*). Both need more moisture and are not as prolific as the violets in my lawn.

WOODLAND SKIPPER and COMMON WOOD NYMPH

Who knew how important the native grasses were for butterflies? Apparently, the host plants for skippers and wood nymphs are native grasses and we have Blue Grama (*Bouteloua gracilis*), Little Bluestem (*Schizachyrium scoparium*), June Grass (*Koeleria macrantha*), drop seed (*Sporobolus* sp.), Purple Oat Grass (*Schizachne purpurascens*), and two sedges (*Carex* sp.) in our yard. We leave the seed heads standing for the winter. These butterflies are so inconspicuous I can't say I have ever noticed them before. They are so cute they could easily be in a Disney movie.

HABITAT

Our gardening practises are based on ecological principles, which varies a bit from the traditional gardening practises of our parents. Both our parents had wonderful yards and many of the lessons they taught us we use, but not all of them.

• **LEAVES:** One of the key differences is that we leave the leaves. I was influenced by a much-admired botany and ecology professor who was a believer in field trips. Dr. Jennifer Shay had us take soil profiles of the forest and the prairie and compare the depth. Why was the forest organic profile so thin, and the prairie profile so thick? Where did all those leaves go? No one rakes up the forest leaves! Consequently, we leave the leaves as mulch for the health of the soil. It's free. We have 26 years of cones and coniferous needles under two of our spruce trees. I did a small excavation and it ended up being about 4" to 6". We do minimal clean up in the shrub beds in the Fall, to allow the

standing stems and leaves to be homes for insects. The exceptions are: 1) leaves are always removed from the lawn in the fall and composted, otherwise the grass might die, and snow mould will reign and 2) we remove the leaves in the spring from the rock garden groundcovers or they would smother.

Leaves are left in all other areas including the shade/ forest type groundcovers such as False Solomon's Seal (*Maianthemum racemosum*) and Anemone (*Anemone* sp.). The plants will find their way through the leaves. If the wind has blown in excess leaves, we might relocate them. Exposed earth is rare in our yard. Even bees appreciate some leaf litter according to the Xerces Society. One of their campaigns is called 'leave the leaves'. The leaf litter is apparently important for many overwintering adult butterflies. They don't even want you to shred the leaves that you do pick up, since it could be destroying butterfly eggs or chrysalises.

• **NOT THAT TIDY; BUT NO WEEDS:** There is a sense of messiness in our shrub beds that might bother many. We have wood piles that were intended for backyard bonfires that have been there for years. It turns out these wood piles may be important for sheltering overwintering butterflies. If the log pile is sheltered, as ours is from the overhang of the garage, all the

better. We try hard to remove all weeds from the provincial weed lists from our garden. It does not matter to us how beautiful or bee friendly Dandelions (*Taraxacum sp.*), Baby's Breath (*Gypsophila paniculata*), Purple Loosestrife (*Lythrum salicaria*), Oxeye Daisy (*Leucanthemum vulgare*), Common Tansy (*Tanacetum vulgare*) or toadflax (*Linaria sp.*) may be, they are hand removed. So is Creeping Bellflower (*Campanula rapunculoides*). This is on the regulated weed lists of Manitoba and Alberta. We generally do not use pesticides /herbicides in our own yard 99.9% of the time. We have been known to use the paint brush method when Quack Grass (*Agropyron repens*) shows up in places impossible to remove.

- **REDUCED LAWN AREAS:** A good 50% of our yard is shrub beds. One of our lawns is a blue grama lawn that is only cut 1 to 3 times per summer and never cut in fall. This means we have even less than 30% traditional lawn. Many of the shrub beds started out with wood chips from our trees that were cut down. We see wood chips as temporary until the groundcovers take over. Once the groundcovers are established the workload of weeding tree seedlings (our main weed) is much reduced. Weeds in lawns are hand removed.

There are many other habitat situations /practises that may have attracted or deterred butterflies:

- **SUNNY AREAS:** We recently improved butterfly habitat unintentionally by removing two trees (we still have 13 trees on our property). This decision had nothing to do with the butterflies, but they do prefer sunny spots and it's in the heat of the day that most of the butterflies are observed. In future years we anticipate having fewer butterflies due to increased shade.

- **COMPOST:** We have already mentioned rotting fruit and compost. Do butterflies remember that year after year the compost will be there? I am speculating that consistency may be the key.

- **CONSTRUCTION:** The butterflies came despite construction. In the fall of 2014, we had our weeping tiles replaced and 60% of our yard was a mud pile. It took years to recover when fences, decks and patios had to be reinstated. Thankfully most of the key butterfly plants were on the edges of the yard. It offered the opportunity to replace one of our lawns with a Blue Grama lawn. Construction happened again in 2021, when the city replaced waterlines and sidewalks. About 100 plants, mostly native, were temporarily relocated to pots and to our raised vegetable beds. The butterflies may even have preferred the new sunnier location and one Monarch caterpillar was even found on a potted milkweed.

- **GOOD HORTICULTURAL PRACTISES:** There are many times when traditional gardening methods work better. For example, we remove the leaves/stems of some of our horticultural flowers and send those to the garbage to avoid disease. Also, too much leaf litter may encourage slugs. We do cut and compost the stems of tall perennials such as Echinacea and False Sunflower (*Heliopsis helianthoides*) in the early to late spring, but they are cut tall – 12 to 18". There is some orderliness, but much less than most yards.

- **LIMITED ROCK AREAS:** There are no expansive areas of filter fabric and rock. This practise may save on water bills but offers few environmental benefits. A few rocks for aesthetic purposes are fine and butterflies like the heat from rock perches. Our rocks are decorative as part of the dry creek bed. We have enough hard surfaces in driveways, pathways, and decks.

CLOSING THOUGHTS:

We did not set out to build a butterfly garden. Our main interest was using native plants to our area and rebuilding soil with leaf litter. Which butterflies are in your yard? You may have a butterfly garden too and not know it. A number of organizations are promoting the idea of 1 square metre of native plants for wildlife in every yard. I like that idea. If everyone did that, the habitats for birds, bees and butterflies would be much improved.

Butterflies are ancient creatures often seen together in dinosaur movies and dioramas and apparently have been around for 175 million years; the Painted Lady may be 35 million years old. No fossil record has been found of the Monarch. It is troubling that our generation has contributed to their demise through chemical spraying, habitat loss and climate change. If you own land, you have an obligation to take care of it, and part of that ethic is leaving some room for the creatures that were there before the land was broken. Small changes to horticultural practises and using well behaved native plants can be part of any yard, not just the environmentalist yard. The butterflies have given us much joy and I would encourage homeowners to try some of the native plants and methods described here. Then take photos of the butterflies that come and consider becoming a citizen scientist through apps such as iNaturalist. We feel honoured that the many butterfly varieties came to our yard, and we hope they feel welcome.

Editor's note: This article has been modified for content and length. The full article can be found on our website at: https://www.npss.sk.ca/rsu_docs/documents/the-unexpected-butterfly-garden-draft-8--1-.pdf



This issue's COVER PLANT -

Townsendia exscapa

True to its name, Low *Townsendia* grows only a few centimeters above the ground. Its species name, *exscapa*, is Latin for “without a stem”. In denser grass, it can be completely hidden, and even in sparse vegetation (its preferred habitat), it takes a keen eye to spot this diminutive plant when not flowering. Low *Townsendia* has short, almost linear leaves that are covered with bristly hairs to the point that it gives the leaves a grey-green colour. For most of the season, a short tuft of leaves is all there is to see. However, for a brief period in June, the plants burst with showy, white to light pink flowers with yellow centres. They have the one of the largest flowers relative to their size, typically the size of a quarter when the entire plant is barely double that in diameter. Even after flowering, their seed heads are still quite showy as the cover photo proves.

Low *Townsendia* grows in dry habitats, full sun, and coarse, well-drained soils. It is extremely drought tolerant and makes an excellent low maintenance garden plant that is especially suited to rock gardens. Low *Townsendia* attracts a diversity of pollinators which likely include ground-dwelling insects due to its flowers located so close to the soil surface. It doesn't readily spread and grows well with other low growing plants so can be planted in a matrix or on its own. It grows readily from seed but will establish slowly and may take two years before it blooms. For those with less patience, seedlings may be a better option. Oddly, there are very few sources for this species, potentially due to its low seed production, so acquiring it takes some investigating. The NPSS is always a good first step when looking for a species, as we have an annually updated native plant material supplier list.

It should be noted that Saskatchewan has another similar *Townsendia* species, *Townsendia hookeri*, which is very rare (S1), generally smaller and has a tuft of hair at the tip of the involucre bracts.

This project was undertaken with the financial support of:
Ce projet a été réalisé avec l'appui financier de :



Environment and
Climate Change Canada

Environnement et
Changement climatique Canada



Blazing Star
WILDFLOWER SEED COMPANY

Meewasin



Nature
SASKATCHEWAN



Saskatchewan
Ministry of
Environment

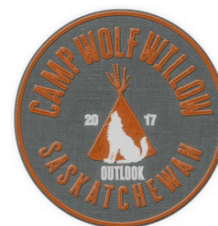
SaskPower
Powering the future®



GOLDER



EcoFriendlySask.ca
Dedicated to promoting and protecting our natural habitat



CanNorth
Canada North Environmental Services

Saskatchewan



SaskEnergy

