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Wild Senna (Senna hebecarpa) K.Patrie

Late August 2020

SEEDLINGS

Wild Ones|Kalamazoo Area Chapter

What more substantial service to conservation than to
practice it on one's own land?--Aldo Leopold



Tiny bee on purple coneflower (*Echinacea purpurea*) K.Patrie

Dear *|FNAME|*,

As of this writing, we are experiencing a small drought; no rain in over a month. (At least where I live, north of Comstock.) I have been selectively watering my native plants to help the blooms last longer; must have nectar for the butterflies and bees!

Regarding bees, and bumblebees specifically, we have two excellent articles this month from Kalamazoo College students Nicki Bailey and Niko Nickson. They are studying under the tutelage of Dr. Ann Fraser, and working on the citizen science project Southwest Michigan Bumblebee Watch. Read their informative articles for more information on how you can help.

Our September program will feature Dr. Dave Warners teaching about native shrubs and trees and their importance to wildlife. I'll send information next month on how to join us LIVE on Zoom for his presentation. In the mean time, mark your calendars for the evening of September 23. For October and November meeting info, see the Community Events section near the bottom.

Stay Safe, and Be Well,
Kim Patrie
Editor

Grasshopper on Tall Coreopsis
(*Coreopsis tripteris*) K.Patrie

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In Search of Bumblebees: A Citizen Science Project

Text & photos by Niko Nickson

As a student at Kalamazoo College, one of my graduation requirements is to complete an undergraduate thesis in my field of study. For my thesis, I have been working with Dr. Ann Fraser to help develop and launch a citizen science program focused on assessing Southwest Michigan's bumble bee species abundance and composition.



Named the Southwest Michigan Bee Watch, we have been recruiting the public to photograph bumble bees in the Southwest Michigan region and submit these photos through one of two online platforms: [Bumble Bee Watch](#) or [iNaturalist](#). With the help of citizen scientists, we can vastly increase the amount of area covered and number of photos taken. This in turn provides a more accurate and robust picture of the health of bumble bee populations in our area. Pollinators across the state, country, and world are seeing population declines for a variety of reasons. Southwest Michigan Bee Watch focuses specifically on bumble bees because they are large, easily recognizable, and relatively easy to photograph while feeding at flowers. Of our state's 21 bumble bee species, only 6 are believed to have relatively stable populations, and only 3 of those are seeing population growth.

Like many others during this unique time period, finding ways to keep myself busy during the coronavirus pandemic has been very important. Spending time working as a citizen scientist has been a fulfilling experience because I get to spend a lot of my time in our beautiful natural spaces of Southwest Michigan working on a project that seeks to address a pertinent environmental concern. It's been exciting to explore a variety of natural areas in our region and scope out the resources present to support pollinators.



It's also been exciting to personally see 7 of our state's bumble bee species. Collectively, 220 bumble bee sightings have been submitted and identified to species so far this year. Common species with stable populations include the two-spotted (*Bombus bimaculatus*; 44%), common Eastern (*B. impatiens*; 20%), brown-belted (*B. griseocollis*; 13%), and half-black (*B. vagans*; 9.5%) bumble bees. I've also personally seen the uncommon and declining yellow (*B. fervidus*; 10%), and confusing (*B. perplexus*; 0.5%) bumble bees.



Through the submissions of myself and my fellow research partner, Nicki Bailey, as well as other citizen science volunteers, our project has recorded the sightings of the black-and-gold (*B. auricomus*; 22%) and possibly American (*B. pensylvanicus*; 0.5%) bumble bees, both of which are listed as a conservation concern. As the summer has progressed, we have also seen males begin to make their floral visits which is exciting as they can have different color patterns from their female counterparts.

However, the most exciting aspect of my research thus far this summer has been the opportunity to engage with the regional community and encourage them to submit photos on our project's behalf. Our volunteers have made valuable contributions by submitting photos everywhere from nature preserves to their private gardens, each contributing to a more thorough understanding of the species in our area. I have found citizen science in practice to be a wonderful concept because it allows a research team to have "many eyes in many places," thereby expanding the focal range of the research over the relatively short seasonal duration of the spring and summer months.

Another wonderful aspect of citizen science is that the time commitment for a volunteer is as minimal as the few seconds it takes to capture a single photo; it is not necessary to spend hours in the field or use a high-quality camera to be a citizen scientist. So, the next time you're spending time in your garden or find yourself in an area with flowers, take a few minutes to look for a bumble bee paying a flower a visit.



It's the efforts of citizen scientists that make it possible for the Southwest Michigan Bee Watch program to gain deeper insight of the regional composition of bumble bee species, which will help inform conservation efforts moving forward. For more information about the program, resources for bumble bee identification, and directions to get involved, please visit our website at swmbees.kzoo.edu.



Plant of the Month: Showy Goldenrod

Laura Shaw *Photos: K.Patrie*



The bright yellow flower clusters of this North American perennial add a colorful flourish to the late summer and early fall landscape. The genus name, *Solidago*, is from the Latin word *solidare*, suggesting that the plant has healing properties. Its densely packed flower heads live up to the species name, *speciosa*, which means “showy.”

This member of the Aster family is widely distributed throughout the Midwest and parts of Georgia and Texas. It grows 3 to 4 feet high in clumps, in full sun to light shade, from a rhizomatous and fibrous root system which may develop woody caudices. It is not considered aggressive, but may spread over time.

Closeup of the tiny flowers of showy goldenrod

Typically occurring in dry soils in open woods, fields and prairies, Showy Goldenrod prefers well-drained soil but is tolerant of many soil conditions. The roots send up numerous unbranched, usually reddish stems topped by a floral array that is longer than it is broad. The flower panicle is erect rather than drooping. The lance-shaped leaves are usually not hairy, and the upper stem leaves are much smaller. Small green bracts are scattered along the stalks of the flower clusters. The seed is shaped like a thin inverted cone, with a fluffy white pappus at the thick end which allows for wind distribution. Goldenrods have been mistakenly accused of causing hay fever, which is a reaction to

wind-borne pollen from ragweed and other plants. Goldenrod pollen is sticky; it is transferred from bloom to bloom by pollinators, not by wind.



Showy Goldenrod provides nectar and pollen for bees, beetles, and butterflies in a late season when other wildflowers have faded. Moth caterpillars are nourished by the leaves, and goldfinches and other small songbirds feed on its seeds. Deer, rabbits and groundhogs may occasionally eat the leaves. In conclusion, the plant not only contributes beauty to the landscape, but is an important source of food for wildlife.

Showy Goldenrod (Solidago speciosa) in a native garden.

Walking Leaf

Ilse Gebhard

When I first saw this “leaf” it was from the inside through a window. It was straddling the crack and I thought a plant was growing through the crack. Before most of our milkweed died from the phytoplasma disease it would come up through the cracks between the boards, attesting to its tenacity. By the time I got my cane and got out on the deck, the leaf had moved ever so slowly on those long legs, almost like in slow motion. The mottling adds to the leaf-like effect.

If you google “katydid images” there are some really amazing ones.



Studying Summer Blooms in Southwest Michigan

Text & photos by Nicki Bailey



The heat may keep many of us inside, but the sun's rays are feeding new floral emergences all summer long. Southwest Michigan is home to an amazing array of native plants which are specially equipped to handle these hot summers while doing their duties to support other species. These flowers are fueling a variety of pollinators with the nectar and pollen they need to make it through grueling days and the challenging winter ahead.

Beginning in June, I have been conducting research for my Kalamazoo College senior thesis under the supervision of Professor Ann Fraser to learn everything I can about the connection between bumble bees and the flowers they forage on in Southwest Michigan. I have identified the flowers and observed their bumble bee visitors in Southwest Michigan Land Conservancy properties and other nearby nature preserves to understand how these areas support bumble bee populations.

Bumble bees rely on a healthy and supportive plant habitat because they must collect a lot of pollen and nectar to feed the developing larvae in the nest and to prepare new queens for winter hibernation. With a consistent decline in bumble bee populations over the last several decades, it is important to study what these bees prefer to forage on to improve land management practices in ways that assist our bumble bees.



Many of the properties I visit have a focus on planting native wildflowers, meaning flowers that originated in the Midwest and evolved alongside the fauna they support, like bumble bees. Commonly occurring native species like bee balm, purple coneflower, black-eyed Susan, and daisy fleabane can occur anywhere from the side of the highway to a well kept nature preserve. These plants are resilient and grow in many open prairies providing a beautiful landscape for visitors and pollinators alike.

False indigo (Baptisia sp.)

Bumble bees won't choose just any flowers, though, despite the presence of many native plants. They prefer flowers with irregularly shaped petals, perfect for extracting nectar with their long tongues, and dense centers or lips to support their weight. This doesn't mean these flowers are difficult to grow however, as bee balm has hosted the vast majority of our bumble bee sightings this summer.

Michigan is host to many rare and highly conserved (native plant) species as well, including false white indigo and wild lupine which can be found in the Lillian Anderson Arboretum and Chipman Nature Preserve, respectively, in June. These plants have unique flower shapes and they are a favorite of bumble bee queens after they emerge in late spring, as well as other native bees.



I am excited to complete this research and create a final thesis that can inform future land management practices in the Kalamazoo area that I call home. We are lucky to witness such a beautiful array of plants in the summer, and I appreciate my time outside now more than ever. To support this project, please join our citizen science initiative called [Southwest Michigan Bee Watch](#). You can submit your photographs of bumble bees and the plants they forage on through [Bumble Bee Watch](#) or [iNaturalist](#) and from there your observations will be incorporated into our project. Working as a community, we can improve bumble bee and native flower populations in Southwest Michigan.

Sedges Have Edges...

Ilse Gebhard Photos: Russ Schipper

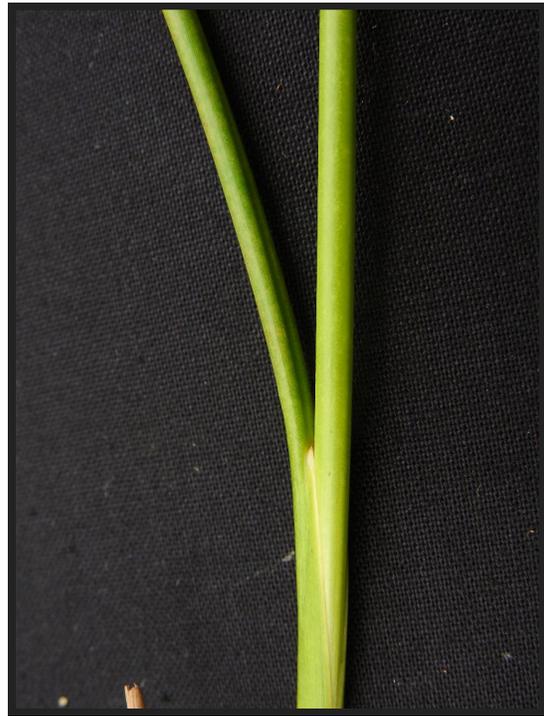
Wondering if the origin of the saying “Sedges have edges” is ascribed to a particular person, I looked it up on the web. Did not find anything on the origin and while all the references agreed that,

Sedges have edges...



rushes are round....

there are a variety of ways to express the characteristics of grasses. Here are a few:



- Grasses are hollow from top to the ground
- Grasses are hollow right up from the ground
- Grasses are hollow straight to the ground
- Grasses are hollow. What have you found
- Grasses have nodes down to the ground
- Grasses have nodes from the blades to the ground
- Grasses have nodes from top to the ground
- Grasses have knees that bend to the ground
- Grasses have joints from top to the ground
- Grasses have joints if the cops aren't around
- Grasses like a... have holes that are round



Community Events of Interest

Sept 23 - 7:00Pm: “Planting Feeders: Native Shrubs and Trees as Landscape Magnets for Biodiversity”. Dr. David Warners, Professor of Biology, Calvin University. Dr. Warners will talk about the importance of Native Shrubs and Trees, as sources of nectar and pollen in the spring, foliage food for invertebrates, and fruits and berries for vertebrates in the fall. Along

with their beauty they provide nesting and overwintering sites for both invertebrates and vertebrates. *An online Zoom presentation, more info coming soon.*

October 28th - 7:00PM: “Insects in Decline: Conservation Opportunities”, Dr. Doug Landis, Distinguished Professor of Entomology, Michigan State University. *An online Zoom presentation, more info to come.*

Nov. 18th - 7:00PM: “You Planned and Planted: Now What?”, David Mindell of Plantwise, Ann Arbor MI. *An online Zoom presentation, more info to come.*

Editor's note: If you know of any local events pertaining to native plants that you feel may interest our readers, please send them along to us at the address below. Thanks!

Webinar from the National Office:

Sept. 24, featuring Heather Holm - Wild Ones Honorary Director Webinars

This past July Dr. Doug Tallamy, Honorary Director of Wild Ones, presented an outstanding webinar that outlined some of the major points in his new book, Nature's Best Hope. (If you missed it, you can [watch it on YouTube.](#))

The next National Wild Ones Honorary Director webinar will be presented by new Honorary Director, Heather Holm. A biologist, horticulturalist and award-winning author, she is a leading educator about native bees and native plants. Heather is VP of the Wild Ones Prairie Edge chapter (MN).

Find program details and link for free tickets in the Fall *Wild Ones Journal* and the [National website.](#)

We hope you reach out through your chapter to encourage members to attend, bring a friend, family member, neighbor or past member. Looking forward to meeting up with you (online!) at these informative presentations!

What's Happening at the National Office

Check out our [National Office web site](#)

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Thank you for your interest and support of Wild Ones!

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SEEDLINGS is edited by Kim Patrie. It appears mostly monthly. The next regular issue will come in mid-September. **Deadline for September issue is September 10.**

[Send Submission](#)

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To share comments and suggestions, simply reply to this email.

We look forward to hearing from you!

Find more information and news at www.KalamazooWildOnes.org
and www.Facebook.com/KalamazooAreaWildOnes



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