



Celebrate Pollinators! The Buzz . . .

This issue of the Missoula Butterfly House and Insectarium's newsletter celebrates insect pollinators. Five years ago the U.S. Senate's unanimous approval designated one week in June as "National Pollinator Week" to draw attention to the urgent issue of declining pollinator populations. It's a celebration of the invaluable services that bees, birds, butterflies, bats, beetles and other pollinators provide. Life as we know it would simply not exist without these animals.

Similar to the lifestyle of most pollinators, with summer getting underway we've been extremely busy. We've been meeting with a diverse array of community members and partners to discuss and gain support for our vision, plans, and developing opportunities for a location for our facility. It's been a time consuming, but extremely

rewarding, process with great feedback and enthusiasm being expressed for our mission.

With outreach season upon us, I hope you'll take advantage of one of the upcoming opportunities to visit us and meet some of our newest bug ambassadors. Please see the event listing in this newsletter for dates, times, and locations. We'll keep you posted of additional opportunities via our Facebook page.

As a supporter of the Butterfly House, you too are a pollinator - helping pollinate an exciting vision so it can become reality. The end result of these pollinating efforts will be the establishment of an educational facility unlike anything you can find in our region.

I can't wait to celebrate a future National Pollinator Week with you

in the Missoula Butterfly House! Thanks for your vision and support!

New Board Member: Lawrence Brehm

Larry came to Missoula in 2003, having retired his architectural business in Berkeley, CA. As a family man, his personal interests and pro bono work involved children's entertainment, education, and amusement projects. He's been watching the annual migration of monarch butterflies for 3 decades! Grandchildren and a local grandniece help fuel Larry's enthusiasm for, and appreciation of, all sorts of beautiful bugs and creepy insects.

Our Mission

The mission of the Missoula Butterfly House and Insectarium is to promote an appreciation and understanding of insects and their relatives in the Animal Kingdom through public education and the development of an invertebrate education facility.

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Help us create the experience.
www.missoulabutterflyhouse.org

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Missoula Butterfly House





Yucca moth
Photo by Mark Muegge, Ph.D.



Yucca plant
Photo by Anneli Salo

Insect In-Sight:

Chances are you've admired the showy, fragrant flowers of the small soapweed yucca. This member of the agave family is native to central and eastern Montana. Outside of its range, you'll find this popular plant in many western Montana gardens because it is not only beautiful, but drought tolerant and hardy.

Whether it's eastern Montana or any backyard, wherever you find yuccas you can't help but notice their attractive stalk of flowers. However, the yucca plant will only successfully produce seedpods within its native range. Does climate vary that much? Do soils? No. The successful reproduction and seed production of the yucca plant are totally reliant on the aptly named yucca moth.

The yucca moth and yucca plant form an obligate mutualistic relationship. In other words, neither species can exist without the other.

Unlike most species of moths and butterflies, instead of having a long tongue, the yucca moth has specialized tentacles around its mouth that serve a unique function. After mating, the female moth will gather pollen from one plant and store it in a ball underneath her chin. She will then visit a different plant, but before cross-pollinating, she will first deposit several eggs into

the flower's ovary. With her eggs laid, she will finish the job by purposefully removing some of the pollen from under her chin and depositing it on the stigma. Successfully pollinated, the flower is now able to produce a fruit with so many seeds that it can add to its own genetic legacy and serve as a food source for the developing yucca moth larvae.

The full-grown larvae eventually move to the ground, bury into the soil, and build a cocoon. There they survive the winter, emerging in the spring when the yuccas bloom, to once again start this incredible cycle anew.

If you're in an area where yucca plants are native and want to observe these incredible moths in action, simply find a yucca plant in bloom (late spring to early summer in Montana). The moths will be resting on the yucca plant or flowers during the day and laying eggs and pollinating at night when the blooms are fully open.

Kids Corner

A Plethora of Pollinators

What is a pollinator? Technically speaking, a pollinator is an organism that transfers pollen grains from the stamen of one flower to the stigma of the same or another flower. Although some plants are self-pollinated or wind-pollinated, pollinators help plants produce the fruit and

seeds we eat, like apples, squash, almonds, blueberries, and even chocolate and coffee! Honey bees pollinate about \$15 billion worth of crops in the US each year! Many insects, birds, and bats are pollinators.

Pollinators visit flowers in search of food, either pollen or nectar. Some pollinators, such as mason bees, collect the pollen to eat and spread it around in the process. Others, such as butterflies and birds, move the pollen accidentally when it sticks to their bodies while they search for nectar.

Because of this important relationship, plants and pollinators may be co-evolving - forming ever-more intimate relationships over time. Different pollinators are attracted to different colored flowers, different shaped flowers, and flowers that smell differently during different times of day, and scientists are just beginning to understand these complex relationships.

Grab your nature journal and go out and survey your backyard. Make a data sheet where you can record the time, date, flower color, shape, and size, what kind of scent the flower has, and what pollinators you see coming to it. Describe or take pictures of the pollinators and flowers to help you identify them. Do you see any patterns? Are insects the only pollinators in your backyard? **Share what you find with us on Facebook!**

| POLLINATOR | TYPE OF FLOWER |
|-------------|--|
| Bees | Yellow, blue, purple colors; there are hundreds of types of bees that come in a variety of sizes and have a range of flower preferences |
| Butterflies | Red, orange, yellow, pink, blue colors; they need to land before feeding, so they tend to like flat-topped clusters (e.g., zinnias, calendulas, butterfly weeds) in a sunny location |
| Moths | Light-colored flowers that open at dusk (e.g., evening primroses) |
| Beetles | White or dull-colored, fragrant flowers (e.g., potatoes, roses) |
| Flies | Green, white, cream colors; many like simple bowl-shaped flowers or clusters |

Planting for Pollinators

By Bryce Christiaens,
Native Ideals Seed Company



One of my favorite things about landscaping with native plants is the wide array of native insects you get to see just outside your door. From the sphinx moths that flutter around the evening primroses at dusk to the bright yellow crab spiders hiding in the arnica waiting for an unsuspecting pollinator, it's like a new Discovery Channel show in your backyard every time you take a minute to watch! I'm always impressed by the new insects and insect interactions brought to my garden by the addition of a new native plant, and I've started planning my garden not just for increased plant diversity, but increased insect diversity as well.

If you would like to start spending less time mowing and watering and more time honing your photography skills on bumblebees and butterflies,

here are a few things you should consider when planning your native plant garden:

- **Plan for the entire season**

Focus on more than the classic late May blooms of arrowleaf balsamroot and lupine; pollinators like to hang out in places that provide blooms throughout the entire growing season. Thankfully, native wildflowers bloom from early spring (cutleaf daisy and currants) to late fall (rabbitbrush, Rocky Mountain beeplant and goldenrod).

- **Provide for everybody**

It's easy to think about pollinators when they are buzzing and fluttering around flowers as adults, but a great way to attract pollinators to your yard is to plant for other life phases as well. Many caterpillars prefer specific host plants.

See *Butterflies and Moths of North America* at www.butterfliesandmoths.org to find information on host plants.

- **Plant a feast**

If you are just starting a native pollinator garden, plant big patches of whatever plants you choose. Pollinators will find your garden more easily, and they will be more likely to stick around.

- **Provide shelter**

A little structure in your garden using logs, branches, and even the dead stalks of the previous season can go a long way to providing homes to native insect populations. Why worry about attracting pollinators every year when you can provide a permanent home?

- **Look for pollinators when you are hiking**

Native pollinators are adapted to native plants, and the best way to know which plants will attract certain pollinators to your yard is to watch which species they are attracted to when you're out and about.

Above all, don't be afraid to ask questions! Western Montana is full of amazing native plant gardeners that are happy to help you on your way!

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Missoula Butterfly House and Insectarium
PO Box 8885
Missoula, MT 59807

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Strong community support will be essential in making this vision a reality. Please help by sharing our mission with your friends, colleagues, and family. Consider *recycling* this newsletter by passing it along to someone else.



Follow us on Facebook to learn about a host of insects (local and exotic) as well as keep on top of the latest Butterfly House news. Share our page with your friends to help us get our message out!

Upcoming Events

July 8: Join us from 10:00-2:00 at the Sunday Farmer's Market near the Carousel.

July 12: We'll be at Downtown Tonight! Caras Park, 5:30-8:30.

July 24: Draught Works Chug for Charity, 915 Toole Ave., Missoula, 5:00-8:00. A portion of the proceeds from every pint sold will be donated to the Missoula Butterfly House!

July 28: Join us at the Carousel's Fairy Tale and Super Hero Festival from 10:30-Noon.

August 25: Stop by and see us at the River City Roots Festival! Caras Park, Noon-6:00.

Help Us Take Flight!

BECOME A MEMBER!

For a donation of \$35 or more, you can become a member of the Missoula Butterfly House and Insectarium. As a supporter of this exciting effort, we'll keep you up to date on our accomplishments. You can make your tax-deductible donation online using PayPal. Simply go to our website (www.missoulabutterflyhouse.org) and click on "Please Donate Now!"

WEBSITE

We're online at www.missoulabutterflyhouse.org! Our website has all kinds of useful information, including current activities, gardening tips, and copies of our newsletters. You can even join the Butterfly House and keep the buzz going with PayPal.