



Marchie's Nursery is a great place to teach kids about insects!



The Buzz . . .

It is hard to believe it has been one year since we wrote our first newsletter. What a year it has been! We visited numerous classes and camps, expanded our menagerie of bug ambassadors and brought them to many community events, kept you up to date on local insect sightings via Facebook, applied for and received our 501(c)(3) non-profit status, grew our membership, began looking for a home for our facility, and worked with a consultant to ready our organization for the work ahead. Amongst all these steps forward, this year also saw the loss of our friend and founding board member, Byron Weber. I know he would be proud of our progress.

Insect In-sight – Mosquitoes

This is the year of the mosquito. The first year in 15 when we are not looking at drought conditions. Instead, we're looking at the perfect conditions for mosquitoes – standing water and warm temperatures. In Montana, we have two basic groups: species that require the pools of water associated with flooding to breed, and species that can exploit nearly any type of standing water, including plastic containers, old tires, troughs, and the saucers you put under your planters. You may not be able to do much about the floods, but you certainly can keep numbers down in your own backyard by emptying anything that might accumulate standing water on a regular basis.

Mosquitoes really are an interesting group of insects though. Mosquitoes have been around for a hundred million years. Although the fossil record is

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Promoting an appreciation and understanding of insects and their relatives in the animal kingdom through public education and the development of an invertebrate education facility.

In the months ahead we'll continue to build the momentum that will be needed to reach our vision – educating the public about insects and their relatives, increasing community awareness and support, searching for a location, expanding our circle of friends and supporters, and strengthening our operations for the long-term.

We would like to thank everyone who has supported our work by becoming a member, donating time, following us on Facebook, or sharing their enthusiasm for this vision. We wouldn't be here without you.

~ Jen Marangelo



Photo by Mardon Erbland

not great, the earliest known mosquito is a female preserved in amber (think *Jurassic Park*). Mosquitoes are members of the Order Diptera – with other true flies – meaning mosquitoes (*Continued...*)

Mosquitoes and West Nile Virus

Most Montana mosquitoes do not transmit diseases, but a few species do and they occur throughout the state, some places in large numbers. That's where an ounce of prevention comes in. Avoiding mosquitoes when they are active is the easiest. Mosquitoes are most active shortly after sundown until about 1 or 2 a.m. Wearing good stout clothing – from head to toe – can also help, but that's hard to do when it's so hot. So, repellents are an effective option. Repellents containing 10 to 35 percent DEET are the most practical and effective. Higher concentrations may be necessary if you're in a high risk area where the temperatures are high and you're sweating a lot. Be aware – rain, sweat, and swimming can wash off repellents.

have two wings (di = two and ptera = wings) and a pair of halteres, or modified hind wings. Scientists have identified over 3500 species of mosquitoes, and each can be very different from each other.

Mosquitoes are holometabolous – just like butterflies, they lay eggs and have larval, pupal, and adult stages. In fact, it is the egg stage that drives blood-sucking mosquitoes. Only female mosquitoes suck blood, and then only in order to provision their eggs with essential amino acids. Both the females and the males actually feed on nectar and other sugary

Spring Hullabaloo



Most kids (and even some adults) love petting the Madagascar hissing cockroaches.

Photo by Jon Garvin

The Neuro Networking Club at The University of Montana hosted its annual Spring Hullabaloo to raise autism awareness last April. Each year, the club hosts an art auction and chooses a recipient for the proceeds. This year, they generously chose the Missoula Butterfly House and Insectarium. The event was fantastic – we got to meet all kinds of new friends – and the auction was a great success. The club raised over \$1,000 for the Butterfly House! We send

substances. Mosquitoes aren't necessarily pollinators, though. They are known to pollinate bog orchids (*Habenaria obtusata*), and they are considered secondary pollinators of many subarctic plants. So, while mosquitoes do pollinate some plants, they are more commonly considered nectar thieves. They usually choose white or pale flowers with nectaries in shallow cups or short, straight corollas because, unlike butterflies, they are limited by a short proboscis.

After a blood meal (from humans, dogs, horses, even birds), the female locates a pool of standing water to lay her eggs, either singly or as a mat, depending on the species. Once the larvae hatch, they feed on algae, bacteria, and other micro-organisms near the surface of their watery home. Larvae have to come to the surface to breath, either through a siphon or through spiracles, but they dive like a flash when they are disturbed. In flood pools, they can fall prey to small fish, dragonfly nymphs, and even the larva of another species of mosquito – one that doesn't suck blood! Developing from egg to adult can be as short as five days, and largely depends on how warm it is. As adults, mosquitoes are delicacies for bats, birds, insects, and amphibians.

So, mosquitoes can be a pain, but they can also be appreciated. The important thing is to be prepared during mosquito season. We can coexist – except for that one. Smack! And that one. Whap!

In addition to all the hard work she put in on the Spring Hullabaloo, Treva Bittinger, of the Neuro Networking Club, distributed boxes called “Bucks for Butterflies” to local area businesses. Thanks to all the businesses who hosted them! Donation boxes can still be found at several local businesses, including Southgate Mall Subway, Liquid Planet on Higgins, Butterfly Herbs, Fact & Fiction, and Twist. Thanks, Treva!

a big and hearty “Thank You” to Treva Bittinger and all the members of the Neuro Networking Club!

We would also like to thank all the people that donated to the Neuro Networking Club's art auction, including Kim Anderson, Dave Bell, Bob and Treva Bittinger, Romy McGahon Daniel, Amy Doty, Sean Ehlert, Claire Emery, Jessica Fitzpatrick, Keith Graham, Amy Hirschbach, Tim Joyner, Joan Mason, Alison Perkins, Nancy Seiler, Naomi Simonson.

Moth Mania



An adult polyphemus moth.

Photo by Timothy Lauro

This spring we heard from two local insect fans regarding something they found near (or on) their homes.

Desiree Stanley contacted us earlier this spring after finding an unusual cocoon in her yard. We weren't sure what it was but suggested she loosely net the cocoon in order to see what might emerge. She followed our advice and was rewarded with a beautiful polyphemus moth.

Is it a butterfly or a moth?

Butterflies and moths are closely related, but you can tell the difference by looking at the antennae. Butterfly antennae are straight with a small knob at the end, and moth antennae are either straight without a knob or feathery. Another clue is to consider what time of day the animal is active. Generally, butterflies are active during the day, while moths are active at night.



With their bright colors and spiny projections, the caterpillars of cecropia moths are easy to spot!

Photo by Glenn Marangelo

The polyphemus moth is one of Montana's largest moths with a wingspan of up to 5 inches. Adults emerge in late spring and lay eggs on a variety of deciduous hosts including birch (*Betula*), maple (*Acer*), willow (*Salix*), and oak (*Quercus*). If you look on these plants now, you might find the large green caterpillars. They have six rows of red spots and narrow white lines on the sides of the body.

In late June, we received a call asking if we wanted some eggs a cecropia moth had laid on a door jamb. Not only did we get the live adult (which laid more eggs), we also received the cut out section of the door jamb with the eggs. Now that's dedication. Thanks Jim and Dennis!

After a week or so we had about two dozen caterpillars emerge that have since grown to more than a half inch in length and will eventually reach 4 inches. If you'd like to see these impressive caterpillars, come visit our booth at the Western Montana Fair.

Thanks to Desiree, Jim and Dennis for sharing your experiences (and eggs) with us.

Byron's Birthday Bake Sale

Each year, Byron Weber, one of our founding Board Members, would teach his young students about Beatrix Potter – an author, an artist, and a naturalist. The unit would end with a tea and scone party. This year, in honor of Byron's birthday on May 3rd, students at Florence-Carlton School held a bake sale to raise money for the Missoula Butterfly House and Insectarium – complete with tea and scones! The students raised over \$300! Thanks Florence-Carlton!

We have T-shirts!



Help create the buzz! Show your support for the Butterfly House by sporting one of our t-shirts. We have a variety of sizes and colors – kids t-shirts are available in pink and blue, unisex t-shirts in grey-blue and sage green, and women's cut t-shirts in yellow and blue. A big thanks to Exact Image for donating our first order!



Help Us Take Flight!

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 (<http://www.missoulabutterflyhouse.org>) and click on "Please Donate Now!"

Tell a Friend!

To make our vision a reality, we need your help in informing others about our mission and what we are bringing to our community. Please help by sharing our work with your friends and family.

Volunteer!

Consider donating your time and skills to help us achieve our vision. As we grow and move forward, we will need a variety of different kinds of volunteer help. Please fill out the volunteer survey on our website or contact us at insecteducation@gmail.com or 406-214-5036.



Follow Us on Facebook

Keep up to date on Butterfly House activities as well as local insect happenings, news, and trivia. Please "like" or "share" our page with your friends to help us get our message out!

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.

Upcoming Events

Western Montana Fair, Missoula County Fairgrounds, Tuesday August 9 - Sunday August 14, 2nd Floor of the Commercial Building.

River City Roots Festival, Caras Park, 12:00 - 8:00, Saturday August 27.

Missoula, MT 59807

PO Box 8885

Missoula Butterfly House and Insectarium

AND INSECTARIUM

