

The Buzz Thank You Missoula!

By Jen Marangelo, Executive Director

WINTER 2024

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Our Mission

The Missoula Butterfly House and Insectarium inspires an appreciation and understanding of insects and their relatives.

Visit us!

1075 South Ave. W, Suite 2,
Missoula, MT 59801
missoulabutterflyhouse.org/visit-us



Scan the QR code
to learn more!

Hours

Tuesday-Saturday: 10AM-5PM
Sunday: Noon to 4PM
Monday: CLOSED



As a partner in our mission, I don't need to tell you how extraordinary the past year has been. By the time this newsletter reaches your eyes, we'll have celebrated our first full year of operations in the new Missoula Butterfly House and Insectarium. And what a year it's been!

To say that these past months have been busy is a bit of an understatement. But no matter how busy a day I'm having, the opening of our new facility introduced a new routine to my workday. I always take the time (even if it is just 5 minutes) to check out the animals on exhibit and walk through the butterfly house.

The best part? Even though I'm in the facility every day, the impact those 5 to 15 minutes have on me have never diminished. It clears my mind. Brings a sense of peace. Recharges my batteries for the additional hours behind my desk that lay ahead. It's also an opportunity to engage with visitors and share in their expressions of awe, wonder, and delight. Without a doubt, it's always one of the highlights of my day.

As with any new endeavor, this first year has been all about enacting our initial and best-laid operational plans and then making any necessary tweaks, changes, or additions to fine tune how this new and much larger machine runs. As with everything in life, it's an ongoing learning process. And while it's important to adequately plan, it's just as important to acknowledge and take advantage of the daily lessons that unfold to make something great even better.

In looking back on everything that's happened this past year, I could not be more thrilled. With our first year of operations now under our belts, I look forward to an even better year ahead as we continue to improve the visitation experience and the unique learning opportunities we provide.

“The enthusiastic response we've received from our community is more than we could have hoped for.”

My deepest thanks to our staff for their hard work and flexibility... to our Board of Directors for their guidance... and to our members, donors, and the thousands of visitors who've not only made this long-term dream a reality but a resounding success. The enthusiastic response we've received from our community is more than we could have hoped for.

Best wishes for the holiday season and cheers to the New Year ahead! 🍷

Over the past several years, you may have heard reference to the “Insect Apocalypse” ...the disappearance of species and decrease in overall number of insects that research is uncovering all around the world. To shed light on the critical importance of this issue, we asked Dr. Diana Six to write a short guest article for our newsletter.



An Insect Apocalypse?




By Diana L. Six, Ph.D., FRES

Professor Emerita of Forest Entomology/Pathology
WA Franke College of Forestry and Conservation
Dept. Ecosystem and Conservation Sciences
The University of Montana

In a time of mass extinctions, insects may be the perfect poster child. Their rate of extinction is eight times faster than that of vertebrates (mammals, birds and reptiles). Forty percent of their species are in decline, and at least a third are endangered. The loss of insect biomass (a measure of abundance) is estimated at 2.5% annually. This could mean their complete loss within a century. These are disturbing statistics, especially given the fact that insects support Earth’s food webs and terrestrial ecosystems, which would experience massive collapse far in advance of their complete demise.

The causes of insect declines are many, but all are tied to human activities. The major drivers are intensive agriculture, urbanization, pesticides, forest alterations, and climate change. Often several factors are simultaneously at play, making conservation efforts challenging. Declines and extinction rates are much worse for insects because they are more sensitive to habitat loss and environmental changes. Habitat is more than a place. It is the combination of things an insect needs to survive including correct climate, food, water, shelter, and the right environment to produce young. It also includes the effects of stressors such as predators and competitors, and of course, things like pollutants. If any one of an insect’s requirements are not met, or if negative factors exert too much influence, the insect cannot survive. Habitat requirements of insects are often quite specialized and even small shifts in temperature, moisture, or seasonality can shift suitability dramatically. Our increasingly erratic weather is particularly hard on insects and can rapidly lead to local declines and extinctions.

“We need to support all insects and this requires an understanding of their needs.”

Insects are small, but their role in supporting Earth’s ecosystems is huge. While pollinators get the most attention, the myriad of other roles insects play are no less important. We need to support all insects and this requires an understanding of their needs. Solutions cannot be piecemeal and are complex. For example, while efforts like planting flowers to provide nectar and pollen can help pollinators feed, if nesting habitat is gone, summers are too hot and dry, or pesticides are present, they will still not survive. We must become aware of the effects our lifestyles have on insects and create shifts in our behaviors with insect conservation in mind. 



For the past four years we’ve been part of a nation-wide research collaboration to determine if insect numbers are declining. While anecdotal observations and informal studies suggest that they are decreasing in many areas across the country, this is the first nationwide scientific research project conducted to confirm or deny the possible trend. The project is run by Dr. Peter Dunn of the University of Wisconsin-Milwaukee.

Photo by Kara Cromwell

Bug Bytes

While our education programs and social media content here at the Missoula Butterfly House and Insectarium are more front and center, we've been collaborating with Montana Public Radio for a number of years to bring you Bug Bytes, our short, informative, and entertaining podcast.



First-time listener? Check this episode out. If you like what you've read, we have nearly 100 more that you can listen to at mtrp.org/podcast/bug-bytes



Flying Spiders

To an arachnophobe, nothing is more terrifying than the thought of a spider. Despite efforts to convince them how amazing spiders are, more than a few times our conversation ended with something like, "Well, thank goodness they can't fly."

I'm sorry to say, that's not exactly true.

While spiders don't have wings, they have been found two and a half miles in the air and as far as 1,000 miles out to sea. How did they do it?

It's called ballooning. And it's mainly spiderlings (or baby spiders) that take to the air, but some larger spiders have been observed doing it too.



A spider will climb to a high point, like the tip of a branch or blade of grass. Here it will spin a long strand of silk and become airborne.

It was commonly thought that the silk simply caught the wind and took the spider along with it. But observers as far back as Charles Darwin noticed that spiders only ballooned on days with light winds, not accounting for their impressive travel.

It was not until more modern research uncovered the answer, which you might find shocking. Electricity. Thanks to thunderstorms, the Earth's atmosphere is electrically charged ... the upper reaches of the atmosphere having a positive charge, while the ground has a negative charge.

Ballooning spiders use this to their advantage. If you remember from your physics class, like charges repel, while opposite charges attract.

When leaving a spider's spinnerets, the silk picks up a negative charge. So, the negatively charged ground and the negatively charged spider silk repel each other, sending our little friend up into the positively charged atmosphere.

And that, is *positively* amazing! 🕷️

Liftoff: Newly hatched spiders (species undetermined) are shown climbing a sacred lotus flower bud, extending thin silk threads, and ballooning.



Year-end Giving

Over the four (plus) years it took us to plan for and construct our new facility, we raised and spent more money than we could have ever imagined when our all-volunteer organization was just getting started. We've obviously grown tremendously since then ...and so has our annual operating budget.

With our new mode of operations comes new and significant sources of earned income from admissions, our gift shop, and our programs. But when all is said and done, we still need to secure more than 40% of our annual budget (over \$500,000) the old fashioned way – through foundations and private donations.

The holiday season is not only a time of year to give thanks and spend time with loved ones, it's a time of year when many of us choose to support the organizations and causes that add so much to our lives. And we certainly hope the Missoula Butterfly House and Insectarium is on your list.



Here are some of the ways you can consider making a donation:

Traditional Donations – It's easy to make a tax-deductible year-end donation. Just go to weblink.donorperfect.com/MBHIdonate or mail a check to us at 1075 South Ave W, Suite 2, Missoula, MT 59801.



Flight Crew Monthly Donations – Would you rather have your support go to something specific? Support the acquisition of our butterflies! The Flight Crew is a monthly giving club focused specifically on keeping the butterfly house full of insect beauty. As a Flight Crew donor, we'll send you a Missoula Butterfly House and Insectarium "Flight Crew" stainless steel thermal tumbler as a small token of our appreciation. Just scan this QR code or go to weblink.donorperfect.com/FlightCrew.



Appreciated Stock – Sitting on some appreciated stock? A stock donation is a great way to support our work and avoid paying capital gains tax. For more information about this giving option, give Glenn a call at **406-317-1211** or glenn@missoulabutterflyhouse.org.

IRA Charitable Rollover – This is a tax-free way for IRA owners to donate to charity. If you're 70.5 years old or older, have an IRA, and don't need the income from your required minimum distribution, you can donate all or part of those funds directly from your IRA to a charity and avoid paying taxes on what would normally count as taxable income. For more information, please speak with your tax adviser or financial professional.

Thank you for your consideration! 🦋



Bugzoola Gift Shop

The holiday season is upon us. Are you still looking for a unique gift for that someone buggy on your holiday shopping list? Or maybe you're looking for something for yourself that expresses your love for the "little things" we share our planet with? Conveniently nestled next to the entrance of our facility, our Bugzoola gift shop just might have exactly what you're looking for. With an assortment of insect-themed jewelry, educational toys, hats, t-shirts, books, art, Butterfly House logo items, and perfect stocking stuffers for insect enthusiasts of any age, we've got a little something for everyone.

While we have items from artists and vendors from around the country, we're proud to offer an array of locally handcrafted items, multiplying the benefits of your efforts to shop local. Check out Bugzoola for some truly unique gifts, while supporting our facility and unique education efforts at the same time. 🦋

Bugzoola is open Tuesdays through Saturdays from 10:00 AM to 5:15 PM and Sundays from 12:00 PM to 4:15 PM. Closed on Mondays.

Around the House

Q&A: Where do you get your butterflies?



Walking into the butterfly house is such a unique, total immersion experience. You immediately notice the warmth, humidity, and lush growth of tropical plants. And then, of course, the incredible colors and fanciful flight of the approximately 300 butterflies in the conservatory.

While presented with an array of questions on a daily basis, one of the most frequent we get is, "Where do you get your butterflies?" The short answer ...primarily from a distributor working out of the Denver area. But the true answer runs much deeper and brings us to small butterfly farms in Costa Rica, Ecuador, the Philippines, Kenya, Columbia, and several other countries.

On small, mostly family-run butterfly farms, the 35 to 40 different species we exhibit throughout the year are sustainably raised, providing good local jobs and promoting conservation of the wild populations' tropical habitat. Raised from the egg through the caterpillar stage, the butterflies are collected and quickly shipped off once they form a chrysalis. After being processed in Denver and delivered to Missoula, our new butterflies typically begin emerging within a day or two. Throughout the next week, the

"...small butterfly farms in Costa Rica, Ecuador, the Philippines, Kenya, Columbia, and several other countries."

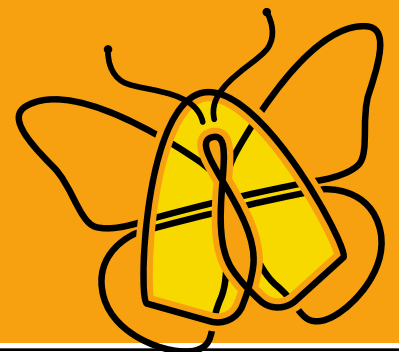
majority of the butterflies will emerge, many of them making their Montana debut during our daily butterfly releases.

With the average butterfly only living 1 to 2 weeks, we receive 250+ butterflies each week in order to keep the number of butterflies in the conservatory at approximately 300. And while we have a number of species that are always on exhibit, like the amazing Blue Morpho, our order often contains a few surprises, giving you the opportunity to see some amazing new species each time you visit. 🦋

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Stacy Carr-Poole, Operations Director
Dr. Scott Debnam, Live Collections Assistant
Shelby Fisher, Administrative Coordinator
Andie Hernandez, Lead Animal Keeper
Madeline Kleeman, Museum Interpreter
Kate Likvan, Gift Shop Manager
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Brenna Shea, Science Writer & Educator
Ashley Sinclair, Admissions Associate
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EXPLORING the little things that run the world.

Bugs on the Move: Kalispell

Q: What has eight legs, four heads, and can teach 330 kindergartners in a single day?

A: Our incredible education team!



After piling into our BugMobile for a 6 AM start, 4 of our educators (along with 16 bug ambassadors and 4 wagons of supplies) made the trek up to Kalispell to teach 17 classes of enthusiastic kindergartners. While we can't make trips like this all the time, this was an amazing opportunity to provide unique programming for classes we would not normally be able to see in person.

Are you a teacher? Or do you have or know a kiddo whose class would love to visit our facility or have an on-line or in-person field trip brought into their classroom? You can check out the variety of field trips we offer under the **"Learn"** and **"Schools and Youth Groups"** drop downs on our website. 🐛

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