

MISSOULA BUTTERFLY HOUSE & INSECTARIUM



NEWS



Year of Change, Year of Opportunity

By Jen Marangelo, Executive Director

Winter 2019 INSIDE...

- International Butterfly Conference
- Our Bugs in Research
- Thank You, Allison!

OUR MISSION

The Missoula Butterfly House and Insectarium inspires an appreciation and understanding of insects and their relatives through educational programs and innovative science exhibits featuring live invertebrates.

Missing our bugs?

If you need a bug fix, check out our calendar for the next opportunity to see some of your favorite critters:

missoulabutterflyhouse.org/calendar/



In many ways, the start of the new school year signifies change. It roughly marks the beginning of fall. Students of all ages are back in school with new teachers and new classes. And many of us settle into a new mode of operation after making the most of the long summer months.

This annual period of transition marked the beginning of some significant changes for the Missoula Butterfly House and Insectarium too. New offices. New homes for our critters. A new, more mobile, mode of operation for our education programs. New collaborations with partner organizations. And a new logo to celebrate the past, and welcome an exciting future. While the Insectarium may have closed at the end of August, thanks to the changes we've made we've hardly skipped a beat.

And what follows on the heels of any change? Opportunity. Over this past year we've created and taken advantage of opportunities to expand our education programs in new ways. We've strengthened and developed important partnerships and relationships. And we've established exciting and critical momentum by focusing on the dream that started this organization a decade ago -- opening a tropical butterfly house in Missoula.

I've realized another important change this year. While many individuals have expressed interest, enthusiasm, and support for our long-term goal over the years, there's been a marked change. It's become increasingly apparent that my dream of a tropical butterfly house is no longer just "my" dream. Thanks to you, it's become "our" dream. A dream shared by many. And a vision for something that will be truly extraordinary for our community, our schools, and visitors to Missoula.

All of the transitions that have been made and that are underway required an incredible amount of planning and preparation. Thanks to all of this hard work, not only have the changes we've made been successful, they've created and solidified the exciting opportunities for our future.

To those of you that have been part of this dream since the beginning, I want to thank you for your steadfast partnership, enthusiasm, and encouragement over the years. And to those of you who have recently become part of our buggy family, you couldn't have come aboard at a more exciting time.

Best wishes for the holiday season! 🦋

IABES Conference



A few weeks ago, two of our staff attended the International Association of Butterfly Exhibitors and Suppliers conference in Orlando, FL. This was the 3rd time this annual conference was held in the United States over its 23-year history. And with our efforts underway to open a tropical butterfly house within the next two years, there could not have been a better time to attend this conference.

Meeting and making connections with nearly 100 colleagues from other butterfly houses and tropical plant and butterfly suppliers from around the world provided an incredible opportunity for information exchange, learning more about the industry's latest standards and best practices, and gathering exciting ideas for our future facility. In total we toured six different facilities, gaining valuable information and insight on a variety of issues and ideas, including: which species of plants provide better nectar sources; what type of path to have inside our butterfly house; what kind of irrigation system to set up; how to deal with unwanted pest species; which species of butterflies do better in northern climates; and what supplemental nectar sources work best to keep butterflies happy and healthy (orange Gatorade appears to be a butterfly favorite).

The chance to learn about and address these and many other issues will prove invaluable in the months

ahead as we get into the details of the building and exhibit design process. As we learned from other exhibitors, there will always be something you wish you had done differently after opening your facility. But by attending this conference and utilizing the valuable connections we've made, we're helping ensure we "do it right" as best we can from day one. 🦋



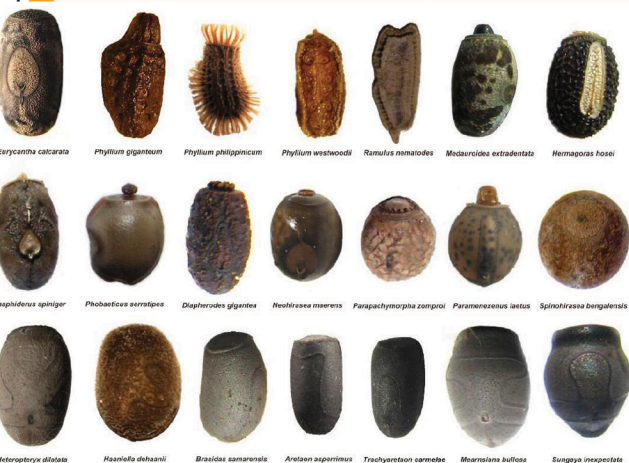
Year-End Donations: Giving Us Wings

If you have not already made a special year-end donation to the Missoula Butterfly House and Insectarium, there's never been a more important time for your support. Ranging from the vital donations needed to keep our education programs and operations strong to opportunities to make a lasting impact through our capital campaign, there are a number of giving opportunities you can take advantage of to help give us wings.

If you have questions about making a general donation, making a gift of appreciated stock, or would like to learn more about our capital campaign, please contact Glenn at 406-317-1211 or glenn@missoulabutterflyhouse.org



A Buggy Research Partnership



Our Eggs & Research

Romain Boisseau (PhD student) and Dr. Art Woods (University of Montana) are studying how stick insect eggs manage to let oxygen in while maintaining their precious water content at the same time. Specifically, they have been measuring water loss and metabolic rate (amount of energy or oxygen used per time) over the course of egg development in stick insect eggs provided by the Missoula Butterfly House and Insectarium (our thorny devil stick insects and spiny leaf insects). They will soon add the eggs of Vietnamese walking sticks, the walking leaves and the giant jungle nymphs to their research.

Eggs of terrestrial animals face an interesting dilemma between trying to keep water in (and not dry out) and letting oxygen in for respiration of the developing embryo. Stick insect eggs display an incredible variation in size and

shape between species -- some species laying the largest eggs in the insect world. Stick insect eggs have a hard shell, which is rare for insects. This helps the eggs retain water, but also makes it harder for oxygen to get inside. The development time of stick insect eggs is VERY long for an insect. It takes them several months to more than a year to hatch, while most other insect eggs hatch in a matter of days! This is probably due to lower oxygen levels from the egg's hard shell.

Romain and Art are studying how size really affects the energy use and water loss of these eggs. How do large eggs differ from small ones? How do stick insect eggs compare to other insect eggs? How do they manage the balance between getting oxygen and staying hydrated? Stay tuned to hear more about what they will find in the next year! 🐛



Buggy Happy Trails, Allison

Despite all of the changes that have taken place over the past few months, we only needed to say goodbye to one staff position.

Allison Dehnel took the job of our Museum Interpreter knowing that this position would end with the close of the Insectarium in August 2019. With Allison and her fiancé moving to Florida in the fall, it was a perfect match. But the fact that our calendars for this position aligned was just a happy coincidence. Allison could not have been a better fit for the job.

As anyone who visited the Insectarium's encounter area, came to one of the dozens of birthday parties she ran, or attended one of the two Bugs & Brews lectures she gave can attest, the only thing that surpassed Allison's enthusiasm for sharing the amazing world of insects with others was her incredible knowledge and passion for all things "buggy."

Thank you, Allison! You'll forever be part of our buggy family. And you're welcome, Florida ...because Montana's loss is very much your gain!



MISSOULA BUTTERFLY HOUSE & INSECTARIUM STAFF

Jen Marangelo
Executive Director

Brenna Shea
Lead Animal Keeper

Carolyn Taber
Museum Educator

Glenn Marangelo
Development Director

Rose Marchak
Animal Care Intern

Karen Weaver
Interpretive Content Creator



Follow us on Facebook!
Missoula Butterfly House &
Insectarium



COME LEARN ABOUT THE LITTLE THINGS THAT RUN THE WORLD!

NON-PROFIT ORG.
U.S. POSTAGE
PAID
MISSOULA, MT 59801
PERMIT NO. 569

Butterfly Licence Plate



Thanks to the incredibly talented Courtney Blazon, you can now add some butterfly flair to your vehicle. For an extra \$20 added to your annual registration, you can spread a bit of butterfly love. All proceeds go to support our education programs, amazing critters, and efforts to open our new facility. Contact us for more information or visit your County Treasurer's office to get yours today!

Missoula Butterfly House and Insectarium Board of Directors

Marcy Allen, *President*
Executive Director, Missoula Community Foundation

Megan Robson, *Treasurer*
Realtor, Berkshire Hathaway HomeServices Montana Properties

Lisa Verlanic Fowler, *Secretary*
Teacher, Florence-Carlton School

Larry Brehm
Architect, L.K.Brehm, A.I.A.

Michael Carter
Retired Fundraiser

Kathryn Herman
Benefit Calculation Analyst,
Foster & Foster

Jen Marangelo
Executive Director, Missoula Butterfly House and Insectarium

Glenn Marangelo
Development Director, Missoula Butterfly House and Insectarium

Morgan McNeill
Digital Media Coordinator,
Clearwater Credit Union