
**Program Subject to Change. Last Updated 5/12/2025**

**Tuesday, July 22**

**4:00pm-6:00pm Pre-Conference Meet and Greet**

Are you already at the resort? Want to meet up with some colleagues for some preconference social time? Please join us for some chips, salsa and drinks. Location TBD

**Wednesday, July 23**

**6:00am - 8:00am Registration**

**1:30pm - 5:30pm Registration**

**FIELD TRIPS** - Pre-registration required. All field trips will meet at Presidio Registration Desk; please arrive 15 minutes before the scheduled departure time. To help keep the cost of the field trips down and try to accommodate those that do not feel comfortable riding in closed vehicles with large groups of people, we will be asking for volunteers to help with carpools for the field trips. All field trips will be supplied with light snacks and water. Please bring a refillable water bottle; best to start with it filled!

**6:30am-4:00pm H2O for You and the Bugs!**
**Led by Clayton Leopold, Moody Gardens**
Visit one of the few permanent water sources in the Sonoran Desert. Dammed in 1968, Sonoita Creek flows into Patagonia Lake and creates a hotspot for water-loving arthropods. Shallow areas around the lake offer opportunities for Lepidoptera and Odonata. Here you will also have the chance to get wet and

view any water bound insects like *Thermonectus.* After, we will continue to riparian corridor habitat, where bugs and birds both abound. Lastly, we will have the option to stop at the Paton Center for Hummingbirds, where many flying insects can be found.
No collecting - 12 participants

**6:45am-4:00pm BUG TOURS, Episode 32 - The Rise of Sky Islands**
**Co-led by Zack Lemann, Audubon Insectarium and Tad Yankoski, Sophia M. Sachs Butterfly House**
A short time ago in a habitat not too far away…The Entomologists Alliance had been visiting a remote region of southeast Arizona for years. As the summer rains came, they ventured into canyons and scrublands to find that the arthropod fauna had blossomed. Seeking a continuation of their success, they sent a team of intrepid explorers back in 2025 to examine cacti, turn rocks, and swing nets.

Come collect and observe all that this amazing land has to offer on a day long field trip. In addition to gathering fascinating information and (we hope) terrific invertebrates for your exhibits, you will also have a chance to create philosophical quotes like these:
"This net is the tool of the entomologist. Not as clumsy or random as trying to catch butterflies by hand; an elegant device from a more civilized age."
"I find your lack of bugs disturbing." [Only to be used if it's been too dry].
"Remember: a Bugi (or gal) can feel the monsoons flowing through the Sonoran landscape."
Collecting is allowed- 24 participants

**7:00am-4:00pm Border Bugs 2025**
**Led by Jim Melli**
The border region along Ruby Road holds many treasures, invertebrates and vertebrates. Some are seen nowhere else in the US. We are sure to find some cool bugs. If you are up for a chance to see something rare and exciting in a spectacular and luscious landscape setting, join me for Border Bugs 2025.
No collecting- 12 participants

**7:15am-4:00pm Saguaro National Park Madrona Pools**
**Led by Lucas Hetherington, Saguaro National Park**
Take a trip to Saguaro National Park, where we will be granted access to a secluded area of the Rincon Mountains where perennial waters fill tinajas and support a wide variety of wild creatures in a unique habitat. Make sure to bring close-toed shoes and sun protection in addition to lots of snacks and water for this canyon adventure. After exploring the canyon, we will visit the Visitor Center and drive around the Cactus Forest Loop of Saguaro NP (time permitting).
No collecting- 12 participants

**7:30am- 4:00pm Peppersauce Canyon Tour**
**Led by Emma Califf, Bird Conservancy of the Rockies and Ainsley Basham, Hillsborough County Public Schools**
Join Wildlife Biologist Emma Califf and Ecologist Ainsley Bassham for a day in Peppersauce Canyon, a biodiversity hotspot in the Catalina foothills. Located just 45 minutes from El Conquistador, we'll make the most of our day and hit a few of Emma and Ainsley's favorite places in the canyon, taking in some of

the stunning outlooks along the drive. From Rainbow and Horselubber Grasshoppers, Tortoise Beetles, and Velvet Ants, to Coatis and Black-tailed Rattlesnakes, every visit to Peppersauce has offered new and exciting wildlife sightings.
No collecting- 12 participants

**EVENING EVENTS**
**5:30pm - 9:00pm Welcome, Keynote Presentation, and Dinner Reception**
**IECC 2025 Keynote Speaker: Marley Peifer- Nature Journaling with Marley Peifer**
Marley is an artist, educator, traveler, and student of nature. He longs for the reintegration of art with science and words with images, a synthesis that he develops in his nature journaling. Marley has nature journaled in the Amazon rainforest, the Serengeti, the Galápagos, the length of the Grand Canyon by raft, and various ecosystems in Ecuador, Panama, Colombia, Mexico, and Costa Rica. He is a passionate teacher with over 10 years' experience teaching nature journaling online and in person. Marley is committed to developing nature journaling as an applied tool to help save biodiversity and humans on this planet. His favorite invertebrates to draw are crabs, moths, and big parasitoid wasps.

**Thursday, July 24**

**8:00am - 4:00pm Registration -- Registration may close during paper sessions and lunch.**

**8:00am - 4:00pm Silent Auction**

**8:00am - 4:00pm Please visit our vendors.**

**MORNING WORKSHOPS**

**8:30am-11:30am Beeswax Alchemy**
**Led by - Erin Mills, Houston Botanic Garden**
Honey bees are amazing! Even if you are team native bee, like me, you have to admire honey bees for all they are able to do. Join me to learn all about beeswax and how to make some really cool things with it!

**8:30am-11:30am What's My Molt?! Identifying Species Through Molt Skins Using DNA Barcoding**
**Led by – Jeff Petracca, Cold Spring Harbor Laboratory**
There are more than one million described arthropod species, and for any arthropod group, the ability and expertise of identifying those species requires time, resources, and often training to develop. DNA barcoding is a molecular tool for species identification. Through DNA barcoding, unknown specimens can be identified by anyone, regardless of their level of expertise in taxonomy. Furthermore, specimens can be identified using just a small amount of tissue or even a molt skin! Such methods present opportunities for species identification and verification in captive collections where invasive molecular techniques are undesirable. Workshop participants will learn how to identify arthropods from their molt skins by analyzing their DNA barcodes. Participants will work through the hands-on methods of molt skin

preservation, DNA extraction, PCR and DNA sequencing using cutting-edge Oxford Nanopore Technology.

**8:30am-11:30am Introduction to Zoo Science Methods: Data Collection and Analysis Strategies to Increase Invertebrate Keeper Effectiveness**
**Led by - Dr. Zachary Loughman, Dr. Mathew McKinney, Kinsey Skalican and Zach Kaminski, West Liberty University**
Zoo science is an old idea and a relatively new field within zoological institutions that uses the scientific method to gather information on the lives and natural histories of animals in ex situ situations. Given its reliance on the scientific method, zoo science is a hierarchical discipline that relies heavily on scientific enterprise and consistent data collection. When effectively employed, zoo science approaches lead to increased keeping efficiency, the discovery of novel biological information, and opportunities to publish findings in peer-reviewed journals. This being said, many keepers want to employ zoo science approaches to their keeping but lack training in data collection and management, as well as methods used to search scholarly works for prior knowledge. This workshop will focus on providing invertebrate keepers with the tools necessary to apply zoo science approaches in their care protocols and strategies. Participants will receive training in data collection techniques, data analysis, and management of literature sources. Our goal is to provide TITAG participants with the strategies needed to improve their data management and collection, enabling them to effectively maintain TAGs.

**FIELDTRIPS**

**9:00am-10:00am Behind the Scenes at the Arizona – Sonora Desert Museum**
**Led by Tom Weaver, Arizona -Sonora Desert Museum**
Come see behind the scenes at the Arizona-Sonora Desert Museum with Curator of Herpetology, Ichthyology, and Invertebrate Zoology Tom Weaver. Get a look at our diverse collection of snakes, amphibians, inverts, and more. The Museum opens at 7:30 am, please use your free admission to the general Museum grounds for conference-goers! Tom will meet you at 9am in the Reptile and Invertebrate Hall for a tour of the collection
No collecting- 12 participants

**ROUNDTABLES**
**8:30am-10:00am Beetle breeding, Flake Soil and Larva Care Roundtable**
**Facilitated by Julie LaTurner, Houston Zoo**
Houston Zoo would like to offer the 3rd year of the beetle rearing round table an open discussion for all to ask questions about raising any/all stages, share successes, talk about substrates, brainstorm solutions and collaborate with other institutions. Come with your questions, your successes, your try-agains, and let's work to increase our ability to breed coleoptera of all kinds in-house.

**10:15am-11:45am Invertebrate Welfare Beyond Informal Science Institutions**
**Facilitated by Karen Verderame, University of Pennsylvania School of Veterinary Medicine**
Round table discussing invertebrate welfare beyond our institutions. Many invertebrates and reptiles have become more popular in the pet trade. This round table will help facilitate discussion of ways that would be helpful in providing resources to other agencies, such as animal shelters/rescues, that are seeing more invertebrate and reptile species in their facilities, as well as identify other agencies that

may need resources including schools, game commissions and US Fish and Wildlife. Other related topics to discuss included what species are identified at most risk of being "re-homed" and may need resources to help improve welfare.

**11:30pm – 12:45pm COMPLIMENTARY lunch provided for conference participants**

**12:45pm-1:00pm Welcome and Announcements**

**ROUNDTABLE**

**1:00pm-1:50pm USDA Roundtable**

**1:50pm-2:00pm Announcements and Break**

**PAPER SESSION: It's Getting SWARM in Here**
**2:00pm-3:40pm**

**2:00pm-2:20pm Over the Saint Louis Zoo's Past 35 Years of Invertebrate-focused Conservation**
**Bob Merz, Saint Louis Zoo**
The Saint Louis Zoo started its first targeted Invertebrate-focused conservation effort in 1989, and within the past 20 years, has expanded its "invertebrate-focused conservation portfolio". A brief history of the zoo's conservation efforts will be followed by an in-depth look into three of the zoo's most impactful efforts to date. This will be followed with plans for the future for these programs.

**2:20pm-2:40pm A 30-year Collaboration to Reestablish the American Burying Beetle (*Nicrophorus americanus*) to Nantucket Island, MA**
**Lou Perrotti, Roger Williams Park Zoo**
The American burying beetle (*Nicrophorus americanus* Oliver) is federally listed as a threatened species once common throughout the eastern and mid-western United States and now surviving in limited habitats in seven states. Starting in 1994 an initiative to re-establish the American burying beetle on Nantucket Island, Massachusetts has been carried out by a partnership of public and private conservation agencies. During the 28-year period, just over 4,000 beetles were released at two sites on the 33,000-acre island. Post-release monitoring has confirmed that beetles are reproducing and surviving over winter, though actual population levels are not known.

**2:40pm-3:00pm The Effect of Breeding Methodology on Average Size of American Burying Beetles *(Nicrophorus americanus*) in a Conservation Breeding Population at the Saint Louis Zoo**
**Kayla Garcia, Saint Louis Zoo**
The Saint Louis Zoo has been involved in a conservation breeding program for the federally threatened American burying beetle (*Nicrophorus americanus*) since 2004. Throughout our involvement, we have been actively maintaining a breeding colony of ABBs for reintroduction purposes to re-establish the species in parts of its former range. Around 2014, we began to anecdotally notice a positive trend in the overall size of the beetles we were producing and changed our protocols. This project seeks to answer one main question: Is there a significant difference in adult ABB size between two different breeding

methodologies? Understanding the challenges associated with conservation breeding and specifically this program will better equip us to answer future questions about offspring survival and overall fitness in the wild.

**3:00pm-3:20pm *Partula* Conservation Efforts 2024**
**Anthony Oliveira, Saint Louis Zoo**
This presentation would entail my experience in the international reintroduction efforts of *Partula* snail species in French Polynesia. In September of last year, I helped release *Partula nodosa*, which were raised by multiple statewide institutions, and I was present for the delisting of *Partula tohiveana* from extinct in the wild to critically endangered. I hope to tie the two experiences together, how the collaboration led to the historic delisting, and what we hope for the future of the various *Partula* species.

**3:20pm-3:40pm Noninvasive, DNA Barcoding-based Identification of Tarantula Species**
**Dr. Lawrence Reeves, University of Florida and Jamie Sincage, Disney's Animal Kingdom**
With more than 1,000 described species, tarantulas are diverse. Considering this high diversity, the potential for the existence of cryptic diversity, and that expertise in morphological identification of tarantulas is limited by the number of trained spider taxonomists, identification of tarantula species can be challenging based on the morphology of live specimens. This is especially true for specimens of unknown geographic origin such as those obtained from the pet trade or those intercepted at ports of entry. DNA barcoding is a molecular tool for assigning taxonomic identities to unknown specimens and to verify species currently in captive collections. In standard applications of DNA barcoding, this technique is destructive, requiring tissue for DNA extraction. Here, we present an effective and noninvasive method for DNA barcoding tarantulas based on DNA extracted from molts. This approach makes it possible to obtain information on the taxonomic identity of tarantula species without harming specimens under the care of institutions.

**3:40pm-3:50pm Breeding and Rearing Blue Death Feigning Beetles**
**Joe Maloney, Topeka Zoo & Conservation Center & April Pitman, Cincinnati Zoo & Botanical Garden**
Blue death feigning beetles (BDFB) *Asbolus verrucosus* have historically proven to be a difficult species to get to pupate and eclose in human care. This will be a joint presentation from April Pitman (Cincinnati Zoo) and Joe Maloney (Topeka Zoo) describing the history of BDFB rearing in AZA facilities, the creation of the BDFB SWARM, the development of a successful breeding and rearing guide and the current success rates we are seeing in participating facilities.

**3:50pm-4:10pm Peruvian Fire Sticks SWARM Data**
**Julie LaTurner, Houston Zoo**
This will include preliminary data from data loggers pertaining to the TITAG funded grant for the Peruvian fire stick SWARM. What loggers we ordered, what's gone right, what went wrong, what we look forward to in the future and some interesting data we have collected.

**4:10pm-6:00pm Terrestrial Invertebrate Taxon Advisory Group (TITAG) Meeting**

Come one, come all to the TITAG meeting to get updates on the sustainable populations SWARM program, Saving Animals From Extinction (SAFE) programs, invertebrate welfare and other fun TITAG business.

**7:00pm – 9:00pm INSECT TRIVIA AND GAME NIGHT**

**FIELD TRIPS**

**7:00pm-10:00pm Night Hike in Douglas Springs with Courtney and Emma**
**Co-Led by Emma Califf and Courtney Christie, Arizona-Sonora Desert Museum**
You've seen the Sonoran Desert during the heat of summer, but have you seen it come to life at night? Join Wildlife Biologist Emma Califf and Desert Museum Keeper Courtney Christie for a leisurely night hike and discover the new world that comes alive under the stars. Nestled in the foothills of the Rincon Mountains, just up the street from Saguaro National Park East, Douglas Springs contains a high diversity of flora and fauna. When the sun goes down and the temperature drops (a little), we have a chance to see a wide variety of native invertebrates, including but not limited to tarantulas, sun spiders, and scorpions, in addition to the extraordinary local herpetofauna, like Gila monsters, rattlesnakes, and toads. Wear closed-toe shoes, bring plenty of water, and bring a headlamp or flashlight if you have one.
No collecting- 12 participants

**7:10pm-10:10pm Night Hike Sabino Canyon**
**Led by Irene Dickinson, Arizona Monarch Collaborative/ Desert Botanical Garden**
Sabino Canyon is home to many unique invertebrates from tailless whipscorpions to aquatic beetles (if there is water in the creek). This hike is around 2 miles round trip if we don't get distracted by a cool bug first. Bring plenty of water and prepare to be amazed at the nocturnal wonders of Sabino Canyon.
No collecting –12 participants

**7:15pm-11:15pm Blacklight in Peppersauce Canyon**
**Led by James Hall**
Evening blacklight event in Peppersauce Canyon. Set up using Entoquip LED lights powered off battery packs. Typically runs for 4 hours.
No collecting- 12 participants

**Friday, July 25**

**8:00am - 4:00pm Silent Auction**

**8:00am - 4:00pm Registration -- Registration may close during paper sessions and lunch.**

**8:00am - 4:00pm Please visit our vendors**

**MORNING FIELD TRIP**

**8:30am-10:30am Tucson Botanical Gardens**
**Led by the Botanical Garden**

Enjoy Tucson's midtown oasis during monsoon season! A brief overview of the Gardens' history will be followed by a tour of the Gardens led by the Horticulture Manager. Topics during the tour will include an overview of the Gardens' integrated pest management program, bee box partnership, and soil formation. After the tour of the grounds, the Curator of the Tropical Conservatory will discuss the butterfly program, including a visit inside the greenhouse to see orchids and other tropical plants (butterflies are not present in the summer months). Following the tour, participants can then self-guide to areas of interest and consider visiting the café and gift shop.
No collecting - 12 Participants

**MORNING WORKSHOPS**

**8:30am-11:30am Building a BeeNBee not a Haunted House: Sustainable Management Practices for Building Solitary Bee Homes**
**Led by Lindsie McCabe, Orchard Bee Association**
The Orchard Bee Association will host a workshop on sustainable bee hotel management for zoos, highlighting the ecoBOB standard developed by the Orchard Bee Association backed by evidence-based research from university and federal *Osmia* researchers. These standards ensure safe, effective, and sustainable practices for maintaining healthy orchard bee populations. Experts discussed optimal bee hotel design, placement, and maintenance, focusing on pest and disease mitigation. Attendees learned how to integrate native pollinators into conservation programs while following ecoBOB guidelines. Practical demonstrations covered proper materials, seasonal care, and monitoring techniques. The workshop emphasized collaboration between institutions to support biodiversity, ensuring managed bee populations thrive in zoo and aquarium environments.

**8:30am-11:30am Tools of the Trade**
**Led by Sarah Jenkins, Omaha's Henry Doorly Zoo & Aquarium**
An opportunity for hands on experience with small tools and materials that can be used for invertebrate care, containment, shipping and habitats. The workshop will include instructions on how to modify off-the-shelf containers to make custom enclosures. Participants will be provided with lists of resources and vendors as well as sources for inexpensive or free materials. We will make small pieces with animal safe epoxy and discuss the use of 3D printing.

**ROUNDTABLES**

**8:30am-10:00am Insect Festival Project**
**Led by Gwen Pearson, Consultant/Freelancer**
After a short hiatus, the Insect Festival Project is back! IFWG was formed to identify best practices for common insect festival exhibits and volunteer training. We also have developed a common evaluation to allow us to benchmark with each other. Join us! Learn more at Insectfestivals.org

**10:00am-11:30am Butterfly Support Group**
Are you one of the growing number of people who are breeding or rearing butterflies in the lab for conservation purposes? This roundtable is for you! Meet (and be part of) your community as we discuss

the pleasures, problems, pitfalls and promises of rearing rare butterflies in the lab. Topics include rearing setups, genetic considerations, host plant propagation, holding immature stages over the winter, and just about anything related to culturing butterflies in managed care. Following last year's roundtable, the group has expanded to include quarterly virtual meetings. This is our annual opportunity to meet in person.

**11:30pm – 12:45pm COMPLIMENTARY lunch provided for conference participants**

**12:45-1:00pm Welcome and Announcements**

**PAPER SESSION: Medicrawl for ALL**

**1:00pm-2:30pm**

**1:00pm-1:20pm Untangling the Web of Fear and Fascination: Exploring Drivers and Impacts of Wildlife Trafficking in Commonly Feared Spiders (mygalomorphs) and Implications for their Welfare**
**Karen Verderame, University of Pennsylvania School of Veterinary Medicine**
The trafficking of wildlife has significantly impacted biodiversity and is one of the main drivers of loss of diversity across species. Among one of the most trafficked animals in wildlife trade markets are arachnids, including tarantula species which make up 50% of the arachnids in the trade market. We will review characteristics that make tarantulas feared and coveted in the pet trade, as well as recommendations to optimize welfare in conservation and captivity.

**1:20pm-1:40pm Sedating the Spiders: Exploring Anesthesia in Tarantulas**
**Cori Brant, Butterfly Pavilion**
Anesthesia in tarantulas can be a critical tool for performing medical procedures, allowing for safer handling and reducing stress during medical interventions. Using isoflurane, the Butterfly Pavilion has been able to anesthetize several tarantulas of different genera to perform medical procedures with much success. This technique is valuable in veterinary care, enabling procedures like limb amputations, removing exuviae after a poor molt, or euthanasia. However, the dosages and administration methods must be carefully tailored to avoid overdosing, which can be fatal. These successful procedures have allowed Butterfly Pavilion to study the effects that isoflurane has on tarantulas.

**1:40pm-1:50pm Navigating the Chrysalis Minefield: Identifying Dead Butterfly Pupae**
**Tanya K Minott, Thanksgiving Point**
Few things are more disgusting than discovering that one dead chrysalis in an eclosion chamber, either by sniffing it out or witnessing this falling bomb of putrid goo. However, identifying dead butterfly pupae can be a challenge for Lepidoptera keepers at any level, from beginners to seasoned keepers. Removing dead pupae most likely decreases disease spread through the remaining chrysalids and helps facilities maintain accurate records. This presentation will demonstrate the features our keepers assess to identify dead butterfly pupae: signs of decomposition, abnormal coloration, compromised exoskeletons, and abnormal textures.

**1:50pm-2:10pm Eye Spy: Impact of Enclosure Setup on Captive Giant Asian Mantis Welfare**
**Brianna Martin, Thanksgiving Point**

This presentation will detail the husbandry of the giant Asian mantis (*Hierodula membranacea*) with a focus on exploring the prevention of eye rub, an injury which develops when a mantis rubs its face against enclosure walls, especially in response to motion of other nearby mantids or keepers. This is one of the largest mantis species kept in captivity, and keeping large populations in individual enclosures can be difficult with limited space. We are evaluating the effects of different enclosure sizes and a variety of visual barriers to minimize eye rub prevalence while maximizing our lab space.

**2:10pm-2:30pm Inflammation, Melanization and Nodulation: Treatment and Analysis of SDZWA Invertebrates**
**Paige Howorth, McKinney Family Curator of Invertebrates, San Diego Zoo Wildlife Alliance**
Invertebrate medicine remains an emerging field of knowledge, and often gaps are substantial enough to mean that most clinical interventions are experimental. Conversely, much can be learned from necropsies! This presentation will discuss selected successful and unsuccessful invertebrate treatments at SDZWA, as well as data gathered from years of postmortem analyses of specimens, particularly Australian phasmids.

**2:30pm-2:50pm Announcements and Break**

**PAPER SESSION: The Great Beetle Flake Off**
**2:50pm-4:50 pm**

**3:00pm-3:20 Stag Beetle Breeding at Omaha's Henry Doorly Zoo and Aquarium**
**Annelyn Bateman, Omaha's Henry Doorly Zoo and Aquarium**
Since 2023, beetle breeding and rearing efforts at Omaha's Henry Doorly Zoo and Aquarium expanded to regularly include several species of stag beetles in the collection. The methods used and results of breeding stag beetles, particularly *Dorcus titanus palawanicus* and *Cyclommatus metallifer*, are discussed.

**3:20pm-3:40pm Care and Breeding of the Red-Eyed Devil, *Neobarrettia spinosa***
**Joshua Byrne, Fort Worth Zoo**
I describe my experiences breeding the historically difficult-to-reproduce Texas katydid *Neobarrettia spinosa* over the last four years. Using observations of wild individuals and many trials of different egg incubation methods, diets, and enclosure designs, I present my methods of rearing a consistently increasing captive population. I also reflect on the species' suitability as a display animal and on still-unknown factors which may impact captive breeding success.

**3:40pm-4:00pm Growing with Bees - A Rearing Methodology for Chimney Bees**
**Erika Dalliance, University of Tennessee**
Bees are an incredibly diverse group of pollinators for the food we consume and flowers we admire, but when asked most people can only recall honeybees and bumblebees. Chimney bees (*Anthophora abrupta*) are a better representative of most native bees, as they are solitary and live underground like the vast majority of bee species. They are docile, non-stinging generalist pollinators local to the eastern United States. This talk will document how to locate aggregations for larval collection, the novel

methodology of rearing larval bees to adults, and notes on how to encourage a breeding population of chimney bees.

**4:00pm-4:10pm A Conversation on Beetle Substrate**
**Steven Barney, Beetle Source**
A presentation offering a deeper understanding of the processes behind producing beetle substrate. This would cover the reasons behind most commonly used methods and ingredients, including aerobic fermentation, aeration, and lignin degradation.

**4:10pm-4:30pm A Shot in the Dark**
**Sotoukie Lor, Butterfly Dan's**
When people buy bugs off the internet, they tend to find all sorts of critters ranging from: butterflies, beetles, ants, mantis, isopods, and all the way to tarantulas. Why not fireflies? Fireflies have been a very difficult process to breed for many researchers throughout the years. So, I took a chance to try my luck with the help of Dr. W's take on the Malaysian species. Now, I am a current breeder of a native species yet to be identified as of date. I would like to share my current project in hopes of getting feedback and starting more firefly conservation.

**4:30pm-4:50pm Crawler Cuisine: Homemade Diets for Healthy Insects**
**Anita Westphal, Iowa State University Reiman Gardens**
Produce-based diets come with constraints dependent on availability. At times of abundance, produce can go to waste, and at times of scarcity, the only option is to pay up for it. Reiman's Entomology Lab has developed the key to these produce constraints. The lab has developed a guide for preserving produce and creating food for insects that can be stored for up to a year. Frozen, dried, or fresh produce can be used to make bug jellies similar to commercial ones. The Jellies have also been tested on a variety of species to observe preference and dietary considerations.

**4:50pm – 6:15pm Husbandry Breakout Session**
The Husbandry Breakout session is organized to promote the discussion of husbandry in our industry, and to expand on the topics presented in the preceding paper session. All are welcome to join! -- Facilitator: Erin Sullivan - Woodland Park Zoo

**EVENING EVENT**

**7:00pm - 9:00pm Black Lighting the Night Away**
We will provide all the equipment for a black light sheet and mercury vapor light setup. Participants will be able to pursue moths, wasps, scorpions, tarantulas, etc!
Location TBD.

**Saturday, July 26**

**8:00am - 4:00pm Silent Auction**

**8:00am - 4:00pm Registration -- Registration may close during paper sessions and lunch.**

**8:00am - 4:00pm Please visit our Vendors**

**ROUNDTABLES**

**8:00am-9:00am Husbandry Think Session**
**Led by Erin Sullivan, Woodland Park Zoo**
Do you have a husbandry project you are working on but want to talk it out with others? In this round table, we will discuss husbandry projects that people are currently tinkering with. Bring your ideas, experiences, and questions!

**9:00am- 9:10am Welcome and Announcements**

**PAPER SESSION: Please Don't Tap on the Glass**
**9:10am-10:10am**

**9:10am-9:30am Something Old, Something New**
**Winton Ray, Cincinnati Zoo & Botanical Garden**
The Cincinnati Zoo & Botanical Garden's World of the Insect is the oldest zoological exhibit of live invertebrates in the United States, having opened in August 1978. While nearly every aspect of the facility's operation has evolved since its opening, the majority of the displays had remained unchanged. In 2024, an ambitious project was undertaken to modernize the World of the Insect's displays. This presentation will explore that transformation.

**9:30am-9:50am Crawling Across the Street with a Museum in Your Mandibles**
**Lindsay Mullen and Bradley Hiatt, Audubon Insectarium**
On June 8th 2023, Audubon Nature Institute opened a newly reimagined Audubon Aquarium and Insectarium. The Insectarium's reopening followed a closure in March of 2020 during the Coronavirus pandemic. While the Insectarium was closed, almost all the staff were laid off. After a $41 million dollar renovation, the Insectarium opened inside the same building as the Aquarium. This paper will focus on the challenges of reopening a new Insectarium and offsite rearing facility including construction woes, staff training and collection rebuilding. We hope that other institutions can benefit from lessons learned during what was an exciting and hectic time.

**9:50am-10:10am When Life Finds a Way: Strategies for Containing Ant Colonies on Display**
**Miles Maxcer, Trapjaw Science Communications, LLC**
This presentation will discuss ongoing research into effective containment methods for live ants in display and research settings. As small social insects, ants are among the most challenging invertebrates to effectively contain and display, but innovations in materials science and precision manufacturing are providing new solutions to persistent problems. By developing effective containment standards, the display and use of ants in exhibits, education, research laboratories and as consumer pets can expand

and develop, providing new opportunities to understand and showcase the little things that run the world. This work includes broader applications for the containment of terrestrial invertebrates.

**10:10am-10:30am Entangled History, Uncertain Futures: Taxonomy, Wildlife Conservation, and the Complexities of Collection**
**Joshua Kulak, Franklin & Marshall College, the North Museum of Nature & Science**
Taxonomy and the collecting activities that facilitate it are integral to 21st century wildlife conservation, particularly as relates to invertebrates– after all, one cannot conserve what is not known. So too, however, is the entanglement of taxonomy, conservation, and collection implicated in long histories of exploitation and injustice. Furthermore, sampling bias in zoological and natural history collections alike, as well as on digital platforms such as iNaturalist, replicate many historical data biases and research gaps. This paper interrogates the relationship between these three processes as it relates to terrestrial invertebrates and investigates the integration of environmental justice frameworks into them.

**10:30am-10:50am Announcements and Break**

**PAPER SESSION: Roachella Saturday Headliners**
**10:50am-12:30pm**

**10:50am-11:10am Diversifying Bugs: Creating Meaningful Partnerships Through Accessible and Empathy Building Programs**
**Karen Verderame, University of Pennsylvania School of Veterinary Medicine**
How we build and fortify partnerships in our community is essential to the success of our programs and how our institutions support our communities. This presentation will review how Penn Vet developed accessible arthropod centered programming to build community partnerships and increase collaboration across the university. The presentation will explore ways to build meaningful partnerships and incorporate arthropods into user led programming for diverse learners promoting empathy and deepen understanding of animal welfare.

**11:10am-11:30am Insect Fest: A Buzz-Worthy Celebration of Nature's Tiny Wonders**
**April Pitman, Cincinnati Zoo & Botanical Garden**
During National Insect Week in 2024, the World of the Insect brought the buzz with Insect Fest a high-energy, hands-on celebration of all things incredible and inspiring! Guests explored native species while picking up host plant seeds to support caterpillars, examined insect anatomy through larger-than-life models, and got creative with make-your-own antennae. Kids went wild for our button-making station, turning colorful exotic insect art into wearable keepsakes. Insect Fest ignited curiosity, inspired a love for arthropods, and connected guests of all ages to the fascinating world of insects in a fun, unforgettable way.

**11:30am-11:50am Using specimen color as an educational tool to increase student interest in arthropods**
**Faith J Weeks, Towson University**

Arthropods are often judged based on their aesthetic. This study looked to determine if specimen color impacted student interest in and amount of importance given to arthropods. Students were given either a set of brightly colored live arthropods or a set of similarly sized/shaped dull-colored arthropods. After observations, participants rated their level of interest in arthropods and the level of value they placed on all arthropods. These experiences were compared to determine if the color of the animal influenced their ratings, which may help entomologists and educators create new ways to positively introduce these organisms to students and the public.

**11:50am-12:10pm Creepy vs Captivating: Spinning a Web of Wonder**
**Trinity Walls, University of California Berkeley**
This presentation summarizes a pilot program I've developed that is guided by the initial input of the audience. We ask participants to describe spiders and then use those descriptions to explain why spiders are both fascinating and beneficial. Participants list characteristics of spiders (i.e. hairy, scary, fast, etc), and then we use a mixture of visuals and hands-on activities to investigate the truth and charm of these descriptions. The program focuses on changing people's perspectives rather than changing the descriptions themselves. This program can be adapted to any age group.

**12:10pm-12:30pm Charlotte's Honor: Reducing Spider Bias as a Girl Scout Gold Award Project**
**Leia Begay, Girl Scouts of Southern Arizona**
Spiders are often a misunderstood part of our ecosystem. People often kill spiders even if the spider is not attacking them. Spiders are killed without reason other than they are scary. I want to bring awareness to our community of the value of spiders in our ecosystems and alert people of the misconceptions of their dangers. Using research regarding spider avoidance, I have created a program that I present to children to illustrate the spider's importance to our ecosystem, present fun facts about spiders and even jokes to aid in understanding that spiders are NOT villains. I have created an elementary grade level presentation and craft to help children learn more about spiders. My goal for this presentation is to present my experiences in educating children and reducing bias towards spiders and spider research.

**12:30pm-12:45pm Announcements**

**12:30pm-3:00pm Vendor Hall Open**

**BANQUET**

**5:30pm – 10:00pm Final Silent Auction bids, Cash Bar and Banquet**