



## PROGRAM OF PRESENTATIONS AND ACTIVITIES

### THURSDAY, 4 AUGUST 2022: Workshops and Welcome Social

- 7:30-9:00 Amphibian and Reptile Mortality Investigations: Part A
- 9:30-12:00 Amphibian and Reptile Mortality Investigations: Part B
- 9:30-11:30 Making Better Sense of your Data:  
Using Directed Acyclic Graphs (DAGs) to Infer Causation
- 12:00-2:00 Infectious Disease Modeling of Amphibian Populations
- 1:00-4:00 Molecular MythBusters
- 3:00-4:00 Herps and One Health: Part A
- 4:00-6:00 Herps and One Health: Part B
- 6:00 – 10:00 Welcome Social: Zoo Knoxville (transportation provided from Hilton hotel)

### FRIDAY, 5 AUGUST 2022

#### SESSION 1 (AM): Climate Change, Biodiversity, and Pathogen Emergence

- 8:00-8:15 **Opening Remarks**
- 8:15-8:45 **Jason Rohr**  
**KEYNOTE:** The roles of climate change and biodiversity in mediating amphibian disease risk

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- 8:45-9:00      **Jason Sckrabulis**  
Using metabolic theory and thermal mismatches to model the temperature dependence of ectotherm resistance to an emerging disease.
- 9:00-9:15      **James Noelker – Student**  
Comparing temperature dependence of experimental *Bd* infection dynamics at individual and population levels.
- 9:15-9:30      **Zuania Colón-Piñeiro – Student**  
Modeling growth-immunity trade-offs in direct-developing frogs experiencing seasonal chytrid infections.
- 9:30-9:45      **Mark Wilber**  
Once a reservoir, always a reservoir? Seasonality affects the pathogen maintenance potential of amphibian hosts.
- 9:45-10:00     **Ciara Sheets – Student**  
Experimental evolution of *Batrachochytrium dendrobatidis*, a lethal pathogen of amphibians, in climate change conditions.
- 10:00-10:15    **Brandon Labumbard – Student**  
Seasonal changes in the mucosal defenses of leopard frogs (*Rana [Lithobates] sp.*).
- 10:15-10:30    **Coffee Break**
- 10:30-10:45    **David Lesbarreres**  
**FOCAL TALK:** Amphibian disease ecology: are we just scratching the surface?
- 10:45-11:00    **Alessandro Catenazzi – Virtual**  
Role of a disease-tolerant species in amplifying transmission of chytridiomycosis in tropical montane frog communities.
- 11:00-11:05    **Erin Muths**  
The role of monitoring and research in the Greater Yellowstone Ecosystem.
- 11:05-11:10    **Samantha Garza – Virtual, Student**  
Surveys for chytridiomycosis in South Korean salamanders.
- 11:10-11:15    **Thais Sasso Lopes – Virtual, Student**  
Multi-scale occupancy of an endangered amphibian integrating disease dynamics and environmental DNA.
- 11:15-11:20    **Mariana Pontes – Virtual, Student**  
The pathogenic chytrid fungus in the threatened admirable redbelly toad, *Melanophryniscus admirabilis*.

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- 11:20-11:25 **Bennett Hardy – Virtual, Student**  
Demographic compensation unlikely in montane amphibian populations challenged by *Batrachochytrium dendrobatidis*.
- 11:25-11:30 **Joelma Prado – Student**  
Transport of a lethal amphibian pathogen (*Batrachochytrium dendrobatidis*) through fog.
- 11:30-12:00 **Facilitated Discussion**
- 12:00-1:30 **Lunch**

## SESSION 2 (PM): Emerging Reptile Diseases

- 1:30-2:00 **Jim Wellehan**  
**KEYNOTE:** Comparative ecology and evolution of reptile pathogens.
- 2:00-2:15 **Rob (Oz) Ossiboff**  
Genomic and *in vitro* characterization of ophidian serpentoviruses.
- 2:15-2:30 **Jeff Lorch**  
Detection of *Paranannizziopsis* spp. in wild snakes.
- 2:30-2:45 **Jenna Palmisano – Student**  
Infection experiments indicate some Florida anurans, lizards, and cockroaches can serve as intermediate hosts for the invasive pentastome parasite, *Raillietiella orientalis*.
- 2:45-3:00 **Samantha Kuschke – Virtual, Student**  
Are hatchlings emerging dehydrated? Preliminary packed cell volume and total solids data in leatherback (*Dermochelys coriacea*) sea turtle hatchlings and post hatchlings and their relation to incubation temperature.
- 3:00-3:15 **Alexander Romer**  
Dysbiosis of the snake microbiome due to snake fungal disease results in loss of microbial diversity in both laboratory experiments and field studies.
- 3:15-3:20 **Terence Farrell**  
The invasive pentastome parasite, *Raillietiella orientalis*, pervades the herpetofauna of central Florida habitats.
- 3:20-3:25 **Emily Oven – Student**  
Snake parasite communities vary by region and habitat type in North America: a systematic literature review.
- 3:25-3:30 **Alexandria Nelson – Student**  
Identifying possible parasite bioindicators and patterns of trophically transmitted parasitism in four aquatic snake taxa.

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- 3:30-3:45      **Coffee Break**
- 3:45-4:15      **Jeff Lorch**  
**KEYNOTE:** Uncoiling the complex his-story and impacts of snake fungal disease in North America
- 4:15-4:30      **Gaelle Blanvillain – Student**  
Large-scale prevalence and host association with *Ophidiomyces ophidiicola* in Europe.
- 4:30-4:45      **Steven Allain – Student**  
Investigating the character of skin lesions caused by ophidiomycosis in the barred grass snake (*Natrix helvetica*), in eastern England.
- 4:45-5:00      **Ellen Haynes**  
Innate immune function in Lake Erie watersnakes (*Nerodia sipedon insularum*) with ophidiomycosis.
- 5:00-5:15      **Gualberto Rosado Rodríguez**  
Morphological and molecular characterization of the fungal pathogen *Ophidiomyces ophidiicola* in soil samples of cave habitats in Puerto Rico.
- 5:15-5:20      **Eneilis Mulero-Oliveras**  
Study for the Spatial Analysis of *Ophidiomyces ophidiicola* in snake species through surveillance and detection in Puerto Rico and US Virgin Islands.
- 5:20-5:25      **Rachel Marschang**  
*Ophidiomyces ophidiicola* in wild snakes in Germany.
- 5:25-5:30      **Tristan Vratil – Student**  
Prevalence of *Ophidiomyces ophidiicola* in *Nerodia harteri paucimaculata*, a threatened species candidate.
- 5:30-6:00      **Facilitated Discussion**
- 7:00-12:00     **Field Trip: Rare salamander species sampling in eastern Tennessee.**  
(must be signed up previously)

## **SATURDAY, 6 AUGUST 2022**

### **SESSION 3 (AM): *Batrachochytrium salamandrivorans***

- 8:00-8:15      **Opening Remarks**
- 8:15-8:30      **Frank Pasmans**  
**FOCAL TALK:** *Batrachochytrium salamandrivorans* in Europe: here to stay.

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- 8:30-8:45 **Matt Gray**  
**FOCAL TALK:** *Batrachochytrium salamandrivorans*: Advances in North American Research
- 8:45-9:00 **Annemarieke Spitzen - van der Sluijs – Virtual**  
Experiences from the field, ten years after the first ever recorded *Batrachochytrium salamandrivorans* outbreak.
- 9:00-9:15 **Matt Grisnik – Student**  
Incorporating species susceptibilities and climate change into models of *Batrachochytrium salamandrivorans* risk in the United States.
- 9:15-9:30 **Wesley Sheley – Student**  
Imbalances and dehydration play a key role in *Batrachochytrium salamandrivorans* chytridiomycosis.
- 9:30-9:45 **Davis Carter – Student**  
From the early stages of infection to the grave: How does *Batrachochytrium salamandrivorans* transmission probability shift throughout infection?
- 9:45-10:00 **Angela Peace – Virtual**  
Parameterizing a Multi-Stage Infection Model of the Emerging Fungal Pathogen *Batrachochytrium salamandrivorans*.
- 10:00-10:15 **Coffee Break**
- 10:15-10:30 **Gordon Burghardt**  
A standardized method for observing amphibian behavior in climate-controlled chambers to assess changes with fungal disease (*Batrachochytrium salamandrivorans*) inoculation.
- 10:30-10:45 **Adri Tompros – Student**  
Management strategies to reduce invasion potential of *Batrachochytrium salamandrivorans*.
- 10:45-11:00 **Ana Towe – Student**  
Risk of bacteremia associated with probiotic treatment of *Batrachochytrium salamandrivorans*.
- 11:00-11:15 **Molly Bletz**  
Combination strategies boost eastern newt survival to the salamander chytrid fungus.
- 11:15-11:20 **Ross Whetstone – Virtual, Student**  
Probiotic application delays fatal Bsal chytridiomycosis in eastern newt metamorphs (*Notophthalmus viridescens*).

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- 11:20-11:25 **Mihrab Uddin Chowdhury – Virtual, Student**  
Coupling intra season disease dynamics and annual population demography with a hybrid model of *Batrachochytrium salamandrivorans* in amphibian populations.
- 11:25-11:30 **Aubree Hill**  
Surveying for *Bsal* in Wild Salamander Populations of Tennessee: Lessons Learned.
- 11:30-12:00 **Facilitated Discussion**
- 12:00-1:30 **Lunch**

#### **SESSION 4 (PM): Disease Surveillance and Management**

- 1:30-2:00 **Trent Garner**  
**KEYNOTE:** Riding a Swell: is *Batrachochytrium dendrobatidis* still emerging in the Mediterranean?
- 2:00-2:15 **Maria Puig Ribas – Virtual, Student**  
Amphibian Surveillance Program of Catalonia (ASPrCAT): a risk-based approach for monitoring chytrid fungi in amphibian communities from Northeastern Spain.
- 2:15-2:30 **Anthony Waddle – Virtual**  
Thermal shelters reduce the impacts of chytridiomycosis in an endangered frog.
- 2:30-2:45 **Tiffany Kosch**  
Genomic approaches for increasing disease resilience in amphibians.
- 2:45-3:00 **Andrea Barbi – Virtual, Student**  
The other face of triazoles: how widespread use of fungicides in agricultural habitats could protect amphibians from chytridiomycosis.
- 3:00-3:15 **Sarah McGrath-Blaser – Student**  
Appalachian soil bacterial communities inhibit amphibian-killing fungal pathogen growth in experimental microcosms.
- 3:15-3:30 **Coffee Break**
- 3:30-3:45 **Hugo Sentenac – Virtual, Student**  
Accounting for bias in prevalence estimation: the case of the amphibian-killing fungus *Batrachochytrium dendrobatidis* in the southern Darwin's frog *Rhinoderma darwinii*.
- 3:45-4:00 **Jesse Brunner**  
Evaluating environmental DNA-based detection of *Batrachochytrium salamandrivorans* in trade and captive settings.
- 4:00-4:15 **Danielle Wallace – Student**

Lovesick? The effect of *Batrachochytrium dendrobatidis* infection on amphibian breeding display.

- 4:15-4:20 **Samantha Shablin – Student**  
Assessment of physiological and behavioral responses of *Osteopilus septentrionalis* to infection with *Batrachochytrium dendrobatidis*.
- 4:20-4:25 **Lola Brookes – Student**  
Developing indicators of poor welfare for assessing non-model amphibians used infectious disease research.
- 4:25-4:30 **Li-Dunn Chen – Student**  
Near-infrared spectroscopy (NIRS) as a screening tool for chytrid fungus (*Batrachochytrium dendrobatidis*) in Fowler’s toads (*Anaxyrus fowleri*) and leopard frogs (*Rana pipiens*).
- 4:30-4:35 **Emilly Nolan**  
Translocation does not influence prevalence of amphibian chytrid fungus among translocated wild Eastern Hellbenders (*Cryptobranchus alleganiensis*).
- 4:35-4:40 **Becky Hardman**  
High mortality due to Bd chytridiomycosis in transported Broadfoot Mushoomtongue Salamanders, *Bolitoglossa platydactyla*.
- 4:40-4:45 **Claudio Azat – Virtual**  
Chytridiomycosis outbreak in a captive breeding program of the Chilean giant frog (*Calyptocephalella gayi*): genomic characterization and pathological findings.
- 4:45-4:50 **Leni Lammens – Student**  
Application of disinfectants for environmental control of a lethal amphibian pathogen.
- 4:50-4:55 **Matthew Mangan – Virtual, Student**  
Genetic evidence for recovery of the endangered Fleay’s barred frog (*Mixophyes fleayi*) throughout its range after declines associated with amphibian chytridiomycosis.
- 4:55-5:00 **Alex Shepack**  
Recovery of the Neotropical stream-breeding hylid *Duellmanohyla rufioculis* following chytrid related declines.
- 5:00-5:05 **Rachel Goodman**  
Comparison of swab and tissue samples for detection of *Ophidiomyces ophidiicola* in Eastern Wormsnakes (*Carphophis amoenus amoenus*).
- 5:05-5:30 **Facilitated Discussion**

## SUNDAY, 7 AUGUST 2022

### SESSION 5 (AM): Ranaviruses and Other Amphibian Pathogens

- 8:00-8:15      **Opening Remarks**
- 8:15-8:45      **Jesse Brunner**  
**KEYNOTE:** Ranaviruses: four things we (mostly) know and three we (largely) do not.
- 8:45-9:00      **Nicole Dahrouge – Student**  
Environmental Factors and Individual Susceptibility Shape Ranavirus Epidemics in Experimental *Lithobates sylvaticus* Populations
- 9:00-9:15      **Arik Hartmann – Student**  
Impacts of asynchronous emergence of *Batrachochytrium dendrobatidis* and Ranavirus in Florida amphibian assemblages.
- 9:15-9:30      **Charlotte Ford – Student**  
Non-lethal sampling: Detecting ranaviruses in UK native amphibian species (*Rana temporaria* and *Bufo bufo*).
- 9:30-9:45      **Matt Atkinson – Student**  
Widespread amphibian Perkinsea infections associated with rapid hosts, cooler months, and Ranavirus co-infection.
- 9:45-10:00     **Eveline Emmenegger – Virtual**  
Susceptibility of U.S. Pacific Northwest native amphibians to fish rhabdoviruses.
- 10:00-10:15    **Coffee Break**
- 10:15-10:30    **Greg Chinchar**  
**FOCAL TALK:** History and taxonomy of the family Iridoviridae.
- 10:30-10:45    **Francesco Origi**  
Frog and toad herpesvirus-associated proliferative skin disease: A paradigmatic example of host-pathogen-environment interaction.
- 10:45-11:00    **Angela Julian**  
'Suckers for amphibians': Investigating the occurrence of leech predation on amphibians in Southern England and The Netherlands.
- 11:00-11:15    **Roberto Brenes**  
Hepatocellular Toxicity of the metabolite emodin produced by the common buckthorn (*Rhamnus cathartica*) in green frog (*Lithobates clamitans*) tadpoles.
- 11:15-11:20    **Gilles Armel Nago**  
Parasitic infections of amphibians in the Pendjari Biosphere Reserve, Benin



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- 11:20-11:25 **Monica Argueta – Student**  
Investigating phylogenetic relationships between intradermal mites infesting amphibians in Texas.
- 11:25-11:30 **Vicky Flechas**  
First evidence of Ranavirus in native and invasive amphibians in Colombia.
- 11:30-11:35 **Alexa Dulmage – Virtual, Student**  
Algae-supplemented diet enhances tolerance to ranavirus infection but also augments viral replication in wood frog larvae.
- 11:35-12:00 **Facilitated Discussion**
- 12:00-1:30 **Lunch**

#### **SESSION 6 (PM): Amphibian Immune Defenses (Part I)**

- 1:30-2:00 **Louise Rollins-Smith**  
**KEYNOTE:** Anti-*Batrachochytrium* immunity and chytrid immune evasion
- 2:00-2:15 **Kaitlyn Linney – Student**  
Inhibition of amphibian lymphocytes by cell wall components of *Batrachochytrium dendrobatidis*.
- 2:15-2:30 **Laura Reinert**  
Antimicrobial peptide defenses of the iconic coqui frogs of Puerto Rico against *Batrachochytrium dendrobatidis*.
- 2:30-2:45 **Randall Jimenez**  
Relationship of chytrid infection and environmental microbes with a pathogen-protective trait from Appalachian salamanders: A view from a microbiome network perspective.
- 2:45-3:00 **Carly Muletz-Wolz**  
Host-defense peptides and skin microbiota in frogs and salamanders.
- 3:00-3:15 **María Torres-Sánchez**  
Three to tango: linking pathogen-microbiome-host interactions to explain amphibian population dynamics.
- 3:15-3:30 **Coffee Break**
- 3:30-3:45 **Jacques Robert**  
**FOCAL TALK:** *Xenopus laevis* Research Resource for Immunobiology (XLRRI): Tools, reagents, cell lines, genetically modified animals and pathogens, resources, assistance, and training for studying amphibian immunity

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- 3:45-4:00 **Jacques Robert**  
Potential role of bacterial and fungal co-infections on ranaviral persistence and reactivation.
- 4:00-4:15 **Mónica Jacinto Maldonado**  
Water pollution and toxicity increase the risk of Chytridiomycosis in Mexican amphibians.
- 4:15-4:30 **Corinna Hazelrig – Student**  
Surveillance and assessment of skin keratin abundance associated with *Batrachochytrium dendrobatidis* prevalence in red-spotted newts (*Notophthalmus viridescens viridescens*) and mole salamanders (*Ambystoma talpoideum*).
- 4:30-4:35 **Autumn Holley – Student**  
The use of probiotic applications in early life stages to *mitigate* *Batrachochytrium dendrobatidis* infections in *Rana luteiventris* (Columbia spotted frogs).
- 4:35-4:40 **Abigail Miller – Student**  
Developing gnotobiotic tadpoles to investigate the influence of the microbiome on the amphibian immune system.
- 4:40-4:45 **Julia McCartney – Student**  
The microbiomes of adult Eastern Newts (*Notophthalmus viridescens*) are distinct and dynamic after two exposures to *Batrachochytrium salamandrivorans*.
- 4:45-4:50 **Nina McDonnell – Student**  
The impacts of peptide secretions and environment on the skin microbiome of the Northern leopard frog, *Rana pipiens*.
- 4:50-4:55 **Sergio Lopez – Student**  
A Mucosal Medium to Refine Assessment of Growth Inhibition of *Batrachochytrium dendrobatidis* by Skin-Associated Microbiota.
- 4:55-5:00 **Aurelien Chuard**  
Insulin Goes Viral: The Role of Iridoviridae Viral Insulin/IGF-1 like peptides in a host context infection.
- 5:00-5:05 **Miki Davidson – Student**  
Could genomic approaches unlock the key to saving the iconic Southern Corroboree frog?
- 5:05-5:10 **Zach Gajewski**  
Modeling the amphibian chytrid fungus growth dynamics using optical density, MTT assays, and zoospore count data.
- 5:10 -5:40 **Facilitated Discussion**

## MONDAY, 8 AUGUST 2022

### SESSION 7 (AM): Amphibian Immune Defenses (Part II)

- 8:00-8:15      **Opening Remarks**
- 8:15-8:45      **Anna Savage**  
**KEYNOTE:** Amphibian disease immunogenetics: MHC, Bd, and beyond.
- 8:45-9:00      **Laura Grogan**  
Amphibian infection tolerance and resistance in the context of chytridiomycosis.
- 9:00-9:15      **Kelsey Hauser – Student**  
Understanding *Xenopus laevis* mast cells: sentinels of antifungal immunity
- 9:15-9:30      **Mitch Le Sage – Virtual**  
Enhanced survival in Eastern Newts after a second exposure to *Batrachochytrium salamandrivorans*.
- 9:30-9:45      **Leon Grayfer**  
Endogenous retroviruses augment amphibian (*Xenopus laevis*) tadpole antiviral protection.
- 9:45-10:00     **Allison Byrne – Virtual**  
A snapshot of *Batrachochytrium dendrobatidis* (Bd) genetic diversity across the continental United States.
- 10:00-10:15    **Patricia Burrowes**  
Unexpected effects of tropical seasonal environmental factors in the response of *Eleutherodactylus coqui* to Bd infections.
- 10:15-10:30    **Coffee Break**
- 10:30-10:45    **Muhammad Hossainey – Student**  
A perspective into the relationships between amphibian (*Xenopus laevis*) myeloid cell subsets.
- 10:45-11:00    **Felipe Floreste – Student**  
Interorgan dynamics during the amphibian inflammation: roles for the liver and the spleen in immune proteins gene expression.
- 11:00-11:15    **Kelsey Banister – Student**  
The impact of temperature on the within-host dynamics of *Ambystoma tigrinum virus* (ATV) epizootics in larval salamanders (*Ambystoma tigrinum*).

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- 11:15-11:20 **Patricio Garcia Neto – Virtual, Student**  
Stimulation with heat-killed bacteria (*Aeromonas hydrophila*) promotes immunological and endocrine alterations in toads.
- 11:20-11:25 **Junangel Aleman Rios**  
Recapture history of *Eleutherodactylus coqui* indicates that it can clear Bd infections but does not develop resistance.
- 11:25-11:30 **Aura Muñiz Torres – Student**  
Maintaining Resistance to *Batrachochytrium salamandrivorans* Infection Despite Depletion of Skin Defense Peptides.
- 11:30-12:00 **Facilitated Discussion**
- 12-1:30 **Lunch**

#### **SESSION 8 (PM): One Health and Wildlife Trade**

- 1:30-2:00 **Andrew Cunningham – Virtual**  
**KEYNOTE:** One Health needs Herp Health – we must learn to learn from each other.
- 2:00-2:15 **Alice Pawlik – Student**  
Utilising citizen science to investigate pond creation across the British Isles during COVID19 and explore impacts on amphibian health and human wellbeing.
- 2:15-2:30 **Dede Olson**  
Reversing the low social capital of US herpetofauna to increase disease-threat investments.
- 2:30-2:45 **Jonathan Kolby**  
The spread of amphibian pathogens through international wildlife trade.
- 2:45-3:00 **Neelam Poudyal**  
Awareness, attitudes and perceptions of US pet amphibian businesses and owners regarding pathogen threats, biosecurity and acquisition of certified disease-free amphibians.
- 3:00-3:15 **Gia Haddock – Student**  
Amphibian pet trade stakeholders' biosecurity practices, relationships, and connection to the spread of novel chytrid fungus *Batrachochytrium salamandrivorans*.
- 3:15-3:20 **Frank Pasmans**  
Reptile and amphibian diseases in EU's policy: theory versus practice.
- 3:20-3:25 **Ednita Tavaréz-Jiménez – Student**  
Commonly traded amphibians are susceptible to the emerging fungal pathogen *Batrachochytrium salamandrivorans*.

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- 3:25-3:45 **Facilitated Discussion**
- 3:45-4:00 **Coffee Break**
- 4:00-6:00 **Diversity, Equity and Inclusion Workshop:**  
Fostering Safe Workplaces and Diversity in Science
- 6:30-8:30 **Poster Session\* and Student-Professional Mixer**

\*Poster titles listed at the end of the Program.

## **TUESDAY, 9 AUGUST 2022**

- 9:00-10:00 Workshop: Generating Disease System Models
- 10:00-10:15 Coffee Break
- 10:15-12:00 Workshop: Generating Disease System Models
- 12:00-1:30 Lunch
- 1:30-2:45 Workshop: Generating Disease System Models
- 2:45-3:00 Coffee Break
- 3:00-4:00 Global Ranavirus Consortium: Membership Meeting
- 4:00-5:00 Presentation Awards Ceremony and Social

## **WEDNESDAY, 10 AUGUST 2022**

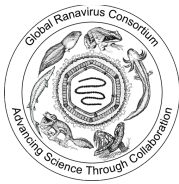
- 8:00 – 5:00: **Trip 1: Exploring salamander biodiversity in the Smoky Mountains**
- 6:00 – 2:00: **Trip 2: Searching for eastern hellbenders in East Tennessee**
- 7:00 – 3:00: **Trip 3: Eastern box turtle health assessments with trained Boykin spaniels**
- 9:00 – 12:00: **Trip 4: Exploring reptile diversity in eastern Tennessee**

## Poster Presenters and Titles (8 Aug, 6:30 pm); S = Student.

No.	Presenter	Title:
1 (S)	Arcebucho L	Identifying potential probiotics from Eastern Newts ( <i>Notophthalmus viridescens</i> ) infected with <i>Batrachochytrium salamandrivorans</i>
2 (S)	Brosnan E	Assessment of the invasive Rio Grande Leopard Frog ( <i>Rana berlandieri</i> ) as a vector of <i>Batrachochytrium dendrobatidis</i> in native Arizonan anurans.
3 (S)	Carman H	Impact of ranavirus on growth and survival of two freshwater turtles in central Virginia ponds
4	Claunch N	Investigating the influence of thermal environment on infection dynamics of <i>Bsal</i> in Plethodontid salamanders
5 (S)	Conley D	Snake Fungal Disease in Virginia: Estimating the effects of <i>Ophidiomyces ophiodiicola</i> on snakes in a coastal ecosystem
6 (S)	Craig H	Lack of thermal acclimation or locally adapted responses to chytridiomycosis infection in a newt common garden experiment
7	Crespi E	Health assessment of wood frog ( <i>Rana sylvatica</i> ) populations in the Athabasca Oil Sands Region, Alberta, Canada
8 (S)	Davidson M	Embryo mortality in the captive managed, critically endangered <i>Pseudophryne corroboree</i>
9 (S)	Dodd K	Amphibian skin microbiome and <i>Batrachochytrium dendrobatidis</i> interactions in the Inland Northwest, USA
10 (S)	Friedeman N	Environmental associations of <i>Ophidiomyces ophiodiicola</i> presence, the causative agent of snake fungal disease
11 (S)	Galvin D	Ranavirus Detection in South Dakota Amphibian Populations During Summer 2021
12	Harman M (S)	Preliminary patterns of spatial disparity in invasive tegu parasite load
13	Hughey M	Effects of Ranavirus infection on assembly of the microbiota of larval wood frogs ( <i>Rana sylvatica</i> )
14 (S)	Inman B	Responses of skin microbial abundance and composition of adult Eastern Newts ( <i>Notophthalmus viridescens</i> ) to changes in social and substrate conditions
15 (S)	Jackson X	Student-led surveillance for <i>Batrachochytrium salamandrivorans</i>
16 (S)	Keller E	Determining the contributions of host and virus to virulence in <i>in vitro</i> ranavirus infections
17	Lawrence S	Tissue tropism of different Frog Virus 3 strains in <i>Xenopus laevis</i> tadpoles utilizing <i>in situ</i> hybridization
18	Leineweber C	<i>Batrachochytrium dendrobatidis</i> in natterjack toads ( <i>Epidalea calamita</i> ) in Northern Germany
19 (S)	Nelms, M	Identification of Newt Contacts Utilizing Machine Learning Techniques
20	Poudyal N	Protected area visitors' attitudes, behavior, and willingness to pay for protecting natural populations
21 (S)	Roth S	<i>Batrachochytrium dendrobatidis</i> (Bd) persists in the Sonoran Desert despite temperature and hydrologic conditions that exceed its known physiological tolerances
22	Serr M	Examining the dermis of Southeastern salamanders to inform a project on <i>Batrachochytrium salamandrivorans</i> ( <i>Bsal</i> )
23	Torres-Sánchez M	Panzootic chytrid fungus exploits diverse amphibian host environments through plastic infection strategies
24 (S)	Towe A	Use of implants for terbinafine administration to prevent chytridiomycosis in greater sirens ( <i>Siren lacertina</i> )

25 (S)	Urban M	Estimating the efficacy of plant-derived fungicides at inactivating <i>Batrachochytrium salamandrivorans</i> in pond water
26 (S)	Vaziri G	Examining gene expression in two immunologically important tissues across the hibernation period of wood frogs ( <i>Rana sylvatica</i> )
27 (S)	Webb, R.	Shooting the messenger RNA: Could interfering RNA be a novel tool against chytridiomycosis
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