

**AUCTION:** Always one of the more entertaining features of our meetings, the **live auction** will feature the usual (i.e., unusual) assortment of herpetologically-oriented items. Bring money or credit card and a bidding attitude. If you have items to donate (literature, prints, photos, posters, artwork, cages, hooks, field equipment, decorative items, toys, clothing, jewelry, decals, etc.), you may bring them to the meeting (**early**), or get them to Jeff Beane or Jeff Hall before the meeting (it would be helpful to let one of the Jeffs know beforehand what items you plan to bring). We **may** have at least a few items offered for **silent auction** in addition to the live auction, depending on inventory, space, and logistics. **No live herps or herp parts will be auctioned**, but almost anything else goes (provided it lies somewhere within the realm of legality). Items donated to the auction are tax-deductible to the extent allowed by law. All proceeds go to NCHS general fund.

**RAFFLE:** This meeting's raffle will feature this beautiful **Black Racer** replica, made and donated by **Joe Morgan** (some smaller consolation items may be raffled as well). Raffle tickets will be \$1.00 each. You may buy as many tickets as you want. The drawing will be held at the end of the meeting. You need not be present to win, **but** if you are not present, you must arrange with someone who will be present to claim your prize for you and be responsible for delivering it to you (otherwise, we'll draw another name).



**LODGING:** The Raleigh area has numerous hotels/motels, including many near campus (e.g., see: <https://www.expedia.com/Raleigh-Motels.d178300-aaMotels.Travel-Guide-Accommodation>). Many of our members also live in the Raleigh area. If you're from out of town and need to stay overnight, it might not hurt to ask around—chances are someone might have a spare room to offer you for a night or two.



## SPEAKERS

Originally from Union County, NC, **Alvin Braswell** received a B.S. in Wildlife Biology with a Botany minor and an M.S. in Zoology from North Carolina State University (NCSU). He served in the U.S. Army, reaching the rank of E-5. Currently, he is retired from the North Carolina State Museum of Natural Sciences (NCSM), where he spent over 40 years in various curatorial roles with reptiles, amphibians, and freshwater fishes before serving as Research Lab Director, and later, assuming a Deputy Museum Director for Operations position. After 4.5 years of retirement, he was called back to serve as Interim Director while a new Museum Director was being sought. Now, as an Emeritus Research Curator with the Museum, he has returned to his primary love—field biology. Publications include co-authorships on *Reptiles of North Carolina; Amphibians and Reptiles of the Carolinas and Virginia, 2<sup>nd</sup> Edition*; and the booklet *Venomous Snakes of North Carolina*. He served for over 20 years on the Plant Conservation Program's Scientific Committee and chaired that committee for five years. He also served on the Nongame Wildlife Advisory Committee for the North Carolina Wildlife Resources Commission (NCWRC) for over 25 years and chaired the Scientific Councils for Amphibians and Reptiles, and Freshwater Fishes for periods during that time. As an Adjunct Instructor with NCSU, he co-taught ZO 542 (Herpetology) from 1996–2013 with Dr. Harold Heatwole. In retirement, he is involved with several non-profit conservation organizations and various research projects with NCSM. Honors include Outstanding Graduate Student Teacher from NCSU, Governor's Wildlife Conservationist of the Year, Order of the Long Leaf Pine, Governor's Award for Excellence, and the Thomas L. Quay Award for Wildlife Conservation from NCWRC. He has served as NCHS Advisor since 1981.

**Dr. Daniel Dombrowski** is currently the Chief Veterinarian and Director of Veterinary Sciences at the North Carolina State Museum of Natural Sciences. He is an adjunct faculty at the North Carolina State University (NCSU) College of Veterinary Medicine. In 2006, he earned a DVM from NCSU with a focus in zoo medicine and advanced courses in reptile, fish, invertebrate, avian, and wildlife medicine. In 2006, Dr. Dombrowski also received the Wildlife, Avian, Aquatic, and Zoological Medicine Proficiency in Zoological Medicine Award. He earned an M.S. in Biology and a B.S. in Biology from Virginia Commonwealth University in Richmond, Virginia. Dr. Dombrowski has been an author and coauthor of several publications in pharmacology, natural history, and clinical medicine, and two book chapters focusing on invertebrate medicine. He currently leads the Veterinary Sciences team at the Museum in animal health, welfare, veterinary education, and veterinary clinical research. Dr. Dombrowski has been a past NCHS grant recipient and past Treasurer and is a lifetime member of NCHS.

**Dr. Andrew Durso** grew up catching snakes in North Carolina and has been a member of NCHS since he was 15 years old. He earned a B.S. in Ecology from the University of Georgia in 2009, an M.S. in Biology from Eastern Illinois University in 2011, and a Ph.D. in Ecology from Utah State University in 2016. Since 2020 he has been an Assistant Professor at Florida Gulf Coast University in Ft. Myers, Florida, where he and his students research the population and community of snakes and other herps. He currently chairs the NCHS Grants Committee.

**Dr. Danielle Galvin** is a postdoctoral research associate at the University of Tennessee Knoxville, where her research focuses on monitoring pathogens in the international pet amphibian trade and assessing toxicity of a plant-derived fungicide which reduces Bsal infections and increases amphibian survival. She received her B.S. in Fisheries and Wildlife from the University of Nebraska Lincoln (2019) and her Ph.D. from the University of South Dakota in Biology. Her research career has focused on understanding host-pathogen dynamics in wild and captive amphibians to inform conservation practices. Dr. Galvin holds a variety of positions, including co-lead of the Midwest PARC's outreach and communications task team and secretary and treasurer of the Healthy Trade Institute, a 501(c)3 nonprofit organization founded to facilitate a healthier herpetofauna trade. As a pet amphibian and reptile owner, Danielle is dedicated to improving the amphibian and reptile pet trade through education and research.

**Dr. Alex Krohn** is a herper and the Director of Conservation Genomics at Tangled Bank Conservation. He has a B.A. from Oberlin College, and a Ph.D. from the University of California, Berkeley. He has worked with herps all over the world for the past 15 years, from Vietnam to California, Las Vegas to Alabama. He has worked with genomic datasets for over 10 years now, including studying convergent evolution, captive reintroduction feasibility, species and subspecies boundaries, and identifying species with metabarcoding. At Tangled Bank, Alex is responsible for data analysis, bioinformatics, report writing, and project management.

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**Rachel Myers** is the Head of Reptiles, Amphibians, and Ambassador Animals at the North Carolina Museum of Natural Sciences. She received her B.S in Marine Biology at the University of North Carolina Wilmington. Rachel also worked at the North Carolina Aquarium at Fort Fisher during this time and took every opportunity to go out in the field and look for herps in southeastern NC. Rachel studied biology with a focus on animal behavior in graduate school and received her M.S. in Biology from Western Carolina University in 2013. She worked for six years at Naples Zoo and Caribbean Gardens in Naples, Florida where she was the Animal Care Supervisor of Ectotherms. Rachel currently serves as NCHS Husbandry Committee chair.

**Gary Williamson** was born in Norfolk, Virginia in 1944 and has spent his adult life in the Chesapeake area. He is a retired Virginia State Park Ranger and past President of the Cape Henry Audubon Society. Gary has had a lifelong interest in snakes and birds and is also fond of hunting for champion trees. He attended Old Dominion University and assisted in a Canebrake Rattlesnake telemetry study in the Chesapeake area. He has lectured on natural history subjects at area schools, colleges, naval bases, and civic organizations. In 1965, Gary met the legendary Carl Kauffeld by chance at the Okeetee Club in Jasper County, South Carolina. That fortuitous meeting led to a friendship that endured until Kauffeld's death in 1974. Gary's 10-year friendship and correspondence with Kauffeld changed his life and inspired his book, *The Kauffeld Letters*.

## ABSTRACTS

### The Human Side of Genetics and Releasing Confiscated Turtles

**Alex Krohn**

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Confiscating turtles poached from the wild is a win for the fight against poaching, but not always a win for the wild population. Confiscated turtles are often unhealthy from their journey, and there are often little data on their population of origin. So, once confiscated, the wild turtles usually stay in captivity rather than go back into the wild to bolster already-dwindling populations. Tangled Bank Conservation has created a number of genetic databases to help assign confiscated turtles back to their population of origin. By comparing the genotype of the confiscated turtle to genotypes of turtles from known locations, we can determine which known turtles the confiscated turtle is most closely related to, and can thus assign it to a geographic area of origin. I will talk about our work creating these databases for Box Turtles, Bog Turtles, and Alligator Snapping Turtles, focusing on the recent release of 28 confiscated Alligator Snapping Turtles back into the wild in Texas. I will focus on the science of assigning unknown turtles to geographic areas, and how human decision-making and risk-tolerance is as important as the science at each step of the process.

### An Important New Tiger Salamander Discovery

**Alvin Braswell**

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Moore County is the site of a newly discovered population of the Eastern Tiger Salamander (*Ambystoma tigrinum*) in North Carolina. The Eastern Tiger Salamander is state-listed Threatened due to loss of breeding and terrestrial habitat, range reduction, invasive species, and other factors. The new site likely represents a relict population that was overlooked until recently. Efforts to work with landowners in the area have been successful and protection of an important breeding site has been secured through purchase resulting from a cooperative landowner and efforts of NCHS, Three Rivers Land Trust, and private donors willing to assist. Assessment of the site for use by a wide range of amphibians and other species is ongoing. The site does have challenges, and cooperative efforts of Three Rivers Land Trust (the holder of the deed), NCHS, the North Carolina Wildlife Resources Commission, and other parties will be needed to assure the long-term success of the breeding site and terrestrial habitat for adult salamanders. A chronology of events leading to conservation ownership of the breeding site and related cooperative ventures in the area will be presented.

### History and Status of the NCHS Grants Program

**Dr. Andrew M. Durso**

Florida Gulf Coast University  
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The NCHS David L. Stephan Grants in Herpetology program turns 30 years old in 2024. Since 1995, the program has awarded over \$64,000 in grant money to 107 research projects. Andrew will summarize the accomplishments of the program and present some highlights.

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## Remembering Carl Kauffeld

**Gary M. Williamson**  
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Carl Frederick Kauffeld (1911-1974) was Curator of Reptiles at the Staten Island Zoo for 37 years and is perhaps best known as a great popularizer of herpetology. He was especially passionate about rattlesnakes, and his books *Snakes and Snake Hunting* (1957) and *Snakes: The Keeper and the Kept* (1969) served as “herping bibles” to young people interested in reptiles in the 1950s and ‘60s and beyond. *Rana [Lithobates] kauffeldi*, the Atlantic Coast Leopard Frog, was later named for him. This presentation is about how Kauffeld served as a mentor and an inspiration to many, and how a chance meeting with him in 1965 resulted in a 10-year friendship and correspondence that changed my life, influenced my career path, and eventually inspired my recent book, *The Kauffeld Letters*.

## A Vision for a Healthier Herpetofaunal Trade

**Danielle Galvin**  
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Wildlife trade has been linked to the global dissemination of various pathogens. Considerable evidence exists that chytrid fungi and ranaviruses exist in amphibian trade, which can spill over to wild populations and contribute to declines. In the USA, chytrid fungi and ranaviruses cause an estimated \$140M USD in annual revenue losses to businesses. Previous surveys indicate that U.S. businesses and pet owners are in support of an industry-led healthy trade certification program that facilitates the sale of pathogen-free amphibians. In June 2022, we began discussions with over 20 industry stakeholders and experts to develop a voluntary program that would certify U.S. businesses as healthy trade partners. Member businesses are required to participate in online training; incorporate biosecurity practices that promote healthy animals; test a subset of resident, for-sale, and newly acquired amphibians for target pathogens (chytrid fungi, ranavirus); and quarantine animals if a positive detection occurs. As market incentive, testing amphibians in shipments between certified businesses is not required. Testing is done using nonlethal swab samples and performed by approved laboratories that demonstrate proficiency in diagnostic assays for the target pathogens. In 2024, we created the Healthy Trade Institute, Inc. (HTI)—a U.S. 501(c)(3) nonprofit organization that will launch and coordinate this program. The HTI is currently recruiting diagnostic laboratories to lead pathogen testing and is opening membership to U.S. businesses that sell pet amphibians. Membership fees are tiered based on annual sale revenues. Member businesses are authorized to use the HTI certification logo to increase market value of their sellable amphibians. The HTI certification program is an innovative partnership among industry, academia, and a non-profit organization that empowers businesses to champion healthy trade practices that enhance the wellbeing of pets and wildlife.

## Assessing Welfare of Herps in the Museum

**Rachel Myers and Dr. Daniel S. Dombrowski**  
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The welfare of animals in human care is an evolving science that is essential to monitor as part of animal management. Animal welfare refers to the collective physical, mental, and emotional states of an animal and can be measured on a continuum from good to poor. The Veterinary Sciences and Living Collections sections of the North Carolina State Museum of Natural Sciences are responsible for the care and health of the live animals in the Museum and work together to develop our animal welfare program. Nearly 50 species of reptiles and amphibians are cared for at the Museum, each with their own specific set of preferred temperatures, humidity ranges, nutrition needs, and other husbandry requirements. It can be particularly challenging to assess the physical and mental states of reptiles and amphibians, and we have developed a process to evaluate this that is objective and science based. We proactively look at overall animal welfare using parameters that are based on the Five Opportunities to Thrive (Vicino and Miller 2015). These are the opportunity for a well-balanced diet, to self-maintain, for optimal health, to express species-specific behavior, and for choice and control. The data we gather are used to create a welfare evaluation that we can use to identify issues that can be addressed to improve the care of the animals at the Museum.