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HERPETOLOGICAL SYMPOSIUM**

**2018**



**Houston, Texas  
June 20 - 23, 2018**

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**The Houston Zoo's mission statement is "The Houston Zoo connects communities with animals, inspiring action to save wildlife."**

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This year, 2018, marks the 41st anniversary of the International Herpetological Symposium. The first annual symposium on Captive Propagation and Husbandry of Reptiles and Amphibians was held in July 1976, at Hood College in Fredrick, Maryland. The International Herpetological Symposium (IHS) evolved from this meeting. The primary purpose of the IHS is to provide a forum for the dissemination of information and results of such research pertaining to the natural history, conservation biology, and captive management and propagation of amphibians and reptiles. Each year the IHS is held in a different location hosted by a zoological, herpetological, or herpetocultural institution. This year, IHS has the honor to partner with the East Texas Herpetological Society and is generously co-hosted by the Houston Zoo, in Houston, Texas.



Unlike most herpetological societies or associations, IHS does not have a voting membership, but an electoral body. That body consists of the volunteer members of the Board of Directors, the Advisory Council, and chairs of various committees. Zoologists, herpetologists, and private herpetoculturists are all involved in organizing the annual symposia. These meetings and programs are largely supported by the generosity of our donors and sponsors, to whom we are eternally grateful.

We have an exciting meeting planned, kicking off with our Keynote speaker, Twan Leenders of the world-renowned Roger Tory Peterson Institute of Natural History. We also welcome you to join us for a special event Thursday night, An Evening with Dr. Harry Greene, for our esteemed guest speaker presentation and book signing. During our banquet on Saturday, the acclaimed herpetologist William Lamar will be taking IHS guests on a herp-filled journey through Central America as our Banquet Speaker. We also would like to thank all of our fantastic symposia speakers for joining us this year, as well as our major sponsors, Timberline and Zoo Med Laboratories, Inc. We would not be where we are today without you. Please support all of our sponsors whenever you are able.

Over the years, an increasing number of people with varied interests in herpetology have attended IHS meetings, and this curious mix has allowed IHS to develop its “unique” flavor. Although IHS is often visualized as an organization with an interesting blend of academia and herpetoculture, the types of people who attend the meetings far exceed those bounds. Progressive programs such as the Junior Herpetologist Award and Collegiate Speed Session have also opened the doors to the next generation of reptile and amphibian enthusiasts and conservationists. So whether you are a reptile breeder, a budding herpetologist, a natural historian, a wildlife artist, a commercial importer, a student, a veterinarian, a zookeeper, an academician, or a dry-goods vendor, IHS has something for everyone young and old.

The 41st meeting marks my first full year as President of this dynamic organization. I gave my first public presentation at an IHS in my early 20's; I can recall feeling nervous, but the welcoming IHS board and attendees made it easy. At that same meeting, I met a soon to become employer and mentor who played a significant role in both my career and life. You never know what opportunities may present themselves at an IHS meeting. We may live at a time where much of our communication is through a screen and keyboard, but nothing can compete with a conversation and handshake. I am honored to have the opportunity to work with such a multi-talented and highly dedicated group of volunteers as we continue to move forward. For our old friends, we thank you for your continued support, and for those who are joining us for the first time, we welcome you. We look forward to seeing you at these annual gatherings for many years to come.

**Jennifer L. Stabile**, President  
Associate Research Scientist  
Fieldprojects.org

All IHS attendees are invited to visit **CROCODILE ENCOUNTER**. Show your IHS badge and get FREE admission! A very special thanks to owner and director Chris Dieter!



What is Crocodile Encounter? Crocodile Encounter is a fully licensed and insured USDA zoological facility whose primary focus is science and wildlife education. Started by a science teacher and his students Crocodile Encounter has grown into a world class animal facility that has a truly unique origin. A visit to Houston's country zoo enables each visitor to experience wildlife in a safe, exciting, and educational fashion. You will see crocodiles and alligators swimming, sunning, and feeding while being led by knowledgeable and lively tour guides. Crocodile Encounter has the largest group of crocodiles on display in the United States. We are the premier crocodylian facility in the state of Texas and widely regarded in the zoological world as a standard bearer in the care of captive crocodylians. The animal ambassadors that live at our location are some of the most storied, legendary, and unfortunately endangered animals on the planet. It is our mission to further educate the public on these vital keystone species and the impact they have on the human world.

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**An Evening with Dr. Harry Greene**  
**“Snakes and Primates: 75 Million Years of Deadly Dialog”**  
**Thursday, June 21 from 7:30pm-10:00pm**  
**Presentation, book sales and signing, plus a meet and greet!**



Harry Greene graduated from Texas Wesleyan in 1968, served three years as an army medic, then earned a M.A. from University of Texas at Arlington and Ph.D. from University of Tennessee. He was a professor and curator in Berkeley's Museum of Vertebrate Zoology for two decades before moving to Cornell, where he is now professor emeritus of ecology and evolutionary biology. He's taught vertebrate natural history, herpetology, introductory biology, evolution and biodiversity, and field ecology, while studying vertebrate biology and conservation. Harry's honors include U. C. Berkeley's Distinguished Teaching Award, the Edward O. Wilson Naturalist Award, president of the American Society of Ichthyologists and Herpetologists, and Cornell's Stephen H. Weiss Presidential Fellowship. In 2014, *Business Insider* named him one of Cornell's "Top Ten Professors" and he was elected to the American Academy of Arts and Sciences. His *Snakes: The Evolution of Mystery in Nature*, won a PEN Literary Award, garnered a two-page spread in *Time* magazine, and made the *New York Times*' annual list of 100 Most Notable Books.

Praise for Harry's *Tracks and Shadows: Field Biology as Art*, published in 2013:

"An immediate classic. I had heard of it rumored for years. It is grand indeed and more than fulfilled my expectations."—Jim Harrison, author of *Legends of the Fall* and *The River Swimmer*

"Masterfully—and poetically—examines contradictions inherent in wild places that teem with beauty and danger. These stories reveal how an eminently humane scientist found joy and peace by exploring the living world."—Mark Moffett, author of *Adventures Among Ants: A Global Safari with a Cast of Trillions*

"A valuable, fascinating, very human book about the making of a field biologist. Harry has lived the life I once dreamed: studying snakes. But there's more, much more, and what makes it all work is something not taught in herpetology class: This man can write."—David Quammen, author of *Song of the Dodo* and *Spillover*

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**Cover Art: Katie Karl**

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## Wednesday

1:00pm-3:00pm Board Meeting CLOSED

7:00pm-10:00pm Icebreaker

## Thursday

**8:20am-8:30am** Opening Announcements

**8:30am-9:30am** Keynote: **Twan Leenders** (Roger Tory Peterson Institute of Natural History) “Conservation Starts at Home – A Herpetologist’s Journey Through the World’s Backyards”

Roger Tory Peterson Institute of Natural History

**9:30am-9:50am** **Dusty Rhoads** (Texas Christian University) “How the H-Snake Lost Its Hs: Mendelian Inheritance and Geographic Distribution of the Blonde phase of the Trans-Pecos Ratsnake (*Bogertophis subocularis*)”

**9:50am-10:20am** **Colette Adams** (Gladys Porter Zoo) “Herpers, Crocodiles, and Beer”

**10:20am-10:30am** **BREAK**

**10:30am-10:50am** **Melissa Spradley** (Houston Zoo) “Houston Toad Recovery Program”

**10:50am-11:20am** **Chris Dieter** (Crocodile Encounter) “Raising Jurassic Park: Outdoor Propagation of Tropical Crocodiles in Texas”

**11:20am-12:00pm** **Chris Figgner** (Texas A & M) “The Riddle of the Two Nesting Behaviors of the Olive Ridley Sea Turtle (*Lepidochelys olivacea*)”

**12:00pm-1:25pm** **LUNCH**

**1:25pm-1:50pm** **Clinton Doak** (Turtle Survival Alliance) “Unlocking the Secret to Sulawesi Endemic Turtles”

**1:50pm-2:10pm** **Sal Scibetta** (Department of Defense) “Antivenom Use in Department of Defense”

**2:10pm-2:40pm** **Dr. Phil Ralidis** “Salamanders of the genus *Isthmura*: Imperiled Jewels of the Mexican Highlands”

**2:40pm-3:00pm** **Dr. Neil Ford** (University of Texas at Tyler) “Catch-up Growth Impacts on Adult Reproduction in Snakes”

**3:00pm-3:10pm** **BREAK**



## “Conservation Starts at Home – A Herpetologist’s Journey Through the World’s Backyards”

**Twan Leenders**

*President of the Roger Tory Peterson Institute*

Twan has authored several field guides including *The Wildlife of Costa Rica*, *Amphibians of Costa Rica*, and *The Amphibians and Reptiles of Costa Rica*. Twan is a biologist from The Netherlands interested in animal ecology and conservation management. For more than twenty years his work with birds, mammals, plants and especially tropical amphibians and reptiles has taken him to various places on the planet. As a former researcher at Yale University’s Peabody Museum and other institutions he participated in many international expeditions that helped gather data to better understand and protect biologically important areas and their unique species and habitats. Before coming to western NY, Twan taught biology at Sacred Heart University in Fairfield, CT, and went back into the ‘trenches’ of hands-on conservation research and education while leading the Science and Conservation Office of the Connecticut Audubon Society. As President of the Roger Tory Peterson Institute of Natural History, he now applies his experience to our region and develops new conservation research and education initiatives that aim to spark increased interest in the area’s exceptional natural assets while providing economic incentives to promote good environmental stewardship.



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**Zilla**

**3:10pm-3:40pm Michael Price** (Wild About Texas) “Squamate Diversity of the Sierra Madre Occidental in Northern Mexico”

**3:40pm-4:10pm Quetzal Dwyer** (Parque Reptilandia) “Understanding and Enraveling Reproductive cues in Captivity for Tropical Reptiles with Emphasis on *Simalia boeleni*”

**4:10pm-4:30pm Tim Cole** (Rattlesnake Preservation Trust) “Status Update on Rattlesnake Round-ups in Oklahoma and Texas Along with Past, Present, and Future of the Rattlesnake Preservation Trust”

**4:30pm-5:00pm Vince Scheidt** (IHS) “Reptiles of the Revillagigedos Archipelago”

**7:30pm-10:00pm An Evening with Dr. Harry Greene** “Snakes and Primates: 75 Million Years of Deadly Dialog”

**\* Presentation, book sales and signing, plus a meet and greet!**

## **Friday**

**8:20am-8:30am** Friday Announcements

**8:30am-9:00am Robert Edwards** “Unimaginable Voyages and Unique Roads - A Brief Synopsis Outlining Rara-Avis, Biological Preserves and the History of Ecotourism in Costa Rica

**9:30am-10:10am Josh Holbrook** (Montreat College) “The Field Herping Guide: Manifesto to the Next Generation of Herpers”

**10:10am-10:25am BREAK**

**10:25am-11:10am Dr. Spencer Greene** (Baylor College of Medicine) “Beyond Antivenom: Novel Therapies for Snakebites”

**11:10am-11:30am Gerry Salmon** (KT Wildlife) “Results of Reptile and Amphibian Public Opinion Surveys”

**11:30am-12:00pm Dr. Marisa Tellez** (Crocodile Research Coalition) “Sinking Your Teeth into Crocodile Conservation

**12:00pm-1:30pm LUNCH**

**1:30pm-1:50pm Robert Hill** (Zoo Atlanta) “Research and Conservation of Grenada’s Endemic Herpetofauna”

**1:50pm-2:20pm Marnee Roundtree** (University of Nebraska at Lincoln) “Tackling Amphibian Chytrid Disease With A One Health Approach”

**2:20pm-3:00pm Ari Flagle** (Forth Worth Zoo) “Project Black Python: Tracking *Simalia boeleni* in the Highlands of West Papua New Guinea; 10 Years of Blood, Sweat, and Penis Gourds”

**4:15pm Buses leave for Houston Zoo**

**6:30pm Houston Zoo Dinner & Behind-the-Scenes Tour of the Herpetarium**  
Courtesy of HOUSTON ZOO and Herpetology Staff

## Saturday

**8:20am-8:30am Saturday Announcements**

**8:30am-9:30am Collegiate Speed Session:**

**Neil Balchan** “Movements in the Fall Migrating Red-sided Garter Snake (*Thamnophis sirtalis parietalis*)”

**Noah Garwood** “The Peruvian Amazon: A Land of Mystery and Majesty”

**Dane Conley** “Scarlet Kingsnake Range Distribution of the Mid-Atlantic Region”

**Matthew Schalk** “Incorporating Herp Education into an Agritourism Event”

**Katie Karl** “Conservation Through Art”

**9:30am-10:00am Paul Moler** (Florida Fish and Wildlife Conservation Commission)  
“Herpetological Surveys in Vietnam, 2001-2018”

**10:00am-10:30am Micha Petty** (Louisiana Exotic Animal Resource Network)  
“Innovations in Outreach: Interpreting Herps to the Public”

**10:30am-10:40am BREAK**

**10:40am-11:10am Bruce Shwedick** (The Crocodile Conservation Center of Florida, Inc.) “Secret Croc of the Sunda Islands”

**11:10am-12:20pm Junior Herpers/Next Gen**

**12-15 Age Group Winner**

**Michael Skibsted** (Ladera Ranch, California) “*Macrochelys temminckii*: The Living Dinosaur”

**16-18 Age Group Winner**

**Tyler N. Tobias-Jones** (Natchez, Mississippi) “Dragons, Dinosaurs, and Detective Work: The Potential Impact of Paleobiology in Herpetological Conservation”

**NextGen Herpetologist Award Winner**

**Paul Coyne** (Chatham, New Jersey) “The Evolutionary Differences Within The Chelidae Family”

**Scout Aulenbach “It All Started With A Tortoise - The Georgia Reptile Society”**

**12:20pm-1:30pm LUNCH**

**1:30pm-2:30pm John T Herp Quiz**

**2:30pm-3:10pm Dr. Ellis Nordyke** (University of St. Thomas - Houston)

“Mitochondrial DNA Phylogeography of  
*Lampropeltis alterna* (Serpentes: Colubridae)”

**3:10pm-3:25pm Dr. Alex Hall** (Thermo Fisher Scientific) “Computed Tomography Reveals Hidden Bone Tumor in a Coralsnake”

**3:25pm-3:40pm Maria Elena Barragán-Paladines** (Fundacion Herpetologica Gustavo Orces) “New Approaches Towards the Conservation of Venomous Snakes in Ecuador”

**3:40-3:55pm BREAK**

**3:55pm-4:25pm Jordan Perrett** “*Aspidites*: An Ancient Lineage of Pythons in Modern Herpetoculture”

**4:25pm-4:55pm Clint Guadiana** (Gladys Porter Zoo) “A Stone’s Throw from Mexico: Herping South Texas”

**6:30pm-11:00pm Banquet/Silent Auction/Live Auction/Awards**

**7:00pm Banquet**

**Presenter: Carl Franklin** (University of Texas Arlington) “**New Knowledge and Dance Moves From Old Animals**”

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**Announcement of IHS photo contest winners**

**Acknowledgement of the Junior Herpetologists Award Winners**

**\* Age 12-15**

**Winner - Michael Skibsted**

**1st Runner-Up - Scout Aulenbach**

**2nd Runner-Up - Cameron Paul Sanders**

**\* Age 16-18**

**Winner - Tyler N. Tobias**

**1st Runner-Up - Olivia Damm**

**2nd Runner-Up - Tatem Shoemaker**

**\* Age 19-22**

**Winner - Paul Coyne**

**Announcement of the IHS Grant Winners**  
**Announcement of the Louie Porras Award**  
**Announcement of the Joe Laszlo Award**  
**Announcement of the Lifetime Achievement Award**

**LIVE AUCTION!!**



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## **“New Knowledge and Dance Moves From Old Animals”**

**Carl Franklin**  
(University of Texas Arlington)

Texas is a juggernaut state for contributions in herpetology and herpetoculture. Ironically a Texas-sized hole still exists with regards to our understanding regarding the ecology and natural history for much of our herpetofauna even those that can be labeled “Texas-sized”. Fortunately, a dedicated crew of herpetologists and citizen scientists are chipping away at the mysterious biology of one of Texas’ most notable yet all too often overlooked reptiles.

Carl J. Franklin is a herpetologist, biological curator and collections manager of the Amphibian and Reptile Diversity Research Center at the University of Texas Arlington. He has worked at the Fort Worth Zoo and Dallas Zoo departments of herpetology and El Serpentario de La Paz in Baja California. He has published several popular and technical publications as well as two books about turtles. He has also provided lectures and presentations about some of our often misunderstood wildlife to hundreds of audiences and all age groups. Asides from numerous outreach programs Carl has assisted with several wildlife documentary television programs, local news broadcasts and motion pictures pertaining to reptiles and amphibians. An avid outdoorsman and native Texan, Carl most enjoys spending time in the field with his family and friends. Especially in places where there are turtles.

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## ABSTRACTS

### **New Approaches Towards the Conservation of Venomous Snakes in Ecuador**

**María Elena Barragán-Paladines**

Fundacion Herpetologica Gustavo Orces

The conservation of venomous snakes around the world, has always faced a tremendous disadvantage, for being animals with little appeal for man. Additionally, fear, death and the collateral effects associated with snake-bite accidents increase the disadvantages in the implementation of effective conservation strategies for this group of fauna. In addition to this, the lack of funds for conservation of poisonous animals increases the already difficult challenge of their conservation.

This is the case of Ecuador, in which there are documented the existence of 10,000 cases of bites per year, of which 0.1% corresponds to reports of death by biting. Since 1993, the Gustavo Orcés Herpetological Foundation has implemented, together with its environmental education program, the approach of involving indigenous communities in processes of training and demystifying local knowledge related to species of venomous snakes distributed throughout the Amazon region. Part of this new approach also consisted in learning two ways about the ancestral vision of the communities about snakes, the valuation of snakes in artistic, linguistic and religious representations, which account for a positive view of snakes, and the creation of documents in native languages, which allows the approximation and elimination of linguistic and cultural barriers which are also an issue. The search for the artistic part within the color, function and attractiveness that snakes can naturally have, the rescue of these benefits, through women's training workshops where the implementation of production activities linked to the production of souvenirs that rescue the beauty of these animals, which also maintain an identification of the communities associated with the presence of these poisonous animals to their localities.

### **The Grenada Frog (*Pristimantis euphronides*): Long-term Monitoring, Conservation Actions, and Outreach**

**Billie Harrison, Robert Henderson, and Robert L. Hill**

Zoo Atlanta

The Grenada Frog (*Pristimantis euphronides*) is one of three endemic vertebrates on the Grenada bank and is listed as endangered on the IUCN red list. Although once widespread on Grenada, land use patterns and competition with the invasive Johnstone's frog (*Eleutherodactylus johnstonei*) now limit the range of *P. euphronides* to roughly 8 square miles. Surveys conducted from 2004–2015 indicated that the numbers of frogs were dropping, even in protected areas. In May of 2009, swab samples were collected from three of four species of frog found on the island for *Batrachochytrium dendrobatidis* (Bd). All three species were infected. *Batrachochytrium dendrobatidis* is likely to pose the most severe threat to *P. euphronides*, which is only found at high elevations where both temperatures and moisture regimes are ideal for Bd to thrive. Continued long-term population surveys are needed to determine how rapidly Bd is affecting populations of *P. euphronides*. This presentation will review previous outreach and research efforts while also proposing future initiatives.



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**Understanding and Unraveling Reproductive Cues in Captivity for Tropical Reptiles  
with Emphasis on *Simalia boeleni***

**Quetzal Dwyer**  
Parque Reptilandia

In this paper, diverse problems and experiences stimulating breeding behavior in a variety of tropical reptile species are discussed. Subjects from microhabitat misinterpretation and feeding routines to financial considerations which have proved to be detrimental in obtaining frequent reproductive success in several high profile species.

**Raising Jurassic Park: Outdoor Propagation of Tropical Crocodiles in Texas**

**Chris Dieter**  
Crocodile Encounter

Crocodylians are the world's largest reptiles and their husbandry creates demands not seen in other captive reptiles. While omnipresent as a public focus in zoological parks many aspects of crocodylian care are overlooked in an effort to make the animals as visible as possible for the public. Crocodile Encounter uses a different model to ensure a positive visitor experience while enhancing the lives of the animals in our care. Maintaining tropical crocodylians outside is not without its challenges and this talk will highlight the challenges faced in both successfully maintaining and propagating the world's greatest reptiles in an outside environment.

**Computed Tomography Reveals Hidden Bone Tumor in a Coralsnake**

**Dr. Alexander S. Hall, Justin Jacobs, and Eric N. Smith**  
Thermo Fisher Scientific

Cancer chiefly occurs in vertebrates. Rare in amphibians, and perhaps common in reptiles, various neoplasms and malignant cancers have been reported with erratic frequency by museums, paleontologists, veterinarians, and pet hobbyists. Unsurprisingly, most herpetofaunal diversity has never been systematically surveyed for the presence of neoplasms owing to the extreme rarity or obscurity of many species. Museum collections can fill these gaps in knowledge, especially when researchers use non-destructive techniques. In this study, we used X-ray computed tomography to discover and characterize an osteosarcoma of the spine in a rare South American coralsnake, *Micrurus ancoralis*. Two spinal vertebrae were completely fused and adjacent vertebrae showed evidence of corruption. The fused vertebrae contained a hollow inner network thought to be vascular tissue. The rarely reported technique of X-ray CT for tumor discovery could greatly improve our understanding of the species diversity and perhaps underlying causes of neoplasia.

**Conservation Through Art**

**Katie Karl**

Founder, ECHO Foundation for Herpetological Conservation  
lizardlvr766@gmail.com

Reptile and amphibian species are rapidly disappearing, with over 2400 at risk according to the International Union for Conservation of Nature (IUCN). These amazing and diverse animals have survived on Earth for millions of years but are now vanishing at an alarming rate due to habitat loss, climate change, environmental pollution, disease, and direct violence from humans, such as rattlesnake roundups. Katie, 17 years old and a recent



high school graduate, is passionate about conservation and plans to become a herpetologist with a focus on endangered species. She has been creating art to earn money for herpetological conservation and has raised over \$5000 for various causes. Katie is in the process of establishing her own conservation non-profit, ECHO Foundation for Herpetological Conservation.



## **Tackling Amphibian Chytrid Disease with a One Health Approach**

**Marnee Roundtree**

University of Nebraska Lincoln

Chytridiomycosis is an amphibian disease caused by *Batrachochytrium dendrobatidis*, which has been shown to persist not only in the environment but in non-amphibian hosts. Until relatively recently, research efforts to understand chytridiomycosis or Amphibian Chytrid Disease have been fragmented, but with increased awareness on the rapidly spreading fungus, we have access to an exceptional amount of information. Utilizing diverse tools, we can better understand and tackle Amphibian Chytrid Disease by connecting animal, plant, and ecosystem data and human influences on Chytrid Disease through a One Health approach. By synthesizing the known and looking at this disease through a One Health lens, we enhance our ability to understand and better mitigate chytrid outbreaks.

## **Salamanders of the Genus *Isthmura*: Threatened Jewels of the Mexican Highlands**

**Dr. Philip Ralidis**

The seven recognized species of the genus *Isthmura* are widespread but sparsely distributed in the Mexican highlands north and west of the Isthmus of Tehuantepec (with a single isolated species restricted to bordering mountains of Sonora and Chihuahua), and include the largest plethodontids in the world. They are distinctively and strikingly patterned, generally with bold red-orange dorsal markings of varying intensity and prominence on a general black ground color. Recently split from the neotropical genus *Pseudoeurycea* (Rovito et al, 2015), they can reach gigantic proportions (with documented lengths of up to 165 mm SVL). The nominate species *I. bellii* possesses the broadest elevational limits of any salamander in the world (between 750-3300 m asl), its unusually broad ecological scope suggesting possible cryptic species. The nominate form *P. bellii* as described by Gray (1850) has since been split into seven recognized species with the elevation of *I. boneti* from previous synonymy and the former subspecies *I. sierraoccidentalis* elevated to full species status. All forms are presently listed by the IUCN Red List as Vulnerable, Endangered, or Critically Endangered: *Isthmura naucampetepl* was considered extinct until its recent rediscovery after more than 30 years absence in field collecting efforts; the recently described *I. corrugata* (Sandoval-Compte et al, 2017) is known only from the holotype and paratype; all other forms have shown a marked decline in abundance, even in seemingly undisturbed habitat. The dramatic decline in neotropical salamander populations as a whole (as detailed by Rovito et al 2009) cannot be solely attributed to habitat disturbance, or even to the seemingly ubiquitous *Batrachochytridium dendrobatidis* fungus adversely affecting amphibian populations worldwide. The proclivity of adult *Isthmura* to inhabit deep burrows in earthen banks, their inherently low metabolism, and large size differential between hatchlings and large adults suggesting great longevity potential might account for their persistence in sampled areas with now largely diminished in salamander species diversity.

## **Sinking Your Teeth Into Crocodile Conservation**

**Dr. Marisa Tellez**

Crocodile Research Coalition

Conservation is not just about wildlife, it is about people and communities. The success of any wildlife conservation program relatively parallels the involvement and support from local communities, thus working alongside communities and partner organizations is imperative to empower people with the knowledge of co-existence and sustainability to ensure long-term conservation efforts. Additionally, continuous collaboration and communication with local and national governments can ensure data collected from one's scientific investigations will be prioritized in regards to policy decisions regarding wildlife and their habitat (= translational ecology). In this presentation, I will be discussing the conservation efforts and scientific investigations of the Crocodile Research Coalition (CRC), a Belize based non-profit that works with local, national and regional stakeholders to ensure long-term sustainability of crocodiles and their habitat. Although crocodiles are the CRC's flagship species in pursuing regional conservation efforts, the CRC facilitates research focused on the surrounding flora and fauna given long-lasting conservation management is dependent on preserving the integrity of ecological interactions. This holistic approach of crocodile conservation and management, in addition to the continuous involvement and mentorship of local wildlife champions in projects that range from eco-parasitology, eco-toxicology, and population ecology, has contributed to local stewardship in protecting crocodiles and their environment.

## **Herpers, Crocodiles & Beer**

**Colette Adams**

Gladys Porter Zoo

Imagine an evening where herpers get together to drink a beer, eat some food, exchange war stories, and, maybe even a few animals . . . an evening so fun that everyone pledges to do it twice a year. Now, picture everyone pitching in a little money, and an auction item, with all proceeds donated to a good cause. Like, a crocodile project? That is the recipe for CrocFest.

## **Catch Up Growth Impacts on Adult Reproduction in Snakes**

**Dr. Neil B. Ford and Dryden Johnson**

University of Texas at Tyler

Catch up growth is a phenomenon that occurs in many species of animals in which a rapid period of growth occurs after a period of restricted diet early in life. In animals in which adult size is important in reproductive output, getting to large size is critical in terms of reproductive success. For example, larger individuals produce larger clutch size or larger offspring in a variety of snakes. Snakes in particular are able to withstand periods of low prey availability early in development and to then increase growth rates when food becomes more available. Changes in metabolism, immunity and behavior are all known to be involved in the catch up growth. The rapid growth although producing an adult that in size is equivalent to one that had high prey availability during early



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development is known to impact adult reproduction in both guppies and zebra finches. We raised both male and female checkered garter snakes, *Thamnophis marcianus*, on high and low diets (20% and 60% of their body mass per week) for 5 months and then began feeding both groups as many frozen thawed mice as they would eat. The low diet group ate more mice and caught up to the high diet group in length within 5 months. The animals were then placed in hibernation for 3 months and then brought out and continued on the high diet. Females were paired with multiple males over the next month and within 3 months had produced young. The results of the experiment will be presented.

### **Unimaginable Voyages and Unique Roads**

**Robert Edwards**

La Selva Biological Station, Monteverde Cloud Forest Reserve, Sirena Biological Station, Rara-Avis Biological Reserve and Santa Rosa National Park are all names that have become synonymous with a rich history of adventure filled with the flora and fauna directly responsible for a growing industry that attracts nearly 3 million tourists each year. The history of ecotourism in Costa Rica is actually very young and the early stages are not much older than the International Herpetology Symposium. Private reserves began to pop up in the 1960's followed by national parks in the 1970's and then ideas of sustainable tourism surfaced in the 1980's. All of these ingredients compounded upon each other resulting in the present day mega industry called eco-tourism; the idea to utilize a natural environment of flora, fauna and scenic beauty as a sustainable source of income to preserve the natural wonders it possesses.

### **The Riddle of the Two Nesting Behaviours of the Olive Ridley Sea Turtle (*Lepidochelys olivacea*)**

**Christine Figgner, Joseph Bernardo, Pamela T. Plotkin**

Texas A & M

Several olive ridley sea turtle populations world-wide display two co-existing nesting behaviours, where some females nest solitarily, completely independent from each other, and some females synchronize themselves into huge mass-nestings with aggregations of hundred to hundreds of thousands of females that nest to the same time. It is unclear if females exhibit only one of the two nesting behaviours, and also what the basis of this **convergent nesting behaviour is. For my dissertation I have been investigating the underlying mechanisms of the two nesting behaviours and compare the two female groups using morphometric and life-history trait analysis, stable isotope analysis, and satellite tracking.**

### **Fall Movement and Mass Loss in the Migratory Red-sided Garter Snake (*Thamnophis sirtalis parietalis*)**

**Neil Balchan and Kevin Fraser**

Changes in movement and behavioural patterns are vital to a species' ability to inhabit a seasonally variable environment. In central Manitoba, the red-sided garter snake undertakes long distance migratory movements between summer habitat and winter hibernacula. At the world's largest denning area near Narcisse, MB, we investigated: 1) fall movement timing, 2) changes in snake numbers over time at den sites, and 3) changes in body condition. Camera traps in sub-highway tunnels documented movement events, revealing a movement interval from mid-August to early October, with 73% of snakes moving over a 10-day period. While microclimates among den sites varied, we found a strong relationship between snake numbers and air temperature. Individually marked snakes that were recaptured before denning (n=7) lost mass between sampling events (1%-9%). Our results suggest highly synchronous movements towards den sites with mass loss while snakes await ideal conditions for permanently remaining in hibernacula.

## **A Stone's Throw from Mexico: Herping South Texas**

**Clint Guadiana**  
Gladys Porter Zoo

The Rio Grande Valley of South Texas is unique in both culture and the incredible diversity of herpetofauna that calls the region home. There are 93 species of snakes, lizards, turtles, and amphibians in the RGV, some of which are found nowhere else in the U.S. Living and herping so close to the border of Mexico offers its fair share of adventures. This presentation will take you on a journey through the past eight years of trial and error, biting insects, and, of course, the occasional border patrol agent.

## **Unlocking the Secret to Sulawesi Endemic Turtles**

**Clinton Doak and Nathan Haislip**  
Turtle Survival Alliance

Boasting large collections of both *Leucocephalon yuwonoi* and *Indotestudo forsteni* in North America, the Turtle Survival Center (TSC) has made these species a major focus for captive breeding and management. These species are notorious for their difficulty level in the captive setting and the low success rates institutions experience around the country. Since efforts culminated in the successful hatching of *Indotestudo forsteni* attention has now been shifted to *Leucocephalon yuwonoi*. Initially, the diet was investigated to determine whether the amount of protein may result in low reproductive output. However, after closely simulating the diet of other successful institutions, we concluded that this might not have played a factor. After conducting a short-term study on enclosure arrangements, the team has established an effective enclosure that has resulted in improved body weight and, an increased response in appetite and mobility. This study is ongoing and preliminary results will be provided.

## **Mitochondrial DNA Phylogeography of *Lampropeltis alterna* (Serpentes: Colubridae)**

**Dr. Ellis L. Nordyke**  
University of St. Thomas - Houston

The gray-banded kingsnake, *Lampropeltis alterna*, is a medium-sized colubrid snake found in the Trans-Pecos/Chihuahuan Desert regions of west Texas and northern Mexico. It inhabits the dry hillsides, canyons, and mountain slopes of the northern Chihuahuan Desert along the Rio Grande, eastward into the

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Edwards Plateau, and westward into the mountains of the western Trans-Pecos. The color and patterning of *L. alterna* is extremely variable throughout its range with local population groups separated by geographic barriers and availability of water. Gene flow between isolated population groups is thought to be minimal. A genetic analysis of this species was performed using nucleotide sequences of the mitochondrial gene nicotinamide adanine dinucleotide subunit 4 (ND4). Sequences were aligned manually and then analyzed online using clustal omega. Haplotypes of ND4 were correlated with geographic locality.

**Speaker Bio for Presentation: Innovations in Outreach:  
Interpreting Herpetofauna to the Public**

**Micha R. Petty**

Louisiana Exotic Animal Resource Network

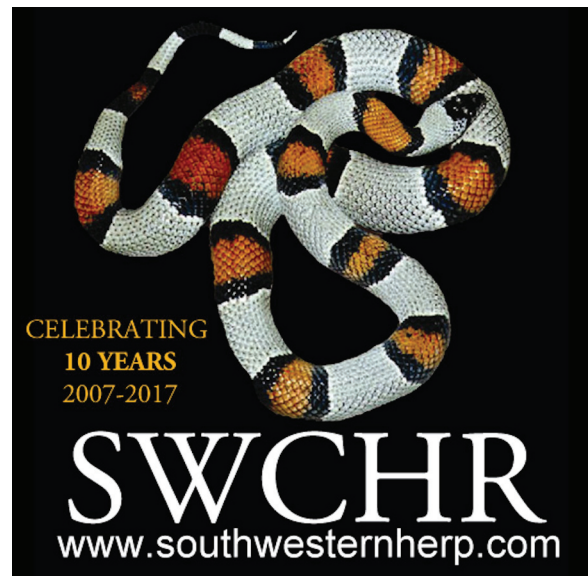
Mankind's knowledge of the biology, diversity, natural history, and captive husbandry of reptiles and amphibians has advanced considerably in recent decades. Public perception of these animals, however, is often still negative and based on fear and ignorance. To conserve these fascinating and beneficial animals, we must raise up more people to be interpreters. These people should have the tools and develop the skills to effectively communicate science and conservation concerns in a manner that inspires the public to value herpetofauna as an important part of their natural heritage. Presentation will highlight training opportunities (such as Master Naturalist Programs) and available resources (such as the speaker's free collection of interpretive bulletins). Additional focus will be given to determining which communication methods fit best with your particular strengths, weaknesses, and comfort zones.

***Tomistoma*: Secret Croc of the Sunda Islands**

**Bruce Shwedick and Colin Stevenson**

The Crocodile Conservation Center of Florida, Inc.

Since being founded in 2003 as a working group within the IUCN-SSC Crocodile Specialist Group, the *Tomistoma* Task Force (CSG-TTF), has been promoting international awareness for the conservation of *Tomistoma schlegelii*, one of the world's largest, yet least studied crocodylians. The CSG-TTF has provided funding for and participated in status surveys and ecological studies of this species throughout its entire range in Indonesia and Malaysia. Most recently CSG-TTF members have participated in a capacity building training workshop held in Medan, Sumatra. This workshop, held in November 2017, was developed to prepare Indonesian rangers, veterinarians and other wildlife rescue workers



for managing the challenges of human/crocodile conflict. Future training workshops are being planned, as well as initiatives to encourage Indonesian and Malaysian university students to undertake research projects focusing on Tomistoma, its habitat and threats to its future survival.

### **The Field Herping Guide: Manifesto to the Next Generation of Herpers**

**Josh Holbrook and Mike Pingleton**

Montreat College

Field herping is becoming exponentially more popular with every year that passes. In the past twenty years, it's gone from a fringe-pursuit to a hobby that may rival birding in the near future. But this great growth has meant that many new herpers get very little guidance in either field methods, ethics, safety or any one of dozens of herping-related topics. Because of this Josh Holbrook and Mike Pingleton have written and developed *The Field Herping Guide: Finding Amphibians and Reptiles in the Wild*. *TFHG* gives herpers, new and old, some sage advice on finding herps in North America and around the world. Josh will be sharing why this book is needed and some of the stories and experiences that led to its development. He'll also be summarizing the content and soul of this groundbreaking book, being published in 2019 by the University of Georgia Press.

### **“Project Black Python”**

**Tracking *Simalia boeleni* in the Highlands of West Papua New Guinea:  
10 Years of Blood, Sweat, and Penis Gourds.**

**Ari R Flagle**

Black Python Project

I have dedicated 10 years of my life traveling to this remote and primitive area of the world studying these fascinating snakes. My research has been able to shed new light on wild behavior not previously known. I have established lifelong relationships with the Dani people and have been exposed to their private lives while exploring the Memberamo basin. I plan to share new data pertaining to wild and reproductive behavior never before seen. Aside from addressing issues pertaining to threats this species faces, I will be sharing remarkable stories from my travels and showcasing never before

### **Results of Reptile and Amphibian Public Opinion Surveys**

**Gerry Salmon**

KT Wildlife

The Southwestern Center for Herpetological Research conducts online surveys every 2 years, soliciting opinions from the public on a wide range of herpetofauna-related topics. Areas of interest included discernment of venomous species, thoughts on field herping and maintaining private collections, and general public perceptions of the enthusiast community. The surveys are global in participation. Part of the surveys' intent is to gauge potential collecting pressure and efficacy of laws pertaining to US native herpetofauna. Results indicate many states' current regulations may be counterproductive to the growing capabilities of the citizen-science movement, which could hamper academic partnerships with concerned amateur enthusiasts for continued research on US species.

## **How the H-Snake Lost Its Hs: Mendelian Inheritance and Geographic Distribution of the Blonde Phase of the Trans-Pecos Ratsnake (*Bogertophis subocularis*)**

**Dustin D. Rhoads**  
Texas Christian University

The Blonde phase of the Trans-Pecos Ratsnake (*Bogertophis subocularis*) is a naturally occurring color pattern mutation dramatically different from the more common H-patterned type. Yet, although it has been featured in most field guides inclusive of Chihuahuan Desert herpetofauna, nothing has been published in peer-reviewed literature on any basics of its natural history. Here, I analyze comparative meristic data along with the outcomes of captive matings involving Blonde, Striped, Patternless, and classic H-patterned *B. subocularis* in order to infer the nature of color pattern inheritance in this taxon. Color pattern frequencies among 220 offspring were consistent with inheritance of the Blonde and Striped patterns as discrete Mendelian recessive traits. From these—combined with the aforementioned meristic data—I present early evidence that the typical H-pattern phenotype found throughout the species' range is possibly composed of two genes—namely, stripes and blotches. Furthermore, I also describe the known distribution of the Blonde phase, and from this data present evidence that Blonde occurrence and coloration appears to coincide with, and closely match in hue, its natural substrate of yellow cretaceous limestone. This, in turn, informs potential range beyond the biased collecting sites of documented Blonde specimens and is possibly one of the few instances of cryptic color adaptation acting on a single, discrete allele with high penetrance. Additionally, I also use field observation data to conservatively estimate both morph frequency and allele frequency and quantitatively classify the Blonde allele not as a rare mutation (typically defined as comprising < 1% of the population) but indeed as a polymorphism (comprising significantly > 1% of the population). This is the first hypothesis-driven study of any kind regarding the biology and natural history of Blonde phase Trans-Pecos Ratsnakes.

### **Antivenom Use in Department of Defense**

**Sal Scibetta**  
Department of Defense

The Department of Defense has people deployed all over the world, including many in austere locations. In these remote locations, snakebite can be a threat to US military and coalition partners. This presentation will give a brief summary of the Department of Defense's effort to minimize the threat and provide antivenom to fielded forces.

### ***Aspidites*: An Ancient Lineage of Pythons in Modern Herpetoculture**

**Jorden Perrett**  
*NetViper digital studio*

These Australian pythons have been relatively well established in captive collections around the world for decades. But much of what is “known” may not paint the most accurate portrait of these incredible animals and their natural history. This presentation will discuss some of the more common misconceptions and why it is that we have so much more to learn. What can we learn from the field? What can we learn from captive propagation? And, how should observations from either impact the other?

## **Squamate Diversity of the Sierra Madre Oriental in Northern Mexico**

**Michael Price**

*Wild About Texas*

In the realm of field herpetology, there is a direct correlation between the overall diversity of herpetological observations and locality collecting bias. This correlation appears to be even more prevalent in field work south of the border. While herping in Mexico, many field herpetologists tend to focus their efforts on specific locations that are published and/or well-known rather than in areas that are virtually unsullied. Making over two dozen jaunts into the Sierra Madre Oriental, spanning a time of almost ten years, we decided to focus our field attention to areas that we felt were oftentimes overlooked. The purpose of this presentation is to showcase the squamate diversity of some of those lesser known areas of the Sierra Madre Oriental.

## **Houston Toad Recovery Program**

**Melissa Spradley**

Houston Zoo

The endangered Houston toad (*Anaxyrus [Bufo] houstonensis*) is endemic to a small area in Texas, currently only found in three counties. It was listed as endangered by the Endangered Species Act in 1973, the first amphibian to make the list. The Houston Zoo was originally involved in the recovery program for the Houston toad from 1981 through 1988 and again starting in 2007. Currently, the zoo houses a colony of approximately 400 adult toads, with an additional colony of approximately 80 housed at the Fort Worth Zoo. This presentation will cover the history of the captive breeding and release efforts by the Houston Zoo, the current status of the program, and future goals.

## **Status Update on Rattlesnake Round-ups in Oklahoma & Texas Along With Past, Present, and Future of the Rattlesnake Preservation Trust**

**Tim Cole**

Rattlesnake Preservation Trust

What the “Rattlesnake Preservation Trust” is all about and where it is going. An update on Rattlesnake Round-ups in Texas and Oklahoma. Are they declining? Are they changing? Is money or pressure from environmentalists the reason for changes?



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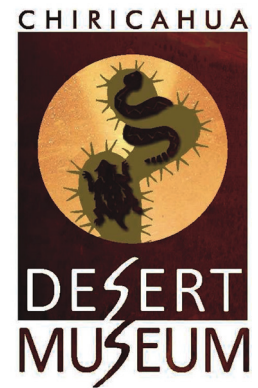
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## Reptiles of the Revillagigedos Archipelago

Vince Scheidt

Vince Scheidt will present a travelogue to help the remote Revillagigedos Archipelago, called “Mexico’s Galapagos”. These incredible islands (Isla Socorro, Isla Clarion, Roca Partida, and Isla San Benedicto) are located 440 miles southwest of Cabo San Lucas, nearly 1,000 miles south of the border. Due to their isolation, they have evolved an amazing endemic flora and fauna, including many species with affinities on the mainland of Colima, Mexico. Mr. Scheidt will discuss familiar species, new discoveries, and the beauty of these magical islands.



## Beyond Antivenom: Novel Therapies for Snakebites

Dr. Spencer Greene

Baylor College of Medicine

Antivenom is the definitive treatment for snake envenomations. However, antivenom is not always available. There are species of venomous snakes for which antivenom does not exist. Many antivenoms prove to be too costly for some healthcare facilities. Other antivenoms are produced in small batches and may not be readily accessible. Furthermore, although the safety of many antivenoms is well-established, adverse reactions, some of which can be life-threatening, are possible.

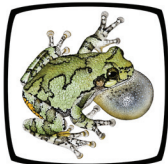
The ideal envenomation antidote would be effective, inexpensive, readily available, safe, and easy to administer. A number of therapies are currently being investigated. In this presentation, medical toxicologist Dr. Spencer Greene will address some of the proposed treatments, including cholinesterase inhibitors, phospholipase A2 inhibitors, carbon monoxide, and the natural immunity to snakebites found in other species.

## Herpetological Surveys in Vietnam, 2001-2018

Paul Moler

Florida Fish and Wildlife Conservation Commission

Beginning in 2001, several colleagues and I made a total of 15 trips to Vietnam to conduct herpetological surveys in a number of national parks and forest reserves. Most surveys have been in southern Vietnam, but with one survey in Cao Bang Province, just south of the Chinese border. Surveys have ranged from sea level to 6,000 feet elevation. Vietnam has a rich diversity of amphibians and reptiles, and new species are being described regularly. I will provide an introduction to some of the herps that we have encountered.



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of AMPHIBIANS and  
REPTILES**



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The IHS Grant Fund Committee was pleased to be able to award a total of \$3,300 in total to the following winning projects in 2017:

**Captive Propagation – Ellie Milnes VetMB MRCVS & Pauline Delnatte DVM (Toronto Zoo)**

A Pilot Study Using Laboratory-Raised Hematophagous Triatomine Bugs for Low-Stress Minimally-Invasive Blood Sampling of Zoo Reptiles and Amphibians

**Natural History – Sophia Larsen & Adam Brandt (St. Norbert College)**

Toll-like receptor gene diversity in turtles (Order: Testudines) and implications for disease resistance.

**Conservation Biology – Alexandra Vlk (State University of New York – College at Oneonta)**

Wood Turtle (*Glyptemys insculpta*) Nesting Ecology, Mating Behavior, and Genetic Diversity in Disturbed and Undisturbed

**Education – Akwasi Anokye (Threatened Species Conservation Alliance)**

Mitigating Human-Crocodile Conflicts: A Bottom-up Approach in the Obuasi Municipality, Ghana

On behalf of the entire IHS Grant Committee and Executive Board, congratulations to last year's grant recipients!

For more information on the annual IHS Grant Program, which open Jan 1 each year, please check out the IHS website: <http://www.internationalherpetologicalsymposium.com/ihs-grant/>

**Vicky A. Poole**

Treasurer and Grants Committee Coordinator



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## INTERNATIONAL HERPETOLOGICAL SYMPOSIUM JUNIOR HERPETOLOGIST AWARD

This program created by Russ Gurley, Todd Goodman, and the IHS Board and a dozen other excited sponsors, is a new program for IHS, implemented in 2015. The Junior Herper committee thoroughly examined every application and one winner in each age category was chosen. This winner received an all expenses paid trip to the 2018 International Herpetological Symposium. In the two younger age groups, an all expenses paid trip was given to a parent or chaperone as well. Two runners-up in each age category received free registration to the 2018 IHS meeting and \$200 towards travel expenses.

Applicants submitted:

1. A cover letter explaining why the applicant should be chosen as the Junior Herpetologist winner
2. A short essay (500 to 1,000 words) with the topic of Natural History or Conservation or Herpetoculture
3. Two letters of recommendation from a teacher, friend, parent, or someone who knows the applicant well

**\* Note from Russ: We have a very energetic, interesting, sophisticated, and intelligent group of young herpetologists out there, studying, researching, flipping boards and flat rocks, taking care of their reptile pets, and growing into the amazing herpetologists who will replace us all someday. I was so encouraged and excited to read these essays and applications and I hope the Junior Herper program continues for IHS long into the future. Thank you to my judges for your hard work and to all who supported this program in 2018.**

### JUNIOR HERPETOLOGIST PROGRAM 2018

#### 12-15 Age Group

Winner - Michael Skibsted (Ladera Ranch, California) "*Macrochelys temminckii*: The Living Dinosaur"

Runner Up - Scout Aulenbach (Lilburn, Georgia) "Indigo Days"

Runner Up - Cameron Paul Sanders (Phoenix, Arizona) "The Axolotl: This "Walking Fish" is Walking on Thin Ice"

#### 16-18 Age Group

Winner - Tyler N. Tobias (Natchez, Mississippi) "Dinosaurs, *Abronia*, and the Microcosm That is Herpetological Conservation"

Runner Up - Olivia Damm (Lodi, Ohio) "The Gila Monster"

Runner Up - Tatem Shoemaker (Corpus Christi, Texas) "The Axolotl"

### NEXTGEN HERPETOLOGIST AWARD

Winner - Paul Coyne (Chatham, New Jersey) "The Matamata: *Chelus fimbriatus*"

## The Porras Award

In recognition of lifelong achievements in and contributions to field biology, specifically in Central America, the International Herpetological Symposium is pleased to bestow an award in his name. The Louie Porras Award is presented to a speaker at the IHS annual meeting who has demonstrated that his or her work represents exceptional accomplishments in the field that benefit herpetology, herpetoculture or herpetological conservation.

### About Louis “Louie” Porras

Louie Porras hails from the beautiful Costa Rican community of San Ramon, a site near cloud forest that fairly brims with fantastic reptiles and amphibians. And from the moment he could walk, Porras was chasing all of them. His family relocated to the US when Louie was eight years old, and he again found himself in a herp paradise: the Florida of the 1950s. Back then, from the ‘Glades south, Florida was so alive with snakes that Porras literally supported his family by catching them. At the same time he honed his herpetocultural skills working for Charles P. “Bill” Chase, whose legendary animal compound was comparable to the world’s largest zoo.

During that time Porras made acquaintances throughout the herpetological community, from inspired scientists to avid hobbyists and collectors. His candor and integrity, not to mention his generous provision of what were undoubtedly the finest and most interesting herps on the planet, endeared him to everyone. But his activities went beyond that. Every spare moment Louie was in the field, first in the south Florida environs, but later in Mexico, Honduras, Costa Rica, and the Caribbean Islands, repeatedly. He became a student of the literature, acquiring and reading everything he could find on the subject of herpetology. This soon led to collaborations as well as solo publications that range from conservation to systematics and natural history. After his service with Bill Chase, Porras left to establish his own business, a renowned enterprise called “The Shed.” Serving the research, zoo, and hobbyist communities, Louie expanded his activities. When his love for the Intermountain West led him to settle his family in Utah, he opened “ZooHerp,” and the legend continued to grow. And let’s not forget stints at the Houston and Hogle Park zoos along the way.

Porras was one of the first herpetologists to take quality color photographs of reptiles and amphibians, and he has produced a body of work that has served in countless book and magazine articles. He also took a deep interest in the IHS, serving for years in various capacities and as president. During his tenure he established a journal, “Herpetological Natural History,” and the IHS had a celebrated international meeting in Costa Rica, featuring the late Roger Conant as keynote speaker. After closing ZooHerp Inc., he launched a magazine called “Fauna,” dedicated to promoting herps, invertebrates, and their habitats. He went on to found Eagle Mountain Publications, which has produced a superb series of herpetological books and earned him a reputation as a fearless fact checker and meticulous editor. He has also launched the professional journal, Mesoamerican Herpetology, celebrating the species-rich region that lies between the US and South America and providing a much needed outlet for scholars and students of this fantastic faunal assemblage.

### Recipients

**2015 – Robin Moore**

**2016 – Jeff Ettling, Ph.D.**

**2017 - Jeffrey Lemm**

# The Joseph Laszlo Memorial Award

JOSEPH LASZLO  
1935 - 1987

Many individuals were fortunate to have known the late Joseph Laszlo, long-term Superintendent of the Department of Reptiles at the San Antonio Zoo, San Antonio, Texas, who died on 14 November, 1987. In recognition of his lifelong achievements in and contributions to herpetology, especially in herpetoculture, the International Herpetological Symposium, Inc. has bestowed an annual award in his name. The Joseph Laszlo Memorial award is presented to the speaker at the IHS meeting who has demonstrated that his or her work represents new and exciting views and advances in herpetology. For information on the interesting life of Joseph Laszlo, an obituary was published in Herpetological Review, 19, 5-6 (1988).



Joe Laszlo and Poison Ivy. Photographed in 1982 by Bert Langerwerf.

## The following individuals have received the Joseph Laszlo Memorial Award:

- 1991 Seattle, WA - Richard Shine, Ph.D., University of Sydney, Australia
- 1992 St. Louis, MO - Brian A. Kend
- 1993 Miami, FL - Dr. Hans-George Horn, Germany
- 1994 New Orleans, LA - Dante Fenolio/Michael Ready
- 1995 Denver, CO - Ross M. Prazant, D.V.M./Phillipe DeVosjoli
- 1996 San Antonio, TX - David Grow, Oklahoma City Zoo
- 1997 Liberia, Costa Rica - Allen E. Anderson, Norwalk, Iowa
- 1998 Cincinnati, OH - Harry Greene, University of California, Berkeley
- 1999 San Diego, CA - Carlos H. Arevalo Gtez, Guadalajara Zoo
- 2000 New Orleans, LA - Gregory C. Lepera, Jacksonville Zoological Gardens
- 2001 Detroit, MI - Scott J. Stahl, DVM
- 2002 St. Louis, MO - John Brueggen, St. Augustine Alligator Farm, FL
- 2003 Houston, TX - Bill Love, Blue Chameleon Ventures, Alva, FL
- 2004 Daytona Beach, FL - Dr. Stephen P. Mackessy, University of Northern Colorado, CO
- 2005 Phoenix, AZ - Dante Fenolio, University of Miami, Coral Gables, FL
- 2006 San Antonio, TX - Dr. David Lazcano Jr., Universidad Autonoma de Nuevo León, México
- 2007 Toronto, Canada - Ray E. Ashton, Jr., Newberry, FL
- 2008 Nashville, TN - Wayne Hill, Winter Haven, FL
- 2010 Tucson, AZ - Carl Franklin University of Texas at Arlington, Arlington, TX
- 2011 Fort Worth, TX - Alan Kardon San Antonio Zoo, San Antonio, TX
- 2012 Baltimore, MD - Marie Rush DVM
- 2013 New Orleans, LA - Chawna Schuett, Saint Louis Zoo, St Louis, MO
- 2014 Riverside, CA - Philippe de Vosjoli
- 2015 San Antonio, TX - Collette Adams, Gladys Porter Zoo, Brownsville, TX
- 2016 Saint Louis, MO – Roger Sweeney, Virginia Zoo, Norfolk, VA
- 2017 Rodeo, New Mexico - Robert Mendyk, Jacksonville Zoo, Jacksonville, FL

## Lifetime Achievement Award

This prestigious award is in recognition of a lifetime commitment to not only IHS but the fields of Herpetology and/or Herpetoculture.

This award is determined by the IHS Executive Board, and presented at the annual meeting.

**2014 - Charlie Painter**

**2015 - Dr. David Lazcano**

**2016 - N/A**

**2017 - David Grow**

**Mark Conrad Brown** died unexpectedly in Austin Texas on December 21, 2017 at the age of 63.

Mark was born on March 31, 1954 in Ridgway Pennsylvania and lived in several places during his childhood. He graduated from Upper Arlington High School in Columbus Ohio and also attended Ohio State University. As an adult he lived in Long Beach, California, Little Rock, Arkansas, Orlando, Florida, finally settling in Austin, Texas in the early 1980s.

Mark had quite a few passions and interests. He had a love of snakes, cars, car model building, reading, and music that all formed in his early childhood and continued throughout his life. He kept and cared for over a hundred snakes at different times, but was most proud of his 20+ year project of genetically altering corn snakes through the breeding process to his desired color and markings.

I met Mark in the late 80s and we loved going out herping both around Austin and in West Texas. Mark kept to himself pretty much with his social life centering around his passions of snakes, cars, books, and music. Mark was always fun to do things with and he will be missed for sure. Mark's family was glad I was able to deal with his snake collection and herpetology library (200+ books). I suggested donating the proceeds of selling his collection, cages, and library to the IHS Student Grants, and they really liked the idea. So far, we have brought in close to \$5000.00 for IHS!

Tim Cole

*\* The IHS Board and Grant Program Committee thanks Tim Cole for the tremendous amount of work to coordinate this effort on behalf of the IHS Grants Program. We appreciate that the next two years of grants are funded due to his efforts and the support of Mark Brown's family. THANK YOU!*



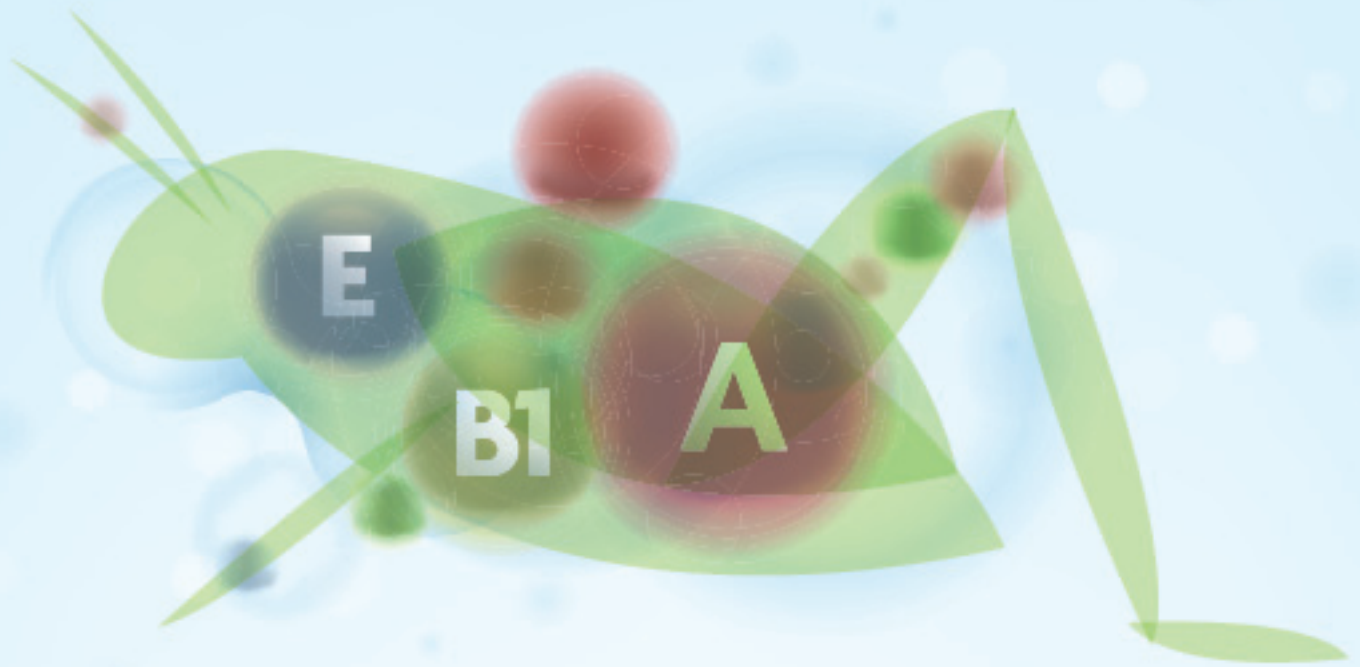
## NOTES

### VENDORS

**Zoo Med    Timberline Live Foods    The Bean Farm**

**Mike Krick Books    Animal Capture Equipment by Stoney**

**ECHO Foundation for Herpetological Conservation**



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