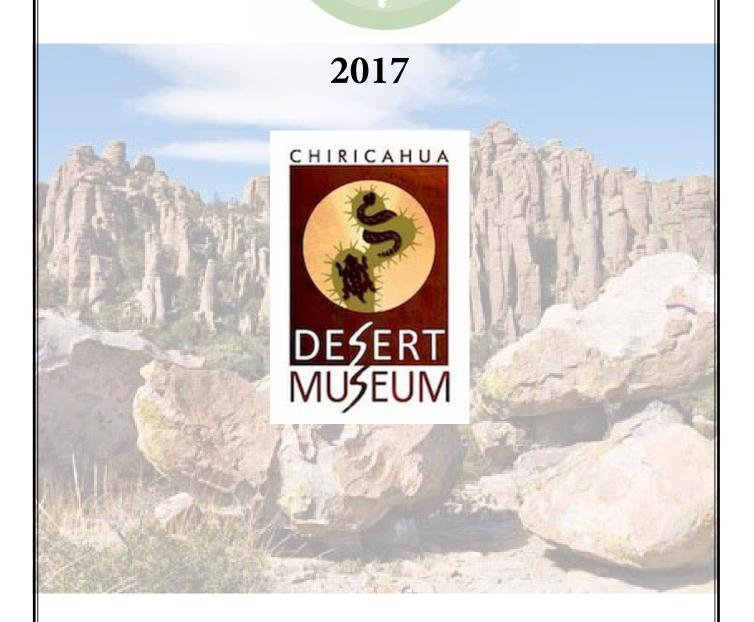
# INTERNATIONAL HERPETOLOGICAL SYMPOSIUM



Rodeo, New Mexico July 19-22, 2017

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A huge thank you to our host for this year's International Herpetological Symposium - The Chiricahua Desert Museum!

The Chiricahua Desert Museum opened to the public on April 1, 2009. To date, the Museum displays over 60 species of wildlife, including among the rarest and most endangered species native to the Chihuahuan Desert.

Their art gallery showcases the works of many well-known and respected artists, including original paintings from the celebrated wildlife artist, Tell Hicks. Many of Tell's prints are available in the gift shop and online. The gallery also displays the largest collection of herpetological art in the world, representing a diverse array of media---sculpture, jewelry, pottery, and original oil, acrylic and sketched works.

Chiricahua Desert Museum's wildlife and botanical garden provides ample opportunity to intimately observe and photograph native wildlife in natural settings. The garden is open to everyone for a leisurely stroll, an afternoon of bird watching, or some quiet time among the desert's wild inhabitants.

CDM offers special tours and rates for groups and schools.

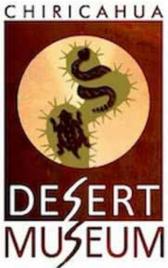
The Chiricahua Desert Museum

NM 80 & Portal Road Rodeo, NM 88056

575-557-5757 or 575-545-5307 Fax 575-557-7575

Open daily: 9am-5pm Closed Only Thanksgiving and Christmas Day

http://www.chiricahuadesertmuseum.com/ email: desertmuseum@gmail.com



Dear Friends and Colleagues -

Forty years have passed since 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, captive management and propagation, of amphibians and reptiles.

Each year the IHS is held in a different location and is hosted by a zoological, herpetological, or herpetocultural institution.

The purpose of the IHS is twofold, (1) to provide a yearly symposium for the dissemination of information and research pertaining to the natural history, conservation biology, captive management, and propagation of amphibians and reptiles, and (2) the publication of such information. Unlike most herpetological societies or associations, IHS does not have a voting membership, but an Electoral Body. That body consists of the members of the Board of Directors, the Advisory Council, Publication Editors, and Chairs of various committees. These individuals are selected from all areas of herpetology and herpetoculture. Zoologists, herpetologists, and private herpetoculturists are all involved in planning and organizing the annual symposia.

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. While IHS is often visualized as an organization with an interesting blend of academia and herpetoculture, actually the types of people who attend the meetings far exceed those bounds. So whether it's a reptile breeder, a budding herpetologist, a natural historian, a wildlife artist, a commercial importer, a student, a veterinarian, a zoo keeper, an academician, or a dry-goods vendor, IHS has something for everyone.

As president for the past six years, and an attendee at most of the symposiums since 1976, I can attest to all the changes that have taken place with IHS over the decades. In the past, IHS was almost considered an exclusive 'boys club', where we would gather once a year, trade husbandry secrets, field experiences, and tall tales. Yet we all faced the fact that none of us was getting any younger, and the age of gathering to share our experiences with each other was slowly winding down.

I am pleased to report that this is not the case. And I'm pleased to report that IHS is far from winding down. In fact, it's winding back up! The importance of meeting face-to-face is still here, and alive and well. With the advent of our Jr. Herper program, young people attendance to IHS is once again on the increase! I am proud to have been president during our revival. The dedication of the current board, officers, and donors to our cause has been unrivaled in our history! I would like to offer a special thanks to Timberline Industries and Zoo Med for caring to be our major sponsors in our endeavor. Without them, we would not be where we are today. We have many other sponsors listed elsewhere in this program, without whose assistance IHS would not be possible. Please support our sponsors whenever you are able.

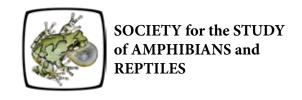
As my term winds down, and I look back on the past 40 years, I am grateful to all the friends I've made at IHS over the years, and I am proud to have played a role in this great institution. IHS is more relevant today then it ever was, and is needed now more than ever. I'll be taking the post of "Past President" (where is my gold watch?) and will keep my hand in IHS in any way I can assist. On a personal note, I am pleased and proud that my successor, Jen Stabile, is not only fantastically capable of filling the role I've played for six years, but she will be the first female president of IHS since its inception. Of all the presidents of IHS, I have always felt I was the least qualified to hold the post. I'm just happy I could help when needed. Time to pass the torch...

I hope to see everyone in Rodeo. It should be a blast!

Ken Foose

**IHS President** 









Wednesday, July 19, 2017 Ice Breaker

The Geronimo Event Center at The Chiricahua Desert Museum 7:00 pm - ???



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Bob Ashley and Russ Gurley

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#### **Publication Design and Layout**

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For Information: intlherpsymp@gmail.com

### Thursday, July 20, 2017

8:30 am Continental Breakfast

9:00 am Opening Remarks Ken Foose

9:15 am Keynote Wade Sherbrooke "Horned Lizards: Report from a Biological Scout"

10:00 am Gordon W. Schuett "Facultative Parthenogenesis in Reptiles: History, Role of Zoos and Private Citizens, and Progress"

10:45 am - 11:00 am MORNING BREAK

11:00 am - Susan Pruitt "Occupancy Modeling for the Endangered Jemez Mountains Salamander (*Plethodon neomexicanus*)"

11:45 am - 1:00 pm LUNCH at Geronimo Event Center or in town \* The Sky Island Grill and Grocery will be offering a catered lunch on Thursday, Friday, and Saturday for purchase as well as a dinner for purchase on Friday night. Menu and sign up will be located at the Geronimo Event Center each morning.

1:00 pm Bill Love "Welcome to the Cherrycows"

1:45 pm - Clint Guadiana "Against the Odds: Reproduction of Orinoco Crocodiles at Gladys Porter Zoo"

2:15 - 2:45 pm **AFTERNOON BREAK** 

\* Dave Blody Memorial Session / Rick Hudson (moderator)

3:00 pm Rick Hudson "Introduction: Remembering Dave Blody"

3:30 pm Robert W. Mendyk "Historical and Current Perspectives on the Reproductive Management of Monitor Lizards (Varanidae: *Varanus*), with a Discussion of Reproductive Failures and Their Potential Causes"

4:15 pm Carl J. Franklin "You Say You Want A Revolution?"

5:00 pm Robert Hansen "Distribution of Snakes of the *Lampropeltis mexicana* Complex with Comments on Taxonomy and Conservation"

### 5:45 pm Andrew Brinker "Chiricahua Challenge: An Interactive Trivia Game"

Audience members will have the opportunity to use their herpetological knowledge in an interactive trivia game. The questions will focus on the reptiles and amphibians of the Chiricahua Mountains with photos and video taken during the inaugural Field Herpetology of the Southwest Course. Each group of two or three will use a wireless "clicker" to send in their answers. The teams will remain anonymous, although each clicker is identified by an assigned reptile or amphibian name (allowing participants to follow their progress). Additional topics will cover zoos, museums and husbandry. At the conclusion of the game the scores will be announced and the top three teams will win prizes.

### 7:00 pm DINNER at The Geronimo Event Center

### 8:30 pm John Tashjian's FAMOUS "Name That Herp" Quiz!

\* Take a journey with IHS Lifetime Achievement Award winner John Tashjian on his travels around the world to photograph the most unique and unusual herp specimens. The winner of this "Name That Herp" quiz will win free registration to next year's IHS symposium!

### Friday, July 21, 2017

### 8:30 am Continental Breakfast

9:00 am Jeff Lemm "Factors Affecting the Presence and Abundance of Amphibians, Reptiles, and Small Mammals Under Artificial Cover in Southern California"

# 9:45 am Andrew Gonzalez (Junior Herper - 12-15) "Western Fence Lizards - Superheroes of Herpetology"

Andrew Gonzalez is a homeschooled 6th grader from Los Angeles, California with a short, but life-long love of lizards. His passion for Herpetology began when he caught his first 'blue belly' at the age of four, and continues to evolve through his study of all the reptile species. Concerned with the decline of his beloved, native Fence Lizards, Andrew reached out to the Disney Company for a grant to study this decline and was awarded monies to assist his research efforts. Through the support of Disney, Andrew was able to identify various causes of the decline and noticed a relationship between the incidence of Fence Lizards and the corresponding amount of Lyme Disease. He

started a non-profit organization to further study this relationship, to raise awareness for the lack of lizards in his region, and to subsequently breed new colonies of lizards. Andrew developed a program to bring his animals into local schools to encourage children to have a greater appreciation for all types of reptiles. His work has been featured on the Disney Channel. Andrew is a volunteer Educator at the Long Beach Aquarium of the Pacific where he can be found teaching visitors about the variety of rescue animals on display, as well as feeding and caring for all the animals. Andrew is a member of the Southwestern Herpetological Society and would like to be an Exotic Animals Veterinarian when he grows up.

10:15 am Ray Pawley "Managed Hibernation of Selected Snakes With Insights/ Questions Regarding Their Behavior and Physiology"

11:00 am - 11:15 am MORNING BREAK

11:15 am Evan Bare "Novel Technique for Surveying Subterranean Newts"

12:00 - 2:00 pm LUNCH at Geronimo Event Center or in town \* The Sky Island Grill and Grocery will be offering a catered lunch on Thursday, Friday, and Saturday for purchase as well as a dinner for purchase on Friday night. Menu and sign up will be located at the Geronimo Event Center each morning.

2:00 pm - Rich Funk DVM "Snake Venoms and Care of Venomous Snakes"

2:30 pm – Lauren Taracka (Junior Herper; 16-18) "Tarboo Herpetological Study and Inspiring Young Herpetologists"

Lauren Taracka, a high school student from Port Townsend, WA. Over the past few years she has done numerous educational herpetological presentations for elementary students with her business *Lizardopolis*. Last year she started one of the first reptile 4-H clubs in Washington State; Olympic Reptile 4-H Club. She also began working on a herpetological study internship in the Tarboo Wildlife Preserve located on the Olympic Peninsula of Washington.

3:00 pm - Christine Roscher "Herpetoculture, Then and Now"

3:30 pm – 3:45 pm – AFTERNOON BREAK

3:45 pm – Debra Hill "The Use of Voluntary Conservation Agreements for Managing an Imperiled Reptile in New Mexico: Lessons Learned and Future Endeavors"

4:15 pm – Marisa Tellez PhD "Back to the Future: A Glimpse of the Past, Present, and Future of Crocodile Conservation in Belize"

4:45 pm – Chuck Smith "The 21st Century Serpent: Copperhead Snakes as a Model Species to Study Reproduction and Sexual Selection in the Field"

5:15 pm - Nathan Hall "Photographing Reptiles, and Amphibians"

6:00 pm Dinner on your own

### 7:30 pm PHOTOGRAPHING HERPS WORKSHOP

\* Join Nathan Hall, Bill Love, and John Tashjian for a free photography workshop in the Geronimo Event Center. Learn from three masters of herp photography including studio setups, photographing herps in situ and ex situ, and many other excitings tips and helpful hints. Space is not limited.

### Saturday, July 22, 2017

8:30 am Continental Breakfast

9:00 am - James C. Rorabaugh "Herpetofauna of Sonora, Mexico - A Synopsis"

9:45 am – Jay Sommers "Captive Husbandry and Breeding of *Sceloporus minor*"

10:30 am - 10:45 am MORNING BREAK

10:45 am - Clinton Doak "Husbandry and Breeding of *Cuora* species at the Turtle Survival Center"

# 11:30 am - Neil Balchan (Junior Herper - 19-22) "Snakes on a Plain: Fall Phenology at a Northern Communal Hibernaculum"

Neil Balchan is an undergraduate student at the University of Manitoba, in Manitoba, Canada. From a young age, Neil has been heavily involved in herpetoculture and local herpetological initiatives. This coming fall, Neil will begin his honors research in Manitoba at the world-renowned Narcisse Snake Dens. Tens of thousands of red-sided garter snakes (*Thamnophis sirtalis parietalis*) hibernate in the Narcisse hibernacula, making conservation of sites like this critical for the management of northern snake populations. Neil will be

studying factors that determine hibernation timing and identify potential themes that may result in spring carryover.

12:00 - 2:00 pm LUNCH at Geronimo Event Center or in town \* The Sky Island Grill and Grocery will be offering a catered lunch on Thursday, Friday, and Saturday for purchase. Menu and sign up will be located at the Geronimo Event Center each morning.

2:00 pm — Mason Lee "San Antonio Zoo Department of Conservation and Research Upcoming Projects"

2:30 pm – Daniel Cueva "Assessing the Species Status & Distribution of *Eunectes beniensis* Utilizing a Molecular Comparative Approach"

3:00 pm - John Tashjian "Western Miniatures"

3:45 pm – Wolfgang Wüster "When Cute Meets Deadly: Natural History, Systematics, and Venom Evolution in Saw-scale Vipers (*Echis*)"

4:15 pm Closing Remarks Ken Foose \* Jen Stabile - Announcement for 2018 IHS;

Announcement of Biology of the Snake at CDM

\* 4:30 to 5:00 pm Final Opportunity to visit the VENDOR ROOM

5:30 pm Banquet

Mark O'Shea "Blood, Sweat and Snakebites: The Making of an Herpetologist"

Announcement of IHS photo contest winners

Acknowledgement of the Junior Herpetologists Award Winners

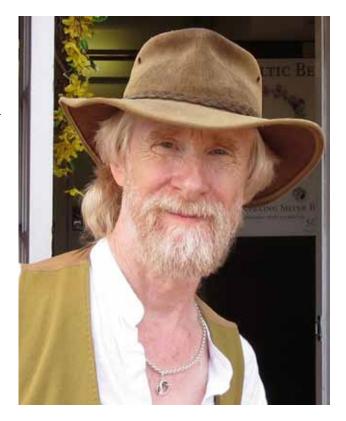
- \* Age 12-15 Andrew Gonzalez
- \* Age 16-18 Lauren Taracka
- \* Age 19-22 Neil Balchan

Annoucement of the IHS Grant Winners; Announcement of the Louie Porras Award, Joe Laszlo Award, and Lifetime Achievement Award

LIVE AUCTION!!

# MARK O'SHEA BSc., DSc.(h.c.), FRGS, FLS

Mark O'Shea is an herpetologist with over fivedecades of experience with reptiles, both in captivity and in nature. He is Consultant Curator of Reptiles at the West Midland Safari Park in the United Kingdom, a position he has held for over thirty years. He also has Research Fellowships with the University of Wolverhampton, in the UK, and the University of Melbourne, in Australia, the latter as a member of the Australian Venom Research Unit. He holds a DSc. (h.c.) from the University of Wolverhampton, and the Millennium Award for Services to Exploration (Zoology) from the Explorers Club of New York. He has worked on tropical herpetofaunas in jungles, deserts, and swamps all around the world but his specialist area is the herpetofauna of eastern Indonesia, Timor-Leste, and Papua New Guinea, and he has made over 20 expedition to the region. He is the author of five books including the definitive A Guide to the Snakes of Papua New Guinea,



which is currently being revised as a second, expanded edition, and he is working on a large book project, *The Book of Snakes* which will include 600 from the worlds 3,700 species, for late 2018 publication. He has also presented over 40 television documentaries, including the critically acclaimed four seasons of "O'Shea's Big Adventure".

### BLOOD, SWEAT AND SNAKEBITES: The Making of an Herpetologist

Mark O'Shea started out in the reptile world the same way many of us do, he met a snake at the zoo, pawed over books of snakes, and sought out local snakes in the wilds of Staffordshire, England. He pined for his own pet snake and that wish was fulfilled with an Italian grass snake when he was eight or nine. From there his snake collection grew, he set out to find all six native British reptiles in one day, and he made a couple of herping trips to the United States. In the early 1980s, whilst completing a BSc. in Applied Sciences, he organised his first tropical expedition, to Borneo, and the contacts he made in the process led him much deeper into the expedition world. What came afterwards is, as they say, history. Mark's herpetological history encompasses private keeper, zoo man, expedition herpetologist, taxonomic researcher, snakebite researcher and victim, television presenter, author, photographer and public speaker. "Blood, Sweat and Snakebites" will touch on most of these aspects and include anecdotal recollections from over 50 years in herpetology.

#### **ABSTRACTS**

#### **Novel Technique for Surveying Subterranean Newts**

#### E. A. Bare and R. J. Kline

Biology Department University of Texas Rio Grande Valley eabare01@utrgv.edu and rjkline@utrgv.edu

Black-spotted newts (*Notophthalmus meridionalis*) are a poorly studied amphibian species of the Rio Grande Valley, resulting in a lack of knowledge regarding habitat characteristics and use. Habitat for black-spotted newts experiences prolonged dry periods during which black-spotted newts are rarely seen. We argue that black-spotted newts will use fissures or burrows in soil as refuge during dry periods. Using a novel survey technique, we employed a borescope to capture pictures and video of black-spotted newts in subterranean microhabitats. Thus far, five newts have been discovered residing in fissures or burrows and additional newts have been observed crawling into fissures after discovery under debris. This implies regular use of these microhabitats by black-spotted newts, a behavior rarely observed in other Notophthalmus species. Subterranean microhabitat use makes black-spotted newts more difficult to observe, but suggests that this threatened species may be present in more locations than previously documented using other survey techniques.

Permits: TPWD: SPR-0913-125; FWS: 2016-23

# Assessing the Species Status & Distribution of *Eunectes beniensis* Utilizing a Molecular Comparative Approach

Daniel Cueva<sup>1</sup>, Jesus Rivas<sup>1</sup>, Sarah Corey-Rivas<sup>1</sup>

<sup>1</sup>Department of Biology New Mexico Highlands University 1005 Diamond Street Las Vegas, NM 87701

Eunectes beniensis (Dirksen, 2002) is a poorly studied and recently described anaconda species native to the Beni province, Bolivia. Originally thought to be a hybrid between *E. murinus* and *E. notaeus* due to range overlap between the species in the Beni province, Dirksen & Bohme (2005) disputed this notion and described it as a new species of anaconda utilizing solely morphological characteristics and scale counts from five individuals (four males and one female). Due to difficulty in acquiring samples and exporting tissue from South America, no one has validated this assumption using molecular techniques. I propose to sequence several nuclear and mitochondrial markers, and compare sequences of *E. murinus*, *E. notaeus*, & *E. beniensis* in order to create a phylogenetic analysis of the Eunectes genus and reevaluate E. beniensis species status. Phylogenetic analysis will be conducted using a maximum likelihood analysis in order to determine the relationship amongst species within the *Eunectes* group. We hypothesize that *E. beniensis* represents a population of anacondas residing within a hybridization zone, and does not merit valid species designation.

#### Husbandry and Breeding of *Cuora* species at the Turtle Survival Center

#### Clinton S. Doak

Chelonian Keeper Turtle Survival Center P.O. Box 396 Cross, SC 29436-0396 cdoak@turtlesurvival.org

The Turtle Survival Alliances, Turtle Survival Center (TSC) is an assurance colony that houses 27 species of tortoises and freshwater turtles. The goal of the TSC is to maintain a genetic variability of at least 90% for the course of 100 years. The staff at the TSC are highly trained professionals that use the most up to date husbandry practices to help grow and maintain the populations of these rare chelonians. Out of the 27 species at the TSC, 12 of those belong to the genus *Cuora*. The TSC has developed a specific breeding program that has proved beneficial to the reproductive success of this genus. To date, the TSC has bred 6 of the 12 species with continued efforts for the other 6 species. This has all been accomplished by using a diet that's rich in variety, naturalistic conditions and updated forms of incubation.

#### YOU SAY YOU WANT A REVOLUTION?

#### Carl J. Franklin

Biological Curator
Amphibian and Reptile Diversity Research Center
The University of Texas at Arlington Dept. of Biology
Box 19498
501 South Nedderman. Rm 337
Arlington, Tx 76019
Tel: (817) 272-3615
http://biology.uta.edu/herpetology/

www.Texasturtles.org

Evoking change and provoking affects are actions crucial towards the union of herpetology, herpetoculture, conservation and engaging society. In Texas, a group of herpetologists and citizen scientists are doing just that and their ambition has caused a wave which can very likely transform into a tsunami of results affecting conservation of amphibians and reptiles in the Lone Star state.





www.timberlinelivepetfoods.com



#### **Snake Venoms and Care of Venomous Snakes**

#### Richard S. Funk DVM

richardsfunk@gmail.com

Richard Funk Veterinary Services LLC 7718 E Palm LN Mesa, AZ 85207

Midwestern University College of Veterinary Medicine 19555 N 59th Ave. Glendale, AZ 85308

Venomous snakes are fascinating both due to their venomous properties and impact on human health, and because of their varied morphologies and behaviors. We will review the major components of snake venoms and some applications for human medical care. Basic handling and husbandry techniques will then be discussed, as well as veterinary care including diseases and surgery.

# Against the Odds: Reproduction of Orinoco Crocodiles at Gladys Porter Zoo

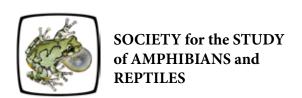
#### Clint Guadiana

Gladys Porter Zoo 500 E Ringgold Street Brownsville, TX 78520 Cguadiana@gpz.org

The critically endangered Orinoco crocodile, *Crocodylus intermedius*, is the largest and most imperiled New World crocodilian. In terms of genetic diversity, it is poorly represented throughout private and zoological collections worldwide.

Two "famous" *C. intermedius*, named Blade and Suede, were raised indoors at the Seaway Serpentarium in Welland, Ontario. In 2011, after their owner's unexpected passing, the crocodiles were in desperate need of relocation. Crocodile enthusiasts joined with wildlife officials on both sides of the U.S./Canada border in an extraordinary effort on behalf of the soon-to-be homeless crocodiles.

This presentation will cover a 6 year journey – from securing the crocs in Canada and transport to Brownsville, Texas, to the effort put into conditioning the pair for successful reproduction.





# Distribution of Snakes of the *Lampropeltis mexicana* Complex with Comments on Taxonomy and Conservation

Robert W. Hansen (Clovis, California)

Editor, Herpetological Review herpreview@gmail.com

Gerard T. Salmon (Boerne, Texas)

gerardtsalmon@gmail.com

Kingsnakes of the *Lampropeltis mexicana* complex occur in northern and central Mexico and the southwestern USA. Collectively, these often-colorful snakes have attracted much attention from herpetologists and amateur naturalists. Although treated historically as a monophyletic group, recent molecular studies suggest that some species may be more closely related to *L. triangulum* (sensu lato) or to the *L. pyromelana* and *L. zonata* groups. We generated point locality maps based on 615 records supported by vouchered specimens. The ranges of constituent species are characterized by allopatry, although some species pairs are nearly parapatric. In light of our expanded knowledge of distribution, we review historical taxonomy of this group, provide partial synonymies, and present morphology-based diagnoses for each species. We recognize six species as most accurately reflecting biodiversity. The conservation status of each species is reviewed in the context of new distributional data and in consideration of our revised taxonomy.

# The Use of Voluntary Conservation Agreements for Managing an Imperiled Reptile in New Mexico: Lessons Learned and Future Endeavors

#### **Debra Hill**

U.S. Fish and Wildlife Service 2105 Osuna NE Albuquerque, NM 87113 debra hill@fws.gov

Nine years after the US Fish and Wildlife Service (USFWS) signed Candidate Conservation Agreements for the dunes sagebrush lizard, we have gained insight into the benefits and downfalls of voluntary conservation. The dunes sagebrush lizard is a habitat specialist, only found in the shinnery oak dunes in southeastern New Mexico and west Texas. The range of the species falls within the Permian Basin, one of the largest oil fields in North America. In 2008, the USFWS and partners entered into agreements with the oil and gas industry and landowners to voluntarily conserve this species. I will present a review of this agreement, and a new agreement for the Rio Grande cooter.



CLOCKWORK

**KOMODO** 

#### **Remembering Dave Blody**

#### Rick Hudson, President/CEO

Turtle Survival Alliance (TSA) 1989 Colonial Parkway Fort Worth, TX 76110 Tel: 817-759-7177 www.turtlesurvival.org

The zoo herpetological career of Dave Blody (1951-2016) spanned 30 years, starting as a volunteer at the Bronx Zoo, and including stints at Jacksonville, Monroe Louisiana, Dallas, and Fort Worth, where he spent 20 years (1980 – 2001) as Herp Curator. Under Dave's leadership, creative genius and husbandry skills, the Fort Worth Zoo Herpetarium achieved prominence as one of the preeminent zoo herpetological collections in the world. Known for their naturalistic exhibits, and widely recognized as a leader in the field of captive reptile reproduction, the FWZ herpetological collection achieved an unprecedented record of breeding an impressive array of rare and endangered species, many for the first time ever. Dave was a "husbandry savant" and his insights into monitoring and manipulating the thermal regimes of his charges gave rise to innovations that led to some of the remarkable breeding successes that the Herpetarium enjoyed. Moreover Dave mentored, trained and gave opportunities to many of us that spent time in the zoo herp world, and will long be remembered as a colorful and iconic figure in the Herp world, both during and after his zoo career. This presentation will summarize some of the high points of Dave's career at the Fort Worth Zoo.

Welcome to the 'Cherrycows'

**Bill Love** 

Blue Chameleon Ventures Bill@BlueChameleon.org

I.H.S. is happening in mid-July, usually the start of the annual monsoon season that brings the herpetofauna out to the max. That was no coincidence! The organizers know it's a fantastic time to be in the extreme bootheel of New Mexico, with the adjacent Chiricahua Mountains (the 'Cherrycows' as Carl Kauffeld pronounced them) of southeastern Arizona right next door. You're in the thick of it here – the crossroads between east and west where herp species diversity reaches its zenith. Bill's a veteran of countless visits to this region. His slideshow will introduce you to the faunal highlights (emphasis on herps, of course), including advice on where to hike or drive to heighten the chances of herp encounters. Popular local species will be shown and their microhabitats, plus scenery to entice you into the field to enjoy the best of the valley and the mountains. The goal of this colorful presentation is to leave you setting aside some time to explore the area during evenings and after the symposium, especially if this is your first time here.

PHOENIX REPTILE EXPO November 18 - 19, 2017

http://phxreptileexpo.com

Mesa Convention Center
Phoenix Marriot Mesa
200 N. Centennial Way, Mesa, AZ 85201



#### San Antonio Zoo Department of Conservation and Research Upcoming Projects

#### Mason Lee

Conservation Technician
San Antonio Zoo Department of Conservation and Research
masonmlee3@gmail.com

The San Antonio Zoo's Department of Conservation and Research (DoCR) works with a number of imperiled species including amphibians, fish, and invertebrates. In 2015 and 2016, the DoCR worked on a grant with the Edwards Aquifer Authority to salvage endangered species such as the Texas blind salamander (*Eurycea rathbuni*) from the Aquifer and establish a captive refugia program. Salamanders were put into breeding pairs at the beginning of 2017 and trapping efforts for additional wild salamanders are ongoing. The DoCR has recently partnered with the Dallas Zoo, Fort Worth Zoo, Texas Parks and Wildlife Department, Texas Christian University, and private landowners to establish a Texas horned lizard (*Phyrnosoma cornutum*) reintroduction program for South Texas. The goal of this project is to release captive bred horned lizards onto private property in South Texas to reestablish populations of horned lizards where they have been extirpated.

Permits: Texas Parks and Wildlife Department Scientific Research Permit No. SPR-0116-022 Texas Parks and Wildlife Department Scientific Research Permit No. SPR-0513-065

# Factors Affecting the Presence and Abundance of Amphibians, Reptiles, and Small Mammals Under Artificial Cover in Southern California

#### Jeff Lemm

#### Mathias Tobler, and Matt Anderson

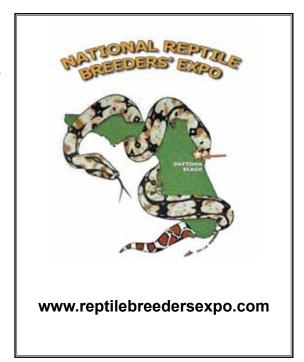
San Diego Zoo Global Institute for Conservation Research

Artificial cover objects (ACOs), also known as boardlines, have been used by private herpers for years. The academic community only began utilizing this successful survey method for reptiles and amphibians in the 1980's, and few studies have been completed with ACOs in the southwestern United States. Jeff Lemm will present his findings on a four-year research project focused on the factors that affect the presence and abundance of reptile, amphibian and small mammals under ACOs in San Diego County, California.

### **Exotic Pets**

2410 N. Decatur Blvd. Suite 160 Las Vegas, NV 89108 Phone: 702-631-7387

Fax: 702-631-7367 ExoticpetsLV@aol.com



# Historical and Current Perspectives on the Reproductive Management of Monitor Lizards (Varanidae: *Varanus*), with a Discussion of Reproductive Failures and their Potential Causes

#### Robert W. Mendyk

Department of Herpetology Jacksonville Zoo and Gardens 370 Zoo Parkway Jacksonville, FL 32218 mendykr@jacksonvillezoo.org

The keeping of monitor lizards (Varanidae: *Varanus*) in captivity has advanced considerably over its ~200 year history, with the majority of important captive breeding achievements and innovations taking place over just the past few decades. Although most of the 50 or so species of monitor lizard that have been maintained in zoos and private collections worldwide have successfully been reproduced at least once in captivity, there are still many challenges and uncertainties that continue to affect captive breeding success with this group. This talk will briefly discuss the history of monitor lizard reproduction in captivity, outline current knowledge, practices and perspectives driving their reproductive management, and discuss many of the issues currently affecting successful reproduction and their potential causes.

#### Managed Hibernation of Selected Snakes With Insights/Questions Regarding Their Behavior and Physiology

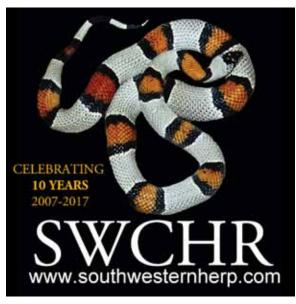
#### **Ray Pawley**

raypawley@pvtnetworks.net

Observations on hibernation/brumation behavior/physiological of 3 local species of snakes maintained under semi-natural ambient thermal conditions will be detailed. Measurements (weights/lengths) were taken prior to and following winter quiescence of 5 Western Diamondback Rattlesnakes (*Crotalus atrox*), 2 Black-tailed Rattlesnakes (*Crotalus ornatus*) and 2 Bull Snakes (*Pituophis catenifer sayi*). Temperature fluctuations were recorded. Adaptation results to this management strategy including nutritional supplements for exhibit purposes will be elaborated.

Photos and a video via PowerPoint will be shown. A live Bull Snake raised under conditions that has included a hibernation component will be available for examination.





#### Occupancy Modeling for the Endangered Jemez Mountains Salamander (Plethodon neomexicanus)

Primary author/speaker: **Susan Pruitt** Collaborating authors: **Michelle Christman** 

The Jemez Mountains salamander (*Plethodon neomexicanus*) was listed as endangered under the Endangered Species Act in 2013. This strictly terrestrial salamander can inhabit a variety of habitat types, including mixed conifer forests; therefore, little is known regarding its specific distribution within the Jemez Mountains of New Mexico. Observation data for the endangered Jemez Mountains salamander was collected in the Jemez Mountains from 1984-2015. As is the case with many long-term data sets, little analysis has been completed to date. In order to answer questions regarding future monitoring and management, a multiple-season occupancy model was applied to this data set. While research is ongoing, the goal of this analysis is to provide information on differences in occupancy between sites and trends in occupancy over time. The detection probabilities determined will help inform future monitoring protocols, while comparisons of the probabilities of occupancy among different sites will help guide future management decisions.

#### Herpetofauna of Sonora, Mexico - A Synopsis

James C. Rorabaugh

jrorabaugh@hotmail.com

Sonora, Mexico's second largest state, is situated at a confluence of temperate and tropical biomes with distinctive regional influences from dry tropical forests, the Sonoran and Chihuahuan deserts, grasslands, and montane woodlands of the Sierra Madre Occidental and adjacent sky islands, as well as endemism on islands in the Gulf of California. These biotic influences, combined with climatic and topographical diversity, have culminated in an amphibian and reptile diversity in the U.S.-Mexico borderland states second only to Texas. A total of 38 amphibian and 160 reptile described species are known to inhabit Sonora, and several others are awaiting description.

This presentation will include a synopsis of Sonora's biotic communities and affiliations, and representative amphibian and reptile species of those communities, but will also touch upon the ways in which geological and ecological deep history have helped shape the herpetofauna, background on herpetological studies, recent taxonomic changes, and conservation issues. The 688-page *A Field Guide to the Amphibians and Reptiles of Sonora, Mexico*, authored by James C. Rorabaugh and Julio Lemos Espinal, was published in 2016 by ECO Herpetological Publishing and Distribution and will be available for purchase.

#### Herpetoculture, Then and Now

#### **Christine Roscher**

croscher52@gmail.com

Christine Roscher of Sunland Breeders will share insights into her interesting history in the world of animal importation and reptile breeding. Christine will look at how people develop an interest in reptiles, exposure of children to reptiles, and a look at her stint as an animal importer in the industry during the 1970s and 1980s. Included will be information regarding the advancements in reptile husbandry and what the future holds for those who choose to live their lives with pet reptiles.

#### Facultative Parthenogenesis in Reptiles: History, Role of Zoos and Private Citizens, and Progress

#### Gordon W. Schuett, Ph.D.

Department of Biology, Georgia State University. Atlanta, Georgia USA Chiricahua Desert Museum, Rodeo, New Mexico USA

#### Warren Booth, Ph.D.

Department of Biology, University of Tulsa, Tulsa, Oklahoma USA

In this presentation we will review the discovery and history of an intriguing reproductive phenomenon, namely facultative parthenogenesis, in avian and non-avian reptiles, with particular emphasis on the role of zoos and private citizens. First studied in domestic fowl (turkeys, chickens) in the 1950s, facultative parthenogenesis would not be known in any other vertebrate for another 40 years. Facultative parthenogenesis was reported in snakes in a pair of ground-breaking papers in 1997. Subsequently, a tremendous amount of progress has been achieved in the past two decades, documenting and establishing the molecular underpinnings of facultative parthenogenesis in reptiles and other vertebrates, which has led to other unanticipated discoveries.

Horned Lizards: Report From a Biological Scout

Wade C. Sherbrooke

wcs@amnh.org

I will try to summarize my explorations into the lives of horned lizards over the last 40 years. Constantly I've tried to ride at the edge of the known in the hopes of seeing something beyond. Such explorations often fail, but there are some rewards of discovery, often unexpected. Even with only 17+(?) species to focus on, I still find lots of ignorance about them to approach. I've enjoyed exploring their anatomical features as well as their behavioral activities, and how they integrate these into their survival – eating, drinking, and avoiding predator's skills. Ideally I want to know what horned lizards think about life. Don't expect all the answers, but maybe some insights, and revealing photographs and videos!

The 21st Century Serpent: Copperhead Snakes as a Model Species to Study Reproduction and Sexual Selection in the Field

**Charles F. Smith** 

The Copperhead Institute P.O. Box 6755 Spartanburg, SC 29304

We studied a large population of copperhead snakes (*Agkistrodon contortrix*) located in a basalt trap rock ecosystem in the Central Connecticut Valley of Connecticut continuously since 2001, representing one of the largest long-term studies of any pitviper species in the field to date. Here, we will present results of this study that include the role of body size (snout-vent length, body mass), body condition, movement parameters (distances moved, home range size), and plasma testosterone concentration on mating success in males; levels of plasma progesterone (P4), 17 – estradiol (E2), testosterone (T), and corticosterone (CORT) from early- to mid gestation through the perinatal period in wild-collected females; alternative reproductive strategies in females (parthenogenesis); and evidence for kin-recognition among females and their litters.

#### **Western Miniatures**

#### John H. Tashjian

jht0522@yahoo.com

Lifetime Achievement Award winner John Tashjian's "Western Miniatures" will introduce tiny, colorful, western snakes, most of which can be kept in a small terrarium or even a gallon jar with a little sand, in a small apartment.

# Back to the Future: A Glimpse of the Past, Present, and Future of Crocodile Conservation in Belize

#### Dr. Marisa Tellez

Crocodile Research Coalition, Maya Beach, Stann Creek, Belize. E-mail: marisa.tellez@crcbelize.org

In the early 1900s, a sea of red eyes enshrouded the aquatic habitats of Belize at night. However, the exploitation of American crocodiles (*Crocodylus acutus*) and Morelet's crocodiles (*Crocodylus moreletii*) began to rise in the late 1920s for their skin, and were nearly extirpated by the 1950s. For the last 75 years, various conservationists and natural enthusiasts have played a part in ensuring the preservation of the crocodile species in Belize, and positive steps have been taken to reverse previous decimation. This presentation will provide a glimpse into the history of crocodile conservation in the Central American country of Belize, and discuss the 2nd Crocodile Renaissance occurring now, which includes exploration of unidentified crocodilian populations in remote areas of the country, initiating nationwide population surveys, creating anti-poaching programs, and providing various outlets of wildlife outreach. False beliefs and misguided information about the crocodiles in Belize in conjunction with the continuous fight against wildlife trafficking has created challenges in improving human-crocodile relations, yet with the implementation of current research and education programs initiated by organizations such as the Crocodile Research Coalition, a strong foundation is currently being built to empower the communities in co-existing with the American and Morelet's crocodiles, and joining the global movement in wildlife conservation.



EIGHTH ANNUAL TTPG CONFERENCE ON CAPTIVE CARE & BREEDING OF TURTLES
November 15-17, 2017 ooOoo Mesa, Arizona

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### When Cute Meets Deadly: Natural History, Systematics and Venom Evolution in Saw-scaled Vipers (*Echis*)

#### Wolfgang Wüster

Molecular Ecology and Fisheries Genetics Laboratory
School of Biological Sciences
Bangor University
Bangor LL57 2UW, UK
and
Chiricahua Desert Museum
Rodeo, NM 88056, USA

Saw-scaled vipers (*Echis*) are among the most feared venomous snakes in the world. High untreated mortality rates coupled with problems of antivenom effectiveness combine to make this genus one of the most medically important groups of venomous snakes. At the same time, due to their distribution across many of the globe's less visited regions, their natural history and taxonomy remain poorly known. On the basis of a 13 year research program including fieldwork, systematics and venom research, this presentation will summarise recent findings on the genus, in particular species-level diversity, natural history drivers and genetic mechanisms of venom variation, and the link between venom variation and antivenom incompatibility. Despite its conserved morphology, *Echis* is an old and diverse genus: within four major species complexes that diverged, ongoing DNA analyses suggest the existence of additional, currently unrecognised species. Saw-scaled vipers show evidence of prey-specific venom action and lethality, related to differences int heir natural diet. However, neither natural diet nor generalised venom profile predict antivenom effectiveness across species.





The IHS Grant Committee reviewed (31) COMPLETE APPLICATIONS in 2016, and again the various projects covered an amazingly broad scope in subject species, project type, and multinational localities. The competition was quite close in two categories requiring a tie-breaking votes; and an unprecedented second place prize was awarded in one category due to its merit and difficulty in narrowing down the category. Due to the continuing generosity of Grant Fund donors and dedicated fundraising events, in 2016 the IHS Grant Fund Committee was pleased to be able to award a total of \$4,000 in total to the following winning projects:

- CAPTIVE PROPAGATION Dr. Ellen Bronson, D.V.M., D.A.C.Z.M. and Amy Rifkin, B.S. (Maryland Zoo in Baltimore) Bioaccumulation of Itraconazole
- CONSERVATION BIOLOGY –1st Place Alexander Shepack (Southern Illinois University) Back from the brink: rebounding amphibian populations in a pathogen enzootic environment
- CONSERVATION BIOLOGY 2nd Place Kristina Chyn (Texas A & M University) Effects of roads on endemic Taiwan reptiles and amphibians
- EDUCATION- Sean C. Sterrett, Evan H.C. Grant, & Chris Sutherland (Pennsylvania State University & U.S. Geological Survey) Integrating science and society: Improving public awareness about the link between climate change and local conservation issues using terrestrial salamanders as a model system
- NATURAL HISTORY Deb Prasad Pandey, PhD (Tribhuvan University) Food spectrum of Common Krait (*Bungarus caeruleus*): an implication for snakebite prevention and biodiversity conservation

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

International Herpetological Symposium (IHS) – *Treasurer and Grants Committee Coordinator* 



# INTERNATIONAL HERPETOLOGICAL SYMPOSIUM JUNIOR HERPETOLOGIST AWARD

This new program created by Russ Gurley and the IHS Board and funded by Todd Goodman 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 2017 International Herpetological Symposium. In the two younger age groups, an all expenses paid trip was given to a parent or chaperone as well. Three runners-up in each age category received free registration to the 2017 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 so 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 2017.

CONGRATULATIONS to the 2017 JUNIOR HERPETOLOGIST AWARD winners and runners up! We are proud of your hard work and your passion for reptiles and amphibians! Although winners are ineligible to win more than once, we encourage to you return to IHS and to become part of our meetings each year. Runners up and all others are encouraged to submit again in 2018.

Ages 12-15

Winner: Andrew Gonzalez (San Gabriel, California) "Western Fence Lizards: Superheroes of Herpetology"

Runner Up: Grace Taracka (Port Townsend, Washington) "Western Diamondback Rattlesnakes (*Crotalus atrox*) and Roundups"

Runner Up: Hana Leonard (Rougemont, North Carolina) "Natural History/Conservation of the Southern Hognose Snake"

Runner Up: Scout Aulenbach (Lilburn, Georgia) "Dragon Tails" (Komodo Dragons)

Ages 19-22

Winner: Neil Balchan (Canada) "Equis: A Panamanian Perspective on *Bothrops asper*"

Runner Up: Michaela Wiersema (San Benito, Texas) "The Herpetoculture of *Indotestudo forstenii*"

Ages 16-18

Winner: Lauren Taracka (Port Townsend, Washington) "Western / Boreal Toads (Anaxyrus boreas boreas)"

Runner Up: Katie Karl (Chatham, Illinois)
"The Timber Rattlesnakes' Crisis - When
Deadly Species Become Endangered"

Runner Up: Kaeden Miller (Maumee, Ohio) "Mata Mata: So Nice They Named it Twice"

Runner Up: Avi Ackermann (Plano, Texas) "The Natural History and Conservation of Sphenodon"

#### 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 Lifetime Achievement Award Winner: Charlie Painter

2015 Lifetime Achievement Award Winner: Dr. David Lazcano

2016 Lifetime Achievement Award Winner: N/A

# Dave Blody (1951-2016)

The zoo herpetological career of Dave Blody (1951-2016) spanned 30 years, starting as a volunteer at the Bronx Zoo, and including stints at Jacksonville, Monroe Louisiana, Dallas, and Fort Worth, where he spent 20 years (1980 – 2001) as Herp Curator. Under Dave's leadership, creative genius and husbandry skills, the Fort Worth Zoo Herpetarium achieved prominence as one of the preeminent zoo herpetological collections in the world. Known for their naturalistic exhibits, and widely recognized as a leader in the field of captive reptile reproduction, the FWZ herpetological collection achieved an unprecedented record of breeding an impressive array of rare and endangered species, many for the first time ever. Dave was a "husbandry savant" and his insights into monitoring and manipulating the thermal regimes of his charges gave rise to innovations that led to some of the remarkable breeding successes that the Herpetarium enjoyed. Moreover Dave mentored, trained and gave opportunities to many of us that spent time in the zoo herp world, and will long be remembered as a colorful and iconic figure in the Herp world, both during and after his zoo career. This presentation will summarize some of the high points of Dave's career at the Fort Worth Zoo.

Rick Hudson, President/CEO Turtle Survival Alliance (TSA) 1989 Colonial Parkway Fort Worth, TX 76110 Tel: 817-759-7177

www.turtlesurvival.org

#### 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.

### The Joseph Laszlo Memorial Award

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).

# 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

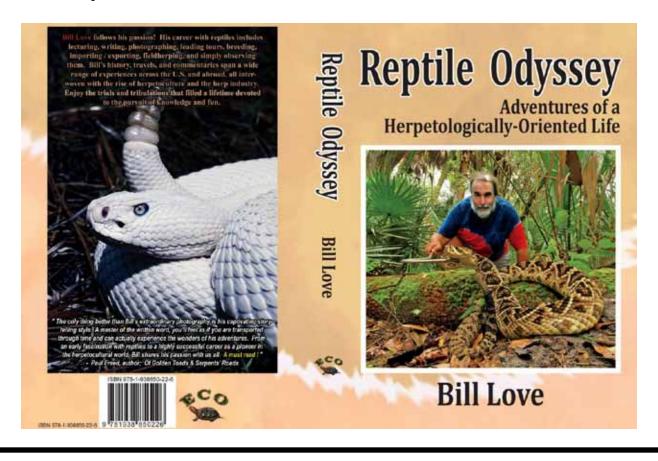
JOSEPH LASZLO 1935 - 1987

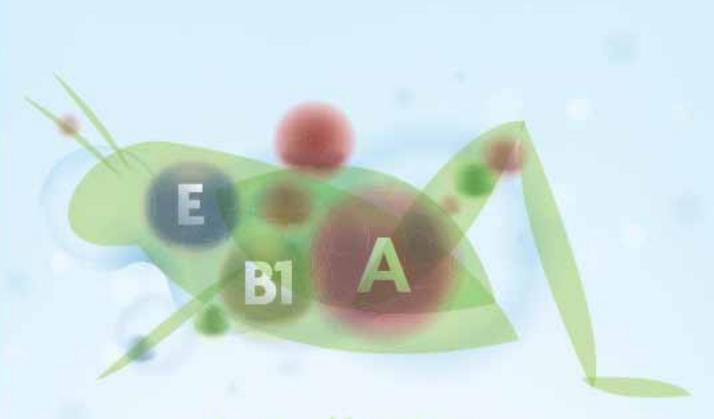


Joe Laszlo and Poison Ivy. Photographed in 1982 by Bert Langerwerf.

#### **NOTES**

*REPTILE ODYSSEY* by Bill Love. This new soft-cover book is 301 pages with well over 200 color photos, including some of Bill's absolute best images of herps, especially venomous snakes. This limited edition book is expected to arrive mid-August 2017. If interested in purchasing a copy, autographed copies from Bill will be \$29.95 each, PLUS [INSIDE the U.S.] postage of either \$8.00 Priority Mail postage, or slower Media Mail postage for \$4.00 each. Thanks! To order: kathy@cornutopia.com or, you can send checks / money orders written to 'Bill Love' at: 5062 N. Bear Ct., Apache Junction, Arizona 85120.





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