

# 37th International Herpetological Symposium



**July 16 - July 19, 2014**

**Riverside, CA USA**







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**Without the generous financial support of these sponsors, the International Herpetological Symposium (IHS) would be less than it is. Sponsors allow IHS to attract speakers, fund extra activities, rent meeting spaces and AV equipment, produce the program and other printed materials, and make the Ice Breaker one of the most exciting social gatherings of the year.**

**Please support these wonderful sponsors and share their work with your friends.**

The IHS Vendor tables will be open to the public and to IHS registrants at no charge during the conference with an incredibly diverse selection of herpetocultural supplies, artwork, books, and other items.

The vendor room will be open from 9:00 am - 4:00 pm Thursday, Friday and Saturday to everyone, including the general public!

June 16th, 2014

Dear Friends and Colleagues,

Another year has gone by, and once again the time for the International Herpetological Symposium (IHS) is upon us. IHS, over the past 37 years has been at the forefront for disseminating the latest herpetological information. This year we have an amazing array of talks including presentations on Komodo dragons, Giant geckos, axolotls, tortoises, rattlesnakes in churches, and trips to Papua New Guinea and other herpetological hot spots around the world. As never before, reptiles and amphibians are faced with pollution, collection for food and traditional medicine, habitat fragmentation, and an ever-increasing attack on their lives in nature. With knowledge gained through IHS lectures, we are better able to understand their needs and what we can do to help in their plight.

Long before many reptile and amphibian books were written, and long before there was such a thing as the Internet or reptile shows, the International Herpetological Symposium was there. And although you can now retrieve information about just about any reptile or amphibian in the world with the touch of a few buttons, IHS remains relevant and has an important place in herpetology. The human need to come face-to-face with each other to pass along information is still needed in this complicated, seemingly impersonalized world, and IHS provides this. This year, some of the biggest, most important names in herpetology, ecology, field biology, and herpetoculture are coming to the beautiful Mission Inn Resort in Riverside, California to share their work, exciting information, and new discoveries with us. In the great tradition of the IHS, information will be passed verbally, hands will be shaken, drinks will be tipped, and toasts will be made.

The purpose of the IHS is:

(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, and (3) to provide grants for financial assistance to individuals or organizations conducting herpetological research, conservation, and education.

The IHS meetings have evolved and a flow of excited attendees show up each year to learn more about their beloved reptiles and amphibians. We learn about new advances in their study and are given incredible information about their lives in nature and in captivity.

No matter what walk of life brings you to IHS, I hope you enjoy every talk and I thank all of the speakers, sponsors, and attendees for keeping this incredible tradition alive and strong!

Cheers,

**Ken Foose, IHS President**

## **A huge thank you to our host for this year's International Herpetological Symposium - The Los Angeles Zoo!**

### **Nurturing Wildlife and Enriching the Human Experience**



The City of Los Angeles owns the Zoo, its land and facilities, and the animals. Animal care, grounds maintenance, construction, education, public information, and administrative staff are City employees. The Mayor of the City of Los Angeles is Eric Garcetti who began his first term in 2013. Located within the 4th City Council District, the Zoo is represented by Councilman Tom LaBonge. Since June, 2003, John Lewis has served as General Manager and Zoo Director. Mr. Lewis served as director of the John Ball Zoological Garden in Grand Rapids, Michigan, from 1986 until his appointment to the Los Angeles Zoo. Lewis has also served as president of the Association of Zoos and Aquariums (AZA) Board of Directors from 2001 to 2002.

The Greater Los Angeles Zoo Association (GLAZA) was created in 1963 as a private, nonprofit, fundraising organization to support the new Zoo. Today, GLAZA provides support through fundraising, membership, organizing special events and travel programs, producing award-winning publications, coordinating one of the largest zoo volunteer programs in the country, administering the contract for visitor services concessions within the Zoo, and supporting community relations, and public relations. GLAZA President Connie Morgan was appointed by the Board of Trustees in October 2002.

The Los Angeles Zoo and Botanical Gardens opened on November 28, 1966. The Zoo is home to more than 1,100 mammals, birds, amphibians and reptiles representing more than 250 different species of which 29 are endangered. In addition, the Zoo's botanical collection comprises several planted gardens and over 800 different plant species with over 7,400 individual plants. The Zoo receives over 1.5 million visitors per year and is owned and operated by the City of Los Angeles. The daily management of the Zoo is overseen by Zoo Director John R. Lewis. The Zoo is credited by the Association of Zoos and Aquariums (AZA).

Location: 5333 Zoo Drive, Los Angeles, CA. 90027 – Griffith Park at the intersection of the Golden State (5) and Ventura (134) freeways

**All attendees are granted free admission to the Los Angeles Zoo with proof of IHS registration. When you wear your IHS badge, you will get free admission on July 16, 17, 18, and 19. Thank you Ian Recchio!**



The LAIR (Living Amphibians, Invertebrates, and Reptiles) encompasses several visually stunning areas that include habitats for various unique and endangered species. The diverse collection in the LAIR comprises some of the rarest species among North American zoos – some of which are not showcased anywhere else in the world and others that have never been displayed at the Los Angeles Zoo. Zoo Director John Lewis comments that “the LAIR is home to fantastic and stunning creatures that were present on Earth well before humans arrived, but now unfortunately depend on us for their survival.” Over 60 species of amphibians, invertebrates, and reptiles are represented in this assortment of living jewels. Each habitat is beautifully themed with hand-painted murals of damp and misty forests, rainforest canopies, red rock formations, mountain ranges and vistas, and dry arid deserts to exemplify the natural environments of the many diverse species. Additionally, this new structure provides a vital base for the Zoo’s reptile and amphibian-focused conservation initiatives.

### **Entrance/Oak Woodland Pond**

Upon entering the LAIR’s exhibit area, guests are welcomed by the native residents of Oak Woodland Pond. This organically inhabited exhibit is designed specifically to provide a habitat that the local wildlife of Griffith Park and Southern California can choose to reside in. Green vines grow along the exterior fence of the LAIR, while personalized engraved donor “rep-tile” scales slither around the entrance doors. At the top of the adjacent hill, riders on the Tom Mankiewicz Conservation Carousel get a perfect view of the LAIR’s unique and living Green Roof.

### **The LAIR**

LAIRInterior-CMThe LAIR’s principal building exhibits species found around the world. Visitors entering are swept away into the depths of Damp Forest to find neon green Fiji Island banded iguanas. Several species of tiny brightly colored poison dart frogs are discovered in lush vivariums. Further into the exhibit, the world’s largest amphibian, the Chinese giant salamander, inhabits a mountainside stream with underwater viewing. Skylights peek through the mural canopy showcasing a dazzling array of snakes in Betty’s Bite and Squeeze room named after Betty White, co-chair of the Greater Los Angeles Zoo Association. The serpent species include the Mangshan viper, a venomous snake from the mountains of China; the green mamba, a fast slender arboreal snake from Africa; and the bushmaster, the largest venomous snake of the Americas. The reptiles and amphibians of the Zoo’s conservation programs are showcased in the LAIR in a way that has never before been done at the Los Angeles Zoo. The Care and Conservation Room features a rare look at the work the Zoo is doing to help conserve rare and endangered species such as the Gray’s monitor. Visitors see Behind the Glass to witness activities that would normally take place behind-the-scenes and out-of-site. Zoo Keepers utilize this room for daily activities such as food prep, nursery care for young reptiles, reptile egg storage, and most importantly, to share with visitors messages of importance for species conservation. Visitors also hear the sounds of the species represented in the LAIR, as well as elements from their natural habitats, through an immersive audio experience presented in AstoundSound®.

### **The Desert LAIR**

The LAIR’s secondary building represents the semi-arid desert climate of Mexico, Arizona, and our own backyard – Southern California. The Desert LAIR houses snakes, lizards, turtles, and scorpions. Visions of

lightening and the sounds of thunderstorms and monsoons wisp through the ears of the Desert LAIR's visitors mimicking the weather sporadically encountered in these dry climates. The weather extremes of these environments make for tough and distinct species such as the desert hairy scorpion, Gila monster, Southwest speckled rattlesnake, Sonoran toad, and California natives like the California kingsnake and the San Diego gopher snake.

### **Crocodile Swamp**

Visitors traveling through the Crocodile Swamp encounter the LAIR's false gharial exhibit. Guests look down into this endangered species' pool to get a glimpse of the intimidating species of crocodile found in Southeast Asia. False gharials can reach a length of 15 feet long.

### **Arroyo Lagarto**

Arroyo Lagarto literally translates to "lizard stream" in Spanish. This outdoor desert environment features a potpourri of reptile species including California's official state reptile – the desert tortoise. The neighboring radiated tortoise habitat adds to the showcase of reptile diversity. Just beyond both outdoor habitats lies a garden of tough, distinctive, and typical desert plants ranging from Mexico to Southern California.

### **Fast Facts**

- \* The LAIR encompasses over 60 species of amphibians, invertebrates, and reptiles from around the world.
- \* There are a total of 49 exhibits; each exhibit closely resembles the natural ecosystem of its inhabitants.
- \* The LAIR is comprised of six diversely themed areas: the Damp Forest, Betty's Bite and Squeeze room named after Betty White, co-chair of the Greater Los Angeles Zoo Association, Care and Conservation room, Behind the Glass, Arroyo Lagarto, and the Desert LAIR.
- \* The LAIR's principal building is 6,289 square feet. The Desert LAIR building is 2,085 square feet.
- \* The LAIR is one of a few facilities built in North America within the past decade that specifically focuses on reptiles and amphibians.
- \* All murals are hand-painted by different artists and represent the natural habitats of the LAIR's species including mountainous regions of China, Central America and Mexico; lush forests of Africa, South America, and the Philippines; river banks of New Zealand, Australia and Louisiana; deserts of Southern California, Arizona and Mexico.
- \* The outside benches that provide seating for guests are recycled from the pine trees removed during the building's construction.
- \* Visitors experience the natural sounds of the species represented in the LAIR and their habitats both inside and outside the exhibit through audio presented in AstoundSound®.



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# Thursday, July 17, 2014

Session Moderator: Ken Foose

Session Audio/Visual Tech: John Potash

9:00 - 9:15 am

**Opening Remarks & Introductions - Ken Foose, IHS President**

9:15 - 10:00 am

**KEYNOTE ADDRESS - Ernie Wagner “Old Herp Tales From an Old Herper”**

10:00 - 10:30 am

**Vince Scheidt “Springtime in the Western Cape Province: Mostly Tortoises”**

10:30 - 11:10 am

**Marlowe Robertson “Breeding Update: *Phrynosoma asio*, the Giant Horned Lizards”**

11:00 - 11:15 Morning Break

11:15 am - 12:00 pm

**Byron Wustig “Komodo Dragons: Captive Management, Breeding, Incubation & Rearing of Offspring at the Los Angeles Zoo”**

12:00 - 2:00 pm Lunch Break

Session Moderator: Russ Gurley

Session Audio/Visual Tech: Vince Scheidt

2:00 - 2:45 pm

**Jim Harrison and Kristen Wiley “The Only Good Snake is a Live Snake: Venoms Helping People”**

2:45 - 3:45 pm

**Edward L. Ervin “The Archipelago Distribution Pattern and Natural History of the Rare “Common Garter Snake” (*Thamnophis sirtalis*) in a Semi-arid Region of the American Southwest”**

3:45 - 4:15 pm

**Edward Newell “Application Specific Zoological Lighting Design-Zonal UVA/B”**

**5:00 pm – Buses Leave for the Los Angeles Zoo in Front of the Hotel**

**7:00 until 9:00 pm – Dinner & Behind the Scenes Tour of the LAIR  
(Los Angeles Zoo Herpetarium)**

**\* One bus will leave the zoo at 9:00 pm and another at 9:30 pm.**

## **Friday, July 18, 2014**

Session Moderator: Rob Nixon

Session Audio/Visual Tech: Bill Love

9:15 - 9:45 am

**Tom Greek DVM “Essential Tips in Keeping Your Herps Healthy”**

9:45 - 10:15 am

**Ari Flagle “Training Tree Crocodiles: Target Training and Behavioral Observation in Captive Crocodile Monitors”**

10:15 - 10:45 am

**Rande Gallant “The Biology and Husbandry of the Southern Alligator Lizard”**

10:45 - 11:00 am Morning Break

11:00 - 11:30 am

**Ed Pirog “Tortoises of the United States”**

11:30 am - 12:00 pm

**Jeff Lemm “West Indian Rock Iguanas: Conservation of the World’s Most Endangered Lizard”**

12:00 - 2:00 pm Lunch Break

Session Moderator: Bob Ashley

Session Audio/Visual Tech: Dennis Johnston

2:00 - 2:30 pm

**Tim Cole “Snake Days & Texas Rattlesnake Festival - Striving to Make a Difference in Texas!”**

2:30 - 3:30 pm

**Barbara Durrant PhD** “Development of a Sperm Cryopreservation Protocol for the Argentine Black and White Tegu (*Tupinambis meriana*)”

3:30 - 4:00 pm

**William K. Hayes** “The Kiss of Death: Amazing Insights on Rattlesnake Venom”

4:00 - 4:30 pm

**Rob Nixon** “*Abronia* - The Arboreal Alligator Lizards of Mesoamerica”

4:30 - 4:45 pm    Afternoon Break

4:45 - 5:15 pm

**Kristofer Swanson** “Copperhead Heaven”

5:15 - 6:00 pm

**Sean Bush MD**

6:00 - 6:30 pm

**Bill Love** “The Art and Fun of Fieldherping”

Just before Dark

**HERPING THE DESERT** with Jordan Russell and Myke Clarkson.

We have enlisted Myke Clarkson and Jordan Russell to help give tours out to the desert night hunting and road cruising. There will also be maps available for people to use. We need to stress to people that this is catch and release herping unless they have a California fishing license. IHS would rather people not collect animals or plants during this outing.

\* For those not interested in night herping. . .

**John Tashjian** will present “Herpers and Their Collections” at 8:00 pm.

## **Saturday, July 19, 2014**

Session Moderator: James Badman

Session Audio/Visual Tech: Cindy Steinle

9:15 - 9:30 am

**Sam Bacchini** “Natural History and Husbandry of Madagascan Hog-nosed Snakes”

9:30 - 10:00 am

**Jordan Russell** “Captive Care and Breeding of Knob-tailed Geckos”

10:00 - 10:30 am

**Quetzal Dwyer “In Pursuit of Endemic Reptiles in the Solomon Islands”**

10:30 - 10:45 am Morning Break

10:45 - 11:30 am

**Philippe de Vosjoli “The Life of Giant Geckos”**

11:30 am - 12:00 pm

**Jay Sommers “Husbandry and Breeding Protocols for the Mexican Axolotl (*Ambystoma mexicanum*) with an Introduction to New Morphs”**

12:00 - 2:00 pm Lunch Break

Session Moderator: Vince Scheidt

Session Audio/Visual Tech: David Doherty

2:00 - 3:00 pm

**Chad Brown, Robyn Markland, and Brian Barczyk “Using Social Media to Reach Your Audience”**

3:00 - 3:30 pm

**Phil Goss “Sea Kittens! We’re Losing a War with Sea Kittens!”**

3:30 - 4:00 pm

**Paul Stewart “Venomous Interviews and Medicine”**

4:00 - 4:15 pm Afternoon Break

4:15 - 4:45 pm

**Julie Bergman “Challenges in the Reptile Business and a New Definition of Success”**

4:45 - 5:15 pm

**Kristen Wiley “Not Saved: Snakes in Church”**



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6:00 pm to 7:30 pm

IHS Banquet at the Hotel with Banquet Speaker:

Paul Freed

“Herping the World - A Global Perspective”

7:30 pm

Presentation of the Joe Laszlo Award

Closing Remarks - Ken Foose, IHS President

7:45 pm to ???

## 2014 IHS AUCTION

**\* Don't miss this fun and important event! We have a lot of fun, drink a bit, and raise a lot of money to benefit the IHS and its grants program and other projects!**

\* If you are interested in donating unique or interesting herp-related items for future auctions, please contact Russ Gurley at russgurley@cableone.net and Bob Ashley at ecobooks@hotmail.com.

### *The Invisible Ark: In Defense of Captivity*

by David and Tracy Barker

This is a small paperback book that explains the importance of captivity in this modern world and promotes the work of the keepers of all animals and plants.

\$15.00 each shipped in the US

\$25.00 each shipped outside the US.

PayPal: russgurley@cableone.net or send payment to:

Russ Gurley  
P. O. Box 321  
Ada, OK 74821-0321 USA

*The Invisible Ark* is a simple book that presents a big idea. It argues for the increasing importance of captivity as a conservation measure for animals and plants today, an era identified as the sixth major extinction event in the history of life on Earth.

The book calls to attention the millions of people around the world whose efforts maintain thousands of species of life in self-sustaining, captive populations. The authors call these people *The Invisible Ark*.

The *Invisible Ark* is not some invention created for this book.

The *Invisible Ark* already exists, and this book emphasizes the importance of the *Invisible Ark*. Although its keepers are the largest conservation force in the world, they are mostly unrecognized, and they increasingly find themselves facing legislation that compromises their projects, businesses, and studies that have developed over decades.

If you love the plants and animals of our world, if you keep and care for plants and animals, you probably are a member of the *Invisible Ark*, and you should read this book.



**David and Tracy Barker** are biologists with more than 80 years of combined experience with reptiles and amphibians. For the past 25 years they have worked intensively with pythons while co-authoring 42 articles and scientific papers and three books on pythons. The Halmahera python, *Similia tracyae*, is named for Tracy.

Their most recent book, *Ball Pythons: The History, Natural History, Care, and Breeding*, was recognized by the Independent Publishers Award as the Best Animal Book of 2006. Dave and Tracy live in the beautiful Hill Country of Central Texas.



## ABSTRACTS

### Natural History and Husbandry of Madagascar Hog-nosed Snakes

**Sam Bacchini**

sam.bacchini@herpnation.com

Madagascar hog-nosed snakes have been sporadically available in the reptile trade since approximately the late 1980s. While all three known species have been bred in captivity, self-sustaining captive populations do not appear to have been established, particularly for *Leioheterodon geayi* and *L. modestus*. Additionally, information on their natural history, care, and breeding is scarce. This presentation, which will be followed by an article in *Herp Nation* magazine, is an attempt to highlight these species, and provide a comprehensive and easily accessible source of information on these fascinating snakes.

### Challenges in the Reptile Business and a New Definition of Success

**Julie Bergman**

Julie Bergman has been keeping and breeding geckos for over 20 years. She started networking with other reptile keepers after joining the Northern California Herpetological Society in the 1980s when she attended college at the University of California at Davis. After college, she pursued other career interests, the wholesale music business and Counseling Psychology, while keeping geckos. She sought out mentors in the areas of gecko keeping she was interested in; for Day Geckos it was the late Sean McKeown and for Leopard Geckos it was Ron Tremper. She also attended shows and symposiums and eventually established Gecko Ranch LLC in 1993, working with over 80 species of geckos over the years. She is a past president of the Global Gecko Association, frequent contributor to *Reptiles* magazine and is the author of the Advanced Vivarium Systems book *Geckos*. You can visit her website at [www.geckoranch.com](http://www.geckoranch.com)

### Snake Days & Texas Rattlesnake Festival, Striving to Make a Difference in Texas!

**Tim Cole**

Conservation by Education  
<http://www.austinreptileservice.net/>  
<http://www.austinreptileexpo.com>  
<http://www.austinherpsociety.org>

Snake Days, <http://snakedays.com/> includes some fabulous, once-in-a-lifetime herping opportunities, participants are treated to world-class lectures, benefit dinner fundraiser, raffles, a highway clean-up, silent auctions, trade show, photo contest, and of course, a fake snake contest!

**Tim Cole**



**Austin Reptile Service**

Conservation through Education

Conservation by Education  
<http://www.austinreptileservice.net/>

The Texas Rattlesnake Festival, <http://www.texasrattlesnakefestival.net/> is an educational, no-kill rattlesnake event. We have created a fun, family friendly event in which we can share the value of these amazing and beautiful animals and in a setting where NO SNAKES ARE HARMED OR KILLED.



Tim Cole was born and raised in the Chicago area. He moved to Texas in 1985 to enjoy the herpetofauna and the warm weather which was quite a change from the upper Midwest. Starting in the late 1990s and into the mid-2000s, Tim was involved with breeding *Crotalus atrox* morphs, *Crotalus lepidus*, and a few of the arboreal vipers. Tim's "signature" *atrox* morph was the Patternless. Recently, a joint breeding project has produced the first Patternless Albino *atrox*. As one of the founders of the Austin Herpetological Society in 2003, Tim has served as president and currently he is the vice-president. Tim is the owner of Austin Reptile Service, whose motto is "Conservation by Education". In 2004, he developed a state approved Herpetological Training Course for Animal Control Officers. Tim conducts snake safety classes throughout the state of Texas, using snakes that are indigenous to that particular area of the state. Tim's hobby is adding to an extensive "herp" library consisting of over 2,000 titles.

## The Life of Giant Geckos

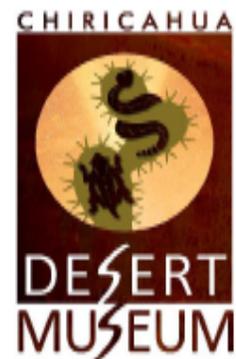
Philippe de Vosjoli

Advanced Visions, Inc.  
Sales@GiantGeckos.com

An overview of what we know to date about the natural history and social behaviors of giant geckos (*Rhacodactylus leachianus*) based on observations in the wild and in captivity. This information and details of husbandry and propagation will be published in *The Life of Giant Geckos* by Philippe de Vosjoli, Frank Fast and Allen Repashy, available this summer from Advanced Visions, Inc.



[www.thesnakekeeper.com](http://www.thesnakekeeper.com)



**Development of a Sperm Cryopreservation Protocol for the Argentine Black and White Tegu (*Tupinambis merianae*)**

**Barbara Durrant**

San Diego Zoo Institute for Conservation Research

Only 891 of the ~5,600 lizard species have been evaluated by IUCN. Of those, at least one third are threatened with extinction. However, there is no organized effort to preserve their genetic diversity through semen banking. In fact, there is no known scientific literature on the subject of lizard semen freezing. As part of an invasive species-monitoring program, Argentine black and white tegus were captured in the Florida Everglades. Following post-mortem examination sperm was collected and used as a model for the development of sperm cryopreservation protocols for related species such as the critically endangered Sombrero and Rainbow ameivas and certain iguanas of the Caribbean. The efficacy of eighteen cryopreservation protocols was assessed by evaluating pre- and post-thaw sperm motility, speed, plasma membrane function and acrosome integrity. Of the two cryoprotectants tested, DMSO was significantly better than glycerol for protecting sperm from cryodamage. The lowest concentration of DMSO (8%) was superior to 12% and 16% and the slowest freeze (0.3°C/min) was superior to faster freeze rates. This study is the first to describe a cryopreservation protocol for any lizard species.

Barbara Durrant holds an undergraduate degree in Animal Science, a Master's degree in Physiology and Genetics and a Ph.D. in Reproductive Physiology from North Carolina State University. Her post-doctoral fellowship at the San Diego Zoo Institute for Conservation Research led to her current position as Henshaw Chair & Director of Reproductive Physiology. In addition, she is Adjunct Professor of Biology at San Diego State University and Palomar College, where she teaches Animal Behavior. Her research group focuses on the endocrine, behavioral and physiological correlates of estrus, ovulation and pregnancy, germplasm cryopreservation, assisted reproductive technology, endocrine disruptors, and stem cell acquisition and culture. She works with mammals, birds, reptiles and amphibians, and has a special interest in the unique reproductive strategies of bears. She has authored or co-authored over 120 scientific papers in these areas.



**The Archipelago Distribution Pattern and Natural History of the Rare “Common Garter Snake” (*Thamnophis sirtalis*) in a Semi-arid Region of the America Southwest**

**Edward L. Ervin, Associate Biologist**

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Since 1994, many experts have suggested that the Common Gartersnake (*Thamnophis sirtalis*) occurring in the South Coast Bioregion of coastal



southern CA may be an undescribed form. However, to date very little has been reported about this snake within this region. Currently the Common Gartersnake (*Thamnophis sirtalis*), regionally referred to as the South Coast Gartersnake (*T. sirtalis* ssp.), is a CDFW Species of Special Concern. As part of our ongoing effort to understand the ecology, life history, and taxonomic status of *T. sirtalis* within the South Coast Bioregion, we set out to first clarify its distribution in relation to biotic and abiotic factors. After evaluating, mapping, and analyzing the distribution pattern, our results strongly suggest that within the topographically complex South Coast Bioregion four fundamental factors best explain the highly disjunct distribution pattern of *T. sirtalis*. In this presentation, we provide images of occupied habitat, an updated distribution map that includes many previously unreported records, describe essential habitat features, and discuss landscape changes that have enhanced populations at some locations and likely eliminated populations elsewhere. Historically, the South Coast Gartersnake (*T. sirtalis* ssp.) had highly localized populations in Santa Barbara, Ventura, Los Angeles, San Bernardino, Riverside, Orange, and San Diego counties. However, based on our findings, this species is possibly extinct from Los Angeles and San Bernardino counties.

### **The Biology and Husbandry of the Southern Alligator Lizard**

**Rande M. Gallant**

Assistant Vector Ecologist  
Greater Los Angeles County Vector Control District

Rande Gallant has been an avid “herper” since attending programs at the Natural History Museum during summer vacation from elementary school. In high school, Rande became a “Student Volunteer” at the Los Angeles Zoo. He transferred to Millbrook School in New York State, since it was the only high school in the country with a fully accredited zoo. Rande spent several years prior to Vector Control, as a desert wildlife biologist, as well as a designer of robotic museum displays involving dinosaurs and other prehistoric life.

The Southern Alligator Lizard is a unique and fascinating animal, which I believe is often underappreciated locally, due to the frequency it is seen and absence in the hobby of herpetoculture. The Southern Alligator Lizard’s unusual shape, color, lifestyle, and behavior lend it an intrinsic value which transcends traditional definitions of “worth.” In this presentation, I trace my own path to understanding the nature of this lizard, and the development of outdoor enclosures based upon what the lizard itself, has “told me.”

### **Sea Kittens! We’re Losing a War with Sea Kittens!**

**Phil Goss**

President  
United States Association of Reptile Keepers

There is a serious threat that has been building momentum for decades. This threat is now at the forefront, removing freedoms from Americans, and gaining power. A wide diversity of groups remain divided in a fight against a common enemy; an enemy that has joined forces to change public policy and force their agenda upon us all. What seemed impossible just a few years ago is now reality. We have already waited too long and it’s time to fight. We must go to battle and destroy the sea kittens! Besides, they’re delicious.

Phil Goss is President of the United States Association of Reptile Keepers (USARK), a science, education and conservation-based advocacy for the responsible private ownership and trade in reptiles and amphibians. Goss has a degree in Education, and certificates including business, kinesiology and sociology, from Indiana University, where he also presented many reptile educational outreach programs. Goss has been a reptile hobbyist and field herper over 20 years and has been breeding reptiles since 1997. He has worked in all aspects of the pet industry, encompassing pet shops, large scale breeding facilities, pet product distribution and product manufacturer. From this array of experience, he has knowledge and understanding of the pet and reptile industries that few others possess, which will be of great value as USARK protects the freedom of individuals to keep herps as pets and those with herp-related businesses. Goss knows his life has been enriched by the herp community and he will do whatever is needed to protect this community and allow future generations the same privileges he had.

### **The Only Good Snake is a Live Snake: Venoms Helping People**

**Jim Harrison and Kristen Wiley**

Kentucky Reptile Zoo  
Slade, KY 40376 USA

Jim Harrison has been working with venomous snakes and their venom for 39 years. He has extracted venom for most of that time. He founded Kentucky Reptile Zoo in 1990, with the vision of producing medicinal grade venom, ethically and sustainably. When he's not working with snakes, Jim enjoys martial arts and B-grade horror movies.

Kristen Wiley has been working at Kentucky Reptile Zoo since 1998, and is now the curator. Her responsibilities include husbandry of venomous reptiles, permit acquisition, antivenom maintenance, and attempting to manage employees. When she's not at the zoo, Kristen is an avid equestrian who enjoys the sport of eventing.

### **The Kiss of Death: Amazing Insights on Rattlesnake Venom**

**William K. Hayes, Ph.D.**

Professor of Biology  
Department of Earth and Biological Sciences  
Loma Linda University  
Loma Linda, CA 92350 USA

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William K. Hayes is a professor of biology and the director of the Center for Biodiversity and Conservation Studies at Loma Linda University. He and his students study a range of venomous animals, including rattlesnakes, spiders, scorpions, and centipedes. They also study the behavioral ecology and conservation of endangered

reptiles and birds, with emphases in the California and Caribbean Islands biodiversity hotspots. In addition to his publications in scientific journals, he has co-edited several volumes, including *The Biology of Rattlesnakes and Iguanas: Biology and Conservation*.

### **West Indian Rock Iguanas: Conservation of the World's Most Endangered Lizard**

#### **Jeff Lemm**

Jeff Lemm is a herpetologist at the San Diego Zoo Institute for Conservation Research. Jeff has spent the past 22 years studying Southern California herpetofauna, as well as a variety of exotic species, including varanids and iguanas. A major part of his work includes conservation of West Indian rock iguanas (*Cyclura*), including studies of both wild and captive animals. Jeff is the author of over 70 popular and scientific articles, as well as two books: *Field Guide to Amphibians and Reptiles of the San Diego Region* and *Cyclura: Natural History, Husbandry, and Conservation of West Indian Rock Iguanas*. In his spare time, Jeff enjoys field herping and photographing wildlife with his three children. His field herping ventures have taken him around the world and inspired the formation of the North American Field Herping Association (NAFHA).

#### **Bill Love**

Blue Chameleon Ventures  
Apache Junction, Arizona

TEL #1 --- 480-646-1297      TEL #2 --- 239-464-6642  
EMAIL: [bill@bluechameleon.org](mailto:bill@bluechameleon.org)      WEB: [www.BlueChameleon.org](http://www.BlueChameleon.org)

This presentation is an introduction to the enjoyment and techniques of getting out in the field to find herps, observe them, and photograph them. Bill Love will present the subject in-depth incorporating today's factors (vs. the relative 'freedoms' of yesteryear), and including things like expenses, legalities and ethics. Also covered will be specific aspects such as: 1) plotting the place to look, 2) checking regulations pertaining to where you're going, 3) preparing the necessary gear, 4) best times and weather conditions, 5) road-cruising tips, 6) photography suggestions, 7) good field etiquette for the environment, etc. It'll be a fairly comprehensive 'introduction', and fully illustrated with photos (of course)! Bill promises to make it a pleasure to watch and learn from, even for

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those wives and kids who might not think they'd enjoy herping 'beyond the deli cup'. This brand new presentation will debut at IHS 2014.

Bill Love has been fascinated by herps since his childhood in New Jersey, and then for 40 years living in Florida. His special passion continues to be seeking and photographing herps in the wild. He also frequently gives live educational presentations, leads eco-tours to Madagascar via Blue Chameleon Ventures, writes freelance articles on various herp subjects, and authors the monthly Herpetological Queries column in *REPTILES* magazine since it started 21+ years ago. Bill's imagery has graced books, magazines, calendars, business promotions, TV, and websites for over four decades. For just over three years, Bill has called the Phoenix, Arizona region home.

**BILL LOVE's Reptile Photo Seminar - Scottsdale, Arizona      Sept. 11 - 14, 2014**

### **Using Social Media to Reach Your Audience**

**Robyn Markland, Chad Brown, and Brian Barczyk**

The Reptile Report

Robyn@TheReptileReport.com  
www.TheReptileReport.com

Whether you want to develop and reach an audience for commercial purposes, or for educational/informational purposes, there are social media platforms that are effective tools in achieving your goals. We will give an overview of the different platforms that are available, the pros and cons of each, and give some insight and tips on how to best make use of these powerful marketing tools. Great information for the breeder looking to grow their customer base, but also valuable for the zoo, institution or herp society looking to build a larger, more cohesive and involved community.

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## **Application Specific Zoological Lighting Design-Zonal UVA/B**

**Edward Newell, CEM, IALD, IES**

Lighting Design & Specification-RTM Lighting & Electronics-Plasmalyte

What is Application Specific Zoological Lighting Design and why is It Important?

Time and technology have proven the mortal enemy of zoological lighting in most if not all animal habitats and applications. Typical goals for enclosure design privilege the substrate, furniture, accessibility, aesthetic background murals, etc. Moreover, and in most cases, lighting takes a back seat and is rarely or properly incorporated, designed, implemented, and/or deployed. In fact, it is commonly left as an adder once enclosure construction is complete. Primarily our goal is to provide design implementation and specification of zoological-grade, high output light sources that fill application specific niches within the community-specifically Herpetology and Aquatics. Because of the UVAI (340nm>400nm), UVAIL (32nm>340nm), and specifically UVB (290nm>320nm) requirements of many reptile species found within the zoological community, we (Plasmalyte and RTM Lighting & Electronics) along with strategic zoological facilities have been testing, modifying, redesigning, and deploying high output UVB light sources since early January 2012.

Watt for Watt, Light Emitting Plasma (LEP) has the largest full-spectrum lighting array of any high output light source available today. Within this array are high levels of projected UVB. LEP fixtures (Plasmalytes) use an RF power supply that converts electrical power to radio frequency (RF) power, a process that vaporizes the contents of the LEP bulb to a plasma state, generating an extremely bright full-spectrum source of light.

Plasmalyte & RTM have had successful deployment of LEP at zoological facilities around the country and continue to further the research of LEP within zoological applications worldwide.

Edward Newell has a background in lighting design and specification incorporates projects residing in many disciplines from Commercial, to Industrial, Department of Defense, Department of Homeland Security, and Zoological. Over the last few years, I have spent an exorbitant amount of time working with curators and keepers to create optimum naturally lit environments for as many species as possible. At this point, I believe we have units over roughly 35 species-most of which are Herps and/or Aquatic Reptiles. I have committed myself to furthering Light Emitting Plasma (LEP) technology as a specified light source for application specific lighting design within the Herpetological field as well as many other disciplines. Our focus has been the recreation of natural species specific environments for the purpose of elevating captive animal health and quality of life. Working closely with such organizations as San Diego Zoo Global, Los Angeles Zoo and Botanical Gardens, and the Fort Worth Zoo-Museum of Living Art (MOLA), I have acquired a plethora of knowledge that has been incorporated in fixture design and modification for individual applications

### ***Abronia* - The Arboreal Alligator Lizards of Mesoamerica**

**Rob Nixon**

sapo1047@msn.com

Composed of 28 recognized species, the genus *Abronia* is the most species-rich member of the subfamily Gerrhonotinae, the alligator lizards. Ranging from northeastern Mexico, south to El Salvador and Honduras, the arboreal alligator lizards typically inhabit high elevation pine-oak and cloud forests. *Abronia* species are largely allopatric, with few exceptions where the distribution of two species overlap. *Abronia* are considered

among the most endangered of all lizards due to the large-scale deforestation of the montane forest communities in which they occur, combined with limited geographic distribution. This presentation will attempt to provide a glimpse into the natural history of these fascinating lizards and discuss various aspects of captive husbandry.



Rob Nixon has a life-long interest in natural history. Since 1996, he has worked as a biologist, living in the Mojave and Sonoran Deserts. His interests and experience conducting field studies on a variety of organisms throughout the southwestern United States and Mexico has given him familiarity with the remarkable flora, fauna, and cultures indigenous to these regions and their relationships with the environment.

### **Update: Captive Husbandry and Reproduction of the Giant Horned Lizard (*Phrynosoma asio*), at The Los Angeles Zoo and Botanical Gardens**

**Marlowe Robertson-Billet**

This presentation intends to update information about the ecology, captive husbandry, reproductive biology and propagation techniques developed for the Giant Horned Lizard (*Phrynosoma asio*) at the Los Angeles



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Zoo. The Los Angeles Zoo is involved in a long term comprehensive collaborative study of the herpetofauna of Western Mexico. In August of 2008, a group of two males and one female were acquired from the wild for study and exhibition at the Los Angeles Zoo's Herpetarium. The natural history of this uncommon Mexican endemic horned lizard is poorly understood. One of the goals of bringing this species into captivity has been to understand and document nutritional requirements, social and reproductive behaviors and husbandry requirements. Reproduction was successfully accomplished each of the past four breeding seasons through the manipulation of environmental parameters, mimicking those found seasonally in their native habitat. As a result of these efforts, the Los Angeles Zoo became the first zoo to successfully hatch and rear *Phrynosoma asio* neonates. The information gathered through diligent efforts will serve as a baseline for future propagation and successful housing of *P. asio* and similar species in captivity.

Full time Animal Keeper in the herpetology department. Marlowe is primarily responsible for the care of lizards, amphibians, turtles, and fish. Marlowe cares for many of the zoos breeding groups and is responsible for the majority of neonate care. She has particular interest in behavior, training, development, and genetics.

## **Springtime in the Western Cape Province: Mostly Tortoises**

**Vince Scheidt**

South Africa, at the bottom of the world, supports the richest endemism on earth, with over 10,000 species of flowering plants and the greatest diversity of tortoises to be found anywhere. This presentation focuses on the Mr. Scheidt's recent trip to this magnificent country, where he explored the amazing flora, fauna and landforms of the Western Cape Province.

Mr. Scheidt is an honorary member of the IHS Board of Advisors. He has been a continuous attendee at IHS meetings since 1982.

## **Husbandry and Breeding Protocols for the Mexican Axolotl (*Ambystoma mexicanum*) with an Introduction to New Morphs**

**Jay Sommers**

[www.axolotl.net](http://www.axolotl.net)

As a young child, like many of us, Jay Sommers was fascinated with reptiles and amphibians. He grew up catching frogs, toads, turtles, and snakes on the land surrounding his family's home. It was at the age of eight, while vacationing with his grandparents in Mexico, that he laid eyes on a truly amazing creature, his very first gecko. This experience triggered a lifelong obsession.

Now, 30 years later, after acquiring over 300 species represented by over 60 genera of gecko and almost 100 other reptile and amphibian species, Jay has amassed one of the most diverse collections of reptile and amphibian species. In keeping with his broad herpetological interests, aquatic amphibians were incorporated from the beginning. Jay produced the first leucistic Spanish ribbed newt (*Pleurodeles waltl*) and multiple new morphs of Axolotl, and is the only person who consistently breeds the Suriname toad (*Pipa pipa*).

## **Copperhead Heaven**

**Kristofer Swanson**

Katy Snakes

Over a period of years, Texas Parks and Wildlife had received a number of calls from a gentleman who had claimed his property was overrun with copperheads. He needed help, but his situation was questionable because such an outlandish claim could only be the product of exaggeration. In an effort to gain a grasp of the scenario, the agency called upon a team of local field herpers led by Kristofer Swanson of Katy Snakes. TP&W requested that the team meet the gentleman in person, accurately evaluate his situation, and lend whatever assistance could be given. Prepared upon their arrival to hear an embellished snake tale from the gentleman, the team could never have imagined what they would actually find in the fields of Sweeny, TX. Since that first meeting, the team has been on a continued quest to find a use for the multitudes of snakes they found, to collect as much data as possible, and to pursue assistance, information, and *contortrix* as they continue their sweaty night hunts in the Texas summer heat. The following is an account of what this team found, what they've learned, and what they haven't. Most of all, the team hopes to unravel the mystery of 'Copperhead Heaven'.

## Not Saved: Snakes in Church

**Kristen Wiley**

Kentucky Reptile Zoo  
Slade, KY 40376 USA

Religious snake handling has existed in the US since the early 1900s. The most common snakes used in snake-handling ceremonies are Timber Rattlesnakes, *Crotalus horridus*, Copperheads, *Agkistrodon contortrix*, and occasionally Cottonmouths, *Agkistrodon piscivorus*. This presentation is an effort to demystify religious snake handling and explain why handlers are rarely bitten, and why bites that do occur are rarely fatal. Snakes used in church services are frequently deprived of proper care, including being kept with no water, held in overcrowded boxes, and left to sit in feces and urates for long periods of time. Snakes that are stressed and dehydrated quickly fall prey to infections of various types. When these snakes are then used in handling services, they are unlikely to bite and can be incapable of injecting a large quantity of venom. Additionally, the handling methods used in church services are disorienting and stressful to the snakes, making it difficult for them to strike effectively. Scientists who work with pitvipers should be aware of the abuse these animals endure when being kept for the purpose of religious services.



nutjob.

## Komodo Dragons: Captive Management, Breeding, Incubation, and Rearing of Offspring at the Los Angeles Zoo

**Byron Wustig**

An animal keeper on the herpetology team at the Los Angeles Zoo since 2007, Byron is primarily responsible for the care of the Komodo Dragons, *Tomistoma* and most of the zoo's desert herps. He has a background in Exotic Animal Training and is especially interested in desert reptiles and invertebrates. Byron studied Biology at UC Davis and received certificates in both Exotic Animal Training and Wildlife Education from America's Teaching Zoo at Moorpark College.



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## 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).

JOSEPH LASZLO  
1935 - 1987



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, General Curator, 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, National Reptile Breeders' Expo, 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

# NOTES

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