



34th International Herpetological Symposium
July 27 - 30, 2011
Fort Worth, Texas USA



DALLAS WORLD



AQUARIUM



IHS OFFICERS

President

Bob Ashley P. O. Box 376 Rodeo, NM 88056 (575) 575-5757
e-mail: ecoorders@hotmail.com

Vice President

Ken Foose Las Vegas Exotic Pets 2105 N. Decatur Las Vegas, NV 89108
(702) 631-7387 e-mail: ExoticPetsLV@aol.com

Treasurer

Giovanni Fagioli The Bean Farm 32514 NE 77th St. Carnation, WA 98014
(425) 861-7964 e-mail: beanfarm@beanfarm.com

Secretary and Grants Program Chair

Frank Lundburg P. O. Box 6329 Boise, ID 83707 e-mail: teguix@aol.com

Immediate Past President

Joseph P. Marek, Jr. 10411 Balsamwood Ct. Laurel, MD 20708
e-mail: joseph.p.marek.jr@verizon.com

IHS ADVISORS

James Badman

Jeff Barringer

Vince Scheidt

Vicky Poole

Jon Coote

David Doherty

Randal Berry

Theresa Moran

Dennis Johnston

Bill Love

Russ Gurley

Emmanuel Van Heygen

Publication Design and Layout

Russ Gurley P. O. Box 321 Ada, OK 74820 e-mail: russgurley@cableone.net
www.livingartpublishing.com

Thank you to Theresa Moran for supplying us with the quotes found within this program.

Cover photo: Northern Arboreal Alligator Lizard, *Abronia taeniata*. Photo by Rob Nixon.

July 1st, 2011

Dear Friends and Colleagues,

More than 35 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 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 you are a reptile breeder, a budding full-fledged herpetologist, a natural historian, a wildlife artist, a student, a veterinarian, a zoo keeper, or an academician, IHS always has something for you.

Bob Ashley, IHS President

SPEAKER SCHEDULE

Thursday, 28 July 2011

OPENING REMARKS & INTRODUCTIONS

9:00 – 9:10 AM

KEYNOTE ADDRESS

9:10 – 9:50 am

The Value of Herpetoculture

Louis Porras

9:50 - 10:25 am

Alan Kardon - "Alligator Lizards to Palm Vipers - Husbandry & Propagation of New World Montane Herpetofauna"

10:25 - 11:00 am

Michael S. Price - "Herp Diversity of the Western Sierra Madre Oriental (Coahuila, Nuevo Leon and Tamaulipas)"

11:00 - 11:15 am Morning Break

11:15 - 11:45 am

Danté Fenolio (presented by William Lamar) - "Life in the Dark: Wildlife That Spends All or Most of Their Lives in the Shadowy Corners of our Planet"

11:45 - 12:20 pm

Thomas Eimennacher - "Phylogeography and Diversity of Snakes in Southern Africa"

12:20 - 1:45 pm Lunch Break

1:45 - 2:15 pm

Dr. Gary Ferguson - "Field Observations on the Activity, UV-exposure and Temperature Environments of the Texas Horned Lizard *Phrynosoma cornutum*: Implications for Captive Maintenance and Management."

2:15 - 2:45 pm

Ari Flagle - "Boelen's Python Thermal and Ultraviolet Basking Observations"

2:45 - 3:15 pm

Matt Edgar - "Aiding Armenian Vipers"

3:15 - 3:30 pm Afternoon Break

3:30 - 4:00 pm

Emmanuel Van Heygen - "Sympatric Ecology of the genus *Phelsuma* (Sauria: Gekkonidae) on a Peninsula in northwest Madagascar"

4:00 - 4:45 pm

Danté Fenolio (presented by William Lamar) - "The Darwin's Frog Conservation Initiative"

4:45 - 5:15 pm

Tim Cole - "Current Texas Herpetological Laws and Proposals"

5:15 - 6:00 pm

Andrew Wyatt - "Evolution of the Modern Reptile Industry; Politics & Economics"

Friday, 29 July 2011

9:00 - 9:30 am

David Lazcano - "Variation in Body Weight in Three Mountain Species *Crotalus aquilus* (Klauber, 1952), *Crotalus lepidus* (Kennicott, 1861) and *Crotalus willardi* (Meek, 1905) in Captive Conditions"

9:30 - 10:00 am

Ed Pirog - "Notes on the Chaco Tortoise, *Geochelone chilensis*"

10:00 - 10:30 am

Shannon T. Ferrell, DVM "Reptile Conservation Medicine at the Fort Worth Zoo"

10:30 - 10:45 am Morning Break

10:45 - 11:15 am

Russ Gurley - "Keeping and Breeding Blue Tegus"

11:15 - 12:00 pm

Dr. Bryan Grieg Fry - "Origin and Diversification of the Reptile Venom System"

12:00 - 1:30 pm Lunch Break

1:30 - 2:00 pm

Dr. Neil Ford - "The Role of IGF-1 in Control of Growth and Maturation in Snakes"

2:00 - 2:30 pm

Tell Hicks - "A Herpetological Artist and Rattlesnakes"

2:30 - 2:45 pm Afternoon Break

2:45 - 3:30 pm

Jennie Erin Smith - "The Great Rift: *Stolen World* and the Long, Bitter Divorce of Specimen Collectors and Institutional Science"

3:30 - 4:00 pm

Randal Berry - "Texas Zoos, Then and Now"

4:30 pm – Buses Leave for the Fort Worth Zoo in Front of the Hotel
6:00 until 10:00 pm – Dinner at the Fort Worth Zoo's Crocodile Café
& Behind the Scenes Tour of MOLA (Museum of Living Art)

Saturday, 30 July 2011

9:00 - 9:30 am

Bradley Lawrence "Monitoring Texas Horned Lizards in the Rolling Plains of Texas"

9:30 - 9:50 am

Nathan Haislip - "Variation in Susceptibility to Ranavirus Among Tadpole Developmental Stages"

9:50 - 10:30 am

Bekky Muscher & Judith Bryja - "Chasing Dragons, Komodo Dragon Field Work 2010"

10:30 - 10:45 am Morning Break

10:45 - 11:30 am

Cindy Steinle - "The Evolution of Women in the Reptile Community"

11:30 - 12:00 am

Jeff Barringer - "Information Systems: Their Role and Impact on Herpetology and Herpetoculture in the 20th & 21st Century"

12:00 - 1:30 pm Lunch Break

1:30 – 2:00 pm

Andy Reeves – “Overview of Omaha’s Henry Doorly Zoo’s Amphibian Conservation Area”

2:00 - 2:30 pm

Corey Roelke Ph.D. - “Species Level Status of the Albertine Rift Endemic Karissimbi and Kiru Treefrogs: and a Case Study on the IUCN Red List Categories and Criteria”

2:30 - 3:15 pm

Mohammed Ayoub Haji Simai, et al. - “The Reptiles and Amphibians of Zanzibar in Contrast to Environment and Education at Zala Park - Zanzibar”

3:15 - 3:30 pm Afternoon Break

3:30 - 4:00 pm

Doug Hotle - “Multidisciplinary Collaboration Approach to Herpetology”

4:00 - 4:45 pm

Bill Love - “The Art of Fieldherping”

6:30 pm to 12:00 am

IHS Banquet at the Hotel with Banquet Keynote Speaker:

Mark O’Shea

“Herp Quest in Timor-Leste”

ABSTRACTS

Information Systems; Their Role and Impact on Herpetology and Herpetoculture in the 20th & 21st Century

(My snake has a Facebook page and my Iguana has more Twitter followers than Ashton Kutcher so why can't I figure this \$#!* out?)

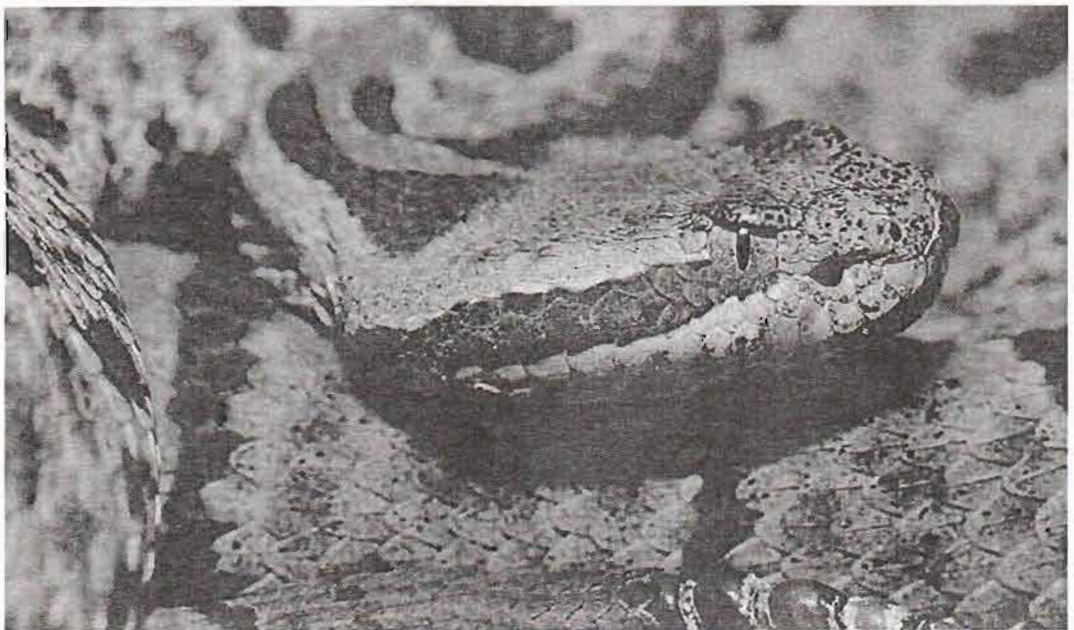
Jeff Barringer

What is the internet? In 1996 that was the main subject of Jeff Barringer's talk at the East Texas Herpetological Symposium in Houston where he introduced hundreds of reptile people to the World Wide Web for the first time. His talk foresaw the rise of the internet as a media force, the slow death of paper based media, live video and audio streaming, internet access in the third world via cell phone, IP based telemetrics, the use of GPS technology by the general public, and how these technologies and more would apply to reptiles and the reptile community. Now in 2011, fifteen years later, the internet and it's many facets and technologies have not only equaled Jeff's vision, but far surpassed them, becoming intertwined with the daily lives of virtually everyone on the planet.

The founder of kingsnake.com, Jeff Barringer returns to discuss how technology will change our lives, and the lives of our reptiles, over the next 15 years. What does the future look like? Come find out.

Jeff Barringer is a former International Network Engineer for Compaq Computer's Networking Products Division where he was responsible for developing many of their first web technologies, as well as consulting with agencies such as the NSA, US Army Special Operations Command, and the White House on secure network design and implementation. His first reptile web page, The Altema Page, first appeared on the internet in 1994 and led to the launch of kingsnake.com in 1997, arguably the largest and most popular reptile and amphibian site on the web.

Jeff lives in Georgetown Texas with his 2 dogs and his parrot and is now involved in a variety of internet sites, but along with a number of staff members and volunteers still spends most of his time operating kingsnake.com.



Crotalus lepidus morulus from Nuevo Leon, Mexico. Photo by Michael Price.

Texas Zoos, Then and Now

Randal Berry

Randal Berry
Herpetology Dept.
Little Rock Zoo
#1 Jonesboro Dr.
Little Rock, AR 72209

A look back at reptile and amphibians exhibited in Texas Zoos. A few Texas Zoos, especially Dallas and San Antonio, were in the forefront of propagating rare and unusual herps in the mid 1970's. Then along came Houston, Brownsville, etc. I will focus on some of these projects along with what zoo's won the prestigious Edward Bean Award. The Edward H. Bean Award is a historic award within AZA. It originated as recognition for the most significant birth or hatching of a species and/or subspecies. Later it also began to recognize propagation or management programs as first births/hatchings became less frequent and collection management focused increasingly on long-term programs and commitments..

I was "introduced" to Texas herp keeping in 1987, when I landed my first zoo job in Lufkin, Texas. I had already heard names like, Laszlo, Kardon, Murphy, Barker, etc. I couldn't wait to meet these guy's and pick their brains. I would spend my weekends driving to Houston to hang with Karl Peterson, Paul Freed, etc. Then other weekends drive to Dallas and meet Don Boyer, Steve Hammack, Ardell Mitchell, Dave Barker, and Jim Murphy. ALL of these folk's were very kind and put up with my persistent questions and annoyances. I will also present the curators, keepers, and a few Directors who were credited with amazing discoveries regarding their charges. Many of them will be in the audience today.

Texas Zoos have always been rich in herpetoculture and a friendly competition was exhibited among zoos. Who had the rarest? Who bred this specie first? What was their method? It went on and on, yet, everyone was willing to cooperate with each other.

Current Texas Herpetological Laws and Proposals

Tim Cole

(512) 83-SNAKE

www.AustinReptileExpo.com

www.AustinReptileService.net

I will address issues such as Collectors and Commercial Permits for native and exotics and how many have them, Whitelist & Blacklist, Breeding, Road Hunting, Herp Stamp, and Confiscation scenarios. I will also address Senate Bills and House Bills that concern these topics.

"The old familiar whir of a rattle sounded from that ledge – sweet music to my ears!"

Carl Kauffeld
Snakes and Snake Hunting

Phylogeography and Diversity of Snakes in Southern Africa

Thomas Eimermacher

Department of Biology and
Amphibian and Reptile Diversity Research Center
University of Texas at Arlington
Arlington, TX 76019-0498

Southern Africa is known for its tremendous levels of diversity, with its reptile diversity being one of the richest in the world and the richest on the African continent. Yet despite these high levels of diversity, only relatively few of phylogeographic studies focus on southern African systems. Among reptiles alone, the vast majority of species of southern African reptiles are considered to be taxonomically problematic, which indicates a pressing need for broad systematic reviews of many of the reptile genera that are distributed in this region. In this work, we chose several common snake species to study phylogeographic patterns among southern African snakes, and to infer the mechanisms that generated this diversity. Over the course of several field collecting trips, we were able to accumulate samples from throughout the region. We constructed datasets utilizing multiple mitochondrial DNA markers, and conducted phylogenetic reconstructions using various frameworks. Here we present preliminary results and potential taxonomic implications, along with memorable anecdotes from the field.

Aiding Armenian Vipers

Jeff Ettl, Curator of Herpetology – Saint Louis Zoo

* Presented by Matt Edgar, Keeper/Herpetology – Saint Louis Zoo

The Armenian viper, *Montivipera raddei* is a medium-sized snake with a known range that includes Armenia, northwestern Iran, eastern Turkey, and northeastern Iraq. Agricultural activities have severely modified and fragmented the habitat of the Armenian viper. In addition, the species is also threatened by over-collection for the pet trade, human persecution and possibly warfare.



Armenian viper, *Montivipera raddei*. Photo by Jeff Ettl.

In the mid- 1960's population densities of Armenian vipers were estimated at 20 – 50 snakes/hectare. Current reports indicate that population densities are 4 – 10 vipers/hectare and that populations are declining.

Several Russian herpetologists have studied the ecology of the Armenian viper in the mountains of Armenia, and briefly described reproductive behavior and timing of mating. However, data on habitat use, home range size, movement patterns, seasonal activity and population structure are lacking. Given the fragmented distribution of the Armenian viper and the ever increasing human impact on its population numbers and habitat, a comprehensive conservation management plan is needed. The Saint Louis Zoo's WildCare Institute Center for Conservation of Near East Mountain Vipers has been collaborating with colleagues from the Armenian Academy of Sciences since 2004 on a long-term investigation of the spatial ecology and population structure of the Armenian viper.

Life in the Dark:

Wildlife That Spends All or Most of Their Lives in the Shadowy Corners of Our Planet

Danté B Fenolio, MS, Ph.D.
Amphibian Conservation Biologist
Atlanta Botanical Garden
Center for Conservation
1345 Piedmont Ave.
Atlanta, GA 30309

* Presented by: William Lamar, Department of Biology, University of Texas at Tyler

Life forms eek out a living in the darkest reaches of our planet's biosphere (the thin strip around the globe where life is found). In fact, most folks don't realize just how many habitable places there are on Earth with little or no light. These lightless haunts include the inky black depths of our oceans, rivers, and lakes. They involve the absolute darkness of subterranean habitats. Subterranean habitats come in the form of underground rivers and lakes as well as dry or damp passageways. These passageways vary from cracks in rocks to massive caverns that humans can pass through. Other lightless habitats include spaces within the soil and sand, burrows, compartments within structures like termite mounds and rotting logs, pockets beneath leaf litter, and even the space inside of other organisms. Further, there are entire communities of nocturnal organisms that spend their days in hiding while active at night... another community of organisms exploiting the dark. All of these habitats or activity periods receive little or no light; yet, life persists and thrives within them. Danté Fenolio was awarded a grant to produce a photographic book focusing on this group of life forms. His talk will include images slated for use in the project and will provide a rare preview of the project. Because Danté works with amphibians and reptiles, his talk will have a healthy dose of those creatures strewn throughout. But there is something for everyone in this presentation from termite mound inhabitants to deep sea fishes to insects found nearly 100 feet above the forest floor in Madagascar.

"... keeping live snakes at once brands him as an eccentric who's every action henceforth is scrutinized for further psychopathic manifestations."

Carl Kauffeld
Snakes: The Keeper and The Kept

The Darwin's Frog Conservation Initiative

Danté B Fenolio, MS, Ph.D.
Amphibian Conservation Biologist
Atlanta Botanical Garden
Center for Conservation
1345 Piedmont Ave.
Atlanta, GA 30309

* Presented by: William Lamar, Department of Biology, University of Texas at Tyler

Darwin's Frogs of the genus *Rhinoderma* are extraordinary amphibians; only two species of frogs on Earth brood young within their vocal sacs, both are Darwin's Frogs. Male frogs wait nearby to fertile egg masses on the forest floor. When the eggs are hatching, they take tadpoles into their mouths. The tadpoles are manipulated through the vocal slit below the tongue and into the vocal sac. In *Rhinoderma darwini*, all remaining developmental stages take place within the vocal sac. Somewhere around 65 days later, the adult male "coughs up" fully developed baby frogs. As is the case with so many species around the globe, Darwin's Frogs are in serious trouble in the wild. Habitat alteration and emergent infectious amphibian diseases threaten these frogs. The Atlanta Botanical Garden's amphibian conservation program and the National Zoo of Chile in Santiago have teamed up to create a captive breeding center for Chile's endangered amphibians. Today, a fully functional facility exists on grounds of the zoo in Chile with breeding Darwin's Frogs inside. The facility is on public exhibit at the zoo. The program now looks to expand its efforts to work with several of the many endemic amphibian species of Chile's temperate rainforests that are facing extinction.

Field Observations on the Activity, UV-exposure and Temperature Environments of the Texas Horned Lizard *Phrynosoma cornutum*: Implications for Captive Maintenance and Management.

Gary Ferguson

Department of Biology
Texas Christian University
Fort Worth Texas 76129

g.ferguson@tcu.edu

The Texas horned lizard *Phrynosoma cornutum* is a species listed by Texas Parks and Wildlife as threatened and listed federally as a species of concern. Its populations have been declining, especially in the eastern part of its range. Efforts to maintain, breed and exhibit the species in captivity have been only sporadically successful. This is probably due in large part to poorly understood food and other environmental requirements. One such requirement is the need for ultraviolet-B (UVB) light exposure, which enhances endogenous vitamin D synthesis. Field observations during the past three years at the Matador Wildlife Management Area in Cottle Co., Texas have provided new insight into the natural UVB exposure of horned lizards. Based on these observations recommendations for appropriate UVB exposure in captivity are presented.

Reptile Conservation Medicine at the Fort Worth Zoo

Shannon T. Ferrell, D.V.M., Dipl. ABVP (Avian), Dipl. ACZM, NREMT-B
Clinical Veterinarian
Fort Worth Zoo
Fort Worth, Texas

Abstract: The Fort Worth Zoo has been consistently involved in the field conservation of reptile fauna through a combination of education, direct research efforts, and technical medical assistance. Projects have varied from the state of Texas to as far as Asia utilizing both our conservation biology staff and veterinary medical personnel. Three specific projects to examine will be: 1) the status of *Pseudemys gorzugi* (Rio Grande River Cooter) in Texas river systems, 2) a reintroduction project using radiotransmitters in the Anegada Iguana (*Cyclura pinguis*), and 3) a recent education workshop for veterinarians in India on chelonian medicine and surgery sponsored in part by the Turtle Survival Alliance. The underlying theme throughout these efforts is the developing field of conservation medicine which is a multidisciplinary approach looking beyond the simple preservation of a species in isolation. By combining human health, animal health, and ecology concerns, conservation medicine attempts to integrate these interrelated areas to affect viable, acceptable, and long-lasting solutions to complex situations. The Fort Worth Zoo will continue to expand its role in reptile conservation through either direct support or ancillary involvement through one of her umbrella conservation organizations.

Observations of Thermal and Ultraviolet basking in a Female *Boelens python Morelia boeleni*

Ari R. Flagle

Terrestrial Ectotherm Department
Fort Worth Zoo
1989 Colonial Parkway
Fort Worth, TX 76110
817-759-7194
herp@fortworthzoo.org

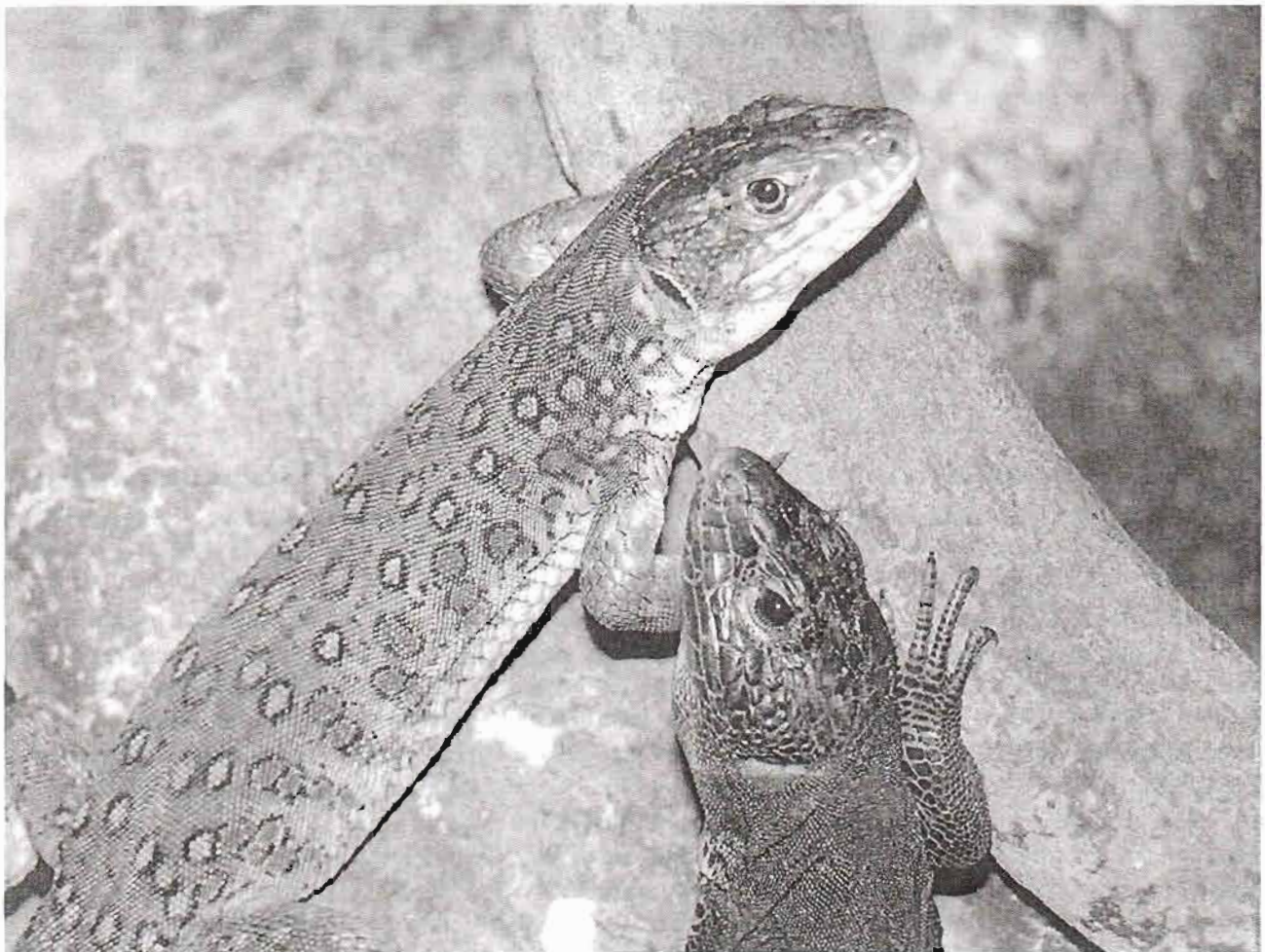
Ultraviolet (UV) light from the sun enables the skin of vertebrates to produce vitamin D that is a vital requirement for survival. There has always been a debate whether or not snakes require UV exposure for vitamin D synthesis. Some species of snakes are exposed to UV in nature and may require its use and higher exposures during the more critical periods of their life... We monitored for 9 months the UV exposure of one long-term captive female Boelens's python at the Fort Worth Zoo. The snake actively sought exposure to the UV light source during that period of the year when developing follicles and when receptive to courtship by a male. Preliminary observation on a second female showed a similar periodic attraction to her UV source. The attraction of both females was independent of attraction to a separate localized heat source provided by a flood lamp.

The Role of IGF-1 in Control of Growth and Maturation in Snakes

Neil B. Ford and Anne M. Bronikowski

Dept. of Biology, Univ. of Texas at Tyler, Tyler TX 75799 and
Dept. of Ecology, Evolution and Organismal Biology, Iowa State University, Ames, IA 50011

The endocrine system regulates the expression of key life-history traits such as growth rates, and timing and magnitude of reproductive events. The hormone insulin-like growth factor-1 (IGF-1) is of particular interest in this control because it can exert far-reaching effects on growth, reproduction and lifespan. In experiments in our lab, brown house snakes (*Lamprophis fuliginosus*) on different levels of feeding exhibited plasma with levels of IGF-1 correlated to their diet. For this snake IGF-1 levels appear to serve as an index of nutritional status and not only were correlated to growth rates but apparently signal somatic readiness to mature. IGF-1 is known to stimulate the production of gonadotrophin hormone in other animals and may be the mechanism for triggering the onset of maturity in snakes. In field studies in northern California, we have found that in two ecomorphs of the western garter snake (*Thamnophis elegans*) IGF-1 controls the growth rates and maturation of each population and appears to be correlated to the lifespan of the ecomorph. The role of IGF-1 in a number of other aspects of life-history still needs to be determined and such be an important area for research.



Jewelled Lizard, *Timon lepidus*. Normal (left) and melanistic (right). Photo by Russ Gurley.

Origin and Evolution of the Reptile Venom System

Bryan Grieg Fry

Associate Professor

Venom Evolution Laboratory
School of Biological Sciences
University of Queensland
St. Lucia, Qld 4072 Australia

Due to significant differences in anatomy of the venom delivery system and distant phylogenetic relatedness, it had been long assumed that the venom systems of the snakes and the lizards were independently evolved and that the helodermatids were the only venomous lizards. Further, venom was considered to have arisen several times independently within the snakes. Confounding the understanding of the evolution of the venom system was the limitation of the understanding of the organisms themselves. Resolution of the higher order relationships greatly facilitated the resolution of the origin of venom. The development of molecular systematics provided the vital phylogenetic framework necessary for a reconstruction of the evolutionary history of the glands and fangs and thus a resolution of fundamental aspects. The single origin of venom in reptiles was revealed to have occurred approximately 166 million years ago during the Jurassic period the common ancestor of the snakes and two lizard clades (Iguania and Anguimorpha). A clade we named Toxicofera. The maxillary venom glands underwent extensive diversification in snakes, mandibular glands were diversified in the Anguimorpha lizards, while conversely the venom system remaining of little or no ecological importance within the Iguania, only trivial further diversification occurred within this lineage.

Keeping and Breeding Blue Tegus

Russ Gurley

TURTLE and TORTOISE PRESERVATION GROUP

P. O. Box 321

Ada, OK 74821-0321 USA

ttpg@cableone.net

www.ttpg.org

Russ Gurley will present a look at the Blue Tegu (*Tupinambis meriana*) a large teiid lizard from northern South America. The genus *Tupinambis* includes seven described species; *Tupinambis meriana* (Argentine Black and White Tegu), *Tupinambis rufescens* (Red Tegu), and *Tupinambis teguixin* (Colombian Tegu, Gold Tegu, or Common Tegu) which are all common in the pet trade, and four other species that are rarely seen in captivity.

The Blue Tegu's origin in herpetoculture is somewhat of a mystery. The story goes that six to ten unusual looking tegus arrived at a Florida reptile importer's mixed in with a shipment of Gold Tegus. These animals were pulled from the group and became the founders of a group of what became known in the hobby as Blue Tegus because several of the males were a "powdery blue" in coloration. The name Blue Tegu was used more as a marketing tool than as a true description of most of the animals produced from these founders. Though they are considered simply a variation of the larger, Black and White Tegu (*T. meriana*), there are certainly many differences between them and *T. meriana* and will no doubt (in my mind) be split out as a separate species or subspecies in the future. These tegus are smaller than the Argentine Black and White Tegu and the Red Tegu, their hatchlings are quite different from the two, and they are also much more docile

and less aggressive with mates and intruding keepers. Russ will give an overview of the history of this species in captivity, its captive care and his efforts to breed and raise hatchlings of this beautiful South American lizard.

Variation in Susceptibility to Ranavirus Among Tadpole Developmental Stages

Nathan A. Haislip, Matthew J. Gray, and Jason T. Hoverman

Terrestrial Ectotherm Department
Fort Worth Zoo
1989 Colonial Parkway
Fort Worth, TX 76110
817-759-7194 herp@fortworthzoo.org

Amphibian populations are declining globally and one cause is emerging infectious diseases. Ranaviruses are responsible for the majority of amphibian mass mortality events in North America, yet research into factors that govern host susceptibility is limited. Our objective was to compare host susceptibility among four developmental stages for seven amphibian species. Each stage was exposed to 10^3 PFUs of *Ranavirus* in a water bath for four days and survival monitored for 14 days. The egg stage was least susceptible compared to hatchling, larval, and metamorph stages. *Lithobates sylvaticus* and *Scaphiopus holbrookii* were the most susceptible species with 85-100% mortality across stages. Using stage-specific estimates, the likelihood of survival from egg through metamorphosis when exposed to ranavirus was 7% across species. Our results indicate that ranavirus is capable of causing catastrophic mortality in larval amphibian populations, but this likelihood depends on species and developmental stage.

A Herpetological Artist and Rattlesnakes

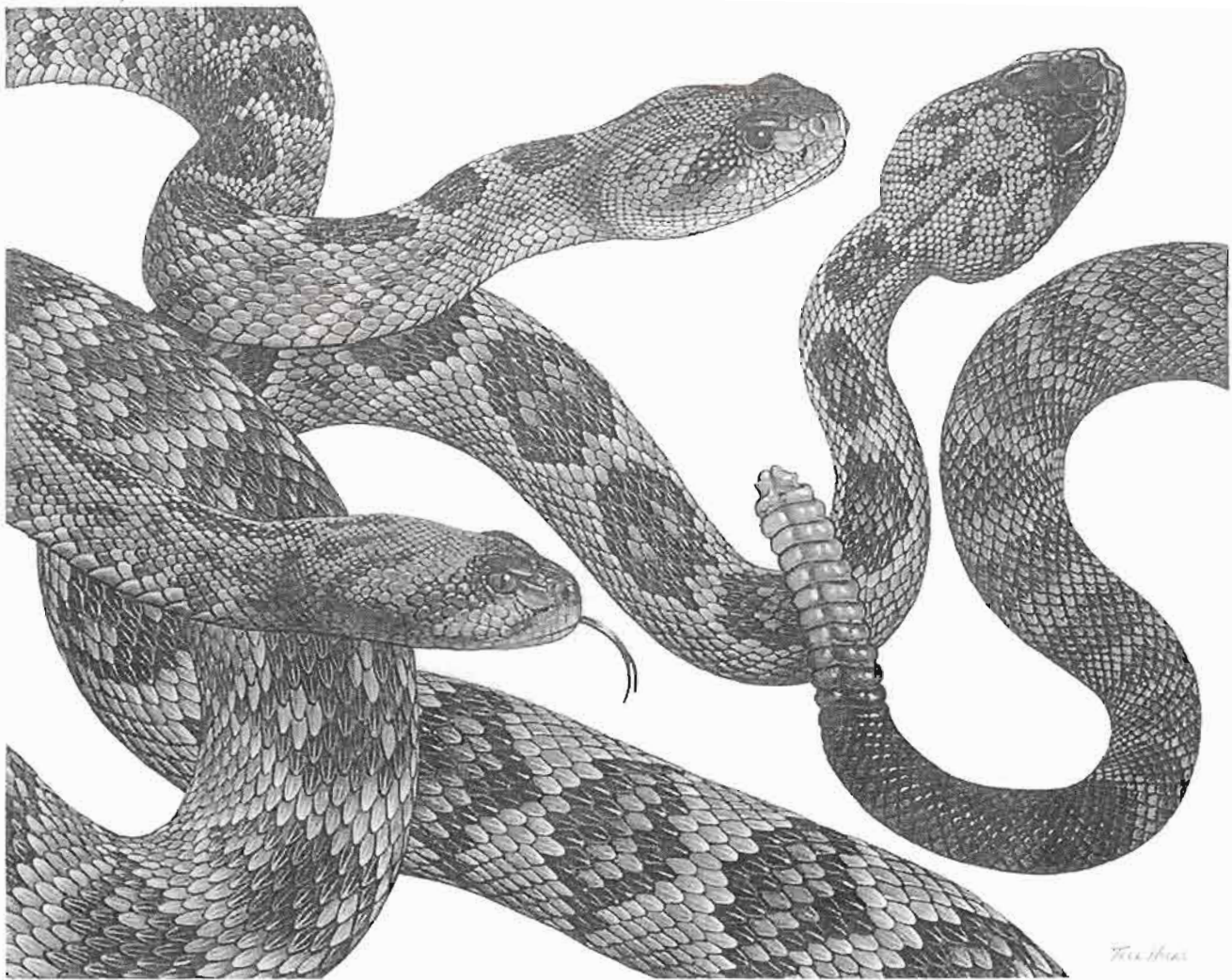
Tell Hicks

Artist
www.tellhicks.com

Since I caught my first venomous snake at the age of ten, I've been hooked on field herping. My passion has taken me around the world to see and photograph reptiles in the wild.

In recent years my attention has been concentrated on the deserts and mountains of the American Southwest, to gather the information and photographic material required to produce a collection of rattlesnake portraits. These paintings will eventually be used to illustrate a book on the rattlesnakes of Arizona.

This talk displays my efforts, to date, and highlights some of the experiences that come with the pursuit of rattlesnakes and herping in remote places.



Black-tailed Rattlesnakes. Painting by Tell Hicks.

Multidisciplinary Collaboration Approach to Herpetology

Douglas L. Hotle

Curator of Herpetology
Albuquerque Biological Park
903 Tenth Street SW.
Albuquerque, NM 87102

E-mail: dhotle@cabq.gov

Tel: (505) 764-6265

Fax: (505) 764-6281

There are many scientific disciplines that have an interest in herpetology. Field researchers, zoologists, toxinologists, clinical physicians, zoo and museum professionals are just a few of the specialists who are focused on the behaviors, physiology and phylogeny of these animals. Conversely, the majority of these individual disciplines sometimes have very different objectives. Significant observations, husbandry techniques, reproductive insights, population localities, venomics and other information that is important to all of these scientists often remains unshared. Because of these separate directions, many scientists fail to recognize the importance of sharing information with one another. What may be common knowledge to a zoo professional

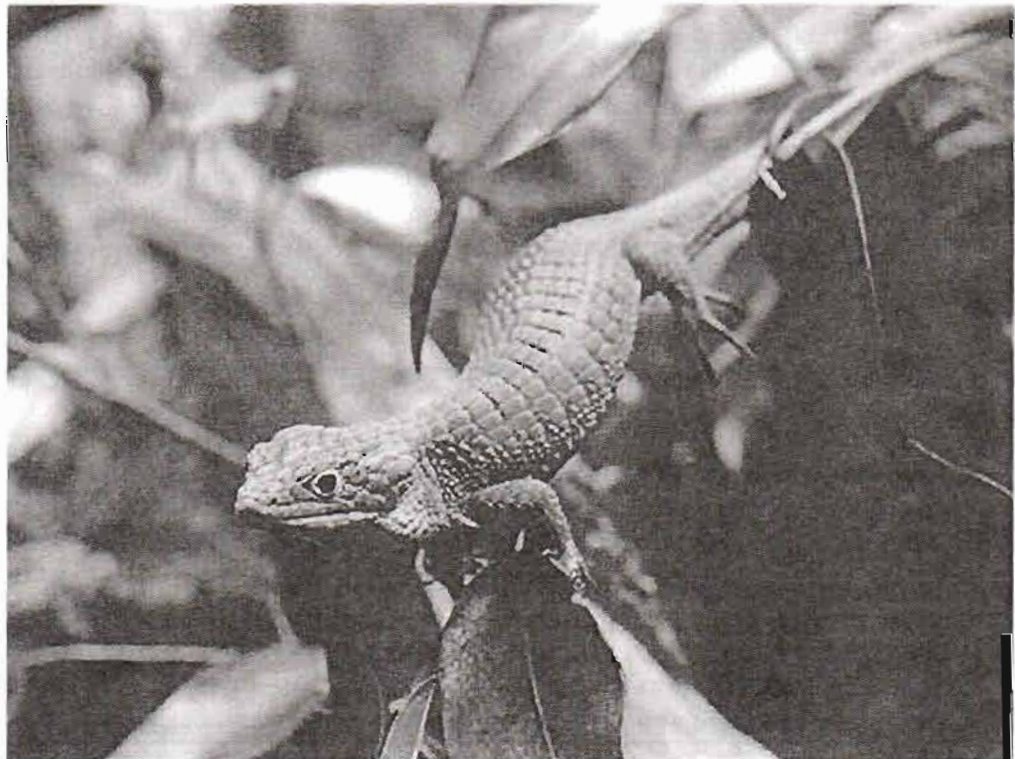
may be a crucial link for a venom researcher. A commonplace event at a venom laboratory could prove invaluable for a taxonomist. However, without fluid and open communication among this cross-section of scientists, much of this information remains scientifically atrophied. Here, we hope to explore the breakdown of communication and methods of increasing professional interactions and the sharing of information. Although each discipline may have dissimilar goals; each is dedicated to the single objective and that is to increase the body of scientific knowledge.

Alligator Lizards to Palm Vipers- Husbandry & Propagation of New World Montane Herpetofauna

Alan Kardon

Curator Reptile/Amphibian/Aquarium Department
San Antonio Zoo
3903 N. St. Mary's Street
San Antonio, TX 78212
ph. 210-734-7184 x1340
fax 210-734-7291

Working with high elevational (montane) reptile and amphibian species in captivity can be quite a challenge-even for the most experienced herpetoculturist. Air and basking temperatures, humidity levels, and photoperiod manipulations all play an integral role in the proper captive husbandry and reproductive success with cloud forest, pine/oak, alpine, and high elevational desert species. Seven genera (twenty species/subspecies) of montane New World herpetofauna are currently maintained in the San Antonio Zoo's department of herpetology collection. Sixteen species reproduce annually and include members of the following genus: *Pseudoeurycea*, *Abronia*, *Thamnophis*, *Bothriechis*, *Crotalus*, and *Ophryacus*. This presentation will discuss husbandry protocols and reproductive strategies developed at the San Antonio Zoo for the successful captive management of New World montane herpetofauna.



Adult *Abronia
graminea*. Photo by
Rob Nixon.

Monitoring Texas Horned Lizards in the Rolling Plains of Texas

Bradley Lawrence

REPTILE AND AMPHIBIAN SUPERVISOR
DALLAS ZOO
bradley.lawrence@dallaszoo.com
469.554.7252

In recent years Texas Horned Lizards have experienced drastic population declines throughout their native range. While many factors such as habitat development/destruction, the spread of exotic ant species, and the overuse of pesticides, are implicated in this decline no clear cause and effect relationship has been established. We propose to study the population dynamics of Texas Horned Lizards at the Rolling Plains Quail Research Ranch in Fisher County, Texas. By collecting lizard life history data (including but not limited to population densities, habitat preferences, diet, sex ratios, activity patterns, etc...) we will shed valuable light on the ecology of this threatened species.

Variation in Body Weight in Three Mountain Species *Crotalus aquilus* (Klauber, 1952), *Crotalus lepidus* (Kennicott, 1861) and *Crotalus willardi* (Meek, 1905) in Captive Conditions

David Lazcano¹, Carlos Alberto Martinez-Sanchez¹, Sarai Betzabe Lopez-Quintanilla¹, and Roberto Mercado-Hernandez² ¹Universidad Autónoma de Nuevo León, Facultad de Ciencias Biológicas, Laboratorio de Herpetología, Apartado Postal-513, San Nicolás de los Garza, Nuevo León, C.P. 66450, México, ²Universidad Autónoma de Nuevo León, Facultad de Ciencias Biológicas, Departamento de Zoología de Invertebrados, Laboratorio de Entomología Médica, Apartado Postal-513, San Nicolás de los Garza, Nuevo León, C.P. 66450, México.

The objective of this study focused on documenting the variation present in adults of three species of mountain rattlesnakes *Crotalus aquilus*, *Crotalus lepidus* and *Crotalus willardi*, in captive conditions under a regime based on the common mouse (*Mus musculus*) as a food item; simultaneously measuring variation in body weight presented once the hibernation period ended. We obtained the descriptive statistics using an ANOVA and COVARIANCE to determine if there were substantial differences in gain or loss of body weight compared with species, subspecies, sex, age, cycles, feeding frequencies and hibernation period set in days.

The turtle lives 'twixt plated decks
Which practically conceal its sex.
I think it clever of the turtle
In such a fix to be so fertile.

Ogden Nash

We also utilized the DUNCAN and TUKEY test to measure variables that presented significant differences, to establish uniform mean adjustment. We found that variables that presented a difference in body weight increase were directly related to those individuals with a high number of feeding frequencies and body loss during hibernation to those individuals with lower feeding frequencies during their active cycle and those that spent more days in hibernation before weighting. These results were expected, but hadn't been documented; a few individuals presented an increase in body weight once they had finished their hibernation period, this can be attributed to the consumption of water a few days before they were weighted. It is noteworthy to mention that this is all based on acceptance and rejection of food items; it is difficult to establish a strict feeding habit, as many individuals will rejected their food if they are in the process of shedding, different ages states, sex physiological activity or simple lack of feeding interest.

The Art of Fieldherping

Bill Love

Blue Chameleon Ventures

'Fieldherping' is a recent term somewhat analogous to bird-watching, but often with the added benefits of close encounters and photography. Sometimes shortened to simply 'herping', the term encompasses appreciating wild herps and the complexities of their lives in nature. While it's a familiar pastime to many, a percentage of 'herpers' (< a much larger subset of 'reptile people' than 'fieldherpers') seldom or never indulge in field activities as any part of their involvement in the hobby / profession. This image-heavy PowerPoint presentation will convey the tools, techniques, and most of all the thrills and enjoyment of fieldherping. If you already love getting out herping, or simply would like to get into it or do so more often, you'll glean many interesting ideas and helpful hints to prepare you. The information presented will definitely increase your chances for successful herp encounters.

Chasing Dragons, Komodo Dragon Field Work 2010

Bekky Muscher

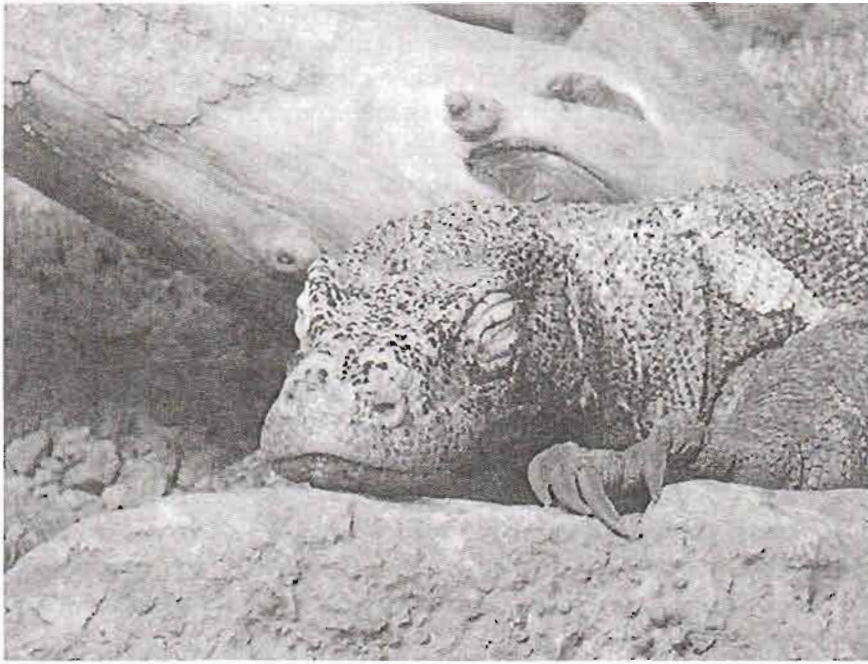
Department of Herpetology
San Antonio Zoo
3903 N. St. Mary's St.
San Antonio TX 78212
210-734-7184
poecilotheriabekky@yahoo.com

Judith Bryja

Department of Herpetology
Houston Zoo Inc
1513 Cambridge St.
Houston TX 77030
713-533-6655
jbryja@houstonzoo.org

Komodo Dragons (*Varanus komodoensis*) are the largest extant lizard. Native to only five islands in Indonesia (Komodo, Rinca, Flores, Gili Motang, and Gili Dasami), the Komodo dragon is an apex predator. Despite their notoriety, little is known of these giant lizards in their natural habitat. 2002 started an extensive study of these monitors and their prey.

For the past nine years, Komodo dragons have been the subject of a capture mark recapture study. Individual specimen data is collected and animals are permanently marked with passive integrated transponders (PIT tags). Prey density studies are conducted concurrently with the trapping. Using a thirty meter line, fecal



Resting Komodo Dragon, *Varanus komodoensis*. Photo by Trisha Shears.

pellets from deer, wild pigs, water buffalo, civets, and dragons are counted in a one meter radius and totals are recorded.

The vast majority of the work is carried out by Indonesian students and Komodo villagers with the permission and supervision of Komodo National Park. The opportunity for participation from Westerners in this field work is rare, so when we heard about it, we jumped! With generous funding from the Houston and San Antonio Zoos we flew across the world in search of wild dragons.

Notes on the Chaco Tortoise (*Geochelone chilensis*)

Ed Pirog, Hobbyist

epirog@comcast.net

The Chaco tortoise is a small tortoise which ranges from Argentina to Paraguay but only occupies sections of a unique habitat known as the Gran Chaco of South America. Very little has been documented in regards to the natural history and captive husbandry of this unique tortoise. Presented is one account of observations in the wild of the Chaco tortoise in Argentina. Also presented are notes recorded over an 11 year period of a small group of wild caught Chaco tortoises maintained in captivity.

THE VALUE OF HERPETOCULTURE

Louis W. Porras

Eagle Mountain Publishing, LC
7705 Wyatt Earp Ave.
Eagle Mountain UT 84005-4382
Tel. (801) 789-4149
Cell (801) 369-4843

The media is often quick to run sensational stories about amphibians and reptiles. In recent years, several books have given the general public the impression that nearly everyone associated with the live animal business is unscrupulous and dishonest, and that this behavior also applies to several zoos and many people

who keep amphibians and reptiles in captivity. Unfortunately, a distinction between herpetoculture and the pet trade is seldom made. According to Wikipedia the term herpetoculture is defined as a predominantly amateur activity conducted by people with little or no formal background in herpetology or other natural sciences.

Over time, the reasons “why” and “how” herpetoculture came to be appear to have been largely forgotten. and for this reason I present historical information on the origin and development of the herpetoculture. Based on my experiences in the animal business, the zoo world, the private sector, the herpetological community, the publishing business, as well as my years of involvement with IHS, I conducted an analysis on the importance and benefits of herpetoculture, focusing on its economic, social, educational, scientific, and conservation value. The results of this analysis show that the modern-day definition of “herpetoculture” is incorrect, and that the term needs to be redefined.

Herp Diversity of the Western Sierra Madre Oriental (Coahuila, Nuevo Leon, and Tamaulipas)

Michael S. Price

Director, San Angelo Nature Center
7409 Knickerbocker Road
San Angelo, Texas 76904
325.942.0121
michael.price@sanangelotexas.us

The Sierra Madre Oriental, loosely translated as the “Mother Mountains of the East”, is a long range of tall mountains that span approximately 600 miles (1,000 km) through seven states in the country of Mexico. These states include: Coahuila, Nuevo Leon, Tamaulipas, San Luis Potosi, Hidalgo, Puebla, and Queretaro.

Along this long mountain range, this cluster of sierras range in elevation from 3,300 feet (1,000 meters) in the Sierra las Mitras to over 12,100 feet (3,700 meters) at Cerro Potosi. Established in a north to south directional flow, the Sierra Madre Oriental is a natural barrier between the Chihuahuan Desert portions of the Mexican Plateau to the west and the more tropical Gulf Coastal Plains to the east. As such, this mountain range is renowned for its abundant herpetological bio-diversity.

From the late summer of 2006 to the present, the author of this presentation has traveled on 16 expeditions into this mountain range, primarily in the states of Coahuila, Nuevo Leon, Tamaulipas, and San Luis Potosi. This region, roughly from Monterrey, Nuevo Leon southward to central San Luis Potosi, is where herptiles that most enthusiasts from the United States will recognize as familiar to less well known species reside, and is the primary region of focus of this presentation.

SUPPORT our generous IHS sponsor

EXO-TERRA

www.exo-terra.com

Overview of Omaha's Henry Doorly Zoo's Amphibian Conservation Area

Andy Reeves

Senior Keeper - Reptiles
Omaha's Henry Doorly Zoo
3701 South 10th Street
Omaha, NE 68107
(402)738-2043
andyreeves1@hotmail.com

Nearly 1/3 of the planet's amphibian species are now threatened with extinction. Habitat destruction, pollution, disease, pesticides, and the *Chytrid* fungus are but a few of the known culprits. The Henry Doorly Zoo has developed its Amphibian Conservation Area (ACA) to house and breed species of amphibian faced with extinction. The ACA currently boasts 3 full time employees and 12 bio-secure isolation rooms designed to prevent the spread of disease from species to species. Each room is equipped with its own heating and cooling system to replicate each specie's environmental parameters. Strict hygiene procedures are practiced in this off exhibit non-public area to prevent contamination. Omaha's Zoo has successfully produced and released Wyoming toad (*Anaxyrus baxteri*) tadpoles and Puerto Rican crested toad (*Peltophryne lemur*) tadpoles into the wild. We have recently had great success with reproducing the Mississippi gopher frog (*Rana sevosa*). It is our hope that offspring from additional species will be released once threats have been lessened.

Species Level Status of the Albertine Rift Endemic Karissimbi and Kivu Treefrogs; and a Case Study on the IUCN Red List Categories and Criteria

Corey Roelke, PhD

Lead Keeper
Terrestrial Ectotherm Department
Fort Worth Zoo
1989 Colonial Parkway
Fort Worth, TX 76110
817-759-7186
croelke@fortworthzoo.org

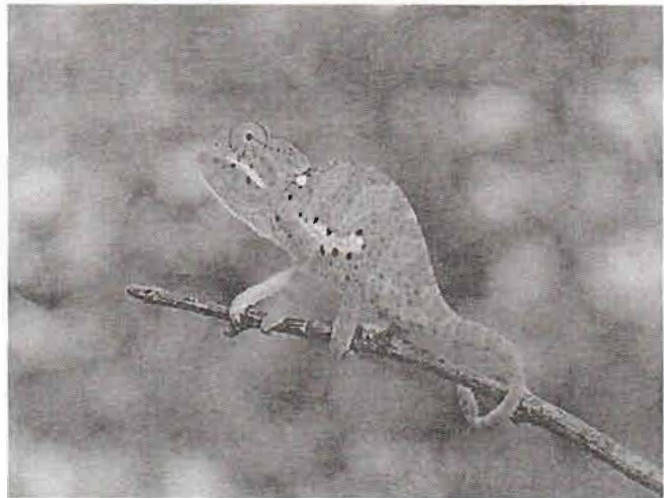
The Karissimbi Treefrog (*Leptopelis karissimbensis*) is currently considered to be "Endangered" by the IUCN because the species reportedly occurs only in the Virunga Mountains of Rwanda, Uganda, and the Democratic Republic of the Congo. Some authors also regard this taxon as conspecific with the closely related Kivu Treefrog (*L. kivuensis*), which has a larger distribution. We provide morphological, acoustic, and molecular evidence to show that the two taxa are indeed distinct species. We then examined the conservation status of *Leptopelis karissimbensis* in light of the IUCN's threat categories and determined through our own field collections and literature searches that *L. karissimbensis* is not restricted to the Virungas as previously thought, but has a distribution that is nearly concordant with *L. kivuensis* throughout the central Albertine Rift. Lastly, we offer our perspective on the role of literature bases and gaps in knowledge as a barrier towards effective conservation research and decision making.

THE REPTILES AND AMPHIBIANS OF ZANZIBAR IN CONTRAST TO ENVIRONMENT EDUCATION AT ZALA PARK- ZANZIBAR

Mohammed Ayoub HAJI SIMAI.(Park Manager)
Ali Bkari MACHANO and Malik Rashid OMAR (Park/Rept. Attendants)

This is presentation , more than a mere checklist of Reptile and amphibians of Zanzibar , exhaustively describe into Environment and Science Education in ZALA PARK -Zanzibar Land Animals Park(Reptiles Park) for visitors and Zanzibaris as a whole.

An account has been made and some reptiles and amphibians to be shown on screen during the presentation. Topography and climate are briefly described . Breeding season has been assessed roughly. The species have clarified in in Class, Order, Family, scientific name, Swahili name and bit of species feature description and some colored photo of species.,



Young Flap-necked Chameleon, *Chamaeleo dilepis*. Photo by Michael Monge / www.FLCharns.com.

The Great Rift: *Stolen World* and the Long, Bitter Divorce of Specimen Collectors and Institutional Science

Jennie Erin Smith

When I set out to write *Stolen World*, about the reptile smugglers Hank Molt and Tom Crutchfield, my intention was not to have a referendum on the reptile industry. Rather I was looking at two men during a turning point in scientific history, when zoological parks, forced by new laws and new public attitudes between the 1960s and 70s, shut their doors to the people who had long provided them with animals. The zoos, to survive, reinvented themselves as conservation institutions (no longer entertainment parks) and the zoo dealers found themselves demonized as “part of the problem” by the same institutions and people they once faithfully supplied. Cut off from institutional science, the modern reptile trade was born. Whereas the old guard sought to discover wild animals new to science and the public, a more isolated younger generation seeks domesticated mutants new to themselves. A distrust of science, zoos, and other institutions still runs through the reptile culture today.

But what happened in the 1970s was not the first great rift in natural history. Specimen collecting as a profession dates back to the 18th century, and entered a golden age in the Victorian era, when large museums competed with one another for novel species. Many specimen dealers attained celebrity for their adventurous travels and flamboyant personalities. Unlike the museum curators they served, the collectors tended to be working-class – and this made them easy targets for a backlash. In the late 19th century, as natural history fell out of fashion in favor of laboratory and experimental science, museum curators launched “sustained and venomous attacks,” in the words of one historian, on their field collectors, in an effort to aggrandize themselves and protect their discipline from invasion by “amateurs.” In many ways this mirrors what

happened in the United States in the 70s, 80s and 90s – except no one went to jail.

I'm going to talk about some of the great mud-fights of natural history, the great freelance adventurers and their devoted scientific adversaries from Alfred Russel Wallace and John James Audubon and the gorilla hunter Paul Du Chailu (all field collectors who were victims of sustained attacks from on high) through Frank Buck and Arthur Jones, who fought the scientific establishment and even disparaged it as they served it, through Hank Molt and Tom Crutchfield, whose lives and careers spanned this second "great rift."

The Evolution of Women in the Reptile Community

Cindy Steinle

PHFaust
Kingsnake.com Site Coordinator
Guest Chat Coordinator

Reptiles are thought to be a man's hobby, but surprisingly enough almost 50% of kingsnake.com's user base is female. What has changed in the last century for women in the reptile community and what roles do women currently maintain in our world? Who were the pioneers and what struggles did they have? And who is leading the community today? Inspired by Tracy Barker in the height of the battle, I looked into our roots and our actions as women.

Sympatric Ecology of the genus *Phelsuma* (Sauria: Gekkonidae) on a Peninsula in Northwest Madagascar

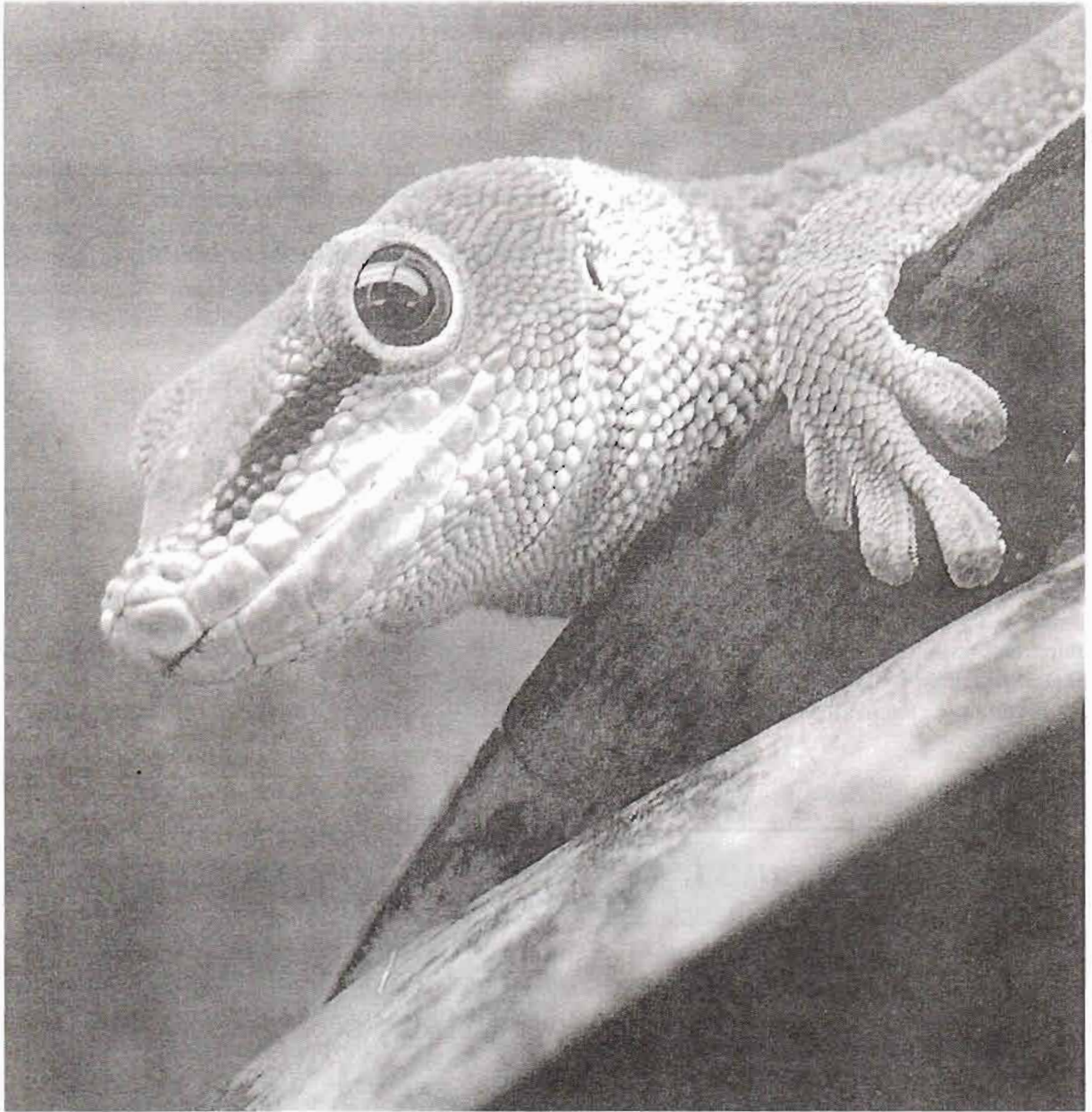
Emmanuel Van Heygen

Terrarium Category Manager
Rolf C. Hagen Inc.
Winkelkaai 16
2800 Mechelen
Belgium
www.exo-terra.com
www.hagen.com

The genus *Phelsuma* is believed to have originated from the island of Madagascar and radiated from there to the Mascarenes, the Comoro Islands, continental Africa and even the Andaman Islands separated by 5000 km of Indian Ocean. But on the "Red Island" itself, as Madagascar is often referred, speciation of this relatively young genus is still in full progress. Despite the fact that the principle of competitive exclusion states that two species occupying the same biological niche cannot coexist, at least eight species of *Phelsuma* occur sympatric on the Ampasindava peninsula in northwest Madagascar.

Extreme microhabitat specialization with regards to associated flora and altering activity patterns allow these species of the same genus to coexist in a relatively small area.

At least three other diurnal geckos in the genus *Lygodactylus* are known to compete with the *Phelsuma* species for the same microhabitat and food sources. One of the dominating plants is bamboo of the genus



Madagascan Giant Day Gecko, *Phelsuma madagascariensis grandis*. Photo by Leann Christenson.

Valiha on which at least seven species of day gecko have been found during field studies from 1994 - 2011. During a research expedition to the region in 2004, a highly specialized new species of *Phelsuma* was discovered occupying a very specific fundamental niche.

“Why do you like snakes?” This is a question I am often asked, and the answer is simply, “Because I think they are beautiful.”

Carl Kauffeld
Snakes and Snake Hunting

Evolution of the Modern Reptile Industry; Politics & Economics

Andrew Wyatt

United States Association of Reptile Keepers
P. O. Box 279
Grandy, NC 27939
252-207-1041
president@usark.org
www.USARK.org

The evolution of the Herp Industry over the last 20 years; from a small eclectic group of importers and dealers to the emergence of Herpetoculture as a 1.4 billion dollar industry. From basement pioneers and storefronts operations to sophisticated breeding operations and multi-million dollar manufacturing companies; a new cottage industry grown. And the trade association that has taken on the fight from state capitols around the country to Capitol Hill and the halls of Congress. Herpetoculture has found its place in the world, and is here to stay.

PYXIS SUMMIT

at the 2011
TURTLE and TORTOISE
PRESERVATION GROUP's

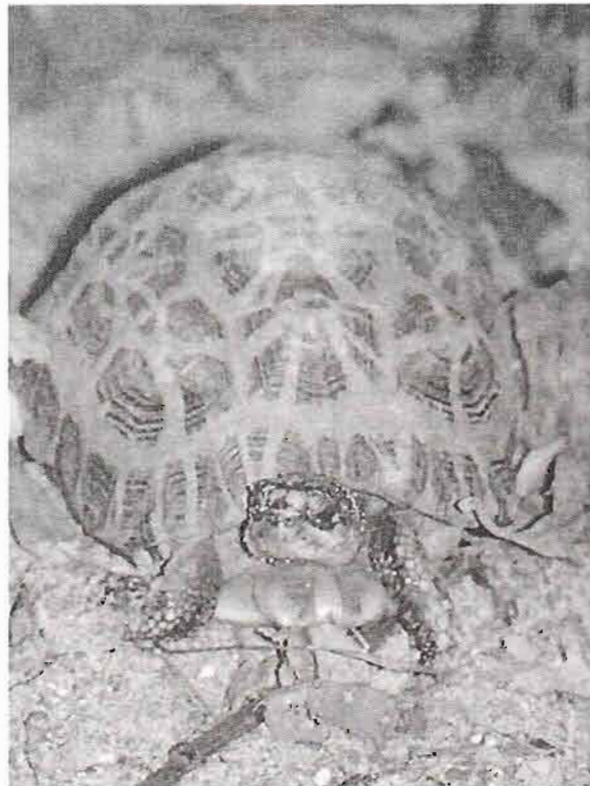
CONFERENCE ON CAPTIVE CARE and BREEDING of TURTLES and TORTOISES

Phoenix Marriott
Mesa, ARIZONAUSA

Thursday,
November 17th
8:00 pm



www.ttpg.org



**A huge thank you to our host for this year's
International Herpetological Symposium:
The Fort Worth Zoo!**

“From meager beginnings the Fort Worth Zoo has grown into a nationally ranked family attraction.

The oldest zoo in Texas, the Fort Worth Zoo was founded in 1909 with one lion, two bear cubs, an alligator, a coyote, a peacock and a few rabbits. From these humble beginnings, the Zoo has grown into a nationally ranked facility, housing nearly 7,000 native and exotic animals.”

The mission of the Fort Worth Zoo is to strengthen the bond between humans and the environment by promoting responsible stewardship of wildlife and ensuring diverse, high-quality educational and entertaining family experiences through effective and efficient management of its resources.

For more information, go to: <http://www.fortworthzoo.org>

Thank you to Steve Hammack, Diane Barber, and John Kast and all the staff at Fort Worth Zoo who are making this IHS a great experience for all of us!

Thank you to Daryl Richardson and the staff of The Dallas World Aquarium and Carl Franklin (Joe Laszlo Award recipient) and the University of Texas at Arlington for your hospitality and behind-the-scenes tours of your facilities!

RÉUNION ISLAND 2003
MADAGASCAR 2004
UGANDA 2005
MADAGASCAR 2006
GABON 2007
TANZANIA 2008
HONDURAS 2009
CAMEROON 2010
SRI LANKA 2011



JOIN THE SINHARAJA EXPEDITION !

Exo Terra Expeditions help contribute to the scientific community and to the general knowledge of reptiles and amphibians. Every year Exo Terra explores one of the world's many ecologically diverse hotspots in search of reptiles and amphibians. By researching and collecting data from these microhabitats, we can get a better understanding of the natural living conditions of these reptiles and amphibians.



www.exo-terra.com



Gekko gecko



Gekko gecko



Gekko gecko

**3 NEW SPECIES
DISCOVERED
DURING EXO TERRA
EXPEDITIONS!**

IHS GRANTS PROGRAM

The IHS has established a grant program to provide financial assistance to individuals or organizations conducting herpetological research, conservation, and education. Proposals are now being accepted for the year 2011 awards. Grants are initially in the amount of up to \$500 and will be awarded to applicants whose projects represent a significant contribution to herpetoculture in one of the categories listed below:

Herpetological Natural History

Proposals in this category should address new field research in areas such as population distribution, behavioral ecology, and life history strategies of amphibians or reptiles.

Herpetological Conservation Biology

Proposals in this category should address new research on endangered or threatened amphibian or reptile species or the phenomena that affect the maintenance, decline, and restoration of their natural habitat.

Captive Propagation

Proposals in this category should address research in captive behavioral studies or new techniques in captive maintenance and breeding of amphibians or reptiles.

Herpetological Education

Proposals in this category should address starting and/or maintaining an educational program pertaining to amphibians or reptiles at a facility available to the public, such as a zoological park, school, or community center.

The total number of grants awarded will depend solely upon the balance of the grant fund in any given year. Depending on the applications received, an attempt will be made to award a grant to each category and some categories may receive more than one award. The committee reserves the right to reassign the category under which a given proposal is submitted.

Applicants may be anyone from the herpetological community. When a grant is awarded, the recipient agrees to abide all local, state and federal laws. Recipients will be encouraged to present their findings at the next year's symposium. Recipients will also agree to mention the IHS in any publications resulting from this grant award.

Instructions to Applicants

Proposals should include the following information:

Statement of the objective(s) and justification of the proposal.

Description of materials and methods.

Complete budget with a list of other funding sources.

Brief resume of the applicant, including affiliation if any and name, phone, e-mail, and address of all participants.

Two notarized letters of reference or if a student, a letter from the faculty advisor.
Project schedule.

A written report must be submitted to the I.H.S. board.

Grants may not be used to support salary, tuition, or publication expenses.

Applications can either be mailed to the IHS address below or submitted by e-mail in Microsoft Word format. Mailed applications must be typed, double-spaced and submitted in duplicate. Applications should be kept brief and simple, and proposals longer than three to five pages are discouraged. All applications must have a postmark no later than December 31st of the year and grants will be awarded by March 1st of the following year.

It is the goal of this grant program to award funds to a wide variety of applicants. Enthusiastic amateurs will receive the same level of consideration as professional herpetologists and graduate students.

Sent typed applications to:

**International Herpetological Symposium
Grants Program
P.O. Box 6329
Boise, ID 83707-6329**

E-mailed applications in Microsoft Word format only, send to: teguiix@aol.com and specify "Grants Program" in subject field.

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 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 is published in Herpetological Review, 19, 5-6 (1988).



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

JOSEPH LASZLO
1935 - 1987

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

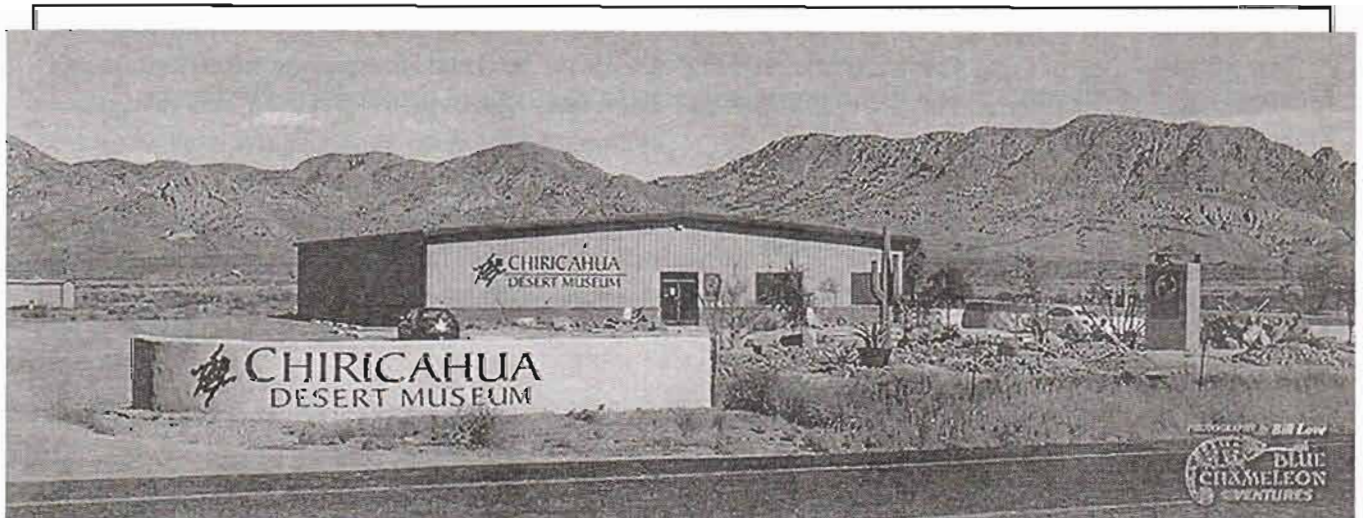
1993 Miami, FL - Dr. Hans-George Horn, Germany

1994 New Orleans, LA - Dante Fenolio/Michael Ready, Los Angeles, CA

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, DABVP-AVAIN, Eastern Exotic Veterinary Center, Fairfax, VA
- 2002 St. Louis, MO - John Brueggen, General Curator, St. Augustine Alligator Farm, St. Augustine, FL
- 2003 Houston, TX - Bill Love, Blue Chaneleon Ventures, Alva, FL
- 2004 Daytona Beach, FL - Dr. Stephen P. Mackessy, University of Northern Colorado, Greeley, 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., Ashton Biodiversity Research & Preservation Inst.,
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

NOTES



CHIRICAHUA DESERT MUSEUM

A huge NEW Facility in Rodeo, NM between the Chiricahua Mountains and the Pelloncillos. We have a giant art collection and state-of-the-art reptile exhibits, some rare and endangered. Stop by for a visit or see us on FACEBOOK. Phone: 575-557-5757.

NOTES



Support Chelonian Conservation!

Join the TURTLE and TORTOISE
PRESERVATION GROUP

www.ttpg.org

SECOND ANNUAL TTPG Conference on
Captive Care and Breeding of
Turtles and Tortoises

Thursday, November 17th and Friday, 18th

PHOENIX MARRIOTT - Mesa
Mesa, Arizona



TEXAS REPTILE EXPO SAN ANTONIO

The "HOTTEST" Show in Texas!

August 20-21, 2011

November 5-6, 2011

SATURDAY & SUNDAY 10am~5pm

LIVE OAK CIVIC CENTER
8101 PAT BOOKER RD. @ HWY. 1604
SAN ANTONIO 78233

FOR VENDOR OR EVENT INFO CONTACT: RANDAL BERRY
501-562-7311 OR EMAIL: expos@texasreptiles.com