38th International Herpetological Symposium

May 27-30, 2015
San Antonio, Texas

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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 the small grants program the IHS Junior Herpetologist Award program, 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 and Friday and from 9:00 am to 2:00 pm on Saturday to everyone, including the general public!

June 16th, 2015

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 dissiminating the latest herpetological information. This year we have an amazing array of talks including presentations on salamanders, Ridley sea turtles, Egyptian tortoises, iguanas, reptile medicine, copperheads, and much more. 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 city of San Antonio 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 San Antonio Zoo!

Zoo Facts

•Established in 1914
•The San Antonio Zoo is a 501(c)3 non-profit organization.
•Open 365 days a year at 9:00 a.m.
•Admission for children under 2 is FREE, Children 3-11 is $11.25, Adults $14.25
•Zoo memberships start at $90 for the entire family and good 365 days a year
•The Zoo spans 56 acres. Thirty-five acres are public pathways and exhibits
•The Zoo houses over 9,000 animals of 750 species
•One of the first "cageless" zoos in the United States
•Received numerous awards for captive propagation – and we participate in over 230 endangered species programs
•First to receive Association of Zoos and Aquariums (AZA) accreditation; of over 2,600 U.S. wildlife exhibitors, only 223 are accredited by AZA
•One of the largest bird collections in the country
•Acclaimed breeding programs for endangered and threatened species
•The first zoo in the country to breed the endangered whooping cranes
•Visited by nearly 80,000 school children each year
•First to reproduce the endangered white rhinoceros in North America
•The first to hatch and rear Caribbean flamingos
•Successfully bred 53 endangered snow leopards since 1970
•First to build an amphibian conservation center
•1,000,000 guests annually and growing (60% local; 40% tourist)
•Successfully built a $12 million AFRICA LIVE! phase I safari-like exhibit
•Opened a $10 million AFRICA LIVE! 2 exhibit
•Specialized education adventures offered for all ages
•The only zoo in the country to have separate children's zoo area, Kronkosky's Tiny Tot Nature Spot, designed for kids 5 and under
•Listed as one of the 2009 Top 10 Best Zoo's for Kids by Parents Magazine
•Listed as the #1 tourist spot by Nickelodeon's ParentsConnection gocitykids.com
•Only zoo in the country to have a senior veterinarian on staff that is double boarded in zoo medicine and in reptile and amphibian medicine
•Successfully built an $8 million Zootennial Plaza that includes a new especially designed carousel and restaurant

All attendees are granted free admission to the San Antonio Zoo with proof of IHS registration. When you wear your IHS badge, you will get free admission on May 27, 28, 29, 30, and 31.

SAN ANTONIO ZOO

REAL. Wild! LIFE.

San Antonio

CERVECEROS

CRAFT BEER COMMUNITY

EST. 2010

May 27th 2015
Ice Breaker
6:00 pm - 11:00 pm

The Stetson Room at the Hilton Palacio del Rio, home of this year's IHS ice breaker!

INTERNATIONAL HERPETOLOGICAL SYMPOSIUM
JUNIOR HERPETOLOGIST AWARD

This new program, implemented by Russ Gurley and funded by Todd Goodman, Tonya Bryson, the Turtle and Tortoise Preservation Group, Bob Blome, and Tandy Keenan, is a brand new program for IHS.

Announcements were made and applications were mailed out. The Junior Herper committee thoroughly examined every packet and read all the essays. One winner in each age category was chosen. This winner received an all expenses paid trip to the 2015 International Herpetological Symposium in San Antonio, Texas from May 27-30, 2015. This includes admission to all talks, free banquet, and a free trip to the San Antonio Zoo. In the two younger age groups, an all expenses paid trip was given to a parent or chaperone as well. Five runners-up in each age category received free registration to the 2015 IHS meeting, free banquet and free trip to the San Antonio Zoo and $100 towards travel expenses.

Applicants submitted:

1. A cover letter explaining why the applicant should be chosen as the Junior Herpetologist winner
2. There are three age divisions for this year's Junior Herpetologist program: (12-15) (16-18) and (19-22)
3. A short essay (500 to 1,000 words, typed, 1.5 spacing, Times New Roman, black ink) was submitted with their application. This essay featured a favorite reptile or amphibian species with the topic of Natural History or Conservation or Captive Care or Herpetoculture.

*** Note from Russ: We have a very energetic, interesting, sophisticated, and intelligent group of young herpers out there, studying, flipping boards and flat rocks, taking care of their reptile pets, and growing into the amazing herpers who will replace us all someday. I was so encouraged and so excited to read these essays and applications and I hope the Junior Herper program continues for IHS long into the future. Thank you to my committee for your hard work and to all who supported this fledgling program in 2015.**

CONGRATULATIONS to the 2015 JUNIOR HERPETOLOGIST AWARD winners and runners up! We are proud of your hard work and your passion for reptiles and amphibians!

- IHS JUNIOR HERPETOLOGIST AWARD Committee and the IHS Board

Ages 12-15

Matthias Lemm – winner

Pierce Curren - runner up
Lauren Taracka – runner up
Scout Allenbach – runner up
Sarah Brabec - runner up
Cade Napoletano – runner up
Avi Ackermann – runner up

Ages 16-18

Aryeh Miller – winner

Kaeden Miller – runner up
Bethany Avilla – runner up
Neil Balchan – runner up
Crista Gibeson – runner up
Marianne Knight – runner up

Ages 19-22

Caroline Blyskal – winner

Courtney Guinane - runner up
Hayley Garrison – runner up
Erin Chapman – runner up
Ashley Stefanides – runner up

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Thursday, May 28, 2015

8:30 am Opening Remarks Ken/Dante/Jen

8:40 am Keynote John Maerz - Salamander Ecology and Conservation in the Salamander Capital of the World

9:25 am Carl Barden - A Day in the Life of a Venom Lab: Comments, Commissions, and Considerations

10:00 am Marty Crump - What Amphibians and Reptiles Mean to Us:The Lore and Mythology of Our Favorite Animals

10:45 am Break

11:00 am Ray Pawley - Politics, Egos, and Conservation: A Goliath Challenge

11:45am Robin Moore - In Search of Lost Frogs: Spawning a Conservation Communications Campaign

12:30 pm Lunch

1:45 pm Colette Adams - Failing the Galapagos Tortoise

2:30 pm Carlos Martinez - Saving Frogs of Hispaniola

2:55 pm Nicole Atteberry - Captive *Cyclura* Reproduction: The Role of Zoos in Preserving the World's Most Critically Endangered Lizards

3:30 pm Nelson Melendez - Diet of Radiotracked Bog Turtles, *Glyptemys muhlenbergii*, Comparison from populations in Northern and Southern New Jersey

3:55 pm Break

4:10 pm Tom Crutchfield - Conservation of the San Salvador Rock Iguana

4:20 pm Tim Paine - Conservation Through Travel

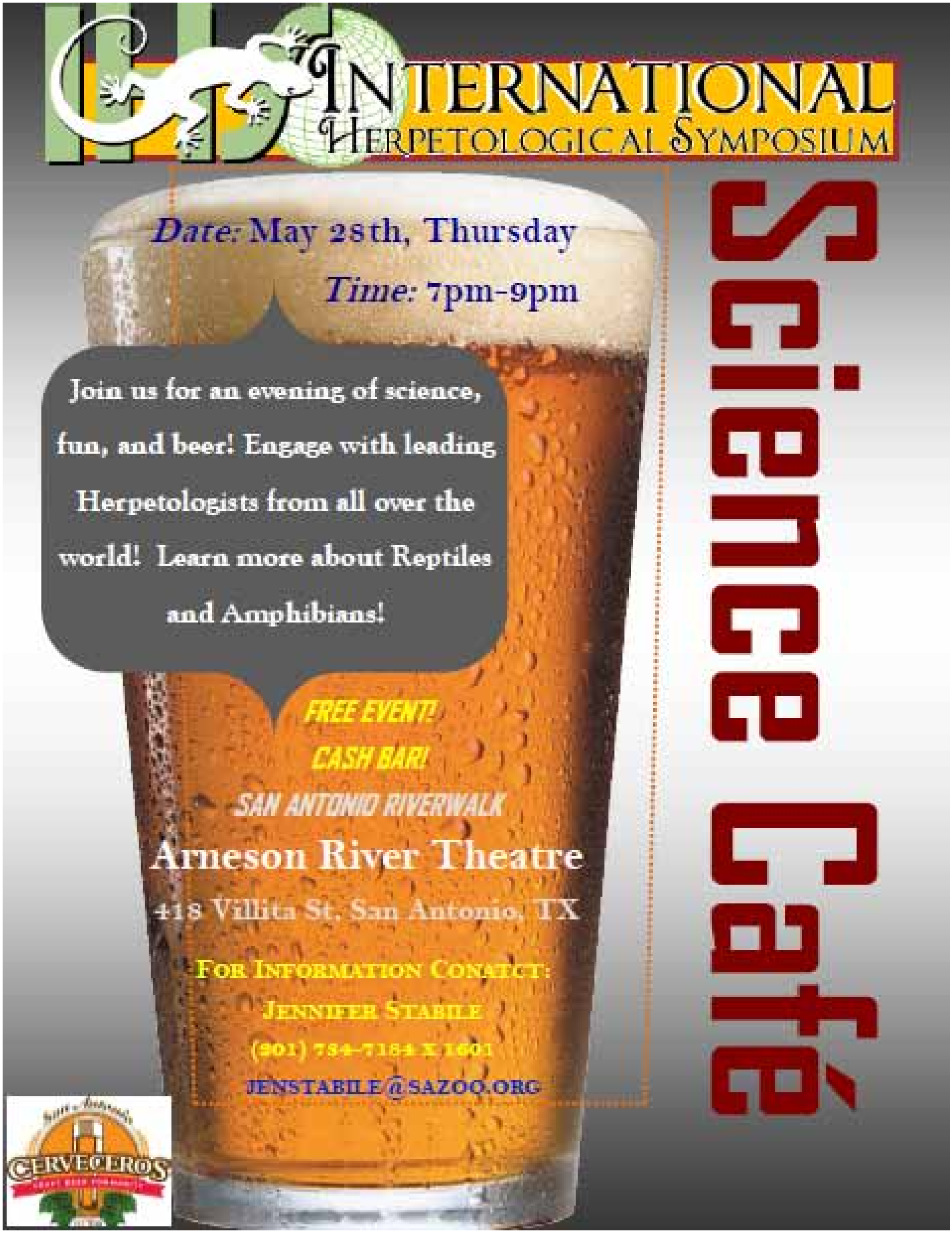
4:55 pm Ari Flagle - Serpents in the Clouds

5:20 pm Robert Hill - Herbivory in Sirenid Salamanders

5:35 pm Thomas Gorman - A Conservation and Management Approach for the Recovery of Reticulated Flatwoods Salamanders

International Herpetological Symposium

Science Café



Date: **May 28th, Thursday**

Time: **7pm-9pm**

Join us for an evening of science, fun, and beer! Engage with leading Herpetologists from all over the world! Learn more about Reptiles and Amphibians!

FREE EVENT!

CASH BAR!

SAN ANTONIO RIVERWALK

Arneson River Theatre

418 Villita St. San Antonio, TX

For Information Contact:

Jennifer Stabile

(901) 734-7184 x 1601

JENSTABILE@SAZOO.ORG

Cervecero's

5:55 pm Closing Remarks Ken/Dante/Jen

7:00 pm SCIENCE CAFÉ: Arneson River Theatre - Andrew Durso,; Colette Adams; Carlos Martinez; John Maerz

Friday, May 29, 2015

TEXAS SESSIONS

8:30 am Opening Remarks Ken/Dante/Jen

8:45 am Carl Franklin - Custodian of Eden

9:30 am Tim Cole - Snake Days & Texas Rattlesnake Festival: Striving to Make a Difference in Texas!

9:55 am John Karges - The Ecological Face of Texas: Herpetofauna of the Middle Third of the Continent

10:20 am Break

10:35 am Rick Kline - Mitochondrial Genomics of the South Texas Siren

11:00 am Ed Pirog - Notes on the Egyptian Tortoise (*Testudo kleinmanni*) in Captivity

11:25 am Jim Koukl - Radiotelemetry Studies on Resident and Relocated Adult, Hatchling, and Juvenile Three-toed Box Turtles (*Terrapene carolina triungius*)

12:00 pm Lunch

1:30 pm Jaime Pena - The Binational Kemp's Ridley Sea Turtle Project - Past, Present, and Future

1:55 pm Ron Tremper - Commercial Reptile Breeding

2:30 pm Andy Gluesenkamp - The iNaturalist Herps of Texas Project: Citizen Science in the Lone Star State

3:05 pm Andrew Durso - Life is Short but Snakes Are Long

3:30 pm Break

3:45 pm Gerry Salmon - Prey Selection in Copperheads (*Agkistrodon contortrix*) - Applications for Captive Management

4:20 pm Kristopher Swanson - Two years at Copperhead Heaven- Now What Do We Do?

4:30 pm Troy Hibbitts - Texas Lizards in the 21st Century

5:15 pm Dave Barker - The Invisible Ark

5:50 pm Closing Remarks - Ken/Dante/Jen

7:30 pm John Tashjian - Herp Quiz

Saturday, May 30, 2015

8:30 am Opening Remarks - Ken/Dante/Jen

8:45 am Craig Pelke - Varied Predation Techniques of Matamatas

9:10 am Chris Jenkins - The Orianne Society

9:25 am USARK Updates

9:35 am IHS Junior Herpetologists Award presentations

9:50 am Kim Lucas - Crested Gecko Husbandry

10:15 am Break

10:30 am Davod Lazcano - Importance of Determining Physiological Biomarkers of Stress and Pollution in *Ambystoma*

11:15 am Ashley Ortega - A Binational Conservation Strategy for Black-spotted Newts (*Notophthalmus meridionalis*)

11:30 am Charlayna Cammarata - New Worms to Marine Turtles: Two Species of *Telorchis* Luehe, 1899 (Digenea: Telorchiidae) Found in an Atypical Host and Environment

11:45 am Rob Coke - Alternative Medical Therapies for Reptiles

12:10 pm Bill Love - Impacting Through Imagery: Improving Herp Photos and Visual Presentations

12:45 pm Closing Remarks Ken/Dante/Jen

3:00 pm Bus Leaves for San Antonio Zoo

3:30 pm Walk Around Zoo; VIP tour

6:00 pm Banquet

6:30 pm Banquet Speaker

Francis Rose - Life as a Herpetologist; or, What's Half of Nothing?

7:30 pm Live Auction

9:30 pm Closing Remarks - Ken/Dante/Jen

10:00 pm Bus Leaves for Hotel

ABSTRACTS

Failing the Galapagos Tortoise

Colette Adams

Gladys Porter Zoo, Brownsville, Texas, USA [cadams@gpz.org]

Over the past 30 years, tortoise husbandry has improved steadily. This has increased the chances that captive-reared juveniles will resemble wild adults in appearance, behavior and reproductive success. Particularly in terrestrial species, controlled studies and trial-and-error has taken much of the mystery out of how to avoid many health problems and shell deformities. With proper husbandry, in most cases our captive-raised young are closely matching the wild standard. An exception to this collective success story seems to be the giant tortoises. Based on observations of growing Galapagos tortoises (*Chelonoidis nigra*) at the Gladys Porter Zoo, and combined with information and photographs collected from numbers of giant tortoise owners, rearing a healthy, "normal" giant tortoise poses a unique set of challenges. Many of these are likely to be related to the massive growth potential of the species. Failure to make adjustments for this difference has caused serious health issues, often accompanied by abnormal shell growth and ambulatory problems that might preclude reproductive success at maturity. This presentation takes a practical look at husbandry techniques that have proven effective for most tortoises and the life-saving considerations that should be given a growing giant tortoise.

Colette Adams is currently the General Curator and Grants Coordinator at the Gladys Porter Zoo in Brownsville, Texas. She had a passion for reptiles long before the 1976 commencement of her zoo career, when she began working in the Reptile Department as a keeper. Though her titles have changed and administrative duties have increased over the years, she remains a primary caretaker of several groups of crocodiles and the giant tortoises at her zoo. Colette is a member of the IUCN-SSC Crocodile Specialist Group and the Philippine Crocodile National Recovery Team. She is also an avid fundraiser for various species of endangered crocodiles.

Captive *Cyclura* Reproduction: The Role of Zoos in Preserving the World's Most Critically Endangered Lizards

Nicole Atteberry

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Faced with numerous threats in their native habitats, the rock iguanas comprise some of the most critically endangered species of lizards in the world. Various *in situ* and *ex situ* programs have been developed in order to preserve these dynamic animals. Some species, such as *Cyclura collei* have proven difficult to reproduce in captivity. It is therefore essential that husbandry and reproductive standards be established by zoos to ensure management of their genetic diversity for their long-term survival. With recent events occurring throughout the Caribbean that threaten the wild-survival of some of these species, captive animals may be the only survivors preserved for future generations to enjoy.

Tim Cole

Austin Reptile Service
Conservation through Education

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

A Day in the Life of a Venom Lab: Comments, Commissions, and Considerations

Carl Barden

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A discussion and comments regarding the inception, construction, management and operation of a large scale collection of venomous snakes (1000+) primarily for the purpose of commercial venom production. Medtoxin Venom Laboratories and its public attraction the Reptile Discovery Center is located in east central Florida and has been in operation since the mid 1990's. Topics include safety protocols, husbandry, venom extraction, snakebite considerations, display and education.

The Invisible Ark

David Barker

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In a polluted, crowded, resource-poor world that is undergoing global habitat alteration and loss, irreversible climate change, and the sixth major extinction event in the history of life on earth, how can we save the vertebrate animals? The answer, at least in part, is the Invisible Ark. The Invisible Ark is people participating in a decentralized, non-governmental, economically driven model of conservation. The Invisible Ark exists today. The Invisible Ark is millions of people all around the planet who keep animals alive in captivity. Even though largely unrecognized and unthanked, the Invisible Ark is the largest conservation force on Earth. The Invisible Ark has had many successes and already it possesses a treasury of species of plants and animals maintained in viable, self-sustaining captive populations. Modern herpetoculture is one of the greatest successes of the Invisible Ark. This talk will emphasize the importance of keepers capable of maintaining captive populations of as many species of reptiles and amphibians as possible.

New Worms to Marine Turtles: Two Species of Telorchis Luehe, 1899 (Digenea: Telorchiidae) Found in an Atypical Host and Environment

Charlayna Cammarata and N. Dronen

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Five species of sea turtle are found in the Gulf of Mexico, yet very little data on their endohelminths exists from this area. Gastrointestinal tracts (GITs) from 4 stranded sea turtles from Galveston, Texas were collected between 1993-1995 by staff at NOAA's Southeast Fisheries Science Center—Galveston Laboratory. Our lab received the samples from Dr. William Wardle, Texas A&M University at Galveston, in late 2008 with no identifying paperwork attached. The sea turtle species were identified as green turtles (*Chelonia mydas*) based on anatomical features of their GITs and stomach contents. Upon examination of the GITs, we discovered two species of adult Telorchiid trematode parasites, representing a genus only previously reported from freshwater amphibians and reptiles, especially turtles. If these two species of *Telorchis* are truly freshwater species, how did marine turtles become infected?

Alternative Medical Therapies for Reptiles

Rob Coke

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Even with the progress of modern medical technologies, sometimes we have to go back into the past for novel effective remedies. Sometimes these older therapies, are often "re-discovered" into modern medicine. This lecture will discuss some of these such as Traditional Chinese Veterinary Medicine (TCVM), herbal medicine, and acupuncture. Though these modalities have been around for thousands of years, modern medicine has made its mark by encompassing electro-acupuncture, LASER therapy, and ethno-pharmacology. Other disciplines used in human medicine is also making mark into the animal realm such as physical therapy, chiropractic, and even stem cell injections.

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

Tim Cole

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http://www.austinreptileservice.net/

"Snake Days" is a weekend event for the whole family. Educational talks, field herping, roadside cleanup, benefit dinner, silent auction, photo contest, raffle items, and more. The goal of this event is to build a better relationship between herpers and TP&W.

"Texas Rattlesnake Festival" is a weekend event for the whole family. Educational talks, over 45 subspecies of rattlesnakes displayed, venom extraction show, scavenger hunt, face painting, photo booth, vendors, and more. The goal of this event is to show Texans they can have a rattlesnake event without animal cruelty and destroying the environment.

What Amphibians and Reptiles Mean to Us: The Lore and Mythology of Our Favorite Animals

Marty Crump

marty.crump@usu.edu

Throughout time and worldwide, humans have loved and hated amphibians and reptiles. We admire some for their association with fertility and rebirth, but we despise others out of fear or lack of understanding. We worship some as gods and goddesses, and believe that others are the Devil himself. We perceive these animals as powerful, able to cause natural disasters and to kill, but also useful in boosting our own health and wellbeing. Folklore reveals much about our perceptions—positive, negative, and indifferent. In the end, our perceptions of the animals can influence conservation priorities.

History and Status Report for the San Salvador Rock Iguana, *Cyclura rileyi rileyi* Conservation Center

Tom Crutchfield, Bill Hayes PhD, & Joe Wasilewski

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The project began in spring of 2010 in a meeting between Bill Hayes (BH) and Tom Crutchfield (TC) at Loma Linda University. The plight of *Cyclura rileyi rileyi* (*Crr*) and recovery measures were discussed.

Subsequent to that, in later 2011 BH called TC and said the grant was approved and forthcoming. TC was asked to be the principal investigator for the project. It was decided by BH and TC to bring another iguana research biologist into the project.

Due to the remote location and potential for emergencies, Joe Wasilewski (JW) was asked to join the project as he has prior experience in these matters.

The focus of the project was to build an educational display that will double as a breeding facility. This makes the iguanas available to be viewed by locals, students, teachers and visitors to Gerace Research Center. It also would provide a venue to study the complex social structure, growth rates and reproductive strategies of *Cyclura rileyi rileyi*.

Part of the long-term plans for the project was to re-introduce the iguanas to the mainland, eliminate threats on cays that have (or had) resident populations, and establish a National Park system for protection of both the iguanas and the residents of San Salvador.

In 2012 one lizard hatched in the enclosure and soon after the principal investigator was removed from the project by the Bahamian Government due to protests from a member of the IUCN Iguana Specialist Group. To date, no more lizards have hatched and the project is in limbo.

Life is Short, but Snakes are Long

Andrew M. Durso

Utah State University
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Snakes are a part of human culture worldwide and they have been a part of human biology for millennia. Most people have strong feelings about snakes; some are positive, others negative. Populations of wild snakes are threatened by habitat loss and persecution, and most are probably declining, although it's difficult to say with certainty. I study the behavior, physiology, and ecology of snakes, and I have been fascinated by their evolution and natural history for many years. My work brings me into frequent contact with the serious need for snake conservation. I believe that we can only accomplish this goal through education, and that is partly why I decided to publish a blog, entitled Life is Short, but Snakes are Long (http://www.snakesarelong.blogspot.com/). The title is a quote from David Quammen, one of the best science writers around. To date, I have published over 60 posts, which have been read by over 180,000 users in almost every country, generating more than 325,000 unique page views. In my talk, I'll share some of the most popular, some of my favorites, and some amusing anecdotes, as well as comment on the utility of blogging and social media for science communication in general.

Serpents in the Clouds
New Guinea and Initial Population Study for *Simalia boeleni*

Ari R. Flagle

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"Boelens Python Conservation and Research"
www.ularhitam.com www.moreliaboeleni.com

I have been traveling to West Papua New Guinea since 2006 to study the Boelens python, *Simalia boeleni*. I have been visiting a unique area that sustains an active nesting area that supports multiple adult animals that are producing multiple times a year. During my two most recent trips in 2014 I began evaluating the population in this remote area with the intent to develop a population assessment for this species. This project is intended to continue for the next 5-6 years. Providing beneficial observations and a population study of the animals in this region is the focus. In my presentation, I will be discussing the initial examples of the first three specimens that have been added to this project and discussing the importance of this species. I will also be giving attendees a glimpse of the native people habitat seen during my time spent in the highlands of West Papua New Guinea.

Custodian of Eden

Carl Franklin

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Since the earliest recorded human activities at Olduvai humans have largely maintained an exploitative relationship with turtles regardless of sustainability. With a population of Homo sapiens that increases each year so do

the direct and indirect pressures on our planet's current turtle populations. Fortunately there are plenty of places and ways that the concerned cheloniphile can direct his or her energies to make a lasting impact for future generations of turtles and tinkering primates alike. Such is the endeavor of one turtle man who thinks he has a way of helping future generations of Texans appreciate the priceless nature of one of the most endangered rivers in the United States while providing a viable future for some amazing turtles.

The iNaturalist Herps of Texas Project: Citizen Science in the Lone Star State

Andy Gluesenkamp

Andy.Gluesenkamp@tpwd.texas.gov

The Herps of Texas project (HoTX) is part of the iNaturalist family of online citizen science projects (www.inaturalist.org). Since its inception in August, 2012, HoTX has grown to nearly 12,000 observations representing 96% of the reptile and amphibian species found in Texas. Observations are vetted by project curators and observations of Species of Greatest Conservation Need (SGCN) are added to the Texas Natural Diversity Database, the Texas Parks and Wildlife Department's repository for natural history data. The mission of the Texas Natural Diversity Database is to manage and disseminate scientific information on rare species, native plant communities, and animal aggregations for defensible, effective conservation action. The HoTX project is a powerful tool for documenting the status of reptile and amphibians in Texas and has the additional benefit of providing a community where citizen scientists as well as experts can gather and share information while supporting TPWD's stewardship, conservation, and management goals.

A Conservation and Management Approach for the Recovery of Reticulated Flatwoods Salamanders

Thomas A. Gorman, Houston C. Chandler, and Carola A. Haas

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The Reticulated Flatwoods Salamander (*Ambystoma bishopi*) is a federally endangered species that has experienced steady population declines across its range even since its listing in 1999. In collaboration with land managers, zoos, and researchers, we are working to understand these population declines and develop strategies to stabilize salamander populations on Eglin Air Force Base, which is potentially the last remaining stronghold for this species. Flatwoods salamanders occur in the fire-maintained longleaf pine ecosystem and breed in

ephemeral wetlands that are embedded within longleaf pine forests. Little is known about the role of fire or other disturbances in these wetlands, which are critical for successful reproduction and recruitment. We are currently evaluating a suite of management tools including prescribed fire and fire surrogates (mechanical removal and herbicidal control of woody species) that can create appropriate habitat conditions for this species. Further, we are investigating the effect of precipitation patterns, primarily winter droughts, on wetland hydroperiod and assessing the influence of hydroperiod and vegetative cover on larval occupancy and adult abundance. Our research suggests that flatwoods salamanders are less likely to breed in wetlands with high canopy cover and low herbaceous groundcover, conditions that often occur from fire exclusion. Mechanical treatments in ephemeral wetlands reduced canopy cover to similar levels as high-quality sites, but the response of herbaceous vegetation, an important component for several life stages, lags behind the immediate canopy reduction. Further, winter droughts shorten wetland hydroperiods leading to decreased recruitment, adult abundance, and larval occupancy. Long-term modeling suggests that winter precipitation has declined and thus wetland hydroperiods have been shorter during the last 15 years than at any other time over the last 100 years. Identifying the challenges associated with managing flatwoods salamander populations and designing conservation actions to improve both population viability and habitat suitability are important steps for the recovery of this species.

USARK UPDATE

Phil Goss
President
United States Association of Reptile Keepers

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.

Texas Lizards in the 21st Century

Troy Hibbitts

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Texas is home to fifty-one native and established exotic lizards species. While a few of these species seemingly thrive in habitats disturbed by human activities and live right alongside us in our altered landscapes, the majority of these species likely suffer from declines of one degree or another - mostly due to alterations in their habitats. While data on many species is limited, this presentation will discuss those for which hard data is available, as well as provide discussion on likely causes of population declines, many of which may not be readily apparent at first glance.

Troy Hibbitts is a high school science teacher with a lifelong interest in Herpetology. He earned a Bachelor's of Science in Wildlife & Fisheries at Texas A&M and a Master's of Science at the University of Texas at Arlington. He is the co-author of *Texas Lizards, Texas Amphibians, and Texas Turtles & Crocodilians* (in press).

Herbivory in Sirenid Salamanders

Presenter (s): Robert L. Hill, Joseph R. Mendelson III, and Jennifer Stabile

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We report direct observation of herbivory in *Siren lactertina* (Greater Siren), *Pseudobranhcus axanthus* (Southern Dwarf Siren), and review indirect evidence of the same for *S. intermedia* (Lesser Siren). We believe that at least two species of sirenid salamanders are facultative herbivores, the only salamanders known to show such behavior, and this behavior may apply to all known species of Sirenidae.

The Orianne Society: Single Species Family Foundation to Global Reptile and Amphibian Conservancy

Chris Jenkins

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The Orianne Society is a nonprofit organization focused on the conservation of reptiles and amphibians in the wild. However, Orianne originally started as a family foundation dedicated to the range-wide conservation of eastern indigo snakes. As an important step in the organization's transition from a family foundation to a public charity, Orianne formed a close partnership with the University of Georgia (UGA). Orianne's initial programs in research, land conservation and management, and population restoration

have served as models as their partnership with UGA and their programs continue to expand. Currently, Orianne programs are focused on the conservation of endangered reptiles and amphibians in three primary regions, the longleaf pine ecosystems of southeastern North America, the Appalachian Mountains of eastern North America, and the rainforests of Central America. In each of these landscapes the conservation work is focused on endangered species such as indigo snakes, spotted turtles, hellbenders, and bushmasters. Orianne is currently working on solidify two key partnerships that would expand its work in the next year to additional regions in North America and to multiple international sites.

Ecogeographic Face of Texas: Herpetofauna in the middle of a continent

John Karges

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Texas spans a mid-continent geography in both east-west and north-south dimensions. The reptile and amphibians found within the state reflect the ecological breadth of the state ranging from aridlands in the west to humid forests of the east, and from subtropical southern Texas to the Panhandle Plains. And in the middle, a nearly endemic ecoregion of limestone with its own endemic amphibian fauna exists as well as contributions from all four sides. The ecoregional map of Texas has many versions and degrees of detail and definition from very simple representations to extraordinarily elaborate and complex vegetation maps. The presentation highlights the generalities of a suitably useful ecogeographic representation with major vegetation types overlying soils, terrain, and climatic regimes. I will provide an overview of species and assemblages of herpetofaunal taxa from throughout the state tied to those ecoregional divisions and some of the conservation challenges that the species and their habitats face.

Identification of the South Texas Siren Using Mitochondrial DNA

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The species identification of the South Texas siren has been hampered by the lack of published sequences and potential species misidentification due to the use of costal groove counts. In this study, confirmed specimens of S. lacertina and S. intermedia from Florida and North Texas were compared with the South Texas siren samples by analyzing both coding and non-coding regions. Ten complete mitochondrial genomes were compared. A 7kb region, containing the D-loop and highly variable

non-coding region were analyzed for 18 sirens. Preliminary results suggest that siren populations in South Texas are composed of one species, and that the non-coding region of mtDNA may be extremely useful in species identification and understanding regional variation and phylogenetic relationships. The non-coding intergenic spacer region appears distinct for this group in South Texas and may be useful for distinguishing species. The results of this study will provide critical information for this cryptic species, and aid future conservation and management plans.

Importance's of Determining Physiological Biomarkers of Stress and Pollution in *Ambystoma*

David Lazcano

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Aquatic systems are the most affected ecosystems due to human activities: urbanization, aquiculture, agriculture, overgrazing, water extraction, industrial process, etc., which produces population decrees and in extreme cases the extinction of specific species that habits aquatic systems (Bartram y Ballance, 1996). Animals living in aquatic systems seem to be more affected from human activities, particularly amphibians (Zhou et al., 2008). Most amphibian´s populations in the wild are endangered, so it is necessary to conduct physiological research to recognize how the human activities are affecting them. There are many techniques to asses physiological disturbance in animals, and understanding how they response to the environmental changes. One of the most important aspects about these techniques is that almost any specie could be used without exposing them to life treating conditions.

One of the less studied groups of amphibians in the Urodela order, is the Ambystomatidae family, with one genus and 32 species, they are distributed from southern Canada and Alaska, to the Trans-Mexican Volcanic Belt. Nineteen species of the genus *Ambystoma* are found in Mexico, mostly endemic (Casas-Andreu et al., 2004; Wells, 2007). *A. mexicanum* has been used as a research model and also as a bioindicator. This specie is one of the most endangered in the country. Many researchers have intensively worked in an effort to enhance their conservation, assembling reproduction programs, educational programs, etc.

There are many definitions of what stress means, it is commonly described as physical and chemical factors that pro-

duces reactions in the organisms that could contribute to an illness or even death. The real problem of stress is the duration of these and how they response, as an example, predators attacks only lasts a short period of time which do not affect significantly the individual's life, in contrast, human activities generate chronic stress, which not only affects significantly the individual, but the total population.

Stress often conduces to mortality in most amphibians, nonetheless, many physiological and morphological changes occurs depending on the stressor and its duration, one of the first effects of stressor stimuli, is the changes in the energy balance in physiological processes (Wikelski and Cooke, 2006), some researches indicates that stress conduces to reproduction inhibition, the first response to stress is the increase of corticosteroid hormones which are precursor hormones in reproduction, nevertheless these are not the only responses or changes that organisms suffers, they also become vulnerable to diseases, change their behavior, in some cases organisms presents malformations.

Pollution

The definition of pollutants is well-known, every exogenous toxic substance that change ambient quality its named pollutant. Most of human activities provoke pollution in ecosystems, not only by pouring chemical substances in to the system, but also by changing chemistry water and other characteristics of the ecosystems, one example of this is the increase of eutrophication in freshwater bodies by the intensification of agriculture and cattle grazing (Paskova, 2012).

There are many types of pollutants, from natural sources, like charcoal produced by forest fires; to the introduction of invasive species or chemicals produced by industrial or agriculture activities; most of these, causes alterations in organisms that inhabit the place where their disturbance occurs, and responding in all biological levels. Time and magnitude of the response vary depending on the biological level and the exposition period of the pollutant. In some cases pollutants do not affect the survivorship of animals, but they could affect their health, behavior, reproduction, growth factor, among others.

In *Ambystoma* the presence of pollutants has been examined for decades, one of the first techniques to evaluate it, is the lethal concentration (LC50), it has been studied in *A. gracile*, *A. mexicanum*, *A. opacum*, and *A. tigrinum* (Lefcort et al., 1996; Nebeker et al., 1995; Slooff and Baerselman, 1980). Nevertheless with advance technology and an increased awareness of conservation, more studies with noninvasive techniques have been gaining weight among scientists. It is so, that techniques to evaluate molecular, hematological and growth factor, have been under development in species as *A. mexicanum*, *A. tigrinum*, and *A. tigrinum nebulosum* (Forson and Storfer, 2006; Griffis-Keyle, 2007; Henson-Ramsey et al., 2008; Robles-Mendoza et al., 2009).

Key words: Pollution, Biomarkers, Stress, *Ambystoma*.

Some Ecological Aspects of the Pigmy Alligator Lizard *Gerrhonotus parvus* (Knight & Scudday, 1985) in Nuevo Leon Mexico

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Gerrhonotus parvus (Knight and Scudday, 1985) is an endemic species of the state of Nuevo Leon and one of rarest lizards in the state and Mexico. It is known now for from three localities in the Sierra Madre Oriental. It was originally known only at Galeana, but later discovered at Santiago (Band et al 2003) and Los Rayones (Lazcano com. pers.) The species is rare, poorly known, and biogeographically anomalous and it is an ideal candidate ship flag species for development of conservation programs for the region. Between June 2012 and March 2014, 29 individuals were found. In our field work. We also discovered two individual *Gerrhonotus* in the municipality of Garcia, Nuevo Leon, Mexico, that may represent a previously undescribed species.

One work focused on three well known sites that are inhabited by *G. parvus* in the Sierra Madre Oriental, as well as the area in Garcia, Nuevo Leon, where two individuals were found that could represent a species that is distinct from *G. parvus*. Sampling was conducted from March to October. In order to evaluate the abiotic parameters, microhabitat characteristics were recorded and morphometric measures were taken from the captured individuals. To follow activity, individuals were identified by noting coloration pattern features unique to each individual. We also evaluated habitat biotic and abiotic variables; these will be quantified (temperature, humidity, type of substrates, vegetation etc.) in a radius of 3 m. following a specific pathway. We studied reproductive behavior, 10 individuals were housed in terrariums with substrates and cover similar to that of the natural habitat. Precopulatory and reproductive behaviour between pairs of adults are being analyzed.

To date, we have conducted 19 field trips to Santiago, Galeana, Los Rayones and 29 individuals of *G. parvus*, have been found and their data have been recorded. We have also conducted 16 field trips to Garcia, Nuevo Leon, where 2 individuals of a different anguid have been found. These individuals are being described. We are also collecting tissue samples from the three populations for DNA analyses which will be conducted as the project progresses. A paper has been published on the species sympatric with *G. parvus*, and others are in preliminary stages of preparation. Field trips will continue until the end of year.

Key words: Ecological Aspects, Endemic Lizard, *Gerrhonotus parvus*

Impacting Through Imagery: Improving Herp Photos & Visual Presentations.

Bill Love

Blue Chameleon Ventures
Apache Junction, Arizona

TEL #1 --- 480-646-1297 TEL #2 --- 239-464-6642
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This talk will first discuss easy 'tricks' to guide you in taking better herp photos. It will be a technique, not a gadgetry approach, which applies when using any kind of camera to make your efforts more interesting and impressive. The spotlight will then shift to creating more attractive and informative digital slideshows with programs like PowerPoint. It will focus on making a presentation that's clear and concise to viewers. The combined ideas presented will help mold your next presentation into a more lucid and memorable one while also enhancing its overall appeal to a herpetologically-oriented audience.

New Caledonian Crested Gecko Husbandry, *Correlophus ciliatus*

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The New Caledonian crested gecko, since its introduction into the pet trade in 1994 has become one of the most popular reptiles kept in captivity. It's generally docile temperament and minimum care requirements make it a popular choice with reptile owners. Many methods have been used experimentally over the years to refine the best approach to crested gecko husbandry with varying results. Kimberly Lucas, of Gorgeous Gecko, a professional crested gecko breeder of 11 years will present an overview of her successful husbandry practices including habitat requirements, lighting, humidity and UV , food and nutrition options for all stages of the crested gecko as well as breeding considerations and struggles. Crested geckos have proven to be one of the hardiest gecko species that will continue to thrive in captivity even with the most basic of care and ongoing husbandry refinements.

Holistic conservation strategy for the Critically Endangered frogs of Hispaniola

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Amphibians are facing unprecedented rates of extinction and population declines. This crisis is even worse in island ecosystems where amphibians are mostly endemic and where there are greater human densities. Such is the case of Hispaniola, the island shared by Haiti and the Dominican Republic, where 60 out of the 82 recognized species for the island are under threat. This crisis is more prevalent in Haiti, where 54 of the 58 amphibian species recorded for the country may become extinct if nothing is done to prevent it. In both countries, deforestation and habitat degradation are the main drivers of amphibian extinction, which means that the island

is also at risk of losing its entire natural heritage. The Philadelphia Zoo is committed to saving species in risk of extinction through *ex situ* and *in situ* conservation projects by collaborating with local group to understand the issues affecting endangered species. As such, nine critically endangered amphibian species mostly from Pic Macaya National Park in Haiti have already been rescued and are housed at a designated facility at the Philadelphia Zoo. Moreover, with help from Société Audubon Haïti and Grupo Jaragua from the Dominican Republic we are working together with local government and private organizations for the establishment of a long term conservation and education strategy that focuses on the conservation of amphibians and their ecosystems in key biodiversity areas of Massif de la Hotte and Massif de la Selle in Haiti and Sierra de Bahoruco and Bahoruco Oriental in the Dominican Republic.

Diet of Radiotracked Bog Turtles, Glyptemys muhlenbergii, Comparison from populations in Northern and Southern New Jersey

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Bog turtles (*Glyptemys muhlenbergii*) experienced at least a 50 percent reduction in range and population numbers from 1977-1997. This species is currently listed in the State of New Jersey (NJ) as an endangered species and federally listed as a threatened species. The ICUN lists this species as a critically endangered species. The most well documented threat to bog turtles is the loss and degradation of suitable wetland habitat due to human intervention, which may involve loss of suitable dietary items for this species. Extensive research on the diet of bog turtles, however, is underrepresented in the literature. Therefore, we have initiated a comparative study of diet in two northern NJ populations, and one southern NJ population, of bog turtles, which will run from April 14th 2014 to October 1st 2014. To perform this analysis fecal samples are collected and analyzed to determine the identity of food items in the bog turtles' diet. For this research, radio telemetry is used to identify, and then recapture animals from which fecal samples are collected. In addition, radio telemetry and GPS tracking is used to examine the home range size and habitat selection of bog turtles. Water quality tests are performed as well to assess the environmental health of the study sites. It is our hope that our work will provide a foundation of habitat and diet data that will be useful for conservation efforts on *Glyptemys muhlenbergii.*

In Search of Lost Frogs: Spawning a Conservation Communications Campaign

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Amphibians, despite being the most threatened class of vertebrates, receive only a fraction of the conservation support reserved for a few charismatic mammals. The Search for Lost Frogs campaign was conceived in 2010 in an attempt to raise the profile of amphibians in the public eye by tapping into a sense of adventure, discovery and hope. The campaign, which supported over 30 search teams in 21 countries, led to a number of rediscoveries, an unexpected flurry of media attention, and provided the inspiration for a new book entitled *In Search of Lost Frogs*. The attention generated by the campaign has provided a hook to deliver more nuanced messages about the plight of amphibians, but how effective has it been in evoking concern for amphibians, and how do we truly appeal to the hearts and minds of a public that is still generally apathetic towards the decline of an entire group of animals?

A Binational Conservation Strategy for Black- spotted Newts (*Notophthalmus meridionalis*)

Ashley Ortega

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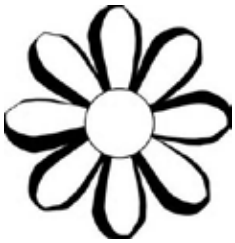
A newt with conspicuous black spots distributed over the entire body, the black-spotted newt (*Notophthalmus meridionalis*) ranges from the Gulf Coastal Plain, from south of the San Antonio River in Texas, USA, southward along the Atlantic versant to Tamaulipas, northern Veracruz and south-eastern San Luis Potosi, Mexico. Two subspecies of black-spotted newts are currently recognized: Texas black-spotted newts (*N. m. meridionalis*) and Mexican black-spotted newts (*N. m. kallerti*). Only Texas black-spotted newts occur in the United States.

In collaboration with the San Antonio Zoo, UTB (University of Texas at Brownsville), ITA (Instituto Tecnologico de Altamira), and CDEN (Conservacion y Desarrollo de Espacios Naturales), the Gladys Porter Zoo of Brownsville, Texas, is developing a multiagency, binational project focused on a recently discovered population of black-spotted newts in Altamira, Tamaulipas, Mexico.

The project includes collecting data on specimens in South Texas and Altamira. Samples will be taken to test for Batrachochytrium dendrobatidis and Ranavirus; as well as tail-clipping for genetic testing. The information obtained from this study will contribute to important management and conservation strategies for black-spotted newts as well as other amphibian species that may be present in the localities within and around the study area; and can potentially serve as a platform for other conservation projects and monitoring surveys which will enhance the learning experience for biology students in Southern Tamaulipas, as well as contribute to the study of biodiversity in the State of Tamaulipas.

Conservation through Travel



Tim Paine

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To be effective at conservation we need to be effective at education. But to be a good teacher we also need to be a good student. I hope to show the importance of travel as a way to be an informed teacher. I'll share some images and stories from my travels to hopefully inspire people to expand their world of experience. And if they are not already, become the dedicated teachers that are needed to support efforts in conserving some amazing reptiles and amphibians and the habitats they live in.

Politics, Egos and Conservation: A "Goliath" Challenge

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To accommodate conservation programs, egos and politics can present an extraordinary challenge to the best laid recovery or sustainability plans. Goal achievement for species and its habitat/environment requires that politics be set aside to insure the best opportunity for the targeted species and its (usually) endangered habitat.

Varied Predation Techniques of Matamatas

Craig Pelke

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The matamata turtle (*Chelus fimbriata*) is well-known for its ambush method of obtaining prey both in captivity and in the wild. It appears, however, that this species may have a variety of techniques beyond the simple ambush method. At the San Antonio Zoo, a group of 100 hatchling matamatas displayed several different methods of acquiring prey, and these methods were subsequently documented.

The Binational Kemp's Ridley Sea Turtle Project - Past, Present and Future

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The Kemp's ridley, Lepidochelys kempii, is the most vulnerable and endangered of the sea turtle species. One of the key elements in its critically endangered status is that over 90% of this species' population nests within one 78 mile stretch of beach in Mexico. Should any disaster, manmade or natural, befall that epicenter, the entire species could be lost. It is the smallest sea turtle and the only species which nests primarily during the daytime. Because of its critically low numbers, the Kemp's ridley, called "tortuga lora" in Spanish, is also considered to be a conservation dependant species.

The level of Kemp's ridley nesting plummeted to less than 12,000 nests in 2014. From 1995 to 2009, Kemp's ridley nesting at Tamaulipas had exhibited an exponential increase - likely due to the conservation efforts on the primary nesting beaches in Mexico and the required TED-use in the U.S. and Mexico. The population was approaching levels that would lead to downlisting the species from endangered to threatened; however, nesting has failed to exhibit any signs of long-term increase in the past five years. This means that the population remains highly endangered, maybe even more so than before, depending on what the cause for this decrease is, how many age classes have been impacted and to what extent. More years of studies at the primary nesting beaches in Tamaulipas will be required to offset the recent losses, answer the impact questions and resolve the current status and trends of the population.

Notes on the Egyptian Tortoise (*Testudo kleinmanni*) in Captivity.

Ed Pirog

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The Egyptian Tortoise (*Testudo kleinmanni*) is a small nondescript tortoise that is found in the coastal regions of North Africa. It is a very delicate tortoise that has been the target of the pet trade for many years because of its small size. In years past it was rarely bred in captivity but as newer generations present themselves they are becoming more commonly bred in captivity. New understandings in both the husbandry and the natural history of these wonderful tortoises has led to a better understanding of their care and needs.

Life as a Herpetologist; or, What's Half of Nothing

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In this polemic, which is registered in Washington, DC with the Department of Art, I will delve into the meaning of herpetology, and into its aspirants. Some time will be spent illuminating audience members on the meaning of the word, and compare it and its adherents to the other low-income –ologies. I will discuss how one can identify and separate budding herpetologists from those who will seek succor as ichthyologists, ornithologists, or mammalogists. At the end I will chronicle a sputtering career through the trials and tribulations of academia where I learned, among other useful things, never to buy raisins from a person who owns a rabbit.

Prey Selection in Copperheads (*Agkistrodon contortrix*) - Applications for Captive Management

Gerry Salmon

Member of SSAR, Southwestern Center for Herpetological Research (current VP), Austin Herpetological Society, Chicago Herpetological Society and East Texas Herpetological Society. Resides in Boerne, Texas

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Gerry has been studying diet in wild and captive copperheads (mainly with northern, broad-banded and Trans-Pecos populations) in the field, museum collections and in captivity. The latter two formerly recognized subspecies have had little attention in this regard in the past. Results reveal a varied diet that may follow seasonal trends. Additionally this highly evolved ambush predator exhibits foraging behaviors that allow it to capitalize on seasonally available insect and amphibian prey. This study (most recently conducted in collaboration with Harry Greene) is relevent in captive management of wild specimens (consistent feeding) and for eliciting feeding in neonates and juveniles which may refuse typically available rodent prey.

Two years at Copperhead Heaven- Now What Do We Do?

Kristofer Swanson

Katy Snakes

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After two years of working the site that has become known as Copperhead Heaven, a team of local field herpers, led by Kristofer Swanson of Katy Snakes, have realized the truth to be even greater than the stories. As the quest for information and understanding has continued in the sweaty nights of south Texas, the tip of the iceberg has revealed only the beginning of what Copperhead Heaven will behold as a site ready for further research and conservation. This is the updated account of what has happened with the site since IHS 2013, and where we can only hope to reach in the future by studying this amazing feeding aggregation. You may be the key to helping us unlock the mysteries of Copperhead Heaven.

Commercial Reptile Breeding

Ron Tremper

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Video presentation of a large-scale breeding center with emphasis on how to evolve and survive in an ever-changing marketplace. The importance of 'thinking outside the box' is presented with a look at the future.

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
2014 Riverside, CA - Philippe de Vosjoli

NOTES

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