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LIBERIA, COSTA RICA, C.A.

JULY 10-12, 1997

PROGRAM & ABSTRACTS

Herpetological Natural History is a peer reviewed journal published by the International Herpetological Symposium, Inc., and is devoted to all aspects of natural history (e.g., behavior, biodiversity surveys, conservation biology, disease, ecology, evolution, geographic distribution, paleontology, reproduction) of free-ranging amphibians and reptiles. U.S. subscription to *Herpetological Natural History* is \$25.00/yr. for **individuals**, and \$50.00/yr. for **institutions**. International subscriptions are mailed by surface and require an additional \$7.00 for postage. Air mail quotes will be provided upon request. Back issues (Volume 1, Numbers 1 & 2) are available for \$34.00 a set (postpaid). All other back issues are available for \$17.00 each (postpaid).

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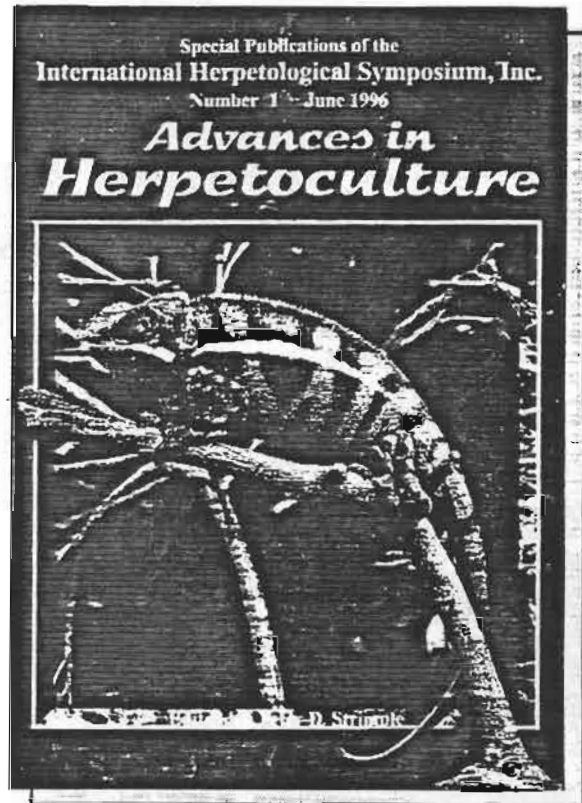
HERPETOLOGICAL NATURAL HISTORY

VOL. 3 DECEMBER 1995 NO. 2

CONTENTS

The Reptiles and Amphibians of Santa Rosa National Park, Costa Rica, with Comments about the Herpetofauna of Xerophytic Areas. Mohamed Sam and Alejandro Solórzano	113
Historical Groups and the Mixing System in a Northern Population of Timber Rattlesnakes, <i>Crotalus horridus</i> . William S. Brown	127
Comments on the Marine History of <i>Lissolepis sinensis</i> (Amphicetacea: Lepidocystidae), with a Description of the Type. William W. Lawler and Erik R. Will	135
A Late Miocene Macroherpetiform from Northwestern Nebraska. J. Alan Holman	145
A New Species of <i>Elasmosauriscus</i> (Amphicetacea: Lepidocystidae) from Toluca, West India and its Morphometric and Phylogenetic Characterization. Harold Knaur, Christian M. Dreyer, Wolfgang Fuchsinger, and Michael Schmalzer	151
Sexual and Parental Behavior of the Unusual Lizard <i>Cnemidophorus inornatus</i> in Mexico. Mark A. Phillips	165
Is There an Ontogenetic Shift in Mating Diet? Taxonomic Confusion and Heavy Records for Black and Green Mantles (<i>Leptodeira</i> Species). William R. Branch, Gerald V. Hoogmoed, and Richard Suter	171
NOTES AND COMMENTS	
Proposed Range Overlap Disputed by <i>Crotalus amoenus</i> in the Dominican, Gulf of California, Mexico. Humberto Wong, Eric Melnick, and Bradford D. Hollingsworth	179
Female Reproduction in <i>Urotaenia</i> derived from the Chiricahua Mountains of Southernmost Arizona. Geoffrey R. Smith and Rayn E. Ballinger	183
An Experiment with Artificial Shelters for Rainbow Effects of Mammal, Age, and Surface Preparation. Jeffrey R. Parrish and Henry S. Pech	187
Allo-Parental Behaviors Among Same-Sexing Hybrid Progs. Cynthia Long	193
Observations on the Birth of a Caudon (Amphibian: Oryziatrypa). James C. O'Reilly and Dale A. Ruzzo	199
Announcements	205

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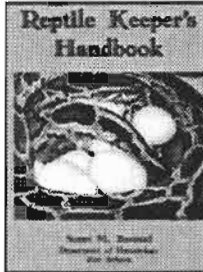
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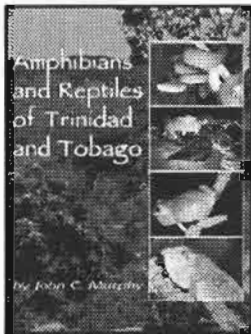
All major captive care considerations are addressed allowing boa keepers to provide for, and possibly breed their captives. Comprehensive chapters on heating devices and their application to herpetoculture, and designing a herp room will be extremely beneficial for everyone maintaining any species of reptiles or amphibians in captivity, as well as the boa keeper.



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The authors, both with extensive field experience in Belize and its environs, have compiled the first guide to the frogs and toads of this region. All 33 species, as well as the major habitat types in Belize, are illustrated in color.



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by John C. Murphy
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This is the only book dealing with the entire herpetofauna of Trinidad and Tobago, covering 130 species and subspecies as well as the environment of the two islands and the natural history of the herpetofauna. Professional and amateur herpetologists, environmentalists, conservationists, and ecotourists will find this volume useful.

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This monographic treatment offers all the basic knowledge about New World venomous coral snakes. It gives full descriptions and keys for identification of all the species and subspecies, with maps of distribution and variation.

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by Peter J. Stafford & Robert W. Henderson
Orig. Ed. 1996 120 pp. ~~\$34.95~~ \$26.65
ISBN 0-89464-975-2

Kaleidoscopic Tree Boas covers the natural history and captive management of the genus *Corallus*, a small group of highly adapted, typically tree-dwelling snakes from tropical America.

"...the only source I know of where essentially everything that is known about the genus *Corallus* is available in one place..." — Al Winstel, *LIHS Herpetofauna Journal*, Sep/Oct 1996.



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PROGRAM SCHEDULE

WEDNESDAY, 09 JULY

7:00 pm - 10:00 pm **Registration** - Hotel Boyeros

THURSDAY, 10 JULY

8:00 am - 5:00 pm **Registration** - Hotel Boyeros
Paper Sessions - Hotel Conference Hall

MORNING SESSION

8:00 am - 8:15 am **OPENING REMARKS**

Louis Porras, President
International Herpetological Symposium,
Inc.

8:15 am - 9:00 am **KEYNOTE ADDRESS**

Ecology of the dry tropical forest and
the history of scientific work in the
Area de Conservación Guanacaste
Daniel H. Janzen, PhD
email: <djanze@sas.upenn.edu>

9:00 am - 9:45 am **Venomous snakes of Costa Rica: Feeding
biology, venom, and snakebite**
David L. Hardy, Sr., MD

9:45 am - 10:15 am **BREAK**

10:15 am - 11:00 am **Neotropical microhabitat specialists: An
overview of natural histories and various
approaches to the captive maintenance of
certain anurans**
Danté Fenolio

11:15 am - 11:45 am **The herpetofauna of a heavily disturbed
area on the Corumbá River, Goiás, Brazil**
Hélder Lúcio Rodrigues Silva

11:45 am - 1:00 pm **LUNCH**

AFTERNOON SESSION

- 1:00 pm - 1:45 pm Country Orientation Workshop
Alejandro Solorzano
- 1:45 pm - 2:30 pm Climate and declining herpetofaunas
J. Alan Pounds, PhD
- 2:30 pm - 3:00 pm **BREAK**
- 3:00 pm - 3:45 pm The current situation of marine turtles in
Costa Rica
**Lic. Anny Chaves Quirós and Leslie A.
du Toit, PhD**
- 3:45 pm - 4:30 pm Herpetofauna of the dry environments of
Middle America: A summary
Mahmood Sasa, MSc
- 7:00 pm - 10:00 pm **ICEBREAKER**

FRIDAY, 11 JULY

MORNING SESSION

- 8:30 am - 9:15 am Africa - Amazonia: Conserving "useless
animals" in developing countries
William R. Branch, PhD
- 9:15 am - 10:00 am Life in the water: Distribution and
natural history of the Jacararana,
Crocodilurus lacertinus (Sauria: Teiidae)
**William W. Lamar, Marcio Martins, PhD,
and David Schleser, DDS**
- 10:00 am - 10:30 am **BREAK**
- 10:30 am - 11:15 am Current trends in antivenom production in
Latin America
**José María Gutiérrez, PhD, and Gustavo
Rojas, PhD**
- 11:15 am - 12:00 am Latin American pitvipers at the Dallas
Zoo: Past, present, and future
Matthew J. Russell
- 12:00 am - 1:00 pm **LUNCH**

AFTERNOON SESSION

- 1:00 pm - 1:45 pm Brazilian pitvipers and antivenin
production at the Fundacao Ezquiel Dias
Donal M. Boyer
- 1:45 pm - 2:30 pm A history of Santa Rosa National Park
Roger Blanco
- 3:30 pm - 7:30 pm **Barbecue at Santa Rosa National Park**

SATURDAY, 12 JULY

MORNING SESSION

- 8:30 am - 9:15 am Past directions and future trends at the
San Diego Zoo Reptile Department
Donal M. Boyer
- 9:15 am : 10: am Intraspecific variation in pitvipers: A
case study in the lancehead *Bothrops asper*
from Middle America
Mahmood Sasa, MSc
- 10:00 am - 10:30 am **BREAK**
- 10:30 am - 11:15 am Natural History and Conservation of Lesser
Antillean Frogs
Hinrich Kaiser, PhD
- 11:15 am - 12:00 am Preliminary account of the herpetofauna of
the Upper Tocantins River, Brazil
Nelson Jorge da Silva, Jr., PhD
- 12:00 am - 1:00 pm **LUNCH**

AFTERNOON SESSION

- 1:00 pm - 1:45 pm On the popularity of amphibians and
reptiles
Louis W. Porras
- 1:45 - 2:30 Captive Reproduction in 3 species of Costa
Rican Poison Frogs
David Hulmes

6:00 - 10:00

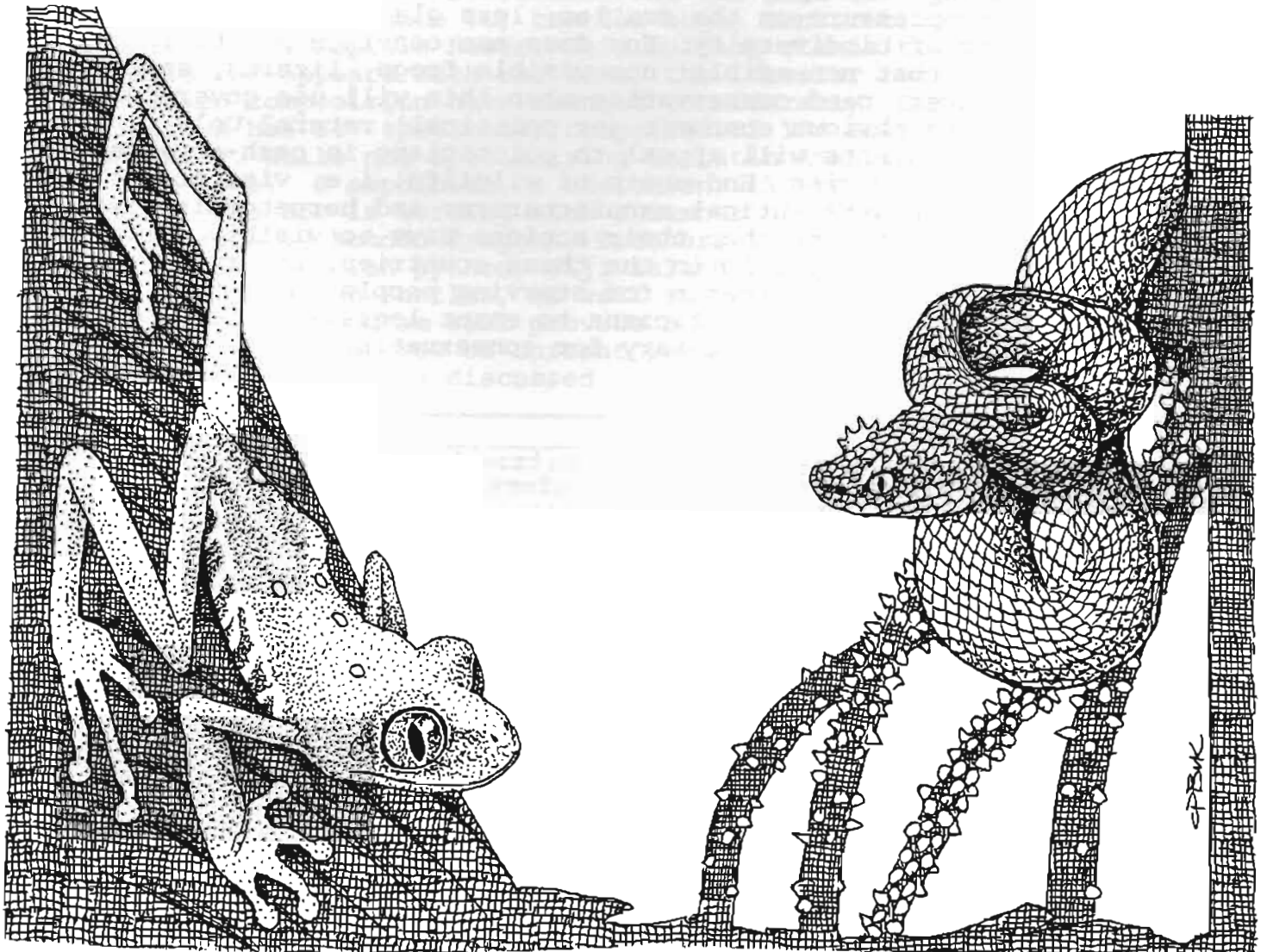
BANQUET

Opening Remarks
Louis W. Porras

Guest of Honor
Dr. Roger Conant

Banquet Presentation
An Amazon dream: The Peruvian
rainforest through African eyes
William R. Branch, PhD
Curator of Herpetology
Port Elizabeth Museum

Auction



ABSTRACTS

Africa - Amazonia: Conserving "useless animals" in developing countries

William R. Branch

Port Elizabeth Museum
P.O. Box 13147
Humewood 6013, SOUTH AFRICA
email: <pemwrb@zoo.upe.ac.za>

Africa and Amazonia have very different herpetofaunas, and yet face similar problems. Both struggle to document and conserve biodiversity in the face of burgeoning human populations, massive habitat loss and changing attitudes. Political and social agendas have created a "climate of expectation and a culture of entitlement", and demands for development increasingly conflict with conservation. In response, conservation authorities and organizations have embraced economic arguments based on ecotourism and substantiable utilization to ensure the protection of dwindling wildlife. However, such pragmatic stances place increasing pressure on the smaller, less glamorous or non-useful components of biodiversity. How does one convince politicians and the public that non-edible, non-visible frogs, lizards, snakes or invertebrates, need conservation when this will use government funds for no obvious economic (or political) return? Only economic arguments will appeal to politicians in cash-strapped Developing countries. End-users of wildlife, i.e. visitors to game parks, pharmaceutical manufacturers, and herpetoculturists, etc., need to accept that their actions have to visibly enrich the lives of poor people in the these countries. Otherwise there will be no pragmatic reason for starving people to protect habitats, or for the politicians to enact legislation or distribute the funds necessary for conservation.

Banquet Talk/Slide show

An Amazon dream: The Peruvian rainforest through African eyes

William R. Branch

Curator of Herpetology
Port Elizabeth Museum
P.O. Box 13147
Humewood 6013, SOUTH AFRICA
email: <pemwrb@zoo.upe.ac.za>

The Reserva Cuzco Amazonico lies on the Río Madre de Dios in Amazonian Peru. It consists of lowland tropical rainforest and is

one of the sites studied during the BIOTROP investigation. During a 5-week trip to the site numerous reptiles and amphibians were encountered. The beauty and biology of this herpetofauna, as well as the joy, pain, excitement and discomfort of a desert herpetologist working in a swamp, are discussed.

Past directions and future trends at the San Diego Zoo Reptile Department

Donal M. Boyer, Associate Curator of Reptiles and Amphibians
The San Diego Zoo
San Diego, California USA
email: <dboyer1@compuserve.com>

The San Diego Zoo Reptile Department began in 1921 with a single boa constrictor and a handful of local snakes. In 1922, Lawrence Klauber became the first curator of reptiles at the Zoo. Klauber began to build a collection of endemic southwestern US herpetofauna, including some exotic species. By 1925, the collection had grown to 976 specimens, an impressive number even by today's standards. The Zoo's first Galapagos tortoises were acquired in 1928 by Dr Townsend of the New York Aquarium. In 1936, due to an ever-growing collection and the need for special facilities to accomodate it, the Zoo began construction of the Klauber - Shaw Reptile House. This buiding stands today and while the exterior appears much the same, the interior facilities and collection composition have changed considerably. Currently the collection has 847 specimens, comprised of 174 species and subspecies. While not specializing in Latin American species we do have some: 8 amphibian, 8 chelonian, 13 snake and 6 lizard species. The Zoo is working with a number of rare or endangered species such as Komodo dragons, Brothers Island tuatara, bushmasters, Angolan python, Fiji Island iguanas, giant narrow headed softshelled turtles, as well as many other interesting forms. A slide program will provide a brief tour of the facilities; an overview of current program highlights and plans for the future will be discussed.

The current situation of marine turtles in Costa Rica

Anny Cháves Quirós and **Leslie A. du Toit**
Apdo. 18-3019
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COSTA RICA

Five of the world's seven recognized species of marine turtles nest in Costa Rica. This country holds a privileged position in the world as host to two of the four most important mass-nesting beaches for the olive ridley turtle (*Lepidochelys olivacea*), these being Ostional (Refugio Nacional de Vida Silvestre

Ostional) and Nancite (Parque Nacional Santa Rosa). Also important are Parque Nacional Tortuguero for the green turtle (*Chelonia mydas*), and Playa Grande, Playa Langosta, and Matina-Tortuguero for the leatherback (*Dermochelys coriacea*). Turtles have been protected under Costa Rican law since 1948, and the country is signatory to CITES, ratified in 1973. Most of the nesting beaches mentioned are under some form of protection; nonetheless, there are many threats to this resource of international interest, including:

- 1) Destruction of nesting habitat - beach development, water contamination, construction and illumination.
- 2) Illegal egg harvest at all nesting beaches including those in protected areas.
- 3) Lack of protection in protected areas - most of the national parks and refuges designed to protect these nesting areas are lacking in personnel and resources to adequately apply vigilance to the total expanse of the nesting area. This results in egg poaching and, in the case of Tortuguero, turtle hunting.
- 4) Lack of control in the turtle egg collection project in Ostional.
- 5) Lack of control and regulation in the capture and marketing of the green turtle in Limón.
- 6) High levels of incidental capture of turtles in shrimp nets and on long lines.
- 7) Lack of control in the issuance of permits for investigation where such investigation requires invasive procedures endangering the turtle. Inability to retrieve data collected by investigators resulting in the "flight" of research data.
- 8) Lack of support for national or international investigators. Aid and support for responsible and dedicated investigation which helps improve the well being of the resource and communities is non-existent.

Neotropical microhabitat specialists: An overview of natural histories and various approaches to captive maintenance of certain anurans

Dante Fenolio - Director: Amphibia Research Group
PO Box 607
Saratoga, California USA 95070
email: <anotheca@aol.com>

The neotropics are home to a diverse variety of anurans; among these are microhabitat specialists. The microhabitat being defined as any specific hideout used for frequent to permanent housing or for reproductive purposes or for both. A review of the natural histories of a number of amphibians exploiting microhabitats will show them to not only utilize adaptive behavior, allowing them to exploit resources largely untapped by other amphibians, but evolutionary adaptations in their physiology actually compensate for difficulties, or aid in

exploitation of their specific hideout. In some cases, these frogs have specialized to a degree of dependence on the often specific nook they exploit. Enacting the majority of their biological functions within hideouts, like tree holes or epiphytic bromeliads, these specialists can require specific setups in captivity, differing from the "average" anuran. Various methods for cage design and maintenance of some of the specialists will be discussed as have been developed by the Amphibia Research Group. Display tactics are proposed for Zoos and Aquariums. Modification to cage design, allowing for visual capabilities in monitoring reproductive activity, are also described.

Current trends in antivenom production in Latin America

José María Gutiérrez and Gustavo Rojas

Instituto Clodomiro Picado, Facultad de Microbiología,
Universidad de Costa Rica, San José, Costa Rica
email:<jgutierrez@cariari.ucr.ac.cr>

Parenteral administration of horse-derived antivenoms constitutes the mainstay in the treatment of snakebite envenomations. These products are immunoglobulin-enriched solutions that neutralize toxins present in venoms. Due to prominent inter- and intraspecific variations in venom composition, horses should be immunized with the most relevant venoms from the region where the antivenom is going to be used, in order to assure efficacy and specificity. Current trends in technological research aimed at improving the quality and coverage of antivenoms include: (1) The introduction of quality control assays to evaluate the neutralizing capacity of antivenoms against venoms of the most important venomous snakes in Latin America. The improvement of antibody purification technologies, in order to obtain products of higher neutralizing potency while inducing less adverse reactions upon administration. (3) The organization of multinational collaborative efforts directed to the standardization of protocols for antivenom production and quality control. If all these efforts succeed, it is likely that in the near future all Latin American countries will have enough supply of efficient and safe antivenoms.

Venomous snakes of Costa Rica: Feeding biology, venom and snakebite

David L. Hardy, Sr.

585 North Main Avenue
Tucson, Arizona USA 85701
email: <dhardysr@theriver.com>

Costa Rica has a high diversity of dangerously venomous snakes with 14 pitvipers (*Agkistrodon bilineatus*; *Atropoides nummifer* and *picadoi*; *Bothriechis lateralis*, *nigroviridis*, and *schlegelii*; *Bothrops asper*; *Cerrophidion godmani*; *Crotalus durissus*; *Lachesis melanocephala* and *stenophrys*; *Porthidium nasutum*, *ophryomegas* and *volcanicum*), 4 coral snakes (*Micrurus alleni*, *clarki*, *multifasciatus* and *nigrocinctus*), and a sea snake (*Pelamis platurus*). In addition, some colubrids have caused human envenoming, e.g., *Conopsis lineatus*. Feeding behavior and prey of pitvipers and coral snakes were recorded from 1984-1991 at La Selva Biological Station (LSBS) in northeastern Costa Rica as part of a study by Harry W. Greene (MVZ, UC Berkeley). The four pitvipers found at LSBS will be discussed as follows: Bocaracá (*Bothriechis schlegelii*), terciopelo (*Bothrops asper*), mata buey (*Lachesis [muta] stenophrys*), and tamagá, (*Porthidium nasutum*). Also included will be the coral (*Micrurus nigrocinctus*). Interesting ontogenetic changes in the venoms of *B. asper*, *Lachesis* and the cascabel Centroamericana (*Crotalus durissus*) will be reviewed. Case histories of envenoming by the big three (*B. asper*, *Crotalus* and *Lachesis*) will be summarized and illustrated using slides by Dr. Juan Silva Haad of Leticia, Colombia. Finally, a comparison will be made between the terciopelo (high venom output and toxicity; high many bites, but low fatality rate <1%) and the mata buey (low venom output and toxicity; few bites with high mortality of 75%).

Natural history and conservation of Lesser Antillean frogs

Hinrich Kaiser

Department of Biology, La Sierra University,
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Despite their small land area, islands in the Lesser Antilles harbor a considerable diversity in frogs, mostly members of the genus *Eleutherodactylus*. Of the seven extant *Eleutherodactylus* species, two are widespread generalists (*E. johnstonei*, *E. martinicensis*), three are single-island endemics living in the high-altitude forests of Dominica (*E. amplinympha*), Grenada (*E.*

euphronides), and St. Vincent (*E. shrevei*), and of the two single-island endemics of Guadeloupe, one is a riverine species with webbed toes (*E. barlagnei*), and the other is a miniaturized form (*E. pinchoni*). The recently discovered dendrobatid *Colostethus chalcopis* from Martinique, the large edible crapaud from Montserrat and Dominica (*Leptodactylus fallax*), its congener *L. validus* on Grenada and St. Vincent, and the nearly ubiquitous *Bufo marinus* comprise the remaining species. Two probably introduced species, *Osteopilus septentrionalis* on St. Maarten and *Scinax rubra* on St. Lucia, have very restricted distributions in botanical gardens and have not impacted the local fauna. Encroaching touristic development and especially expansion of plantations pose the greatest threat to the frog fauna. Tourism affects species primarily through habitat loss during the development of new facilities, and the numbers of *L. fallax* consumed on Dominica and Montserrat. The poorly diversified island economies are struggling to increase their agricultural output, and this has resulted in a steady expansion of agricultural lands, even into the higher reaches of the volcanic hills. Although only *L. fallax* may be considered vulnerable, long-term monitoring of all species, particularly of single-island endemics, is necessary to protect this unique fauna.

Life in the water: Distribution and natural history of the Jacarerana, *Crocodylus lacertinus* (Sauria:Teiidae).

William W. Lamar¹, Marcio Martins², and David Schleser³

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A sizeable, semiaquatic, macroteiid, the monotypic *Crocodylus lacertinus* is poorly known, having been mentioned in fewer than a dozen substantive publications during the past century. Recent

and historically overlooked data clarify its occurrence in Venezuela, Colombia, and Peru, and expand its known range within Brazil. Apparently rare in parts of western Amazonia, specimens examined recently from that region conform closely with published descriptions. An occupant of riverine swamp forest, flooded forest, and possibly streams, *C. lacertinus* swims or retreats into shoreline burrows to escape its enemies. Swimming is accomplished via lateral movements of the tail with the limbs adpressed. When restrained, specimens twist and occasionally bite, but show no threat displays. Dentition is pleurodont, with recurved, conical, isodont, sharply pointed teeth anteriorly and some enlarged maxillaries, modifications best suited to grasping, holding, and tearing large prey items. Feeding habits are unknown largely, captives having taken frogs, fishes, crickets, and neonate mice. Stomach contents have consisted of anurans and some arthropods; there is some evidence that anurans are preferred. This lizard is known to vocalize; aside from suggestions that this may be related to either mating or defence, this phenomenon remains uninvestigated. Nothing is known about reproduction.

POSTER

Life history differences in turtles from tropical and temperate environments

Julián Monge-Nájera¹ and María Isabel González²

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²Estadística, Fac. Agronomía, Universidad de Costa Rica, 2050
Costa Rica

Chelonian life history traits have been statistically analyzed for samples that cover from genera to several families, but mostly without comparing the tropical species with those that occur in temperate areas. A common problem to all studies is the use of mathematical transformations that are of doubtful, if any, biological value. In this poster we present the results of a different approach: life history characteristics are analyzed with modern, distribution-free statistical techniques without transforming them to logarithmic or similar values. The emphasis is on comparing tropical and temperate species.

Climate and declining herpetofaunas

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A sudden crash of amphibian populations in 1987 led to the disappearance of the endemic Golden Toad (*Bufo periglenes*), the Harlequin Frog (*Atelopus varius*), and many other species from seemingly undisturbed habitats in the Monteverde region of Costa Rica's Cordillera de Tilarán. This and similar cases in highland areas of other continents have caused alarm and controversy because of the suggestion that agents more subtle than habitat loss and fragmentation may be threatening biological communities on a global scale. Debate has focused on whether the observed patterns differ from those expected from natural population dynamics. The number of disappearances among the anurans of Monteverde, analyzed in the context of known demographic variability, suggests that the phenomenon goes beyond natural fluctuations. Furthermore, although discussion of the declines has focused on frogs, toads, and salamanders, lizards and snakes have also been affected. Climate change may be a key underlying factor. There is 24-year trend toward increasingly severe dry seasons and concordant biological responses to this trend by breeding birds and anoline lizards. The catastrophic nature of the amphibian declines has led to the hypothesis that unusually warm, dry weather in 1987 interacted with other sources of mortality such as pathogenic microparasites.

The herpetofauna of a heavily disturbed area on the Corumbá River, Goiás, Brazil

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A nine-month herpetological survey carried out between August '96 and April '97 at the site of the Corumbá hydroelectric power plant in Goiás, Brazil, resulted in 31 species of amphibians (2 orders) and 64 species of reptiles with 41 species of snakes (6 families), 18 species of lizards (6 families) and 4 species of amphisbaenians, with 14,000 specimens collected. The study site is a mosaic of gallery forests and Cerrado with an intense human

occupation owing to tourism to Caldas Novas county's hot springs. It represents a fauna of the Corumbá River, a tributary of the Paranaíba River (Paraná River basin), not yet known and described. This is one of a series of efforts carried out by the Centro de Estudos e Pesquisas Biológicas to characterize the herpetofauna of Central Brazil and will be used in comparative studies of the diversity of these taxa in this part of the country related to other biomes (Amazon rainforest, Pantanal, Atlantic rainforest, and Caatinga).

Latin American pitvipers at the Dallas Zoo: Past, present, and future

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The Dallas Zoo has enjoyed success maintaining several species of Latin American pitvipers in captivity. To date, approximately 50 species of pitvipers from this region have been maintained at this institution. Of those species, nearly half have bred and produced offspring. Numerous original research projects have been performed at the Dallas Zoo with these viperids. Such research includes the combat ritual of the rock rattlesnake (*Crotalus lepidus*), strike-induced chemosensory searching in the bushmaster (*Lachesis muta*), and loreal pit impaction in a black-speckled palm-pitviper (*Bothriechis nigroviridis*). Published works reporting significant reproductions include the reproductive biology of the Uracoan rattlesnake (*Crotalus durissus vegrandis*), breeding of the bushmaster (*Lachesis muta*), and the captive reproduction of the speckled forest-pitviper (*Bothriopsis taeniata*).

Intraspecific variation in pitvipers: A case study in the lancehead *Bothrops asper* from Middle America.

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Intraspecific variation in pitvipers has been documented by looking at external characters such as scutellation, color pattern and venom variation. Molecular markers are also important

tools for the analysis of intrapopulation variation, particularly since high levels of variation can be observed at the genetic level. A good knowledge of the extent of this variation is fundamental to elucidate the taxonomic status and phylogenetic relationships of species and populations. A case study is presented in where the morphological diversity of the pitviper *Bothrops asper* from Middle America was studied. Despite its abundance and clinical importance, the taxonomic status of *B. asper* remains controversial. The effects of gender, ontogeny and geography were examined for morphological characters of taxonomic importance. Sex differences were observed in several traits: females are larger and have more ventrals and dorsal rows, and can be distinguished by landmark measures. Males have a higher number of subcaudals and are usually more heavily pigmented in the supralabial region. Age does not affect scutellation, although it does influence pigmentation patterns. Geographic differences in several morphological characters were evident from the analysis. The seven populations included in this study can be clustered in two major groups: those in Mexico and Nuclear Central America, and those from Isthmian Central America. Distinction between these groups is possible in terms of univariate and multivariate statistics, and also employing optimization criteria for a hypothesis of relationships among populations. The geographical differences in *B. asper* are explained in terms of population fragmentation due to formation of xeric barriers separating mesic regions inhabited by the species or by isolation by distance between populations within each region.

Herpetofauna of the dry environments of Middle America: A summary.

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Despite their extension and relative accessibility, dry areas of Middle America have received little attention in terms of herpetological studies. Tropical dry forest, tropical very dry forest and subtropical dry forest, dominates these areas, with annual precipitations between 500mm and 1500 mm. A continuous corridor of xeric conditions runs along the Pacific coast, from southern Guatemala to the Península de Nicoya, Costa Rica. There is also a disjunctive series of subhumid valleys from the Isthmus of Tehuantepec along eastern Guatemala and northern Honduras. Herpetological communities are highly diverse in these habitats: from 76 to 81 species are reported to occur there. Amphibians and reptiles distributed in these areas are adapted to the drastic conditions that affects them. Reproduction is extremely seasonal

in the majority of the species, with hatchings emerging at the beginning of the rainy season (May-June). Great similarity is found in the herpetological composition between these arid localities in Central America, even among the isolated dry-valleys of Nuclear Central America. A proposed study to account for the biogeography and origin of these isolated herpetological communities is presented.

Preliminary account of the herpetofauna of the upper Tocantins River, Goiás, Central Brazil

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There are very few descriptive papers on the herpetofauna of Central Brazil and most of them deal with a specific category (amphibians, lizards or snakes) rather than a more complete faunal characterization. With the results of the collecting work carried out by the Centro de Estudos e Pesquisas Biológicas since 1987, we begin to have a first picture of the amphibians and reptiles of the state of Goiás. With the recent help of a faunal survey for the Serra da Mesa hydroelectric power plant at the upper Tocantins River (Cerrado vegetation) we produced a checklist that possibly represents up to 80% of the herpetofauna of the region. So far we have recognized 37 species of amphibians in 2 orders (Anura and Gymnophiona) and 6 families, and 95 species of reptiles with 6 species of amphisbaenians, 23 species of lizards (9 families), 60 species of snakes (8 families), 4 species of turtles (3 families), and 2 species of crocodylians. Among the taxa collected, we have at least 5 new species of reptiles. Comparative studies with the known herpetofauna of the lower Tocantins River (Amazon rainforest) are underway, and a new one-year collecting project in the middle Tocantins River (possible ecotone) is to begin in a few months.