

The Newsletter of the Herpetologists' League

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and other information for HL members is always available on the web-site at:

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Call for Symposium Proposals for the 2002 HL Meeting

The Herpetologists' League sponsors thematic symposia for its annual meetings. Any League member may submit a proposal for a symposium for the upcoming meeting by sending a proposal application to the chair of the Symposium Committee. Official sponsorship by the Herpetologists' League allows for the scheduling and announcement of the symposium in the meeting program and registration materials. In addition, a small amount of money (a maximum of \$2000) is available to support sponsored symposia.

Applicants should provide the following information: 1) a statement outlining the name/topic of the symposium, the scope of the planned presentations, the relevance of the topic to herpetology and, if appropriate, to the particular meeting (e.g., timeliness or geographic appropriateness), and the goal of the symposium (not to exceed one single-spaced page of text); 2) a tentative outline of speakers (including presentation of titles and institutional affiliations) indicating the time to be allocated for each presentation and the total length of the symposium (e.g., half-day, full-day). Only speakers that have indicated their willingness to participate should be listed. This should be accompanied by a short (one paragraph) statement explaining how the particular slate of speakers and presentations meets the goals of the symposium as a whole. Note that two or more individuals should be involved

with organizing each symposium and that the application should include the addresses, telephone and fax numbers, and e-mail addresses of these organizers. 3) a budget (not to exceed \$2000) detailing the proposed use of funds requested from the Herpetologists' League. Appropriate expenses include full or partial support of travel, housing and/or registration expenses for symposium participants.

Sponsorship by the Herpetologists' League does not guarantee financial support and symposia may be sponsored and funded at a level lower than that requested by the applicants.

Interested persons should submit their proposals no later than 1 May 2001 to: Rafael O. de Sa, Symposium Committee, Department of Biology, University of Richmond, Richmond, Virginia 23173.

Herpetotrivia: In Kuhl's wart frog (a fanged frog from Taiwan) most females lay multiple clutches with an average frequency of over 3 clutches in the 81 day sampling period. One female laid nine clutches during this period. -- Tsuji, H and K-Y Lue. 2000. *Herpetologica* 56:153-165.

2000 Winners: HL's Graduate Competition

Eight students participated in HL's Graduate Student Competition at this year's annual meeting at La Paz. Awards were based on short written papers and on oral presentations made at the meeting. Six of the participants were chosen as finalists and these students received monetary awards to fund travel to the meeting. An Overall Winner and Honorable Mention were selected. Below are short bio's of the six finalists and a brief description of their research in their own words.

Overall Winner:

Kirsten Parris

Degrees: **BSc** (Botany, *Honors*), Univ. of Melbourne **BA** (History), Univ. of Melbourne **Ph.D.** (Ecology), The Australian National Univ.; Advisor: Henry Nix

Current: **Post-Doctoral Fellow**, Australian Research Centre for Urban Ecology, Royal Botanic Gardens Melbourne

Hometown: Bendingo, Victoria, Australia

During my Ph.D., I studied the ecology of stream-breeding frogs in the forests of eastern Australia. There are approximately 200 species of frogs in Australia, but the ecology of the majority of these is poorly understood. I investigated the distribution, relative abundance and habitat requirements of the cascade treefrog *Litoria pearsoniana* and the great barred frog *Mixophyes fasciolatus*. The study involved a large-scale field survey across the geographic and environmental range of the two target species. I also investigated the habitat variables influencing the diversity and composition of frog assemblages at forest streams in sub-tropical Queensland and New South Wales. For my post-doc, I'm planning a study of frogs in the greater Melbourne area, to identify which species are persisting in the urban and suburban environment and which have declined or disappeared in response to habitat changes over the last 30 years. I'm hoping to be able to provide recommendations for the restoration of aquatic habitats in the area, so they may be suitable for an increased diversity of native frogs.

Honorable mention:

Nicole M. Gerlanc

Degrees: **BS**, Purdue Univ. (Biology); Advisor, Morris Levy **MS**, Kansas State Univ. (Biology); Advisor, Glennis Kaufman

Current: **Ph.D. student**, at Kansas State Univ. (Biology), Advisor: Walter Dodds

Hometown: Evansville, Indiana

I study western chorus frogs on Konza Prairie Biological Station in the Flint Hills of Kansas. I am interested in their use of ephemeral aquatic breeding habitats as breeding sites, particularly bison wallows and intermittent streams. The primary objectives of my study were to determine if abiotic factors in the larval environment of western chorus frog tadpoles changed predictably as pools dried and to determine how these changes affected growth and development of tadpoles. The research I did for my master's thesis provided evidence that bison wallows and intermittent streams vary in physiochemical properties and that natal habitat has an influence on the response of tadpoles to some abiotic factors. I am now interested in how a stochastic climate, which influences the temporal and spatial variation of available aquatic habitat, influences the population dynamics of this widely distributed amphibian in tallgrass prairie. Specifically, I am using mark-recapture to start estimating population parameters of western chorus frogs on Konza Prairie.

Travel Awards:

Kristin Bakkegard

Degrees: **BS**, U.S. Naval Academy (Chemistry) **MA**, Boston Univ. (Chemistry); Advisor: John Snyder

Current: **Master's student** at Auburn Univ. (Zoology); Advisor: Craig Guyer

Hometown: Huntsville, Alabama

I have been studying the behavior and activity of the Red Hills salamander (*Phaeognathus hubrichti*) at the burrow entrance for the past two years. It is a federally listed (threatened) species endemic to five counties in south central Alabama. Due to its fossorial habits, limited range, and relatively recent discovery, little is known about this species. The last intensive study of this salamander was completed in 1975, a master's thesis. I filmed burrow entrances with a camcorder and determined when and how long they were present at a burrow entrance, what behaviors were exhibited and what prey were available. Salamanders are present at an entrance on a continuous basis for up to 14 hours where they oriented toward and preyed upon arthropods. I also documented two previously undescribed behaviors, a gape or yawn, and social interactions between two salamanders. I concluded that the burrow entrance plays an important role in the ecology and behavior of the Red Hills salamander.

Julian Faivovich

Degrees: **Licenciado en Ciencias Biologicas**,
Facultad de Ciencias Exactas y naturales, univ. De Buenos Aires, Argentina

Current: **Ph.D.**

student, Colubia University/CERC and American Museum of Natural History; Advisor, Darrel Frost

Hometown: Buenos Aires, Argentina

My research has focused on the phylogenetic relationships of the hylid frog genus *Scinax*. *Scinax* is composed of roughly 84 recognized species that are presently divided into five species groups. It is a very biologically diverse genus, with representatives occupying different habitats from Mexico to Argentina. Through the use of exemplar species I performed a cladistic analysis to test the monophyly of four of the five recognized species groups and to explore their interrelationships. The data matrix included 84 characters taken from adult and larval external morphology, osteology, myology, karyotypes, reproductive biology, and behavior. The most parsimonious trees suggest that two of the currently recognized species groups are paraphyletic, one is polyphyletic, and one is monophyletic. Furthermore the results show two large clades within *Scinax*, one well-supported group almost restricted to southeastern Brazil, and another, more weakly supported clade that is widespread in warm areas of the neotropics. A cladistic analysis of such a diverse group as *Scinax* provides a framework to test a wide range of ecological, biogeographic and evolutionary hypotheses.

Meredith J. Mahoney

Degrees: **BA**, Smith College (Biological Sciences & Philosophy); Advisor: Stephen Tilley **Ph.D.** Univ. of California, Berkeley (Integrative Biology); Advisor, David Wake

Current: **Post-doctoral Associate**, American Museum of Natural History

Hometown: Arlington, Massachusetts

My dissertation research is on phylogenetic relationships and morphological evolution of salamanders in the family Plethodontidae. The salamanders I study represent extremes of morphological change. Species of *Plethodon* in eastern and western North America have been separated for over 40 million years, yet they have retained generalized morphology, ecology and behavior. The closely related genus *Aneides* displays a suite of derived morphological features associated with arboreality and increased intraspecific aggression. These features apparently evolved over a very short period of time. Molecular studies of these salamanders have indicated that western species of *Plethodon* are more closely related to *Aneides* than to eastern species of *Plethodon*. The genus *Plethodon* is therefore paraphyletic and the derived morphology of *Aneides* evolved from a *Plethodon*-like ancestor. I studied the relationships among these salamanders using mitochondrial DNA, osteological characters, and additional characters from the literature. My results support the paraphyly of *Plethodon* and the relationship of *Aneides* to western *Plethodon*. Although some portions of the phylogeny are not resolved strongly, the western lineages of *Plethodon* are apparently a clade, and sister taxon of the *Aneides* clade. The eastern *Plethodon* are a robust clade supported by molecular data, but there are no morphological synapomorphies for this group. My results also indicate parallel morphological evolution has taken place in the *Aneides* clade and in the western sister taxa *Plethodon elongatus* and *P. stormi*. Both lineages have enlarged jaw adductor muscles, a modified insertion site for these muscles on the atlas, increased ossification of the skull, and a reinforced snout region with modifications to the vomer and premaxilla bones.

J. C. Marshall

Degrees: **BA**, Brigham Young University (Biology)

Current: **Ph.D. candidate**, University of Utah (Zoology): Advisor: Jack W. Sites

Hometown: St. George, Utah

Two chromosomal races of the *Sceloporus grammicus* complex form a hybrid zone in the Mexican state of Hidalgo. In my research, I try to describe the width and shape of the zone through the use of genetic markers. Previously a "necessary evil" of using multiple markers is that you would have to take the averages of all markers to describe the zone. Implementing a beta version of the computer program ANALYSE, I was able to look at each genetic marker (mitochondrial and three chromosomal) individually and compare the different widths and shapes between each markers. By making comparisons between clines generated by the genetic markers, we gain insights into the evolutionary processes that contribute to the origin and maintenance of the hybrid zone. This is important and exciting because it helps us to better understand evolution and the speciation process.

Graduate Students in Herpetology!

Guidelines for the HL Student Award Competition

If you are a Master's or Ph.D. student with research results, consider participating in the annual competition for the Herpetologists' League Award for Graduate Research. There are six prizes to be won.

To participate, you must (1) be a member of the Herpetologists' League in good standing, (2) be either a registered graduate student or have completed your graduate degree within 12 months of the Award presentations at the annual meeting, (3) submit a single-authored abstract by the "call for papers" 31 March 2001 deadline for the 2001 annual meeting, noting on the abstract your intention to compete only in the HL Award competition (this applies only to this particular abstract, different abstracts/ presentations may be submitted to other competitions), (4) submit a single-authored extended abstract to the Chair of the HL Award Committee (4 pages of text, double-spaced, minimum 11 point or 12 pitch type, 1 inch margins, with additional literature cited, tables, and figures for a maximum of 10 pages in total) written in format for *Herpetologica*, due 28 May 2001 (two months before the first day of the annual meeting), and (5) give the oral presentation at the annual meeting. Note that noncompliance with any of these requirements will result in disqualification.

The judges will review the extended abstracts and pick up to six finalists for the rest of the competition. Their names will be announced at the meeting after the presentations (all presentations will be in a single session). If you are a finalist, you will receive a travel award of \$200. In addition, the Herpetologists' League will host a dinner for the finalists on the evening of the Award Session. The winner will be announced later at the HL Business meeting, and the award shall consist of (1) \$300 (for a total of \$500), (2) 10 years of back issues of *Herpetologica*, and (3) an invitation to submit an expanded full-length manuscript to *Herpetologica*/*Herpetological Monographs* (which will be subject to normal review) as a lead article identifying the author as winner of the Award. All participants will receive collated comments from the judges on their talk and extended abstract.

Admittedly, the Herpetologists' League's student award competition is more demanding than those of the other herpetological societies but the chances of winning something are higher, and we submit that you'll get a lot out of the experience whether you win the first prize or not. For assistance on giving oral presentations and writing the extended abstract, we recommend that you refer to the June 1998 Supplement of *Herpetologica* (Volume 54: S42-S54 and S67-S75).

For further information or questions concerning the Herpetologists' League Award, contact Linda S. Ford, Chair of the HL Award Committee, Department of Herpetology, American Museum of Natural History, Central Park West at 79th Street, New York, NY 10024-5192, USA. Phone: (212) 769-5857; Fax: (212) 769-5031; email:

lford@amnh.org

Sherman A. Minton

Student Travel Awards for 2001

Appeal for Contributions

In order to honor the memory of the late Sherman A. Minton, Student Travel Awards will be made in his name for the HL/SSAR Annual Meeting in Indianapolis next year. These will serve to help recognize his many important contributions to herpetology, toxicology and medicine.

Approximately 10 awards will be made to students to help defray travel expenses to the meeting, and will be made using the same criteria as the SSAR Student Travel Awards. The winners will be recognized in the HL Newsletter. Donors will be recognized in appropriate ways, unless they ask to remain anonymous. Many feel Dr. Minton has a special place in their memory and we hope they will express their feelings by making a significant contribution to these awards.

Donors may send their check or credit card information to: Dr. Robert D. Aldridge, Treasurer SSAR, Department of Biology, Saint Louis University, 3507 Laclede Ave., St. Louis, Missouri 63103-2010 USA. Email: ssar@slu.edu. Credit Card donors may pay via e-mail; include number, expiration date and name of card holder. All contributors will be sent an official acknowledgement of their donation for tax purposes. For more information contact David Hardy, Sr. at dhardysr@theriver.com or (520)624-8879.

GRAD SCHOOL NEWS...

The department of Biological Sciences at Binghamton University

Binghamton University is located in upstate New York only an hour south of Cornell University. BU has a very strong academic reputation, is one of four university centers in the SUNY system emphasizing research, and has a flexible policy in support of graduate research projects conducted elsewhere and between academic units. The Department of Biological Sciences is strong and well-funded in the areas of behavioral ecology, evolutionary biology, and ecology, and BU's location is ideal for herpetological field studies. It is surrounded by extensive wooded hillsides near the Susquehanna River, and includes on campus both a fence-enclosed Ecological Research Facility (ERF) and a 117-acre Nature Preserve that is a classic, multiple-pond complex with a resident beaver population. Just a short walk away is Nuthatch Hollow Preserve, a research-dedicated woodland property with old and restored ponds. Herpetological research on campus is primarily in the laboratories of **DALE MADISON** and **DAVID SLOAN WILSON**, but the web of collaborations with other EEB faculty, nearby research units, and the NYS Department of Environmental Conservation diversifies the graduate experience.

DALE MADISON, Professor of Biology, has a long-term research focus on the chemosensory dynamics of predator-prey interactions between snakes (*Thamnophis sirtalis*) and salamanders (*Plethodon cinereus*), although an active research interest is maintained in habitat use, breeding and migratory behavior in amphibians. DALE is currently trying to identify the diet specific chemical components that are used by red-backed salamanders, *Plethodon cinereus*, to identify garter snakes that are a significant predation risk. The context-specific nature of the avoidance response is of particular interest. Professor SUSAN BANE (HASTIE) is a natural products organic chemist in the Department of Chemistry collaborating on these studies. JOHN MAERZ, a postdoctoral research specialist working with DALE MADISON, is currently active in the effort to chemically identify the cues by which salamanders detect and discriminate among snakes feeding on different prey. JOHN completed his Ph.D. at

Binghamton University in Spring 2000 focusing on diet and phenotypic differences between local red-backed salamander populations. He found that diet differences between salamander populations were correlated with changes in the dominant vegetation and soil conditions. He also found that population differences in salamander tail condition (resource storage), female fecundity, social behavior, and morphology were correlated with diet differences. In addition to his thesis work, JOHN has collaborated with RICHARD WYMAN at the Edmund Niles Huyck Preserve on top-down regulation of terrestrial herpetological communities, with RICHARD HIGHTON on the population genetics of *P. cinereus*, and with DALE MADISON, JAMES MCDARBY, and AARON SULLIVAN on several projects examining salamander responses to chemical alarm cues. In April 2000, JOHN also started a three-year appointment as a postdoctoral research specialist in the Department of Natural Resources at Cornell University working with BERND BLOSSEY, Director of the Invasive Species and Biological Control Program. In the coming years, JOHN will be interacting with many BU, Cornell and regional herpetologists in studying the effects of invasive species on populations of a variety of aquatic and terrestrial amphibian species. EDWARD MCGOWAN, a veteran NYS DEC consultant and Ph.D. student, is currently using GPS, GIS, and radiotracking techniques in a Nature Conservancy and DEC-supported project to better understand mating behavior and reproductive ecology of the timber rattlesnake, *Crotalus horridus*, emphasizing mating systems and synchronous reproduction in rattlesnakes. ED is also under contract with Eastern NY Office of The Nature Conservancy to conduct herpetological surveys in southeastern NY. Target species include the bog turtle (*Clemmys muhlenbergi*) and northern fence lizard (*Sceloporus undulatus*), which are both State endangered species and the timber rattlesnake (*C. horridus*), a State threatened species. Finally, ED is conducting a herpetological inventory of the Rutgers Creek Wildlife Conservancy at the Paul F. Brandwein Institute, Orange County, NY. The inventory project is designed to provide baseline information on herp diversity and distribution at this recently created environmental education facility. JASON ROHR is in the terminal phase of his Ph.D. research on the context-dependence avoidance of conspecific alarm pheromones from eastern Red-spotted newts (*Notophthalmus viridescens*). Comprehensive field studies show that responses are plastic and depend upon a variety of factors including predation risk, population density and breeding activity. VICTOR LAMOUREUX will soon defend his Ph.D. research on the behavioral ecology of the greenfrog, *Rana clamitans*. VICTOR has radiotracked over 35 adult greenfrogs through major segments of the annual cycle, including the overwintering period. He has made startling observations on cannibalism, heron predation, foraging, and overwintering habitat use during the secretive, non-breeding period of this species, and his 6-part thesis should revolutionize how future biologists view many aspects of anuran natural history. AARON SULLIVAN, a former master's student in ALICIA MATHIS' laboratory, is currently beginning a Ph.D. project on the field validation of the avoidance of predator scent traces by the red-backed salamander. Finally, MICHAEL VILLANELLA is developing the protocol for the implementation of RAPD technology to study the population genetics of *Plethodon cinereus*. This research will attempt to see whether the suites of local behavioral/morphological variation observed by JOHN MAERZ are better indicators of genetic plasticity or genetic polymorphism. DAVID SLOAN WILSON, Professor of Biology, has a wide range of interests, including natural selection as a hierarchical process, the nature of intraspecific variation, the evolution of ecological communities, and human evolutionary biology. JEFF ARENDT is a postdoctoral research associate working in DAVID's laboratory on the evolution of growth and development rates in vertebrates, emphasizing life-history theory, functional morphology, and developmental biology. He has recently shifted his specific emphasis to adaptive variation of growth rate in tadpoles, specifically on a trade-off between growth rate and swimming speed in American toads and Hammond's Spadefoot toads. He is trying to understand this trade-off in terms of muscle development and patterns of cellular recruitment vs. cellular differentiation. In the future he hopes to relate these patterns to anti-predator behavior, especially the relative benefits of large size versus burst speed in avoiding gape-limited predators (primarily fish) and predators that aren't gape-limited (turtles, skunks, and birds). CHARLES SONTAG is conducting Ph.D. research on the group structure and formation of larval American toads, *Bufo americanus*. One of the guiding principles of his study will be to search for evidence that group formation will be at least in part based on higher level, group selection, where traits associated with group survival will be selected for based on differential survival between groups. Names of Faculty in the Biology Department and the Ecology, Evolution and Behavior (EEB) group, along with their recent publications, can be accessed at our website: <http://biology.binghamton.edu/faculty/faculty.html>

Herpetotrivia: Female brown tree snakes play an active role in courtship, including mounting, chin-rubbing and

head-lifting behaviors. They also can discourage courtship by males by raising their tails and releasing cloacal secretions, suggesting the presence of a courtship inhibitory pheromone. -- Greene, MJ and RT Mason. 2000. *Herpetologica* 56:166-175.

FEATURE ARTICLE

Editor's Note: The following is the 4th in a series of articles describing what it's like to be a herpetologist at different types of institutions. While everyone's experience is not the same, and each institution has its own special personality, it is hoped that this series will provide useful information for students and others contemplating careers in herpetology.

How green is your grass? Herpetology in a state wildlife agency

By Michael Sredl

Arizona Game and Fish Department

Nongame Branch

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Phoenix, AZ 85023-4399 USA

When I interact with other herpetologists professionally or socially, I periodically find myself wondering: what would my herpetological career be like if I had taken a different path? Is it really that much greener on the other side? Sometimes these musings take place during passionate scientific discussions, other times during good old-fashioned gripe sessions. While these interchanges have provided a good deal of insight into my "what if" wondering, more importantly, they have made one thing abundantly clear: there are few perfect jobs, much of your job and your passion for it is what you make it, and your career and job, although inextricably intertwined, can be two different animals.

I came to work at Arizona Game and Fish Department after finishing my master's degree (spatial and temporal factors affecting larval amphibian fitness), and have worked for the department from 1990 to the present. While my primary focus has been conservation and management of the state's 7 species of native ranid frogs, I have been involved with many aspects of research, conservation, management, and policy as it related to Arizona's herpetofauna. Activities of my job fall into two primary categories: those that can be considered investigator driven (e.g. field projects) and those that are issue driven (e.g. management and policy)... but it wasn't always that straightforward.

Little in my life has taken a straight path. Career wise, I have done stints as a student of wildlife management (Montana State University), a monk in the mountains of Colorado, a forklift operator in a lumber yard and a paint factory, an ice cream storeowner, and at age 29, as a returning student of Zoology (BA from UC Berkeley and MS from Arizona State University).

After finishing school the inevitable "Where would I end up?" began to sound in my mind. A small museum with a big research budget? A little college with no teaching load? A research 1 university that handed out NSF grants to all start-up faculty? Oh my, so much to choose from! Even though I had an early interest in wildlife management -- my most influential biological roots were in zoology -- I hadn't pictured ending up at a state wildlife agency.

Arizona Game and Fish is organized as a series of branches within five divisions. I work in the Nongame Branch as a Wildlife Specialist II, which is part of the Wildlife Management Division. My position and those I hire are part of the "Wildlife Series." These positions go from Wildlife Assistant (I and II) and Wildlife Technicians to

Wildlife Specialists (I, II, and III). In general the higher you go, the more administrative your position becomes.

One feature of agency culture that stands in contrast to the culture of academia is hierarchy of supervision or "the chain of command", which often can have a strong influence on your job satisfaction. The quality of any chain is only as good as its individual links.

When I arrived, the Nongame Branch had seven employees, including a clerical person. The first project I worked on was a \$10,667 grant from U.S. Fish and Wildlife Service. This project initially investigated population dynamics of lowland leopard frogs, but as funding increased, broadened to include status and distribution studies of the 7 species of Arizona ranid frogs. The focus of my projects has continued to evolve and has gradually shifted from status and distribution and demography to applied ecology and conservation targeting native ranid frogs.

During those early days, I was successful at getting a little forest service money, which funded status and distribution surveys for riparian herpetofauna on several national forests. At that point in my career, my summers were spent in the field, and that was the upside. The downside was I was bringing home a Wildlife Assistant II salary, an amount that even with an "I'm not in it for the \$\$ attitude" made it difficult to build a secure financial future.

Keys to building a fulfilling job as a herpetologist in a state wildlife agency are adequate funding and institutional support. I have been fortunate to have been the recipient of some of both. Beginning in 1992, the Nongame Branch mushroomed to over 80 employees. Nearly all of these positions were the result of the passage of the Heritage Initiative by the voters of Arizona. It was during this prosperous period in Game and Fish when I moved into my current position, Ranid Frogs Projects Coordinator. The initiative created the Heritage Fund, which contributes approximately 10 million dollars of lottery proceeds annually to Game and Fish. This money supports research, conservation and management, environmental education, and habitat protection for Arizona's natural biological diversity.

Between 1992 and 1998, I supervised a staff of between 4 and 5 biologists, which included a mix of Wildlife Assistants, Wildlife Specialists, and summer interns. These positions were soft-money projects, which came from grants and contracts that were approximately equal portions of state and federal dollars. From 1998 to the present, state and federal funds have decreased, as has my staff.

My job has developed a certain rhythm: springtime planning followed by project implementation, which lasts into the fall. Fall and winter bring data entry and analyses and writing. Much of what I write is technical or gray literature reports and planning documents. This writing is often punctuated with last-second proposal writing and assignments "from above" that seem to pop unexpectedly like kernels of corn in hot oil.

And speaking of hot oil, I have also been involved in a variety of issue-driven projects and activities that fall outside the scope of my field projects. They are frequently interesting and always a challenge. Some examples are evaluation of Endangered Species Act listing packages, revision of our non-native species policy, development of conservation agreements, and input on possession limits, scientific collecting, and land use permits, among other things.

I have always been a believer in being a participant in the scientific process and have a strong interest in the interface and integration of pure and applied science. Working as a herpetologist at Game and Fish has, so far, allowed me to explore this arena by interacting with groups like the Declining Amphibian Populations Task Force and attending meetings like this year's "herp societies" meeting in La Paz. I have also had incredible opportunities to design *and* implement conservation of native amphibian populations. (As I was finishing writing this newsletter contribution, I got an e-mail from a private land owner who is a participant in one of our leopard frog reintroduction projects. In this message, he told me that frogs we released in August of 1999 had just laid another egg mass in his pond, making this season's total nine).

Careers in herpetology are not all peaches and cream. If you're at a small regional museum, you're going to have

to hustle for research dollars. Small college -- teaching load, research 1 university -- endless committees, federal government -- bureaucracy: no matter where you end up, there will be things about your job that you don't like. Focus on career.

Is support for science weak? Show how science and policy can be integrated. I want to contribute to peer-review publications, but internal support to do this weak. My challenge is to blend career and job to everyone's satisfaction. I find bureaucracy stifling (who wouldn't), figure out ways to make it less so. Take out the garden hose, and make your grass grow.

For the most part I have been satisfied with my herpetological career at Arizona Game and Fish. In the near future, the prospects for herpetology in other state wildlife agencies may be taking a turn for the better. The Conservation and Reinvestment Act (CARA) has passed some key hurdles in Congress. While the final form of this legislation has not taken shape, there is good chance that herpetology in state wildlife agencies across the country may benefit. If you end up as a herpetologist in one of those agencies and if you work hard and are supported financially and by your agency, you can have a fulfilling career. If you do, I hope I run into you at a future herp meeting.

MONEY, MONEY, MONEY

Southwestern Research Station Student Support Fund

The American Museum of Natural History awards several grants each year of approximately \$400 - \$800 to graduate or postdoctoral students pursuing research at its Southwestern Research Station in the Chiricahua Mountains, Portal, Arizona. Information and application forms for this program and other Museum grant programs can be obtained by contacting: Office of Grants and Fellowships, American Museum of Natural History, Central Park West at 79th Street, New York, NY 10024-5192; <http://research.amnh.org/grants/index.html>; e-mail: rnavarro@amnh.org; -- applications due: Feb. 15, 2001. Address questions concerning the Station to Dr. Wade C. Sherbrooke, Director, Southwestern Research Station, American Museum of Natural History, Portal, AZ 85632 USA; phone/fax: 520-558-2396; e-mail: swrs@amnh.org.

Southwestern Research Station

Seasonal Staff Assistant

Southwestern Research Station, American Museum of Natural History has an opening for a seasonal staff assistant March 15 - September 2001 (end date flexible). Assist in operations of the biological research station office, nature shop, and guest rooms: taking reservations, answering phones, greeting guests, working with volunteers in housekeeping, general staff assistance. Five-day week; salary \$245/week, plus room (shared) and board, and medical benefits. Applicant must be conscientious, organized, and flexible; must enjoy people, and be interested in living in a remote setting and working with biological researchers. Biological training an asset. Call and send resume to: Dr. Wade C. Sherbrooke, Director, Southwestern Research Station, American Museum of Natural History, P.O. Box 16553, Portal, AZ 85632 USA; phone/fax: 520-558-2396; e-mail: swrs@amnh.org.

ANNOUNCEMENTS

Volunteers

Approximately 30 volunteer positions are open in 2001 at the American Museum of Natural History's Southwestern Research Station in Portal, Arizona. The volunteer program is run annually and offers students in biological sciences outstanding opportunities to observe and become involved with scientists doing field research. Food and lodging are provided to volunteers in exchange for twenty-four hours per week of routine chores, with

the remaining time available for research activities. The program is open to both undergraduate and graduate students; the latter may pursue their own research projects. Faculty knowing of promising students should alert them to this opportunity for professional experience toward, development of, and evaluation of their career goals. The program is open to non-students as well, particularly in the spring and fall.

Volunteers are needed between March 15 and November 1. Appointments are for part of this period, with a minimum appointment of six weeks. Applicants for spring positions (March-May) should submit applications by February 15, summer volunteers (June-August) by April 1, and fall volunteers (September-November) may apply any time. For applications, write: Dr. Wade C. Sherbrooke, Director, Southwestern Research Station, American Museum of Natural History, P.O. Box 16553, Portal, AZ 85632 USA; phone/fax: 520-558-2396; e-mail: swrs@amnh.org.

Herpetotrivia: A new species of fringe limbed treefrog apparently is hard to find in its native Guatemalan cloud forest. It was given the name *Hyla dendrophasma*, meaning "tree phantom". -- Campbel, JA, EN Smith & M Acevedo. 2000. *Herpetologica* 56:250-256.

WARNING -- Toxic Sponges

Commercially available sponges have proven useful in a number of recent studies of amphibians. Jason Rohr and Dale Madison recently reported to *Communications* that some of the pre-moistened sponges on the market can be toxic to amphibians in captivity. Salamanders died after only half an hour in contact with these sponges. If you use sponges in your studies, you should rinse them thoroughly and monitor your animals carefully.

PUBLICATION NOTICES

The Biology of Plethodontid Salamanders

Edited by Richard C. Bruce, Robert G. Jaeger, and Lynne D. Houck. 2000. Kluwer Academic/Plenum Publishers. 485 pages. About \$195 (cloth). ISBN: 0-306-46304-0. This book begins with the publication of a symposium in honor of Richard Highton, containing major papers by Darrel Frost; Richard Highton and Robert Peabody; David Wake and Elizabeth Jockusch; Stephen Tilley; Paul Chippindale; and Stevan Arnold. The second part of the book contains 11 papers pertaining to "evolutionary and comparative biology of plethodontids". The third part contains eight papers pertaining to "behavioral ecology of small *Plethodon*".

Amphibians and Reptiles of Texas

By James R. Dixon. 2000. Texas A&M University Press. 421 pages. \$39.95 (cloth), \$24.05 (softcover).

Field Guide to the Amphibians and Reptiles of Illinois

Illinois Natural History Survey

Field Manual No. 8

By C. A. Phillips, R. A. Brandon and E. O. Moll. 1999. 300 pages. \$19.95 (hardcover). A field guide to aid biologists, naturalists, land managers, law enforcement officials, and students in the identification of the amphibians and reptiles found in Illinois. Full-color photographs of all 102 species plus information on habitats, natural history, and distribution.

To order send \$19.95 (includes shipping and handling) to: Distribution Center, Illinois Natural Survey, 607 East

Peabody Drive, Champaign, Illinois 61820. Make checks payable to Illinois Natural History Survey. For more information, call the Publications Office at 217-333-6880 or go to:
<http://www.inhs.uiuc.edu/cbc/collections/herplinks/FGannounce.html>

Frogs: A Wildlife Handbook

By Kim Long. 1999. Johnson Books. 192pp, over 100 color and B&W illustrations, range maps. \$15.95 (paperback). ISBN: 1-55566-226-9. This book is a combination illustrated field guide, fact book, and folklore collection for North American frogs. Topics include identification, anatomy, favorite foods, reproduction, advertisement calls, feeding habits, preferred habitats, predation, natural range, vision, hearing and locomotion.

For more information contact Johnson Books, 1880 South 57th Court, Boulder, CO 80301. Ph: 303-443-9766; Fax: 303-443-1106; E-mail: books@upcolorado.com.

A Veterinary Guide to the Parasites of Reptiles

Volume 2: Arthropods (Excluding Mites)

By Susan M. Barnard and Lance A. Durden. 2000. Krieger Publishing Co. 298 pages. \$46.50 (cloth). ISBN: 0-89464-908-6. Information is presented in annotated outline form. Chapters are divided by arthropod groups, and include descriptions, hosts, host locations, sources of infestation and life cycles. There also is a chapter on lab procedures for the herpetoculturist, and a bibliography of more than 430 references. To order contact: Krieger Publishing Company, P.O. Box 9542, Melbourne, FL 32902-9542; Phone 1-800-724-0025 or 321-724-9542; Fax 321-951-3671; E-mail: info@krieger-publishing.com; www.krieger-publishing.com

Amphibians and Reptiles of Madagascar

and the Mascarene, Seychelles, and Comoro Islands

By Friedrich-Wilhelm Henkel & Wolfgang Schmidt, with the collaboration of M. Knöthig, K. Liebel, and R. Zobel. Final translation and technical edit by H. Kaiser. English Edition 2000. Krieger Publishing Company. 324 pp with 269 color photographs. \$64.50 (cloth). ISBN 1-57524-014-9. Descriptions of 240 species of frogs, turtles and tortoises, lizards, and snakes are provided. For each species, the description includes information on distribution, habitat, characteristic features, as well as some general comments on natural history. To order contact: Krieger Publishing Company, P.O. Box 9542, Melbourne, FL 32902-9542; Phone 1-800-724-0025 or 321-724-9542; Fax 321-951-3671; E-mail: info@krieger-publishing.com; www.krieger-publishing.com

Pythons of Australia:

A Natural History

Edited by Geordie Torr. 2000. Krieger Publishing Company; Co-published with the University of New South Wales Press. 112 pages (34 color photographs). \$24.50 (paper). ISBN: 1-57524-149-8. This book covers anatomy and physiology, behavior, reproduction, and ecology and conservation. It provides detailed accounts and descriptions of all species, from the tiny pygmy python, the world's smallest, to the scrub python, which can reach up to 5 meters in length. To order contact: Krieger Publishing Company, P.O. Box 9542, Melbourne, FL 32902-9542; Phone 1-800-724-0025 or 321-724-9542; Fax 321-951-3671; E-mail: info@krieger-publishing.com; see www.krieger-publishing.com

Fossil Snakes of North America

By J. Alan Holman. 2000. Indiana University Press. 400 pages, 152 figures, 30 color plates. \$69.95 (cloth). Detailed accounts of the morphology and distribution of the fossil snakes of North America and their evolutionary, zoogeographic, and paleoecological patterns. For order information contact: Indiana University Press at: Ph: 800-842-6796, fax: 812-855-7931; E-mail:iupress@indiana.edu. Web-site: iupress.indiana.edu.

Dinosaur Imagery: the Lanzendorf Collection

Foreward by Philip J. Currie, Photography by Michael Tropea. 2000. Academic Press. 152 pages. \$49.95. ISBN: 0-12-436590-6. Photographs of paintings and sculptures from the largest dinosaur art collection in the world, the Lanzendorf Collection.

The Variety of Life: A Survey and Celebration of all the Creatures that have ever Lived

By Colin Tudge. 2000. Oxford University Press. 684 pages. \$45 (cloth).

Policy for Advertisement of New Books As a service to our readers, *Communications* is pleased to publish announcements of new books of interest to HL members. However, we do not accept formal "advertisements". We will include the "standard" information (title; author; publisher; price (HB/PB); no. of pages, maps, illustrations), plus, optionally, a very brief 1-2 sentence description of the book and an address for orders. This information should be sent to the editor of *Communications*. Announcements will be included as space allows and content may be edited.

Communiqués to *Communications*

Target dates for distribution of *Communications* are March and September. Herpetologically-relevant announcements are included as space allows. Send submissions/ questions/comments to: Dr. Alicia Mathis, Dept. of Biology, Southwest Missouri State University, Springfield, MO 65804-0095. Phone: 417-836-5699; FAX: 417-836-4204; e-mail: sam477f@smsu.edu.

Annual Meetings

2001 Indianapolis

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