The Newsletter of the Herpetologists'League

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Alicia Mathis, Editor

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1998 Winners: HL's graduate competition

Ten students participated in HL's Graduate Student Competition at this year's annual meeting in Guelph. Students were judged based on short written papers (four pages of text) 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 was selected. Below are short bio's of the six finalists and a brief description of their research in their own words.

Overall Winner:

Matthew J. Parris

Degrees: **BA** (Biology, *summa cum laude*), St John's University, Collegeville, MN (1994)
Current: **Ph.D. student** at the University of Missouri-Columbia. Advisor: Raymond D. Semlitsch
Hometown: Esko, Minnesota (near Duluth)

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To determine the relative fitness of parental and hybrid genotypes in sympatric leopard frog populations, I examined the performance of parental and hybrid larvae to measure differences in viability. I used artificial crosses between adult frogs from a natural population in central Missouri to produce two parental (*Rana blairi* [BB] and *R. Sphenocephala* [SS]) and three hybrid (F1, F1 backcross, and F2 backcross) genotypes of larvae. I reared resultant larvae in two-way mixtures in experimental ponds. When reared together, both SS and F1 backcross larvae had shorter larval period lengths relative to when reared alone. When reared together, SS larvae drastically reduced survival for F1 hybrids, but both SS and F1 hybrid larvae metamorphosed at larger body masses relative to when reared separately. More F1 backcross metamorphs were produced when larvae were reared with either parental species relative to when reared alone. Larval performance for BB and F2 backcross hybrid larvae was not significantly affected by mixed genotype populations. On average, these results indicate that parental and hybrid genotypes perform at equivalent or higher levels when reared in mixed relative to single genotype populations. Despite the reduced survival of F1 hybrids in mixed populations, the relatively high performance of advanced generation hybrids suggests that natural hybridization and subsequent backcrossing between *R. blairi* and *R. sphenocephala*
can produce novel and relatively fit recombinant genotypes capable of successful coexistence with their parental species in larval environments.

Finalists:

Michelle D. Boone

Degrees: **BS** , Furman University (1994)

Current: **Ph.D. student** at the University of Missouri-Columbia. Advisor:Raymond D. Semlitsch
Hometown: Goose Creek, South Carolina

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My main research interest is how chemical contamination may affect larval amphibian communities under different levels of biotic stress. Most studies in ecotoxicology do not incorporate stresses that a natural community would experience. Because a chemical contaminant would be an additional factor on organisms experiencing other biotic stresses such as density, predation, and pond drying (to name a few), the addition of a chemical contaminant (even at low sublethal levels) may alter the relationships within the community. Carbaryl, the chemical used in this study, is an acetylcholinesterase inhibitor with a half life of a few days that can induce mortality, and at sublethal levels can affect tadpole feeding behavior and activity. This study included three species of anurans (*Hyla versicolor*, *Bufo woodhousei*, and *Rana clamitans*) that were raised together in outdoor mesocosms (1000 L) and were followed through metamorphosis; these replicated communities were exposed to chemical (absent, low, high), predator (*Notophthalmus viridescens*, red-spotted newt; absent or 2 present), and density (low or high) treatments. The chemical affected mass at metamorphosis of one species through reduced survival at the high chemical level which resulted in larger size at metamorphosis. The chemical significantly interacted with density and predator presence for some species. The most intriguing outcome of this study is that even a short-lived chemical contaminant can alter the dynamics and relationships that develop in an amphibian community.

Robert Espinoza

Degrees: **BS** (Biology), San Diego State University (1990)
Current: **Ph.D. candidate**
in Ecology, Evolution and Conservation Biology Program, Univ. of Nevada, Reno. Advisor: C. Richard Tracy
Hometown: San Diego, California

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The research I presented for the HL competition focused on the systematics and the relationship between climate and reproductive modes among members of the South American lizard genus *Liolaemus* (Iguania: Tropiduridae). On a global scale, squamate reptiles distributed in cool climates (i.e., high latitudes and elevations) tend to be viviparous. The adaptive explanation for this association is that viviparity confers a selective advantage in cool environments. This is because females of viviparous species can behaviorally select the appropriate body temperatures for the development of their offspring, whereas oviparous species deposit their eggs in nests wherein the developing embryos are subjected to the vagaries of the nest environment. Specifically, I tested whether viviparous members from two species groups within the genus *Liolaemus*
were distributed in cool climates -- as predicted by the cold-climate hypothesis. To test this prediction in a historical context, I developed phylogenetic hypotheses for two groups based on a combination of molecular, morphological, and biological data sets. The monophyly of both species groups was well supported by these analyses. I then plotted the climatic distributions of the ingroup taxa and their reproductive modes (as determined by examination of museum specimens) on the combined-evidence topology. These analyses demonstrated that viviparity has evolved on several independent occasions within one, if not both, of the two lineages. Moreover, the viviparous species were distributed exclusively in cool climates as predicted by the cold-climate hypothesis. Interesting as well was the fact that several oviparous taxa within these lineages also were distributed in cool climates. Among these, are several species known to have extended egg retention (i.e., eggs are laid with embryos in advanced stages of development). This condition has been interpreted by some researchers as an evolutionary transition to viviparity. This study was the product of a recent research rotation. My dissertation actually focuses on the evolution of herbivory in modern reptiles.

Maureen Kearney

Degrees: **BS** (Biology), George Mason University (1990)
MS (Biology), George Mason University (1993)
Current: **Ph.D. candidate**

in Biology at George Washington Univ. (in the Weintraub Program in Systematics and Evolution). Primary Advisor: James Clark; Co-advisor: Kevin de Queiroz, Smithsonian Institution, National Museum of Natural History
Hometown: Castleton, Virginia

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My dissertation research is on the systematics and evolution of amphisbaenians (including living and fossil forms), a group of burrowing, limbless squamate reptiles related to snakes and lizards. Their evolutionary history is not well known. The talk for which I was a finalist described the results of my work investigating the appendicular skeleton in amphisbaenians. I X-rayed, cleared and stained, and prepared skeletons; then studied these specimens and observed the variability present in the remnants of the limbs and girdles in these specimens. The purpose was twofold: first to gather more morphological data on these forms which can be used in ongoing phylogenetic studies of the group, and second, to compare the morphology of these girdle and limb remains to those in other non- or reduced-limbed lizards (and snakes). A cladogram was presented which showed how these new data affected my hypothesis of amphisbaenian relationships. These new data are interesting because so many lizard groups have independently evolved limblessness that this condition is often blamed for the inability to achieve consensus on the relationships of these forms. Closer examination of the appendicular skeleton reveals the various types of "limblessness" at a finer level of detail.

Brad Moon

Degrees: **BA** (with honors and thesis honors), Univ. of California, Santa Cruz (1988). Advisor: Kenneth Norris
Intern, National Museum of Natural History (1988-1989). Advisor: George Zug
MS (Ecology and Evolutionary Biology), Univ. of Arizona, Tucson (1992). Advisor: David Vleck
Current: **Doctoral candidate** (Biology), University of Michigan, Ann Arbor. Advisor: Carl Gans
Instructor (Biology), University of Puget Sound, Tacoma, WA
Future: **Post-doctoral Researcher**
(Radiology), January 1999: University of Washington Medical Center, Seattle. Advisor: Kevin Conley
Hometown: Cupertino, California

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Snake Vertebrae do the Twist. -- The elongate, limbless body forms of snakes constrain their movements to various kinds of bends and twists. Within their simplified external body forms, snakes have remarkably complex muscular and skeletal systems. Each of their 100 to over 300 vertebrae has five points of articulation rather than three, which is the common condition in most other reptiles and vertebrat*es*. The two extra articulations, between the zygosphenes and zygantra on each side of the adjacent vertebrae, are commonly hypothesized to prevent torsion at the vertebral joints. However, this hypothesis is based largely on extrapolation from structure, despite contradictory behavioral and biomechanical evidence. Many of the axial muscles are elongate and interconnected in muscle-tendon chains that span up to 45 vertebrae, which makes them perhaps the most complex and extensive multi-joint muscle systems in all animals! Some of these muscles insert on the skeleton at an angle, and thus are mechanically suited to produce both bending and twisting movements. In my research on the mechanics of vertebral bending in snakes, I observed slight torsion during a variety of natural movements. These observations led me to measure the degree of axial torsion that snakes exhibit during lateral undulatory locomotion, the structure of the vertebral articulations, and their mechanical capacity for torsion. Although the compound vertebral articulations do reduce torsion, they do not completely prevent it. For example, gopher snake vertebrae are capable of 1-3 degrees of torsion per joint, which allows them to twist by about 20 degrees (measured over 10 vertebrae) per bend during lateral undulatory locomotion. Several other snake behaviors involved twisting movements, and some of these, such as the vigorous twisting used by many snakes when captured, would not be possible without some twisting motion at the vertebral joints. These observations and measurements refute the common hypothesis that torsion is impossible in snakes, and further illustrate the long-known, but often ignored, limitations on inferring precise functions from knowledge of structure alone. The complexity of snake structure and function is much greater than is generally recognized, and is illustrated by the wide variety of bending and twisting movements used by snakes in diverse behaviors.

Santiago Ron

Degrees: **Licenciado** (Biological Sciences), Universidad Católica del Ecuador (1995); Advisor: Tjitte de Vries
MA (Systematics and Ecology), University of Kansas(1998). Advisor: William E. Duellman
Current: **Full time professor**, Department of Biological Sciences, Universidad Católica del Ecuador
Hometown: Quito, Ecuador

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Biogeographic area relationships of lowland Neotropical rainforests based on cladistic analysis of anurans. My research is a cladistic analysis of the distribution of anurans
and lizards in Neotropical rainforests. It shows area cladograms that depict the hierarchical sequence of vicariance among lowland Neotropical regions. This is the first time that Parsimony Analysis of Endemicity has been applied to address biogeographic questions for
Neotropical herpetofauna. This is the most comprehensive biogeographic analysis for lowland Neotropical rainforests in terms of number of taxa and localities/regions considered.

Thanks to all of the student participants and judges for their hard work and congratulations to the winners!

Would you like to participate in next year's competition? The following announcement will tell you how!

Announcement

The Herpetologists' League

Award for Graduate Research

If you are a Master's or Ph.D. student with research results, you should seriously consider participating in the annual competition for the Herpetologists' League Award for Graduate Research. There are six prizes to be won so think about giving a paper at the 1999 annual meetings at Penn State!

To participate, you must (1) be a member of the Herpetologists' League and either a registered graduate student or no more that 15 months in a post-doctoral program, (2) submit an abstract by the "call for papers" December 1998 deadline for the 1999 annual meeting, (3) submit an 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 26 April 1999 (two months before the first day of the annual meeting), and (4) give an oral presentation at the annual meeting. Note that the abstract, extended abstract, and presentation must be authored solely by the participant.

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. If you are a finalist, you are already a winner and 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 (all presentations will be in a single 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 a 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 information on how to become a candidate for 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. E-mail: lford@amnh.org.

Call for

Symposium Proposals for the 2000 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 April 1999 to: Rafael O. de Sá, Herpetologists' League Symposium Chair, Department of Biology, University of Richmond, Richmond, Virginia 23173.

Herpetotrivia: In a South American iguanian lizard *(Microlophus occipitalis*), males have larger crests than females. Crests appear to function in male/male competition: Crests were often elevated by males during intrasexual agonistic encounters, but were never elevated during male/female encounters. _ Watkins, G. G. 1998. *Herpetologica* 54:161-169.

Grad School News

Herpetology at utah state university:

Featuring the Laboratories of Joseph R. Mendelson, III, James A MacMahon, and Edmund D. Brodie, Jr.

The Department of Biology at Utah State University has very active undergraduate research and graduate programs. Three laboratories are primarily interested in herpetology, especially systematics, ecology, behavior, and evolution.

JOSEPH R. MENDELSON, III, is an Assistant Professor and is continuing to work on systematics, distribution, and

natural history of neotropical species; major projects include the phylogeny of Central American toads (*Bufo*) and phylogeny of marsupial treefrogs (Hemiphractinae). Joe is taking advantage of his new westerly location to begin/continue research on the herps of the southwestern deserts. STEPHANIE A. GARDNER, an M.S. student, is working on the taxonomy and natural history of the leaf-nosed snakes *Phyllorhynchus decurtatus* and *P. browni*. She also is investigating handling of dangerous prey by the banded gecko *Coleonyx variegatus*. Incoming student KIRK SETSER (Kansas State University) is interested in the ecology of habitat-specialist snakes and incomer DAN MULCAHY (UC Berkely) is interested in the macroecology and biogeography of the herps of the Great Basin region.

JAMES A. MACMAHON, Professor and Dean of the College of Science, is broadly interested in ecology, including restoration ecology and community level interactions. He teaches the herpetology course and is interested in the biogeography of Utah herpetofauna and the conservation ecology of the spotted frog. Doctoral student MARK CHATIGNY is researching the morphological, ecological, and genetic variation found among the populations of *Lampropeltis triangulum taylori* found within the state of Utah.

EDMUND D. BRODIE, JR., Professor and Head, Department of Biology, continues to be interested in antipredator mechanisms of amphibians and is currently spending most of his research time on the resistance of garter snakes to tetrodotoxin (TTX) produced by the newt *Taricha*. This is collaborative research with EDMUND D. BRODIE, III, of Indiana University.

Several graduate students are examining different aspects of the garter snake-newt system. CHARLES HANIFIN is applying High Performance Liquid Chromatography techniques learned in Japan on a summer NSF fellowship to measure interpopulation and intrapopulation variation in TTX levels of newts in the genus *Taricha*. SHANA GEFFENEY's dissertation work (in PETER RUBEN's neurobiology laboratory) examines the hypothesis that resistance in garter snakes is the result of differing affinities of sodium channels for TTX. She is using several electrophysiological recording techniques to measure sodium channel activity. BEN RIDENHOUR recently completed a B.S. degree at USU and has a manuscript submitted on the effects of repeated doses of TTX on growth and resistance; Ben starts a doctoral program at Indiana University in Fall 1998. BECKY WILLIAMS, a current undergraduate, is working on determining a conversion factor of oral doses of TTX to the injected doses we have previously used. CHRIS GARRARD is developing a model using genetic algorithms to apply to the snake-newt arms race. She is comparing these simulations to results from quantitative genetics models. JEFF MOTYCHAK's doctoral research focuses on defensive behavior in garter snakes, including geographic variation, development, heritability, thermal effects, and phylogenetic trends. His side projects include studies of naive prey preference in neonates and a phylogenetic analysis of TTX resistance in the genus *Thamnophis* and related taxa.

Another group of graduate students is interested in ecology and conservation; they are all involved in extensive field projects. PAUL USTACH is studying the chuckwalla (*Sauromalus obesus*) throughout the northern limits of its range in Nevada. He has developed a wildlife-habitat relation model with GIS and is developing a model of past distribution. He is testing the hypothetical past ecological distribution by analyzing mtDNA variations throughout the northern extent of the species. KEVIN and APRIL YOUNG have spent the last three summers (their summers last six months) in the desert outside lovely Yuma, Arizona, investigating the ecology of the flat-tailed horned lizard (*Phrynosoma mcallii*). They are assisted by our youngest lab member MEGAN YOUNG (age 1) and a large group of students, including: PEGGY ANDERSON, SANDY BERG, RULON CLARK (now at Cornell University), PATRICK ELLSWORTH, AMY HOWA, JO GARRARD, NATALIE OLSON, and LAURA TAYLOR. Kevin's work involves radiotracking individuals, aggressive interactions, prey choice, predation, antipredator behavior, and reproduction.

TY GARDNER is investigating the use of habitats with steep slopes by the desert tortoise (*Gopherus agassizii*) in the western Mojave Desert. Environmental data are being used to model G(O), the proportion of tortoises above ground, to assist in the effort to establish a range-wide protocol for density estimation. Undergraduate student JESSE MEIK has assisted Ty in this research. CRAIG STEELE is doing field work in the Cascade Mountains and coastal areas of Washington, focused on documenting changes in densities of salamanders that inhabit headwater streams in forests of different ages. These salamanders (*Dicamptodon* and *Rhyacotriton*) are likely indicators of healthy stream ecosystems. DAN FOLEY is a doctoral student involved in a field project on the island nation of Madagascar. Dan is investigating the biology and general natural history of leaf chameleons (*Brookesia*). These lizards reside in the leaf litter among the islands few remaining pockets of primary rainforest. Approximately 80% of Madagascar's rainforests have already been destroyed and/or severely disturbed. Little or no information is available on the biology and ecology of most of the animals that live in these rainforest habitats. We are working with RON NUSSBAUM of the University of Michigan on this project.

Herp research at USU is currently funded by a variety of sources, including: National Science Foundation, Department of Defense (SW Division, Naval Facilities Engineering Command), Nevada Division of Wildlife, California Department of Parks and Recreation, Bureau of Reclamation, U.S. Marine Corps, MCAS through the Defense Legacy Program, Longview Fibre.

Conferences, Conventions, Conclaves

Fifth Latin American

Congress of Herpetology

The Fifth Latin American Congress of Herpetology (5th CLAH) will be held at the University of Uruguay, Motevideo, Uruguay, 12-17 December 1999. The official languages of the 5th CLAH will be Portuguese and Spanish. However, English and other languages will be accepted in workshops, symposia, and poster presentations but they need to have an abstract in one of the official languages. Deadline for Abstracts is 30 June 1999. For registrations and additional information, please contact: Lic. José A. Langone, Secretario Ejecutivo V CLAH, Museo Nacional de Historia Natural, CC 399, 11000 Mentevideo, Uruguay, e-mail: vclah@fcien.edu.uy. Http://zvert.fcien.edu.uy/clh.

For further information and registration with the U.S. and Canada, please contact: Dr. Rafael de Sá, Department of Biology, University of Richmond, Richmond, VA 23173; e-mail rdesa@richmond.edu.

Symposium on the Status and Conservation of Florida Turtles

A second symposium on the Status and conservation of Florida Turtles will be held at Eckerd College in St. Petersburg, Florida on 8-11 October 1999. Co-sponsored by Eckerd College, the Gopher Tortoise Council, and the Florida Turtle Conservation Trust, this symposium will address the problems faced by Florida turtle species, as well as conservation strategies and specific recovery solutions.

Paper session topics include populations, habitat, disease, commercial trade, and conservation measures. In addition to a poster session and field trips, workshops on the identification of emydid turtles, field methods, and environmental education are scheduled.

A volume describing the conservation biology of Florida turtles at the end of the 20th century is planned. We anticipate that it will include 25, mostly-multi-authored accounts. Anyone wishing to contribute to one or more species accounts is asked to contact Peter Meylan at <meylanpa@eckerd.edu>.

For more information about the symposium, contact: Gopher Tortoise Council, c/o George L. Heinrich, 1223 Alhambra Way S., St. Petersburg, FL 33705-4620; (813)865-6255; e-mail: <highpine@gte.net>.

Herpetotrivia: The jelly in the egg masses of spotted salamanders (*Ambystoma maculatum*) can be either transparent or milky and translucent. In an artificial pool experiment, white egg masses were less vulnerable to predation from *Rana* tadpoles than clear masses. Moreover, the percentage of white masses increased with the density *Rana* egg masses at breeding sites. --Petranka, J. W., A. W. Rushlow, & M. E. Hopey. *Herpetologica* 54:1-13.

Feature Article

Editor's Note: The following is the 2nd 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 on special personality, it is hoped that this series

will provide useful information for students and others contemplating careers in herpetology .

Herpetology and Community Colleges: The Miami-Dade Example

By Larry David Wilson

Department of Biology

Miami-Dade Community College

Kendall Campus

Miami, FL 33176-3393, USA

I have worked at the largest community college in the United States since 1972. It is a six-campus two-year institution currently serving the needs of over 51,000 students. Thus, the vast majority of what I have accomplished in herpetology has been done at this institution.

I cannot speak about what occurs at other community colleges in the country, but Miami-Dade Community College is purely a teaching institution. Thus, my principal responsibilities are as a classroom instructor. As does every full-time instructor, I carry a basic load of five, 3-credit courses involving a minimal number of 15 contact hours. Each of us also has a total of 10 office hours, for a total of 25 student contact hours out of a 35 hour workweek. The remaining 10 hours are divided between 5 hours for preparation and 5 for research. The preparation hours are insufficient to keep up with our course load; thus, most faculty take up the slack by working at home (including myself). The research hours can either be on- or off-campus. It can easily be seen that I have very little time officially built into my work schedule to accommodate research. Research, as with preparation for courses, is largely undertaken outside my paid workweek. This is the downside.

The upside is that we currently have flexible scheduling and a generous leave policy. For me, flexible scheduling means that I can organize my work schedule into four days of the workweek freeing Friday for other activities. Preparing for classes must be part of those activities, but I also use Fridays to try to keep up with the demands of my discipline (not to mention Saturdays and Sundays). The advantage gained is larger blocks of time for intellectually challenging work, such as curriculum design and, of course, herpetological research. The institutions's leave policy allows for so-called unlimited point banking, i.e., faculty can teach courses beyond the basic load, bank the associated teaching points (e.g., 12 points per 3-credit course), and apply for a banked-point leave. A 6-week leave would "cost" 24 teaching points. In my case, I usually teach one extra course during the fall semester and one during the winter semester to accumulate the 24 points. The 6-week leave I obtain is tagged onto another 6-week leave all faculty receive once a year and a 3-week hiatus between summer and fall terms, i.e., the end of one academic year and the next, to obtain a 4-month leave. It is during this time that I do field work and generally recharge my batteries to have a go at it the following academic year. It's a tough row to hoe, but someone has to do it. So, there is much time to pursue interests not necessarily connected very closely to my teaching.

More of the upside is that continuing contract (our term for tenure) is awarded at the end of three years, not six or seven. Miami-Dade also has a very detailed policy concerning C.C., as well as all the other types of faculty advancement. Our situation is quite at variance with the slipshod, politicized system of tenure award that can exist at some universities.

Given, however, that faculty research is not a priority at M-DCC, I do not have a laboratory and make do with a 6(8 foot cubicle. Thus, research is done at my home and that of my long-time collaborator, James R. (Randy) McCranie. Randy is the one who maintains the up-to-date library, because most of my library was lost in a fire many years ago. Quite frankly, if it were not for Randy's influence, it is not likely that I would desire to fight the research battle. As it is, most of my papers are coauthored with Randy.

Our herpetological research has been supported over the years from out-of-pocket funds. I have always felt that my M-DCC work schedule would never allow me to meet a schedule for completion of grant-supported research. Unlike the situation in most, if not all, universities in this country, advancement of faculty at M-DCC does not depend on securing grants. So, I have been able to avoid that treadmill, but at some cost to me personally (as well as the other people with

whom I do field work). I have inured myself simply to think of the money being spent on a vacation.

As Bob Powell noted in his piece in the last issue of this newsletter, herpetology per se does not exist at our type of institution. Nevertheless, a herpetologist can find a haven at a community college, given that he or she can juggle a very heavy student contact load and a viable research program. It is not easy, but a liberal leave policy and flexible scheduling can assist materially in finding those elusive blocks of time necessary to produce publishable research. Finding a capable collaborator can help a great deal to make up for the time that a community college instructor has to spend preparing for and delivering classes.

Being able to wear both hats depends ultimately on the commitment one brings to the two tasks. It takes love of one's discipline, perseverance, and a willingness to work long hours to pull off the two. If not, judged by the track taken by many of my M-DCC colleagues, one will simply fall into the groove of teaching freshman and sophomore courses until retirement.

Herpetotrivia: For African caecilians of *Schistometopum thomense*, bite marks are more frequently located on the head than expected by chance. These bite marks are typically relatively shallow and may function in tactile or olfactory communication. -- Teodecki, E. E. et al. 1998. *Herpetologica* 54:154-160.

Site of Future Meetings

1999 Penn State University

Money, Money, Money

DOCTORAL FELLOWSHIPS

IN AMPHIBIAN

BEHAVIORAL ECOLOGY

Beginning 1 August 1999, The University of Southwestern Louisiana will have two Louisiana Board of Regents Doctoral Fellowships available for studies in amphibian behavioral ecology. Each fellowship is funded for four years at $17,000 per year as stipend with waiver of all tuition and most fees. There are no teaching obligations for these doctoral fellows, so full time can be devoted to research and studies. For more information, contact: *Bob Jaeger, Department of Biology (Box 42451), University of Southwestern Louisiana, Lafayette, LA 70504-2451.* [Phone 318-482-5235; FAX 318-482-5834; biology@usl.edu]. Fellowships can be awarded only to U.S. citizens.

Announcements

New Gecko Society Launched

The Global Gecko Association (GGA) is a new organization dedicated to gecko enthusiasts worldwide. Membership is open to anyone with an interest in gekkonids, from the professional herpetologist to the hobbyist.

The GGA is an organization committed to promote interest in gekkonids in a whole variety of ways, from responsible captive care, to study in the wild, conservation, academic research and beyond. Furthermore, the GGA will serve people who are interested in gekkonids by providing a voice and means of communicating and sharing of resources and ideas.

Members will receive two issues of the Association's Journal annually, together with regular members Newsletters. The Journal of the Global Gecko Association will be produced in color and contain articles and papers, book reviews, interviews and other items of interest that reflect the full breadth of the GGA's objectives. Many of the leading figures in the "gecko world" have agreed to contribute. Newsletters will keep members fully updated with Association events, gecko related news and views from around the world, veterinary advice, and provide a mechanism for members to communicate with each other.

Advertising will be accepted for the Newsletters only.

For membership and other information, visit the GGA web-site at: http://www.gekkota.com or write to: *Global Gecko Association, P.O. Box 739, Westview Station, Binghamton, NY 13905*.

Publication Notices

Salamanders of the

United States and Canada

By James W. Petranka. 1998. Smithsonian Institution Press. 587 pages. $60.00 (hard cover). 172 color plates; 311 drawings and black-and-white photographs. Sections are: (1) Introduction, (2) Salamander Identification and Plan of the Book, (3) Conservation Biology of Amphibians, (4) Key to Adult Salamanders of the United States and Canada, (5) Key to larval salamanders of the United States and Canada, (6) Family Ambystomatidae, (7) Family Amphiumidae, (8) Family Cryptobranchidae, (9) Family Dicamptodontidae, (10) Family Plethodontidae, (11) Family Proteidae, (12) Family Rhyacotritonidae, (13) Family Salamandridae, (14) Family Sirenidae, (15) Glossary, (16) Literature Cited, (17) Collection Localities, and (18) Taxonomic Index.

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