The Society for Integrative & Comparative Biology

# SICB Newsletter











Volume Spring 2007

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#### **Message from the President**

Sally's major accomplishment during her presidency was securing a very favorable contract with Oxford University Press to publish our journal. I'm sure you have already enjoyed the stunning layouts of the issues and the timely publication of our symposia.

I intend to focus on four objectives during my term as President: 1) increasing ethnic diversity, 2) increasing the international character of our society, 3) expanding our scope, especially to include more plant scientists, and 4) addressing the re-emergence of faith-based thinking as it encroaches into science and an enlightened worldview.

#### [Read more]

#### **Message from the Treasurer**

#### [Read more]

#### **Message from the Program Officer**

• If you are interested in submitting a topic for late-breaking symposia for the 2008 meeting in San Antonio, please have ready a title for the symposia and a list of 4-7 speakers who have committed to presenting.

#### [Read more]

#### Message from the Secretary

• The SICB Website is being overhauled. You can get a preview of the new "look" by going to <a href="http://new.sicb.org/">http://new.sicb.org/</a>

#### [Read more]

Comparative Biomechanics (DCB)

Comparative Endocrinology (DCE)

Comparative Physiology and Biochemistry (DCPB)

Evolutionary Developmental Biology (DEDB)

**Ecology and Evolution (DEE)** 

Invertebrate Zoology (DIZ)

Neurobiology (DNB)

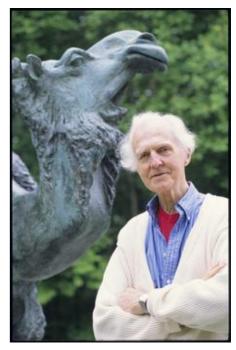
Systematic and Evolutionary Biology (DSEB)

Vertebrate Morphology (DVM)

# Comparative Biology Loses Another Giant: The Passing of Professor Knut Schmidt-Nielsen (1915-2007)

On January 26, 2007, the comparative physiologist Knut Schmidt-Nielsen died at his home, surrounded by family, in Durham, North Carolina at age 91. He represented-indeed stood with few others as a paradigmatic figure-of what we can recognize as the classic era in the development, expansion, and recognition of his field, comparative physiology. His achievements did not go unrecognized-he received numerous honorary degrees and national academy memberships and was awarded the first International Prize in Biology by the Emperor of Japan.

Comparative physiology traces its roots in large measure to a laboratory in Copenhagen, Denmark, one begun by Christian Bohr (father of the famous physicist Niels Bohr) and brought to its peak by August Krogh, Nobel Laureate. The physicists recognize a so-called Copenhagen School, centering on Niels Bohr; physiologists might well recognize a parallel-in time as well as place-a school begun by the earlier Bohr. So well accepted is its approach to the subject that one easily forgets that before it came along, "comparative" as a designation referred to work, mainly anatomical, that inferred ancestry and



lineages from studies of extant organisms. Function was largely ignored; it was a nuisance that, by driving convergence, complicated analyses. Krogh took comparative work as a way to recognize the basics of function, a way to sort out the general from accident and epiphenomenological adaptation, and he pioneered the use of the diversity of nature in studies of function. He suggested, as well, that looking at extreme cases of physiological function and adaptation might have special value for elucidating functional principles, in revealing nature's inner secrets-but neither he nor his associates pursued the matter extensively.

That latter agenda largely remained for his successors and has continued to this day, initiated in particular by Knut Schmidt-Nielsen, his close friend and Norwegian compatriot Per Scholander. Schmidt-Nielsen received his doctorate under Bohr's sponsorship and spent the war years in occupied Denmark. He came to the United States in 1946 and spent several years at the invitation of Lawrence Irving at Swarthmore College, where he began exploring the water balance of kangaroo rats. He then moved to Stanford University and the University of Cincinnati; he joined the Zoology Department at Duke University in 1952, where he remained until well beyond his formal retirement in 1995. At the time neither that department nor the university could be considered first-rate; the subsequent success of the department-and the legacy of physiology at the Duke Medical School-reflects not just his presence but his high standards and considerable efforts with respect to all of its areas and activities.

While his laboratory at Duke remained modest in both size and expenditures, its output was quite remarkable in both diversity and significance, a result, in part, of his remarkably broad curiosity about how animals work. To work done there we can trace our appreciation of the special value for understanding temperature regulation and water balance of studies on the physiology of desert animals, from camels to snails. Counter-current exchange mechanisms, first recognized by Scholander, took on additional roles and arrangements-such as the reciprocating flow exchangers widespread among nasal passages. Salt glands in marine birds and reptiles put to functional purpose the mock turtle's tears. Students studied the cost of penguin migrations in Antarctica and thermogenesis in the heads of marlin and swordfish. The way birds achieved unidirectional flow through high-efficiency lungs despite alternating inhalations and exhalations was largely elucidated there. The use of scaling exponents to deduce function was pressed forward with Schmidt-Nielsen's

written and organizational urgings in the 1970s. (It must be put on record that he was not persuaded by recent explanations of the significance of the body-mass vs. metabolic rate scaling exponent of 0.75, recognizing its limitations of both input data and applicability.) He enjoyed collaborations, even ones of daunting complexity, and much of his best work took advantage of his ability not just to inspire, but to organize.

Schmidt-Nielsen's legacy remains as much as anything in the clarity with which he explained physiological principles. The increased recognition of the value of a comparative approach to physiology traces as much to his books and semi-popular articles as to the direct output of his laboratory and the subsequent work of his students. One finds it hard to imagine that he long worried about his mastery of English, but then understands his intolerance of poor writing by native speakers. He had a special talent-or, more likely, fastidiousness and tirelessness-for focusing on central issues and for direct, unambiguous prose. His first book, *Animal Physiology* (1960) was a small paperback in a series designed for first-year biology students. It sold in enormous number, probably more than any of the other titles, eventually going into a third edition and multiple translations. It represents comparative physiology as we now know it when undergraduates had easy access to nothing else of the sort. *Desert Animals* (1964), a larger work, put that area of physiology on the map. And *Scaling* (1984) does the same for another area-defining the issues and catalyzing a renaissance of work that continues today.

In 1975, Schmidt-Nielsen produced another book entitled *Animal Physiology*, this one a full-fledged textbook for an undergraduate course. Few senior figures in any field invest valuable mid-career effort in textbook writing, but he had in mind a particular mission. Now in its fifth edition, the book has effectively reset the canon for such courses and has become the standard for college courses around the globe. Previous textbooks were almost indistinguishable from books on medical or human physiology. His book and more recent textbooks by others are truly comparative in the sense that traces to Krogh, as they use diversity to illuminate principles rather than to infer ancestry or to catalog nature's range.

He leaves us as well an extraordinarily frank autobiography, *The Camel's Nose* (1998). It recounts his unusual personal history, living in three countries and experiencing the war. Besides its rich anecdotes about expeditions, people, and animals, it provides a powerful statement of the utility of studying animal function in both field and laboratory. But its greatest interest, and as he told some of us he intended, lies in how he lays bare his personal problems in order to offset any purely triumphalist view of a well-rewarded life and to show how one can compartmentalize one's life to do good science while otherwise experiencing difficulties.

His books retain their value-any one of them, from first to last, provides an excellent entry point for a person intent on entering the field of comparative physiology. And his influence will long be felt-in particular his stress on the importance of clear articulation of what science discovers specifically and of the reality-based world view of the scientist in general.

Successful scientists fit no simple social stereotype, ranging from brash extroverts to shy introverts. Schmidt-Nielsen cannot be readily placed on such a one-dimensional scale. While certainly shy and quiet, he was at the same time outspoken and opinionated-but in ways so informed, so subtle, and so effective that his views usually prevailed. He had an eloquent style and a soft manner but a firm and well-reasoned position on issues extending far beyond his area of science. Most often he prevailed, whether editing a thesis with a student or a paper with a coauthor or whether calming a university after faculty and president at Duke did public battle over the location of the Richard Nixon library. In the department his was a consistent voice for intellectual quality, whatever the field of an applicant or the nature of some initiative. Outside the department he was a force for broad culture, liberalism, and urbanity in a part of the world that received these only late and grudgingly.

Knut Schmidt-Nielsen was a giant in the field of physiology. His high standards, compelling intellect and language, his deep appreciation of the complexity of the natural world and the process of science inspired

those who worked closely with him. His influence in the field of comparative physiology has been profound, and he will be deeply missed. Still, his legacy will remain through the students, post-doctoral fellows, and collaborators who carry the tradition of his field in a rapidly changing world.

Steven Vogel, Barbara Block, Stephen Wainwright

#### **Experiences in Integrative and Comparative Biology**

SICB members like a good story about an expedition, a field experience, a lab experiment, or another researcher! To spice up our newsletter, I have asked some of the leaders of SICB to relate one or two experiences that might be of interest to the membership. This issue features Ron Dimock, SICB Treasurer and Linda Walters, SICB Program Officer.

Lou Burnett, SICB Secretary

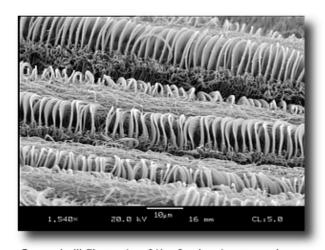
#### Ron Dimock, SICB Treasurer

I've always really liked clams...

My fondness for clams started with Mya arenaria that I consumed in large quantities from 'clam shacks' in New Hampshire and Maine as a kid. When I got to college, I had the good fortune to become immersed not only in clams, but invertebrates at large, in the company of the likes of George M. Moore, Lorus and Margery Milne, Emory Swan, Art Borror, Alan G. Lewis and others at the University of New Hampshire. Having never once considered being pre-med, I saw my career appear before me during a summer course in the Natural History and Taxonomy of Marine Invertebrates with Norman Meinkoth, a visiting professor from Swarthmore. The road trip to Lubec, Maine, Passamaquoddy Bay and the fringes of the Bay of Fundy, with 30 ft+ tides and a couple cases of beer shared with 3 traveling companions turned me on to marine invertebrates.



1968 at USCB. On the left is Eldon Ball, now Senior Fellow at the Research School of Biological Sciences, Canberra, Australia



Several gill filaments of the freshwater mussel Hyridella depressa, Australia, showing lateral-frontal cirri and frontal cilia. (2006)

At the urging of Art Borror, and a growing interest in diving in water other than the Gulf of Maine, I ended up at Florida State University with Mike Greenberg, who taught me experimental biology and hooked me with comparative physiology/integrative biology. A master's thesis that required only the hearts of oysters enabled my wife and me to eat more Crassostrea bodies, fixed every way imaginable, than any one should, so much so that she refused to eat oysters for years after. With the fauna of the Gulf under my belt (literally), we moved to Santa Barbara, the tutelage of Demorest Davenport, and the opportunity to spend a summer at Friday Harbor sharing a lab with then graduate student, Dennis Willows. The rest, as they say, is history, ultimately involving 35+ years of teaching invertebrate biology at Wake Forest University and more than 20 summers teaching the

marine invertebrate course at the Duke Marine Lab on the North Carolina coast.

But the salinity of my blood, and of my clams, was becoming diluted living 5 hrs from the coast. My fondness for bivalves continued unabated, but unionid mussels are not the gourmet item of choice. However, they have given me the better part of a full career, serving first as hosts to symbiotic water mites and my Davenport-inspired experimental approach to symbioses, and later to functional morphology, development and even shades of immunology and molecular biology as my focus shifted to the host mussels and their bizarre life history. I mean really, what quirk of intelligent design would house Pac Man-like mussel larvae in water tubes of mom's gills, to be released to become temporary parasites on the fins or gills of an unsuspecting fish host that has been conned into upstream transport and the avoidance of being a larva swept down to the sea?

Mussels have taken me from the 1000-year old canals of The Netherlands, complete with shards of 17<sup>th</sup> Century clay pipes, and lots of broken glass, to the Australian Outback where every second living thing is poisonous or can eat you. Along the way I've had the good fortune to nudge a number of neophytes along the path to discovery and satisfaction that has been good to me for nearly 40 years.



Intertidal: St. Ann's Bay, Jamaica, 2003

#### A Baker's Dozen Sampler:

Dimock, R. V., Jr., and J. G. Dimock. 1969. A possible "defense" response in a commensal polychaete. Veliger 12: 65-68.

Dimock, R. V., Jr., and D. Davenport. 1971. Behavioral specificity and the induction of host recognition in a symbiotic polychaete. Biol. Bull. 141: 472-484.

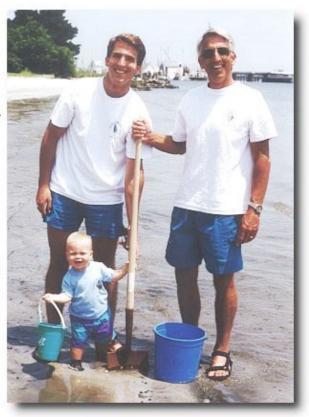
Pruitt, N. L. and R. V. Dimock, Jr. 1979. The effects of temperature and eyestalk extracts on oxygen consumption of the crayfish <u>Cambarus</u> <u>acuminatus</u> (Faxon). Comp. Biochem. Physiol. 62A: 631-634.

Dimock, R. V., Jr. 1983. In defense of the harem: intraspecific aggression by male water mites. Ann. Entomol. Soc. Am. 76: 463-465.

Dimock, R. V., Jr. and C. Davids. 1985. Spectral sensitivity and photo-behaviour of the water mite genus <u>Unionicola</u>. J. Exp. Biol. 119: 349-363.

Tankersley, R. A. and R. V. Dimock, Jr. 1992. Quantitative analysis of the structure and function of the marsupial gills of the freshwater mussel <u>Anodonta cataracta</u>. Biol. Bull. 182: 145-154.

Polhill, J. B., V., and R. V. Dimock, Jr. 1996. Effects of temperature and pO2 on the heart rate of juvenile and adult freshwater mussels (Bivalvia: Unionidae). Comp. Biochem. Physiol. 114A: 135-141.



3 generations: Mudflat, Duke Marine Lab, 1994, with son Jeff and grandson Colby, not quite 1 yr old.

Edwards, D. D. and R. V. Dimock, Jr. 1997. Genetic differentiation between <u>Unionicola formosa</u> and <u>U</u>. <u>foili</u> (Acari: Unionicolidae): cryptic species of molluscan symbionts. Invert. Biol. 116: 124-133.

Schwartz, M. L. and R. V. Dimock, Jr. 2001. Ultrastructural evidence for nutritional exchange between brooding unionid mussels and their glochidia larvae. Invert. Biol. 120: 227-236.

Dimock, R. V., Jr. 2000. Oxygen consumption by juvenile <u>Pyganodon cataracta</u> (Bivalvia: Unionidae) in response to declining oxygen tension. pp. 1-8. In, R. A. Tankersley, D. I. Warmolts, G. T. Watters, B. J. Armatage, P. D. Johnson and R. S. Butler, (editors. Freshwater Mollusk Symposium Proceedings, Ohio Biological Survey, Columbus, Ohio.

Fisher, G. R. and R. V. Dimock, Jr. 2002. Ultrastructure of the mushroom body: digestion during metamorphosis of <u>Utterbackia</u> imbecillis (Bivalvia: Unionidae) Invert. Biol. 121: 126-135.

Rogers-Lowery, C. L. and R. V. Dimock, Jr. 2006. Encapsulation of attached ectoparasitic larvae of freshwater mussels by epithelial tissue on fins of naive and resistant host fish. Biol. Bull. 210: 51-63.

Rogers-Lowery, C. L., R. V. Dimock, Jr. and R. E. Kuhn. 2007. Antibody response of bluegill sunfish during development of acquired resistance against the larvae of the freshwater mussel *Utterbackia imbecillis* Develop. & Comp. Immunol. 31: 143-155.

#### Linda Walters, SICB Program Officer

When I began my faculty appointment at the University of Central Florida in Orlando 10 years ago, I decided that I would use my training in marine ecology to address both basic and applied questions on how humans are impacting the coastal environment, especially in Florida. Currently in my lab, my students and I are looking at how recreational boat wakes are causing the decline of intertidal oyster reefs and restoration of the same, ballast water disinfectants, dispersal and DNA forensics of invasive flora and fauna, and the ecology of coral larvae in situ. I am presently on sabbatical and decided to spend my year addressing two questions with marcoalgae that greatly interested me, but I did not have time to pursue during the regular academic year. I first spent two months in the St. Thomas at the University of the Virgin Islands looking at foraging by the long-spined sea urchin Diadema antillarum from the point of view of the algae. This keystone herbivore has recently returned to the USVI and other locations in the Caribbean after a 20+ year absence and resource managers are eager to learn if this return will mean the end of algal blooms on coral reefs. My colleagues and I ran simple feeding trials and found this urchin is a very fussy consumer avoiding many



species. With the avoided species, the urchin usually shreds the biomass, creating many fragments. These fragments can then attach to substrates and continue growing as clones. There will have to be a really huge increase in *Diadema* numbers to remove all of the unpalatable macroalgae. From there, I went with my family to Australia for 4 months to look at vegetative fragmentation in the green alga *Caulerpa taxifolia*. The invasive form of this macroalgae is listed as one of the world's 100 worst invasive species. Australia is the only country where both invasive and native populations of *Caulerpa* can be found. I am running lab and field manipulations in New South Wales (with invasive *Caulerpa*) and in Moreton Bay in Queensland (native form) to determine the minimum viable fragment size. While these experiments are still underway, I can say that there are many significant differences between the two forms and the invasive appears much better suited for dispersing, survival and attachment. University of Queensland's marine lab is on North Stradbroke Island and is one of the nicest facilities I have had the pleasure of working at over the past 20 years. Additionally the island is a wonderful, small community that is very safe, has incredible sand flats and white sand beaches, and, according to my 10-year old son, has the best gelato on this planet!



#### **Message from the President**

John Pearse

Sally Woodin handed over the president's gavel to me (and received an honorary one herself) at the final Executive Committee meeting at the Annual Meeting in Phoenix. She has done a superb job steering SICB forward. The Society continues to thrive. It is especially reassuring to see the infusion of students and postdocs at the annual meeting. This is in no small part due to Sally's leadership in assuring that not only were the meetings intellectually attractive, but also financially affordable to younger colleagues. With so many students and postdocs becoming active members, we can look forward to a most vibrant future.

But Sally's major accomplishment during her presidency was securing a very favorable contract with Oxford University Press to publish our journal, *Integrative and Comparative Biology*. This was necessary because of the steady erosion of subscriptions to our journal, a major source of revenue for SICB. Working with Brett Burk (SICB Executive Director) and Ron Dimock (our Treasurer), Sally eased the Journal into new territory, with a vigorous new Editor, Hal Heatwole, and an energetic, sensitive staff at Oxford University Press led by Cathy Kennedy. I'm sure you have already enjoyed the stunning layouts of the issues and the timely publication of our symposia. All the papers submitted from the Orlando meeting in 2006 were published in 2006. This was done, of course, by having most of the symposia published in the last issue, which was huge. Starting in 2007, the goal is for all six issues to be published *monthly* over the last half of the year, with the symposia distributed more evenly among the issues. The difficulty of staggering each year's symposia among well-spaced issues is, well, staggering, and our unusual journal demands creative solutions from our new team. I look forward to working with them over the next two years.

Ron Dimock, will give you some details of the financial health of SICB. In a nutshell, it is nearly all good news. We have a cushion in reserve that has been wisely invested to provide a steady stream of income for the Society's use. Sally allocated a portion of it to our Symposium Support Fund (still looking for a catchy name), and an encouraging number of our members have contributed to this Fund. On the other hand, we need to recognize the cost to the Society of making the meetings affordable to students and postdocs: the subsidies we offer them do have a financial impact on SICB. Presumably, this policy of paying it forward will pay off in the long run as many of these young people move on to full membership.

I also want to commend our Secretary, Lou Burnett, for an outstanding job working through the election process of our multiple officers. Not only had we overlooked elections for some of the offices the past couple of years, but we were not sure who all the officers were at any one time! Now we are. Lou has also been working tirelessly with our very capable webmaster, Ruedi Birenheide, to update and overhaul our website. The results should be evident for all to see within a few months.

Finally, it is a pleasure to be working with Burk and Associates, Inc. Brett capably is keeping me focused with our weekly conference calls of the core officers, expanded monthly to include the journal. Sue Burk and Lori Strong not only have been wonderful in negotiating attractive arrangements for our meetings, but also have ably managed the meetings themselves. We are in very good hands.

In last spring's newsletter I wrote that I intended to focus on four objectives during my term as President: 1) increasing ethnic diversity, 2) increasing the international character of our society, 3) expanding our scope, especially to include more plant scientists, and 4) addressing the re-emergence of faith-based thinking as it encroaches into science and an enlightened worldview. I mentioned this again in the fall newsletter, together with our urgent need to find reliable sources for funding symposia. Suggestions and offers to help were welcomed. Still awaiting both, I also have not moved forward myself on any of these fronts. I trust this inactivity will, over the coming months, prove to have been merely a sort of diapause, and some of you will hear from me soliciting your assistance.

#### **Message from the Treasurer**

Ron Dimock

• Executive Committee passes budgets for 2007 and 2008, attempts to reduce the deficit spending

Following initial discussion at the annual meeting in Phoenix and detailed reworking of the budgets by the Finance Committee, the Executive Committee has approved budgets for the final 6 months of fiscal 2007 and the full 12 months of fiscal 2008. The odd budget is a consequence of changing the Society's fiscal year.

With the passing of the fiscal 2008 budget, SICB will once again approve budgets before the annual meeting, e.g., San Antonio in January 2008. This timing has not been possible since the Society switched from the late December to early January meeting times.

• 2008 Budget limits expenses for "Functions" at the annual meeting in San Antonio, provides equity across Divisions for annual budget and puts a cap on complimentary room or registration costs for student workers attending the annual meeting.

The allocation for all Society-wide "functions" - welcome reception, coffee breaks, student-postdoc dessert, drink tickets, companion breakfast, etc. - is capped at \$65,600. This figure contrasts with the approximately \$80,000 spent in Phoenix and the outrageous figure of \$105,000 in Orlando.

Divisional budgets have been standardized at \$2000 for symposia support, \$800 for socials and \$300 for student awards such as Best Paper/Best Poster. This figure does not include the special assessments now being collected for DCPB and DCE, nor special allocations for some regional and international initiatives.

Student support for comped rooms or registration will be capped at \$60,000 for San Antonio. If the total requests exceed \$60,000, adjustments will have to be made either in the student co-pay or in the number of students approved for compensation.

• New budget limits compensated support to attendance at a maximum of 3 annual meetings for any one student.

Beginning with the meeting in San Antonio, no student will be eligible for more than 3 years of comped room or registration for work at the annual meeting. The clock will begin in San Antonio, i.e., a student who has already received one or more years of support will not be penalized; rather he or she will be eligible for 3 years' support from San Antonio forward.

• New endowment fund for symposia off to great start with \$7,450 in contributions received within the first 5 days of the meeting in Phoenix.

With generous contributions from 9 members, the newly created symposium endowment has risen to \$107,450 from the initial \$100,000 allocated by the Executive Committee. All Society members are encouraged to consider donating to this new fund which still is in need of a name. If you have a clever or creative acronym, suggest it to Secretary Burnett.

• Investment in Inland REIT pays off.

Inland American Real Estate Trust in which the Society has been invested for 4 years merged in March with Developers Diversified Realty, owners of more than 800 shopping centers in 45 states, Puerto Rico and

Brazil. Shareholders of record received \$12.57/share for Inland stock plus 0.022 shares of DDR stock per share of Inland. The \$12.57 per share times the 28,360 shares owned by SICB equals a cash payout of \$356,485 directly to SICB. DDR is currently trading at about \$62.70, yielding an unrealized gain of approximately \$38,375 on SICB's 612 shares. A decision when to sell these shares in DDR will be forthcoming. The total return on the original \$200,000 invested in Inland will be approximately \$395,000. Recommendations about how to reinvest this windfall return are being considered by our financial managers.

#### **Message from the Program Officer**

Linda Walters

Greetings! By all accounts the January 2007 meeting in Phoenix, Arizona was a huge success. The selection of the Hyatt and the Phoenix Convention Center by Burk and Associates made for easy movements between oral sessions, posters, and meetings. All of the symposia were very interesting, diverse and well-attended. Building on that success, we are already hard at work preparing for the 2008 meeting in San Antonio, Texas. Nine symposia have been selected and for the first time, we will be entertaining ideas for late-breaking symposia or themed half-day sessions. The goal here is to accommodate time-sensitive ideas. If you are interested in submitting a topic for late-breaking symposia, please contact me and please have ready a title for the symposia and a list of 4-7 speakers who have committed to presenting. The deadline for late-breaking symposia will be the same as the deadline for abstracts for the 2008 meeting (late August or early September). Thanks and I look forward to seeing you all in Texas!

#### Message from the Secretary

Lou Burnett

**SICB Web Site.** We are now well on our way to having a new SICB web site. The redesign and reorganization of the SICB web site has been a major task and we have been careful and deliberative in taking appropriate steps in the process. Not only will the new web site have a modern look and be more easily navigated, but it will serve as the main vehicle for the storage of archival information for the society. You can get a preview of the new "look" by going to <a href="http://new.sicb.org/">http://new.sicb.org/</a>.

The steps we have used in the process of developing the new site are listed below. Ruedi Birenheide, the SICB Webmaster, has been involved in all phases of this process and he is now busy implementing the changes. The steps below refer to "format" or the organization of information and "design" is the look of the site.

- 1. A survey was developed to elicit feedback from divisional secretaries and SICB Executive Committee (July 2006).
- 2. The survey was completed by divisional secretaries and SICB Executive Committee (August September 2006).
- 3. A new web page format was developed based on survey results and sent to divisional secretaries and SICB Executive Committee (September 2006).
- 4. The web page format was modified based on feedback and given to Ruedi Birenheide for input on implementation.
- 5. A web design was developed with initial input from the SICB primary officers and with the help of an outside web designer. Three layouts were sent to divisional secretaries and the SICB Executive Committee for preferences (November 2006).
- 6. The SICB Webmaster will implement both format and design, consulting where necessary with divisional secretaries. He will present a draft of new web pages for review in the spring of 2007.
- 7. The new SICB web page is targeted to go on-line in the spring or summer of 2007.

I especially want to acknowledge the hard work of Claudia deGruy, Ruedi Birenheide, and the divisional secretaries in this long process.

**Elections.** One of the challenges of having officer turnover in any society is keeping track of when elections should take place. This can be a daunting task for SICB since we have society-wide officers and divisional officers. During the past year and with the help of the divisional secretaries, we have developed a schedule for all elections through the year 2014. This election schedule now exists in the form of a spreadsheet and available for all members to inspect on the SICB web site at <a href="http://sicb.org/elections/">http://sicb.org/elections/</a>.

We have a full slate of candidates for the society-wide offices of secretary-elect, program officer-elect, and member-at-large. The Nominating Committee this year was chaired by Ken Halanych who was joined by committee members John Long, Stacia Sower, and Tom Wolcott.

# Society-Wide Elections Candidates and Biographies

Click on a candidate's name to jump to her/his biography and statement.

#### **Candidates for Secretary Elect**

- Lou Burnett
- Brian Tsukimura

#### **Candidates for Program Officer Elect**

- Kathy Coates
- Eduardo Rosa-Molinar

#### Candidates for Member-at-Large

- Sönke Johnsen
- Don Mykles
- Jackie Webb

#### **Candidates for Secretary Elect**

#### Louis Burnett (incumbent)

**Current Position:** Professor of Biology, Director of the Grice Marine Laboratory, College of Charleston, South Carolina

**Education:** B.S., College of William and Mary (1973); Ph.D. University of South Carolina (1977); Postdoctoral Fellow: 1978, University of Aarhus, Denmark

**Professional Experience:** Assistant through Full Professor, University of San Diego, 1978-1991; Dept. Chair, University of San Diego, 1988-1991; Professor and Dept. Chair, College of Charleston, 1991-1996; Director, Grice Marine Laboratory, 1991-present

**SICB Activities:** Member for over 30 years; Program Officer, Division of Comparative Physiology and Biochemistry (1989-1990); Chair, Division of Comparative Physiology and Biochemistry (1993-1995); associate editor of *American Zoologist* (1998-1999); currently the International Union of Physiological Sciences (IUPS) representative for SICB; currently the International Union of Biological Sciences (IUBS), Section of Comparative Physiology and Biochemistry, representative for the Division of Comparative Physiology and Biochemistry of SICB; co-organized a number of different symposia for SICB; SICB Secretary 2006-2009

**Other Memberships:** American Physiological Society; Council on Undergraduate Research; Estuarine Research Federation; National Shellfisheries Association; Sigma Xi; Southeastern Estuarine Research

Society

**Research Interests:** The environmental physiology of animals; the influence of environmental variables on the physiology and biochemistry of animals; the evolution of the transition from water breathing to air breathing in animals; the effects of environmental variables, especially hypoxia, hypercapnia, and temperature on disease resistance in animals.

**Statement of Goals:** The highly integrative nature of this society played a significant role in how I viewed the world as a scientist when I first joined SICB as a graduate student in the 1970's. It is what keeps me and my students coming back to meetings year after year. I continue to enjoy serving SICB in various capacities and I believe that my experiences within the structure of SICB place me in a good position to contribute to the society's Executive Committee. As current secretary of the society I have initiated a reorganization and redesign of the SICB web site. A part of this project is to make the SICB web site a major place for SICB business to take place and to serve as an archive for the societies activities. I believe this important project will take sustained effort over several years to complete and I wish to see this through.

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#### **Brian Tsukimura**

Current Position: Professor of Biology, Department of Biology, California State University, Fresno

**Education**: A.B. Zoology, University of California, Berkeley, 1981; M.S. Zoology, University of Hawaii at Manoa, 1985; Ph.D. Zoology, University of Hawaii, 1988

**Professional Experience**: Professor of Biology, California State University, Fresno 2005- present; Interagency Ecology Project – Mitten Crab Workteam, 1999 – present; Associate Professor of Physiology, 2000 – 2005, California State University, Fresno; Assistant Professor of Physiology, 1994 – 2000, California State University, Fresno; Acting Assistant Professor, Illinois State University, 1992 – 1994; Lecturer in Biology, Illinois State University, 1990; Postdoctoral Fellow, Endocrinology, Illinois State University, 1988 – 1992

**SICB Activities:** My first annual meeting was 1986 ASZ, Nashville, and I have attended every meeting to date except 1987 (New Orleans). Chair, Student/Post-Doctoral Affairs Committee, 1995-1999 (successfully lobbied to get this Chair of SPDAC onto the Executive Committee); Chair, Student Support Committee, 2002-2006 (implemented and increased number of FGST awards); Member SICB Program Committee as The Crustacean Society Liaison to SICB, 2005 to present. Participation in the Midwestern Regional Conference on Comparative Endocrinology (co-organizer, 1990), and Western Regional Conference on Comparative Endocrinology

**Other Memberships:** The Crustacean Society, American Microscopical Society, Western Society of Naturalists, AAAS - Pacific Division, Sigma Xi, Sierra Foothill Conservancy, Interagency Ecology Project – Mitten Crab Project Workteam.

**Research Interests:** Comparative endocrinology of the regulation of development, growth, and reproduction using crustacean (Branchiopoda, Brachyura, Astacidae and Penaeoidea) models. Current studies focus on the influence of environmental factors on reproduction and development, and the regulatory hormones integrating these influences, particularly on vitellogenin synthesis and larval growth.

Recent studies on the invasive Chinese mitten crab have diversified my research to include invasive species ecology, particularly with respect to larval population dynamics on adult year class strength. In addition, we have started examining selenium toxicity as a stressor on tadpole metamorphosis.

Goals Statement: The annual SICB meetings serve as a forum for our Society members to share data and exchange ideas. My past participation on SPDAC and SSC has attempted to ensure that SICB remains a student and post-doc friendly organization by minimizing the perceived distance and disconnection between this very important constituency and the SICB faculty. As Secretary, I would try to keep the membership informed of all the important events happening within our society and assist in maintaining its smooth functioning. I hope to work with the other members of the Executive Committee to find new and exciting ways to meet the ever changing needs of both our student and faculty members.

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#### **Candidates for Program Officer Elect**

#### Kathryn A. Coates

**Current Position**: Associate Research Scientist, Department of Conservation Services, Bermuda Ministry of the Environment, Bermuda

**Current Professional Affiliations**: Adjunct Professor, School of Graduate Studies and Department of Ecology and Evolutionary Biology, University of Toronto; Research Associate, Royal Ontario Museum, Department of Natural History, Toronto, Canada; Research Associate of the Bermuda Zoological Society and the Bermuda Aquarium, Museum and Zoo

**Education**: BSc, University of Toronto, 1974, MSc, University of Victoria, Canada, 1979, PhD, University of Victoria, Canada, 1987

**Professional Experience**: Curatorial Fellow, Assistant and Associate Curator, Department of Invertebrate Biology, Royal Ontario Museum, Toronto, Canada; Assistant Professor, Zoology, University of Toronto; Associate Research Scientist and Academic Education Advisor, Bermuda Biological Station for Research, Inc (now, Bermuda Institute of Ocean Sciences)

**SICB Activities**: 2003 - ongoing, service to Program Committee as representative for an affiliate Society; 2005, Co-organizer The New Microscopy: New Characters and the Importance of Morphology in Phylogenetic Analysis and co-developer of SICB webpages based on the symposium presentations; 2003, DIZ student paper judge (also additional, earlier, years); poster and paper presentations in various years, since late-1980's.

Other Professional Memberships: American Microscopical Society, Program Officer since 2002; North American Benthological Society, Taxonomic Expert for NABS Taxonomic Certification Program; American Fisheries Society, co-chair of Annelid Subcommittee of the Committee on Common Names of Aquatic Invertebrates of North America. Also: Systematics Society (UK), Biological Society of Washington, American Association for Zoological Nomenclature, Association of Marine Laboratories of

the Caribbean, and Aquatic Oligochaete Biologists

**Research Interests**: Systematics and evolution of marine and freshwater, tropical, clitellate annelids; diversity and evolution of the clitellate family Enchytraeidae; conservation ecology of tropical seagrass communities; conservation ecology and general biology of tropical intertidal snails; conservation and management plan development for marine habitats; dispersal and evolution of marine invertebrates of the sub-tropical mid Atlantic region – Bermuda and the Caribbean.

Goals Statement: As Program Officer for the SICB my primary goal would be to continue the well-structured program development process, which now includes and integrates the PO's of all the Divisions of the SICB and of the affiliated Societies. Also, it is recognized by the SICB executive, and others, that new and novel financing for, our symposia are necessary and I would wish to contribute to this ongoing strategic planning.

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#### Eduardo Rosa-Molinar

**Current Position**: Associate Professor of Biology and Neuroembryology, University of Puerto Rico-Rio Piedras, San Juan, Puerto Rico

**Education**: The University of Alabama, Tuscaloosa, Alabama. Natural Sciences; B.S., 1994 University of Nebraska Medical Center, Omaha, Nebraska. Medical Sciences Ph.D., 1997 Creighton University School of Medicine, Omaha, Nebraska. Cellular & Molecular Neurobiology, 1997-1999

**Professional Experience**: August, 2003-present: Associate Professor, University of Puerto Rico-Rio Piedras, San Juan, Puerto Rico; August, 1999-July, 2003: Assistant Professor, University of Puerto Rico-Rio Piedras, San Juan, Puerto Rico; July, 1997-July, 1999: Post-Doctoral Research Fellow in Neuroscience, Department of Biomedical Sciences, Creighton University School of Medicine, Omaha, Nebraska

**SICB Activities**: Editorial Board (2003-present), *Integrative and Comparative Biology*; Symposium Co-Organizer (2003). *Alexander Kowalevsky Award Recipients Mini-Symposium*; SICB Program Committee (2003-2007); Division of Evolutionary Developmental Biology Program Officer (2001-2007); SICB Committee on Diversity (2001-present); Symposium Organizer (2001), *Starting from Fins: Parallelism in the Evolution of Limbs and Genitalia* 

**Other memberships**: Society for Developmental Biology; American Society for Cell Biology; American Association of Anatomists; Society for Neuroscience; Histochemical Society; Sigma Xi; American Association of the Advancement of Science

**Research Interests**: We use classical and modern differential neuroanatomical tract-tracing methods combined with classical and modern optical microscopy methods and through collaborations, to visualize and study the logic of neural circuit organization, assembly, and remodeling in the vertebrate spinal cord.

**Goals Statement**: If elected, my primary objective will be to work closely with SICB divisional program officers to encourage the SICB membership to develop proposals for high profile symposia and workshops, and assist SICB divisional program officers and symposia and workshop organizers in their fund raising

efforts (i.e., money for international travel) to bring together more integrative biologists within SICB and outside of SICB in order to continue working on "big picture questions" in the field of integrative biology as well as on the latest most appropriate tools, techniques, and theories in integrative biology. I will continue to work on strengthen ties and increase the collaborative efforts between SICB divisional program officers.

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#### **Candidates for Member-At-Large Elect**

Sönke Johnsen (incumbent)

**Current position:** Assistant Professor, Biology Department, Duke University, Durham, NC. (2001-present)

**Education:** 1988, B.A. in Mathematics, Swarthmore College; 1996, Ph.D. in Biology, University of North Carolina at Chapel Hill

**Professional experience:** 2003-present, Adjunct Scientist, Nicholas School of the Environment, Duke University; 2002-present, Adjunct Scientist, Woods Hole Oceanographic Institution; 2000-2001, Assistant Scientist, Woods Hole Oceanographic Institution. 1999-2000, Postdoctoral Scholar, Woods Hole Oceanographic Institution; 1997-1998, Postdoctoral Fellow, Harbor Branch Oceanographic Institution; 1996-1997, Lecturer, Department of Biology, University of North Carolina at Chapel Hill; 1991-1994, National Science Foundation Pre-Doctoral Fellow, Department of Biology, University of North Carolina at Chapel Hill

**SICB activities:** 1991-present, member; 2002-2004, Bartholomew award committee; 2003, nominating committee, Division of Invertebrate Zoology; 2003, 2007, co-organizer of two symposiums, editor of the proceedings of the first symposium; 2007 SICB member-at-large (filling one year vacancy)

**Other memberships:** Sigma Xi

**Research interests:** Visual ecology of pelagic species, including topics such as: organismal and ocular transparency, camouflage, bioluminescence, polarization and ultraviolet vision, and optical sampling techniques for zooplankton.

Goals statement: SICB has been my intellectual home since the Atlanta meeting in 1991, during which I gave my first terrified talk. Since then, I have talked at every meeting but one, including one in a leg brace and another using borrowed clothing and no slides. The main purpose of the member-at-large is to tell the society's leadership what the members are thinking, something that I have been doing for a number of years. My goal is to continue this. One of the reasons I have stayed with SICB over the years is that I always felt that the leadership listened to me. If I can repay even some of this, I will be happy.

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#### Donald L. Mykles

**Current Position:** Professor, Department of Biology and Associate Dean for Graduate Education, College of Natural Sciences, Colorado State University, Fort Collins

**Education:** B.A., University of California, Santa Barbara (1973); Ph.D., University of California, Berkeley (1979)

Professional Experience: Muscular Dystrophy Association Postdoctoral Fellow (1981-1983); Postdoctoral Fellow, Oak Ridge National Laboratory (1979-1983); Research Associate, ORNL (1983-1985); Assistant (1985-1988), Associate (1988-1993), Full Professor (1993-present), Colorado State University. NSF Presidential Young Investigator Award (1989); Fulbright Scholar and Guest Professor, University of Heidelberg (1991); Fulbright Intercountry Visitor to the U.K. (1991); Associate Editor, The Journal of Experimental Zoology (1994-1999); Distinguished Research Fellow at Bodega Marine Laboratory, University of California, Davis (1998); Editorial Board, Comparative Biochemistry and Physiology, 2002-present

**SICB Activities:** Invited speaker in five SICB symposia (co-organizer of two); Judge for DCBP Best Student Paper competitions; DCPB Nominating Committee; DCE Nominating Committee; DCPB Program Officer (2007-08)

**Other Memberships:** American Physiological Society; The Crustacean Society; American Association for the Advancement of Science; and Society for Experimental Biology

**Research Interests:** Regulation of molting and limb regeneration in decapod crustaceans using cellular, biochemical and molecular biological methods. There are two projects: (1) signaling mechanisms in the molting gland and (2) steroid regulation of claw muscle atrophy.

Goals Statement: I have been a member of ASZ/SICB since 1974 and have attended most of the annual meetings over that period of time as a graduate student, postdoctoral fellow, and professor. It is the major forum for integrative organismal biology in the US. I am familiar with the scope of the Society, as my research spans four divisions (Comparative Physiology & Biochemistry, Comparative Endocrinology, Neurobiology, and Invertebrate Zoology). As member-at-large, I will foster efforts that promote the exchange of ideas and techniques across the broad spectrum of biological diversity and organization. For example, SICB should continue its involvement in organizing regional and international meetings, as well as encourage participation of students and postdoctoral fellows in the annual meetings and Society governance. If elected, I will work with other members of the Executive Committee and the Business Office to continually improve its operations.

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#### Jacqueline F. Webb

Current Position: Professor of Biological Sciences, University of Rhode Island

**Education**: B.S., Cornell University (1979); Ph.D., Boston University (1988); Post-Doctoral Fellow Scripps Institution of Oceanography, UCSD (1987-1989): Post-Doctoral Fellow and Post-Doctoral Associate, Department of Anatomy, N.Y.S. Coll. Vet. Med., Cornell University (1989-1991); Grass Foundation Post-Doctoral Fellow, Friday Harbor Labs, University of Washington (1992)

Professional Experience: Assistant and Associate Professor of Biology, Villanova University (1993-2006); Visiting Associate Professor, Department of Zoology, University of New Hampshire (2001); Visiting Investigator, BU Marine Program, MBL (2000); Visiting Instructor, Hatfield Marine Science Center, Oregon State University (1993); Visiting Assistant Professor, Illinois Wesleyan University (1992); Visiting Faculty, Boston University Marine Program, MBL (1991); Visiting Faculty, Marine Sciences and Maritime Studies Center, Northeastern University (1987); Lecturer/Coordinator, Undergraduate Marine Science Program, Boston Univ. (1983-1987)

**SICB Activities**: Active member since 1982; Symposium Organizer for 2006 Annual Meeting Zebrafish in Comparative Context, with T. Schilling; Funded by NIH, American Association of Anatomists Research Meeting Outreach Grant, American Microscopical Society, and Aquatic Habitats, Inc.; Nominating Committee, Division of Vertebrate Morphology (2001); Program Officer, Division of Systematics (1995-1997); Judge, Dwight Davis Award, Division of Vertebrate Morphology (1989)

**Other Memberships**: American Society of Ichthyologists and Herpetologists, International Society of Vertebrate Morphologists, American Association of Anatomists, American Association for the Advancement of Science

**Research Interests**: Development and Evolution of the Mechanosensory Lateral Line System in Fishes; Evolution of Vertebrate Sensory Systems; Functional Morphology; Evolutionary Developmental Biology; Ichthyology and Fish Biology.

Goals Statement: SICB's mission to support integrative biology is unique among scholarly societies and provides an important venue for the development of novel interdisciplinary collaborations. We need to continue to promote the combination of high quality science and the accessible, student-friendly atmosphere at SICB meetings, which provided so many of us with our first meeting experience. Both SICB's Divisional organization and its focus on symposia are important for the continuing evolution of new approaches to integrative biology, but should be supported with additional funding especially given the decreasing funding availability from federal agencies. SICB is in a unique position to increase its efforts in public outreach in novel ways especially in light of renewed suspicion of the validity of scientific inquiry. I would like to see additional efforts to promote attendance of local high school teachers at annual SICB meetings, which should increase SICB's impact on the science education of future undergraduates. ICB's increased visibility with the move to Oxford University should also allow the journal to publish a wider range of paper formats (beyond our symposia), which will enhance its profile and broaden its readership.

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#### **News and Announcements**

- Join in an Antarctic Expedition!
- Oxford University Press Discount for SICB Members
- New Content in the SICB Digital Library
- Len Muscatine has passed away

# Join in an Antarctic Expedition!

http://www.antarctica.uab.edu

Dear Colleague,

We wish to invite you to join us on an expedition to explore the spectacular marine life of Antarctica by joining our University of Alabama at Birmingham research team at Palmer Station on the western Antarctic Peninsula. This interactive educational web program designed by experts in educational web technology targets students of all ages and the populace at large with topical features including research, animal and plant life, weather, diving, social aspects of life at an Antarctic science station, and educational activities for the classroom. Selected by the National Science Foundation to be featured during the 2007 International Polar Year, this award winning web site, now with video and digital images integrated with the social networking sites such as Flickr, brings to life the adventure and excitement of discovery below the seas of Antarctica.

Dr. Charles Amsler, Professor of Biology

Dr. Jim McClintock, Professor of Polar and Marine Biology



Iceberg in fast sea ice. Photo Courtesy of Jim McClintock

# **Oxford University Press Discounts**

Oxford University Press offers a special discount of 20% on books ordered by SICB Members. <u>Click here</u> for details and order form.

# **New Digital Library Content**

The SICB Digital Library features two new sections:

- Educational Abstracts lists abstracts with educational content from SICB meetings from 2002 to 2007.
- **SAAWOK** provides articles from the "Science as a Way of Knowing" series that was published in *American Zoologist* in the 1980s and 1990s.

Visit <a href="http://sicb.org/dl">http://sicb.org/dl</a> to view.

# Len Muscatine has passed away

Colleagues,

It is with regret and sadness that I pass on to you the news that Leonard Muscatine died in his home on 11 April after a short bout with stomach cancer. He was a very young 74 years old. Len received his Ph.D. at the University of California, Berkeley in 1957, and spent his entire career at the University of California, Los Angeles, carrying out exquisite work on algal-animal symbioses, especially in corals. He was a long-time member of SICB until his retirement in 1997, was a mentor and colleague to many of us, and will be greatly missed.

Sincerely,

John

John Pearse, President Society for Integrative and Comparative Biology

# Division of Animal Behavior (DAB): 2007 Spring Newsletter

- Message from the Officers
- Election Candidates

#### **Message from the Officers**

Tom Hahn (Chair), Sarah Humfeld (Program Officer), and Scott MacDougall-Shackleton (Secretary)

#### **Elections!**

Greetings from your DAB executive! We've had a change and your current DAB executive is now:

Chair: Tom Hahn

Program Officer: Sarah Humfeld

Secretary: Scott MacDougall-Shackleton

This year we need to vote for Program Officer and we have two excellent nominees. Please read the biographies below and take the time to vote. Thank you, Sarah and Peggy for agreeing to stand for election.

#### **Best Student Presentations**

At the 2007 meeting in Phoenix we announced the Best Student Presentations from the 2006 Orlando meeting. They were:

**Jennifer Hylton** (Best Student Oral) "Cryptic Plumage Dimorphism in *Aphelocoma* Scrub-Jays: Assessing Visible and Ultraviolet Reflectance Across Species and Subspecies"

**Laura Macesic** (Best Student Poster) "Morphometrics and behavioral function of the electric organs of Bancroft's numbfish, *Narcine bancroftii*"

Congratulations Jennifer and Laura! The judges were -as always- impressed by the consistently high quality of student presentations. We will announce the Best Student Presentations from the 2007 meeting in the Fall Newsletter, then make a presentation at the 2008 meeting San Antonio. Plan to attend the annual DAB business meeting/social.

#### **Symposia**

The society is welcoming late-breaking and mini-symposia for San Antonio. If you would like to organize a smaller symposium but don't want to wait until the Boston meeting this is your chance! As always we welcome proposals for symposia and will work with you to see it successfully through.

Have a great spring and summer, and don't forget to vote!

~Tom, Sarah, and Scott.

### **DAB Election Candidates**

#### Candidates for Program Officer

Peggy S. M. Hill

Current Position: Associate Professor of Biological Science, University of Tulsa, OK.

**Education:** B.S. in Education, University of Tulsa, 1975; B.S. in Natural Sciences, University of Tulsa, 1977; Ph.D. in Zoology, University of Oklahoma, 1996.

**Professional Experience:** Associate Professor of Biological Science, 2002-present, Assistant Professor of Biological Science, 1996-2002, Instructor of Biological Science, 1987-1996, University of Tulsa; Native American Studies Program, Committee Member, 1991-2003, Academic Advisor, 1994-2000, Associate Director, 1998-2003; Classroom Teacher, 1977-87, Booker T. Washington High School, Tulsa, Okla.

SICB Activities: Member since 1990; Annual Meeting Session Chair/Co-chair, 1997-1999, 2001, 2004, 2007; DAB Best Student Paper Judge, 1998-2001, 2003; Symposium Organizer, 2000, 2001; DAB Program Officer, 1998-2001; American Zoologist Reviewer. Other Memberships: Animal Behavior Society, International Society of Behavioral Ecologists, Sigma Xi, Society for Conservation Biology, Kansas Entomological Society, Orthopterists' Society.

**Research Interests:** I have been working with animal behavior in both honeybees (foraging ecology) and prairie mole crickets (airborne and vibrational communication), and my major long-term interest is in how animals use sensory cues to make choices in resource acquisition (foraging or reproduction). I have been working on a book, Vibrational Communication in Animals, for much of the two past years.

Goals Statement: My general goal as an SICB member is to help to promote the society as a leader in bringing focus to issues in integrative and comparative biology through our annual symposia. My parallel goals continue to include encouraging the participation of minorities and women in the work of SICB, areas where great gains have been made since I joined the Society.

#### Sarah Conditt Humfeld

Current Position: Post-Doctoral Fellow, Division of Biological Sciences, University of Missouri-Columbia

**Education:** B.S. (Biology), Trinity University, 1995; Ph.D. (Biology), University of Missouri-Columbia, 2003.

**Professional Experience:** 2004-05, Research Technician, Division of Biological Sciences, University of Missouri-Columbia;

2005-current, Postdoctoral Fellow, Division of Biological Sciences, University of Missouri-Columbia;

**SICB Activities:** Program Officer of DAB, 2005-2008

Other Memberships: Animal Behavior Society, International Society for Behavioral Ecology.

**Research Interests:** I am generally interested in acoustic communication and mating behavior in anuran amphibians. I continue to be interested in the mating system I studied for my dissertation (Hyla cinerea) and questions about alternative mating tactics in males. Additionally, I have recently expanded my interests in male phonotaxis, and begun studying the different behavioral contexts in which these acoustic preferences may be used by males. I am beginning to investigate the mechanistic explanation for the observation of condition dependent call characteristics in some species of treefrogs. Also, I am collaborating with Dr. Carl Gerhardt at the University of Missouri to investigate the evolution of signaling systems in the canyon treefrog.

Goals Statement: Since elected, I have learned a lot about how a program officer can help to make their division an intellectually stimulating enterprise! My goals fall along two main lines. First, DAB has not hosted a behavior symposium for several years. I will strive to facilitate the partnerships that are necessary to generate and host great symposium over the next few years. This is a commitment that I have made regardless if I am re-elected P.O. Secondly, I will work to reinvigorate the formal and personal ties that used to exist between DAB and the Animal Behavior Society. I believe that these two organizations are complementary in their mission and can benefit from interacting with each other. I am especially interested in educating student members of ABS about the opportunities to participate in SICB.

Website for additional information:

http://www.biosci.missouri.edu/gerhardt/sarah.htm

# Division of Comparative Biomechanics (DCB): 2007 Spring Newsletter

#### In this newsletter:

- Message from the Secretary
- Candidates for Elections

#### Message from the Interim Secretary

Miriam Ashley-Ross

#### Minutes of the 2007 Business Meeting in Phoenix

DCB held its first Business Meeting on January 4, 2007, at the SICB Annual Meeting in Phoenix, AZ.

Bob Full, the interim Chair, called the meeting to order. The first order of business was the Introduction of the interim officers: Bob Full, Chair; Frank Fish, Program Officer; Miriam Ashley-Ross, Secretary; Monica Daley, Student representative. Bob briefly discussed the rationale for creating the Division of Comparative Biomechanics: it should cut across disciplines and taxa of study, therebyintegrating the strengths of the other divisions. He highlighted Mimi Koehl's plenary lecture and the Not-So-Mini Symposium honoring Steve Vogel as examples of the appeal of comparative biomechanics.

Adopting the Bylaws for the division was the first official item on the Agenda. Proposed bylaws were passed out for examination by the attendees. A vote was taken, and the Bylaws were adopted unanimously. The DCB would like to create a worldwide list of folks interested in biomechanics. If you know of anyone, particularly foreign biomechanists who would be interested in the DCB, please send names of people who should be on the list to Bob Full. The goal of this effort is to increase membership of DCB, and also to have a list of potential speakers who could be invited to participate in symposia. The next topic of discussion was awards (student papers, etc) - currently DCB doesn't have any on the books. We need to establish criteria for student paper/poster awards. Also, if we are to offer any more substantial awards, we need sponsors, or suggestions of sponsors.

Frank Fish discussed symposia for upcoming meetings. We need symposia for the Boston meeting (the 2009 Annual Meeting) - think especially about local people. Frank made several suggestions for subjects of symposia in the Fall Newsletter. Funding, or attempts to procure it, is necessary to get a symposium approved. The funding can come from a Division within SICB, NSF, a book publisher, etc. If you are considering organizing a symposium, please consult with Frank regarding ideas. There are also two other ways to have symposia:

- (1) Mini-symposium contributed papers that are designated as their own mini-symposium, with their own keyword. This has the advantage that it doesn't cost much, and doesn't require outside funding. Papers from mini-symposia may be published in the ICB journal. The only downside to a mini-symposium is that speakers wouldn't get registration fees waived.
- (2) "Flash" symposium half day event, could be proposed after deadline date. As with a mini-symposium, this option wouldn't require outside funding. Papers could be published in ICB. For any type of symposium that is being proposed, Frank emphasized that it is important to reach out to speakers who don't normally attend. The diversity of symposium contributors is important, especially for NSF. Diversity also includes the professional/career level of contributors having graduate students and post-docs as well as established professors is a plus. SICB President Woodin announced that there is now a new fund to support symposia SICB has seeded it with \$100K, more contributions are requested.

Dianna Padilla talked about NSF reorganization - Integrative Organismal Biology is now going to be Integrative Organismal Systems. Information on the new structure should be up on the NSF website by now. Dianna opined that Comparative Biomechanics will fit well within the new NSF organizational structure.

Miriam Ashley-Ross discussed the upcoming elections for DCB officers (biographical information on the candidates should be up by the time you read this), and listed upcoming meetings of interest to biomechanists:

- (1) American Society of Biomechanics Annual Meeting. The 2007 ASB Meeting will be held on the campus of the Leland Stanford Junior University on August 23-25, 2007.
- (2) International Society of Biomechanics. The next biennial ISB Congress, the 21st, will be help in Taipei Taiwan from July 1 to 5, 2007. Visit the <a href="https://www.isb2007.org">www.isb2007.org</a> for more info. Deadline for Abstract Submission: January 15, 2007
- (3) Annual Scientific Meeting SEBatGlasgow2007. 31st March 4th April 2007. Scottish Exhibition and Conference Centre

Abstract Submission Deadline: 12th January 2007

Malcolm Gordon announced next meeting of IUPS in Kyoto, Japan, August, 2009, and challenged the DCB to come up with a satellite symposium to coincide with the meeting.

Rachel Merz talked about the SICB digital library. The rationale behind having it focus on Biomechanics initially is because biomechanics isn't well integrated into many curricula. The digital library is intended to be a useful resource for teaching. Submissions are peer-reviewed - can be teaching methods, lab exercises, snippets on fascinating animals. To view the material, go to the SICB homepage, click on the link there. Submissions are handled through the website; text documents should be in RTF format. Copyright protection is the author's responsibility.

#### **New Business:**

- (1) Journals should DCB sponsor a journal? If so, which one? Where will the funds to do so come from? This issue was raised, without resolution.
- (2) Society budget meetings have run at a slight deficit. Bob Full asked for suggestions about what might be given up, or how to solve this problem. Andy Biewener suggested that we might raise the meeting registration fees (for regular members, not students) to solve the budget shortfall. John Bertram suggested that he'd be willing to pay more for registration if we had a wireless access point. Margaret Rubega suggested regular members could give up their free drink tickets.

The meeting was adjourned with the directive to attendees to spread the word of the DCB! Consider organizing symposia! Any other suggestions should be directed to the interim Chair.

#### **Candidates for Elections**

#### **Canidates for Chair**



#### John E.A. Bertram

**Current position:** Associate Professor, Dept. of Cell Biology and Anatomy, Faculty of Medicine, University of Calgary

**Education:** Ph.D. 1988 (Anatomy/biomechanics) University of Chicago, M.Sc. 1984 (Zoology/biomechanics) University of British Columbia, B.Sc. 1981 (Zoology) University of British Columbia

**Professional experience:** Medical Research Council of Canada Post-doctoral Fellow, Dalhousie University (1988-90), Bullard Research Fellow, Harvard Forest, Harvard University (1990-91), Research Associate, Concord Field Station, Harvard University (1991-92), Assistant Professor, Dept. of Anatomy, College of Veterinary Medicine, Cornell University (1992-98), Assistant Professor, Dept. of Sport and Exercise Sciences, Ithaca College (1998-99), Associate Professor, Dept. of Food, Nutrition and Exercise Sciences, College of Human Sciences, Florida State University (1999-2004)

**Other professional activities:** Guest faculty, Organization for Tropical Studies, Costa Rica; NIH Minority Student Summer Program mentor

**SICB activities:** Member ASZ/SICB since 1985, Organizer, Northeast Regional Meeting of DVM, Ithaca, NY 1995, Div. of Vertebrate Morphology Nominations Committee Chair 1997, Symposium co-organizer (with R. Marsh), "Muscle properties and organismal function: shifting paradigms". Albuquerque, NM. 1996, Division of Vertebrate Morphology Program Officer, 2004-2005

Other memberships: At various times; ASB, ISB, SEB

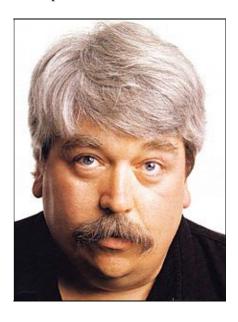
**Research interests:** 1. Comparative biomechanics of trees, fish, reptiles, birds and mammals. 2. Dynamic properties of cartilage. 3. Evolutionary adaptations of equids. 4. Biomechanics of human locomotion, 5. Teaching strategies to introduce students to biomechanics

Goals statement: DCB was formulated to serve as an identifiable home for rigorous biological biomechanics research and to promote the insight available from applying this discipline to questions in the biological world. The objective at this time is to firmly establish the Division in a manner that will allow it to flourish and fulfill this purpose. The development of <a href="meaningful">meaningful</a> symposia that demonstrate the impact that our field can have will be instrumental in establishing the value of DCB. We will be better served by fewer but influential symposia than by simply producing a large number with our name associated. Several areas are currently undergoing important shifts in perspective fueled by work from our membership. I suggest we focus our institutional resources (particularly intellectual) on promoting one of these areas over each of the next few years - this will help define the role of the Division while complimenting the work of our members. I would propose an official committee be formed to organize and coordinate this as a strategic initiative.

Communication is also of key importance. The electronic age allows us to involve our members directly in the

discussion/decision process and gives us the opportunity to make DCB initiatives known to other related groups worldwide. Organized properly, the DCB has the potential to provide a conduit between our desktops and the worldwide biomechanics community. I have served as an *ad hoc* liaison with SEB, another group where comparative biomechanics is well represented, and would continue to foster a positive association with that group. Many of us had the pleasure of attending the International Congress of Biomechanics in Munich last year. Through the initiative of some individuals (all members of our new Division) comparative biomechanics was represented at that venue, though not as strongly as it deserves. Our new Division is situated to have a substantial impact on the organization of other such high profile meetings. By promoting our field within our own Society meeting and at others worldwide we will help to secure Comparative Biomechanics as an endeavor to be supported and encouraged. The chair of our new Division will have to manage its development while being sensitive to other Divisions within the Society (DCPB, DIZ, DVM). These Divisions have served as a fertile ground for the development of comparative biomechanics and in our best interest to keep the well-being of the Society in mind as our Division develops.

#### **Robert Joseph Full**



Current position: Professor of Integrative Biology, University of California, Berkeley 1995 - present

**Education:** Ph.D., State University of New York at Buffalo 1984; M.A., State University of New York at Buffalo 1982, B.A., State University of New York at Buffalo 1979

Professional experience: National Academy of Sciences Mentor in the Life Sciences 2006; External Member of Development Team for the Production of a Capabilities Roadmap to 2030, NASA 2004-05; External Member for Review of the MTP Regional Mobility Program, NASA 2005; National Youth Leadership Foundation Board Member 2004-06; Science Advisory Board, Samsung 2004 - 06; National Academy of Sciences Summer Institute for Undergraduate Education in Biology 2003, 2005; Goldman Professor University of California, Berkeley 1999 - 2001; Chancellor's Professor, University of California, Berkeley 1996 - 1999 Professor, University of California, Berkeley 1995 - present; Associate Professor, University of California, Berkeley 1991 - 1995; Assistant Professor, University of California, Berkeley 1986 - 1991; Post doctoral Lectureship, The University of Chicago, 1984 - 1986

**SICB activities:** Participant in the last 27 National Meetings; Founder and Interim Division Chair of Comparative Biomechanics Division 2006-present; Executive Committee, Member at Large 2003-05; Society Science Task Force Chair 1999; Nominating Committee for Society-wide Offices 1998; Society Program Planning Committee 1995 -1998; Society Electronic Communications Committee, Chair, 1994-1999; Society Membership Committee 1991-2, Chair, 1993

**Other memberships:** American Society of Biomechanics; American Physiological Society; European Society of Comparative Physiology and Biochemistry; Society of Experimental Biology; *Sigma Xi* 

**Research interests:** (1) Comparative biomechanics of terrestrial locomotion; (2) Neuromechanical systems biology; (3) Comparative physiology of muscle function; (3) Mechanisms of adhesion

Goal statement: I proposed the creation of a new division because comparative biomechanics needed a home where colleagues from all fields, interested students, granting agencies and corporations could turn to find the latest cutting-edge research, the investigators conducting the studies and the events that disseminate the discoveries. No other society in the world is better positioned to highlight the contributions of comparative biomechanics. The strength of the symposium and contributed paper and poster sessions at the SICB annual meetings are unmatched. Comparative biomechanics complements strong divisions that focus on physiology, ecology, behavior, vertebrate morphology and invertebrate zoology. This cross-fertilization has become more obvious in recent years as the society has encouraged themed sessions. Sessions on hydrodynamics, aerodynamics, terrestrial locomotion, feeding, biomaterials, and muscle function represent a core of the meeting and consistently showcase research that sets the pace for the field of comparative biomechanics. My goal is establish the division and then let the next generation lead it.

#### **Candidates for Program Officer**

#### Frank Fish



**Current Position:** Professor of Biology, West Chester University

**Education:** B.A., Biology, Cum Laude, State University College at Oswego, New York, June, 1975; M.S., Zoology, Michigan State University, December, 1977; Ph.D., Zoology, Michigan State University, August, 1980

Professional Experience: Assistant Professor, West Chester University (1980-1986); Assistant Professor, Wallops Island Marine Science Center (Summer 1982); Anatomy of Marine Chordates; Associate Professor, West Chester University (1986-1989); Professor, West Chester University (1989-Present); Research Assistant, Sea Grant Foundation of New York (January 1974 - November, 1974; May, 1975 - September, 1975); Consultant, Dames and Moore Environmental Consulting Co. (June, 1975 - July, 1975); Consultant, Applied Optical Media Corporation (1992); Consultant, Port of Nagoya Aquarium and Mannetron (1999-2001); Consultant, Barnsbury Books, London, UK; Consultant, ZeroGravity; Cartoonist for the Journal of Experimental Biology

SICB Activities: Local Committee for annual meeting in Philadelphia, PA (1983); Nominating Committee for the Chair-Elect of the Division of Vertebrate Morphology (1984, 1988, 1992); Secretary of the Division of Vertebrate Morphology (1991-1992, 1993-1994, 1994-1995); Meeting Session Chair (1983, 1985, 1987-1989, 1996-1999); Editorial Board for the American Zoologist (1992-1997); D. Dwight Davis Student Award Committee (1996, 1999); Co-organizer of symposium, Stability and Maneuverability, Chicago (2001); Chair-elect of the Division of Vertebrate Morphology (2002); Chair of the Division of Vertebrate Morphology (2003-2004); SICB Digital Library Advisory Board (2004-2006); Interim Program Officer of the Division of Comparative Biomechanics (2006-2007); Chair of the Nominating Committee for the Chair-Elect of the Division of Comparative Biomechanics (2006)

**Other Memberships:** American Society of Mammalogists; Commonwealth of Pennsylvania University Biologists; International Congress of Vertebrate Morphology; Pennsylvania Academy of Science; Sigma Xi; The Society for Marine Mammalogy

Research Interests: (1) Energetics and hydrodynamics of aquatic locomotion by vertebrates with special emphasis on the evolution of swimming modes and morphologies in mammals; (2) Biomechanics and functional morphology of locomotion in vertebrates; (3) Thermoregulation of mammals, birds, and reptiles in respond to an aquatic environment; (4) Hydrodynamics of biological control surfaces and propulsors for biomimetic application. Goals Statement: Having now survived the "trial by fire" of organizing the two and a half day symposium to honor Steve Vogel, I now feel capable of dealing with the rigors of organizing symposia and contributed paper sessions for the Division of Comparative Biomechanics. As division Program Officer, it is my responsibility to aid division members in organizing symposia of interest to the membership and the entire SICB. I can also advise on funding opportunities. I have suggested potential symposium topics to get things going with the new division, including the Evolution of Flight; Biomimetics: Fusion of Organism and Machine; Transition from Sea to Land: The Evolution of Terrestrial Locomotion in Vertebrates; and Shells, Scales and Cuticles: Structural Mechanics of Exoskeletons. An important aspect of the Program Officer's duties is to organize the contributed papers and posters. In this regard, it is important to work constructively with the other divisions to appropriately schedule these contributions. I look forward to the opportunity to serve the Division of Comparative Biomechanics.

#### **Adam P. Summers**



**Current Position:** Assistant Professor, UC Irvine

**Professional Experience:** Swarthmore College 1986 - BA Math, BS Engineering; New York University 1991 - MS Biology; University of Massachusetts, Amherst 1999 - PhD Organismic and Evolutionary Biology; Miller Fellow UC Berkeley 1999-2001; Asst. Prof. UC Irvine 2001-present

**SICB Activities:** Membership Committee (2004-2007); Grants committee (2004-2005), Chair (2006-2007); D. Dwight Davis best student paper judge DVM (2001, 2005, 2006); Chair of the best poster prize naming committee (2000); Post-doctoral representative for the Division of Vertebrate Morphology (2000-01); Graduate student representative for the Division of Vertebrate Morphology (1995-98)

**Other Memberships:** American Society of Ichthyologists and Herpetologists; Society for the Study of Amphibians and Reptiles; American Physiological Society; Society of Experimental Biology; American Elasmobranch Society; Society of Vertebrate Paleontology

**Research Interests:** Form, function and comparative biomechanics of skeletal biomaterials.

**Statement of Goals:** As the DCB program officer I will endeavor to continue the current scheme of theme based sessions that span several divisions. I will also actively solicit collaborative symposia with divisions closely allied with ours, such as DVM and DIZ. There will be a large influx of presentations to the new division, some that would have been presented in other divisions and some that are entirely new to SICB. Arranging the sessions for maximal thematic content and minimal overlap should be an interesting challenge. I am an advocate of the current poster session format, where they are unopposed by any talks.

**Candidates for Secretary** 

Miriam A. Ashley-Ross



**Current Position:** Associate Professor of Biology

Education: Ph. D., University of California, Irvine, 1994; B.S., Northern Arizona University, 1988

Professional Experience: Associate Professor, Dept. of Biology, Wake Forest University, 2004-current; Panelist: Plant and Animals Sciences section, National Science Foundation Graduate Research Fellowship Program, 2006; Panelist: Animal Sensation and Movement Panel, National Science Foundation, 2004-2005; Panelist: Physiology, Microbiology and Neuroscience section, National Science Foundation Graduate Research Fellowship Program, 2003-2005; Assistant Professor, Dept. of Biology, Wake Forest University, 1997-2004; Postdoctoral Researcher, University of Pennsylvania, 1996-1997; Postdoctoral Researcher, University of California, Irvine, 1995-1996; Grass Fellow in Neurophysiology, Marine Biological Laboratory, Woods Hole, MA, 1995, summer; Instructor, California State University, Long Beach, 1994-1995

SICB Activities: Participant (oral and poster presentations) in annual meetings since 1990; Secretary of the Division of Comparative Biomechanics, 2006-current; Chair of the Public Affairs Committee, 2000-current; Co-organizer of "Molecules, Muscles and Macroevolution: Integrative Functional Morphology," held at the 2001 Annual Meeting; Co-chair of the Public Affairs Committee, 1999-2000; Representative from the Division of Vertebrate Morphology to the Public Affairs Committee, 1998-current; Representative from the Division of Vertebrate Morphology to the Electronic Communications Committee, 1997-2004; Representative from the Division of Neurobiology to the Graduate Student and Postdoctoral Affairs Committee, 1996-1997; Representative from the Division of Vertebrate Morphology to the Graduate Student and Postdoctoral Affairs Committee, 1994

**Other Memberships:** International Society of Vertebrate Morphologists; Society for Neuroscience; American Arachnological Society

**Research Interests:** Functional morphology of locomotion in vertebrates; Biomechanics of support, locomotion and prey capture in spiders; Muscle performance and evolution

Goals Statement: DCB was organized to provide a formal association between scientists working on diverse taxa, but having a common interest in the mechanical basis of function. Thematic sessions based around biomechanics have been some of the most packed for years at SICB meetings. Now that we have a formal home, we are in a position to do more. As your interim secretary, I've been responsible for such pedestrian but necessary tasks as putting together the Newsletter offerings, recording the minutes from the business meeting (which you'll read in the Spring Newsletter), and riding herd on communications between DCB and the Society officers. I expect that, if elected, I'll be doing more of the same, but I also hope to make our Division a very visible presence in the Society by assisting with the creation and organization of a best student paper award. As a graduate student, I was greatly influenced and inspired by the high quality of presentations, and interactions with leading researchers, at the annual meetings. I would like to ensure that DCB graduate students have the same enriching experience.

#### **Stephen Roberts**



Current Position: Associate Professor, School of Life Sciences, University of Nevada Las Vegas

**Education:** Illinois State University (B.S., M.S.); Arizona State University (Ph.D.); University of Chicago (postdoc)

Professional Experience: Section Leader, UNLV School of Life Sciences Integrative Physiology Section; Reviewer: Proceedings of the National Academy of Science, Journal of Experimental Biology, Genetica, Genome, Journal of Insect Physiology, Physiological and Biochemical Zoology, Comparative Biochemistry and Physiology, Integrative and Comparative Biology, Physiological Entomology, Behavioral Ecology and Sociobiology, Ecological Monographs, Functional Ecology, BMC Ecology, Environmental Entomology, Annals of the Entomological Society of America, Journal of Insect Behavior, Entomologia Experimentalis et Applicata, Zoology-Analysis of Complex Systems, Naturwissenschaften; National Science Foundation (Ecological and Evolutionary Physiology ad hoc and panel, Doctoral Dissertation Improvement Grant panel); National Institutes of Health Minority Biomedical Research Support Program (ad hoc); Earthwatch Institute (ad hoc); National Geographic Society (ad hoc)

**SICB Activities:** Numerous contributed talks and posters; <u>Session Chair</u> (Behavioral Mechanisms) Society for Integrative and Comparative Biology Annual Meeting, San Diego, CA; <u>Co-organizer</u>, Society for Integrative and Comparative Biology Symposium, "Ontogeny of physiological regulatory mechanisms: Fitting

into the environment" New Orleans, LA; <u>Judge</u>, Best Student Talk Competition, Society for Integrative and Comparative Biology Annual Meeting, Anaheim, CA

Other Memberships: American Physiological Society; Entomological Society of America

Research Interests: Energetics and aerodynamics mechanisms of insect flight

Goals Statement: I am a faculty member in the School of Life Sciences at The University of Nevada Las Vegas and a lifetime member of SICB. I have enjoyed the benefits of participating in SICB since my graduate student training in the mid 1990's and still consider it the best venue for PI's and trainees of all levels in the field of biomechanics (and comparative biology in general) to share their research and develop collaborations. My work in the area of biomechanics focuses on the mechanisms and limits of energetic and aerodynamic performance in flying insects, particularly bees and flies. My approach to these issues relies on the fact that biomechanical traits are wonderfully suited, arguably above all others biological traits, to the core SICB approach of experimentally (1) identifying the underlying genetic, biochemical and physiological basis of variation in these traits, (2) determining how such variation affects organismal-level performance consequential to fitness, and (3) elucidating the ecological and evolutionary influences that maintain this variation. Moreover, as Steven Vogel notes in his popular writings, biomechanical traits serve as ideal models to teach new learners in biology the fundamental process and strength of the scientific method. Bob Full and the other founding executive officers of the Division of Comparative Biomechanics have performed superbly in their justification, organization and establishment of the DCB and, as shown during the first DCB business meeting in Phoenix, have amply delivered regarding the critical triad of division success; membership, symposia offerings and plans for graduate student support/awards. It is up to the future officers and far more so the general membership of the DCB to ensure this inertia carries forward. I am delighted at the opportunity to serve in a professional society that has given me so much and help the DCB further enhance the visibility, importance and capacity of research in comparative biomechanics.

## Division of Comparative Endocrinology (DCE): 2007 Spring Newsletter

## In this newsletter:

- Message from the Chair
- Message from the Program Officer
- Message from the Secretary
- Message from the DCE Representative to the Student/Postdoctoral Affairs Committee
- Candidates for Elections

## Message from the Chair

Bob Denver (rdenver@umich.edu)

We had an outstanding annual meeting of the SICB in Phoenix this year with about 1200 presentations society-wide. The turnout for the DCE was excellent and, as always there were more outstanding presentations than one could possibly attend. The highlight of the meeting was the sixth annual Howard Bern Lecture presented by Nancy Sherwood. Dr. Sherwood presented a fascinating lecture on "The endocrine system just before the backbone: genomics of the spineless." We were very pleased that Howard Bern could attend the meeting. We are very grateful to Elsevier and the SICB for support of the Howard Bern Lecture series.

Our oral and poster presentations covered a broad range of comparative endocrinology and highlighted some of the finest work in our field. Our Divisional Program Officer (DPO) Michael Romero did an outstanding job of putting together a logical and exciting program. There were no DCE-sponsored symposia at the Pheonix meeting. *As in the past, I want to strongly encourage DCE members to propose symposia for our future meetings*. We have one symposium planned for the meeting in San Antonio (see message from Michael Romero below). Symposia represent one of the most important activities of our Division and are essential for the continued development and vigor of our field. If you are considering proposing a symposium for the Boston meeting please contact Michael as soon as possible. The deadline for symposium proposal submission is **August 17, 2007** (<a href="http://www.sicb.org/meetings/2009/index.php3">http://www.sicb.org/meetings/2009/index.php3</a>). Note that the SICB sponsors three kinds of symposia: 1) divisional or co-sponsoring society symposia, 2) society-wide symposia, and 3) mini-symposia. Also note that in the future the SICB will entertain proposals for 'late breaking', half day symposia. There is still time to propose such a symposium for the San Antonio meeting. Follow this link if you are interested: <a href="http://www.sicb.org/meetings/2008/latesymposia.php3">http://www.sicb.org/meetings/2008/latesymposia.php3</a>.

I want to thank Creagh Breuner for chairing the best student paper award judging committee and each of the judges for their hard work in identifying suitable candidates for the awards. The competition was quite stiff again this year, with 27 students competing in the oral presentation category and 11 competing in the poster category. The quality of the presentations and posters was excellent, making the decision process difficult for the judges. Congratulations to all of the participants, and especially to the following award winners:

The **Aubrey Gorbman Award for Best Student Oral Presentation** was shared by **Susannah French** (Arizona State University) for the talk titled "Corticosterone modulation of reproductive and immune system trade-offs in female tree lizards: long-term corticosterone manipulations via injectable gelling material", and

Oliver Love (Simon Fraser University) for the talk titled "Exposing the embryo to maternal stress: an adaptive precitive mechanism or an unavoidable developmental cost?" Honorable mention in this category was given to Alan Vajda (University of Colorado) for the talk titled "Reproductive disruption of fishes by an endocrine active wastewater effluent". The Award for Best Student Poster Presentation was given to Eunice Chin (Univ. of British Columbia, Vancouver) for the poster titled "Brain and plasma steroid levels in a developing free-living songbird." Honorable mention was shared by Molly Dickens (Tufts University) for the poster titled "Stress and translocation success in Chukar" and Eri Saijo (Arizona State University) for the poster titled "Proliferation, differentiation and survival of newborn cells in adult amphibian brain."

At the annual DCE business meeting we welcomed Cathy Propper, our new DCE secretary and congratulated our new DPO-elect Stephen Schoech. We also welcomed Stacia Sower, our Chair-elect. Please note that owing to the change in the bylaws there was some confusion regarding when Stacia would take over as chair. Stacia will begin her service at the end of the Executive Committee meeting in San Antonio and I will continue as chair of the DCE until that time.

A reminder that the DCE membership approved a change to our bylaws that involves the addition of a \$4 fee to the membership dues for DCE members. This is intended to cover the cost of maintaining membership in the International Federation of Comparative Endocrine Societies (IFCES) and to generate a fund to cover requests for support for regional, national and international meetings. Regarding support for meetings, requests are made to the chair of DCE and these are placed into the divisional budget to be approved by the SICB treasurer. The budgets are formulated in the early fall, so if you are planning a meeting for which you intend to request funds from SICB please get those requests in as early as possible. It may not be possible to grant requests made after the budget is submitted.

This year, the DCE will elect a new Divisional Chair and Secretary. We have two excellent candidates for each position. Jim Carr and Mark Sheridan are nominated to stand for election to the Chair position, and Pierre Deviche and Mary Mendonca are nominated for the Secretary position. Their biographical sketches are at the end of this newsletter. The election will take place online in late Spring 2007 - please vote! I want to thank David Norris for chairing the Nomination Committee and Daniel Buchholz and Rosemary Knapp for serving on it.

## **Message from the Program Officer**

L. Michael Romero (Michael.romero@tufts.edu)

## The 2007 Meeting in Phoenix, Arizona

I hope everyone agrees that the 2007 meeting in Phoenix, Arizona was a great success. The Comparative Endocrinology sessions were well attended. The highlight of the meeting was the terrific Howard Bern Lecture presented by Nancy Sherwood.

## Symposia at the 2008 meeting in San Antonio, Texas

Information on the symposia for the 2008 meeting in San Antonio is now posted on the home page of the SICB web site. DCE is the primary sponsor for an exciting symposium, "Consequences of maternally-derived yolk hormones for offspring: current status, challenges and opportunities" that is being organized by Rachel Bowden and Matt Lovern. DCE is also cosponsoring a symposium, "Evolution vs. Creationism in the classroom: evolving student attitudes" that should be of interest to many of us. In addition, two other

symposia promise to be interesting: "Aeroecology: probing and modeling the aerosphere - the next frontier" and "PharmEcology: integrating ecological systems and pharmacology." All in all, it is shaping up to be an exciting meeting.

## !!Call for Symposia, 2009 meeting in Boston, Massachusetts!!

Information on submitting symposia for the 2009 meeting in Boston is now a link on the home page of the SICB web site. Please think about developing exciting and engaging symposia in your field. DCE-organized symposia have been few and far between lately. Symposia are a major draw for our annual meeting and can be extremely rewarding for the organizers as well. Symposium papers are often published together in an issue of *Integrative and Comparative Biology*. Deadline for submissions is August 17, 2007. If you have an idea for a symposium, please do not hesitate to contact me (michael.romero@tufts.edu).

## Message from the Secretary

Cathy Propper (Catherine.Propper@nau.edu)

## Minutes of the Phoenix 2007 SICB Division of Comparative Endocrinology Business Meeting:

Introductions: Bob Denver introduced the new officers: Stacia Sower, Chair-Elect; Steve Schoech, Program Officer Elect, and Cathy Propper, Secretary.

Minutes: Cathy called for the approval of the minutes from the 2006 business meeting. They were unanimously approved.

Thanks: We thanked Bob Denver (Chair) and Kevin Kelley (Secretary) for their wonderful service for division for the past years and we recognized Michael Romero (Program Officer) and Darren Lerner (Post-doctorate/Graduate Student rep) for their current service. Please see Bob Denver's note above regarding the bylaws and term of service.

SICB is developing its webpage: Soon there will be a place for a Researchers' database under each Divisional heading. When this site opens, please include your information. In the meantime, checkout the new look and spend some time in the different areas.

We are trying to develop a History of Divisional Officers. If you have served, please send Cathy your name, affiliation, office served, and dates of service as soon as possible (best to do it now while you are thinking about it!). She will compile the information for our Division.

SICB general news from the officers: SICB is trying to double its endowment fund to support symposia and foreign speakers. The Journal of Integrative and Comparative Biology has sped up its review process and the manuscripts will be posted on the website within two days following copy-editing completion. Also, the Journal should now be picked up on Medline and Google Scholar, but is available (back to the first issues of American Zoologist) to SICB members at: <a href="http://www.sicb.org/journal/">http://www.sicb.org/journal/</a>.

News from NSF: William Zamer from the NSF gave a brief overview of ongoing changes in structural organization at the NSF to reflect the importance of Integrative Systems. For details you may wish to view

Jim Collins' presentation titled: <u>What is integrative biology at the start of the 21st century?</u> at: <a href="http://www.sicb.org/meetings/2007/">http://www.sicb.org/meetings/2007/</a>. The NSF is looking for a new Divisions Director. Contact Jim Collins if you may be interested.

Regarding your presentations at SICB: To help the Program Officers, please make sure that you note you want your talk to go in a DCE session and carefully choose the subareas of interest. If you do not note DCE for your abstract, our program officer may never see it.

Symposia: There are already two symposia set up for next year's meeting in San Antonio: One on Yolk Steroids and the other (jointly sponsored on Teaching Evolution). Please see Michael's report above for more information.

Grad and Post-doc Affairs: Darren Lerner discussed issues important to Graduate Students and Post-docs. We had 250 students registered for the meeting (1/2 were new). Please contact Darren for new ideas and workshops for San Antonio.

GCE News: Bob Dores, Editor-and-Chief reported on the current state of the journal *General and Comparative Endocrinology*. This year the journal received 342 manuscripts. The rejection rate is 48%. The journal now has an impact factor of "2," and is in the top 25% of endocrine journals. It takes about 5 months to go from receipt of a manuscript to acceptance (including 3-6 weeks in review), 8 months from receipt to on-line and 10 to print. The aim is to significantly decrease this timeline.

Elections: Cathy announced that we would be holding elections for Chair Elect and Secretary Elect in the spring and called for nominations to be sent to David Norris, Rosemary Knapp, Dan Buchholz or Kevin Kelley (Note: this process has been completed thanks to those on the nomination committee. The nominees' bios and goal statements are listed below).

Other: Members should be aware of Dr. David Norris' recently published new Edition (4<sup>th</sup>) of Vertebrate Endocrinology.

## **Upcoming Conferences:**

Western Regional Conference of Comparative Endocrinology will be held at Friday Harbor Labs on March 23-24. Contact Lynn Riddiford (<a href="mailto:lmr@u.washington.edu">lmr@u.washington.edu</a>) or Penny Swanson (<a href="mailto:penny.swanson@noaa.gov">penny.swanson@noaa.gov</a>) for details.

International Symposium of Amphibian and Reptile Endocrinology and Neurobiology will be held in Berkeley, CA on March 25-28. For more information go to: <a href="http://isaren2007.berkeley.edu/overview.php">http://isaren2007.berkeley.edu/overview.php</a>

The Society for Behavioral Neuroendocrinology's annual meeting will be held at the Asilomar Conference Center in Pacific Grove, CA (Barney Schlinger, local organizer) from 21 June (pre-meeting workshop) through 24 June 2007. For more information go to: <a href="http://www.sbne.org/meetings/program.php">http://www.sbne.org/meetings/program.php</a>

The Endocrine Society's annual meeting will be held on June 2-7<sup>th</sup> in Toronto, Canada. For more information go to: <a href="http://www.endo-society.org/endo/">http://www.endo-society.org/endo/</a>

The American Water Resources Association will be holding a Specialty Conference: Emerging Contaminants of Concern in the Environment: Issues, Investigations and Solutions on June 25-27, in Vail, Colorado. For more information go to: <a href="http://www.awra.org/meetings/Vail2007/index.html">http://www.awra.org/meetings/Vail2007/index.html</a>

## Message from the Graduate Student and Post-doc Representative

Darren Lerner (lerner@hawaii.edu)

The most recent SICB meeting in Phoenix was a success in many respects. Many thanks to Stephanie Cross for heading up the Student Support Program and Shea Tuberty, Kevin Kelley and Larry Riley, the new faculty chair of SPDAC, for organizing the excellent and well-attended workshop: "What editors want: Paving the way to publication" Of course many thanks to the journal editors who served on those panels!

This year approximately 15% of the Grants in Aid of Research (GIAR) went to DCE students. Congratulations to Jonathan Atwell, Timothy Greives, Corrine Kozlowski and Rachel Seabury Sprague!! If you haven't received an award previously, don't forget to apply in November!

On to San Antonio 2008. Don't miss the 1<sup>st</sup> Timers Orientation after the welcome social on the first night. This gathering is NOT just for 1<sup>st</sup> timers. The venue in 2008 will include information on how to get the best out of your time at the meeting, provide information on student work for the **Student Support Program**, and a special hello from the current SICB president. Don't forget to sign up when you submit your abstract. Students presenting a poster or oral presentation are eligible for discounted housing or free registration for no more than 4 hours of work.

For the last evening of the meeting, before the dessert social, we are planning a great workshop tentatively entitled: "More than just science: What other skills are needed to be a successful graduate student and job applicant". A panel of recently hired faculty and post-docs will discuss and field questions on various topics including: 1) the unspoken realities about the necessary skills, other than your science, that are needed to be successful in running your lab and/or preparing you for a doctoral degree or post-doc position 2) discussions focused on the importance of collegiality, interpersonal skills, and 3) how to manage your budgets, time, students, service, and oh yah, courses! Don't miss out! Graduate students and post-docs are encouraged to attend.

Finally, if you have any comments or suggestions regarding the meeting or any of the student/post-doc activities please feel free to contact me: <a href="mailto:lerner@hawaii.edu">lerner@hawaii.edu</a> I look forward to seeing you in San Antonio!

## **DCE Elections**

Candidates for Chair-elect, in alphabetical order

## 1. James Carr

#### **Current Position:**

Professor, Department of Biological Sciences, Texas Tech University

## **Education:**

1982, B.S. with Honors, Cook College, Rutgers University; 1986, M.A., Department of E.P.O. Biology, University of Colorado, Boulder; 1988, Ph.D., Department of E.P.O. Biology, University of Colorado, Boulder

## **Professional Experience:**

1988-1989, Research Associate, Department of Anatomy, School of Medicine, University of New Mexico; 1989-1991, NIH Postdoctoral Fellow, Department of Anatomy, School of Medicine, University of New Mexico; 1991-1997, Assistant Professor, Department of Biological Sciences, Texas Tech University; 1997-2004, Associate Professor, Department of Biological Sciences, TTU; 2005- Present, Professor, Department of Biological Sciences, TTU. Served as a panelist for the NSF Integrative Animal Biology Program, 2003; Served as an Associate Editor for General and Comparative Endocrinology since 2003.

## **SICB Membership and Activities:**

SICB member since 1984; Council member, International Federation of Comparative Endocrinology Societies (IFCES, 2001-2005); Secretary, Division of Comparative Endocrinology, Society for Integrative and Comparative Biology (SICB, 2002-2004); Co-organizer, NIMH/NSF funded symposium for the Society for Integrative and Comparative Biology, 2001, Annual Meeting. Symposium entitled: Stress- Is it more than a disease? A comparative look at stress and adaptation; Best student paper/poster judge, annual SICB meeting, Division of Comparative Endocrinology (1996, 1999-2000, 2007); Co-organizer, Southwestern Regional Conference on Comparative Endocrinology held at TTU (1994).

## **Other Memberships:**

American Heart Association (1995- present); European Comparative Endocrinology Society (1998-present); International Neuropeptide Society (1997-2003); J.B. Johnston Club (1995-2004); National Center for Science Education (NCSE, 2001-present); New York Academy of Sciences (2003-present); Society for Environmental Toxicology and Chemistry (2002-2006); Society for Neuroscience (1989-present).

**Research Interests:** Our research is focused in the areas of neuroendocrinology and environmental endocrinology. We study the endocrine and neural mechanisms that allow animals to cope with changes in their environment, in particular how amphibians respond to stressors and contaminants in their environment.

## **Goals Statement:**

Although reductionist approaches to understanding the molecular and cellular basis of endocrine function have provided tremendous advances, SICB and the Division of Comparative Endocrinology are unique in providing a forum for understanding how these advances can be incorporated into an integrated view of organism function. The ability of DCE to support the discussion of endocrine research in light of recent advances in ecology, developmental biology, evolutionary biology and toxicology is critical for my research program as it is for many others in our field. As DCE chair I will encourage the development of interdisciplinary symposia that draw on the unique strength of the integrative framework provided at the annual SICB meeting. I will work to continue DCE's excellent track record in fostering graduate student participation in our annual meeting. Finally, I will work to recruit new members to our division and encourage those whose participation may have lapsed over the past few years to revisit our organization.

## 2. Mark Sheridan

Current Position: James A. Meier Professor, North Dakota State University, Fargo, ND

**Education**: A.B., Zoology, Humboldt State University, 1980; M.A., Biology, Humboldt State University, 1982; Ph.D., Zoology, University of California--Berkeley, 1985.

**Professional Experience**: Assistant Professor of Zoology, North Dakota State University (NDSU), Fargo, ND., 1985-1991; Graduate Program Coordinator, Department of Zoology, NDSU, 1986-1990; Associate Professor of Zoology, NDSU, 1991-1997; Director, Regulatory Biosciences Center, NDSU, 1991-2000; Visiting Professor, University of Tokyo, Ocean Research Institute, Japan, 1994; Professor of Zoology, NDSU, 1997-present; Visiting Professor, University of São Paulo, São Paulo, Brazil, 1998; James A. Meier Professor, NDSU, 1999-present; Director, North Dakota Experimental Program to Stimulate Competitive Research (EPSCoR), 2000-2003; Editor, General and Comparative Endocrinology, 2001-present; Associate Editor, Comparative Biochemistry and Physiology, 2002- present.

**SICB Activities**: SICB member since 1982; Organizer, Midwest Regional Conference on Comparative Endocrinology, 1989; DCE Nominating Committee 1990-1991 & 1994 (Chair); Chair, DCE Best Student Paper Award Committee, 1991-1993; 2006, 2007; Chair, Graduate Student-Postdoctoral Affairs Committee, 1994-1996; DCE Program Officer 1996-1999; Symposium co-organizer, *A Tribute to Erika Plisetskaya: New Insights on the Function and Evolution of Gastroenteropancreatic Hormones*, 1999.

**Other Memberships**: AAAS, American Fisheries Society, Endocrine Society, North Dakota Academy of Science (President, 1999-2000), Sigma Xi (NDSU Chapter President, 1993).

**Research Interests**: Hormonal regulation of growth, development, and metabolism in vertebrate animals. My current research examines the function and evolution of the somatostatin signaling system.

Goal Statement: As the main association of comparative endocrinologists in North America, DCE should strive to make the annual SICB meeting a premier gathering for the field. We also should continue and strengthen our commitment to the professional development of students and postdoctorals. These goals can be realized by offering a diverse and relevant scientific program, including topical symposia and mini-symposia as well as workshops that address methods and approaches in the field. We also must expand means to support student travel and enhance opportunities for "networking" with established scientists at the meeting.

Candidates for Secretary-elect, in alphabetical order

#### 1. Pierre J. Deviche

**Current position:** Professor of Environmental Physiology, Arizona State University (<a href="http://sols.asu.edu/faculty/pdeviche.php">http://sols.asu.edu/faculty/pdeviche.php</a>)

**Education:** B.S., Biology, University of Liege (Belgium), 1975; Ph.D., Behavioral Neuroendocrinology, University of Liege (Belgium), 1980.

Professional Experience and Relevant Activities: A. von Humboldt Post-doctoral Fellowship, Ruhr-University Bochum, Germany (Juan Delius, Mentor), 1982-1984. Research Associate, University of Liege, Belgium (Jacques Balthazart, Mentor), 1984-1985; NIMH Research Associate, Oregon State University (Frank Moore, Mentor), 1985-1988; Associate Professor, University of Alaska Fairbanks, 1988-1998; Professor, University of Alaska Fairbanks, 1998-1999; Associate Professor, Arizona State University, 1999-2003; Professor, Arizona State University, 2003-pres. Chair, Scientific and Local Organizing Committees for the 8<sup>th</sup> International Symposium on Avian Endocrinology (2004) held in Scottsdale, Arizona. Chair, ASU Institutional Animal Care and Use Committee, 2003-2006.

**SICB Activities:** Regularly participated in SICB annual meetings since ~1984. I generally bring several students to these meetings and many of these students give poster or oral presentations.

**Other Memberships:** American Association for the Advancement of Sciences; Society for Neuroscience; Sigma Xi; Society for Behavioral Neuroendocrinology; American Ornithological Union; Ornithological Societies of North America.

Research Interests: Research in my laboratory focuses on the environmental regulation of vertebrate reproductive physiology and behavior, using birds as experimental models. We are especially interested in the reproductive adaptations of birds inhabiting extreme environments such as the Sonoran Desert. Most of our work combines field and laboratory experiments. Ongoing projects include: (a) studies of the mechanisms that mediate effects of day length and non-photoperiodic factors on the neuroendocrine reproductive axis, with particular attention to the GnRH system; (b) investigations on the hormonal and non-hormonal regulation of neural plasticity in the avian brain song control system; (c) research on the basis of differences in endocrine, behavioral, and immune functions between urban-adapted passerines and rural conspecifics; (d) work on the role and regulation of avian corticosterone binding globulin. We are also investigating the hormonal and environmental control of hemoparasite infections and the relationships between these infections and immunity.

Goals Statement: Regular attendance to SICB annual meetings over the past 20 years has allowed me to forge strong, long-lasting professional relationships with many members of the Division of Comparative Endocrinology and to keep in touch with the rapid and exciting developments in this area. During my tenure as DEC Secretary, my goals will be to promote the power and utility of using comparative approaches to investigate endocrinology-related issues, promote education of scientists in this and related fields, stimulate participation in the Division activities through appropriate advertising of workshops and symposia, advertise comparative endocrinology-related positions that become available nationwide, and manage the DCE Newsletter.

## 2. Mary T. Mendonça

Current Position: Associate Professor, Department of Biological Sciences, Auburn University

**Education**: BA Rutgers University, Newark MS University of Central Florida PhD University of California, Berkeley

**Professional Experience**: Associate Professor, Auburn University (1998-present); Assistant Professor, Auburn University (1992-98); NIMH Individual (1989-91) and Institutional (1987-89) NRSA Post-doctoral Fellowships, University of Texas, Austin; Australian Research Grants Scheme (ARGS) Post-doctoral Fellowship (1985-87), University of Western Australia. Served as panel member for NSF

Integrative Animal Biology (IAB), Ecological and Evolutionary Physiology (EEP), Integrative Graduate Research and Education Training (IGERT) review panels, and EPA STAR Fellowship review panel.

**SICB Membership and Activities**: Have attended and presented at majority of annual meetings since first meeting in 1980. Served as session chair, 1994-1997, 1999, 2000, 2002, 2004- 2006. Judged student oral and/or poster presentations (1999, 2000, 2002). Participated in Endocrine Disruptor Symposium (1999). Served on DCE Nomination Committee (2005).

**Other Memberships**: American Association for the Advancement of Science; Animal Behavior Society, Society for Behavioral Neuroendocrinology, American Society of Ichthyologists and Herpetologists

**Research Interests:** My investigations center on how proximate environmental parameters and physiological mechanisms are integrated at the neural level to control the timing of seasonal reproduction in bats. I also study the integration of the stress response and immune response of vertebrates from disturbed habitats in reptiles and amphibians. Other lines of study include the effects of xenobiotics on wildlife species as well as the maternal contribution to offspring quality and sex ratio in avian species

Goals Statement: Membership in the DCE division of SICB has been one of the most intellectually beneficial aspects of my career. I would enjoy repaying this debt, in a small way, by serving the division as secretary. I would continue to facilitate the dissemination of the latest divisional news, promote the exciting research of its members, and act as a contact point for concerns, advertisements, and collegial exchange.

# Division of Comparative Physiology & Biochemistry (DCPB): 2007 Spring Newsletter

## In this newsletter:

- Message from the Chair
- Message from the Program Officer
- Message from the ICCPB executive committee DCPB representative
- Message from the Secretary
- Message from the Graduate Student/Postdoc Representative
- Candidates for Elections
- The George A. Bartholomew Award Competition

Message from the Chair

#### Patrick J. Walsh

Phoenix 2007 was a great meeting! The many delegates I spoke with were very happy with the venue, and the convenience of having the conference center across the street from the main conference hotel, as well as the proximity of the various session rooms to each other, allowing easy moves between sessions. (And who could miss all those Gator and Buckeye fans and band members pouring in as we departed!) As always, the talks and posters were of uniformly high quality. I for one learned a great deal and got to arrange several new collaborations. The vigor of our field was especially evident in the competition amongst the student oral and poster presentations. Don Lovett (and Dave Tapley *in absentia*) and their team of judges had their work cut out for them, judging numerous entrants for the Peter W. Hochachka awards.

For the poster competition join me in congratulating **Stephanie Sbong** of the University of North Texas for her presentation:

## Peter W. Hochachka Best Poster Award

**S.M. SBONG and DZIALOWSKI E.M.** Respiratory and cardiovasculoar interactions during internal pipping in chicken embryos.

And for the Oral Presentations, please congratulate **Clark Cotton** of the University of Wyoming for his presentation:

## Peter W. Hochachka Best Oral Presentation Award

**COTTON, C.J.** Protein conservation in spontaneous and facultative hibernators: the white-tailed prairie dog (*Cynomys leucurus*) and the black-tailed prairie dog (*Cynomys ludovicianus*).

Stephanie and Clark received checks for \$100, a certificate of award, a one-year membership renewal to SICB, and a copy of a tribute to Peter Hochachka prepared by George Somero that was published in *Comparative Biochemistry and Physiology*.

I wish to extend a sincere 'thank you' to Don and Dave and the judges. As you know, the name of the award changes every year, and the name of the award for 2008 will be the **Robert C. Terwilliger** award.



#### **Bartholomew Award**

I also wish to thank the Bartholomew Award Committee for their work in selecting Dr. Douglas Altshuler of the University of California, Riverside as this year's recipient. Dr. Altshuler gave a fascinating presentation to an audience represented by all Divisions. (See Doug's Biography below.) For committee service I want to thank Drs. Katie Gilmour (Chair), Lynn Riddiford, Peter Wainwright, Malcolm Gordon, Martin Wikelski, and Ray Huey (*ex officio*). Notably, Dr. Wikelski will be rotating off the committee after three years of service, so a special thanks to him! Last but not least a very large thank you to John Lighton and Sabre Systems for their generous support. *The deadline for applications for the 2008 Bartholomew Award is tentatively set at September 1*, 2007.

## **Student Travel Support for ICCPB Brazil**

Please see Lou Burnett's message below on the upcoming ICCPB meeting in August. By virtue of our \$5 self levy with our annual dues, we anticipate being able to give 3 to 5 travel awards of approximately \$500 each to students to help offset travel expenses to this meeting. The details of the application process for these awards will be emailed to student SICB members at a later date, but please note that submission of an abstract by the April 15 deadline is required to apply for these awards.

## **Division Officers Old and New**

For the annual 'changing of the guard', one office changed hands at the Phoenix meeting, namely Kim Hammond's term as Program Officer ended, to be replaced by Don Mykles. Please join me in thanking Kim for her service. Note especially Don's message below regarding ideas for symposia. We were able to hold a short brain-storming session in Phoenix about possible ideas for symposia at future meetings. Also note especially the ability to submit ideas for symposia with a shorter lead time in some cases. Also welcome Joe

Williams to the post of DCPB Chair Elect. I will pass him the gavel following the 2008 meeting.

## **Spring Elections**

We have one important post on the ballot for the Spring elections, namely secretary as Jonathon (Papa) Stillman's term will also end after the 2008 meeting. Please see the candidates' bios and statements below, and please vote (it is so easy to do online).

## Message from the Program Officer

Have a fantastic Spring and Summer!

Don Mykles

## **Upcoming SICB meetings**

**Boston 2009.** The meeting is January 2-6, 2009 at the Westin Waterfront Hotel. I encourage members to start thinking about symposia for the meeting. The deadline for proposals is August 17<sup>th</sup>. Go to <a href="http://www.sicb.org/meetings/2009/index.php3">http://www.sicb.org/meetings/2009/index.php3</a> for more information on the process. Please contact me (<a href="mailto:Donald.Mykles@ColoState.edu">Donald.Mykles@ColoState.edu</a>) to discuss your ideas.

**San Antonio 2008.** Our next meeting is at the San Antonio Marriott Rivercenter Hotel, January 2-6, 2008. DCPB is cosponsoring the symposium "PharmEcology: integrating ecological systems and pharmacology", organized by **J. Sorensen & W. Folley**. Please contact me (<u>Donald.Mykles@ColoState.edu</u>) if you are interested in organizing a late-breaking mini-symposium consisting of up to 7 speakers.

Phoenix Meeting (January 3-7, 2007)

The new Phoenix Convention Center and adjacent Hyatt Hotel was an excellent venue for the near-record number of participants.

Bartholomew Award lecture was by **Douglas Atlshuler** (UC Riverside): "The aerodynamic and neurophysiological mechanisms of animal flight through the lens of evolution". The Bern Lecture was by **Nancy Sherwood** (University of Victoria): "The endocrine system just before the backbone: genomics of the spineless."

This year's symposia were very successful. The society wide symposia were:

- "Evolutionary & functional genomics of sperm, sperm storage, & fertilization", organized by **Tim Karr** and **Scott Pitnick**
- "Frontiers in learning & teaching integrative & comparative biology: The SICB digital library", organized by **Patricia Morse** and **Sara Hiebert**

Other upcoming meetings of interest

- Washington, DC 2007. Experimental Biology, April 28 May 7, 2007. The web site: <a href="http://www.the-aps.org/meetings/eb07/index.htm">http://www.the-aps.org/meetings/eb07/index.htm</a>
- Brazil 2007. 7th International Congress of Comparative Physiology & Biochemistry (ICCPB): Integrative Physiology Meets Biodiversity, August 12-16, 2007 at Salvador, Bahia, Brazil. The web site: <a href="http://www.ib.usp.br/iccpb-brazil/">http://www.ib.usp.br/iccpb-brazil/</a>
- Chile 2007. Mid-Year Meeting of The Crustacean Society, October 14-17, 2007, at La Serena Coquimbo, Chile. The web site: http://www.bedim.cl/tcs2007/index.htm
- Kenya 2008. 4th International Conference in Africa for Comparative Physiology & Biochemistry, July 19-25, 2008 at the Maasai Mara National Reserve, Kenya. The web site: http://www.natural-events.com/mara/default-follow.asp





#### Student awards

On behalf of DCPB, I congratulate the winners of the 2007 Best Student Paper Awards (see above) and Grants-in-Aid of Research, which were awarded to the following individuals:

- Molly Dickens, Tufts University. "Investigating the "stress" of translocation."
- Edwin Price, University of Western Ontario. "Migration-related changes to avian muscle phospholipid composition."
- **Heather Elizabeth Mostman-Liwanag**, University of California, Santa Cruz. "Thermal limitations of northern fur seals (*Callorhinus ursinus*): A comparative study with California sea lions (*Zalophus californianus*)."

## Message from ICCPB executive committee DCPB representative

Lou Burnett

Brazil 2007 - 7th International Congress of Comparative Physiology and Biochemistry

"Integrative Physiology Meets Biodiversity"

## August 12-16, 2007 in Salvador, Bahia, Brazil

This ICCPB meeting occurs every four years and is the premier international meeting for comparative physiologists and biochemists throughout the world. Please review the background material for ICCPB below (Roots of the ICCPB). A web site for this meeting is now available at <a href="http://www.ib.usp.br/iccpb-brazil/index.html">http://www.ib.usp.br/iccpb-brazil/index.html</a>. The program will consist of 40 symposia (32 are presently confirmed) and 5 plenary lectures. Chris Wood of McMaster University will present the opening Knut-Schmidt Nielsen lecture. Other plenary speakers include Nora Terwilliger, a past DCPB chair, Francisco Bozinovic of Chile, Steven Chown of South Africa, and Tristram Wyatt of the United Kingdom. The SICB will be well represented with a strong group of symposia including the following.

- Nitrogen Metabolism and Excretion in the Face of Environmental Nitrogen Loading (SICB & CSZ), organized by Pat Walsh and Chris Wood.
- Aromatases, organized by Alan Conley.
- New Models of Ammonium Transport, organized by David Towle.
- Behavioral And Digestive Modulation of Environmental Physiology of Aquatic Animals, organized by Iain McGaw and Steve Morris.
- Genetic and Phenotypic Responses to Hypoxia in the Individual, organized by Karen Burnett, Kim Hammond, Nora Terwilliger and Guido Van den Thillart.

Many more symposia on exciting comparative topics are listed on the ICCPB web site. There will be opportunities for travel support so stay tuned. Plan now to attend this important meeting in the late summer of 2007! Abstract deadline is April 30.

#### **Roots of the ICCPB**

The meetings of the International Congress of Comparative Physiology and Biochemistry sprung out of a desire on the part of the leadership of a number of "comparative" groups to hold international meetings.

The formal structure surrounding the group is a Section of Comparative Physiology and Biochemistry of the International Union of Biological Sciences. This section is currently a group of 12 societies organized for the promotion of international co-operation in the areas of comparative physiology and biochemistry through symposia, conferences, workshops and any other means. DCPB along with the Canadian Society of Zoologists were the founding members.

The main activity of this section is an international congress held approximately every four years and sponsored by one of the member societies. The first such meeting was held in Liege, Belgium in 1984. Subsequent meetings and planned meetings are listed below.

1988 - Baton Rouge, Louisiana, USA

1991 - Tokyo, Japan

1995 - Birmingham, England

1999 - Calgary, Alberta, Canada

2003 - Mt. Buller, Australia

2007 - Salvador, Bahia, Brazil

2011 - Kyoto, Japan

The current list of society members includes the following in alphabetical order.

- American Physiological Society, Comparative Section
- Australia & New Zealand Society of CPB

- Canadian Society of Zoologists
- European Society of CPB
- German Zoological Society
- Japanese Society for CPB
- Russian Physiological Society, Section of Comparative Biochemistry
- Society de Physiologists
- Society for Experimental Biology
- SICB, DCPB
- South African Society for Zoology
- South American Society for CPB

## Message from the Secretary

Jonathon H. Stillman

Firstly, I am proud to be serving DCPB and SICB in this capacity. I am considering ways improve the newsletter or other aspects of recording and communicating DCPB activities. Both the DCPB and SICB executives have discussed the need to make our online interfaces both more informative and more interactive; and any suggestions are welcomed! Please do not hesitate to contact me: <a href="mailto:stillmaj@sfsu.edu">stillmaj@sfsu.edu</a>.

## Minutes of the DCPB BUSINESS MEETING, JAN 4, 2007, Phoenix.

Pat Walsh (Chair) called the meeting to order by introducing the DCPB Executive Committee plus Nora Terwilliger and Lou Burnett, mentioning that Joanna Joyner Matos was not in attendance since she was at home taking care of her new baby (congrats Joanna!). Pat then presented the minutes form the DCPB Business meeting in Orlando, January 2006. The minutes were approved unanimously. Following this, the fact that a new Secretary will be elected for 2008-2009 was discussed, and the nominating committee for that election is headed by Donna Wolcott and two other people. Candidates for the Secretary position are presented below.

SICB society officers Sally Woodin, Bret Burke, Ron Dimock, Linda Walters and John Pearse stopped by to relate the following information and give the DCPB members an opportunity to ask questions.

- 1. SICB has initiated a new endowment fund to support foreign speakers, which hopefully will overcome difficulty in getting federal funding to support non-USA participants in meetings. Names for this fund are currently being accepted; one offered at the meeting was STIRR (Symposium Talks Inspire Research Revolution). [This Secretary thinks that SICB and DCPB members should be able to invent a more dynamic name.] Donations to the endowment fund are gladly accepted, and currently the fund is just over \$100K and earning 8% interest. Ideally, this endowment would be used to support 2-4 international speakers at the annual SICB meeting.
- 2. The SICB Journal Integrative and Comparative Biology is all caught up in publishing backlogged manuscripts (why we had such a thick issue at the end of the year). During 2007, the plan is to publish print versions in July through December to finish 2007 symposium papers in December.

3. Membership database analyses suggest that the retention of student and postdoc members is good. Although many people do not pay membership dues in successive years, over a seven year running average, those people remain in the membership database, suggesting that those members may pay dues and attend meetings intermittently. From the past 7 year period, three datasets have been generated: those individuals who have been members once, those individuals who were members for 2+ years but are not currently members, and those individuals who were members for 2+ years and are current members. Overall, membership in increasing, but analysis of long-term members is complicated by graduate students. Importantly for DCPB, membership status appearing on SICB website is currently undergoing some "construction" to fix some bugs.

Next, Bill Zamer from NSF stopped by the meeting to give DCPB some information about current things going on at NSF that would be relevant to DCPB members. Firstly, Bill said that he wants a better budget - currently things aren't looking good and as of the meeting, they did not have a final budget. Secondly, Bill announced organizational changes at IOB that are pending final clearance. (N.B., by the time that you read this newsletter, the below changes should have already been implemented at NSF) In February 2007, IOB will change to IOS (Integrative Organismal Systems) and there will be a new cluster: PSS (Physiological and Structural Systems). No panels for PSS have been developed yet, but panels will be established based on proposals received and this will be done with as much flexibility as required. These changes at NSF are new, so there are no real data on how this will impact proposal submission and/or review. For January 2007 submissions, clusters will be as they have previously been, but proposals will be reviewed in newly developed panels. Finally, Bill announced that Jim Collins (Assistant Director For Biological Sciences at NSF) will talk later in the evening about NSF BIO Directorate directions and changes, and on Saturday at Noon, Bill and others will talk about changes at NSF and funding opportunities that DCPB members are under-targeting. Jim's talk can be seen here: <a href="http://www.sicb.org/meetings/2007/jcollins/">http://www.sicb.org/meetings/2007/jcollins/</a>

The 2007 Bartholomew Award Winner was then announced: Dr. Douglas Altshuler. Congrats Doug! If you missed Doug's presentation, you missed a great integration across physiology and behavior and a great educational opportunity to learn about work-force loops. Nominations for the 2008 Bartholomew Award are due late in the summer (see below).

Lou Burnett then gave his report at the representative for the International Congress for Comparative Physiology and Biochemistry (ICCPB) and the International Union of Physiological Sciences (IUPS). Lou's message is above, so I won't repeat what he has written here. The next ICCPB is in Salvador Bahia Brazil, August 12-16 2007. The meeting website and registration information is just starting to come online, but is not yet fully functional. E-mail notification will occur when the website is fully functional. As the 2006 DCPB Spring Newsletter included a comprehensive list of DCPB sponsored events, I will not repeat those here, but please see that newsletter for information (LINK). Malcolm Gordon is the APS representative to the ICCPB, and DCPB will likely have a small amount of financial support available to defray costs of attending the ICCPB in Brazil. **Of great importance**, Lou is ready to find his successor as ICCPB representative. This individual would be required to travel to the next IUPS congress in Kyoto Japan (see below) where the next ICCPB will be planned. If you are interested in succeeding Lou, please contact Pat Walsh or any other member of the DCPB Executive Committee.

Malcolm Gordon then presented as the APS representative to the 36<sup>th</sup> IUPS congress to be held in Kyoto, Japan in August 2009. This is not to be confused with the next ICCPB to be held also in Kyoto, Japan in August 2011. (So, you have two chances to go to Kyoto!). The second brochure for the IUPS meeting has just come out and there is still time to prepare symposia for the meeting. Go to <a href="http://www.iups2009.com">http://www.iups2009.com</a> for information and copies of the brochure for the meeting. Planning for the next ICCPB (2011) will happen at the 2009 IUPS meeting

Kim Hammonds then reported on DCPB symposia planned for the 2008 SICB meeting in San Antonio. Sadly, there aren't any. However, there is a PharmEcology symposium planned for the meeting that is DCPB related. There is a need for greater DCPB participation in planning symposia, and our new program director, Don Mykles is eager to hear from you if you have ideas for symposia. Funding is a real issue for getting participants for symposia. SICB can offer about ~\$500/symposium, but other sources of funding (e.g., NSF, industry, foundations) should be considered. Wear your ingenuity cap!

Although any chance for submitting a symposium for San Antonio has passed, Don Mykles suggested that DCPB could organize contributed paper sessions that focus on a particular common theme. This could increase visibility of the contributed paper session giving it a symposium-esque quality. Pat Walsh also discussed how symposium planning has a long lead time - historically this has been so that funding to support the symposium could be obtained. However, a long lead time can diminish the immediate nature of some work (i.e., what is hot right now), and SICB is working to develop a quick mini-symposium format that would involve submission of proposals in July and organization for that year's meeting during the fall Program Officer's meeting. Start thinking about what symposia you'd like to plan for Boston 2009!

Last year, DCPB members voted to approve by-law changes to assess a \$5 dues fee (recall, 1 Disney) to help commit funds to international meetings, especially for un- or under-funded students and postdocs to get to those conferences. About \$2,000-\$2,500 will be collected each year. The DCPB Executive Committee would decide on year-to-year use of the funds at the annual SICB meeting. Funds may be rolled over to the next year and accumulated if upcoming meetings (e.g., ICCPB or IUPS) would warrant saving up the funds.

A special thanks to Dave Tapley for organizing the judging of student presentations and to Don Lovett for providing forms and on-site logistics at the meeting. This year's "in memorium" award will be the "Peter Hochachka" award, which comes with a \$100 cash prize and a 1 year SICB membership, as well as a copy of the obituary of Peter written by George Somero. Next year's award will be in memorium of Bob Terwilliger.

Finally, Jon Harrison announced that the 2007 APS Experimental Biology meeting in Washington DC (late April) will have a "Physiology InFocus" section on experimental evolution (<a href="http://www.the-aps.org/meetings/eb07/abs/pif-rose.htm">http://www.the-aps.org/meetings/eb07/abs/pif-rose.htm</a>). Early career scientists are encouraged to apply for awards (<a href="http://www.the-aps.org/meetings/eb07/awards/comparative.htm">http://www.the-aps.org/meetings/eb07/awards/comparative.htm</a>) if they present at the meeting. To date, only one application has been received for both the research and young faculty awards!

## **Editorial Reports:**

Comparative Biochemistry and Physiology: Pat Walsh

The January 2007 issue has a list of referees. The new Editorial Express MS online tracking system is fully functional and has streamlined the MS Flow process greatly. CBP is now fully electronic. Special issues are in the works, and Göran Nilsson is the new editor of special issues and review articles. There will be 9 new editorial board members (7 of which are female) invited for 2007. The new part D has four issues in 2006, and will be listed in ISI for citation tracking after 2007 (2 years of data are required for calculation of impact factor). After the mandatory 1-year waiting period, it will be listed in Pubmed beginning in 2007. CBP has second pickings for SICB symposia (after ICB).

Here are official statistics for CBP:

CBP's impact factor is steady at approximately 1.5 for Parts A, B, and C.

CBP (parts A-D) received 1148 manuscripts received in 2006. 119 of these were rejected after review, 260 were desk-rejected, 11 were withdrawn, 348 are pending, and 418 are already accepted. Conservatively

assuming that about 30% of pending manuscripts are going to be rejected, this would put another 104 manuscripts into the 'rejected column' and make the total rejected 494 for a total rejection rate of: 43% (acceptance rate 57%).

Between July 2005 and June 2006 we had 1296 willing reviewers who supplied a total of 2955 reports (an average of 2.28 reports per manuscript).

Physiological and Biochemical Zoology: Jim Hicks

Jim presented a nice powerpoint of the evolution of PBZ covers. The biggest change is that PBZ now has photographs of animals in their natural setting on the cover. Got a great animal pic from your latest field trip? Send it in and see it in print (high-quality photos required, so no cell phone pics, please).

In 2006, 182 manuscripts were submitted required 116 editorial decisions. 60% of those manuscripts were from international authors. 159 research papers. 70% rejection rate currently, but about 60% is generally expected. 60% of the rejections are without review. The average # of days to reach a final decision is 70, and an online review system is upcoming.

PBZs impact factor in 2005 is ~2.2. This increase in impact factor is directly related to an increase in the number of papers submitted.

A new section, "PBZ in the news" has been launched, where the Univ. of Chicago press will publicize both the journal and media-appealing scientific content to media outlets (e.g., NPR, National Geographic news, Science, Nature). As a consequence of increased press attention, the Univ. of Chicago press has decided to redesign the PBZ website, and changes are forthcoming.

2007 marks the 80<sup>th</sup> anniversary of PBZ, and to commemorate this, the top 80 most cited papers of all 80 years of the journal will be made available online during 2007. A special issue during 2007 will be on experimental evolution. Open access may reach PBZ, and if that happens costs of \$2-3K will be passed along to authors, a cost that many of us do not wish to bear, but that would be necessary if subscription revenues disappear.

## Message from the Graduate Student/Postdoc Representative

The meeting convened at 5:16 PM and adjourned at 6:13 PM.

Joanna Joyner-Matos

Hello to all DCPB graduate students and postdocs. I hope you enjoyed the meeting in Phoenix!

As graduate student representative for DCPB, I am also a member of SICB's Student/ Postdoctoral Affairs Committee (SPDAC). SPDAC organized a number of activities at the Phoenix meeting. I would appreciate any feedback regarding these activities:

- 1st Timers Orientation on the first day of the meeting, during which we discussed, "How to get the most out of your SICB meeting."
- A workshop on the last evening of the meeting, "What editors want."

SPDAC is in the process of planning the activities for the 2008 meeting in San Antonio. We will continue our tradition of the 1<sup>st</sup> Timers Orientation and are currently discussing possible workshop topics. If you would like one of the past workshops repeated, or have a new idea, please let me know!

If you are looking for funding opportunities during this semester, you may want to consider the Sigma Xi Grants-in-Aid of Research. The spring grant deadline is March 15<sup>th</sup>. You can find additional information at <a href="https://www.sigmaxi.org">www.sigmaxi.org</a>.

If you have questions or ideas regarding SPDAC's plans for the San Antonio meeting, or other questions for me, please feel free to contact me at <a href="mailto:imatos@ufl.edu">imatos@ufl.edu</a>. Good luck with the semester!

## **Candidates for Secretary:**

Allen Gibbs and Steven Secor

Allen G. Gibbs, Personal Statement

**Current Position:** Assistant Professor, University of Nevada, Las Vegas

**Education:** 1981, B.A., Chemistry, University of Chicago; 1989, Ph.D., Marine Biology, Scripps Institution of Oceanography; 1989-1992, Post-doctoral Researcher, UC, Davis; 1992-1999

**Professional Experience:** 1992-1999, Lecturer and Assistant Professor, UC, Irvine; 1999-2004, Associate Research Scientist, University of Arizona; 2005-present, Assistant Professor, UNLV

**SICB Activities:** Member since 1988; have attended most of the annual meetings since then; co-organized a symposium with E. Lisa Crockett in 1996; have judged student presentations 5 times for DCPB and twice for DEE; chaired DCPB student paper competition in 1992

**Other memberships:** American Association for the Advancement of Science, American Physiological Society, Entomological Society of America, Sigma Xi, Society for the Study of Evolution

**Research Interests:** I am an environmental physiologist who has worked in a number of systems, ranging from deep-sea fish to *Drosophila*. My main interest at the moment is insect water balance and energetics, but the work my lab does includes experimental evolution, developmental physiology and functional genomics.

Goals Statement: When I joined ASZ, it contained only five or six divisions. We now have eleven, raising the danger of losing the "integrative" nature of the society. I have seen this happen in multiple academic departments, and it is not what SICB wants. One of my main jobs as secretary will be to prevent balkanization by ensuring excellent communication between DCPB and other divisions. We also need to communicate with

the outside world. This includes other scientific societies and society as a whole. As one who spent five years on soft money, I am acutely aware of how hard it is to get funding these days. SICB needs to work with other organizations to educate the public and the politicians about the importance of basic research.

## Stephen M. Secor, Personal Statement

Current Position: Associate Professor, University of Alabama

**Education**: B.S., SUNY College of Environmental Science and Forestry (1980); M.S., Department of Zoology, University of Oklahoma (1985); Ph.D., Department of Biology, UCLA (1992); Postdoctoral Researcher, Department of Physiology, UCLA School of Medicine (1992-1998).

**Professional Experience**: Instructor, Department of Biology, UCLA (1992); Assistant Professor, Department of Biology, University of Mississippi (1999-2001); Assistant Professor, Department of Biological Sciences, University of Alabama (2001-2006).

**SICB Activities**: Since 1989, 15 oral presentations (co-author on 10 other talks) and 6 poster presentations (co-author on 7 others). In 1996, awarded the George A. Bartholomew Distinguished Young Investigator Award. In 2004, presented in the symposium "Integrative Biology: A Symposium Honoring George A. Bartholomew". For the past few years I have served as a judge of student posters and oral presentations. I have published 1 paper in Integrative and Comparative Biology, 4 papers in Physiological and Biochemical Zoology, and 5 papers in Comparative Biochemistry and Physiology. I am currently serving on the Editorial Board of Physiological and Biochemical Zoology.

**Other Memberships**: American Physiological Society, American Society of Ichthyologists and Herpetologists.

Research Interests: While I consider myself foremost a naturalist, I have become enthralled with the study of digestive physiology. This interest has developed into two main research programs. The first investigates the adaptive interplay between feeding habits and digestive physiology. By taking a comparative approach and working with all forms of amphibians and reptiles, my aim is to evaluate the adaptive match between feeding frequencies and the magnitude by which the digestive system regulates performance between fasting and digesting. The second explores the underlying mechanisms involved in the regulation of physiological performance associated with digestion. For this, I developed the Burmese python as a model to study the magnitude by which gastrointestinal and cardiovascular performance can be regulated, and to identify the signaling and cellular mechanisms responsible for altering tissue form and function with fasting and feeding.

Goals Statement: I would be honored to serve as Secretary for the DCPB of SICB. I have been attending ASZ/SICB meetings since I was a graduate student and each year I am overly impressed with the quality of science presented and the attention the society places on student participation and training. I would be extremely pleased to be able to serve the division in this position and continue the effort to improve the communication of SICB and DCPB activities to its members.

The George A. Bartholomew Award was established in 1992 by the SICB Division of Comparative Physiology and Biochemistry to commemorate the research contributions and mentoring work of Professor Bartholomew (1919-2006) by recognizing an outstanding young investigator whose research follows in the path that Professor Bartholomew blazed. Professor Bartholomew left two outstanding legacies during his long and storied academic career. First, Professor Bartholomew was inspiring as a teacher and mentor at the undergraduate, graduate and postdoctoral levels, and as a result the academic lineages of nearly 1200 individuals spanning 6 academic generations (and counting) can be traced back to him. Second, his body of scientific work was unusually integrative in nature, combining laboratory and field approaches to address questions at the interface of physiology, behaviour and ecology. He also pioneered a philosophical approach that has profoundly influenced how environmental physiologists view the organism as the unit of selection (not an isolated trait), how organisms should be considered adequately, but not perfectly adapted, and how studies of physiology and behavior should be placed an environmental context. The Bartholomew Award recognizes and continues this tradition of Professor Bartholomew's contributions. In assessing candidates for the Bartholomew Award, the selection committee has striven to identify outstanding young scientists with a similarly integrative approach. To continue this tradition, the selection committee will be accepting applications for the 2008 Bartholomew Award until Friday, August 24th, 2007 - if you know of an exceptional young scientist, please send in a nomination!

# 2007 Bartholomew Award Winner: Dr. Douglas Altshuler:



Dr. Doug Altshuler, the 2007 Bartholomew Awardee, has integrated environmental physiology and behavior beautifully, in the tradition of Dr. Bartholomew. As his presentation on *The Aerodynamic and Neurophysiological Mechanisms of Animal Flight through the Lens of Evolution* at the Phoenix meeting so amply illustrated, Dr. Altshuler employs both laboratory and field studies, and techniques ranging from kinematics and neurobiology to molecular phylogeny, to address questions about the foraging behaviour, flight energetics, eco-physiology and phylogeny of hummingbirds.

Doug Altshuler began his academic career at University of California, Santa Cruz where he studied the history of religion with a special focus on the Indian subcontinent. He spent his junior year abroad at the University of Delhi learning about Vedanta philosophy, Sufi poetry, and early Buddhism.

Upon returning to California, Doug took the first opportunity to again study abroad, which turned out to be a field course on tropical biology and Mayan anthropology in Guatemala and Belize. Although the Mayan component was his original motivation for taking this course, Doug soon realized that although biology poses simpler questions than

religion, it also provides more tractable answers. Continuing his quest for fieldwork and travel, Doug added biology into the mix and completed master's research on the interactions between plants and animals on Barro Colorado Island (BCI) in the Panama Canal. This work was supervised by Rick Howard at Purdue University, where Doug was awarded a M.Sc. in biology in 1996. While on BCI, Doug met Robert Dudley who became

his Ph.D. supervisor at the University of Texas. His doctoral research concerned how hummingbird flight performance changes across elevations and related effects on foraging behavior. This project involved laboratory studies in Austin as well as fieldwork in the Peruvian Andes and the Colorado Rockies. Upon graduation in 2001, Doug joined Michael Dickinson's group for his postdoc, where he settled down into the lab and worked on the aerodynamics and neuromuscular control of flight in hummingbirds, zebra finches, and honeybees. In 2006, Doug started a faculty position at University of California, Riverside, joining an energetic group of comparative and evolutionary physiologists.

Doug's current research is focused on integrative biology of animal flight, including mechanics and neural control, evolutionary diversification, and how flight performance influences ecological interactions. He examines these topics using experimental and comparative approaches in both the laboratory and the field. For more about Doug, see his website: <a href="http://www.biology.ucr.edu/people/faculty/Altshuler.html">http://www.biology.ucr.edu/people/faculty/Altshuler.html</a>

## Nominations for the 2008 Bartholomew Award:

The Division of Comparative Physiology and Biochemistry solicits applications and nominations for the 2008 George A. Bartholomew Award-an annual prize given to a young investigator for distinguished contributions to comparative physiology and biochemistry or to related fields of functional and integrative biology. Eligible

candidates are those who have completed their doctorate within the past seven (7) years. Additional information about the award is a available on the SICB website (http://www.sicb.org/grants/bartholomew.php3). Candidates may apply directly or be nominated: both types

of candidates will be evaluated equivalently. Applicants should submit a short description of their work, three (3) reprints, and a curriculum vita and also request three letters of recommendation. Nominators must arrange for these same materials (except that only two additional letters of recommendation are required) to be submitted to the Committee. All materials should be submitted electronically in .pdf format to the Chair of the Selection Committee, Dr. Katie Gilmour, Department of Biology, University of Ottowa (email address: <a href="mailto:katie.gilmour@science.uottawa.ca">katie.gilmour@science.uottawa.ca</a>). Deadline for receipt of all materials is Friday, August 24, 2007. The winner will present a Plenary Lecture at the 2008 Annual Meeting in San Antonio.

# Division of Evolutionary Developmental Biology (DEDB) and Division of Developmental and Cell Biology (DDCB): 2007 Spring Newsletter

#### In this newsletter:

- Message from the Chair
- Message from the Program Officer
- Message from the Secretary & Secretary-Elect
- Message from the Student/Postdoc Representative
- Candidate for DDCB Elections
- Candidates for DEDB Elections



Photos in this newsletter courtesy of Bruno Vellutini

## Message from the Chair

Billie J. Swalla

## Happy Spring, everyone!

Spring is a time of longer days (even earlier this year, as daylight savings time is extended), and rebirth, eggs, embryos and larvae. We hope you like the accompanying pictures, taken during the Comparative Embryology Course at FHL in the summer of 2006. We had a terrific class of students, which makes it clear that Evo-Devo research will continue to flourish and break new ground. We'll be teaching Evo-Devo again at FHL in the summer of 2008. The Division of Evolutionary Developmental Biology is doing well, thanks to our membership, who regularly attend the meetings and put together cutting edge symposia. The Phoenix meetings were busy for our division and frequently it was hard to choose which presentation to attend. This is

Division of Evolutionary Developmental Biology (DEDB) and Division of Developmental and Cell Bedlogy (DI

due to an excellent program put together once again, and for the last year, by Dr. Eduardo Rosa-Molinar. I would like to thank Ed, from all of us, for his tireless energy and enthusiasm that have greatly benefitted DEDB.

One of the consequences of the vitality of DEDB was the subsequent struggle to find officers for the Division of Developmental and Cell Biology. We hope to keep both of these divisions strong in SICB. Therefore, I am pleased to announce that Dr. Karen Crawford, who studies squid development, has agreed to run for Chair of DDCB. Some of you may have seen Karen's cool movies at one of her posters in Phoenix. I am looking forward to working with Karen to revitalize DDCB with a full slate of officers and separate symposia. Dr. Eduardo Rosa-Molinar is currently serving as Editorial Board Representative for DDCB, making sure that our voices are heard. Dr. Paulyn Cartwright, who gave a great talk on Cnidarian phylogeny and evolution in Arizona, has agreed to be the DEDB Editorial Board Representative. Many thanks, Paulyn!

This spring we have several elections, so please take the extra time to vote! We will elect a new Chair and Secretary for the DEDB. Thanks to all of the candidates for running and to Dr. Marcus Davis, Dr. Ann Burke and Dr. David Stock for serving on the nominating committee. The best part of my position is having so many talented people involved in DEDB and DDCB.

Now is a good time to think about putting together a symposium for the Boston meetings in 2009. I hope to see you all in San Antonio in 2008, it is a great venue and, as always, I can promise excellent science.

Have a great summer!



Message from the Program Officer

Wendy M. Olson

Greetings from the land of ice and snow!

OK, so Iowa isn't exactly the Island of Enchantment, but Ed Rosa-Molinar has finally stepped down after a highly successful 6-year run as Program Officer. Many thanks to Ed for all of his dedication and hard work. No one is sadder to see him go than I.

The Phoenix meeting was by all accounts a success. DEDB/DDCB supported three symposia: "Linking Genes and Morphology" (F. Galis & D. Carrier), "Key Transitions in Animal Evolution" (B. Schierwater, S. Dellaporta & R. DeSalle), and "Evolutionary and Functional Genomics of Sperm, Sperm Storage and Fertilization" (T. Karr & S. Pitnick). Many thanks to the organizers and presenters! Two students were awarded \$100 for their presentations. Best talk went to Karin Leiderman (DDCB), "Endothelial Mechanotransduction: Let's Sugarcoat it!"; best poster went to Robert Gueth (DDCB) "Functional Conservation of Electric Fish Myogenic Regulatory Factors." Congratulations, Karin and Robert! And a big 'thank you' to all the judges.

One of the issues that continues to come up is the Keywords list for abstracts. Everyone seems to be fond of personalizing their own keywords as much as possible, so that the list has expanded considerably and is no longer the effective tool that it should be. We are working on this, and I will undoubtedly solicit your feedback. Another thing to think about is the idea manipulating our keyword choices to group talks into "minisymposia". Yes, this seems to contradict my first complaint. But if a group of you comes up with a really hot topic, and it is too late to organize an official symposium, you can effectively group your presentations by selecting the same (possibly unique) keyword. Something to think about as we look ahead to San Antonio.

DEDB/DDCB is currently supporting two symposia for the San Antonio 2008 meeting: "Reptile Genomics and Evolutionary Genetics" (Dan Janes & Chris Organ) and "Vertebrate Head Segmentation in a modern Evo-Devo Context" (Shigeru Kuratani & Thomas Schilling). They have wonderful speakers lined up and are in the process of looking for funding, so we should all wish them success. It is also time to start thinking about Boston 2009! The deadline for symposium proposals is August 17, 2007. Our division is as strong or as weak as we choose to make it, so keep those proposals coming! Please feel free to contact me (wendy.olson@uni.edu) with proposals or ideas at any stage of gestation - I am happy to help you flesh them out. If I do not hear from anyone, I will interpret the silence as permission to push my own agenda. And just to warn you all, I am a raving structuralist. But seriously, always look ahead, think about where you want our division to go, and send me your ideas. Now.

Thanks again, Ed! You're a hard act to follow.



## **Message from the Secretary**

Marcus C. Davis

Fellow devo-friends,

For many of us, the Phoenix meeting was a welcome escape from winter torpor. There were so many fantastic talks to attend, thanks to the three DEDB/DDCB supported symposia, and so little time. I was equally impressed by the quality of the work presented in the poster sessions. Indeed, many of the most impressive posters were from undergraduates, a very promising trend for the future of Evo-Devo!

I would like to extend my sincerest thanks to outgoing Secretary Frietson Galis for making my transition relatively stress free. Thank you for all of your efforts, Frietson! I'd also like to thank outgoing Program Officer Ed Rosa-Molinar for his years of guidance and welcome our new Program Officer Wendy Olson!

I'd wish to encourage members to contribute to our researchers database. If you haven't already done so, or would simply like to update your current page, send your information to me at <a href="marcusd@uchicago.edu">marcusd@uchicago.edu</a> and I'll forward them onwards to our genius webmaster Ruediger Birenheide. Please send images in .jpg format and remember that you can also provide html links to your personal and departmental research pages.

Here are the abbreviated minutes of our business meeting during the conference:

Business meeting DEDB, Thursday, 6 January 2006

Opening of the meeting by our Chair, Billie Swalla.

Discussion on the future of the DDCB and proposal to recruit new DDCB officers.

Proposal to form Nominating Committee to elect new Chair and Secretary.

Site of future meeting announced (09 Boston).

Outgoing Secretary Frietson Galis says good-bye and hands over to new Secretary Marcus Davis.

Report from the Secretary, Marcus Davis (see this thing you're currently reading).

Report from the out-going Program Officer, Eduardo Rosa-Molinar and hand over to new Program Officer Wendy Olsen (see her report in this newsletter).

Visit from Society-wide Officers: Outgoing President, Sarah Woodin; Incoming President John Pearse; Treasurer, Ronald Dimock; and Program Officer, Linda Walters.

Report of the Student/Post-doc Representative, Nathan Bird (see his report in this newsletter).

NSF Representative Judy Venuti reports on changes in the structure of the IOB Division. See NSF website for details.

Call for further business

Adjournment, DEDB social!

I would like to close by thanking the other members of the Nomination Committee, Dr. Ann Burke and Dr. David Stock for their efforts and insights. I'd also like to thank our Chair, Dr. Billie Swalla for being such a pleasure to work with - although I think she now owes me a beer.

## Message from the Student/Postdoc Representative

Nathan Bird

Greetings fellow DEDB graduate students and post-docs!

I hope everyone had a great time at the Phoenix meeting. With no news to report from the SPDAC, I will keep my message brief. I was very pleased with the turnout at the workshop, it was very informative and I, for one, learned quite a bit. Hopefully you all benefited as well. There will be elections for multiple DEDB officer positions this Fall, so be sure to watch for an announcement and vote. That's about all for now - have a great year everyone!

Best wishes from balmy DC,

Nathan Bird



Division of Developmental and Cell Biology Election

## **Candidate for DDCB Chair**

#### **Karen Crawford**

Current position: Professor of Biology, St. Mary's College of Maryland, St. Mary's City, MD.

**Education**: B.S. (Zoology), 1980, University of Massachusetts, Amherst, MA; M.S., 1985 and Ph.D., (Anatomy) 1987, University of Illinois, Urbana-Champaign, IL.

**Professional experience**: Postdoctoral fellow, La Jolla Cancer Research Foundation, La Jolla, CA (1998-2001); member and then chair Professional Development and Education Committee, Society for Developmental Biology (1993-2003); Junior Member at Large, Board of Trustees, Society for Developmental Biology (1995-1998); Principle Investigator (1999-present), Corporation member (2002-present) and member and current chair Housing, Food and Childcare Committee (2004-present) Marine Biological Laboratory, Woods Hole, MA; and Scientific Advisory Board - Indiana University Center for Regenerative Medicine (2006-present).

**Other memberships**: Society for Developmental Biology; American Association of Anatomists; Sigma Xi; American Association of the Advancement of Science; and American Associate of University Women.

**Research interests**: Molecular mechanisms that govern pattern formation in regenerating amphibian limbs (*Ambystoma mexicanum*), regenerating worms (*Lumbriculus variegates*) and developing cephalopod embryos (*Loligo pealii*).

Goals statement: I gave my first scientific paper on limb regeneration at the American Society for Zoologists (ASZ) meeting in 1984. It was an important milestone in my graduate career. More recently, I have returned to the annual SICB meeting and found it to be both welcoming to students and faculty of all levels and institutional affiliation, as well as refreshingly diverse in its breadth of biological organisms, topics and levels of scientific approach. It continues to be a melting pot for fundamental biological discovery. I welcome the opportunity to serve this Society through the division of Cell and Developmental Biology and look forward to both continuing its traditions and with the help of our membership developing new ones. I see this division as an important place where cell and developmental biologists from all levels of their academic training can make fundamental connections between their systems and discoveries.

## **DEDB Candidates for Elections**

## **Candidates for DEDB Chair**

Linda Z. Holland

**Current position**: Research Biologist. Scripps Institution of Oceanography, University of California San Diego

Education: B.A., M.A., Stanford University; Ph.D., University of California San Diego.

**Professional experience**: Editorial Board, *Evolution and Development*; coordinator for the amphioxus genome project

**Memberships**: Society for Integrative and Comparative Biology (SICB); Society for Developmental Biology (SDB)

**Research interests**: Genes, development and genomics of the basal cephalochordate, amphioxus, as a proxy for the ancestral vertebrate. Amphioxus, which is vertebrate-like, but much simpler both genomically and structurally is revealing the fundamental basis on which were built the many variations of vertebrate embryos.

Goals statement: I joined the American Society of Zoologists (ASZ) in 1992, the year we published the first genes and development paper on amphioxus, because I wished to get the message out that evo-devo in general and amphioxus in particular were up-and-coming and interesting and because the ASZ was the major forum for "real biologists" in the U.S.A. I have been very pleased to see that the Division of Evolutionary Developmental Biology has formed and prospered within the ASZ-now the SICB- as a group of like-minded colleagues who are more interested in the evolutionary aspects of the animals they study than their acceptability and fundability as "model developmental systems." I have been impressed by the high quality of the SICB symposia in which I have participated including Molecular approaches to Zoology and evolution in 1995, The evolution of development: Patterns and process in 1998, Developmental and evolutionary perspectives on major transformations in body organization in 1999 and Linking Genes and Morphology in Vertebrates in 2007. My program as DEDB chair would include: 1) encouraging more such high-quality symposia; 2) encouraging the careers of advanced undergraduates, graduate students and postdoctoral fellows in devo-evo (my own graduate students and postdocs have shown that it is possible to get a good job in devo-evo); 3) encouraging joint symposia and paper sessions with other SICB divisions -in particular the DVM and DSEB; 4) attracting new membership and exploring possibilities for joint workshops with the Society for Developmental Biology (SDB).

## David W. Stock

**Current Position**: Associate Professor, Department of Ecology & Evolutionary Biology, University of Colorado, Boulder, Colorado.

**Education:** Ph.D. in Biology 1992, University of Illinois at Urbana-Champaign; B.Sc. in Marine Biology 1985, Texas A&M University.

**Professional Experience:** 1999-2006: Assistant Professor, Department of Ecology & Evolutionary Biology, University of Colorado; 1994-1999: Postdoctoral Research Associate, Department of Anthropology, Pennsylvania State University; 1992-1994: Postdoctoral Scholar, Hopkins Marine Station, Department of Biological Sciences, Stanford University; 2006-present: Member of the Editorial Board, *Journal of Experimental Zoology B: Molecular and Developmental Evolution*.

**SICB Activities:** SICB (and DEDB) member since 2004.

Other Memberships: Society for Developmental Biology.

**Research Interests:** I am interested in the extent to which features of the genetic control of development bias the paths of morphological evolution. My main study system is the dentition of vertebrates, with an emphasis on teleost fishes. Evolutionary topics under investigation include structural reduction, meristic variation, diversification of serially homologous parts, and irreversibility of evolution. Experimental approaches to these problems include analysis of gene expression, gene knockdown, transgenic misexpression, and reporter gene analysis of enhancer function.

Statement of Goals: While I only recently joined SICB, I have found it to be the most welcoming and supportive of Evolutionary Developmental Biology among the societies whose meetings I have attended. My most enjoyable experience through SICB to date has been participating in a symposium which brought together model organism-focused biologists (broadly interested in the unity of life) and comparative biologists (broadly interested in the diversity of life). I believe such interactions are crucial to the health of Evolutionary Developmental Biology, and would like to continue efforts to encourage those working on biomedical model systems to participate in DEDB and SICB. Similarly, I would like to encourage participation of plant biologists in DEDB. My own interactions with departmental colleagues working in plant Evo-Devo suggest that such participation is possible and likely to benefit all involved.

## Candidates for DEDB Secretary

## **Eric Haag**

Current position: Assistant Professor of Biology, University of Maryland, College Park, MD USA

Education: B.A., 1990, Oberlin College; Ph.D, 1997, Indiana University, Bloomington.

**Professional experience:** Jane Coffin Childs postdoctoral fellow, University of Wisconsin, Madison, 1997-2001; delivered invited seminars at 28 academic or conference venues since 2000; reviewed manuscripts

for 14 different journals, including the SICB-sponsored *Evolution & Development*, since 2000; guest editor, *Seminars in Cell & Developmental Biology*, 2007; ad hoc grant reviewer for 6 different agencies in North America, Europe, and Asia since 2002; published 14 peer-reviewed papers in integrative and comparative biology since 2000.

**SICB Activities:** None so far (other than reading and contributing to *Evolution & Development*).

**Other memberships:** Society for Developmental Biology, Society for the Study of Evolution, and the Genetics Society of America.

**Research interests:** I'm generally interested in the proximate developmental and genetic mechanisms that underlie the adaptive evolution of novel reproductive strategies. My graduate work was on direct development in Australian sea urchins, and my postdoctoral work (which I continue today in my own lab) is on the evolution of self-fertile hermaphroditism in *Caenorhabditis* nematodes. This latter project focuses on sex determination and how it is modified in the germ line to allow selfing to occur. More recently, I have begun studying the genome-level consequences of adopting self-fertility and the molecular evolution of interacting developmental genes in the sex determination pathway.

Goals statement: I am a newcomer to SICB, yet have been an "integrative and comparative biologist" for almost 20 years, and know many SICB members and leaders well. I primarily regard this office a good opportunity to get involved in a great organization I should have joined long ago. However, if I elected Secretary of the Division of Evolutionary Developmental Biology, I will certainly carry out the duties of Secretary with great vigor.

#### **Andrea Ward**

Current Position: Assistant Professor, Department of Biology, Adelphi University, Garden City, NY

Education: Ph.D., University of Massachusetts Amherst, 2005

**Professional Experience:** Postdoctoral research at the University of Chicago with Victoria Prince, 2005-2006

**SICB Activities:** SICB member since 1998.

**Other Memberships:** American Society of Ichthyologists and Herpetologists, International Society for Vertebrate Morphology, Sigma Xi, Society for Developmental Biology.

## **Research Interests:**

My general research interest is in the evolution of body shape. Specifically, I am interested in how body shape evolves through genetic and developmental changes, and the effect of body shape changes on locomotion and predator avoidance. My recent research has focused on the evolution of elongation in vertebrates. In this work, I documented the morphological changes associated with the vertebral column in elongate fishes and have proposed several hypotheses concerning the developmental control of these traits. In addition, I have investigated the effects of elongation on other aspects of morphology including the gastrointestinal tract.

#### **Statement of Goals:**

As secretary of DEDB, I will continue the work of our previous secretaries in improving communication among the members as well as making our divisional website an integral information source for news concerning the field of evolutionary developmental biology. In addition, I will continue the current initiative to have research summaries of members put on the website so that we can highlight the amazing diversity of research conducted by our members.

## **Elaine Seaver**

Current Position: Assistant Professor, Kewalo Marine Laboratory, University of Hawaii

**Education:** Ph.D., University of Utah, 1995

**Professional Experience:** Assistant Professor, Kewalo Marine Laboratory, University of Hawaii, 2002-present; Junior Researcher, Kewalo Marine Laboratory, University of Hawaii, August 2001- April 2002; Postdoctoral Research Fellow, Kewalo Marine Laboratory, University of Hawaii, 1999-2001; Postdoctoral Research Fellow, Department of Zoology, University of Texas at Austin, 1997-1999

**SICB Activities:** SICB member since 1999. Co-chair, Contributed papers for Evolution and Development: plants and invertebrates. SICB Annual Meeting, 2001

Other Memberships: Hawaii Academy of Science, Society for Developmental Biology

American Association of University Women

Research Interests: My interests generally include body plan evolution, and we primarily approach this issue from a developmental perspective. We have focused on a number of developmental questions in the lophotrochozoans, specifically working with polychaete annelids. We have taken a comparative approach, although more recently have focused our efforts on *Capitella* sp. I, a representative lophotrochozoan. *Capitella* is a small, segmented marine polychaete annelid and has a number of interesting features that make it particularly amenable for developmental studies. *Capitella* sp. I is among the first lophotrochozoan genomes to be completely sequenced. The features of *Capitella* and of many polychaetes allow many fundamental questions to be asked, such as whether the mechanisms of adult body segment formation is the same during embryogenesis, adulthood and regeneration, and whether these processes are homologous throughout the Metazoa. The molecular control of segmentation in annelids is poorly understood relative to what is known for other segmented groups, and thus we have identified orthologues of the *Drosophila* segmentation gene cascade and the vertebrate somitogenesis pathway in *Capitella* sp. I. We have also initiated projects with *Capitella* sp. I on neurogenesis, examination of dual ontological origins of mesoderm, and gut development with the idea that a fundamental understanding of developmental processes can benefit from comparative studies in phylogenetically diverse animals.

**Statement of Goals:** DEDB represents a vibrant, active division and includes researchers from a range of disciplines. The DEDB division at SICB represents the most important national arena for interactions among people in the field of evolution and development. As the field of evolution and development continues to mature, it is important that we move forward as a cohesive group, and maintain a national presence. Having attended and participated in the SICB meetings since before the DEDB division was founded, I would now like to increase my involvement in this important division, and hope that as secretary, I can increase and facilitate communication among members of the division.

## Division of Ecology & Evolution (DEE): 2007 Spring Newsletter

## In this newsletter:

- Message from the Officers
- Meeting Minutes
- Candidates for Elections

# Message from the Chair George Bakken, Program Officer Jennifer Elwood, and Secretary Anthony Steyermark

Greetings from the DEE officers. Phoenix was a great meeting, and we would like to thank everyone who helped to make it so. DEE co-sponsored three symposia and by all accounts these were very successful.

We are looking forward to an exciting meeting in San Antonio next January, where DEE is co-sponsoring 4 symposia:

- 1. Going with the flow: Ecomorphological variation across flow regimes.
- 2. Evolution vs. Creationism in the classroom: Evolving student attitudes.
- 3. Aeroecology: Probing and modeling the aerosphere: the new frontier.
- 4. Consequences of maternally-derived yolk hormones for offspring: Current status, challenges, and opportunities.

At this time we would like to remind the division that proposals for symposia for the 2009 meeting in Boston are due by AUGUST 17, 2007. SICB has revised the procedure for developing symposia, mainly to insure the involvement of the Divisions and to make the process easier and more straight-forward. If you have any questions contact Jenny Elwood (DEE Program Officer at <a href="mailto:jelwood@aacc.edu">jelwood@aacc.edu</a>), Linda Walters (SICB Program Officer at <a href="jelwood@aacc.edu">jelwood@aacc.edu</a>), Linda Walters (SICB Program Officer at <a href="mailto:jelwood@aacc.edu">jelwood@aacc.edu</a>), Linda Walters (SICB Program Officer at <a href="mailto:jelwood@aacc.edu">jelwood@aacc.ed

The DEE webpage is still featuring the research of its division members. Please check out the site at <a href="http://www.sicb.org/divisions/dee.php3">http://www.sicb.org/divisions/dee.php3</a>. If you would like to contribute material to the site please submit text files as either Word or text documents, images as either tif, jpg, png, or gif, and movies as avi or mpeg to Tony Steyermark (<a href="mailto:acsteyermark@stthomas.edu">acsteyermark@stthomas.edu</a>) or George Bakken (<a href="mailto:gbakken@indstate.edu">gbakken@indstate.edu</a>). At the business meeting in Phoenix, we thought that short essays on "what SICB means or has done for me" might be a useful feature for the web site.

We would like to thank all of the DEE members who graciously volunteered their time at the meeting to serve as judges for the best student paper competitions. Judging student papers is a great way to support DEE. If you didn't volunteer this year - please consider volunteering your time in San Antonio. We will be forwarding a more formal request for judges in the fall.

This year we had 36 students compete for the DEE best paper presentation award and 22 students competed for the best poster presentation award. Unfortunately, the DEE Secretary Tony Steyermark fell seriously ill after the meeting. It was his job to tally the input and comments of the judges and determine the winners of the competition. Thus, we won't have access to the results until he is back on his feet. We offer Tony our best wishes for a speedy and complete recovery. Meanwhile, we offer our apologies and sincere regrets to all of

you who participated as contestants and judges, for the best we can do now will be to report the winners in the Fall newsletter.

After we get this problem sorted out, we think that it would be good to establish a policy of featuring the winning poster(s) at the following meeting(s). This would serve to give the winner more visibility and also provide a guide to other students on how to prepare a quality poster. We also considered mounting winning posters on the society web site as a guide to students preparing their first poster, but this should be done only after the study has been published to avoid triggering the "prior publication" rules many journals have that might limit their ability to publish the study. However, past winners might have published their winning study and could now volunteer their poster for posting on the web. We would appreciate your input on this idea. Our email addresses are at the end of the newsletter.

Attendance at the Phoenix DEE business meeting was low compared to the number of DEE members. We would appreciate your input on how we might make the division more relevant to your interests and/or make it easier for you to attend the business meeting. Our email addresses are at the end of the newsletter.

We currently have two business items to deal with before the next meeting.

First, our bylaws need to be revised to bring them into line with the Society generally. We will provide you with the revised bylaws by email or in the Fall newsletter for your approval.

The division will be electing a new chair-elect and a new secretary. The candidates for both offices are included below. Please be sure to vote!

DEE officer contact information:

Chair: George Bakken, gbakken@indstate.edu

Secretary: Tony Steyermark, <a href="mailto:acsteyermark@stthomas.edu">acsteyermark@stthomas.edu</a>

Program Officer: Jennifer Elwood, <a href="mailto:jelwood@aacc.edu">jelwood@aacc.edu</a>

## **Division of Ecology and Evolution Business Meeting Minutes**

The meeting was called to order (15-20 attendees)

The officers were introduced: Fred Janzen (Chair), George Bakken (Chair-Elect), Jennifer Elwood (Program Officer), and Tony Stevermark (Secretary).

The minutes from last year were approved

To get back on track we will need to choose a new DEE chair-elect and DEE secretary starting in 2008, and to get back on track for rotating officers, choose the next president-elect starting in 2009.

To make the nominations process more open and orderly, DEE needs to establish a nominating committee that will be responsible for sending a blanket email inviting nominations and arranging for the candidate's vita and statements needed for the election process. At the moment, this committeee consists of the DEE officers, and we would appreciate suggestions on how to establish a more inclusive nominations committeee.

The division by-laws need to be amended to bring them in line with the rest of the society. The officers will work out the revisions and submit them to the members of DEE.

The program officer reported that dee co-sponsored or sponsored 3 symposia at the Phoenix meeting. These were: 1) Integrative biology of pelagic invertebrates, 2) Ecological dimorphisms in vertebrates: Proximate and ultimate causes, 3) Ecology and evolution of disease dynamics. She also reported that DEE had received requests for funding from 6 symposia for the 2008 San Antonio meeting. Which symposia would receive funding would be determined sometime in the spring once the budget is approved by SICB.

The secretary reported a very successful turnout (58 entries) for the student paper/poster competitions.

We discussed ways to increase the visibility and honor associated with the awards, and use it as an eductional tool for students preparing a poster for the first time. Many suggestions such as publishing the abstract or mounting the poster on the web site may create future problems for the winner in publishing their results, and were rejected. It did seem possible for us to have the winner of the "Best Poster" award save their poster so that it could be featured at the end of the meeting and at the next meeting. Possible locations might be the hall outside the poster room or a prominent position in the poster sessions. The winning poster would then become a teaching aid that would help others improve their poster presentations. Other suggestions would be welcome.

We also discussed why attendance at the business meeting was low, given that DEE is the largest single division in the society. Our best guess was that, given the nature of the society, DEE was everyone's second choice because they pursued a specialty within ecology and evolution, and had greater affinity for their specialty than the overall ecological and evolutionary context. We wondered if the meeting could be scheduled so that it was opposite fewer specialty division meetings, or against divisions with less overlapping membership.

Your insights and suggestions about both business meetings and how we could make the division more relevant to your interests would be particularly helpful to your officers.

# **Elections: Candidates for Secretary and Chair-Elect**

The division will be electing a new chair-elect and a new secretary. The candidates for both offices are included below. Please be sure to vote!

# **Candidates for Chair Elect**

George Bakken, DEE Chair

# Michele K. Nishiguchi

Current Position: 1999- present, Associate Professor, Biology, New Mexico State University

**Education:** B.S. (Biochemistry, minor in Theatre Arts), University of California, Davis, 1985; M.S. (Marine Biology), Scripps Institution of Oceanography, University of California, San Diego, 1989; Ph.D. (Biology),

University of California, Santa Cruz, 1994.

**Professional Experience:** 2005- present, Associate Professor, Biology, New Mexico State University; 1999-2005, Assistant Professor, Biology, New Mexico State University; 1997-1998, Postdoctoral Research Scientist with Dr. Charles Marshall, Department of Earth and Space Sciences, University of California, Los Angeles; 1994-1997, National Science Foundation Postdoctoral Fellow with Drs. Margaret McFall-Ngai and Edward Ruby, University of Hawaii and University of Southern California; 1994, Teaching staff, National Science Foundation course in "Adaptations to Extreme Environments", US McMurdo Station, Antarctica; 1989-1993, Teaching assistant, University of California, Santa Cruz, Department of Biology (10 quarters)

**SICB Activities:** Member since 1987

**Other Memberships:** American Malacological Union, American Society of Microbiology, Sigma Xi, Society for the Study of Evolution

**Research Interests:** Understanding the evolution of animal and bacterial associations has been an underlying theme in establishing the development and specificity of symbiotic relationships. There is a need to develop better systems to resolve interactions among symbiotic species where population dynamics and environmental processes clearly play an important role in the evolution of the association. These model systems should promote integrated approaches that take into account the response within as well as between various symbiotic populations and their host partners. My laboratory studies the mutualistic association between sepiolid squids (Mollusca: Cephalopoda) and their *Vibrio* symbionts, which provides a versatile and experimentally tractable model system to study the population dynamics and cospeciation between bacterial species and their diversity among host squids.

Since the symbiotic bacteria are environmentally transmitted to new hosts with every generation, this system is ideal for the study of specificity amongst the wide variety of bacteria that reside in the water column. Moreover, it provides a system to resolve whether the ecology of the free-living symbiont is as important as the ecology of the mutualism in the architecture of bacterial-host interactions. My laboratory examines the mechanisms that drive host-symbiont recognition, and assesses whether environmental factors or inherent genetic characters affect speciation and diversity among *Vibrio* bacteria. Researchers in my laboratory focus on aspects of molecular signaling, population genetics of *Vibrio* bacteria, molecular specificity of host recognition, competitive exclusion of non-native bacteria, genetic regulation between environmental and light organ environments, phylogeny of the Cephalopoda and the Vibrionaceae, as well as modeling how specific symbiotic niches become selected.

Goals Statement: My goals as chair-elect for the Division of Ecology and Evolution (DEE) within SICB would be to start integrating more "between discipline" symposia, as well as the recruitment of underrepresented minorities into the fields of integrative and comparative biology. Since SICB changed its name from ASZ some time ago, I have felt the need to actually start "integrating" many of the disciplines that are represented (but usually in separate forums) at our annual meetings. In this manner, we can then combine research foci from groups that may not regularly have the chance to meet or exchange ideas and form new collaborations. I would also like to recruit scientists from non-traditional areas (plant biology, microbiology) for membership and their participation in SICB, by emphasizing the "I" in SICB and promoting the integration of those disciplines into our annual meetings.

Being at New Mexico State University, where our undergraduate student body is represented by > 50% ethnically diverse groups, I have been heavily involved in recruitment of underrepresented students in science, and have felt the need to increase their involvement at our meetings. I have begun to do so with my involvement in the Society for the Study of Evolution, but would also like to bring in funding opportunities, as well as special symposia that would focus on the research from these students. We could do so in such a

manner by initially incorporating special symposia during our annual meetings, and eventually have this as a regular event within the society.

# Scott R. Santos

**Current Position:** Assistant Professor, Department of Biological Sciences and Cell and Molecular Biosciences Peak Program, Auburn University

**Education:** B.Sc., Zoology (With Distinction), University of Hawaii at Manoa, 1996; Ph.D., Biological Sciences, State University of New York at Buffalo, 2002.

**Professional Experience:** Assistant Professor, Department of Biological Sciences, Auburn University, 2004-present; Postdoctoral Fellow, Department of Biochemistry and Molecular Biophysics, University of Arizona, 2002-2004.

**SICB Activities:** DEE Judge Best Student Paper (BSP) Program, 2007; Member and Presenter at SICB meetings 2003, 2006-present.

Other Memberships and Activities: Phycological Society of America, Society of Systematic Biologists

**Honors and Awards:** National Science Foundation (NSF)/Monbusho Research Experience Fellowship for Young Foreign Researchers, Okinawa, Japan, 2000; NSF Minority Graduate Fellowship, SUNY at Buffalo, 1996-1999; Mark Diamond Graduate Initiative Award, SUNY at Buffalo, 1998; Howard Hughes Medical Institute (HHMI) Fellowship for Undergraduate Research, University of Hawaii at Manoa, 1993-1996.

**Research Interests:** population genetics, symbiosis biology, genomic evolution, and resource conservation in both aquatic microbes and multi-cellular organisms.

Goals Statement: I am honored to run for Chair-elect of the SICB Division of Ecology and Evolution (DEE). As Chair-elect, I would actively work with DEE members to identify the strengths and weaknesses we have as a Division. By recognizing both, and overcoming the latter, we will be better able to promote DEE to current and potential members as a way of retaining and increasing participation while reinforcing the interdisciplinary nature of SICB. Additionally, the mission of DEE is: "... to advance, coordinate, and assist research and publication of knowledge regarding the ecological and evolutionary relations of organisms, and to act as a liaison agency between investigators in the several scientific disciplines involved." Given this mission, I feel the Division should further develop effective means of coordinating and disseminating information to DEE/SICB members as well as the general public. Currently, the most cost- and time-efficient manner in which this could be done is electronically. By expanding on its content, I envision the SICB web site becoming a dynamic hub for the sharing of scientific data among the DEE/SICB community while contributing to science outreach and education in the public sector. Lastly, graduate students and postdoctorals researchers are the future of DEE/SICB. Thus, I would continue (and hopefully, be able to expand on) the long history of encouragement and support that DEE/SICB has provided to these young scientists and future leaders of the Society.

# **Candidates for Secretary**

Michael S. Finkler

Current Position: Associate Professor of Biology, Indiana University Kokomo, Kokomo, IN

Education: B.A., Kalamazoo College, 1991; M.S., Ph.D., Miami University, 1995, 1998

**Professional Experience:** Report Writer / Research Technician II, Hazelton Research Products, Inc., Kalamazoo, Michigan, 1991-1992; Adjunct Lecturer, Department of Zoology, Miami University, 1998; Assistant Professor of Biology, Indiana University Kokomo, 1998-2004; Associate Professor of Biology, Indiana University Kokomo 2004-present

**SICB Activities:** Member since 1997; Judge for Best Student Paper Committee, Division of Ecology and Evolution, 2003, 2005, and 2007.

**Other Memberships:** American Society of Ichthyologists and Herpetologists, Society for the Study of Amphibians and Reptiles, Indiana Academy of Science, Indiana College Biology Teachers Association (President 2006).

**Research Interests:** Energetic cost of reproduction in vertebrates; egg composition and abiotic factors influencing embryonic development and neonatal fitness in amniotes; water balance and desiccation tolerance; energetics of locomotion and locomotor performance; overwintering energetics of amphibians (see <a href="http://www.indiana.edu/~nimsmsf/MSF/main.html">http://www.indiana.edu/~nimsmsf/MSF/main.html</a>)

Statement of Goals: I consider SICB to be the most important and most beneficial organization to which I belong. It provides an opportunity to explore topics beyond narrow taxonomic or sub-discipline -based divisions and enables its members to develop a holistic and integrative view of the study of life. It brings together researchers exploring diverse topics and fosters the development of novel approaches and ideas beyond the traditional dogmas within specific areas of study. I see DEE as the key group within the Society in promoting that interdisciplinary and integrative outlook towards biology so that future generations of biologists can see their own specializations in the context of the entire discipline. Therefore, DEE must continue to be a proactive and vibrant element within the Society. I hope to contribute by continuing our recruiting efforts among students and professionals who are not currently members, to encourage the members we have to be more participatory (e.g., attend meetings more regularly, become involved in the "business" of the division and society, etc.), and enhance communication, interaction, and collaboration between members in our division as well as among divisions to promote the sharing of ideas and the development of novel approaches to the study of biology.

# Aaron R. Krochmal

**Current Position:** Assistant Professor of Biology, Department of Natural Sciences, University of Houston - Downtown

**Education:** B.S. in Biology, minor in Classics, June 1996, Union College, Schenectady, NY; M.S. in Biology, June 1998, New York University, New York, NY; Ph.D. in Ecology, December 2003, Indiana State University, Terre Haute, IN

**Professional Experience:** Assistant Professor, University of Houston - Downtown, Houston, TX, 2004 - present; Visiting Assistant Professor, Whitman College, Walla Walla, WA, 2003 - 2004

**SICB Activities:** Member 2000-present; Meeting attendance 2001-2007, inclusive

**Divisional affiliations:** DEE, DCPB, DAB

**Other Memberships:** American Society of Ichthyologists and Herpetologists (1999-present); Society for the Study of Amphibians and Reptiles (1999-present)

**Research Interests:** Functional utility and evolutionary origins of the facial pits of pitvipers; evolution of squamate foraging modes; evolution of colubrid venoms; population ecology of urban herptiles.

**Goals Statement:** By serving as secretary of DEE, I aim to familiarize myself with the administrative procedures of both the division and the society as a whole. I hope to use my experiences as secretary of the DEE to begin active participation in the administrative efforts of the society.

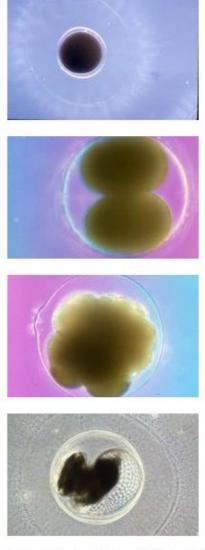
# Division of Invertebrate Zoology (DIZ): 2007 Spring Newsletter

# In this newsletter:

- Message from the Chair
- Message from the Program Officer
- Message from the Secretary
- Message from the Graduate Student-Postdoctoral Affairs Committee Representative
- Message from the Student Awards Committee Chair
- Minutes of the 2007 Annual Business Meeting
- Elections: Candidates for DIZ Program Officer and Changes to DIZ Bylaws

Message from the Chair

Janice Voltzow



Janice fancies the embryo of the gastropod *Calliostoma ligatum* (shown at 2 hours, 3 hours, 7 hours and 3 days).

Dear invertebrate zoologists,

In the spring a young invertebrate's fancy lightly turns to thoughts of ... development!

It was great to see so many of you in Phoenix. The meeting was teeming with presentations on invertebrate zoology, including crackling crustaceans, wriggling worms, and even a few slimy snails. The DIZ-sponsored symposium on Pelagic Invertebrates organized by Alison Sweeney and Sonke Johnson helped us think oceanic thoughts about animals adrift.

This meeting marked the end of the term for our secretary, Bob Thacker. Bob has been a great help to me as I learn the ins and outs of spineless governance. It has been a tremendous pleasure to work with him; I thank him for his dedicated service as DIZ secretary. Bob's duties are now in the capable hands of Renae Brodie. Please be sure to send her any information you would like included in future newsletters or on our divisional

web page.

Ben Miner began chairing our student awards competition in Phoenix. I thank him and all who served as judges. Please see his message to learn who won and join me in congratulating our students on truly outstanding oral presentations and papers.

We will have another election this year, this time for DIZ program officer. Amy Moran will finish her term at our next meeting. A nominating committee of Ben Miner, Dianna Padilla, and Patrick Reynolds have nominated Jim McClintock and John Zardus to fill this position. Please read their statements elsewhere in this newsletter and be certain to vote.

Also appearing on the ballot this spring is a motion to revise the DIZ bylaws regarding the office of Chair-elect to reflect our current practice. A change is proposed to Article V to state: "The Chair-Elect shall be elected triennially. The Chair-Elect should attend the annual meeting that follows her/his election. At the end of this annual meeting, the Chair-Elect shall automatically become Chair for three years. He/She shall serve as Past Chair during the succeeding two years."

As I stated last year, one of my primary goals for DIZ is to nurture our next generation of invertebrate zoologists. To that end, we have decided to host another auction at the San Antonio meeting to benefit the fund for the Libbie H. Hyman Memorial Scholarship. Please start thinking about what you can donate-original invertebrate-themed art, jewelry, or perhaps a memento from your early days before you were famous. The last auction was extremely successful; I hope we can do even more to support students in their embryonic stages of research.

# **Message from the Program Officer**

Amy Moran

Dear SICB members.

Best wishes for the spring!

I would like to congratulate everyone who presented in Phoenix in 2007 for yet another fantastic SICB meeting! DIZ was very well represented in both poster and oral sessions. We were primary sponsor for one symposium, Alison Sweeney and Sönke Johnsen's `"Integrative Biology of Pelagic Invertebrates," which was very well received. Our joint social with The Crustacean Society, DEE, AMS, and DSEB was, as always, a great party. The prevailing opinion was that the layout of the conference venue was unusually convenient due to the proximity of all the meeting rooms, and plans are afoot to make Phoenix a recurring rotating site for the annual meeting. Please send me any comments or concerns that you have about the meeting site or program and I will bring them to the attention of the Program Committee.

At the 2008 meeting in San Antonio, DIZ will be the sponsor or co-sponsor of three symposia including: (1) "Going with the flow: ecomorphological variation across aquatic flow regimes," organized by Gabe Rivera and Rick Blob; DVM is the primary sponsor, and DIZ and DEE are co-sponsors. (2) "Advances in Decapod Crustacean Phylogenetics," organized by Jody Martin and Darryl Felder, sponsored by the Crustacean Society and DIZ; and (3) "Evolution vs. Creationism in the classroom: Evolving Student Attitudes," which is a

society-wide symposium co-sponsored by DIZ. Another highlight of next year's meeting will be the 2<sup>nd</sup> Invertebrate Auction to support the Libbie Hyman Awards Endowment. Many of you will remember this raucous and very fun event from its first iteration in 2004, where it was one of the highlights of the New Orleans meeting.

The 2007 meetings also saw the development of a new mechanism for putting together organized sessions as an alternative to standard symposia. The Executive Committee announced that in 2008 we will have "late breaking symposia" in which the organizers select and solicit talks for a half-day session. The abstracts for talks in late-breaking symposia for 2008 are not due until August 2007, so they can be put together on a short time frame. Please contact Society Program Officer Linda Walters (<u>ljwalters@pegasus.cc.ucf.edu</u>) if you are interested in putting together an organized session for San Antonio.

It's never too early to start thinking about symposia for the 2009 meeting in Boston; the deadline is in August, and I look forward to hearing about ideas for great DIZ symposia. Good luck with your research and have a happy spring!

Amy			

# **Message from the Secretary**

Renae Brodie

It is my pleasure to be your new DIZ secretary. I will do my best to assume the (sea) pen that was so ably wielded by Bob Thacker these past two years. I was happy to see many of you at the Phoenix meeting, in between sessions and the demands of my own 9-month-old larva.

Please be sure to visit the DIZ website often to check out the database of invertebrate zoology researchers: <a href="http://sicb.org/divisions/DIZ/researchers.php3">http://sicb.org/divisions/DIZ/researchers.php3</a>. Better yet, JOIN the DIZ database to highlight your own research and share images of animals, people or data that best represent your work. Submissions can be sent to me at: <a href="mailto:rbrodie@mtholyoke.edu">rbrodie@mtholyoke.edu</a>. Images should be in jpeg, gif or tiff format with a title and paragraph in Word or RTF format.

We are voting for a new program officer and we thank our nominating committee, Diana Padilla, Ben Miner and Pat Reynolds, for recruiting our candidates. Please read the biographies of Jim McClintock and John Zardus below. We are also voting on changes to the bylaws, which are detailed by Janice in her Chair's message.

Finally, don't miss the Invertebrate Reproduction and Development (IRD) meeting in August of this year organized by Rachel Collin and sponsored by the Smithsonian Tropical Research Institute and the Crustacean Society (<u>Click here for PDF flyer</u>). After the IRD meeting, graduate students might want to stay in Panama for the sponge course offered by Christina Diaz and Bob Thacker: <u>Sponge Course PDF flyer</u>

I look forward to seeing you in San Antonio!

Renae

# Message from the Graduate Student - Postdoctoral Affairs Committee Representative

Scott Nichols

Dear graduate student and postdoctoral members of the Division of Invertebrate Zoology,

In 2006, invertebrate zoology was as vigorous a field as ever. We saw the publication of the sea urchin genome and the release of the sea anemone draft genome, and in 2007 we look forward to the draft genomes of a placozoan, a sponge, and limpet. Such resources are invigorating the field of invertebrate zoology and, together with already established invertebrate model systems, promise to further illuminate animal evolution and the genetic underpinnings of cell and developmental processes central to understanding human health and disease. In addition to recent genomic advancements, in the last year we have been presented with exquisitely preserved neoproterozoic fossil embryos from the Doushantuo Formation of China that offer direct insights into the development of possible stem group metazoans. We now have compelling evidence from the fossil record of bivalves that increased species origination rates in the tropics account for global latitudinal diversity gradients - a finding the underscores the importance of preserving tropical habitats as both a "cradle and museum" of invertebrate biodiversity. Last year we were delighted with eloquent studies of invertebrate behavior and cognition, and our ever-improving hypotheses about invertebrate relationships were altered with evidence that monoplacophorans are allied with chitons and that tunicates are more closely related to vertebrates than cephalochordates. We have even heard arguments for placing placozoans as the earliest branching animals - challenging long-held ideas about animal origins. I hope and expect that 2007 will be even more eventful and exciting than 2006.

Keep up the good	d work!			
Scott				
<u>-</u>				

# **Message from the Student Awards Committee Chair**

Ben Miner

We had a great meeting in Phoenix this year, and there were many excellent student presentations. Thank you to all the students who presented!! I would also like to thank the 20 volunteer judges for their time and commitment to the students. This year 30 students competed from for best student paper. The best oral presentation went to Alison Sweeney for her talk entitled, "Evolution of high-acuity vision in coleoid cephalopods". The best poster presentation went to Ben Lake for his poster entitled, "Influence of orientation and flow speed on feeding behavior and metabolism of the barnacle *Semibalanus balanoides*". The Adrian M Wenner Strong Inference Award went to Dawn Vaugh for her talk entitled, "Predator-induced morphological defenses in marine zooplankton: a larval case study". The runner up for best student paper went to Fernanda Oyarzun for her talk entitled, "Plasticity in brooding time of a species with alternative reproductive modes". The runner up for best student poster went to David Sischo for his poster entitled, "Biofilms affect the

behavior of polychaete larvae landing on surfaces in water currents and waves". Runner up for the Adrian M Wenner Strong Inference Award went to Tracey Smart for her talk entitled, "Tolerance of the early life history stages of *Owenia fusiformis* to environmental conditions: possible limits to dispersal". Please join me in congratulating these outstanding students. I look forward to next seeing you all at the next meeting!

	•			
Ben				

# Minutes of the 2007 Annual Business Meeting

Phoenix, Arizona, January 4, 2007

Sincerely,

Janice Voltzow (DIZ Chair) opened the meeting by requesting motions to approve the minutes of the previous year's meeting. The minutes were unanimously approved.

Bob Thacker (DIZ Secretary) announced the results of the Secretary election: Renae Brodie will be the next DIZ Secretary. Congratulations were given to Renae; Larry Basch was also thanked for his willingness to run for office. Bob also announced that last year's proposed changes to the DIZ By-Laws were approved.

Bob also presented proposed changes to the DIZ By-Laws that will be subject to a vote this year. The current By-Laws do not reflect our current practice for the Chair-Elect term. A change is proposed to Article V, to state: "The Chair-Elect shall be elected triennially. The Chair-Elect should attend the annual meeting that follows her/his election. At the end of this annual meeting, the Chiar-Elect shall automatically become Chair for three years. He/She shall serve as Past Chair during the succeeding two years."

A second change moves a responsibility from the Past-Chair to the current Chair, moving the statement "He/She shall sign all proposals to federal granting agencies on behalf of the Division of Invertebrate Zoology" from Article VII to Article VI.

Amy Moran (DIZ Program Officer) detailed DIZ sponsorship of SICB Symposia in 2007, as well as Symposia planned for 2008 (San Antonio) and 2009 (Boston). Amy encouraged all attendees to submit proposals for future symposia. Amy also led discussion of the concern that symposia take too long to organize and described the proposed, less formal group sessions that may be featured at future meetings.

Ben Miner (Student Awards Committee Chair) thanked all volunteers for helping judge the Best Student Paper / Poster Competition. 29 students competed at the 2007 meeting, with 27 volunteer judges. Winners of the 2006 awards were announced and congratulated.

Chair Voltzow announced the winner of the Libbie Hyman award. She also encouraged graduate students and postdoctoral researchers to contact Scott Nichols (Graduate Student / Postdoctoral Affairs Representative) with their ideas, questions, and concerns.

Bob Thacker encouraged all DIZ members to participate in updating the DIZ Researchers Database on the SICB website.

Chair Voltzow thanked Bob for his service to the Division as Secretary for the past three years.

Chair Voltzow asked the DIZ membership to think of ways to enhance support for graduate students at SICB. She announced the intention to hold another DIZ Auction at the 2008 meeting to raise funds for the Libbie Hyman award. DIZ members are encouraged to donate to this fund, to make or bring items for the auction, and to participate by purchasing items at the auction.

All members were encouraged to attend the DIZ and Society-wide social events.

Announcements included a call for an editor of the Invertebrate Zoology section of the SICB Digital Library. The goal of the library is to make many resources available for teaching, including slide sets, syllabi, and digital videos. Editor(s) are needed to coordinate the peer-review process for the library.

The society's journal, *Integrative and Comparative Biology* has now caught up in its publication schedule, with all 2006 symposia published. All symposium papers are now due at the end of January. The journal has made a commitment to a fast turn-around from reviewers. Attendees were reminded that *Integrative and Comparative Biology* has first refusal of publications resulting from SICB symposia.

The SICB Executive Committee (Sally Woodin, John Pearse, Lou Burnett, and Ron Dimock) visited the meeting, and invited all to attend the General SICB Business Meeting. SICB President Sally Woodin announced a new fund with a \$100,000 endowment for support of symposia. SICB is currently seeking contributions to increase the size of this endowment. President Woodin also asked the membership to consider which aspects of the annual meeting are most important for them, and to consider where the society could cut costs.

Bill Zamer and Diana Padilla (NSF) encouraged DIZ members to attend the workshop on NSF's Integrative Organismal Systems program.

Patrick Reynolds provided information on the status of *Invertebrate Biology*, which is sponsored by AMS and DIZ. Patrick thanked his previous co-editor, Susie Balser, and welcomed new members of the editorial board, Bruno Pernet, Louise Page, and Michael Hart. The past year saw 91 submissions and 34 published papers, with about 30 days time to decisions. In January 2007, the journal begins continuous electronic publication, with quarterly printed issues. The journal's impact factor increased to 1.29.

Rick Harrison announced the first International Congress on Invertebrate Morphology, to be held in Copenhagen in 2008.

Rachel Collin announced the 13<sup>th</sup> International Congress on Invertebrate Reproduction and Development, to be held in Panama in August 2007. The registration deadline is May 31, 2007. Details are available at http://striweb.si.edu/icird/

Chair Voltzow requested volunteers to form a nominating committee to identify candidates for DIZ Program Officer-Elect. The three volunteers included Diana Padilla, Ben Miner, and Patrick Reynolds.

A round of applause thanked Bob Thacker for his service as DIZ Secretary, and welcomed Renae Brodie as the new DIZ Secretary.

Submitted by R Brodie and RW Thacker.

# **Elections: Candidates for DIZ Program Officer**

Please review the biographies of our two candidates for the position of DIZ Program Officer, John Zardus and James McClintock. We will hold an election for this office later this spring.

#### John D. Zardus

**Current Position:** Assistant Professor, The Citadel, Charleston, SC; Adjunct Faculty, Graduate Program in Marine Biology, College of Charleston.

**Education:** 1988, B.S. (Zoology), and 1991, M.S. (Zoology), Brigham Young University, Provo, UT; 1998, Ph.D. (Biology), Northeastern University, Boston, MA.

**Professional Experience**: Postdoctoral Fellow, University of Massachusetts, Boston, MA (1999-01); Postdoctoral Fellow, University of Hawaii - Kewalo Marine Lab, Honolulu, HI (2001-05).

**SICB Activities:** Member and presenter at SICB since 1991; session chair, 2005; Judge, Best Student Paper, 2006.

**Other Memberships**: The Crustacean Society (since 2003).

**Research Interests**: Specializing in marine invertebrate ecology and evolution, I am currently utilizing tools of molecular phylogenetics, larval biology, and electron microscopy to investigate the association of barnacles with marine vertebrates. My questions are: How are these barnacles related? How do their larvae find hosts? What can these crustaceans tell us about the biology of their hosts?

**Statement of Goals:** Membership in SICB has proved instrumental in helping to establish my career. As a program officer I want to reach out to the next generation of invertebrate zoologists by promoting membership among students and seeking ways for the Division to help foster their professional development.

#### James B. McClintock

**Current Position:** Endowed University Professor of Polar and Marine Biology, Department of Biology, University of Alabama at Birmingham.

**Education:** 1978, B.S. (Biology), University of California at Santa Cruz, 1980, M.A. (Zoology) University of South Florida, 1984, Ph.D. University of South Florida.

**Professional Experience:** 1984-1986, Postdoctoral Fellow, University of California at Santa Cruz, Instructor - Intertidal Ecology; 1986; Visiting Scientist, Moss Landing Marine Laboratories (1986), Instructor - Biological Oceanography; 1986-2007, 11 research field seasons, Visiting NSF-funded Principal Investigator-McMurdo and Palmer Stations, Antarctica.

**Honors and Awards:** College Honors, UCSC (1978); National Science Foundation Antarctic Service Award (1984); Omicron Delta Kappa (1989); UAB Ellen Gregg Ingalls Teaching Award (1989); Honorary Member

Phi Kappa Phi (1993); Caroline P. and Charles W. Ireland Prize for outstanding UAB faculty scholar (1993); United States Board on Geographic Names designated the geographic feature "McClintock Point" in Western McMurdo Sound, Antarctica, (October 6, 1998); Elected Fellow of the American Association for the Advancement of Science (1999); Wright A. Gardner Award for Outstanding Scientist in Alabama, Alabama Academy of Science (2001); Elected Board of Trustees Member, McWane Science Center, Birmingham, (2001-2007); Co-recipient Tyge Christensen Award for best 2000-2001 paper published in *Phycologia*; Named "University Professor", University of Alabama at Birmingham (2003-present); CASE Award (Council for the Advancement and Support of Education for UAB Antarctica Web Site) (2005).

**SICB Experience**: As graduate student assisted John M. Lawrence with Program Officer duties related to hosting SICB (ASZ) meetings in Tampa, Florida (1979); Proposed, co-organized and co-directed two society-wide symposia on Antarctic Marine Biology (San Francisco - 1990; Atlanta - 2000). DIZ Best Student Paper judge (numerous occasions).

**Other Memberships:** Ecological Society of America (ESA), American Association for the Advancement of Science (AAAS), Regular participant in Benthic Ecology Meetings (BEM), Alabama Academy of Sciences, Sigma Xi.

**Research Interests:** Marine chemical ecology, marine invertebrate nutrition, reproduction and larval ecology, intertidal and subtidal marine ecology, echinoderm biology, sponge biology, polar marine biology.

**Statement of Goals:** Since my early ontogeny as a graduate student I have been significantly involved with SICB/ASZ, and in particular, with the Division of Invertebrate Zoology (DIZ). Over the past two decades, along with my graduate students and postdoctoral fellows, I have immensely enjoyed the benefits provided by my affiliation with DIZ. In 1990 and again in 2000, I worked very closely with DIZ Program Officers to organize and lead society-wide, collaborative and integrative, symposia on aspects of Antarctic Marine Biology. These symposia were not only rewarding on a personal level but provided me with an appreciation of the immense value of timely collaborative symposia to the membership of the society at large, as well as to members of DIZ.

As a consequence of all these personal benefits and rewards, I have long felt a strong desire to give back to the division. I would have enjoyed doing so at an earlier point of my career, but an unanticipated invitation to serve an eight-year stint as Dean of my School of Natural Sciences and then Interim Dean of our Graduate School at the University of Alabama at Birmingham, forestalled these plans. Recently, I have been honored to transition from my deanship to an Endowed University Professorship. Thus, should the DIZ membership so desire, I have the time, and certainly the energy and enthusiasm, to serve as Program Officer of DIZ. Indeed, it would be an honor and a privilege.

Over the years, SICB/ASZ has transitioned through some very productive, and also some very trying, periods. Nonetheless, I am convinced that the DIZ has not only sustained the status quo but has continued to strengthen and expand its programs. As Program Officer I would be committed to not only strive to work with our division membership and other divisional program officers to bring cutting-edge symposia to the forefront, but also to continue to engender the enthusiasm and participation of graduate students and postdoctoral fellows, who hold the key to a strong and vibrant division in the years to come. I would also work hard to communicate with my former Postdoctoral Mentor, and current President of SICB, John Pearse, to best serve our division within the broad constructs of the goals of the society at large, to further optimize opportunities to co-host symposia and integrate educational outreach technologies, and to expand opportunities for fund raising to support targeted DIZ programs. I appreciate your consideration and hope that I may have the opportunity to serve as your voice as our next DIZ Program Officer.

# **Elections: Changes to DIZ By-Laws**

# I. Item 1. Chair terms

The current By-Laws do not reflect our current practice for the Chair-Elect term. A change is proposed to Article V, to state: "The Chair-Elect shall be elected triennially. The Chair-Elect should attend the annual meeting that follows her/his election. At the end of this annual meeting, the Chiar-Elect shall automatically become Chair for three years. He/She shall serve as Past Chair during the succeeding two years."

# II. Item 2. Chair responsibilities

A second change moves a responsibility from the Past-Chair to the current Chair, moving the statement "He/She shall sign all proposals to federal granting agencies on behalf of the Division of Invertebrate Zoology" from Article VII to Article VI.

# Division of Neurobiology (DNB): 2007 Spring Newsletter

# Message from the Program Officer

Richard Satterlie

Greetings to all members of the division and to all other interested readers. We had a successful meeting in Phoenix, with a wonderful *Recent Developments in Neurobiology* symposium that honored Regents Professor Emeritus Douglas Stuart (University of Arizona). We thank the National Science Foundation for support of this symposium.

Our Best Student Paper award competition came out as a tie:

- Muscular organization of the rhopalial stalk in Cubomedusae (Cnidaria) JACOBSON, Barbara.R., University of North Carolina, Wilmington
- Ultrastructure of the Retinal Synapses in Cubozoans GRAY, G. Clark, University of North Carolina Wilmington

In case anyone is wondering, I had nothing to do with the judging!

We have some serious business to attend to in the coming months, most notably election of a full slate of officers, by special election. Look for details soon. We usually stagger the officer elections, but a series of unrelated events have altered the situation for the time being. The following individuals have expressed an interest in running. Let this serve as a final call for nominations for these positions (send additional nominations to me at <a href="mailto:satterlier@uncw.edu">satterlier@uncw.edu</a>).

- Secretary: Thomas Pirtle, Abilene Christian University
- Program Officer: James Murray, Central Arkansas University
- Chairman: Duane McPherson, SUNY Geneseo

We have another year of support for the Recent Developments in Neurobiology symposium, and I have received a few ideas for the next one (in San Antonio). I request further suggestions for symposium topics. We like to highlight at least one laboratory from the vicinity of the meeting site, we like to have at least one untenured professor included, and we adhere to the "piggy-back" talk arrangement in which each hour block is split between a primary researcher and one of his/her advanced grad students or postdocs. We can get five such talks into a symposium, possibly a sixth. If you have a topic idea for the upcoming symposium, please send suggestions to me at the e-mail address in the previous paragraph. We have to decide soon.

We look forward to seeing all of you in San Antonio.

# Division of Systematic and Evolutionary Biology (DSEB): 2007 Spring Newsletter

# In this newsletter:

- Message from the Chair
- Message from the Program Officer
- Message from the Secretary
- Message from the Student-Postdoctoral Representative
- Minutes of the DSEB Annual Business Meeting
- <u>Upcoming Meetings</u>
- Elections: Change to DSEB By-Laws; Candidate for DSEB Program Officer-Elect

# **Message from the Chair**

Don Swiderski

Many thanks to our out-going secretary and program officer, Pat Reynolds and Michelle Nishiguchi for jobs well done, and welcome aboard their respective replacements, Marta deMaintenon and Rachel Collin. Pat has been especially helpful in getting our by-laws and elections in order. Nish has done a fine job ensuring our division is well represented and well served by the symposia presented at the meeting; we can look forward to seeing more of that work bear fruit in San Antonio. Thanks also to Ted Garland for his presentation on independent contrasts and related methods in this years Phylogenetics for Dummies.

Once again our students represented us well at the meeting. I especially want to congratulate the three students who gave outstanding presentations that earned best student awards from our division:

# Poster (tie):

M. Zhong (Auburn Univ.) *Phylogenetics analysis of Terebelliformia worms (Polychaeta, Annelida) based on mitochondrial genomes* 

and

B. L. Banbury (Washington State Univ.) *Inferring ancestral function in morphologically redundant complex traits* 

#### Talk:

E. C. Snell-Rood (Univ. Arizona) *Phenotypic plasticity and the origin of novel traits: butterflies modify behavior and morphology in response to a novel environment* 

Unfortunately, I must now turn to a somewhat less cheerful topic. As you may have heard by now (especially from the Society President and Treasurer), this is something of a watershed year for the society as we are now in a position to plan ahead and proactively manage our expenses - especially those for the annual meeting. I'll

leave it to those august individuals to discuss implications for the society as a whole. But as your representative on the execute committee, I ask you to carefully consider their evaluations and recommendations, and email to me your thoughts and suggestions on the directions that the society should be taking.

On a positive note, budget allocations to our division are not expected to change meaningfully. In part, this is because DSEB has been less extravagant than some. Consequently, we can continue to support symposia and Phylogenetics for Dummies to the level we have in the past, increase the student award to a more meaningful level, and still make a modest contribution to a joint social with other divisions. So on these matters, what we ask are your participation, and your suggestions for future topics.

Donald Swiderski			

# Message from the Program Officer

Best wishes in the New Year,

Rachel Collin

This year's SICB meeting in Phoenix was a great success. As usual there were many great student talks and posters, and it was a difficult job for us to choose the winners of this year's best student oral and poster presentations (see Don's message for the winners!). The DSEB division continues to promote and encourage students to participate in the meetings, and this award recognizes those young scholars who have demonstrated excellence in their research.

It's hard to believe, but it's time to start thinking about the 2008 meeting in San Antonio. DSEB will be sponsoring two symposia: a society-wide symposium entitled "Evolution in the Classroom", and "Crustacean Phylogenetics". The Phylogenetics for Dummies workshop is still in the planning phase. There is a current call for half-day symposium for 2008. Please contact the SICB Program Officer Linda Walters (ljwalter@pegasus.cc.ucf.edu). Please have ready a title and a list of 7 speakers for 30 minute presentations in the AM or 4-5 speakers for 30 minute presentations in the PM. Shorter presentation slots are also possible.

The deadline for receipt of symposium proposals for 2009 Boston meeting is August 17, 2007. The divisions will discuss and decide on funding at the officers meeting in September, so please start developing your ideas and talking with your colleagues and program officer of your division. I have already heard one interesting idea for a symposium but DSEB has the funds to sponsor more than one symposium as well as Phylogenetics for Dummies. DSEB is interested in expanding this workshop to include comparative methods, or even focus on topics such as phylogeography. Again, ideas are welcome to any of the DSEB officers.

# Message from the Secretary

#### Marta deMaintenon

Aloha! It was good to see everybody in Phoenix! I would first like to thank Pat Reynolds for the work he has done as secretary over the last several years, including staying on for an extra year and straightening up the by-laws! His efforts will make everybody's jobs much easier. Thanks also to Nish who has done a stellar job of organizing symposia and coordinating the best student paper awards. Finally, thanks go also to Mike Alfaro, who has volunteered to run for Program Officer elect starting next year.

The primary issue I need to mention, as in previous years, has to do with the DSEB web site; some research-related pictures would be a really great way to liven it up! So if anyone has anything they'd like to share, please forward it to me or any of the other officers.

And finally, please note we do have an election and a by-laws amendment to vote on, so don't forget to put in your two cents on those. Thank you!

# Message from the Student-Postdoctoral Representative

Audrey Aronowsky

Marta deMaintenon

Greetings fellow DSEB students and post-docs!

First, I'd like to say a special thanks to all of the student workers at the annual meeting in Phoenix; the meeting would not have been possible without you. And to those of you who joined us in Phoenix, congratulations on a great decision! It was a fantastic meeting; fabulous presentations and posters, stimulating discussions, and the best coffee breaks and snacks in recent memory. From the Wednesday afternoon orientation session to the Saturday evening student-post-doc social, the annual meeting was informative, interesting, and fun. All of the events were well-attended; indeed, it was standing room only at the DSEB-sponsored Phylogenetics for Dummies workshop on tree-based statistics.

It's not too early to think about next year's meeting in San Antonio. DSEB has doubled the monetary award for best student presentation, so if you have original research that you plan to present, remember to enter the competition.

It's also time to think about ideas for the 2009 meeting in Boston. Each year SICB divisions sponsor symposia that are organized by graduate students and post-docs; you don't have to be a faculty member to suggest or organize a symposium. Organizing a symposium is a great experience; you can develop the symposium you have always wanted to attend, invite and meet the leading researchers in your field, and it looks great on a CV. So check the SICB website and consider submitting an idea.

If you have any questions regarding student/post-doc activities, please contact me. Good luck with your spring semester and your summer field work!

# Minutes of the 2007 DSEB Business Meeting, 5 Jan. 2007, Phoenix

The meeting was opened by Don Swiderski with a brief intro, after which Dianna Padilla discussed some ongoing changes at NSF. Specifically, the NSF Division for Integrative Organismal Biology has morphed into Integrative Organismal Systems, to emphasize the idea of working to understand organisms as systems. There was a workshop during the Phoenix meeting to discuss the change.

Chair Don Swiderski then announced the 8<sup>th</sup> International Congress of Vertebrate Morphology, which will be held this July in Paris. Abstracts and registration were due February 10.

Secretary Marta deMaintenon attended the Division Secretaries Meeting at noon on Jan 5 (after getting lost looking for the room). Most of the discussion at the meeting was about the changing template of the SICB web site, and ideas for getting more interesting items in the divisional web sites. The general upshot is that there's a bunch of stuff the division can put up, depending on what people want. Photos and research blurbs, or synopses of student award winners, would be especially informative.

Chair Don Swiderski opened a discussion of amending the by-laws to make the DSEB Program Officer term three years plus one year as Program Officer - elect, similar to some other divisions. The reason for doing this is that officer's job is fairly demanding and a longer term would give the person elected to the role sufficient time to work with it successfully. No formal resolution was made at the meeting, but a suggestion was made to put the item before the membership for a vote.

The division needs to elect a new Program Officer-Elect starting 2008; Mike Alfaro volunteered to run, his bio will be available at the end of this newsletter.

Outgoing Program Officer Michele Nishiguchi discussed future meeting venues. The DSEB sponsored symposia for San Antonio (2008) are set, and symposium ideas are needed for Boston in 2009. There will be more money available for symposia in future years thanks to a new endowment. One idea to take advantage of this would be to have "quick symposia", essentially theme sessions for a group of people who want to do a series of related talks. Several ideas regarding potential symposia for 2009 were discussed.

Ideas are also needed for the Phylogenetics for Dummies workshops, organized in tandem with DSEB - sponsored symposia. Any ideas on these can be forwarded to Program Officer Rachel Collin. The Phoenix meeting featured a workshop on Tree-based statistics.

Student/ Postdoctoral representative Audrey Aronowsky has just started her term, she is open for any issues that students want to bring up. One issue, as always, is how to get more students to participate in DSEB; more on this below.

Chair Don Swiderski reported that SICB's membership is in good shape, the number of members continues to grow, and now there is an on line membership database that can be easily accessed. SICB's budget, however, is in the red this year and next, in part because institutional journal subscriptions are decreasing. Another contributing factor is the amount of money spent on socials, which are quite expensive. Any ideas to cut costs are welcome!

SICB has also been asked to provide financial support for symposia at other meetings, which seems unlikely given the current budget constraints.

DSEB's division budget has been increased slightly; ideas were discussed on ways to spend the budget. Rich Mooi suggested increasing the amount given for the best student presentation awards (currently \$100 each).

- Ken Halanych made a motion to adjust the size of the award
- Rich Mooi amended the motion, to double the award (to \$200 each for paper and poster)
- Jon Norenburg seconded the new motion
- The motion passed, the student award will be adjusted to \$200 each for best student paper and best student poster.

Under new business, ideas are needed for the division web site. One idea is to post winning student papers or posters, but posting the presentations directly could cause problems because they may count as publications in some instances. So maybe putting up pictures of the paper or posters would suffice.

Finally, many thanks to outgoing Program Officer Michele Nishiguchi and outgoing Secretary Pat Reynolds; their contributions over the years truly count as going above and beyond the call of duty!

Ken Halanych made a motion to adjourn	, which was seconded	, and the meeting adjourned.	

# **Upcoming Meetings of Interest to the Division**

**Evolution 2007**, the joint annual meeting of the Society for the Study of Evolution (SSE), the Society of Systematic Biologists (SSB), and the American Society of Naturalists (ASN), will be held June 16-20, 2007, hosted by The Allan Wilson Centre for Molecular Ecology and Evolution in Christchurch, New Zealand. More info: <a href="http://www.evolution2007.com/">http://www.evolution2007.com/</a>

**SMBE 2007**, the annual meeting of the Society for Molecular Biology and Evolution (SMBE) will be held June 24-28, 2007, hosted by Dalhousie University in Halifax, Nova Scotia, Canada. The meeting is being co-hosted by the Canadian Institute for Advanced Research. More info: <a href="https://smbe2007.dal.ca/">https://smbe2007.dal.ca/</a>

**Hennig XXVI**, the Annual Meeting of the Willi Hennig Society, will be held June 28 - July 2, 2007, at the Royal Sonesta Hotel, on Bourbon Street in New Orleans, LA. More info: <a href="http://www.cladistics.org/meetings.html">http://www.cladistics.org/meetings.html</a>

Elections: Change to DSEB By-Laws

# **Officers' Terms:**

A proposal was made to adjust the term length of the Program Officer, to be consistent with lengths of terms in the other divisions, and to give the Program Officer a term long enough to be able to learn how to run the office effectively.

The current by-laws read, in Article III section 1:

"The Program Officer-Elect shall be elected to serve for one year and shall then successively and automatically become Program Officer for two years."

It is proposed that this sentence be changed to:

"The Program Officer-Elect shall be elected to serve for one year and shall then successively and automatically become Program Officer for three years."

**Elections: Candidate for Program Officer-elect** 

#### Michael Alfaro

**Current Position:** Assistant Professor, School of Biological Sciences, Washington State University, Pullman, WA (since 2004). http://alfarolab.sbs.wsu.edu

**Education:** 2000 Ph.D. Committee on Evolutionary Biology, University of Chicago, IL. 1994 M.A. (Biology), Humboldt State University, Arcata, CA. 1999, B. A. (Dramatic Art), University of California, Davis, CA.

# **Professional Experience:**

Assistant Professor, School of Biological Sciences, WSU, 2004 - present Postdoctoral Fellow, University of California, San Diego 2003-2004 Phylogenetics Postdoctoral Fellow, UC Davis 2001-2003 Research Associate, Field Museum of Natural History, Chicago, 2001- present Postdoctoral Researcher, Field Museum of Natural History 2000-2001

**Awards and Honors:** 2000 Honorable Mention, Dwight Davis Award. 1997 Lester Armour Graduate Fellowship, Field Museum of Natural History.

**SICB Activities:** lifetime member; symposium organizer: Motor Control of Vertebrate Feeding (Chicago, 2000); co-chair of numerous contributed paper sessions; published and reviewed papers for American Zoologist.

# **Research Interests:**

1. Phylogenetic (especially Bayesian) methods

- 2. Evolutionary Dynamics of Functional Traits
- 3. Trophic Evolution in Fishes and Snakes

# Five recent publications (of 19):

M. E. Alfaro and M.T. Holder. 2006. The posterior and the prior in Bayesian phylogenetics. Annual Review of Ecology, Evolution, and Systematics 37:19-42

M. E. Alfaro & J. P. Huelsenbeck. 2006. Comparative performance of Bayesian and AIC-based measures of phylogenetic model uncertainty. Systematic Biology 55 89-96

M. E. Alfaro, D. I. Bolnick, and P. C. Wainwright. 2005. Evolutionary consequences of a redundant map of morphology to mechanics: an example using the jaws of labrid fishes. *American Naturalist* 165:E140-E154.

M. W. Westneat and M. E. Alfaro. 2005. Phylogenetic relationships and evolutionary history of the reef fish family Labridae. *Mol. Phyl. Evol.* 36:370-390.

M. E. Alfaro S. Zoller, and F. Lutzoni. 2003. Bayes or bootstrap? A simulation study comparing the performance of Bayesian Markov chain Monte Carlo sampling and bootstrapping in assessing phylogenetic confidence. *Molecular Biology and Evolution*. 20:255-266

Goals as Program Officer: It is truly an exciting time to be a comparative biologist. Phylogenies are becoming increasingly available for much of the tree of life, providing an expanding framework for addressing creative and integrative biological questions. Concomitant with this has been the development of novel phylogenetic methods and a proliferation of software packages that make using methods, new and old, easier. As program officer, I would like to promote integrative sessions and symposia that feature applications of phylogenetic methods to broad questions in evolutionary biology. The â– Phylogenetics for Dummies' program provides an excellent venue for introducing SICB members across divisions to phylogenetic methods. As program officer, I would support efforts to make Phylogenetics for Dummies even more useful by tying topics to symposia, paper sessions, or to requests from other divisions. I would also focus on increasing student membership and participation in DSEB.

# Division of Vertebrate Morphology (DVM): 2007 Spring Newsletter

# In this newsletter:

- Message from the Chair
- Message from the Program Officer
- Message from the Secretary
- Message from the Student/Postdoc Representative
- Proposed Bylaws change for D. Dwight Davis Award
- Elections: Candidates for DVM Chair-Elect
- Publishing Opportunity

# Message from the Chair

Kurt Schwenk

Greetings from Storrs, Connecticut, where, as I write, we are just entering mud season. Springtime seems like an impossibly distant horizon, but by the time you read this I expect it will be upon us all. If you have never experienced spring in the northeast after a long winter, you really need to try it sometime (Californians, just keep quiet).

The annual meeting in Phoenix was fabulous, as usual. I can't say the city was thrilling, but the venue was excellent, attendance fantastic and the company endlessly entertaining. The presence of huge swarms of graduate students decimating *hors d'oeuvre* trays like locusts in a cornfield was especially gratifying. Can graduate students reproduce asexually? It seemed like their numbers doubled just during the few days of the meeting... In any case, it is a propitious sign suggesting we are doing something right and that the society's future is in good (if hungry) hands.

The quality of the papers, posters and symposia seemed to me to be especially high this year, but then I think that every year. As usual, there was too much to see and too many conflicts among sessions. For example, there were at least three papers scheduled opposite my own that I would much rather have attended. Annoying as it is, choice is a good thing and again speaks to the vibrancy of the meetings. One change we will be trying at the next (San Antonio) meeting, following Dave Carrier's suggestion, is to group the student Davis Prize competitors into a single paper session with as little DVM conflict as possible. This will elevate the competition to a special event and encourage as many of us as possible to attend. It will also make it possible for us to announce the winner of the prize at the business meeting.

When I took this job I was assured that it was all glory and prestige, no work (work is for the Program Officer and the Secretary). While I cannot deny that the aura of the office surrounds me like a golden glow and that students and faculty, alike, pay homage by moving aside as I approach (they say it is to avoid me, but I know better), I have found myself grappling unexpectedly with several pesky work-type issues, namely, budget and bylaws. Taking the latter first, you will be asked to vote on a change of the DVM bylaws related to the D. Dwight Davis student prize (see the proposed bylaws changes section of the newsletter, below). These changes were suggested by David Carrier (2005 and 2006 Davis Prize Committee Chair) and discussed at the

January 2006 business meeting. An online forum for membership discussion was also available. Former Chair, Beth Brainerd, has proposed a revised text. In short, the change limits student competition for the prize to two times. This will encourage students to compete only when their projects are more complete and polished. As noted above, it will further allow us to group all the competing papers into a special, unopposed paper session, making it a celebration of our student members. I hope you will support this change.

In addition, we are currently working on several other small changes to the bylaws initiated by Beth Brainerd. These are designed to streamline the election process of electing DVM officers and to improve their interactions. For one thing, a new position of 'Past Chair' is being proposed for addition to the DVM Executive Committee (along with Chair, Secretary and Program Officer). This formalizes the status of the former Chair who is a *de facto* advisor to the current officers (why do I have the nagging suspicion that as soon as I become 'Past Chair' the position will be dissolved...). Details of these changes will be presented to the membership later this year, discussed at the next business meeting and subsequently voted on. They are not at issue right now. I just wanted you to know that we actually do stuff.

Second, the SICB budget is undergoing some growing pains as we change from a calendar to a standard (June-July) fiscal year. This is the transition year and there are some kinks to be worked out. However, a more important issue is that for the first time since the bad-old-days when the Society nearly collapsed fiscally, we will start to run a deficit. There is no cause for alarm because the Society is financially very healthy, but it means that spending is going to have to be curtailed sooner rather than later because we cannot afford to run a deficit for more than a couple of years (I know, I've tried it). The SICB Executive Committee has been charged with examining the budget and identifying areas that can be controlled. Two of the biggest budget items are graduate student support and annual meeting expenses. Although no one was happy about it, the Executive Committee agreed almost unanimously that grad support has to be capped. This will take the form of limiting student support for travel and rooms at annual meetings to a maximum of three years (and possibly a slightly higher co-payment, depending on the year). Spending on graduate student support for meetings has been growing steeply for many years with no sign of a plateau, so it was felt that capping it was critical before it overwhelmed the budget. The second noticeable impact of the budget caps is that we can expect less lavish food spreads at society functions during future annual meetings. Budgets for food at both society-wide and divisional socials will be capped at amounts slightly less than we are used to, so look forward to more chips and salsa, less roasted asparagus. Hotels charge egregious amounts of money for catered food, so this is not a trivial thing.

Although spending caps are not ideal, I hope you will agree that SICB generally and DVM specifically remains an extremely generous supporter of student members (our future, after all) in all respects. The Executive Committee and Financial Committees are looking for other ways to save money and increase income, and despite these limits, the future of the Society looks rosy. Please feel free to contact me with comments or questions (<a href="mailto:kurt.schwenk@uconn.edu">kurt.schwenk@uconn.edu</a>). Have a great spring and summer.

# Message from the Program Officer

Jeff Walker

Kudos to all for a most excellent Phoenix meeting. Great organization, great site, great science, great seeing old friends and meeting new ones. We should all extend our sincerest appreciation to the organizers of the three DVM sponsored symposia, including Frietson Galis, Dave Carrier, Shawn Vincent, Simon Lailvaux,

Anthony Herrel, Tim Higham and Peter Wainwright. The many, many concurrent sessions with DVM related talks kept our minds (and bodies) busy, but this is good as it highlights the strength of our division at these meetings! Again, the poster sessions were a huge success and I would strongly encourage everyone to consider this format. At our next annual meeting in San Antonio, there will be several symposia that should be of broad interest to DVMers, including:

- 1. Going with the flow: ecomorphological variation across aquatic flow regimes (Gabriel Rivera and Rick Blob)
- 2. Vertebrate head segmentation in a modern Evo-Devo context (Shigeru Kuratani and Thomas Schilling)
- 3. Aeroecology: Probing and Modeling the Aerosphere--The Next Frontier (Thomas Kunz and Nick Hirstov)
- 4. Evolution vs. Creationism in the classroom: Evolving Student Attitudes (Eric Lovely).

It is also time to organize creative, integrative symposia for our 2009 annual meeting in Boston. Think: what is the cutting edge of my field? What are the common themes that my field is pursuing and how are we pursuing these? What developments have occurred in the last few years that have advanced my field into new directions? Or maybe, how have these disparate fields come together to form a new discipline? Remember to seek both internal and external sponsorship for your proposed symposium. Internal sponsorship is easy, simply talk to the program officers of the relevant divisions. External support is well worth the effort as the society will waive registration fees for symposium organizers that actively seek external support for symposia. Be creative with external sources of support. And remember that certain external sponsors, such as NSF, strongly encourage diversity among symposium speakers. Given that a typical, full-day symposium has only eleven speakers, symposium organizers should consider contacting colleagues to submit a contributed paper to a complementary session. Finally, if your symposium idea is simply too cutting edge to wait until 2009 Boston, then you can organize a thematic contributed session around the idea for the 2008 San Antonio meeting (please contact the society's program officer Linda Walters if you wish to do this). Further information for symposium organizers is available on the SICB website at http://sicb.org/guidelines/symposiaguidelines.php3. I hope everyone has a productive spring and summer and look forward to seeing the abstracts for San Antonio in September.

# Message from the Secretary

Gary Gillis

I'd like to start by thanking whatever committee was charged with scheduling the site of this year's meeting. The weather, food and hotel/conference center were great! Not surprisingly, the meeting was good fun as well, and I trust all of you enjoyed the talks, posters and informal conversations about science. Now onto the business at hand...

# DVM Business Meeting Notes (1/5/2007)

# **Announcements:**

1. The Society's officers stopped by to introduce themselves and remind us that the Society's journal, *Integrative and Comparative Biology*, is in good shape, with a nice new format and speedy online

- publishing of new papers. Melina Hale confirmed that the journal is not on PubMed yet and also clarified that the journal has the right of 1<sup>st</sup> refusal for papers based on society symposia.
- 2. Tony Russell told us of the upcoming International Congress of Vertebrate Morphology (ICVM) in Paris this summer. In addition, as the president of the Canadian Society of Zoologists, he clued us in to the "morphology-friendly" environment of that society and offered a standing invitation to attend their annual meetings (in Montreal in 2007)
- 3. I announced that the society is in the process of retooling its website and that your pictures, videos, flash animations etc. would make excellent additions to the DVM page. Please send any such materials to me (ggillis@mtholvoke.edu) and you'll be hearing from me if I don't hear from you.
- 4. Jeff Walker listed the symposia for next year (see Jeff's report above). He also announced that the deadline for submitting ideas for symposia for the 2009 meeting in Boston is August '07. Email Jeff with your ideas (walker@maine.edu).
- 5. Adam Summers apologized for any problems people had with student rooming issues, but was pleased to report that 361 students were supported with rooms at this year's meeting and 30 students had their registrations waived. In addition, this year \$23,000 was given to students in the form of grants-in-aid-of-research, and \$8,000 in the form of travel grants.
- 6. Bill Zamer from NSF shared his thoughts on some of the changes in IOB at NSF. Many of us likely fall under the umbrella of the Physiological and Structural Systems Cluster in the Division of Integrated Organismal Systems. He suggested that "systems-based approaches" were important in our applications for NSF grants and encouraged us to have a look at Jim Collins' presentation on integrative biology in the early 21st century (go to the Phoenix meeting link on the SICB website to view the presentation).
- 7. Beth Brainerd announced that Mark Westneat and Sharon Swartz are up for election to Chair-Elect this spring (see below for their abbreviated cv's and statements). In addition, Beth announced that the tradition of giving a book prize to the D. Dwight Davis award winner has been restored, and this year it is a copy of O.C. Marsh's 1880 monograph on extinct toothed-birds of North America.

Much of the remaining part of the meeting was spent discussing the issue of identity for DVM in the context of the newly formed Division of Comparative Biomechanics. Several members expressed potential concern about DVM membership and session attendance (which will be monitored closely in coming years), and it was made clear that careful planning of the timing of business meetings between the various Divisions that attract our membership is essential. In the end, most of us still consider DVM as our home-base and thus it will surely remain a vital division.

As the final order of business, Beth passed the reins (reign) of Division chair onto Kurt Schwenk, the self-professed "bald guy that's not Ken Dial" who quickly inspired us with his visions as the new "commander". On a serious note, Kurt did announce that he is on the editorial staff at the Journal of Experimental Zoology A, and that they are excited to receive interesting work in the field of functional vertebrate morphology. Please see the final section of this newsletter for more detail.

# 2007 Student Award Winners

Davis Award(Tie)	Davis Award (Tie)	Poster Award
Diego Sustaita	Cally Harper	Nathan Bird







At this year's meeting, the excellence of our student speakers was reflected in a shared D. Dwight Davis award. Both Diego Sustaita (University of Connecticut) and Cally Harper (UNC Wilmington) were recognized for their important contributions to vertebrate morphology. Diego's talk, coauthored with Fritz Hertel (Cal. State Northridge), was entitled "Bite and grip performance in relation to killing behavior of North American accipiters and falcons". In it, he showed that differences in actual bite and grip performances among these birds complemented previous musculoskeletal morphological analyses, and that such differences reflect distinct predatory strategies in which falcons use their beaks to deliver powerful bites to kill prey whereas accipiters rely on their feet and tightly gripped talons and toes (I think I win the award for longest sentence in the newsletter...). Diego's future work will involve studying feeding performance in shrikes in relation to their morphological and ecological variation. Cally's talk, coauthored with a number of colleagues from Wilmington, was entitled "The gross morphology and fiber architecture of the melon in bottlenose dolphins, Tursiops truncatus". According to Cally, the melon is a specialized lipid structure that lies within the dolphin forehead and functions in the transmission of echolocation sounds. Her work involves analyzing fibrous networks throughout the melon and their associated connections to muscles and surrounding blubber. In particular, her work explores how dolphins might use facial muscles to alter the shape and internal pressure of the melon, which in turn could affect sound propagation. This work fits nicely within the context of her larger goals of understanding better the evolution of water-based communication mechanisms in vertebrates in relation to cranial morphology.

Nathan Bird, of George Washington University, was awarded the DVM poster prize at this year's meeting. His poster, co-authored with Pat Hernandez (also of GWU), was entitled "Morphological variation of the Weberian apparatus in cypriniform fishes". In it he showed that structural components of the apparatus that are directly involved with hearing (i.e., the ossicles themselves) exhibit very little morphological variation whereas accessory structures such as ribs and neural arches exhibit considerably more variability. Nathan is also using zebrafish to study genes involved in the development of the Weberian apparatus and eventually hopes to understand the genetic bases of evolutionary change in this novel and complex morphological structure.

Congratulations once again to our award winners and all the other DVM students who consistently present excellent work at the SICB meetings!

# Message from the Student/Postdoc Representative

Russ Main

The 2007 SICB meeting in Phoenix was another success in regards to the events and programs organized by the Student and Post-doc Affairs committee. The Graduate Student and Post-doc Orientation was very well attended yet again, with around 300 people on hand to hear presentations concerning how to make the most of the meeting's academic and social events. This year's SPDAC workshop entitled "What Editors Want" took place on the last night of the meeting and was attended by about 200 students and post-docs. Editors from various journals representing the different divisions of SICB discussed what types of research their journals cover and the submission and publication process. The editors' presentations and the question and answer session were insightful and appreciated by those in attendance. Thank you to those members of DVM who participated in the workshop.

Lastly, if there are graduate student or post-doctoral members of DVM who wish to volunteer to participate in planning and organizing SPDAC events, please send me an e-mail (rpm74@cornell.edu) and I will notify the SPDAC committee chair of your interest.

# Proposed Bylaws change for D. Dwight Davis Award

As many of you probably remember, at the Orlando business meeting there was much discussion of changing some of our current bylaws for the D. Dwight Davis award. Specifically, the chair of the awards committee that year, Dave Carrier, suggested that students be limited in the number of times they compete for the award. An important motivation for this was judging quality. Judges are overwhelmed by the number of presentations they need to evaluate (~ 40 in a given year), and many presentations are of preliminary work. If students are limited to competing only two times, this will reduce the load on judges, allowing them to put more time/thought into their evaluations. In addition, having fewer student talks will allow us to have a single "student session" at the meeting with minimal conflicts, allowing us all to see the work of our Division's amazing students. Below is the actual text of the current and proposed bylaws regarding the Davis Award. Please participate in the online vote!

#### **CURRENT**

Article XV. Student Award - D. Dwight Davis Award

- 1. From the D. Dwight Davis fund of the Division a \$100.00 prize may be given for an outstanding paper presented by a student (or by a new Ph.D. who received the degree no more than 12 months before the meeting at which the paper is presented). In addition, a certificate will be given as well as an appropriate gift to reflect Vertebrate Morphology. The work must be original, and must have been carried out by the student or students. The award is made only on the unanimous decision of a committee of three appointed before the meeting by the Chair of the Division. The guidelines for the award are as follows:
- a. The intention of the award is to recognize significant conceptual, observational, and experimental contributions to he field of vertebrate morphology. These shall be the major criteria for selection. Only

outstanding work is to be recognized.

1	b. Acceptable standards of visual aids and oral presentation shall be required for consideration. Spectacula
1	presentation techniques shall not by themselves qualify a paper.

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#### PROPOSED NEW

Article XV. Student Award - D. Dwight Davis Award

- 1. From the D. Dwight Davis fund of the Division a \$100.00 prize may be given for an outstanding paper presented by a student (or by a new Ph.D. who received the degree no more than 12 months before the meeting at which the paper is presented). The award is made only on the unanimous decision of a committee of at least three members, appointed before the meeting by the Chair of the Division. The guidelines for the award are as follows:
- a. Each student shall be allowed to compete for the D. Dwight Davis Award no more than two times.
- b. The work must be original, must have been carried out by the competing student, and the student must be the first author. Co-authored papers may be entered into the competition, but the student must describe explicitly the contributions of all of the co-authors as part of the presentation. Failure to make the contributions of all listed co-authors clear may be grounds for disqualification.
- c. The intention of the award is to recognize significant conceptual, observational, and experimental contributions to the field of vertebrate morphology. These shall be the major criteria for selection. Only outstanding work is to be recognized.
- d. Acceptable standards of visual aids and oral presentation shall be required for consideration. Spectacular presentation techniques shall not by themselves qualify a paper.

**Elections: Candidates for DVM Chair-Elect** 

# SHARON SWARTZ, PhD



**Current Position:** Associate Professor of Ecology and Evolutionary Biology and Engineering, Brown University

# **Education:**

Ph.D. 1988: The University of Chicago

B.A. 1981: Oberlin College (High Honors).

# **Professional Experience:**

1996-2007: Associate Professor, EEB and Engineering, Brown University

1990-1996: Assistant Professor, EEB and Engineering, Brown University

1987-1990: Assistant Professor of Cell Biology & Anatomy, School of Medicine, and Anthropology, College of Arts and Sciences and Graduate School, Northwestern University.

# **Awards and Honors:**

2000: Dean's Excellence in Teaching Award, Brown Medical School

1999: Hooder, Brown University School of Medicine

1999: Winner, American Medical Women's Association Gender Equity Award

1995-1999: Marshall, Brown University School of Medicine Commencement Exercises

1995: Nominee, American Medical Women's Association Gender Equity Award

1992: Mary Putnam-Jacobi Award for the Outstanding Woman Medical Faculty Member, Brown Women in Medicine

1986: Harper Memorial Doctoral Fellowship, The University of Chicago

1982-1985: Searle Graduate Fellow, The University of Chicago

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1981: graduation with High Honors in Biology, Oberlin College

1980: Sigma Xi, Phi Beta Kappa

**SICB Activities:** I have been a DVM member since 1982, and since that time have chaired numerous contributed paper sessions and served several times on the Student Awards Committee and Nominating Committee. I have participated in the Northeast Regional DVM Meetings since their inception in 1991, and have hosted or co-hosted Regional DVM Meetings at Brown three times since then.

**Other Memberships:** International Society of Vertebrate Morphology; American Society for Biomechanics, American Physical Society ñ Division of Fluid Dynamics, North American Symposium on Bat Research.

**Research Interests:** Evolutionary and functional morphology of mammalian locomotor systems; biomechanics of animal flight; comparative biomechanics of vertebrate skin and bone; size and scale issues in biological structure; novel visualization approaches for complex data

Statement of Goals: Our discipline - if it is, indeed, a discipline! - is transforming at an astonishing rate. As I recently told a new graduate student in an unrelated field, very few of my present research activities would have been even imaginable to me when, as an undergraduate, I made a decision to pursue a career with vertebrate morphology at its center. On the other hand, below the surface of immense technological change, we retain deep connections to our historical roots; many of the kinds of questions that have driven students of vertebrate form for decades remain vital, even as the details of how we try to answer our questions may change. The study of morphology will continue to become more multidisciplinary; it takes no seer to predict that interconnections of morphology to physiology, systematics, evo-devo, biomechanics, and biochemistry will continue to grow, and engineers, computer scientists, mathematicians, and others will become more and more familiar contributors at our meetings and in our journals. The recent creation of a SICB Division of Comparative Biomechanics is one striking - and, to me, very exciting - hallmark of these trends, as are the increasing prominence of interdisciplinary funding initiatives (e.g. Frontiers in Integrative Biological Research, Assembling the Tree of Life, and the National Evolutionary Synthesis Center, all through NSF). Over the next ten years, vertebrate morphology faces important challenges that arise from this juxtaposition of rapid change and commitment to the traditional core of morphological study, and the DVM should, I believe, play a critical role at this key moment in our scientific `ontogeny'. We must chart a course that enhances the links between vertebrate morphology and other growing disciplines without sacrificing the unique character of our field; that supports our graduate students and young faculty and continues to attract wonderful new scientific talent; and that focuses our vision at regional, national and international levels. As a single individual, I could not hope to effectively meet these challenges; as Division chair, I would be honored to integrate, motivate, and inspire our members to work together for the DVM community.

# MARK WESTNEAT



Current Position: Curator of Zoology (Fishes), Field Museum of Natural History, Chicago

# **Education:**

Ph. D. 1990. Duke University.

B. A. 1984. The College of Wooster, Ohio.

# **Professional Experience:**

1997-2006: Associate Curator of Zoology, Field Museum of Natural History.

1992-1997: Assistant Curator of Zoology, Field Museum of Natural History.

1992-2007: Lecturer, Department of Organismal Biology and Anatomy and Committee on Evolutionary Biology, University of Chicago.

1990-1991: Postdoctoral Research Associate: Department of Neurobiology and Psychology, Duke University.

# **Awards and Honors:**

1990: D. Dwight Davis Award for Best Paper in Vertebrate Morphology: Division of Vertebrate Morphology, American Society of Zoologists.

1989: Cocos Foundation Training Grant in Morphology. Duke University.

1988: Raney Award in Ichthyology, American Society of Ichthyologists and Herpetologists.

1987: Stoye Award for Best Student Paper in Genetics, Development, and Morphology: American Society of Ichthyologists and Herpetologists.

1984-1988: Graduate Student Teaching Assistantship, Duke University.

1984: C.G. Bookhout Scholarship: Duke University Marine Laboratory.

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# **SICB Activities:**

Program Officer, Division of Vertebrate Morphology, American Society of Zoologists, 1994-96.

Nominating Committee, Division of Vertebrate Morphology, SICB 1999-2000.

Local Committee, Chicago 2001, organized SICB social at Field Museum of Natural History

#### **Research Interests:**

- 1. Phylogenetic systematics and evolution of fishes: molecular and morphological evolution, evolutionary biomechanics, and phylogeny of diverse marine fish families.
- 2. Biomechanics and physiology: behavior, muscle physiology and neuromotor patterns of feeding, respiration and locomotion in organisms ranging from insects to fishes to mammals.
- 3. Modeling of musculoskeletal systems: mechanical design, muscle models and computer modeling in biomechanics.

# **Other Memberships:**

American Association for the Advancement of Science, American Society of Ichthyologists and Herpetologists, International Association of Vertebrate Morphologists, Neotropical Ichthyological Association, Sigma Xi, Society of Systematic Biologists

# **Goals as President-Elect:**

It is an honor to be nominated to be DVM Chair (a.k.a. DVM Commander, according to Kurt!). The central issue for DVM in the next few years will be to assess the impact of the new Division of Comparative Biomechanics on our membership numbers and the health of our science at the annual meetings. I am deeply interested in this dynamic, because DVM will always be my home base in SICB. It is where I grew up, and I know that many of you feel the same way. On the other hand, what a great thing to have a home for biomechanics, and I will list that on my name tag too (second, of course, after DVM). I propose that we take the following actions to keep DVM vibrant and also take advantage of integration with DCB. First, I want to monitor the data on DVM member and abstract numbers so that we know if there is a problem at home in DVM. Second, we should try to reenergize some of the formerly more active areas of DVM such as classical comparative and evolutionary morphology, explore the recruitment of members in other fields such as biological anthropology and build stronger ties with Developmental Biology. Third, we should embrace Biomechanics with joint symposia and sessions on vertebrate function that highlight the I in SICB. DVM will stay strong and flourish because our science is compelling and SICB is the best scientific meeting of the year, every year.

# **Publishing opportunity**

As mentioned at the Phoenix business meeting, I want to call members' attention to the new editorial leadership and direction of the Journal of Experimental Zoology A (Ecological Genetics and Physiology). Günter Wagner is the new Editor-in-Chief and I am one of the Associate Editors. We are soliciting high quality submissions of all sorts, but especially want to encourage the morphological community to consider the journal. The work does not need to be explicitly experimental, despite the title, and we are happy to consider review and perspective pieces, as well as original research. If you have an idea for a paper or want additional information, feel free to contact me. I will also be approaching some of you to solicit papers. All submissions are handled electronically, turnover is fast and one full page of color is free (as many figures as can fit!). The journal is very widely indexed and available electronically. -Kurt Schwenk