

# Division of Comparative Physiology & Biochemistry (DCPB): 2002 Spring Newsletter

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## Message from the Chair

*Nora B. Terwilliger*

Welcome to DCPB 2002. Hope you've all celebrated those unique days of 02-02-2002 and 02-20-2002, especially at 20:02. Times like that won't appear again for quite a while.

Our 2002 meeting in Anaheim was a great success, starting off with the introductory talk by Bob Full and followed by excellent symposia, contributed papers, lively poster sessions, and various field trips to places like Venice Beach, Disneyland or the Aquarium for biodiversity studies. Many thanks to the DCPB-sponsored symposia organizers and to Michelle Wheatly and Jon Harrison, our DCPB Program Officers who coordinated the Anaheim program so well.

**Bartholomew Award:** Congratulations to Sönke Johnsen, this year's Bartholomew Award winner. Sönke is an outstanding young investigator, and he delivered an absolutely superb talk on his research on gelatinous zooplankton, "Optical Adaptations to Aqueous Environments: Hidden In Plain Sight". In these days of PowerPoint® Presentations and PhotoShop® Phantasies, Sönke reminded us that while visual aids are sometimes helpful, the real power of a talk lies in the ability of the speaker to totally engage the audience on a personal basis. Thanks to the snowstorms in the southeast and luggage lost in the Atlanta airport, Sönke arrived in Anaheim with no slides and wearing a Swarthmore-garnet sweatshirt, courtesy of Delta Airlines. You gave us a great presentation, Sönke, and set high standards for next year's award winner. In addition to the award and the opportunity to address his colleagues at the SICB meeting, Dr. Johnsen also received a generous cash prize from Sable Systems.

**Student Awards:** Compliments are also in order for the winners of the DCPB Best Student Poster and Talk Competition. Congratulations to all of you and good luck in your graduate studies. J. P. Ianowski, McMaster University, won the Poster award ("Evaluation of Na:K:2Cl cotransport across the basolateral membrane in Malpighian (renal) tubule cells of *Rhodnius prolixus*"), judged by Ross Ellington, Linda Mantel and Al Bennett. The Best Student Talk award was split among Caren E. Braby, Hopkins Marine Station ("Larval settlement success and physiological adaptation in the patchwork distribution of introduced and native bay mussels (*Mytilus* spp.) in the central CA hybrid zone"), Keith P. Choe, University of Florida ("Compensation for hypercapnia by a euryhaline elasmobranch in fresh water: roles of gills and kidneys"), and Donna Folk, University of California, Irvine ("Ion regulation and water balance in *Drosophila melanogaster* selected for enhanced desiccation-tolerance"). Honorable mention went to Paul L. Dudas, University of Connecticut ("Urate transport by chick, *Gallus gallus*, renal proximal tubule epithelium"), Ryan M. Pelis, University of

Connecticut ("Active sulfate secretion by the intestinal epithelium of winter flounder is through anion exchange for chloride"), and Chugey A. Sepulveda, Scripps Institute of Oceanography ("The swimming energetics of the eastern Pacific bonito (*Sarda chiliensis*): One step closer to understanding the tuna–bonito relationship"). Judges for the student talks were Shirley Baker, George Bourne, Steve Hand, Charlie Hunter, Valerie Pierce, Mason Posner, Steve Roberts, Bob Roer, Jonathon Stillman, and Art Woods. Thank you, judges, for volunteering your time at the busy meeting, and special thanks to Jon Harrison, DCPB Program Officer, for organizing such a topnotch group of judges.

**Officers and Elections:** The new Secretary of DCPB is Mary Chamberlin. Congratulations to you, Mary. We also extend sincere thanks to Steve Hand and Jeannette Doeller, Chair and Secretary for the previous two years, for the excellent leadership and service they have each given the Division. Steve will be serving for another year as Past Chair on the DCPB Executive Committee, and we welcome his help.

**Meetings:** There are several upcoming meetings of interest to DCPB members: APS Intersociety Meeting (San Diego, August, 2002), SICB annual meeting (Toronto, January, 2003), and the Sixth International Congress for Comparative Physiology and Biochemistry (Mt. Buller, Australia, February, 2003). See the Message from the [Program Officer](#) for details regarding these meetings.

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### Message from the Program Officer

*Jon Harrison*

**Anaheim:** Greetings! The Anaheim meeting was excellent, partially thanks to a vibrant divisional program organized by Michelle Wheatly. A special thanks to Robert Full for an outstanding opening session talk, and to Lars Tomanek, Brian Helmuth, Malcolm Gordon, Ian Bartol, and Jay Hove for organizing DCPB symposia. A special congratulations to Sönke Johnsen, winner of the 2002 Bartholomew Award. By my count there were 84 oral DCPB presentations and 77 DCPB posters.

**Toronto:** The 2003 SICB meeting will be in Toronto. It will be a bit cooler than Anaheim, but Toronto is a cosmopolitan city with great restaurants, interesting sites, and a subway system that is safe and easy to use. The divisional symposia for Toronto will be: *Comparative and Integrative Vision Research*, organized by Mason Posner, Sönke Johnsen and Todd Oakley, and *30 Years of Biochemical Adaption: A Symposium in Honor of Peter W. Hochachka*, organized by Raul Suarez. In addition, there are several society-wide symposia with a DCPB-flavor, including *In Vino Veritas: The Comparative Biology of Ethanol*, organized by Robert Dudley and Michael Dickinson, *Selection and Evolution of Performance in Nature*, organized by Joel Kingsolver, and *NSF Integrated Research Challenges in Environmental Biology: Biological Stoichiometry from Genes to Ecosystems*, organized by Jon Harrison and Robert Sterner. So plan now on attending the Toronto SICB meeting!

**New Orleans:** Now is the time to start thinking about symposia for the 2004 meeting in New Orleans. There is a particular need for broad symposia that cross divisional boundaries. This is a great way to get involved in the society and really contribute to the program. Please email me ([J.Harrison@asu.edu](mailto:J.Harrison@asu.edu)) to discuss ideas and get started.

**Other Meetings:** DCPB/SICB is co-sponsoring the American Physiological Society meeting entitled, *The Power of Comparative Physiology: Evolution, Integration, and Applied*. This meeting will be held in San

Diego in August 24–28, 2002. Don't forget that the abstract deadline for this meeting (May 1, 2002) is fast approaching. To receive the call for paper and registration information go to:

[www.the-aps.org/meetings/aps/san\\_diego/home.htm](http://www.the-aps.org/meetings/aps/san_diego/home.htm).

A satellite symposium to this APS meeting will be held on August 29. This symposium, entitled "The UBC Legacy Symposium", has been organized to honor John Phillips, Peter Hochachka, Dave Randall and Dave Jones for their contributions to the field of comparative physiology and biochemistry. For more details go to: [www.science.ubc.ca/~biomania/thebig4.htm](http://www.science.ubc.ca/~biomania/thebig4.htm).

Another international comparative physiology meeting on the horizon is the Sixth International Congress of Comparative Biochemistry and Physiology, organized by IUBS at Mt. Buller, Australia, Feb 2–7, 2003 ([www.zoo.latrobe.edu.au/iccpb/](http://www.zoo.latrobe.edu.au/iccpb/)). DCPB is a major co-sponsor of this ICCPB/IUBS series of meetings that occur every four years.

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## Message from the Secretary

*Mary E. Chamberlin*

### **SICB DCPB BUSINESS MEETING MINUTES, January 3, 2002**

*Recorded by Jeannette E. Doeller, past secretary for DCPB*

The meeting was called to order by DCPB Chair Steve Hand. He announced the election results– Mary Chamberlin was elected secretary, term to start at the end of the annual meeting. Steve said thanks to Barney Rees for running for office and thanks to Jeannette Doeller for serving as secretary for the past 2.5 years.

Bill Zamer, Program Officer of the Integrative Animal Biology (IAB) program at NSF, discussed funding success rates – 14% recommended for funding in IAB, 24% recommended for funding in the Ecological and Evolutionary Physiology program. The lesson from the IAB fall panel is that "persistence pays off" – of the 12 proposals recommended for funding, 8 were resubmissions and 4 had been submitted 3 times. The NSF budget has been increased by 8%. NSF needs reviewers, panelists and rotating program officers. If interested in serving in these ways, please email your program officer (addresses on the website [www.nsf.gov](http://www.nsf.gov)). Contact your program officer with hot news about your research – for example, let NSF know ahead of time of publication in Science, Nature, PNAS. Also, include in annual and final reports important firsts that have been funded by NSF – this may affect program budgets.

Steve introduced Nora Terwilliger, IUBS/IUPS representative. Nora passed out brochures about the upcoming IUBS ICCPB meeting in Australia in February 2003. SICB DCPB has co-sponsored this meeting throughout the years (the previous one was held in Calgary, Canada, 1999). A new event will occur in the 2003 meeting – the Knut Schmidt–Nielsen lecture, with George Somero as speaker. The website for this meeting is [www.zoo.latrobe.edu.au/iccpb](http://www.zoo.latrobe.edu.au/iccpb). The venue is a ski resort in summer, accommodations ranging from low price dormitories up to chalets.

Nora attended the IUPS meeting in Christ Church, August 2001, as the DCPB representative. IUPS has been restructured to include 9–10 commissions. DCPB has submitted a number of names for service as commissioner. The next IUPS meeting will be in San Diego 2005, held in conjunction with the Experimental Biology meeting. Nora introduced Lou Burnett who also serves on the National Organizing Committee for the IUPS. Lou indicated that although the 2005 meeting program is in the early planning stages, he and Nora have

made sure there are comparative physiology topics on the program. Walter Boron is the chair of the Program Committee, and Barbara Block is a member. There will be opportunities for symposium development for this meeting.

Steve introduced Marvalee Wake, SICB President. She thanked all attendees as participation is essential for the society ("service in a controlled manner is good"), and she encouraged anyone to become involved at the division and society-wide levels. If interested in serving, contact Steve Hand ([shand@lsu.edu](mailto:shand@lsu.edu)). She introduced several other individuals involved in the society – John Wingfield, President-Elect, Brett Burk of Burk Associates, and Ron Dimmock, SICB Treasurer – for questions and answers. The current meeting has about 1200 registrants, same as in Chicago, the largest meeting in recent history. Al Bennett, chair of the membership committee, indicated the society has 2100–2200 members, same as last year, with the grad student/post doc category remaining fairly constant. Marvalee thanked Al and committee members for a letter-writing campaign this summer aimed at increasing membership.

Steve introduced Jon Harrison, DCPB Program Officer. Jon indicated that there are two DCPB-sponsored or co-sponsored symposia at this meeting. Also, there are 21 candidates for the Best Student Talk competition, and 10 candidates for Best Student Poster, and 13 judges – thanks to those willing to serve this way. The approved DCPB symposia for Toronto are: "30 Years of Biochemical Adaptation: A symposium in honor of P.W. Hochachka", organized by Raul Suarez (Peter: "You're kidding!!"); and "Comparative and integrative vision research" organized by Sönke Johnsen, Todd Oakly, and Mason Posner (see [Message from the Program Officer](#)).

Jon solicited input about power-point presentations at the meeting. Is it reasonable for the session chair to be responsible for making sure computers are available? The general consensus was yes. Perhaps all information could be provided on CD, or emailed to session chairs before the meeting, who would then burn the session on a single CD. However, compatibility of computers and preparations may be a problem. Jon thought Mac and PC platforms should be available.

Jon asked for opinion concerning the inclusion of an undergraduate student registration category, and an undergraduate student competition, either division- or society-wide. The general consensus was that these are good ideas.

Steve mentioned the upcoming APS meeting in San Diego, August 2002, co-sponsored by SICB DCPB ([www.the-aps.org/meetings/aps/san\\_diego/home.htm](http://www.the-aps.org/meetings/aps/san_diego/home.htm)). Jim Hicks invited all to come.

Steve introduced Jim Hicks, the new Editor-in-Chief of Physiological and Biochemical Zoology. Jim indicated that the editorial offices, now in Irvine, are up and running, with Associate Editors Al Bennett and Tim Bradley. Because he has just assumed office, he had no statistics to present at the meeting, but discussed four changes in the journal.

- 1) There is a minor change in the journal cover reflecting the unique niche of PBZ – a subtitle "Ecological and Evolutionary Approaches".
- 2) All submissions and reviews will be done online, although things can still be sent through the mail. In about a month, you will be able to log in to the PBZ server for information. Conversion to PDF will be done at Irvine.
- 3) There will be a double-blind review system – reviewers are unknown to authors and vice versa. This is more common in the social sciences; PBZ will try this as an experiment.
- 4) The Invited Perspective has always been around, but Jim wants more submissions here. Anyone with ideas can contact Jim ([jhicks@uci.edu](mailto:jhicks@uci.edu)).

Steve introduced Peter Hochachka, Editor of Comparative Biochemistry and Physiology. Peter indicated that CBP is now back on track and expressed gratitude to SICB for support. The current turnaround time is about

10 months. Acceptance rate is 60–65%, similar to AJP. Manuscript quality has increased as has number of submitted manuscripts. CBP is also affiliated with 8 other societies. SICB could publish abstracts of the annual meeting in CBP – Elsevier Press does this at cost. Pat Walsh is now co–Editor with Tom Mommsen and Peter.

Steve indicated that SICB has asked that members provide feedback concerning the website and divisional webpages. If anyone has suggestions or questions, contact Craig Frank, chair of the electronics communication committee ([frank@fordham.edu](mailto:frank@fordham.edu)). It was pointed out that although the website has been much improved, the Personal Schedule selection for the annual meeting was not as useful as it could be.

All divisions have been encouraged to reword bylaws to handle unexpected office vacancies. Steve read the new wording for vote. During discussion, it was suggested the new wording should indicate that appointed officers fill out the term to keep election cycles intact. New wording now reads: "In the case when a divisional office is unexpectedly vacated, the current Nominating Committee will recommend to the Chair an interim officer who will be appointed to serve the remainder of the term." Vote was unanimous in favor of new wording.

The meeting was opened for discussion:

Timing of the poster sessions is bad, interfering with evening activities. However, because this is one of few meetings at which graduate students have a chance to make an oral presentation, contributed papers should not be eliminated. Suggestions: contributed paper sessions could end at 3PM and poster sessions could go from 3–5PM; evening poster sessions could be supplemented with refreshments; contributed papers and poster sessions could be scheduled at the same time, creating conflicts but there are always conflicts – "this is the price we pay for being in an integrative society, and it's a good price". In a straw vote, there was only one vote to eliminate contributed papers.

The program format is not ideal, using a non–sequential numbering system. Suggestions: this is the time to lobby the new SICB Program Officer Stacia Sower ([sasower@cisunix.unh.edu](mailto:sasower@cisunix.unh.edu)). Any feedback about topical organization of presentations should be sent to Jon Harrison ([j.harrison@asu.edu](mailto:j.harrison@asu.edu)) or Stacia Sower.

Steve thanked Tim Bradley, rotating off as Past DCPB Chair, for all his work, and he thanked Nora for becoming the new DCPB Chair. At the end of the meeting, Steve becomes the Past Chair. Nora presented Steve and Jeannette with covers of the new Hochachka and Somero Biochemical Adaptations book (the books themselves are on order). Many thanks to the division for such a great gift! Nora discussed the rising prominence of comparative and integrative physiology in other societies such as APS.

After a brief intermission, Steve introduced the 2002 Bartholomew Award winner, Dr. Sonke Johnsen. Dr. Johnsen was presented with a certificate of recognition and other prizes, and then gave the Bartholomew Lecture entitled "Hidden in Plain Sight".

## **ELECTION OF OFFICERS**

We are holding elections for DCPB Chair–elect and Program Officer. The electronic ballots will be distributed during the summer. Please be sure to vote when your ballot arrives!

### ***Chair Elect Candidates***

**Donna L. Wolcott**

**Current Position:** Associate Professor, Department of Marine, Earth, and Atmospheric Sciences, North Carolina State University, Raleigh, NC.

**Education:** B.A. (1965) UC Riverside, Biology; Ph.D. (1972) UC Berkeley, Developmental Biology.

**Professional Experience:** Postdoctoral Fellow (1972–73) Toxicology, NCSU; Visiting Lecturer (1974–75) North Carolina Central University; Research Assoc. NCSU (1980–86); Visiting Associate Professor NCSU (1986–96); Director of Undergraduate Programs, Department of Marine, Earth, and Atmospheric Sciences (1994–); Associate Professor NCSU (1996–); Research Associate, Smithsonian Institution (1998–)

**SICB Activities:** Member since 1980. Secretary, Div. Invertebrate Zoology, 1995–97. Co-organized symposium with Guy Charmantier, "Ontogenetic Strategies of Invertebrates in Aquatic Environments", Chicago, 2000.

**Other Memberships:** AAAS; American Geophysical Union; American Society of Limnology and Oceanography; American Women in Science; The Crustacean Society; Phi Beta Kappa; Sigma Xi; Panel member, National Science Foundation, Physiological Processes–1990.

**Research Interests:** Physiological ecology of aquatic and terrestrial crabs. Physiological and behavioral constraints and strategies in the blue crab, *Callinectes sapidus*, with emphasis on reproduction, foraging, and molting. Identification, through field observation, of environmental stressors; study of morphological, behavioral, biochemical and developmental adaptations to stress. Dispersal and recruitment and its effect on population structure and life history strategies. Nitrogen excretion and limitation in decapod crustaceans.

**Statement of Goals:** The Society of Integrative and Comparative Biology represents the "culture of science" at its best. As much as we might relish the relative solace that the lab bench provides, research, and particularly its extension into teaching and outreach, is not a solitary enterprise. The Society provides its members with tools they need to address intellectual, ethical, and social obligations. The SICB annual meetings provide opportunities for sharing our own research, exposure to new research findings in both related and far-flung research areas, interactions with both well-established colleagues and those just embarking on a career in science, and help with doing a better job of educating our students and the general public. The recent strengthening of interdisciplinary symposia and better coordination between societies, and the financial health of the Society, have placed the Society to continue into the 21<sup>st</sup> Century as a dynamic entity, useful to its members and to society at large. Since only active members derive benefit from SICB, and vice-versa, my goal would be to encourage renewed participation by inactive members in the society and its meetings, and to inspire new scientists to join. If financially feasible, discounted registration fees for first-time meeting participants might be a powerful incentive.

## **Donald L. Mykles**

**Current Position:** Professor, Department of Biology, 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–), Colorado State University. NSF Presidential

Young Investigator Award (1989); Fulbright Scholar and Guest Professor, University of Heidelberg (1991); Fulbright Inter-country 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*, 2002–2004.

**SICB Activities:** Invited speaker in four SICB symposia (1985, 1990, 1998, 2000); DCPB Nominating Committee (2001).

**Other Memberships:** The Crustacean Society; American Microscopical Society; American Society for Cell Biology; Sigma Xi, American Association for the Advancement of Science; American Society for Biochemistry and Molecular Biology; Society of General Physiologists.

**Research Interests:** Regulation of molting and limb regeneration in decapod crustaceans using cellular, biochemical and molecular biological methods.

**Goals Statement:** I have been a member of ASZ/SICB for twenty–five years. The DCPB is a major forum for integrative and comparative biologists nationally and internationally. As Chair, I would support and foster programs and meetings that promote the exchange of ideas and techniques across the broad spectrum of biological diversity and organization. This can be done in conjunction with other divisions in SICB, as well as with comparative biochemistry and physiology societies in other nations. DCPB should continue its involvement with the International Union of Physiological Scientists (IUPS) and the International Union of Biological Scientists (IUBS) in organizing international meetings. We must also redouble our efforts to include students and junior faculty in SICB meetings and governance; their participation is key to a vital future for the Society.

### *Program Officer Candidates*

#### **Richard Lyle Londraville**

**Current Position:** Assistant Professor of Biology, University of Akron

**Education:** B.S., Marine Biology, Long Island University, Southampton Campus (1987);

M.S., Zoology, University of Maine, Orono (1989); Ph.D., Zoology, University of Maine, Orono (1994).

**Professional Experience:** Postdoctoral Fellow, Stanford University, Hopkins Marine Station (1994–1996); Assistant Professor of Biology, University of Akron (1996–present).

**SICB Activities:** Active member and meeting participant since 1988; Session Chair, *Thermoregulation*, 1996 SICB meeting, Albuquerque, NM.

**Other Memberships:** AAAS; National Association of Biology Teachers

**Research Interests:** My lab studies cell function in relation to temperature and most of our work has focused on proteins in animals with different body temperatures. Recently, we have been studying the hormone leptin in fish and lizards. Leptin may influence a suite of traits, from onset of reproduction to endothermy, and we hope to understand its role in the evolution of vertebrate fat metabolism.

**Goals Statement:** As program officer for DCBP, I would encourage all of our members to use symposia as a way to recruit new members to the division and to SICB. For example, I would support symposia that highlight the application of emerging technologies (e.g. advances in engineering, genomics, and proteomics) to problems in comparative physiology and biochemistry. Students initially attracted to a technique would hopefully get hooked on a broader question. I would also work with SICB's Education Council to organize education-based sessions targeted for our division. Because comparative physiologists dip into many disciplines for their research, they are often the best prepared to teach introductory Biology classes. Many campuses are dramatically changing the way these introductory classes are taught, often with NSF-sponsored grants. These introductory classes are excellent opportunities for recruiting students to comparative physiology, and therefore I think our members would be well served to learn about advances in biology education.

### **Michael Hughes Dickinson**

**Current Position:** Williams Professor, Department of Integrative Biology, UC Berkeley;

Professor of Bioengineering, California Institute of Technology (Starting 7/1/02).

**Education:** Sc. B., Neural Sciences, Brown University (1984); Ph.D., Zoology, University of Washington (1989).

**Professional Experience:** Consultant, Boeing Aircraft Corporation (1986); Visiting Scholar, Max Planck Institute for Biological Cybernetics (1991); Postdoctoral Fellow, Roche Institute of Molecular Biology (1990–1991); Assistant Professor, Department of Organismal Biology and Anatomy, University of Chicago (1991–1996); Associate Professor, Department of Integrative Biology, University of California, Berkeley (1996–1999); Professor, Department of Integrative Biology, University of California, Berkeley (1999–present).

**SICB Activities:** Invited participant in four SICB (ASZ) Symposia: Evolution and Nervous Systems (1991); Aquatic Locomotion: New Approaches to Invertebrate and Invertebrate Biomechanics (1995); Muscle Properties and Organismal Function: Shifting Paradigms (1996);

Swimming and Flying in Nature (2002).

**Other Memberships:** Society for Neuroscience; International Society of Neuroethology

**Research Interests:** In my lab, we attempt to study the flight control behavior of insects simultaneously at several levels of analysis, from the physiological properties of individual neurons and circuits, to the skeletal mechanics of wing motion and the production of aerodynamic forces. This multi-leveled approach is challenging, and yet rewarding, since novel insight is often gained by addressing a problem simultaneously from several perspectives.

**Goals Statement:** As program officer for DCPB, my goal would be to broaden the depth of the division by recruiting researchers from areas traditionally outside the SICB community. In recent years, many bright and energetic individuals have emerged from the fields of genetics, molecular biology, biochemistry, biophysics with a keen interest in applying their experimental and analytical tools toward systems-level problems. I believe that the DCPB symposia represent excellent means of cross-fertilizing research in these more reductionist disciplines with the organismal approaches represented by the SICB membership.

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## Message from the Graduate Student/Postdoc Representative

*Jennifer Head*

Allow me to introduce myself as the new student representative for the DCPB. Presently, I am a Ph.D. student at the University of Oregon at the Oregon Institute of Marine Biology (OIMB) in Charleston, conveniently located on the breathtaking southern Oregon Coast. My interests in physiology extend back to my days as an undergraduate at the University of North Carolina at Wilmington, and continued on into my Masters work in Liège, Belgium, as well as my doctoral work here at OIMB. As an undergraduate, disillusioned by the glamour of Marine Biology, I became haplessly enthralled with the diving physiology of elephant seals thanks to a course in animal physiology eloquently delivered with emphasis on adaptation and the environment. In a more realistic endeavor as an undergraduate in North Carolina, I studied the respiratory responses of a local crab to changes in temperature, and so began my work with crustacean osmoregulation and respiratory physiology. I must say, I make a much more sensible scientist as a crabologist. As my research interests matured, my appreciation for integrative approaches to answering the questions I was posing grew by leaps and bounds. Now, primarily as an ecophysiologicalist with an emphasis on molecular biology and biochemistry, the importance of understanding an organism on a molecular and biochemical level can only be surpassed by understanding how and why an organism and its constituent parts function as they do in the context of its environment, be it in constant fluctuation or perfectly homeostatic.

On that note, at this past SICB meeting in Anaheim, this being my first SICB experience, aside from being delighted by the rare opportunity to cross paths with friends, colleagues, and former professors turned friends and colleagues, I was galvanized by the scope of research being undertaken by members of the various SICB divisions. In a whirlwind of stimulating symposia, talks, and posters, in what became as much a challenge of my time management skills as it did an attempt to satiate my curiosity, I listened to some tackle such grandiose topics such as metazoan evolution, some who showed that observing evolutionary changes in gene expression is more feasible than ever, and some who used new and innovative approaches to investigating the role of HSPs in vertical zonation of the intertidal, all while provided the opportunity to brush up on my methods of phylogenetic analysis. I was also afforded the occasion to learn about such topics as the importance of tongue flicking in post-strike chemosensory trailing in rattlesnakes by providing tech support in exchange for housing support so graciously provided by SICB.

This brings me to another point I wish to make. I was surprised discover how many students were not aware that SICB was providing either registration or housing support to students for a mere half-day of our time. I encourage you to pass on word to your peers and fellow students about such opportunities. I would also like to bring to your attention that SICB will be co-sponsoring a meeting being put together this summer by the APS entitled: The Power of Comparative Physiology: Evolution, Integration, and Applied. The various symposia address such important questions as: what are the genetic responses to environmental stress? This is the dawn of a new age, where more than ever before, comparative biologists are beginning to ask themselves what genetic mechanisms are behind the physiological and biochemical responses we observe in response to fluctuations in environmental factors such as temperature and oxygen availability. What are the pathways involved? What is being upregulated to produce such responses? What is being repressed? Are the genes as well as the pathways involved conserved across taxa? I digress. Make special note of the fact that the APS is offering student and postdoctoral travel awards that will be selected from amongst the submitted abstracts. Ahhh—I love a challenge.

I will close by saying that aside from the fact that there seemed to be significantly more vegetarians than vegetarian sandwiches at the student/post-doc luncheon, this past SICB conference was nothing short of splendid.

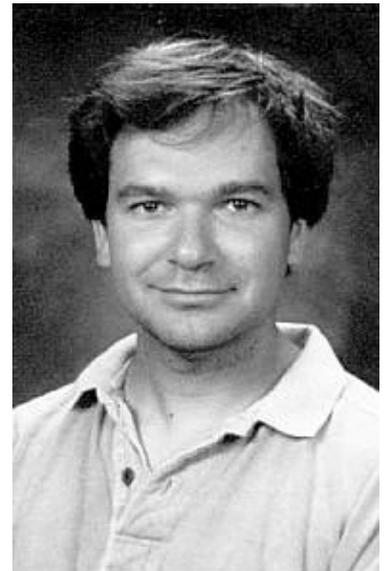
If you have any comments or questions, I would love to hear from you . I can be reached at: [jhead@oimb.uoregon.edu](mailto:jhead@oimb.uoregon.edu). A la prochaine.

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### **The George A. Bartholomew Award**

Sönke Johnsen graduated from Swarthmore College in 1988 with a degree in Mathematics, a strong background in sculpture and painting, and next to no training in Biology. After stints as a dance instructor, kindergarten teacher and free-lance carpenter, he began working with Stuart Kauffmann at the University of Pennsylvania and the Santa Fe Institute investigating the theoretical underpinnings of co-evolutionary dynamics. After two years, and desperate to learn about real animals, Sönke drove down to North Carolina to begin his Ph.D. studies with Bill Kier at the University of North Carolina at Chapel Hill. After three years spent trying to get ophiuroids to behave in an understandable manner and three more years trying to understand the morphology and visual system of what are, in essence, living rocks, he left echinoderms and North Carolina for a postdoctoral fellowship with Edie Widder at the Harbor Branch Oceanographic Institution.

Here, Sönke began his work on the transparency of oceanic zooplankton, collecting and measuring the optical properties of these animals and their environments on various research cruises in the Atlantic Ocean and the Gulf of Mexico. After 18 months, he moved north to Cape Cod, to take a second postdoctoral fellowship with Larry Madin at the Woods Hole Oceanographic Institution, continuing to work on the same topic, occasionally branching off into studies of bioluminescence, zooplankton distribution, and magnetic orientation behavior. After 18 more months, the postdoc transformed itself into a job at Woods Hole. One year later, he moved back to North Carolina to take an Assistant Professorship in the Biology Department at Duke University, where he remains. His current projects include the physical and cellular basis of transparency, the usefulness of coloration as a cryptic strategy, the effect of UV radiation on vertical migration and visual predation, and the nature of magnetoreceptors in sea turtles and spiny lobsters.



The 2001 Bartholomew Award recipient, Sönke Johnsen