

Division of Evolutionary Developmental Biology (DEDB): 2001 Spring Newsletter

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Message from the Chair

Rudy Raff

Dear DEDB members:

I wanted to say that the division has started its second year well, with two terrific symposia, "Starting for Fins: Parallelism in the Evolution of Limbs and Genitalia," and "Lesser known protostome taxa; evolution, development and ecology" at the Chicago meeting, and more coming up at in 2002. The DEDB co-sponsored symposia scheduled for the Anaheim meeting are "Eco-devo the interface of ecology and development," "The evolution of metazoan complexity," and "Perspectives on the Cambrian radiation."

It is also clear that evo-devo is thriving as a field, with an exceptional number of positions opening this year. Because of the highly integrative nature of evo-devo, it fits well with the goals of the SICB. I can only urge you all to come to the 2002 meeting, and to take part in the DEDB business meeting (which will be presided over by Chair Günter Wagner), as well to attend the evo-devo symposia. The business meetings are important. Please plan on taking part in running YOUR division.

I'd also like to remind you that the SICB is a sponsor of EVOLUTION DEVELOPMENT. If you are not a subscriber, you are missing the good stuff. The journal is indexed by SciSearch, ISI, Current Contents, and we've just been picked up by Medline.

EVOLUTION DEVELOPMENT is available to SICB members for an individual subscription price that represents a discount of about 25% of costs to non-members -- \$64 for US members. This is a very good bargain. Information about the journal can be found at www.blackwell-synergy.com. To subscribe as an SICB member call 1-888-661-5800. Please have a look at the [News and Announcements](#) section of this Newsletter for more information on the journal and subscriptions.

Message from the Chair Elect

Günter P. Wagner

I was advised to be brief. After all, who wants to read more than three lines from a society officer? Here are my three points:

- Membership: Whatever the division can do for you scales with the size of membership. We currently have about 75 members, which is way below the number of DevoEvo researchers. Please activate your friends and colleagues who are in the field to become members of the division or SICB, if they are not already society members. Tell them that SICB has substantially reduced member fees.
- Division activities: this is your division, please help us serve you better by sharing your ideas. Would you like to see us organize discussions and workshops on topical DevoEvo issues? Please send me your suggestions to gunter.wagner@yale.edu with the keyword DEDB Activities. Thank you!
- Molecular and Developmental Evolution is now available to SICB members at a discount price for personal subscription. This will make MDE the second DevoEvo journal affiliated with SICB. You will receive a communication with the details of this arrangement from the publisher soon.

Message from the Program Officer

Mark Q. Martindale

Greetings evo/devo-tees! Many thanks to those of you who attended the second annual meeting of the Division of Evolutionary Developmental Biology (DEDB) in Chicago. For those of you who missed it, we co-sponsored two symposia, "Starting with Fins: Parallelism in the Evolution of Limbs and Genitalia" organized by Eduardo Rosa-Molinar and Annie Burke and a second, "The "Lesser-known" Protostome Taxa: Evolution, Development and Ecology" organized by Jim Garey. Both symposia were well attended and provided stimulating discussion. Kudos go to all the organizers and all speakers.

As always, there was also a "best student contributed paper" competition. Although there were a number of outstanding talks, the judges this year determined that there was a first place tie between two outstanding presentations. The first was by B.J. Davidson, W. Moody, and B. Swalla entitled, "Tunicate out of body experiences: extra-somatic cell migration and other insights and observations on urochordate metamorphosis" given by B.J. Davidson. The co-winner was, Greg Davis for his paper along with C.A., Jaramillo, and N.H., Patel, entitled, "Pax group III genes and the evolution of insect pair-rule patterning. Congratulations to the winners!

Next year's meeting is in Anaheim, CA. Unfortunately, our proposal to enter a float in the Rose Bowl parade was nixed by the Rose Bowl Committee (apparently, there was some confusion about the meaning of "the first cleavage stage"), but we are still co-sponsoring three symposia focussed on the Cambrian Explosion, the evolution of metazoan complexity, and the interface between ecology and development ("Eco-Devo"). Stay tuned for more details on the next meeting.

It is time to begin planning exciting new symposia for the meeting is in Toronto in 2003. Please feel free to contact me if you would like to talk about future possibilities. Remember to tell your students and colleagues about the Society and our new Division. Dues are actually going down AGAIN so this is a good time to join and don't forget to keep sending your papers to Evolution and Development (Blackwell Science), a new journal sponsored by SICB. Aloha!

Message from the Student/Postdoc Representative

Patricia Hernandez

Hello everyone. I hope that all of you enjoyed the last meeting as much as I did. Particularly helpful was the Student/ Postdoctoral Strategies Workshop. I urge all of you to attend such workshops in the future. A very big part of this workshop was discussing life after the Ph.D. Strategies for attaining the right postdoctoral position were discussed. If you would like to access the full NAS report just go to www.nationalacademies.org/postdocs. Also the POSTDOC NETWORK can be reached at nextwave.sciencemag.org/feature/postdocnetwork.shtml.

Kevin Kelley, Chair of the Student/ Postdoctoral Affairs Committee (SPDAC) did a fine job organizing this workshop. He also urged graduate students and postdocs to get more involved in the society. Two questions in particular that he wanted feedback on were:

- Which topic would you like to have covered at next year's workshop held by the SPDAC?
- What kind of "voice" should the SICB and/or SPDAC have on your behalf?

The SPDAC is your link to the society. Thus attending and contributing at meetings of this committee is the only way to assure that your needs within the society are met. Please write Kevin at kmkelley@csulb.edu and let him know what you think.

Another reminder. A very important part of these conferences is going to the business meetings. Next year we will have a division social during the business meeting. We are all tired after a long day of talks but these meetings are not very long and they are very important. Since this society has always catered to students and postdocs you can play a big part in the future of our division by attending.

Message from the Secretary

Ken Halanych

Spring Election of New DEDB Officers

At the SICB meeting in Chicago, nominations were held for two DEDB officer positions that are up for election this year. Eduardo Rosa–Molinar and Terri Williams were nominated for the Program Officer, and Tricia Crotwell, Brad Davidson, and Marcus Davis were nominated for the Student/Postdoc Representative. A short sketch for each of these excellent candidates follows.

Input for the Webpage

To reiterate Gunter's point, this is your division and input is needed. The divisional webpage is currently under revision. If you have specific ideas or comments on how the page could be improved or made more useful, please write me (khalanych@whoi.edu).

Division of Evolutionary Developmental Biology Election

Candidates for DEDB Program Officer

(2 candidates: Eduardo Rosa–Molinar, Terri Williams)

Eduardo Rosa–Molinar

Current Position: Assistant Professor, Department of Biology, 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, 1999–present: Assistant Professor, Department of Biology, University of Puerto Rico, Rio Piedras Campus, 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; December, 1994–June, 1997 Pre–Doctoral Fellow in Neuroscience, Department of Cell Biology and Anatomy, University of Nebraska Medical Center, Omaha, Nebraska

SICB Activities: Symposium Organizer (2001), Division of Evolutionary Developmental Biology (DEDB)

Other memberships: Society for Developmental Biology, Spanish Society of Developmental Biology, The Linnean Society of London (Fellow), Society for Neuroscience, Society for Behavioral Neuroendocrinology, International Society for Neuroethology, The International Society for Optical Engineering, Microscopy Society of America, Sigma Xi, The Scientific Research Society, American Association of the Advancement of Science

Research Interests: Major evolutionary changes in the patterning and development of the vertebrate axial and appendicular skeleton and nervous system; vertebrate organismal evolution (especially in atherinomorph teleost fishes)

Goals Statement: My primary objective during my tenure as DEDB program officer would be to recruit, work with, and encourage developmental and evolutionary biologists including plant biologists to develop proposals, symposia, and obtain funding to bring together investigators with the intent to begin discussions about "big picture questions" in the field of evolutionary developmental biology (Evo–Devo) as well as the latest most appropriate tools and theories in evolutionary and developmental biology as well as plant biology

Terri Williams

Current Position: Research Scientist, Yale University

Education: B.S. Zoology, 1982, Duke University; Ph.D. Zoology, 1990, University of Washington

Professional Experience: Postdoctoral Fellow, Dept. of Zoology, University of Texas; NSF International Postdoctoral Fellow, Dept. of Anatomy, University of Vienna, Austria; Postdoctoral Fellow, Dept of Biochemistry, Autonoma University, Madrid, Spain; Pew Teacher/ Scholar Postdoctoral Fellow, Dept. of Organismal Biology and Anatomy, University of Chicago and Biology Dept., Macalester College.

SICB activities: 1998 participant in Developmental and Evolutionary Perspectives on Major Transformations in Body Organization symposium; 1993 participant in Evolutionary Morphology of Marine Invertebrates and Juveniles symposium.

Research Interests: Development and evolution of limb morphology in crustaceans; modularity of the arthropod body plan.

Goals Statement: SICB has long provided refuge against the extreme specialization of present-day research by bringing together biologists whose interests are broad. As such it is an ideal venue for the interdisciplinary Division of Evolutionary Developmental Biology. As Program Officer, I would try to further the integrated perspective at the heart of DEDB by trying to showcase the many different areas of expertise that contribute to the emerging field of evolutionary developmental biology.

Candidates for DEDB Student/Postdoc Representative

(3 candidates – Tricia Crotwell, Brad Davidson, Marcus Davis)

Tricia Crotwell

Current Position: Ph.D. student, Department of Biology, University of South Dakota, Advisor: Dr. Paula Mabee.

Education: Ph.D. expected 2003, University of South Dakota; M.S. 1997, Texas AMUniversity; B.S. 1991. Texas AMUniversity at Galveston.

Professional Experience and Other Activities: Nelson Endowment Graduate Research Assistantship (2000–2001); Teaching Assistantship, 1999–2000, University of South Dakota; Biology Instructor (Adjunct), Sam Houston State University, TX, 1998–1999; Biology Instructor (Adjunct), Tomball College, TX, 1998–1999; Quality Control Specialist, American Seafoods, WA, 1997; Marine Fisheries Observer, Northwest Observers, OR, 1996–1997; Teaching/Research Assistant, Texas AMUniversity, 1992–1996.

SICB Activities: Member since 1999; Student volunteer, SICB, Chicago.

Other Memberships: Society of Systematic Biologists.

Research Interests: Origin and evolution of genetic mechanisms underlying joint formation and skeletal segmentation in vertebrates; modularity, development, and evolution of the median fins of fishes; anterior/posterior patterning of the fish skeleton.

Goals Statement: I propose to continue the work begun by P. Hernandez, our Division's first Graduate Student/Post Doc. Representative, by focusing on student recruitment into the Society as a whole, and maintaining communication with our close "sister" divisions, DDCB, DEE, and DSEB, among others. A particular interest of mine is student support. SICB provides very generous student support at a number of levels, and I would work to diversify that support from within our Division. Even small awards, such as book certificates, poster awards, or research stipends, can make an enormous difference in student confidence. Finally, the many Divisions within SICB provide a forum for researchers with very diverse interests to discuss and exchange ideas. I believe that student representation and involvement in such exchanges will strengthen not only the Division of Evolutionary Developmental Biology, but also the Society as a whole.

Brad Davidson

Current Position: Graduate Student, Department of Zoology, University of Washington

Education: 1995 – 2002? Ph.D. Program, University of Washington; 1991 B.A. in Biology, Swarthmore College

Professional Experience and Other Activities: 2000 –2001 NSF PRIME Fellowship (Partnerships for Research in Inquiry–based math, science, and engineering), 1996– 2000 National Research Service Award predoctoral traineeship (NIH), 1998 Company of Biologists Travel Fellowship for research conducted at the Station Biologique, Roscoff, France, 1998, Huckabay Fellowship for Development of Innovative Curriculum, 2000 Instructor: Marine Diversity and Conservation, UW Bothell, 2000 TA: Comparative Invertebrate Embryology Lab, UW Friday Harbor Labs, 1998 Co–Lecturer for "Animal Diversity" course at Univ. of Washington, 1996 –1999 TA, University of Washington, 1991–1992 High School Biology Teacher, Storm King School, Storm King, NY.

SICB Activities: 2001 SICB Meeting, DEDB Best Student Paper Award

Research Interest: For my thesis work, I am exploring urochordate metamorphosis. Urochordates occupy a critical evolutionary position as non–vertebrate chordates. Therefore the study of urochordate metamorphosis may provide insights into the origins of both chordates and vertebrates. I am employing a number of molecular techniques to gain further insight into urochordate metamorphic signaling. I have carried out a series of subtractive hybridizations aimed at probing the expression of genes immediately prior to and after metamorphosis. This has led to the isolation of a number of interesting transcripts which match identified genes such as Notch, Complement Factor B, Cornichon, Coronin and alpha–NAC. These genes have well described roles in cell signaling, the immune response, and transcriptional activity. By characterizing the expression and function of these genes in urochordate metamorphosis we are beginning to gain valuable insight into the role of these genes in urochordates as well as the evolution of developmental pathways within the chordates.

Goals Statement: My goal as graduate student/post–doc representative of the DEDB division would be to maximizing our exploitation of the resources and opportunities available through SICB. I believe that our membership in this division could be more fully utilized to provide a forum for sharing information on research, job opportunities, teaching techniques etc. I would work to tap this resource by establishing means by which members can easily communicate with each other both during the meetings and during the rest of the year. I think it would be particularly valuable to have this type of communication available in the month or two before the annual meeting so that students and post–docs could coordinate gatherings and other informal events in advance. I would also work to gather and implement other ideas from students and post–docs on how to improve our experiences as SICB members.

Marcus Davis

Current Position: Ph. D. student, Department of Organismal Biology and Anatomy, University of Chicago

Education: 1997 early graduate work at the University of Pennsylvania before transferring to the University of Chicago in 2000; 1996 B.S. Biology, Georgia Institute of Technology.

Professional Experience and Other Activities: University of Pennsylvania, Teaching Assistant and Laboratory Instructor (Introductory Biology, Evolutionary Biology, and Vertebrate Comparative Anatomy), 1997–2000, Graduate Admissions Committee, Student Representative. University of Pennsylvania, 1999–2000; Public Lecturer, Fernbank Museum of Natural History, Atlanta. 1995–1997; Regional and University President, Society of Physics Students and Sigma Pi Sigma Honor Society, Georgia Institute of Technology, 1994–1995.

Research Experience: Current thesis research (The evolution of skeletal development in vertebrate paired

appendages), Department of Organismal Biology and Anatomy, University of Chicago; 1996 Research Assistant (Aquatic ecology of coral reef ecosystems), Department of Biology, Georgia Institute of Technology; 1994 Research Assistant (Phase Coupling in Non-linear Electrical Oscillators), Department of Physics, Georgia Institute of Technology; Vertebrate paleontology field work in Pennsylvania (1997–2001), Arctic Greenland (1998), and Nunavut (1999–2000).

Research interests: The evolution of skeletal development in vertebrate paired appendages; sarcopterygian evolution and systematics; archosaur evolution and systematics; developmental mechanisms of skeletogenesis.

Goals Statement: Evo–Devo is an inherently synthetic discipline, bringing together bodies of research, and researchers, that have classically remained independent. More so than in established fields, the direction that Evo–Devo will take is in the hands of future researchers. My primary objective during my tenure as Graduate Student/Postdoc representative would be to foster communication between disciplines AND between students/postdocs, professors, and institutions. Would you like to have a better sense of who is doing what? What are the "big picture" questions in the field? Where are the research opportunities? Together we can build this dialogue.