



## Division of Evolutionary Developmental Biology

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### **DEDB Officers & Representatives**

**Mark Q. Martindale**  
Chair 2010-2012

**Elaine Seaver**  
Secretary 2009-2011

**L Patricia Hernandez**  
Program Officer 2010-2012

**Rebecca Marie Shearman**  
Student/Postdoc Representative 2008-2011

**Paulyn Cartwright**  
ICB Editorial Board Representative 2008-2013

### **Message from the Chair**

*Mark Q. Martindale*

Greetings EvoDevotees from sunny Honolulu! (sorry, I couldn't resist)

This is my first newsletter as your fearless leader of DEDB and want to encourage everyone to work hard and keep your heads up and minds open! "Everyone fights, no one quits" (Starship Trooper, the forgettable 'bug' movie that saw Doogie Howser complete metamorphosis/puberty...). But I digress, SICB is still my favorite scientific organization because where else can you find people using modern molecular and imaging techniques to answer fundamental biological problems while wearing muddy boots (or around here, with sand between their toes.. inside closed-toed shoes in the lab, of course..). Seriously, I learn something new about some cool animal or how to get things done at every meeting I attend. This last meeting in Seattle was no exception. With several terrific symposia (spiral cleavage, regeneration, chordate genome evolution) there was literally TOO MUCH GOOD stuff to see at any given moment of the day. I wanted to clone myself just so I could be in more than one room at the same time.

While it is gratifying and significant that developmental biology meetings are increasingly supporting sessions on non-model systems and comparative development, and likewise that evolutionary biology meetings are increasingly interested in the role that development plays in evolutionary change (after all some of the most important new advances in our understanding of biology such as RNAi, imprinting, epigenesis and cryptic genetic variation were all discovered in developing systems), the SICB is still THE place for EvoDevo! We have the first division that is explicitly focused on this topic and we have had good attendance at our yearly meetings. I encourage all of you to spread the work and get your students and postdocs involved in the Society. They are the mortar between the bricks and the future of our field. Anyone that has ever attended these meetings knows that the SICB is a genuine and exciting place to learn with a very student-friendly atmosphere.

I would also like to bring to your attention a new opportunity to publish your latest data! There is a new open access online journal from BioMed Central called EvoDevo (<http://>



[www.evodevojournal.com/](http://www.evodevojournal.com/)). With a flat publication fee it allows you to have a virtually unlimited number of color figures, animations, videos etc to take advantage of the power of on line imaging. So now you don't have to hide all your beautiful data and you can publish a thorough story the way it should be, from beginning to end (and from both ventral and lateral views!) And as you might expect, because it is on line you will be able to determine how frequently people visit/download your paper that could be valuable information for applications, promotion, tenure etc. With all the new model systems and modern approaches to studying the development in an evolutionary and comparative context we anticipate that this new publication venue will really take off and become a valuable resource to our growing field.

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## Message from the Program Officer

*Patricia Hernandez*

What a great meeting in Seattle! The increasing numbers of posters and presentations within our division pleasantly surprised those of us in charge of judging. There was however some concern that some of the presentations, while representing excellent developmental biology, were not really addressing evolution. This is something that we should be careful with when advising our students.

Plans are already underway for our next meeting in Salt Lake City. While symposia are already planned for that meeting I encourage all members to come up with ideas for symposia for our next meeting. If you would like to chat about the possibility of putting together a symposium please contact me.

One other issue that we should keep in mind is that there has been some discussion about adding another half day to the meeting.

Thus instead of finishing at noon talks would go to the end of the last day. As you can imagine this has stirred a lot of strong opinions. I bring this up because the alternatives suggested have been to either cut down on the number of symposia or cut talk length down to 15 minutes. There has also been the suggestion that more people should be doing poster presentations than oral presentations. I would be interested in learning of the overall feeling of our membership regarding these changes so that I may be able to speak clearly for our membership at the program officers meeting in September.

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## Message from the Secretary

*Elaine Seaver*

Aloha DEDB members! We have two new officers who just began their terms. Welcome Pat and Mark!

It was a great SICB meeting in Seattle! DEDB sponsored three symposia, all of which were well attended, and it was really a highlight meeting for our division and the field of evo-devo. I want to thank all of the students who entered the competition for the best poster and best talk, the number of competitors in our division was higher than in previous years, a good sign that the attendance and participation of folks in our field is increasing.

Winners are:

Best Paper Presentation:

Will Duguid. Reversed asymmetry in lithodid crabs: an absence of evidence for heritability or induction. 66.4

Best Poster:

Kevin Pang. Wnt and TGF-beta signaling in the ctenophore, *Mnemiopsis leidyi*. P1.76



In addition to a certificate acknowledgment of the award, each winner will receive a check for \$150 and a one year subscription to a Wiley-Blackwell journal.

Thanks to all the judges for their efforts. This year we had several postdoc judges, which was great!

We have an upcoming election for chair of our division, to follow Mark's current term. We have 2 very good candidates, David Weisblat (UC Berkeley) and Chris Lowe (U. of Chicago). Please look over their biographies included in this newsletter (see below) and VOTE when the ballots are issued later this spring!

Thanks to Brad Davidson, Karen Sears, and William Jackson for serving as the nominating committee for identifying candidates to run for the upcoming DEDB chair election.

I have a special announcement, the new chair of our division, Mark Martindale, has received the prestigious Kowalevsky award for comparative embryology. The Kowalevsky Medal is awarded by the Scientific Council of Saint-Petersburg Society of Naturalists for outstanding achievements in modern evolutionary biology of development and comparative zoology. Kowalevsky (1840-1901) was a pioneer of comparative embryology. Like Kowalevsky, Mark has studied and published on a large number of marine invertebrate groups (14 phyla!). Congratulations Mark!

<http://www.hawaii.edu/news/article.php?aId=3376>

I encourage all of you all to submit a few images and short paragraph describing your research interests to our DEDB Researchers Database (<http://www.sicb.org/divisions/DEDB/researchers.php3>). The SICB Researchers Database receives a lot of hits and it is a great way to advertise your work and recruit students. You can send that info di-

rectly to me ([seaver@hawaii.edu](mailto:seaver@hawaii.edu)). Likewise, I am more than happy to post research achievements of our membership; we should all celebrate and acknowledge achievements from our hard work!

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## Message from the Graduate Student/Postdoctoral Researcher Representative

*Rebecca Shearman*

Greetings fellow DEDB graduate students and post-docs!

I hope 2010 is treating everyone well, and you enjoyed this year's meeting in Seattle. We had a great turnout for the workshop on "Careers Outside of Academia", and the panel offered insight into careers ranging from work with non-profit organizations to opportunities in the Armed Forces. The workshop ended on an optimistic note with the panel reminding us that the skill set we develop as graduate students and post-docs prepares us for a variety of careers beyond academia.

We will begin planning next year's Student/Post-doc workshop this summer. Please contact me with your ideas for possible discussion topics.

That is all of the news from my end. Have a great year!

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## Minutes of the DIVISION OF EVOLUTIONARY DEVELOPMENTAL BIOLOGY BUSINESS MEETING, January 4, 2010, Seattle WA

Opening of the meeting by DEDB Chair, Linda Holland

Welcome of chair-elect, Mark Martindale



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and Program Officer-elect, Patricia Fernandez.

Linda Holland reported on continued efforts and activities of the society to respond to the Grand Challenges from NSF.

Encouragement by Program Officer-elect Patricia Fernandez to generate ideas for future symposia of interest to DEDB.

Scott Gilbert, Program Officer for DDCB, brought up the possibility of DDCB merging with DEDB. Pros and Cons for such an action were discussed.

Chair-elect, Mark Martindale presented his vision and priorities for his upcoming term, emphasizing the fact that SICB is the home for the field of 'evo-devo' and expressing concern for the limited funding opportunities for the field.

Secretary Elaine Seaver introduced Student/Postdoc representative Rebecca Shearman. Membership was encouraged to utilize the SICB website and submit to the researchers database. Seaver noted that postdoctoral researchers are eligible to serve as best student poster judges and postdoctoral researchers were encouraged to participate as judges.

Visit from Steven Klein, Program Officer for Mechanisms of Development/Evolution of Developmental Mechanisms at NSF

Klein reported statistics on current funding levels of IOB and Developmental Mechanisms and emphasized importance of including above and beyond broader impact activities as a requisite for a successful grant application.

Visit from SICB executive committee. Introduction of current and elect executive committee members. Attendance at the general SICB business meeting was encouraged.

Meeting adjourned

*Submitted by Secretary Elaine C. Seaver*

### **Elections: Candidates for DEDB Chair (listed in alphabetical order)**

#### **Chris Lowe**

**Current position:** Assistant Professor, Department of Biology, Hopkins Marine Station, Stanford University.

**Education:** BSc. 1991 University of Sussex. PhD. 1998 Department of Ecology and Evolution, State University of New York at Stony Brook.

**Professional Experience:** Assistant Professor, Department of Organismal Biology and Anatomy, University of Chicago. Miller Postdoctoral Fellow UC Berkeley. Editorial Board: EvoDevo Biomed Central.

**SICB activities:** I have attended many of the SICB meetings since starting graduate school and have participated in 3 Symposia since my postdoc work.

**Other memberships:** SDB.

**Research interests:** I am interested in early metazoan body plan evolution and diversification. My work has focused on the early evolution of the deuterostome lineage and the origins of the chordate body plan. My lab has been working on developing the hemichordate *S. kowalevskii* as a developmental model system to investigate the role of conserved body patterning genes in the diversification of adult body plans. Moving to Hopkins Marine Station this year is allowing us to expand our comparative work and we are looking for new species to address new hypotheses in body plan evolution.

**Goals statement:** The division of DEDB in SICB provides the only regular venue for unabashed comparative developmental biology. As emerging, cheaper sequencing technologies are





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allowing even small labs to develop their own new developmental model systems, funding support is declining for the essential descriptive work that is necessary to make functional studies possible. I am interested in being more involved in the Division to promote young scientists who are driven by a fascination with comparative embryology and fundamental questions in zoology. The major discoveries of EvoDevo in the 1990s were mainly the result of descriptive, comparative studies. We have yet to sample a fraction of extant taxa, and DEDB must help promote this type of developmental biology. I would work to build enrollment in DEDB by helping promote cross disciplinary and innovative symposia that cements SICB as the most significant meeting of the year for anyone interested in EvoDevo.

### David Weisblat



**Current position:** Professor of Cell & Developmental Biology in the Dept. of Molecular & Cell Biology, University of California, Berkeley.

**Education:** A.B., 1971 Harvard College; Ph.D. 1976 California Inst. of Technology.

**Professional experience:** Editorial Boards: J. Neurobiol. 1986-1995; Int. J. Dev. Biol. 1989-1996; Development 1988-1998; Roux's Arch. 1989-1996; Zool. Sci. 2003-2004; Editor, Dev./Genes/Evol.; IBRO Visiting Lecture Team (Brazil, Cameroon, India, Estonia, Mexico, Nigeria) 2001-present; NSF Dev. Mech. Panel 1999-2003; NIH, Ad hoc member DEV1, 2009; DEV2, 2010; NIH Diversity Fellowship Panel member, 2008-present. P.I., NSF UCB REU Site in Cell, Developmental and Evolutionary Biology, 2006-present.

**SICB activities:** Member since 2005.

**Other memberships:** American Association of the Advancement of Science (AAAS); American Chemical Society (ACS); American Society for Cell Biology (ASCB) Society for Developmental Biology (SDB).

**Research interests:** Glossiphoniid leech development (D quadrant specification and early cell fate decisions; stem cell processes and segmentation; D/V patterning) as a point of comparison with other clitellate annelids and more far-flung creatures.

**Goals statement:** The path by which I have arrived at evolutionary developmental biology as a major research interest is far from direct, having started in biochemistry and progressed through neurobiology, developmental neurobiology and straight development. But is nonetheless a natural progression, because I have always sought to view my work and life in general within a broad context. Striving to understand how changes in gene sequences and genomic organization lead to changes in developmental processes, and thence to changes in plant and animal morphology, is fascinating work and more than enough for many lifetimes. But in a larger sense, Evo-Devo is entirely focused on the tail end of a process initiated at the Big Bang, long before there was even hydrogen! Are there any non-trivial evolutionary principles that span the different stages of evolution from cosmology to biology? SICB is special because it provides a rare venue for the exchange of ideas and information across the bounds of particular organisms or disciplines. Under previous leadership, DEDB has embodied that goal particularly well, and I would be happy to do my part in maintaining this tradition.