



Division of Evolutionary Developmental Biology

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Message from the Chair

Linda Holland

As those of you who attended the Boston meeting know, the weather was the best Boston can offer in January. Together with the lack of eateries close by the hotel, it kept us inside where the action was. The symposium sponsored by DEDB, "Cell-Cell Signaling Drives the Evolution of Complex Traits," organized by John Torday, was very well attended. I am sure that all of the speakers have submitted their papers by now and we can look forward to the symposium volume of Integrative and Comparative Biology later this year.

I hope that all of you attended the publishers' exhibit booths this year. The Sinauer booth featured the new book "Ecological Developmental Biology" by Scott Gilbert and Dave Epel. If you didn't pick up a copy at the meeting, it is available at Amazon.com for \$37.25 with free shipping.

I want to thank all of the students who entered the competition for the best poster and best talk. Winners were: best poster, Eric Lee, Oklahoma University for his poster "Cartilage rescue in a zebrafish mutant following heterospecific expression of a lamprey SoxE gene," and best oral presentation: F. Tulenko, Wesleyan University for his talk "Body wall formation in lamprey."

Thanks to the generosity of Wiley-Blackwell, each award included \$150 plus a one-year subscription to the Journal of Experimental Zoology, part B.

The DEDB business meeting was well attended. We welcomed Elaine Seaver as DEDB secretary, Pat Hernandez as Program Officer-Elect and Mark Martindale as Chair-Elect. Pat and Mark will take over from Wendy Olson and me, respectively, after the 2010 meeting.

I want to thank Dave McCauley and Jessica Bolker for their service as a nominating committee for the position of secretary to elect a new secretary to take over from Elaine Seaver



after the 2011 meeting. Candidates are Mike Shapiro (U. of Utah), Andreas Heyland (U. of Guelph), and Alexa Bely (U. of Maryland). Elaine will have details in her section of this newsletter. I encourage all of you to cast your vote when the ballot comes out later this spring.

Topics for discussion included the "Grand Challenges," which the SICB Executive Committee has formulated at the behest of Bill Zamer from NSF. The idea is to formulate an umbrella under which all of the SICB membership can fit in order to emphasize organismal biology at the NSF. I'm sure that our president Rich Satterlie, will fill you in about the details elsewhere in the spring newsletter.

In addition, Jim Deshler, an interim program officer for Mechanisms of Development/Evolution of Developmental Mechanisms at NSF, addressed the group. He told us that about 13 or 14 of 80 proposals (17%) were funded in the fall. I believe that 10 years ago there were typically 110-120 proposals per review period. I've not seen the statistics, but it raises concerns that people have become discouraged.

No one yet knows precisely what the benefits of NSF's \$3 billion share of the stimulus package will be for individual research grants. Our governmental liaison here at Scripps Oceanography, sent me the following: There was an NSF-wide meeting March 2 where many of the details of the ARRA and FY2010 NSF budget were discussed. Bement has instructed NSF not share any details until everything is settled and made public. At present, the only information that is being made avail-

able is the breakdown into major categories.

National Science Foundation (NSF)

\$2.5 BILLION FOR RESEARCH AND RELATED ACTIVITIES. WITHIN THIS:

\$300 MILLION FOR MAJOR RESEARCH INSTRUMENTATION (MRI)

\$200 MILLION FOR ACADEMIC FACILITIES MODERNIZATION

\$400 MILLION FOR MAJOR RESEARCH EQUIPMENT AND FACILITIES CONSTRUCTION (MREFC)

\$100 MILLION FOR EDUCATION AND HUMAN RESOURCES

Finally, I want to encourage you all to attend the upcoming meeting in Seattle in January 2010. It promises to be very evo/devo heavy. DEDB is sponsoring two symposia. Wendy Olson will give you the details. In addition, Stacia Sower (endocrinology) and I are planning a late-breaking symposium entitled "Early Chordate Genomics: Endocrinology and Development in Amphioxus, Tunicates and Lamprey." We have an excellent roster of confirmed speakers.

For those who are planning symposia for 2011, proposals will be due in August 2009. Keep in mind that the SICB will reimburse only \$100 of the registration fees for symposium speakers if the organizers apply for outside funding.

See you in Seattle!



Message from the Program Officer

Wendy M. Olson

Greetings from Iowa. Another meeting, come and gone. DEDB sponsored one symposium in Boston, "Cell-cell signaling drives the evolution of complex traits," organized by John Torday. It was well attended, and I for one am looking forward to seeing the published version in *ICB*. We also had multiple contributed sessions, organized around various themes. The abstract sorting went a little more smoothly this year, though it remains a challenge to locate all the Evo-Devo abstracts in a sea of submissions - one of the complicating side effects of a highly integrative field. And this challenge will be passed on to Patricia Hernandez, your Program Officer-Elect, following the 2010 meeting in Seattle. Congratulations, Patricia! And thanks to all of you for your patience, as I learned the ropes. Rest assured that Patricia and I will work together to make sure this transition goes as smoothly as possible.

Congratulations to our two Best Student Presentation winners, Frank Tulenko (oral) and Eric Lee (poster). I would also like to acknowledge Nadine Piekarski ("A long-term somite fate map using GFP-transgenic axolotls"), who came in a very close second for the oral BSP. The number of competitors within our division is slowly increasing. Please encourage more students to enter the competition! And a big thank you to everyone who volunteered to judge the presentations. The BSP program could not succeed without your help.

Business meeting news has already been

covered. All I would add is that attendance was (as usual) low. There was hardly anyone at the DEDB social, as well. For the Seattle meeting, think about the following two things: 1) do you want to have the social right after the business meeting (vs. a different day), and 2) do you want to combine the social with other divisions (and if so, which divisions), or stay on our own? If you have an opinion, let me know.

DEDB is currently supporting two symposia for the 2010 meeting in Seattle - one on spiralian development and evolution (organized by Dave Lambert) and one on regeneration (organized by Alexa Bely). There are several others that may be of interest to us; I will include more details in the Fall newsletter. So plan ahead, get those abstracts ready. The status of the "late-breaking" symposia is still uncertain. But it is always possible to organize regular contributed talks around a theme - something to keep in mind as you look ahead to Seattle and beyond. The 2011 meeting will be in Salt Lake City, Utah. The deadline for 2011 symposium proposals will probably be in August 2009, so brainstorm away and start bouncing around ideas ... something along the lines of "The Central Role of Alcohol and (especially) Caffeine in the Promotion of Science?" Maybe for the social. But seriously, let's come up with something exciting!

Upcoming Meetings

68th **Society for Developmental Biology Annual Meeting**, July 23-30, 2009, San Francisco (<http://www.sdbonline.org/2009Mtg/>)



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[Webpage.htm](#)). There will be a Symposium entitled 'Evolution of Developmental Regulatory Systems' and a concurrent session on 'Evolution of complex body plan.'

Message from the Secretary

Elaine Seaver

Aloha DEDB members,

This is my first newsletter as your secretary, and it is my pleasure to be involved as an officer of an active and exciting division! I took over from Marcus Davis in January 2009 and I will serve through the 2011 SICB meeting.

Divisional Elections

We have an upcoming election for position of the DEDB Secretary-Elect who will take over following my term. We have three great candidates, all of whom have a history of involvement with SICB. The candidates are: Mike Shapiro (U. of Utah), Andreas Heyman (U. of Guelph) and Alexa Bely (U. of Maryland). Please look over their biographies included in this newsletter and VOTE when the ballots are issued later this spring!

Divisional Bylaws Changes

This spring we will also vote on some bylaws revisions. The proposed changes are included in this newsletter (and were also posted in the Fall 2008 newsletter). Marcus Davis worked hard to carefully update our divisional bylaws to reflect the current SICB constitution and also add a few items standard for other divisions that need to be added to

ours. THANK YOU MARCUS! Please look over the changes and vote when the electronic ballots are posted.

I encourage everyone to take advantage of the SICB website. There are lots of resources available, and something for everyone. If you have a position available in your lab or are looking for a position, there are listings available to SICB members. There is a career information page that includes faculty job interview advice. On the 'frequently asked questions' page there are questions such as 'What do biologists do?' and 'Who hires biologists?' for folks considering a career in our field. If want to advertise an upcoming meeting or other item that would be of interest to our membership, this information can be posted on our divisional page. Check it out!

Best Student Presentations

Best Student Oral Presentation: Frank Tulenko (ftulenko@wesleyan.edu), "Body wall formation in lamprey"

Best Student Poster Presentation: Eric Lee (ericmlee@ou.edu), "Cartilage rescue in a zebrafish mutant following heterospecific expression of a lamprey SoxE gene"

Researchers Database

I also want to encourage all of you all to submit an image or two 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 what you are doing. You can send that info directly to me (seaver@hawaii.edu).



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And finally, encourage your students to join SICB. It is only \$36/year for undergraduates and graduate students.

Minutes of the DIVISION OF EVOLUTIONARY DEVELOPMENTAL BIOLOGY BUSINESS MEETING, January 4, 2009, Boston MA

- Opening of the meeting by DEDB Chair, Linda Holland

- Welcome of new DEDB secretary, Elaine Seaver, welcome of chair-elect, Mark Martindale and Program Officer-elect, Patricia Fernandez

- Announcement by Program Officer Wendy Olson of two DEDB supported symposia for the 2010 SICB meeting in Seattle, 1) spiralian development and evolution (Dave Lambert, organizer and Elaine Seaver, co-organizer) and one on regeneration (Alexa Bely, organizer and Sarah Lindsay, co-organizer). Olson encouraged the membership to attend the DEDB sponsored symposia for the current meeting entitled "Cell-cell signaling drives the evolution of complex traits," organized by John Torday.

- Linda Holland reported on a call from NSF via Bill Zamer to the entire SICB society to formulate a unifying theme of organismal biology research ('Grand Challenge')

- Discussion and brain storming for NSF 'Grand Challenge'.

- Visit from Jim Deshler, interim Program

Officer for Mechanisms of Development/Evolution of Developmental Mechanisms at NSF

- Deshler reported statistics on current funding levels of IOB and Developmental Mechanisms. Reported that predictive and quantitative proposals were well received. Encouraged proposals that fall into a new focus at NSF, 'Life in Transition'

- 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

Proposed Divisional Bylaws Changes

Proposal for changes in the bylaws of DEDB. Ballots will be issued later in the spring.

Additions appear in **bold underline**, deletions are indicated by ~~strikethrough~~.

Article IV. Membership

~~Any member of the Society for Integrative and Comparative Biology who so desires may become a member without payment of additional dues. Notice in writing to the Secretary of the Division of Evolutionary Developmental Biology shall be the only formality required.~~

Membership in the Division is open to all classes of members of the SICB. It is ac-



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quired by registration with the SICB business office.

Rationale: Article IV does not reflect current practice on how to acquire divisional membership. We propose to change article IV to reflect current practice.

Article V. Officers

The Officers of the Division shall be a Chair, a Past Chair, a Chair-Elect, a Program Officer, a Program Officer-Elect a Secretary and a Secretary elect. All Officers except the Chair, Past Chair, Program Officer and secretary shall be elected by majority vote of all those members responding to a **secure electronic** ballot submitted to the entire membership of the division, as required by the bylaws of the Society, at least sixty days before the expiration of the current officers' terms. **A brief biography of each candidate shall be made available on the ballot. Election ties will be handled according to the guidelines set in the SICB Constitution.** The post of Chair will be filled automatically every two years by elevation of the previous year's Chair-Elect. In addition, the office of Past Chair shall be occupied by the individual whose term of office as Chair has most recently ended. The post of Program Officer shall be filled automatically by the elevation of the Program Officer-Elect, who will be elected one year prior to the expiration of the Program Officer's term. The post of Program Officer-Elect shall be limited to one year, the year prior to his/her elevation to the office of Program Officer. The post of Secretary shall be filled automatically by the elevation of the Secretary-Elect, who will be elected one year

prior to the expiration of the Secretary's term. The post of Secretary-Elect shall be limited to one year, the year prior to his/her elevation to the office of Secretary. ~~The terms of all officers shall be filled on the basis of the calendar year, beginning January 1.~~ **The term of office of all elected officers and appointed representatives shall begin at the end of the second SICB Executive Committee meeting at the Annual Meeting in the year the term is to begin and will end at the adjournment of the second SICB Executive Committee meeting at the Annual Meeting in the year the term is to expire.** Graduate and postdoctoral representatives are appointed by the Chair.

Rationale: Article V does not specify the type of ballot used for officer elections, does not specify that candidate biographies will be included with the ballot, and does not specify resolution in the event of an election ending in a tie. Furthermore, Article V specifies DEDB officer terms associated with the calendar year, not with the conclusion of the Annual Meeting as specified in the SICB Constitution, Article II. Section 3. We, propose a change to Article V to reflect current practice and to match the terms of the SICB Constitution.

Proposed New Article Va. Vacancies in Office

In the circumstance where an elected officer is unable to complete his or her term of office, the following provisions are made: If the office of Secretary or Program Officer is vacated early, the Chair, in consultation with the Divisional Executive Committee, will appoint some-



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one to serve until elections can be held to fill the position. If the office of Chair is vacant, the Divisional Executive Committee, in consultation with the SICB President, will appoint someone to be the interim Chair until an election is held.

Rationale: Article V does not specify how an unexpectedly vacated office would be filled. The SICB constitution, Article VI, Section III requires that each division set such a guideline. In accordance with the wording of other divisions and under the suggestion of the SICB-wide Secretary we propose a new article Va - Vacancies in Office.



Elections: Candidates for DEDB Secretary (listed in alphabetical order)

Alexa Bely

Current Position: Assistant Professor, Biology Department, University of Maryland at College Park



Education: Ph.D., State University of New York at Stony Brook, 1999

Professional Experience: Assistant Professor, Biology Department, University of Maryland at College Park, 2003-present; Postdoctoral Research Fellow, Department of Molecular and Cell Biology, University of California at Berkeley, 1999-2002

SICB Activities: SICB member since 1998; Symposium co-organizer for upcoming 2010 symposium "Animal Regeneration: Integrating Development, Ecology, and Evolution"; Symposium speaker for "WormNet: Recent Advances in Annelid Systematics, Development, and Evolution" (2005)

Other Memberships: Society for Developmental Biology, Society for the Study of Evolution

Research Interests: My research focuses on the evolution of post-embryonic development, specifically the evolution of animal regeneration and asexual reproduction. Regeneration and asexual reproduction are widespread and highly variable among animals, yet surprisingly little is known about how or why these developmental capabilities evolve. The main projects ongoing in my lab are focused

on 1) the developmental basis and evolutionary causes of regeneration loss in annelids and 2) the origin and diversification of fission and budding in annelids and acoels. Much of the work in my lab is comparative in nature and focused on closely related species that differ in developmental abilities.

Statement of Goals: I have a deep appreciation of the value of integrative research, in evolutionary developmental biology specifically and biology more broadly. Evo-devo found a natural intellectual home in SICB, and, having regularly attended SICB meetings since 1998, I have had the opportunity to witness the birth and subsequent growth of the DEDB division at SICB. I am now eager to become more involved with the division and to contribute to its continued growth. As secretary, I would be deeply committed to increasing the involvement of students and post-docs in the division, facilitating more dialogue among DEDB members, and increasing cross-talk with other divisions to further encourage the exchange of ideas across disciplines.

Andreas Heyland

Current position: Assistant Professor University of Guelph, ON Canada

Education: Ph.D. (Zoology), 2004, University of Florida (Gainesville, FL, USA).

Professional experience: Book Editor: Molecular Mechanisms of Life History Evolution, in preparation (Oxford University





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Press); Grant reviewer NSF and NSERC; Symposium Organizer SICB, Society for the Study of Evolution (SSE)

SICB activities: I became a member of SICB in 2001 and have tried to participate in the annual meeting on a regular basis. In 2005 I co-organized a symposium on Metamorphosis for SICB

Other memberships: SSE, Society for Neuroscience, Canadian Society for Zoology

Research interests: My research focuses on understanding endocrine and neuroendocrine mechanisms in invertebrates from a developmental, evolutionary perspective.

Statement of Goals: Modern developmental-evolutionary (EvoDevo) biology requires an effective integration with ecology and life history theory. This synthesis will help to focus on traits critical for the fitness of organisms and therefore place developmental mechanisms into the relevant context for evolutionary change. The diversity of disciplines represented within SICB along with the annual meeting provides an excellent platform for this integration. The Division of Evolutionary Developmental Biology further fulfills a critical role in this process and provides opportunities for students and faculty alike to integrate these fields within SICB. In the long run this will help to define or re-define Evo-Devo.

Michael D. Shapiro

Current position: Assistant Professor of Biology, University of Utah.

Education: B.A., 1993, University of California, Berkeley; Ph.D., 2001, Harvard University.

Professional experience: Assistant Professor,

Department of Biology and Molecular Biology Program, University of Utah, 2006-present; Helen Hay Whitney Postdoctoral Fellow, Department of Developmental Biology, Stanford University School of Medicine, 2001-2006; Graduate Research Assistantships in Department of Organismic and Evolutionary Biology, and Cardiovascular Research Center (Massachusetts General Hospital), Harvard University, 1994-2001.

SICB activities: Co-Chair, Genetics and Physiology session, 2007 SICB meeting; Chair, Evo-Devo platform session, 2004 SICB meeting; Student/Postdoc Representative, Division of Vertebrate Morphology, 2001-2004; member of SICB since graduate school.

Other memberships: Society for Developmental Biology, American Society of Ichthyologists and Herpetologists, Society for the Study of Evolution.

Research interests: I am interested in the developmental and genetic basis of complex traits, especially in the vertebrate skeleton. My recent work has focused on the genetic basis of convergent skeletal evolution in stickleback fish.





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Statement of Goals: DEDB is a vibrant, interdisciplinary division, and the next few years will be an especially exciting time for us as even more researchers begin to take advantage of emerging model organisms in evolutionary developmental biology. As a happy consequence, we can look forward to further growth in the division and even more scientific diversity at our annual meeting. I am excited at the prospect of serving the members of DEDB and SICB as DEDB Secretary, and I will be committed to building upon the open communication between division officers and the membership at large. I am especially dedicated to further increasing the visibility of students and postdocs at our annual meeting, and in promoting scientific and social interactions between the junior and senior members of our division. I will work closely with the division's senior officers and Student/Postdoc Representative to achieve these goals.