The Society for Integrative & Comparative Biology

SICB Newsletter

Spring 2013 Issue

Division of Phylogenetics & Comparative Biology

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DPCB Officers & Representatives

Michael Alfaro
Chair 2013-2016

Kerin Claeson
Secretary 2012-2015

Rachel Collin
Program Officer 2011-2014

Graham Slater
Student/Postdoctoral Affairs Committee Representative
2012-2015

Message from the Chair

*Michael Alfaro, **Chair.DPCB@sicb.org***

The San Francisco Meetings were terrific! I want to congratulate Rongfeng Cui (Texas A&M) and Tina Marcroft (UCLA) as this year's winners for the Best Student Presentation Competition. This year the competition was especially tight and I would like to acknowledge Lila Leatherman (Oberlin), Elizabeth Bastiaans (UCSC), and Jonathan Chang (UCLA) as runner-ups. I would also like to thank the judges for their efforts.

We value the student presentations a great deal and discussed creating a student session for the 2014 program. We feel that this would allow us to better showcase the work done by students in our division. Please drop me an email if you have any thoughts on the matter.

More soon as the Austin meetings approach. In the meantime, good luck with your research!

Message from the Secretary

*Kerin Claeson, Secetary, **Secretary.DPCB@sicb.org***

Rongfeng Cui

Congratulations to Best Student Presentation Award winner, **Rongfeng Cui** for his presentation at the 2013 SICB Meeting. His talk, entitled "Revealing extensive reticulate evolution in Xiphophorus fishes using high-throughput phylogenomics" was just accepted with minor revision into the journal Evolution.

Rongfeng received his Bachelor's degree from the Department of Biological Sciences at Sun Yat-sen University, Canton, China in 2008. As an undergraduate, he conducted a thesis entitled, "A study of the Gobiids (Perciformes: Gobiidae) from the Pearl River (Zhujiang) estuary of Zhuhai, China." After undergrad, Rongfeng went directly into a PhD program and he is current in his forth year in the Department of Biology at Texas A&M University.

Rongfeng's research questions arose due to his general interest in the reproductive isolation mechanisms and speciation. In the where he is conducting his PhD, researchers study modern hybrid zones between two closely related swordtail fish species. His current project is an investigation of whether hybridization has been an evolutionary force in swordtails, given that reproductive isolation is mainly achieved by premating mechanisms.

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Another line of Rongfeng's research is investigating female preference behavior and mechanisms of mate choice. His goal is integrate genomic approaches to look at the evolutionary pattern of genetic loci responsible for mate choice and reproductive isolation. In particular, he's especially interested olfactory preference, given its importance in conspecific recognition in Xiphophorus.

Fun facts about Rongfeng are that he loves birds, especially parrots, and is currently raising 6 zebra finches, 4 of which are offspring of the original pair. He also has >12 yrs of experience with web programming and love languages and phonology. Someday, he would like to study language evolution. Learn more about Rongfeng here **http://swordtail.tamu.edu/en/cui.php**.

Tina Marcroft

Congratulations to **Tina Marcroft**, winner of the Best Student Poster for the DPCB at this year's SICB meeting. Her poster, entitled, "Functional consequences of carapace shape diversity in boxfishes," was co-authored by SICB members J. Modlin, G. Slater, S. Van Wassenbergh, and M. E. Alfaro.

Tina received her undergraduate degree in Biology from UCLA. She is currently in her third year of her Masters graduate work at UCLA. Tina's interest in biology was sparked after taking a course and functional morphology and becoming fascinated with the discipline. She then sought a workstudy position in Dr. Michael Alfaro's lab. In the process, she learned more about research and continued to volunteer after graduating. A lot of her work then was on boxfishes and she eventually got the opportunity to take a more leading role with boxfishes research. The work and research on boxfishes has her thinking about other armored fishes more, including in the fossil record.

Minutes of the Business Meeting, San Francisco, California 2013

Click **here**.

Other News

Check out this article by SICB members using phylogenetic and comparative methods. Paul Hertz and colleagues examined the timing and extent to which physiology and morphology diversified during the evolutionary history of Anolis lizards, published in the journal Evolution. Anoles form species-rich adaptive radiations, according to a 2009 review by co-author Jonathan Losos. Furthermore, as coauthor Raymond Huey and others have previously established, species of Anolis exhibit extensive variation in their morphology and physiology. Researchers conducted their comparative analysis on a phylogeny published by Mahler et al. (2010) to explore phylogenetic signal and the tempo of character evolution considering the variation that exists. They discovered that the physiological traits they examined exhibit more divergence than does morphology among recently diverged species of Anolis, while physiological diversification follows morphological diversification. This corroborates long held hypotheses of Anolis life history based on careful focused observations in the field. Read the article to see how they did it!

Hertz, P. E., Y. Arima, A. Harrison, R. B. Huey, J. B. Losos, and R. E. Glor. 2013. Asynchronous evolution of physiology and morphology in Anolis lizards. Evolution, Early View. DOI: 10.1111/evo.12072

Candidates for Election: DPCB Divisional Program Officer

Marguerite Bulter

Marguerite Butler

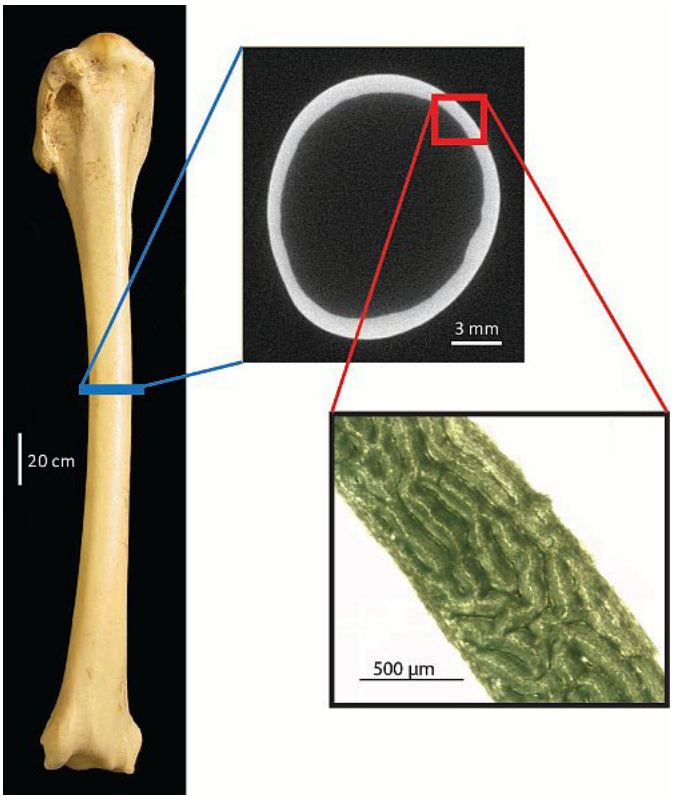
Current Position: Associate Professor of Biology at University of Hawaii, Manoa

Educational history: Ph.D. Evolution & Population Biology in 1998 from Washington University in St. Louis. I earned an M.S. in Microbiology at Rensselaer Polytechnic Institute, and a B.S. in Interdisciplinary Science in 1988 also from RPI.

Other Roles with SICB: Graduate Student Support Committee.

Research Interests: Comparative Biology, Evolution, Phylogenetics, Functional Morphology, Evolutionary Ecology

Goals for SICB/DPCB: What I love about SICB is it's amazing diversity of disciplines and the goal of synthesis amongst different fields of biology. I hope to promote synthesis and exchange of ideas, collaborations, and innovative stimulating programs. One challenge that is really difficult is to maintain breadth in the face of ever rapidly accelerating advances in fields such as phylogenetics. I think that DPCB is in a unique to foster breadth and synthesis by bringing cutting-edge in both phylogenetics and organismal biology together. What new conclusions can we draw? Where is the new frontier? Can we realistically master multiple fields? How do we balance gigantic datasets but with very shallow analyses with deep comparisons of limited representatives? These missions could be accomplished by seeking out cross-disciplinary symposia and workshops.



Erin Simons

Todd Oakley

Todd Oakley

Current Position: Professor and Vice Chair, University of California-Santa Barbara

Education: BS (1993) and MS (1996), Biology, University of Wisconsin-Milwaukee; PhD, Biology Duke University (2001)

SICB Experience: SICB Student Support Committee; Symposium Co-Organizer (2003); Best Student Paper Committee, DSEB (now DPCB); DSEB/DPCB Secretary 2009-2013.

Research Interests: Comparisons of independent evolutionary transitions such as convergence, parallelism, duplication, and homoplasy. Current topics include the evolution of complex traits, like eyes and nervous systems, and the phylogeny and evolution of ostracod crustaceans.

Goals Statement: My goals as DPCB Program Officer would be to help maintain the strengths of DPCB, including the systematics for dummies workshop. In addition, I would strive to help DPCB grow by promoting visibility of SICB to other organizations, like the Society of Systematic Biologists. Especially by targeting early-career systematists, and spreading the word that SICB is a student-friendly meeting, I envision strengthening DPCB even further.