



Division of Phylogenetics and Comparative Biology

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DPCB Officers & Representatives

Kerin Claeson

Chair 2016-2018

David Blackburn

Chair-Elect 2018-2019

David Blackburn

Secretary 2016-2019

Haley O'Brien

Secretary-Elect 2018-2019

Todd Oakley

Program Officer 2015-2021

Ryan Felice

Student/Postdoc Representative 2015-2018

Message from the Chair and Chair-Elect/Secretary

Kerin Claeson, chair.dpcb@sicb.org

David Blackburn, chairelect.dpcb@sicb.org, secretary.dpcb@sicb.org

After over seven years as an officer at DPCB, Kerin is in her last year as chair and David is beginning his first as chair, stepping down as secretary. The DPCB means a lot to us both, so we want to do more — and we need your help. Please spread the word to your colleagues in other divisions to join us and foster more collaboration. We have so many ideas for the division and society that can only happen with you. We hope that DPCB will gain strength in numbers going forward and that the society can benefit from the division.

The SICB Annual Meeting in San Francisco in January 2018 was a really terrific meeting! Congrats to the winners of the DPCB David and Marvalee Wake Best Student Presentation Awards, Dan Paluh and Sage Wiltse. For the student presentations this year, we had seven submitted posters and six talks. All of the talks were given in a single session that was among the best attended sessions for DPCB Best Student Presentations in recent memory.

We would like to think seriously about how to further the reach of DPCB within SICB, as well as how to better use our modest divisional funds. This past October, we supported attendance of 32 undergraduates and 42 graduates at the Southwestern Organismal Biology regional meeting at Claremont Colleges. In the coming year, we hope to also support a workshop at the next Annual Meeting in Tampa.

Please publicize your DPCB-related research on social media! Let us know about your recent work, related outreach, or great opportunities for students by tweeting us at @sicb_dpcb or posting on our Facebook page!

Message from the Secretary-Elect

Haley O'Brien, secretaryelect.dpcb@sicb.org

San Francisco 2018 was a great SICB meeting, and I'm excited to assume a position on the DPCB executive committee! This year our division was fortunate to have excellent student representation in the Wake Award sessions, with highly competitive poster and oral presentation sessions. All of our competitors brought strong projects to the table, highlighting the versatility of systematics and phylogenetic comparative methods in testing ecological and evolutionary hypotheses. Please join me in congratulating the student award winners, Daniel Paluh (Best Oral Presentation) and Sage Wiltse (Best Poster Presentation)! Leigha Lynch received an honorable mention for her oral presentation in the Wake Award session. These students showcased the best of what SICB members can accomplish when using synthetic analytical methods. I can't wait to see what they'll achieve in the future.



In looking forward to the future of the division, I would like to take several steps to update our divisional pages as SICB updates the main website in the coming year. If you would like to have a profile on the DPCB Researcher Database (<http://bit.ly/DPCBresearchers>), please send me an image and a short paragraph about your work. If you already have a profile, please send me updates! These profiles are an excellent way for established researchers to gain collaborators and recruit students, and for students to showcase their research as they look for jobs and expand their research prospects. They're great for broadcasting the diverse interests of our members.

In addition to updating the divisional Researcher Database, I encourage DPCB members to contribute to the SICB Research and Education Resources Database. The RER Database provides an outlet for outreach and broadening participation by providing freely-accessible, peer-reviewed learning and methods resources. Although the materials are broadly relevant to nearly every division in the Society, *there is currently no section in the RER Database for phylogenetic and comparative methods (PCM)*. Comparative methods enable functional, anatomical, and behavioral data to be combined with phylogenies to investigate patterns and processes underlying evolution. These methods are being developed rapidly, and the field is in need of a centralized source of well-curated methodological resources. I would encourage DPCB members to submit PCM tutorials to the RER Database (either through me or directly!)

Message from the Student/Postdoc Representative

Jonathan Chang, jonathan.chang@ucla.edu

Follow DPCB on social media!

Stay connected with the community on:

- **Facebook:** <https://www.facebook.com/SICBDPCB/>
- **Twitter:** https://twitter.com/sicb_dpceb
- **Instagram:** https://www.instagram.com/sicb_dpceb/

Include @sicb_dpceb in your tweets, or Direct Message us to have your research retweeted and distributed through the official DPCB account.

The student-postdoctoral affairs committee has also compiled a resource for external grants and fellowship opportunities. Log in to www.sicb.org/grants/externalgrants.php with your SICB member number for the full spreadsheet.

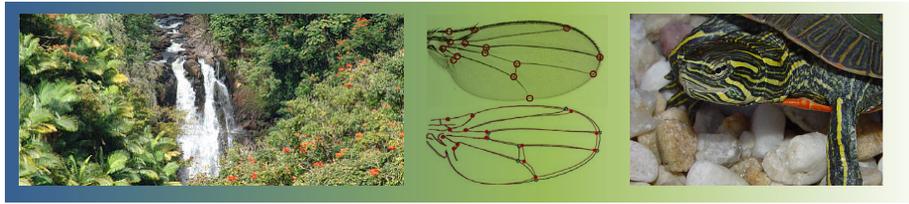


Winner of the Wake Award for Best Student Oral Presentation

Daniel J. Paluh, University of Florida

"Convergent Evolution and Function of Hyperossification in Frogs"

Daniel Paluh is a second year PhD student at the University of Florida and Florida Museum of Natural History. Daniel received his B.S. in Biology at John Carroll University in Ohio, and his M.S. in Biology at Villanova. For his dissertation, Daniel studies the morphological evolution of reptiles and amphibians, focusing on the processes that generate phenotype and functional diversity. His Wake award talk tested hypotheses regarding the function of anuran cranial hyperossification, including osmoregulation, protection from predators, and unique feeding biomechanical attributes. With a broad sample of micro-CT scanned skulls, Daniel and colleagues used phylogenetic comparative methods, ecological parameters, and finite element analysis to test each hypothesis. A predictive relationship was found between the presence of hyperossification and large body size, carnivorous feeding biology, and predator defense behaviors, while climate and microhabitat had no influence. Overall, hyperossification has independently evolved in phylogenetically, morphologically, and ecologically diverse frog lineages. Daniel plans to continue this work by incorporating additional anuran families for the remainder of his Ph.D. work.



Honorable Mention: Wake Award for Best Student Presentation

Leigha M. Lynch, Oklahoma State University Center for Health Sciences

"Isolation by Pleistocene glaciers resulted in divergence of skeletal limb morphology of North American pine martens, *Martes americana* and *M. caurina*"

Leigha Lynch is a Ph.D. Candidate at Oklahoma State University's Center for Health Sciences. Leigha received her B.S. in Geology at Bowling Green State University in Ohio, and her M.S. in Geosciences from East Tennessee State University. For her dissertation, Ms. Lynch utilizes North American pine martens (*Martes americana*, *caurina*, and *nobilis*) as model taxa to investigate the influence of intrinsic and extrinsic factors in shaping skeletal morphology. Leigha's talk introduced a population-level phylogeny of *Martes* and combined phylogenetic comparative methods with evolutionary modeling to demonstrate that tempo and mode of pine marten limb evolution corresponds with Quaternary interglacial cycles. Leigha has been awarded a postdoctoral fellowship at Washington University's Medical School in St. Louis, where she will begin this July.



Winner of the Wake Award for Best Student Poster Presentation

Sage Wiltse, Pitzer College

"Evolution of Visual Acuity and Trophic Specialization in Labrid and Pomacentrid Coral Reef Fishes"

Sage Wiltse is an undergraduate student at Pitzer College in Claremont, California. For her Wake Award poster, Sage presented her undergraduate thesis research that explores the evolution of visual acuity in coral reef fishes. Sage and her colleagues tested a long-standing hypothesis that visual acuity should differ between planktivorous (high acuity) and non-planktivorous (low acuity) fishes. By carefully examining lenses and retinæ of labrid and pomacentrid fishes in a phylogenetic context, Sage found surprising results that suggest these trophic specialists don't have significant differences in visual acuity. Following her graduation this Spring, Sage pursue a Nurse Practitioner degree.