

Division of Vertebrate Morphology (DVM): 2002 Spring Newsletter

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Message from the Chair

Kathleen Smith

I'm sure that all of you who attended the meeting in Anaheim will agree that it was among the best recent meetings. The quality of the symposia and contributed paper sessions was exceptional. DVM was sponsor or co-sponsor of three symposia: Tendon, Bridging the Gap, The Biomechanics of Adhesion and The Energetics and Dynamics of Animal Swimming and Flying. I want to extend thanks on behalf of the division to the symposia organizers and participants. Particular thanks are due to Dave Carrier, who has served as program officer for the past two years.

Bret Tobalske has taken over as program officer and I welcome him to our list of officers. It is never too early to begin thinking about symposia for future meetings, and I encourage you to contact him with ideas. At the 2003 meeting in Toronto, we will be the co-sponsor of a symposium organized by Francesco Santini on "Pattern and Processes in the Evolution of Fishes". We also are participating in the sponsorship of the society wide symposium organized by Joel Kingsolver on "Selection and Evolution of Performance in Nature." I'm sure it will be a great meeting.

This spring, the division will be holding an election for Chair-elect. This individual will serve as Chair-elect starting in January 2003 and then take over as Divisional Chair in 2003. Two excellent candidates, Mark Westneat and Beth Brainerd, have agreed to run for election. I'm grateful to the nominating committee of Ann Pabst (chair), Melina Hale and John Hermanson for their service. Statements from the candidates are below, and procedures for election are elsewhere in this newsletter.

In addition, as we discussed at the business meeting, there is a motion to amend the bylaws. As you recall, we have no provision for replacement of an officer that cannot fill his or her term. In addition, the society is attempting to move all elections to the spring, so that newly elected officers will know of their status long before the annual meeting. A vote on this amendment will be added to the spring ballots. You may find a copy of our bylaws on the SICB web page. I propose amending Bylaw V, Officers as follows:

Old language:

The officers of the Division shall be a Chair, Chair-Elect, Program Officer and Secretary. Election to the office shall be by a plurality vote of a mailed ballot sent to the entire membership at least 45 days before the annual meeting. The outcome of the election will be announced at the annual meeting and in the first Newsletter following the annual meeting.

Proposed new language:

The officers of the Division shall be a Chair, Chair–Elect, Program Officer and Secretary. Election to the office shall be by a plurality vote of a mailed ballot sent to the entire membership in the spring. The outcome of the election will be announced in the next newsletter. If an officer is unable to complete the service of his or her full term, a replacement shall be appointed by the divisional chair, after consultation with the executive committee. An election for this office shall be held at the next normally scheduled election of the division. If necessary, the replacement may be elected to a three–year term to maintain the normal rotation of officers.

The Division is pleased to announce the winner of the Dwight Davis award for "Contributions to the field of vertebrate morphology". First place was awarded to Matt McHenry, University of California, Berkeley for his talk on "A tale of two tails: swimming dynamics in larvae of a colonial and a solitary ascidian." An honorable mention award was given to Jen Dearolf, Cornell University for her work on the "Compartmentalization of the Florida manatee (*Trichechus manatus latirostris*) diaphragm." I wish to extend particular thanks to committee chair, Diane Kelly, who not only organized the judging, but provided excellent guidelines for the candidates. I also thank Jeff Walker, Melina Hale and Bill Hoese, members of the judging committee.

Have a good spring, vote in the election, and plan to attend the Toronto meeting!

—Kathleen

Message from the Program Officer

Bret Tobalske

The overall quality of presentations during the meeting at Anaheim was terrific, so, as newly minted program officer, I encourage you to keep up the good science. I also extend special thanks to Dave Carrier for his recent work as program officer for DVM. It is timely to brainstorm ideas for symposium topics for the meeting to be held in New Orleans in January 2004. Already, I have received one intriguing proposal. This would be for a symposium with the general theme of integrating larval fish development, functional morphology, and ecology. It is good to see that the proposal seeks to invite researchers who would normally not attend our annual meeting. Bringing such people into our midst assures us of exposure to new ideas and technology. For an excellent example of this phenomenon, consider the novel contributions of the fluid dynamicists who participated in the recent symposium at Anaheim: "The Energetics and Dynamics of Animal Swimming and Flying."

Best wishes for a productive year.

—Bret

Message from the Secretary

Audrone Biknevičius

Below are the biographies for our two candidates of Chair–elect.

Candidates for Division Chair–elect

Beth Brainerd

Current Position: Associate Professor of Biology, University of Massachusetts Amherst; e–mail: brainerd@bio.umass.edu; webpage: <http://www.bio.umass.edu/biology/faculty/brainerd.phtml>

Education: Ph.D. 1991: Harvard University; A.B. 1985: Harvard College

Professional Experience: Present: Associate Professor of Biology, UMass Amherst (since 2000); Curator of Fishes, Amphibians and Reptiles, Massachusetts Museum of Natural History, UMass Amherst (since 1998); Director, Organismic and Evolutionary Biology Program, UMass Amherst; 1994–2000: Assistant Professor of Biology, UMass Amherst

Awards and Honors: Junior Fellowship, Harvard University Society of Fellows, 1989–1992; D. Dwight Davis Award, Division of Vertebrate Morphology, American Society of Zoologists, 1990; Lilly Teaching Fellowship, UMass Amherst, 1996–1997; CAREER Award, National Science Foundation, 1999–2004.

SICB Activities – Relevant Service to Societies: 2001–present: Chair, SICB Membership Diversity Committee; 2001–present: Editorial Board Member, *Physiological and Biochemical Zoology*; 1998: Chair, DVM Nominating Committee; 1997: Local Committee Chair, Northeast Regional DVM Meeting; 1997–1999 Student Support Committee; 1996–1998: Associate Editor, *American Zoologist*.

Publications: 26 original research publications; 5 reviews.

Other Memberships: American Physiological Society; American Society of Ichthyologists and Herpetologists; International Society of Vertebrate Morphology; Sigma Xi; Society for Experimental Biology; Society for the Study of Evolution; Society of Vertebrate Paleontology.

Research Interests: Functional morphology, comparative physiology and evolution of respiratory systems; morphology and biomechanics of segmented musculature.

Brief Statement on Goals as DVM Chair: This is an exciting time to be a vertebrate morphologist. New imaging techniques such as high–resolution CT scanning, magnetic resonance imaging, and laser scanning confocal microscopy are opening up vast worlds of cross–sectional and 3–dimensional anatomy. In developmental biology, morphology is now in the process of retaking its proper place at the center of work in this field as whole–mount immuno–staining and transgenics are making it possible to see gene expression *in situ* and even *in vivo*. In systematics, the morphological/molecular wars are finally settling down and people are getting down to the business of assembling the best total evidence phylogenies with the help of continuing developments in phylogenetic methods, data base management and bioinformatics. In vertebrate paleontology, CT scanning is dramatically increasing the amount and quality of morphological data that can be recovered from fossils and the extant phylogenetic bracket method for reconstructing soft tissue anatomy has spurred new interest in the comparative anatomy and physiology of extant vertebrates. In biomechanics, new tools for micrometry, force measurement, 3–D flow visualization, 3–D motion capture, mathematical modeling and microelectromechanical systems are providing ever more sophisticated understandings of the interactions between morphology and environment. My goal as DVM Chair would be to ensure that these exciting new

perspectives on morphology are represented at our annual meetings and that we maximize our opportunities to interact with colleagues in related fields.

Mark W. Westneat

Current Position: Associate Curator of Zoology, Field Museum of Natural History, Chicago, Illinois; Telephone: (312) 665-7734; Fax: (312) 665-7391; e-mail: mwestneat@fmnh.org; webpage: http://fm1.fmnh.org/aa/staff_page.cgi?staff=westneat

Education: Ph.D. 1990: Department of Zoology, Duke University (with Steve Wainwright and John Lundberg). Bachelor of Arts 1984: Biology with Honors, cum laude. The College of Wooster, OH.

Professional Experience: Present: Associate Curator of Zoology, Field Museum of Natural History. Adjunct, Department of Organismal Biology and Anatomy, University of Chicago. Adjunct, Committee on Evolutionary Biology, University of Chicago. 1992-1997: Assistant Curator of Zoology, Field Museum of Natural History. 1991: Postdoctoral Research Associate: Department of Zoology, Duke University. 1990: Postdoctoral Research Associate: Department of Psychology, Duke University.

Awards and Honors: 1993: Nomination by American Association of Museums for the NSF Alan T. Waterman Award. 1990: D. Dwight Davis Award for Best Paper in Vertebrate Morphology: Division of Vertebrate Morphology, American Society of Zoologists. 1989: Cocos Foundation Training Grant in Morphology. Duke University. 1988: Raney Award in Ichthyology, American Society of Ichthyologists and Herpetologists. 1987: Stoye Award for Best Student Paper in Genetics, Development, and Morphology: American Society of Ichthyologists and Herpetologists.

SICB Activities – Relevant Service to Societies:

Nominating Committee, Division of Vertebrate Morphology (1998-99); D. Dwight Davis Award for Best Paper in Vertebrate Morphology (1990); Society of Systematic Biologists Executive Council (2000-04); Associate Editorship, Systematic Biology (1998-2001)

Publications: 48

Other Memberships: American Association for the Advancement of Science; American Society of Ichthyologists and Herpetologists; Pacific Ocean Research Foundation; Sigma Xi: The Scientific Research Society; Society of Systematic Biologists

Research Interests: 1. Phylogenetic systematics and evolution of tropical marine fishes: molecular evolution, evolutionary biomechanics, and phylogeny of the families Labridae and Scaridae.
2. Biomechanics and physiology of vertebrates: behavior, muscle physiology and neuromotor patterns of feeding and locomotion.
3. Modeling of vertebrate musculoskeletal systems: mechanical design and computer modeling in vertebrate biomechanics.

Brief Statement on Goals as DVM Chair: It is an honor to be nominated for DVM Chair! If I am elected I will try really hard not to bankrupt the Division, allow all the biomechanics sessions to be scheduled at the same time, or allow George and his lab to give more than 5 talks in any one day. In addition, I will try to do as well as my predecessors in maintaining the SICB meetings as the best place in the world to come and talk

about vertebrate morphology, function and evolution. We should be active in recruiting new student members, organizing timely symposia, and fostering the cross-divisional sessions and symposia that have been so interesting over the past years. In particular, I would like to see sessions and symposia that integrate DVM core topics with advances in phylogenetic analysis. Finally, I enjoyed helping to organize the DVM party at the Field Museum during the Chicago meetings and I think social occasions can be a great place to talk science at our meeting. So lets do something like that for Toronto and New Orleans!