



## Division of Vertebrate Morphology

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### DVM Officers & Representatives

**Mark Westneat**

Chair 2009-2011

**Kiisa Nishikawa**

Chair-Elect 2010-2011

**Lara Ferry-Graham**

Secretary 2010-2012

**Richard W. Blob**

Program Officer 2010-2012

**Tobias Landberg**

Student/Postdoc Representative  
2008-2011

**Melina E. Hale**

ICB Editorial Board Representative  
2006-2011

### Message from the Chair

*Mark Westneat*

Greetings Vertebrate Morphologists! Spring is here (well almost in Chicago) and I hope everyone is still jazzed about the great meetings in Seattle- that was a fantastic meeting and the DVM sessions were excellent. Particular thanks to symposium organizers and participants. There were lots of signs of success at the society level, from the spectacular attendance, the traction we are getting with NSF regarding the Grand Challenges program, and the society finances doing remarkably well in a tough economy. So let's keep up the good work and start preparing for attendance in Salt Lake City!

In DVM news we have a number of new officers and some elections coming up. Many thanks to Jeff Walker for his heroic efforts as our Program Officer over the past 4 years, and thanks to Rick Blob for taking over as our new PO. We all owe Gary Gillis our thanks as well (or a beer, which he will accept) for his service to the division as Secretary, keeping things running smoothly for us. Lara Ferry-Graham is our new Secretary, and has hit the ground running, reminding me to write this newsletter with perfect timing! We have elections this spring for the future program officer and secretary, so thanks very much to those agreeing to stand for election. As for the Chair (I prefer Captain, actually), I am a bit of a lame duck and will hand the helm over to Kiisa in Salt Lake City.

Student Awards! Congratulations to all the students who gave talks and posters in the scientific competitions in Boston- the science presented by the students was superb. The student award winners in DVM were:

D. Dwight Davis Award for Best Student Paper in the Division of Vertebrate Morphology: **Angela Berg** from Harvard University for her work on **Mechanisms of takeoff and landing flight**.

Best Student Poster Award in the Division of Vertebrate Morphology: **Anna McGregor** of Duke University for her research entitled **Finding the window of energetic opportunity: traveling North Atlantic right whales use dive depths that avoid surface drag**.

We also recognized two students with Honorable Mention awards in the Davis competition as it was just that close a decision.

Terry Dial: Precocial hindlimbs and altricial forelimbs of developing Mallard ducks: A study of locomotor performance and mor-



phometrics

Sharlene Santana: Mechanisms of bite force production and their relationship with diet in Neotropical leaf-nosed bats.

Congratulations to all the students for presenting such great science at SICB!

In closing, a few notes and reminders. Please vote in the SICB and DVM elections this Spring. Check out the candidate bios from Jake Socha, Tim Higham, Susan Williams, and Rita Mehta at the end of this newsletter. Please consider attending the ICVM meetings in Punta del Este, Uruguay this summer, and please also plan to attend the meeting next year in Salt Lake City- I look forward to seeing you all there.

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## Message from the Program Officer

*Rick Blob*

Picking right up from the fantastic meeting in Boston, the 2010 SICB in Seattle was an exciting conference for DVM. We had a huge number of oral and poster presentations, and the "Fish Body Shape" symposium organized by outgoing PO Jeff Walker and Rita Mehta was a big success, bringing together speakers using studies of fishes to examine the origins, evolution, and functional consequences of diversity in vertebrate morphology. Great new symposia are planned for the 2011 SICB in Salt Lake City: The biomechanics and behavior of gliding flight, organized by Robert Dudley; Bioinspirations and applying mechanical design to comparative experimental biology, organized by Brooke Flammang, and a Synthesis of Physiologic Data from the Mammalian Feeding Apparatus using FEED, the Feeding Experiments End-User Database, organized by Susan Williams and colleagues. But

while ideas from discussions at this year's meeting are still fresh, now is the time to start planning symposium proposals for Charleston in 2012! These will be due by August 16, 2010, and guidelines for preparing proposals can be found on the SICB web site.

A few items are helpful to remember when preparing proposals. First, in making plans to apply for external support for symposia, NSF (in line with the Grand Challenges effort) is particularly interested in symposia seeking to direct fields forward to new directions, rather than retrospective collections of presentations. NSF also makes particular effort to support symposia with speakers from a broad range of backgrounds and career stages, ranging from graduate students and postdocs to senior faculty. Some older, but helpful suggestions for preparing grant proposals for symposium support can be found at <http://www.sicb.org/meetings/2002/nsfinstructions.pdf>. Remember also that other sources besides NSF may be willing to contribute to support symposia – other agencies or even equipment manufacturers. So, think creatively for the content, participants, and possible avenues of support for symposia and send in your ideas for Charleston! Please contact me with any questions. And don't forget that our society journal *Integrative and Comparative Biology* is an excellent venue for the publication of papers based on symposium presentations – not only is its Impact Factor continuing to increase, but the first 12 pages have no charges– what a deal!

Please also join me in thanking Jeff Walker for his four years of service as Program Officer. I know that I personally will come to appreciate all of his hard work even more as we prepare for the next SICB meeting. But Jeff is off the hook now, so feel free to get in touch with me if you have questions or ideas about our upcoming programs.



### Message from the Secretary

*Lara Ferry-Graham*

I hope everyone enjoyed the Seattle meeting. I know I did! Great city, great meeting venue, not too much rain, lots of escalators... how can one go wrong?

Let me again congratulate the student award winners, listed in the Chair's message. Great job to those, and to all the students who participated in the meeting. You are truly the lifeblood of our society and a big part of what makes our meetings so successful. As students, I hope you continue to find the SICB meetings and DVM in particular a welcoming place to enhance your professional development.

Now, for those of you that already have established labs and/or research programs, allow me to take over this duty from Gary Gillis, and make yet another (and probably not the last) plea for entries to our Researcher Database. All you need to do is to send me ([lfgraham@mlml.calstate.edu](mailto:lfgraham@mlml.calstate.edu)) one or two pictures and a brief blurb about your research and before you know it you'll be highlighted on the SICB homepage and well on your way to fame and fortune, or at least fame.

We all thank you Gary for your four years of service in this position! I have already appreciated your hard work, and the work you have done to make this transition easy for me. To everyone else, feel free to contact me if you have questions, ideas, things for the newsletter, and so on. I look forward to hearing from you.

### DVM Business Meeting Minutes 5 January 2010

Mark Westneat recapped the SICB Exec. Committee Meeting and the results of society-wide survey - people generally like the time of the meeting, attendance is way up (1800 at

Boston and nearly as much at this meeting), Grand Challenges are well received and will continue, length of the meeting is liked by people, but it might need to be longer because of the attendance levels, posters could be done by more senior members so that there are more high-quality posters.

Mark Introduced Bill Zamer who spoke on behalf of NSF. He reiterated the importance of attendance at Grand Challenges, beginning with target dates this month NSF will no longer allow PIs to submit 2-page updates (formerly used to update Program Officers with events that have happened between the submission date and the review date), there are no longer any stimulus funds available, update your info and keywords on NSF's site.

There are several restricted funds in the society are underfunded. There needs to be \$25,000 committed to start a new fund - this is needed to maintain the fund in perpetuity. The D. Dwight Davis award fund has only about \$6000 in the account. Consider donating.

Program Officer's Report by Jeff Walker - Jeff suggested that we consider using the Grand Challenges as a guide to creating broadly interesting symposia. Diversity of speakers is important, bring new members to society, international, different career levels, etc. This year's symposium is tomorrow (6 Jan 2010), which overlaps with Grand Challenges workshop. Next year there are three symposia of interest to DVM, one by Brooke Flammang, one by Susan Williams, and one by Robert Dudley. If you don't like your session this year, Frank Fish organized them!

Mark thanked Jeff for his four years of service as P.O. and recognized Rick Blob as the incoming P.O.

Secretary's Report by Gary Gillis - Gary thanked people who have submitted their information to the researcher database. We have gone from zero to seven during his tenure. Gary also thanked the persons who agreed to be student award judges. Gary welcomed Lara



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Ferry-Graham as the incoming Secretary.

Mark thanked Gary for his four years of service as Secretary and recognized Lara Ferry-Graham as the incoming secretary.

Jackie Webb announced the Karel Liem symposium at the ASIH meetings this summer. Jackie, plus Beth Brainerd and Cheryl Wilga, are on the local organizing committee for the meeting. There will be posters and talks for the Liem Symposium. This is not by invitation only. Anyone who wants to participate need only let Jackie know, and to register for the meeting and send in an abstract. Topics are open, they should celebrate Karel's influence on your work and career. There will also be opportunities to speak at the dinner. The meeting is at the Providence Convention Center and Westin.

Mattias Starck announced that ICVM would take place in July 2010, and the next deadline for abstracts will be 10 February. It is in Uruguay, they have a wonderful meeting location arranged. The website has more details.

Mark announced that he and others, including Callum Ross, had a new IGERT program called the MOTOR IGERT - they are looking for talented undergrads that want to work on muscle and movement questions. Bob Full has a CYBER IGERT regarding engineering and biomechanics. There are fliers for both around the meetings.

Mark introduced Kiisa Nishikawa as the Chair-elect this year.

Mark announced that Karel Liem and Carl Gans passed away this year. The Gans family asked that if you wanted to donate in his name, choose your favorite charity. Adam Summers announced that there is an endowment at Friday Harbor Labs in Karel's honor that will go to establishing a Liem Fellow for the Fish Course.

Mark announced that it was suggested that we name our best student poster prize as the Karel Liem Prize for the Best Student

Poster. We do not know if we have to have a designated fund to name the award. Adam Summers noted that there had been two committees convened to try to come up with a name for the prize, Mark appointed Adam the chair of this committee to work on the name and determine the society rules.

Mark reminded the membership that the Divisional Executive Committee has the right to levy a small membership fee to raise funds for the division, to be used for symposia, etc. Mark noted that our membership did not drop with the formation of DCB. People can join multiple divisions. Mark noted that the society-wide Executive Committee was encouraging us to start collecting these funds. He felt that if we started to collect these funds our membership may well go down. Beth Brainerd asked if there was a need for the funds and did we need to raise them now since we cannot use the funds any longer for regional meetings? Mark noted that we do not get amount of symposium funds we used to get. The small amount of money we do get goes to the PO (and cannot be used for Regional Meetings). Mark suggested that perhaps we did not need the added tax right now.

Mark adjourned the meeting at 6:05 pm.

### Candidates for Elections

#### Program Officer

#### Tim Higham

**Current Position:** Assistant Professor, Department of Biological Sciences, Clemson University, <http://www.clemson.edu/biosci/faculty/higham/>

**Education:** Ph.D. 2006: University of California, Davis; M.S. 2003: University of



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Cincinnati; B.S. 2000: University of Calgary

**Professional Experience:** 2008-present: Assistant Professor, Department of Biological Sciences, Clemson University (courses taught include Comparative Physiology, Ichthyology); 2006-2008: Postdoctoral Fellow, Concord Field Station, Harvard University

**Awards and Honors:**

NSERC postdoctoral fellowship (2008, declined); 2006: *Journal of Experimental Biology* Traveling Fellowship & William S. Hoar Award for best student oral presentation at the annual meeting of the Canadian Society of Zoologists, 2006.

**SICB Activities:** DVM Best Student Presentation committee, and judge for DCB Best Student Award competition, 2010; Session Chair, 2009, 2010; symposium co-organizer (with P. Wainwright), "Evolution of Feeding Mechanisms in Vertebrates," 2007; attended and presented at 9 annual meetings (first meeting was in Chicago, 2001) and several regional DVM meetings (Northeast and Southeast).

**Other Memberships:** International Society of Vertebrate Morphology (ISVM), Canadian Society of Zoologists (CSZ), American Physiological Society (APS), Society for Experimental Biology (SEB).

**Research Interests:** functional morphology, biomechanics, hydrodynamics, and neuromuscular control of vertebrate feeding and locomotion.

**Goals as Program Officer:** Although the Division of Morphology has a single name, it is extremely integrative. For example, many morphological structures act in concert, the morphology of an animal interacts with its underlying physiology, and morphological

structures interact with the environment and structures of other vertebrates. This integration is central to the division, and I will strive to foster this by generating an exciting program that not only takes into account concurrent DVM and DCB sessions, but also takes into account other disciplines that might appeal to DVM members. The wide range of interesting presentations every year makes avoiding schedule conflicts a challenge – with my own diverse interests I often want to see several presentations running at the same time. Because of these experiences, I am sensitive to the breadth of topics for which program overlap should be avoided, and I will work diligently with the other program officers (especially DCB) to create a vibrant schedule with as few conflicts as possible. Apart from scheduling, a primary goal of mine as Program Officer would be to promote the importance of vertebrate morphology by encouraging members to generate and submit exciting, interesting, and integrative symposia. I would then assist with the procurement of funding and work with the organizers to schedule an optimal time for the symposium at the annual meeting. I would also work hard to expand membership and involvement in DVM by encouraging the attendance at the annual meeting of those who do not typically attend. I would do this by contacting them and encouraging them to submit symposium proposals, but also encourage people submitting proposals to include people who do not normally attend. I recently organized a symposium and am thus very familiar with the process. I would be extremely delighted to contribute to the division as Program Officer.

### Rita Mehta

**Current Position:** Postdoctoral Researcher, Department of Evolution and Ecology, University of California, Davis. Assistant Professor, Department of Ecology and Evolu-



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tionary Biology, University of California, Santa Cruz (Beginning July 1st 2010).

**Education:** Ph.D. 2005: University of Tennessee; B.A. 1999: University of California, Berkeley

**Professional Experience:** 2006-present: Postdoctoral

Researcher, Department of Evolution and Ecology, University of California, Davis; 2006-2008: Appointed Chair for Gaige Award Grant Committee, American Society of Ichthyologists and Herpetologists (ASIH) 2007-2008: Secretary/Treasurer for Postdoctoral Scholars Association at U.C. Davis; 2006-2007: American Association of University Women Fellow; 2005-2006: Adjunct Faculty Member, Department of Biology, American River College, Sacramento, CA.

**Awards and Honors:** Stoye Award, American Society of Ichthyologists and Herpetologists (ASIH), 2008; American Psychological Association Dissertation Award in Physiology, 2004; Storer Award, American Society of Ichthyologists and Herpetologists (ASIH), 2002; Herpetologist's League Award, Society for the Study of Amphibians and Reptiles (SSAR), 2001; Graduate Student Presentation Award, Texas Academy of Sciences, 2000.

**SICB Activities:** symposium co-organizer (with Jeff Walker), "Contemporary Approaches to the Study of the Evolution of Fish Body Plan and Fin Shape" symposium for Seattle annual SICB meeting, 2010; Judge, DAB Award for Student Presentations, 2008.

**Other Memberships:** American Association of Anatomists (AAA); American Association of University Women (AAUW); American Society of Ichthyologists and Herpetologists (ASIH); Herpetologists' League (HL), Inter-

national Society of Vertebrate Morphology (ISVM); Society for the Study of Amphibians and Reptiles (SSAR)

**Research Interests:** Evolutionary and functional morphology of the vertebrate skull, with a focus on the evolution of prey acquisition behavior in ectothermic vertebrates.

**Goals as Program Officer:** It is an honor to be nominated for program officer. Today, vertebrate morphology represents classical biology with a contemporary twist. Our appreciation and desire for good anatomy persists while our drive to incorporate new tools and techniques to reach deeper to integrate morphology and function is ever growing. Our passion, respect, and loyalty to classical morphological science is why our field continues to rapidly evolve. We are fortunate that we comprise a division that is central to SICB and helps unify the 10 (wow!) other divisions in the society. My goals as DVM program officer will be to: (1) help foster growth in our division by finding ways to increase student, postdoc, and faculty participation in DVM related fields, (2) keep the lines of communication with the other divisions not just open but flowing to help promote the development of integrative symposia and workshops, and (3) I will also search for new ways in which we can continue to promote and provide student mentorship.

### Secretary

**Jake Socha**

**Current Position:** Assistant Professor, Department of Engineering Science and Mechanics, Virginia Tech, <http://www.esm.vt.edu/~jjsocha>



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**Education:** Ph.D. 2002: University of Chicago (Organismal Biology and Anatomy); B.S. 1994: Duke University (Physics and Biology)

**Professional Experience:** 2008-present: Assistant Professor, Department of Engineering Science and Mechanics, Virginia Tech; 2008-present: Adjunct Professor, Department of Biological Sciences, Virginia

Tech; 2008-present: Core Member, Virginia Tech-Wake Forest School of Biomedical Engineering and Sciences; 2007-2008: Research Scientist, Argonne National Laboratory; 2004-2007: Ugo Fano Postdoctoral Fellow, Argonne National Laboratory; 2003-2004: Research Associate, The Field Museum, Fishes Division; 2003-2008: Lecturer, Biological Sciences Division, University of Chicago

**Awards and Honors:** Outstanding New Assistant Professor Award, College of Engineering, Virginia Tech, 2010; U.S. National Committee on Theoretical and Applied Mechanics (USNC/TAM) Fellowship, 2008; Ugo Fano Named Postdoctoral Fellowship, Argonne National Laboratory, 2004; Harper Fellowship, University of Chicago, 2001; Berkman Fellowship, University of Chicago, 1999; Stoye Award in General Herpetology, American Society of Ichthyologists and Herpetologists, 1998

**SICB Activities:** Judge, DVM D. Dwight Davis Prize, 2007-2009; Public Affairs Committee member, 2008-2010; Public Affairs Committee Chair, 2010-present.

**Research Interests:** functional morphology, biomechanics, vertebrate gliding flight, internal flows in insects.

**Other Memberships:** American Society for Engineering Education, Sigma Xi

**Goals as Secretary:** Quite simply, I believe that the strength of DVM lies in the en-

thusiasm of its members, and that the role of DVM is to provide a framework and venue for fostering this energy. The most important goal of our division should be to maintain a high level of opportunities for our members as vertebrate morphologists. DVM has a great tradition of supporting and developing student researchers, a tradition that should be continued and built upon. Thus I am all for new ideas that will expand and enrich our experience as DVM members. One way to do so is to promote new regional meetings; for example, the Southeast DVM was founded two years ago and is going strong (and we'll host it here at Virginia Tech in the fall). Overall, our biggest challenges as scientists come not from the lab but from the pocketbook. Many of us are interested in locomotion, but it's safe to say that we're all interested in how to navigate the current waters of seemingly endless budget cuts and ever-increasing competition for grants. In this light, my role as Secretary would be to enable the highest quality environment for professional growth as morphologists, from students to faculty to full-time researchers.

### Susan Williams

**Current Position:**

Assistant Professor, Department of Biomedical Sciences, Ohio University

**Education:**

Ph.D. 2004: Duke University (Biological Anthropology & Anatomy); B.A. 1994: Bryn Mawr College (Anthropology & Spanish)

**Professional Experience:**

Instructor, Ohio University 2003-2005

**Awards and Honors:** Dean's Research Award, Ohio University College of Osteo-





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pathic Medicine, 2006; Distinguished Osteopathic Commitment Award for teaching, Ohio University College of Osteopathic Medicine, 2009; Standard of Excellence Award, Ohio University College of Osteopathic Medicine, 2009

**SICB Activities:** Judge, DVM Student Paper Competition; Session Chair

**Other Memberships:** International Society of Vertebrate Morphology, Society for Vertebrate Paleontology, American Association of Physical Anthropologists, International Association for Dental Research

**Research Interests:** Feeding biomechanics and functional morphology

**Goals as Secretary:** It is an honor to be nominated for the position of DVM secretary. DVM has always been my intellectual 'home' within SICB so I am happy to serve the Division in any way possible. In addition to the duties of the Secretary outlined in the DVM By-Laws, if elected, I will continue efforts by previous and current division officers to maintain our uniqueness within SICB. We have a solid and dedicated member base and I will work to ensure that this member-base grows. At the same time, it is important to encourage researchers to collaborate with researchers from other divisions to meet the Grand Challenges in organismal biology. DVM can and should play a central role in meeting these grand challenges because of the inherently "organismal" focus of many of our questions. As DVM secretary, I will also work with the other DVM Officers to increase contributions for the D. Dwight Davis Award and poster prize. As reported at the SICB DVM business meeting in Seattle, the financial basis for these awards is limited so increasing its base support is important for the continuation of the program. Finally, if elected DVM secretary, I will also work to increase submissions to the DVM database and promote the database to researchers outside of DVM and SICB. The database is a centralized source for publicizing research by DVM members and an excellent way to garner student interest in specific labs.