

# **Division of Vertebrate Morphology (DVM): 2001 Spring Newsletter**

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### **Message from the Chair**

*Kathleen Smith*

In my first message as Chair of the Division of Vertebrate Morphology, I would like to begin by thanking a number of people. First, I would like to thank Andy Biewener, for his service as chair, as well as Audrone Biknevicius and Dave Carrier for serving over the past two years as Division secretary and program officer, respectively. In addition, I am grateful to Dominique Homberger, Rick Blob and Jacki Webb for serving as this year's nominating committee. I would also like to thank Diane Kelly for her efforts on behalf of the Dwight Davis Award. Finally, in behalf of the entire division, I would like to extend my sincere appreciation to Matthias Starck and the other organizers of the ICVM meeting in Jena, Germany. Many of our members participated in this event, and I'm sure all would agree it was an outstanding meeting.

The Division is sponsoring (or co-sponsoring) three symposia at the 2002 meeting in Anaheim, California, all of which will be of significant interest to our members: the Biomechanics of Adhesion, Tendon: Bridging the Gap, and the Dynamics and Energetics of Animal Swimming and Flying. As you recall we have debated our priority for scheduling symposia versus contributed papers, and Dave Carrier, John Pearse, and the symposia organizers have worked very hard to limit the overlap between symposia sessions and contributed paper sessions. The society is still considering proposals for the Toronto meeting. I urge you to contact our current program officer, Dave Carrier if you are interested.

Finally, a word about elections. The Division is electing a new Chair-elect (who will take office in January, 2003), secretary and program officer. Frank Fish and Steve Reilly, both long time, enthusiastic supporters of the division have agreed to run. Audrone has agreed to serve a second term as secretary, as is allowed in the bylaws, and will be running unopposed. The nominating committee tried very hard to come up with two candidates for program officer and was unable to find a second member of the division willing to serve. We have one excellent candidate, Bret Tobalske. I would hope all of you will consider serving as an officer of the division the next time nominations are necessary. If you are interested in serving in any office, please email me at [kksmith@duke.edu](mailto:kksmith@duke.edu), and I'll pass your name along. In addition, we have in general had a very low participation in our elections. Please vote!

In closing, I would like to emphasize how I look forward to seeing you all in Anaheim. For all of us, life has been disrupted by the terrorist events of September. To those who suffered personal loss, I offer my sincere condolences. I hope however, that the membership of the division will show their strong support and make the 2002 meeting a highly successful one.

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## **Message from the Program Officer**

*Dave Carrier*

This meeting in Anaheim promises to be both exciting and busy for DVM members. We are sponsoring or co-sponsoring a group of three timely symposia:

1. "Tendon–Bridging the Gap" organized by Adam Summers and Tom Koob.
2. "Biomechanics of Adhesion" organized by Kellar Autumn and Bob Full.
3. "Animal Swimming and Flying" organized Malcolm Gordon, Ian Bartol, and Jay Hove.

In addition to these three, a number of other symposia will be of interest to many members of DVM. There will be two Society wide symposia: "The Promise of Integrative Biology" and "Comparative Immunology". Other symposia that will attract the attention of DVM members include: "The Cambrian Explosion: Putting the Pieces Together"; "New Perspectives on the Origin of Metazoan Complexity"; "Physiological Ecology of Rocky Intertidal Organisms"; and "Ecological Developmental Biology".

During the past year, we have discussed and debated the question of whether or not DVM has sponsored too many symposia in recent years. This discussion appears to have had an effect because currently I know of only one symposium proposal for the Toronto meeting (the evolution of fishes).

Recently we have also discussed ways symposia could be scheduled to minimize conflicts with contributed paper sessions. Following a suggestion made by Jacqueline Webb, John Pearse and I attempted to organize this year's DVM schedule such that the symposia would run in the mornings and the contributed paper sessions would occur in the afternoons. Under this plan, symposia would run for two or three consecutive mornings. This would have placed the competition for warm bodies among the symposia, rather than between the symposia and contributed paper sessions. For each symposium there could have been afternoon contributed paper sessions that were directly related to the topic of the symposium. This format might also have helped induce some symposia speakers, who are not members of SICB, to spend more than a single day attending the meeting. Initially, two of the three sets of symposium organizers agreed to go with the morning schedule. Unfortunately, the travel needs of several of the symposium speakers forced us to revert to a more traditional schedule in which the symposia will run during both morning and afternoon sessions. I remain an advocate of a schedule that temporally separates symposia from contributed paper sessions and I hope we can make it happen at the Toronto meeting.

One last bit of news – Robert Full will give the opening (plenary) talk at the Anaheim meeting.

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## **Message from the Secretary**

*Audrone Biknevicius*

As noted above by Kathleen in the Chair's report, the Division of Vertebrate Morphology is holding elections this fall for the DVM chair and DVM program officer. Papers ballots will be mailed to members shortly from the SICB office. Below are the biographies for the two candidates of Chair-elect (Frank Fish, Stephen Reilly) as well as the single biography for program officer (Bret Tobalske).

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## **DVM Candidates for Election**

### *Candidates for Division Chair*

#### **Frank Fish**

**Current Position:** Professor of Biology, West Chester University.

**Education:** B.A., Biology, SUNY at Oswego, 1975; M.S., Zoology, Michigan State University, 1977; Ph.D., Zoology, Michigan State University, 1980.

**Professional Experience:** Assistant Professor of Biology, West Chester University, 1980–1986; Assistant Professor, Wallops Island Marine Science Center, 1982; Associate Professor of Biology, West Chester University, 1986–1989; Professor of Biology, West Chester University, 1989–Present; Chairman, Department of Biology, West Chester University, 2000–2001.

**Awards and Honors:** Zoology Faculty Annual Senior Award, State University College at Oswego, New York, 1975; Anne M. Jackson Award of the American Society of Mammal, 1980; West Chester University Trustees' Achievement Award, 1995; Honorary Fellow of the Flinders University of South Australia, 1995.

**SICB Activities:** Local Committee for annual meeting in Philadelphia, PA, 1983; Meeting Session Chair, 1983, 1985, 1987–1989, 1996–1999; Nominating Committee for the Chair-Elect of the Division of Vertebrate Morphology, 1984, 1988, 1992; Secretary of the Division of Vertebrate Morphology, 1991–1995; Editorial Board for the American Zoologist, 1992–1997; D. Dwight Davis Student Award Committee, 1996; Co-organizer of symposium, Stability and Maneuverability, Chicago (2001).

**Publications:** 41 journal articles and book chapters; 3 technical reports; 5 proceedings articles.

**Other Memberships:** American Society of Mammalogists; Commonwealth of Pennsylvania University Biologists; International Congress of Vertebrate Morphology; Pennsylvania Academy of Science; Sigma Xi; The Society for Marine Mammalogy.

**Research Interests:** My research interests are concerned with the evolution of vertebrate aquatic locomotion. My approach to this research integrates the fields of functional morphology, biomechanics, ecological physiology, and hydrodynamics. I am interested specifically in adaptations that are associated with the use of energy during swimming. By examining energy use and efficiency through metabolic and hydrodynamic studies, the evolutionary transition of highly derived aquatic species, such as whales and seals, from terrestrial ancestors may be elucidated. In addition, I am interested in formation movement as a behavioral mechanism to reduce the energetic cost of locomotion. A recent interest is in the area of biomimetics an the application of geometry of morphological structure into technological designs.

**Goals Statement:** My primary goal is to support and strengthen. the DVM. This goal can be met by a multifaceted approach. The presentation at the annual meeting of high quality science should continue to be encouraged. There is already an excellent core of researchers who present at the meeting each year, but other equally exceptional biologists, who do not attend, should be encouraged to present through inclusion in symposia or direct invitation. Invitations to the meetings also should be made to students whose early exposure to other investigators and the scientific process will help in the advancement of their projects and aid them in their professional development. Mechanisms to afford student participation should be continually identified and strengthened. DVM should continue to provide quality symposia. Co-sponsorship of symposia with other divisions will aid in integrating morphology with the collective interests of the SICB. Within the

SICB, I would endeavor to support the integration of new technologies for presentations at meetings. Finally, I would like to identify the future role of morphology and its integration with other fields such as molecular biology, engineering, and developmental genetics. Such a review could provide new outlets for professional opportunities and scholarly growth, while the recognition of the union of our discipline with such diverse fields would highlight the importance of morphology and organismic biology.

**Stephen M. Reilly**

**Current Position:** Associate Professor, Ohio University

**Education:** B.A. Southern Illinois University, 1977; M.A. San Francisco State University, 1980; Ph.D. Southern Illinois University, 1986.

**Professional Experience:** Postdoctoral Fellow, University of California, Irvine, 1986–1991; Assistant Professor, Ohio University, 1991–1997; Associate Professor, Ohio University, 1997–present.

**SICB Activities:** Symposium co-organizer, *Ecological Morphology*, 1990; Dwight D. Davis Prize committee, 1991; Student Poster Award Committee, 1999. Session Chair, 1991, 1992, 1995, 1999, 2000, 2001; Co-hosted Midwest Regional Meeting of DVM, Ohio University, 1999.

**Other memberships:** International Congress of Vertebrate Morphology, Society of Experimental Biologists, American Society of Ichthyologists and Herpetologists, Herpetologists League, Phi Beta Kappa, Sigma Xi, Society for the Study of Amphibians and Reptiles,

**Research Interests:** My research integrates morphological, developmental, and functional analyses to study how ontogeny, ecology, and phylogeny affect vertebrate design and function. My research has focused on the metamorphosis of feeding function and the consequences of neoteny and paedomorphosis in salamanders and current work is examining patterns of feeding function across tetrapods. Another major focus in my work is on vertebrate locomotion with a general goal to understand the locomotory change from sprawling to erect postures. This involves quantitative functional analyses of hindlimb function in a variety of vertebrates with the goal of integrating kinetic and kinematic approaches to the analysis of locomotion to understand postural evolution and how the limbs are used to propel the animal.

**Goal Statement:** My goal is to maintain and improve the high quality, interactive atmosphere that the division provides for members at all points in their careers. This goal is met via action in several areas. First, our strong support for graduate student participation and travel should be maintained and strengthened and I feel we should seek support for additional formal student awards. Second, I believe that we can do better in developing integrative symposia tailored specifically to the DVM audience and to cross-divisional audiences. As the leading group in SICB I feel we should take a more of a leadership role especially in developing cross-divisional symposia. We need to tap the newly developed SICB Program Innovation Fund to plan symposia in new growth areas for the society, in areas that emphasize integration between divisions, and perhaps we can plan a distinguished lecturer series within a division focussing on a specific topic or concept that merits a formal review. On the issue of symposia, we need to formally tackle the problem of scheduling symposia vs. contributed sessions – a prime issue at the last two business meetings that seems to be the only *major* complaint of DVM members. If we meet the goal of better DVM sponsored symposia then almost by definition contributed sessions, in DVM and cosponsoring divisions, cannot be concurrent. Many feel that the contributed sessions are the bread and butter of the division and even these sessions often have conflicting talks. I feel we need to work harder to resolve conflicts both between contributed sessions and symposia to minimize conflicts. I think the keyword selection process on the abstract submittal form is the primary culprit causing conflicts between contributed sessions. The keyword systems needs to be adjusted for

DVM's needs or at least explained to produce less conflicting schedules at the meetings and more streamlined programming. Finally, I would encourage regional DVM meetings and I hope that formal DVM socials like the one organized at the Field Museum last year will become an annual event at the meetings.

***Candidate for Program Officer (running unopposed)***

**Bret Tobalske**

**Current Position:** Assistant Professor, University of Portland.

**Education:** B.A. Southern Illinois University, 1988; M.A. University of Montana, 1991; Ph.D. University of Montana, 1994.

**Professional Experience:** Fulbright Scholar, Parc Naturel Regional du Haut-Jura, France, 1995; Postdoctoral Fellow, University of Montana, 1996; Visiting Assistant Professor, Allegheny College, 1997–1998; Postdoctoral Fellow, Harvard University, 1998–1999; Assistant Professor, University of Portland, 1999–present.

**Awards and Honors:** D. Dwight Davis Award, 1995.

**SICB Activities:** Nominations Committee, Division of Vertebrate Morphology, 1999–2000. Session Chair, 1997.

**Other Memberships:** Society for Experimental Biology, Sigma–Xi, American Ornithologists' Union, Cooper Ornithological Society, Wilson Ornithological Society, American Dove Association.

**Research Interests:** I study bird flight, particularly how flight performance and the underlying mechanisms of neuromuscular recruitment, mechanical power output, and wing motion vary with differences in body size and flight speed. My research continues to attempt to understand the functional significance, ecology, and evolution of intermittent flight and gait selection in birds.

**Goals Statement:** My vision for the program in DVM includes further development of thematic sessions and cross–divisional symposia. In particular, I would like to see symposia in which "problem–solving" formats might be encouraged. Edgier, less established, creative, working hypotheses would be easier to unearth and refine in such an atmosphere. I would also resolve, as much as possible, scheduling conflicts between symposia and regular DVM sessions. One way to reduce conflicts may be to follow the Society for Experimental Biology model and fold some "regular" presentations into existing symposia. I welcome alternative suggestions from the membership.