



Division of Invertebrate Zoology

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DIZ Officers & Representatives

John Zardus
Chair 2015-2018

Sarah Berke
Secretary 2016-2019

Linda Walters
Program Officer 2017-2020

Samantha Smoot
*Student/Postdoc Representative
2017-2020*

Jennifer Burnaford
*Libbie Hyman Memorial Scholarship
Committee Chair*

Message from the Chair

John Zardus, Chair.DIZ@sicb.org

Dear DIZ,

Spring has sprung here in South Carolina. Wherever you are I hope you too are looking forward to pleasant days, adventures in field and lab, and the end of tax season. The annual meeting in New Orleans was another great success. Once again it was the largest meeting to date with many contributions from our division. One of the meeting highlights included the competition for best student oral and poster presentations organized by Anne Böttger (West Chester University, PA). Thanks very much to the many folks who volunteered to judge the presentations. Please see Anne's report in this newsletter detailing the winners and runners up. We also teamed up with three other divisions (DEDB, DPCB, & DEE), the American Microscopical Society and the Crustacean Society for another joint social. That might sound big but there are still another seven divisions with which we could mingle. For further meeting news, please refer to the report from our new Program Officer, Linda Walters (University of Central Florida, FL).

I want to highlight one important item that took place at the business meeting. In the past our bylaws have stated that as a division we can only vote on changes to the bylaws *at the annual business meeting in person*. Last fall we circulated a proposal to change the bylaws to allow us to vote on proposed changes electronically at any time of the year. I am happy to report that voting by those in attendance at the business meeting was unanimously in favor of approving this change. You can now look forward to casting your vote on-line in the future wherever you are when changes are proposed.

There is some divisional business to take care of in 2017. It is time to vote into office a candidate for Chair-elect for the division. My term as Chair will expire in early 2019 so we need to have a Chair-elect in place by early 2018, ready to step up a year later. A three-person nominating committee has found two candidates to run, Bob Podolsky (College of Charleston, Charleston, SC) and Ken Halanych (Auburn University, AL). See the biographical sketches of the candidates in this newsletter and keep an eye out for a ballot in the coming weeks.

Another important item I want to bring to your attention is the ongoing discussion regarding a proposal to change operations for our Best Student Presentation competition. The proposal was conceived by Bob Podolsky and has been posted on the SICB website at the members-only discussion board for DIZ (<http://www.sicb.org/divisions/DIZ/bbdiz/>). The proposal includes a recommendation for some pre-screening for participants, a single session for oral presenters, and a novel mentoring element for all who sign up. Bob



has given a lot of thought to this and provides some preliminary survey data and compelling rationales for the proposed changes. Please look it over and weigh in with your thoughts. Pending responses from the discussion, I am considering appointing an ad hoc committee to collate results and, if merited, draft a document for review and perhaps eventually a vote.

Before you know it, the meeting in San Francisco will be here and it is time to start planning for it. As we think even farther ahead to Tampa in 2019, send your ideas or wishes for symposia topics to our program officer to start building the program now.

Wishing you all the best,

John Zardus

Message from the Program Officer

Linda Walters, DPO.DIZ@sicb.org

For those in a hurry, here's the summary:

2017 meeting in New Orleans was excellent! 2018 meeting scheduled for San Francisco has all the necessary ingredients for "best meeting ever," including 4 symposia co-sponsored by DIZ!

We urgently need submissions for symposia for 2019 meeting to be held in Tampa, Florida.

Many thanks to outgoing DIZ program officer Bruno Pernet for all his energy, enthusiasm, and mostly, his love of invertebrates!

For those who prefer the long version:

Greetings all! I hope you had as much enjoyment combining science with beignets as I did in New Orleans. I was accompanied by a M.S. student who had just finished her first semester of graduate school and was presenting some data she had collected days before the meeting on boring sponge impacts on intertidal oyster reef restoration. It was really fun to watch Iris engage with our community of scientists at her first international conference. While many conferences keep popping up that have rather narrow foci, I tell Iris and other students in my lab that the annual SICB meeting is one of my favorite meetings because there is so much breadth and depth to the topics that are covered. And the 2017 meeting was no exception. There was much to be learned about our favorite invertebrates – a lot of what I learned has already been integrated into my undergraduate Marine Biology course this semester. There were also many, many

opportunities to explore new, diverse topics. I personally really enjoyed a graduate-student led workshop on sketch-mapping.

San Francisco will host the 2018 SICB in our regular early January time slot. In 2018, the dates will be 3–7 January. Symposia were selected in September 2016. Details about all the 2018 symposia are available at <http://www.sicb.org/meetings/2018/symposia/index.php>. DIZ will help sponsor the following symposia in 2018:

January 4

- **From Small and Squishy to Big and Armored: Genomic, Ecological and Paleontological Insights into the Early Evolution of Animals (SICB wide)**; Organizers: Erik Sperling & Kevin Kocot; Sponsors: DEDB, DEE, DIZ, DPCB, & AMS
- **Evolution in the Dark: Unifying Understanding of Eye Loss**; Organizers: Megan Porter & Lauren Sumner-Rooney; Sponsors: DEDB, DEE, DIZ, DNNSB, DPCB, AMS, & TCS

January 5

- **Story and Art in Science Communication (SICB wide)**; Organizers: Sara Elshafie, Stuart Sumida, & Bram Lutton; Sponsors: DAB, DCB, DCE, DEDB, DEDE, DEE, DIZ, DNNSB, DVM & AMS

January 7

- **Measuring Biodiversity and Extinction: Present and Past**; Organizer: Julia Sigwart; Sponsors: DEDE, DIZ & DPCB

And speaking of symposia – it is now time to be plotting symposia topics for 2019 in Tampa, Florida. Please contact me if you have questions, ideas, and/or suggestions. Remember that acting as a symposium organizer is a great way to establish new collaborations. It also looks mighty fine on your annual reporting and promotion documents.

Finally, we all need to give Dr. Bruno Pernet a huge shout-out as outgoing DIZ Program Officer. This position really is a service position for the society; I think the only perk received is a working lunch at the annual meeting. Bruno did an amazing job and I know we are grateful to him for all his efforts. Thanks, Bruno!



Message from the Secretary

Sarah Berke, secretary.diz@sicb.org

Greetings, DIZ members! We had another successful and productive meeting in 2017 in New Orleans. We accomplished a great deal at the business meeting, when we unanimously approved a change to the bylaws on amending the bylaws. From now on, amendments to the bylaws will be voted upon by electronic ballot. We encourage members with proposed changes to approach the divisional officers with their ideas as early as possible, so that the officers can promote sufficient discussion. Ideally, we would publish an announcement in the fall newsletter – note that the newsletter deadline is usually in the first few days of October, so any pending business should be discussed with the officers in early- to mid-September at the latest. We would then discuss the matter at the annual business meeting, and put it to a vote in the SICB spring elections. While this would be the ideal course of action, the bylaws give us the flexibility to call an electronic ballot at any time provided that the proposed amendment has been communicated to the members at least one month in advance of the election. The new bylaws are available online at <http://sicb.org/about/constitution.php3#dizbylaws>

In the coming year we have another order of business – DIZ member Bob Podolsky has asked the division to consider changes to our Best Student Presentation program. John summarized the proposal in his update, above. The full text of Bob's proposal is available at the DIZ online discussion board (links below). I will simply add my exhortation to all members to read the proposal and contribute thoughts on the discussion board itself. Several members have already done so, and I would like to thank them – their comments are very thoughtful. We want to hear your voice, so please comment!

Assuming that the online discussion warrants it (and so far it seems to), our fearless leader John Zardus will be forming an *ad hoc* committee to translate this proposal into specific proposed changes to the bylaws. This committee will consider comments from discussion in making their proposal, so hopefully that gives you added incentive to contribute your thoughts! A draft of the proposed bylaws amendment will be posted on the discussion board for comment, and a final version incorporating feedback will be published in the Fall newsletter, at which point further online discussion will be encouraged. We will discuss the amendment in person at the annual meeting in San Francisco in

2018, and vote on it in spring 2018. The timeline that we envision is as follows:

- Spring 2017: online discussion
- May-June 2017: ad hoc committee translates proposal into specific bylaws changes, taking the discussion into account.
- June-July 2017: The committee will publicize their proposed wording via the discussion board, and solicit feedback (all DIZ members will receive an email when the proposed wording is posted)
- July-August 2017: online discussion of proposed wording
- September 2017: committee finalizes wording for publication in the newsletter
- October 2017: Fall newsletter containing final wording is published
- Business meeting 2018: discussion on the amendment
- Spring elections, 2018: vote on the amendment

Bob's proposal is here: <http://sicb.org/divisions/DIZ/bspproposal2016.php>

The discussion board is here: <http://sicb.org/divisions/DIZ/bbdiz/index.php3>

Note that you will need your member number to access these links. Your member number should be in the header of any SICB-wide emails you receive, and can also be obtained by following the "forgot your member number?" link from the login page.

I would like to join my fellow officers in thanking Bruno Pernet for his excellent service as DIZ Program Officer. Congratulations to Linda Walters as our newly elected PO – we are delighted to have you aboard. This year we must elect a Chair-elect to replace outgoing Chair John Zardus, who will step down at the end of the San Francisco meeting in 2018. We extend a hearty thanks and congratulations to our two chair nominees, Ken Halanych and Bob Podolsky. You can read more about them in their biosketches at the end of this newsletter. Enormous thanks, too, to those who served on the chair nominating committee: Molly Jacobs, Amy Johnson, and Janice Voltzow. Your service is appreciated!

Thanks are also in order to Anne Böttger, who again oversaw a successful Best Student Presentation competition, organizing over 60 judges in evaluating 40 contestants. We are excited to highlight the student winners, whose work is featured in Anne's dispatch below. Thanks, too, to Jen Burnaford, Will Jaeckle,



and Shanna Hanes for their work administering the Libbie Hyman award.

Finally, I would like to exhort all DIZ members, but especially younger members, to consider serving the division as opportunities arise in coming years. Attending the annual business meeting is an excellent way to see how the division runs and get to know the most active members. Business meetings are most effective when we have diverse representation, including long-time members who know our history as well as student and postdoctoral members who help us look to the future. Every year there are opportunities to serve as a judge in the Best Student Presentation program. In 2018 we will need to elect a new Secretary, and in 2019 the Program Officer position will be open again. Serving an international society like SICB is an excellent way to strengthen any CV or application for tenure and promotion. More importantly, DIZ thrives because members who care about it are willing to give freely of their time and expertise. We hope to see you at the business meeting in 2018.

Sincerely,
Sarah Berke

Minutes of the 2017 DIZ Business Meeting, New Orleans, LA, [click here](#).

Message from the Student/Postdoctoral Affairs Committee Representative
Sammi Smoot, scsmoot@gmail.com

Hello DIZ members!!! I wanted to introduce myself as the new student representative for DIZ on the SICB Student/Postdoctoral Affairs Committee (SPDAC)! My name is Sammi Smoot and I'm a third year PhD student at Auburn University. I've been attending SICB meetings since 2010 while I was doing my master's degree at the College of Charleston. I'm really excited to serve this division and can't wait to meet more of you in the coming years at the annual meetings!

The goal of SPDAC is to improve student and post-doctoral experiences both at the annual meeting and throughout the year by offering workshops and funding information. For more information on available internal grants visit <http://www.sicb.org/students/awards.php3> and external grant information can be found at <http://www.sicb.org/grants/externalgrants.php>. In New Orleans, the SPDAC hosted a great brown bag workshop called "Low on the totem pole – power structures and power struggles in scientific careers" at which possible problems and how students can

navigate them were discussed. During the meeting in New Orleans this year, the SPDAC discussed a major change to the booth in the exhibitor hall. Rather than an information booth in the exhibit hall, we plan to create a lounge area for students and postdocs to utilize throughout the meeting to relax, drink coffee and socialize with their peers. We'll also offer mini-workshops throughout the day, covering topics normally covered in brochures, like how to find a post-doctoral position, preparing an academic CV, grant writing, etc. If you have any suggestions for the lounge area, topics, or ideas for the new SPDAC brown bag workshop, please don't hesitate to contact me at scs0051@auburn.edu.

Did you know that DIZ has a Facebook page? Go to <https://www.facebook.com/SICBDIZ> and check it out! "Like" the Facebook page to be entered in a drawing to win a \$25 Amazon card! Know of a job, class, grant opportunity or something else of interest? Post it on the Facebook page! I hope that this Page fosters an online community for our division.

Thanks everyone and I look forward to getting to know you all!!!

-Sammi

Message from the Student Awards Committee Chair
Anne Böttger

Thank you to everyone who made the annual SICB Meeting in New Orleans memorable, and a special thank you to all the students who presented! It was a great meeting that included excellent student presentations from the Division of Invertebrate Zoology. I would also like to take the time to thank the 61 volunteer judges for their commitment to the student presentations and their valued service and comments supporting our DIZ students.

In order for students to compete in our division they need to be a member of the DIZ, and this year 40 students competed for Best Student Presentation in 22 oral and 19 poster presentations! The winners of the Best Student Presentation awards and the Adrian M. Wenner Strong Inference Award for the 2017 SICB meeting are:

Best Oral Presentation

Winner: Karina Brocco French from the College of William and Mary for "Density dependent and size specific cannibalism among juvenile echinoderms."



Runner Up: Sara McAnulty from the University of Connecticut for "Judging a bacterium by its cover: differential hemocyte binding in the squid-*Vibrio* symbiosis."

Best Poster Presentation

Winner: Anna Klompen from the College of William and Mary for "Do Götte's larvae feed? Culturing indirect developing polyclad flatworms."

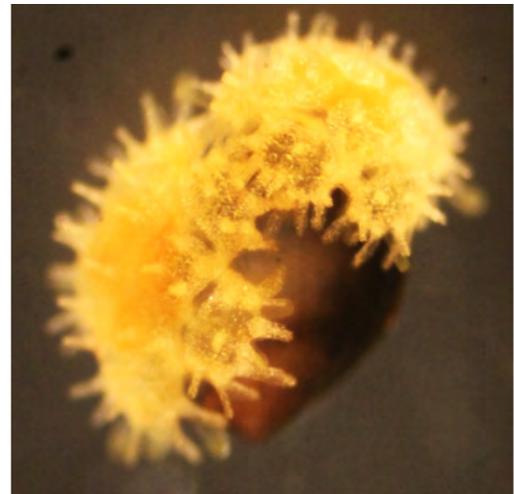
Runner Up: Robyn Reeve from Washington State University for "Immune function in the sea cucumber *Parastichopus californicus* during visceral atrophy and regeneration."

Adrian M. Wenner Strong Inference Award

Karina Brocco French from the College of William and Mary for "Density dependent and size specific cannibalism among juvenile echinoderms."

Please join me in congratulating these outstanding students for their contributions. I look forward to seeing you at the next meeting in San Francisco in 2018!

Sincerely,
Anne



Two sea star juveniles on a juvenile mussel (each about 200 micrometers across). Photo Credit: Karina Brocco French



Three adult *A. forbesi* sea stars. Photo Credit: Karina Brocco French



Best Oral Presentation winner and Adrian Wenner Strong Inference Award winner Karina Brocco French (at right) with her research team in Maine, collecting sea stars. From the left: Stacy Trackenberg, Emily Harmon, Dr. Jonathan Allen, Karina Brocco French. Photo Credit: Karina Brocco French



Best Oral Presentation runner-up Sarah McAnulty at her microscope. Photo credit: Sarah McAnulty



Bobtail squid are the focus of Sarah McAnulty's research. Photo credit: Sarah McAnulty



*The flatworm *S. ellipticus* was the subject of Anna Klompen's winning poster. Photo credit: Anna Klompen*



Best Poster Presentation winner Anna Klompen searches for flatworms in the Chesapeake Bay. Photo credit: Joseph M. McClain, William and Mary Science Communication



Best Poster Presentation runner-up Robyn Reeve. Photo Credit: Amy Tan



The sea cucumber *Parastichopus californicus* was the subject of Robyn Reeve's winning poster. Photo Credit: Amy Tan

Message from the Libbie Hyman Scholarship Selection Committee Chair

Jennifer Burnaford

Applications for the 2017 Libbie H. Hyman Memorial Scholarship were due on 6 February. We received 22 applications. Due to several generous contributions to the fund in recent years, we able to award three scholarships this year.

A scholarship in the amount of \$1740 was awarded to **Rachel Weinberg** to support participation in the Taxonomy and Biology of Tunicates course at the Smithsonian Tropical Research Institute's Bocas del Toro Field Station in Panama. Rachel is a first year M.S. student at San Francisco State University in the lab of Sarah Cohen. Her thesis work focuses on the biology of colonial tunicates in the family Didemnidae, with emphasis on the invasive species *Didemnum vexillum*. The summer field course will give Rachel an opportunity to explore new techniques for tunicate identification and classification, and the experience with tropical species will give her a comprehensive understanding of tunicate taxonomy that will provide critical context for her thesis work.

A scholarship in the amount of \$1864 was awarded to **Laura Spencer** to support participation in the Comparative Invertebrate Embryology course at the University of Washington Friday Harbor Laboratories. As a first-year graduate student in the lab of Steven Roberts at the University of Washington School of Aquatic and Fishery Sciences, Laura is interested in explor-

ing how environmental stressors, particularly ocean acidification, affect physiology and gene expression in molluscs. The summer field course will allow Laura to develop her knowledge base on early life stage development and refine the laboratory and field skills required for her research.

And our third scholarship, in the amount of \$795, was awarded to **Miranda Rep** to support summer research at the University of Maine Darling Marine Lab. Miranda is a third-year undergraduate student at McDaniel College in Westminster, Maryland. Working with faculty mentor Molly Jacobs, Miranda will study the effect of conspecific density on foraging and hiding behaviors of early juveniles of the invasive crab *Carcinus maenas*.

I'd like to thank my fellow committee members Will Jaeckle and Shanna Hanes and SICB Webmaster Ruedi Birenheide for all of their work to make the application and award process move smoothly.

The Libbie H. Hyman Award provides funding to support the first significant field station experience for advanced undergraduates or early career graduate students pursuing coursework or research on invertebrates. This first field station experience is typically a transformative period in the career and life of a student. We deeply appreciate the donations, which allow us to support these experiences. As the costs associated with summer field station experiences continue to rise, we are always happy to accept contributions to the Scholarship Fund so that we can increase the amount of support to these deserving students.

To contribute, click on Donate to SICB on the SICB home page (www.sicb.org) or send a check to: SICB Business Office, Libbie H. Hyman Memorial Scholarship Fund, 1313 Dolley Madison Blvd., Suite 402, McLean, VA 22101

Checks should be made payable to SICB and marked as a "Contribution to the Libbie H. Hyman Memorial Scholarship Fund." All contributions are tax deductible. Thanks for your help!

- Jennifer Burnaford, Chair, Libbie H. Hyman Memorial Scholarship Committee



Candidates for Elections

Candidates for Divisional Chair-Elect

Kenneth Halanych



DIZ Chair-Elect candidate Ken Halanych, working on a collecting cruise

Current Position: Schneller Endowed Chair and Alumni Professor in Biological Sciences, Auburn University, Auburn, Alabama, and Curator of Marine Invertebrates at The Auburn University Museum of Natural History.

Education: B.S., Biology, Wake Forest University; Ph.D., Zoology, University of Texas.

Professional Experience: Postdoctoral positions at University of Pretoria, South Africa, and Rutgers University; Assistant and Associate Scientist, Woods Hole Oceanographic Institution, Woods Hole, MA; Adjunct Scientist, Marine Biological Laboratories; Associate Professor and Professor, and Marine Biology Liaison at Auburn University; Chair, Educational Program Committee for the Marine Environment Science Consortium, AL. Visiting Professor University of Bergen; Co-Instructor of Auburn Bioinformatics Bootcamp; Research Board member, Gulf of Mexico Research Initiative. 20+ scientific research cruises. Editorial board service for *Systematic Biology*, *Biological Bulletin*, *Marine Ecology*, *Marine Biology Research*, *BMC Evolutionary Biology*; Position as Role for *Zoologica Scripta*; Current Editor-in-Chief of *Biological Bulletin*.

SICB Activities: Student representative on local committee for 1990 San Antonio American Society

of Zoologists (ASZ) meeting, Symposium Co-organizer "Evolutionary Relationships of Metazoan Phyla" at 1998 Boston ASZ meeting and "WormNet: Recent advances in annelid systematics, development, and evolution" at 2005 San Diego SICB meeting. Judge of student papers for DIZ and Division of Systematic and Evolutionary Biology (DSEB; R.I.P.). Co-Secretary DEDB (2001-2002). Chair DSEB (2004-2006). Committee for selection of editor for new Open Access journal (2017). Speaker in 5 symposia.

Other Memberships: American Association for the Advancement of Science, American Microscopical Society, Society of Systematic Biologists.

Research Interests: I have broad interest in the evolution of marine invertebrate organisms. My laboratory uses mainly molecular, genomic and bioinformatics tools to address questions across several time scales and habitats. Currently there are 3 main foci to my research program: 1) deep animal evolutionary relationships, 2) recent evolutionary history of Antarctic invertebrate fauna and 3) adaptations and genetic variation in deep-sea invertebrates. My lab works on a number of taxa, but annelids have been a particular focus. Phylogenetic and population genetic theory underpins many of the research efforts in my lab. In terms of teaching, I have interests in updating invertebrate zoology courses to include recent advances in evo-devo, phylogenetics and morphological adaptation elucidated by the genomics revolution. Also, I have been actively promoting bioinformatics training.

Goals Statement: The most significant roles of the DIZ Chair are to act as an advocate for, and a conduit of, communication between DIZ members and the SICB leadership. Given this role, there are some particular issues for which the DIZ Chair has a critical responsibility. The Chair, in consultation with the program officer, must solicit and promote top-notch, engaging symposia. Similarly, maintenance and growth of The Libbie H. Hyman Memorial Scholarship fund is paramount. However, two issues stand out above the rest. First is the continual need to develop and mentor early career scientists (this includes promoting diversity). Two key time points in terms of developing a career in science are transition from undergraduate to graduate research/school, and the transition from a graduate degree to a permanent position (the postdoc years). I would work with the SICB leadership and contribute some DIZ resources to attract promising undergraduates and to help postdocs make SICB and DIZ a career-long home for their research and



interests – helping them build a support network for research and teaching endeavors. The other issue is educating the lay public about the importance of basic science and the function of scientific research in a healthy society. With science under attack on multiple fronts, from the K-12 classroom, to research budgets, to a misinformed public, as research and education professionals we need to undertake a more efficient approach to educating the lay public. I realize a one-term DIZ Chair will not be able to change the world on this front, but they can help encourage SICB as a society to be more proactive.

Robert D. Podolsky



DIZ Chair-Elect candidate Bob Podolsky

Current Position: Associate Professor of Biology and Director, Grice Marine Laboratory, College of Charleston, Charleston, SC.

Education: A.B., Biology, Princeton University, 1985; M.S., University of Florida, 1989; Ph.D., University of Washington, 1995; postdoctoral fellow, Hopkins Marine Station, Stanford University, 1996-7.

Professional Experience: Assistant and Associate Professor, Biology, College of Charleston, 2005-present; Director, Grice Marine Laboratory, College of Charleston, 2012-present; Assistant Professor, Biology and Marine Sciences Departments, UNC-Chapel Hill, 1998-2004.

SICB Activities: Regular meeting contributor since 1992; DIZ student paper award (1992); Adrian M. Wenner strong inference award (1995); regular student paper and poster judge for DIZ & DEE; symposium participant 2003 ("Selection and Performance in Nature"); symposium organizer and participant 2006 ("Marine Life Cycles"); symposium organizer

and participant 2010 ("Evolutionary Paths among Developmental Possibilities"); Membership Diversity committee 2004-2005; Educational Council member 2008-2015 and chair 2009-2015.

Other Memberships: Society for the Study of Evolution, Sigma Xi.

Research Interests: Marine invertebrate form and function; larval ecology and life-history evolution; fertilization ecology; environmental biology; evolutionary and physiological ecology; phenotypic plasticity.

Statement of Goals: Given its taxonomic coverage, DIZ spans an extraordinary range of conceptual interests, one reason I am drawn to researching and teaching about the subject. I also enjoy taking on positions that help to assist the research and teaching of others, as I have as director of Grice Marine Lab. As chair of DIZ I would similarly seek to support the work of established scientists and the career aspirations of students and postdocs. One goal that would benefit our members and strengthen our division is greater member interaction. I hope especially to promote cross-generational exchange, as in my recent proposal to introduce a mentoring component to our Best Student Presentation program, and greater sharing of ideas and resources for teaching, through further development of the Invertebrates section of the SICB Research and Education Resources site, which I founded with a subsection on student-generated invertebrate research focus boxes. Divisional chairs also have the special responsibility of representing the division in deliberations of the executive committee and of transmitting information to and from its members. Having spent 6 years on the executive committee in my role as chair of the Educational Council, I have seen the proactive role that chairs can play in shaping policy and practice. Some issues involving the division that I want to explore include a role for our DPO in program scheduling that is more consistent with those of other divisions; greater support for and development of symposia, without which the society could not survive financially; and the activity of members in communicating with the public about the importance of our discipline.