



Division of Invertebrate Zoology

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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

I don't know about you but fall seems to be whizzing by at terminal velocity and the annual meeting in San Francisco will be here before you know it. Linda Walters, our Program Officer, recently returned from the programming meeting and reports it is set to break participation records yet again. Please see her message in this newsletter for details about the program and highlights for the meeting. We will hold the Best Student Presentation competition at the meeting as usual and I want to reach out and invite DIZ members to sign on to judge. We have had great participation in the past, both by students and judges, and I hope the trend continues.

This will be my last meeting serving as Chair of DIZ, at the end of which we will welcome our Chair-Elect, Ken Halanych, to step up to fill the role. This coming spring we will also be holding elections to fill the position of Secretary for 2019. If you are willing to serve the division, let Ken know of your interest, and thanks to all who have served or are serving now.

We will hold our next DIZ business meeting in San Francisco on day 3 of the annual meeting (Friday, January 5) at 5:45 pm in Salon 3+4. At that time we will hear reports from our officers and discuss division business. One item will be the review of a proposal from Bob Podolsky to make changes to



John Zardus with a large mobile substratum for commensal barnacles in Trinidad and Tobago.



our competition for Best Student Presentations. Discussion on the [proposal](#) has been open on the DIZ chat board since before last year's meeting. This year I assembled an *ad hoc* advisory committee to work with Bob on developing a document that could be brought for a vote. The proposal will be reviewed at the business meeting, and I hope we can bring the proposal for a vote in the spring, along with elections. If you have items you would like to put on the agenda for the business meeting, please contact me at least a few weeks in advance.

I have greatly enjoyed the opportunity to serve as Chair of the Division of Invertebrate Zoology. It has been my academic home since I was a student and I have relished getting to know more of you and working with many of you. Thank you for making this a great division and society! From my perspective of the last few years I think there are two areas that are vital to our continued success as a division. First, I think we need to continue doing a great job making students feel welcome and mentoring them in their professional development. Second, we need to consistently work to develop substantive and interesting ideas for symposium topics. The symposia from the annual meeting are the primary fodder for the society's journal, *Integrative and Comparative Biology*, they bring recognition to our division, and they make the annual meeting relevant and inspiring to us. I encourage you to think of good ideas for symposia that you can send to our Program Officer as well as to ask colleagues and acquaintances for ideas.

All the best for a satisfying wrap-up to 2017 and I look forward to seeing you in San Francisco for a new start to 2018.

Message from the Program Officer

Linda Walters, DPO.DIZ@sicb.org

Everyone needs to get really excited about the upcoming meeting in San Francisco! The location is perfect and SICB has broken yet another record for number of abstracts submitted. The total stands at about 1950 abstracts with symposia, and approximately equal numbers of oral presentations and posters. DIZ will co-sponsor four symposia in January: 1) *Science Through Narrative: Engaging Broad Audiences* (Society Wide Designation), 2) *From Small and Squishy to Big and Armored: Genomic, Ecological and Paleontological Insights into the Early Evolution of Animals*, 3) *Evolution in the Dark: Unifying Understanding of Eye Loss*, and 4) *Measuring Biodiversity and Extinction – Present and Past*. Additionally, DIZ was listed as the primary division for 88 contributed presentations.



DPO Linda Walters and son Josh at living shoreline stabilization event they led in August at DeSoto National Memorial in Bradenton, FL.

One important thing to know is that the plenary, conference sessions and business meetings will all be held in the lower levels of the Marriott Marquis Hotel, rather than having the bulk of the conference at a nearby convention center. This is a change from recent years and might be incentive to book your hotel room sooner rather than later. Within walking distance of the hotel are many fun restaurants, a Trader Joe's, the San Francisco Museum of Modern Art, the Museum of African Diaspora, the Contemporary Jewish Museum, and the Children's Creativity Museum. The local mass transit that goes directly from the airport called BART brings you within two blocks of the conference hotel.

DIZ students will be well represented at our January meeting. 31 students will be evaluated through our Best Student Presentation program (BSP) that will occur throughout the conference. We wish them all their best presentation ever, and we thank Anne Böttger for organizing this important effort. Please sign up to judge presentations if at all possible. Also, please note that we will be voting on a proposal to alter our BSP program to have dedicated award-generating sessions starting in 2019. Please join this important conversation at our divisional business meeting so everyone's voices are heard. As a reminder, this year's DIZ business meeting will be held on Friday from 5:45 to 6:30 PM in Salon 3+4. Our divisional social will most likely be off-site and an excellent way to catch up with friends and establish new collaborations.

Sixteen symposia applications for the 2019 conference in Tampa, FL were discussed at the October 6-8 Program Officers



Meeting in San Francisco. Of these, 12 were selected. For the first time, there will be a society-wide symposium on plants entitled "*Integrative Plant Biology*" to help expand our society's breadth and depth in this obviously important topic. Soon, there will also be a division focused on plants. I know this will strongly appeal to folks in DIZ who study plant-invertebrate interactions at some scale. DIZ has also agreed to use our allotted symposium support funds to support 4 symposia that had significant invertebrate components including the plant symposium listed above and: *Adaptation and Evolution of Biological Materials*; *Comparative Evolutionary Morphology and Biomechanics in the Era of Big Data*; and *The World is Not Flat: Accounting for the Dynamic Nature of the Environment as We Move Beyond Static Experimental Manipulations*.

Thanks all and I look forward to seeing everyone in San Francisco!

Message from the Secretary

Sarah Berke, secretary.diz@sicb.org

Hello, DIZ! I hope you're getting excited for SICB 2018 in San Francisco, I know I certainly am. I would like to exhort you to attend our business meeting this year – Friday, January 5, at 5:45 pm in Salon 3+4. This meeting will be the final opportunity to discuss proposed changes to the DIZ Best Student Presentation program. [The proposal](#) has been available on the DIZ website for the past year, and an ad hoc committee has been working to finalize the language for the bylaws. The final language will be presented at our business meeting and discussed. We expect to vote on this issue in the spring elections. I know that many DIZ members care deeply about the BSP program, so please come and share your voice with us.

See you San Francisco!

Message from the Libbie Hyman Scholarship Selection Committee Chair

Jennifer Burnaford

In 2017, three awards were made from the Libbie Hyman Memorial Scholarship fund. **Laura Spencer** of the University of Washington School of Aquatic and Fishery Sciences had planned to use her award to support participation in the Comparative Invertebrate Embryology course at the University of Washington Friday Harbor Laboratories. Unfortunately, because of last-minute changes to the schedules of the technicians who

planned to care for her oyster larvae, Laura was unable to leave her home campus for the duration of the five-week course and had to decline the scholarship funds. We hope that Laura's summer was productive and encourage her to seek out another field station course or project in the future.

Two of our award recipients were able to pursue their planned field station experiences, and they both made excellent use of their award funds. **Rachel Weinberg**, a M.S. student in the lab of Sarah Cohen at San Francisco State University, had this to say about her experience:

"This summer, I received the Libbie H. Hyman Memorial Scholarship to attend the 2017 Taxonomy and Biology of Tunicate workshop taught by Dr. Rosana Rocha and Gretchen Lambert at the Smithsonian Tropical Research Institute in Bocas del Toro, Panama. In the course, I studied essential methods in tunicate taxonomy and learned to morphologically identify the most common tunicate genera present in the Caribbean Sea. I engaged with other graduate students and professional biologists from around the world to learn about the exciting research they were conducting at their home universities on a wide variety of aspects of tunicate biology.

While tunicates in the genera Ciona and Botryllus are commonly used as model organisms for immunology and genomics research, comparatively little is known about the basic biology and taxonomic diversity of tunicates in the other known genera. In this course we learned about the reproduction, development, and ecology of many non-model tunicate taxa, alongside learning techniques for taxonomic identification, which was the primary focus of the course.

Tunicates are often dominant members of invertebrate fouling communities, which occur on docks and marinas throughout the world. Fouling communities in Panama were no different, with tunicates making up a significant portion of the invertebrate diversity both on the artificial substrate and mangrove roots. We traveled throughout the Bocas del Toro archipelago by boat to collect specimens to use for taxonomy and independent research projects. During these trips, we got to see how variable the sessile invertebrate community composition was between artificial substrate, mangrove root, and coral reef habitats. By the end of the course I had learned to identify most of the native and non-native tunicate species in the Bocas del Toro region, as well as many of the sponges, hydroids, corals, and echinoderms that co-occurred with them. Most of my fieldwork for my Master's research takes place in



the temperate waters of northern California, so this course was the first opportunity I had to see the diversity of tropical tunicates and study them in habitats I would not have otherwise had access to, such as mangroves and coral reefs.

As an aspiring systematic biologist, I have always been fascinated with the synthesis of morphological and molecular traits as a means of understanding the evolution of invertebrate diversity. The taxonomic training I received in this course provided me with many valuable tools to better understand morphological systematics, which I will incorporate into my future work."

Miranda Rep, an undergraduate student at McDaniel College, received \$700 to help support a summer research experience. Here is how she described her summer:

*"This past summer I spent four weeks at the Darling Marine Center of the University of Maine, in Walpole, ME, conducting research and living with many other fantastic students. During my time there, I collected samples of green crabs (*Carcinus maenas*) from the intertidal, off the coast of the Damariscotta River. I was particularly interested in how higher population density affects the behavior of these crabs, specifically how they allocate their time, whether that be sheltering or foraging/eating. At the lab, the crabs were placed in artificial settings, where their behavior was recorded using security cameras.*

This experience at the Darling Marine Center was nothing short of incredible. Being my first research experience ever, I was forced to step out of my comfort zone daily. From waking up at 4:00 am with the tide, to spending hours moving rocks and chasing the smallest crabs imaginable (trust me, they are very fast!), to constantly smelling like seaweed and sea salt, I was challenged in more ways than I ever imagined. The challenges, however, were nothing compared to wonderful experiences I was fortunate to encounter. Working closely with animals, traveling to an island completely off the grid, and watching the sun set over the Damariscotta River are just a few of the adventures I encountered. This was not just a research project; it was truly an experience I will never forget.

Conducting my research in Maine and having all those incredible opportunities would not have been possible without the Libbie H. Hyman Memorial Scholarship. I cannot imagine having spent those four weeks any other way, and I know it would not have been possible without it. I would also like to thank my mentors, Dr. Molly Jacobs and Dr. Skylar Bayer, for their continuous support and mentorship."

These accounts describe transformative experiences that the Libbie Hyman Scholarship is intended to support. We again acknowledge the generous support of our fund donors, whose recent contributions have allowed us to offer substantial support to two or three students per year. Contributions to the Scholarship Fund will help us to further expand our support for students as they explore the field of invertebrate biology. To make a contribution, click on 'Donate to SICB' on the SICB home page (<http://sicb.org>) or send donations to:

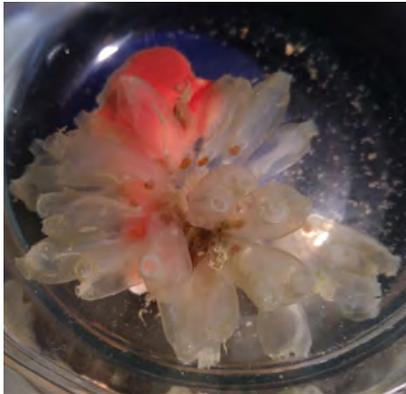
SICB Business Office
Libbie H. Hyman Memorial Scholarship Fund
1313 Dolley Madison Blvd., Suite 402
McLean, VA 22101

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.

I thank Will Jaekle and Shanna Haynes for their service on the committee, and Ruedi Birenheide for making the web-based application process work smoothly. **Applications in 2018 will be due on Monday February 5**, so mark your calendars! The application form is available at <http://sicb.org/grants/hyman>. If you or your students have questions about the application process, please feel free to contact me via email (my address is available at that site). Please encourage your best students to apply!



2017 Libbie Hyman Scholarship recipient Rachel Weinberg, collecting tunicates for her work in the 2017 Taxonomy and Biology of Tunicate workshop in Bocas del Toro, Panama. (Photo credit: A. Fodor)



Ecetinascidia turbinata
viewed through Rachel's
microscope in the lab
(Photo credit: R. Weinberg)

2017 Libbie Hyman
Scholarship
recipient Miranda
Rep searching
for green crabs
near the Darling
Marine Center
in Maine. (Photo
credit: M. Jacobs)



Miranda and fellow research student Tommy Schoolman
measure a green crab. (Photo credit: M. Jacobs)



Oyster reef monitoring in July in Canaveral National Seashore
in New Smyrna Beach, FL. Photo credit: Linda Walters

Message from the Student Awards Committee Chair

Anne Böttger

Another meeting is almost upon us, and we would like to encourage all post-graduate members who are attending the meeting in San Francisco, California, to sign up as judges. Attendees will have the option to sign up as a judge in the checkout section of their online registration. In addition, you are also welcome to sign up as a judge by contacting me directly at aboettger@wcupa.edu. Due to the large number of presentations this year, we would like to ask all judges to referee 4 or fewer presentations. Please help us continue the DIZ's established history of valuing student presentations by signing up as a judge to evaluate student presentations and provide students with valuable comments that will aid them with future presentations.

Judges will be able to choose presentations they are willing to evaluate via the online program for the SICB meeting in San Francisco, which will hopefully be available later in October or November. At that time judges should go online and select the DIZ talks or posters they want to judge: first come, first served.

When the schedule is complete, I will email your assignments and judging instructions – typically in late December. Forms to evaluate posters and talks will be provided to all at the time of registration. An envelope with your name, your assignments and the appropriate number of evaluation forms will be left for you at the registration desk. If you would prefer, instead, to receive the forms as electronic versions, please feel free to contact me.

I would like to thank all past DIZ judges for their time and effort, and ask for their continued help. If you have not volunteered as a judge, I strongly encourage you to consider volunteering. It is great fun and a wonderful way to help the division. Judges are often in short supply and yet necessary to continue to offer student awards. In addition, judges' comments are meaningful and important to prepare students for future presentations and help shape their future research questions. If you have any questions regarding the duties of a judge, please do not hesitate to email me at aboettger@wcupa.edu.

We look forward to seeing everyone in San Francisco in January 2018!