



INSIDE THIS ISSUE:

[Broadening Participation](#) ... 2
[Development Committee](#) .. 2
[Program Officer](#)..... 3
[Annual Meeting Logistics](#) .. 4
[Treasurer's Report](#) 5
[Educational Council](#)..... 6
[Program Committee Meeting](#)..... 8
[Public Affairs Committee](#)... 9

DIVISIONS OF SICB:

- [Animal Behavior](#)
- [Comparative Biomechanics](#)
- [Comparative Endocrinology](#)
- [Comparative Physiology & Biochemistry](#)
- [Ecoimmunology and Disease Ecology](#)
- [Evolutionary Developmental Biology](#)
- [Ecology & Evolution](#)
- [Invertebrate Zoology](#)
- [Neurobiology](#)
- [Phylogenetics & Comparative Biology](#)
- [Vertebrate Morphology](#)



EXPERIENCES IN SCIENCE EDUCATION-SIMULTANEOUSLY ENGAGING UNIVERSITY STUDENTS AND THE COMMUNITY IN MARINE CONSERVATION

By Linda Walters, Pegasus Professor of Biology and Director, UCF Center for Success of Women Faculty, University of Central Florida, Orlando, FL

I was delighted to receive the M. Patricia Morse Award for Excellence in Science Education in January 2015. My family, my PhD advisors Dr. David Wethey and Dr. Sally Woodin, and many of my students were present to share in the fun. Probably most meaningful was having Dr. Morse in the audience. Like many members of SICB, Dr. Morse has provided me with guidance and support at critical times in my journey. I am guessing that she often does not even realize the power of her conversations, especially with women scientists, trying to maneuver in the worlds of science, education, and especially science education.

I first met Dr. Morse at Bates College during the start of my senior year. I had just returned from a perfect year abroad at the University College of North Wales in Bangor and felt like I owned the world. Coming home to Bates, I quickly became aware that I was dreadfully behind on figuring out my future post-graduation. Dr. Morse just happened to be visiting campus, so a meeting was set up by the chair of the Biology Department. I was nervous about what to expect, but found our conversation to be incredibly useful in helping me focus my interests, which were very broad thanks to my liberal arts training, and she strongly persuaded me to directly contact potential advisors. I probably would not have made these direct contacts without her insistence, so thank you Trish! I now know that students without identified mentors frequently find themselves without any support in admissions

continued on page 12

PRESIDENT'S MESSAGE

By Peter Wainwright, SICB President

If you are like me, few things bring about that feeling of new beginnings quite like the start of the school year every fall. We put the more relaxed days of summer behind us and direct our attention to the many events and demands of the academic year ahead. Wherever you are I expect the fall term is under way and the weather has started to turn.

Fall also means that the SICB meetings are just around the corner. Preparations for the meeting in Portland, Oregon, January 3-7, are in full gear. This meeting promises to be excellent, with our plenary lecture by Terrie Williams, our 12 symposia on topics ranging from evolutionary endocrinology, to morphological diversity of intermittent organs, and neuroecology, and of course the many contributed papers and posters. SICB officers and our incredible partners at BAI met in late September to assemble the program, carefully walk through the venue, and get organized about room uses and a host of other challenges. The Portland Convention Center is spectacular and should prove to be an excellent facility for our annual meetings. It is also very conveniently located just a ten minute walk or a short light-rail ride from the main conference hotel, the Doubletree. This hotel is itself right on the light-rail line, about seven stops from the airport. From the Convention Center stop you can also continue by light-rail across the river to downtown Portland where there are many good restaurants and shops, as well as an outrageous lunch truck scene. All meeting registrants will receive a week-long pass for the light-rail. The word seems to be out about what a good place Portland is for a conference. We will be hosting a record number of abstracts this year (1,663), as our society continues its trend of steady growth. All we need

continued on page 11

Support your favorite SICB fund. Click on the "donations" button on the home page.

BROADENING PARTICIPATION IN SICB

By Michele Nishiguchi, Chair, Broadening Participation Committee

Broadening Participation meeting in Washington, D.C., September 21, 2015

Michele Nishiguchi and Brian Tsukimura attended an invitation-only Broadening Participation (BP) meeting held September 21, 2015, at the Federation of American Societies for Experimental Biology (FASEB) campus in Bethesda, MD, sponsored by The Society for Developmental Biology (SDB). The meeting was facilitated by Dr. Ida Chow, who is the lead co-PI for the NSF BP funded grant to SDB. The purpose of the meeting was to have the four currently funded BP grantees (SDB, The American Physiological Society-APS, and The Council for Undergraduate Research-CUR) present their ongoing work in broadening participation in their societies for the past three years. NSF Division of Integrative Organismal Systems (IOS) representatives were also present, and updated the group on funding opportunities that may be available next

year for societies as well as other scientific groups. SDB also invited representatives from other scientific societies to get their feedback and also provide them with information on types of programs that are being implemented at the undergraduate level to increase diversity within the societies.

Four invited speakers were at the meeting to give their insights for broadening participation. The first speaker was Dr. Patricia Campbell, from Campbell-Kibler Associates. Her presentation focused on "What's happening collecting and using data for program assessment and improvement." Dr. Campbell is best known for her publication "The AAUW Report: How schools shortchange girls" and her website www.BeyondRigor.org, which provides tips to improve the quality of evaluations and research done on diverse populations. Dr. Campbell's presentation focused on how we design methods to ascertain trends within

[continued on page 9](#)

DEVELOPMENT COMMITTEE REPORT

Darwin Jorgensen, Chair

Thank you so much for your generosity over the past year in helping to build the Society's Endowment. This year we continue our program designed to more visibly recognize your contributions. If you have contributed to the SICB Endowment since January 9, 2015, and through the end of the Portland meeting, you will receive a ribbon with your Registration materials that can be affixed to your badge identifying you as a Society donor.

If you have not already given to support the Endowment this year, we hope you will consider it. You can stipulate, out of the several fund categories that exist, how you would like your donation to be applied. Simply go to the donation section of the Society website (<https://ssl4.westserver.net/birenheide/sicbcart/donations.php>) to make your contribution online. Or, you can make a donation on-site at the Portland meeting.

Your contribution will help make the Society stronger. Endowment funds allow SICB to support student research and travel, subsidize childcare, develop workshops, run special lectures, improve programming, and facilitate the Society's external work. Any amount you might choose to contribute is greatly appreciated.

Best wishes and we look forward to seeing you in Portland.



Members Michele Nishiguchi, Brian Tsukimura, and Cheryl Wilga wearing ribbons at the Broadening Participation Social in 2015.

There are five donor levels:

- Bronze – up to \$50
- Silver - \$51-100
- Gold - \$101-250
- Platinum - \$251-500
- Diamond - \$501 and up

GREETINGS FROM THE SICB PROGRAM OFFICER

By Sherry Tamone

Portland is going to be a great meeting!

The Program Committee met in Portland on September 26-27, 2015, to view the Portland Convention Center venue and to organize 1663 abstracts into 132 sessions. For the record, I want to applaud this group for working tirelessly and effectively to organize 4 days of scientific program into 12 Symposia sessions, 13 concurrent oral sessions and 3 days of poster sessions. I have served on the program committee for at least 6 years and this is the first time that the meeting was fully organized (rooms chosen, sessions numbered) before leaving the meeting on Sunday afternoon. This does not mean that our job is complete, and we will spend the next couple of months confirming all of the keynote speakers and organizing the workshops.

Speaking of workshops, we received numerous requests for workshop times, a result of very successful funding of our Symposia from the NSF to include complementary workshops. You will notice, when the schedule is released, that we have SICB-specific workshops offered by our hard working Broadening Participation, Public Affairs, and Student/Postdoctoral Affairs Committees as well as our regular workshop offered by NSF. In addition, there is a Symposium-linked Crustacean Transcriptomics Workshop, a TALX (Teaching and Learning X), a Symposium-linked "Explaining the Importance of 'Oddball' Science: Strategies for Public Outreach" workshop, and a STEM Education workshop. In the future, we will move to a workshop selection process much like our process for selecting symposia so that excellent and diverse workshops are provided.

The other important responsibility of the SICB Program Committee is to select the Symposia for the 2017 SICB meeting in New Orleans, LA. We had a lot of excellent proposals and selected 11 of these for the New Orleans meeting. I will report on these selections in the next newsletter. The 2016 Symposia

scheduled in Portland are exciting and diverse, and there is definitely something for everyone. This year the symposia seem very integrative and we know there will be some unfortunate divisional conflicts. It could not be helped!

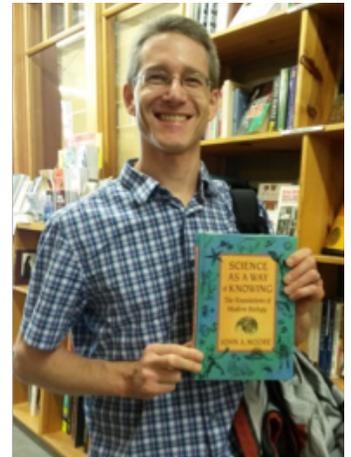
Portland will be a great meeting! Terrie Williams will give the Plenary Lecture, and she will give her talk "The Biology of Big: Discovering the extraordinary costs of survival at the top of the food chain" on January 3rd to kick off the meeting. The Convention Center is large and easy to navigate. There will not be free Wi-Fi throughout, but there will be many food vendors within the Convention Center with diverse offerings. There are plenty of excellent restaurants in Portland accessible by light rail or a good walk. The Program Committee was able to try out some of the restaurants around the North side of

Portland and some of us took the MAX light rail for a short trip into City Center. We explored some brew pubs, walked all around, and went to Powell's Bookstore (see photo of Program Officer Elect, Rick Blob and notice the title of the book!). You might want to spend a couple of hours at Powell's Bookstore, so plan an extra day in Portland. I should also mention that there are many great opportunities for wine tasting, as Oregon has some exceptional wines. Stay tuned for a thorough "Notes from the Underground" - Jason Podrabsky (DCPB) from Portland State is helping me and Burk Inc. put together an insider's guide to the Portland area.

The Program Committee includes Richard Blob (Program Officer Elect), Allison Welch (DAB), Joseph Thompson (DCB), Rosemary Knapp (DCE), Jason Podrabsky (DCPB), Louise Page (DEDB), Sarah DuRant (DEDE), Donald Miles (DEE), Bruno Pernet (DIZ), Charles Derby (DNB), Todd Oakley (DPCB), Manny Azizi (DVM), Elizabeth Davis-Berg (AMS), and John Zardus (TCS). I can't thank them enough for all of their hard work.



Sherry Tamone,
Program Officer



ANNUAL MEETING LOGISTICS

Information from reports by multiple Divisional Program Officers, including Jason Podrabsky, DCPB DPO from Portland State University

The Oregon Convention Center, venue for the 2016 annual meeting, is located just across the Willamette River from downtown Portland where a great number of restaurants and pubs are easy to stumble upon! Portland is a great family-friendly city with lots of parks, gardens and other attractions (Oregon Museum of Science and Industry, Oregon Zoo) just a short train ride away. Portland is also a fantastic city for food and coffee and beer and books ... and you can find sources of all of those things not far from the convention center. There will be childcare available at the meeting; if you are interested in using this service, please complete the [child care survey](#) by November 15.

All of the oral presentation rooms at the Convention Center are quite close to each other, so movement among sessions should be easy. And just a few steps from those rooms is the exhibit hall, which also contains several cafes/restaurants that will be open during the meeting. The convention center will not have free wireless throughout, but there will be several hotspots for free wireless access distributed in the building.

A housing bureau called Travel Portland is managing hotel reservations for the meeting, which should be made using the online reservation portal <https://aws.passkey.com/event/13856072/owner/3232/home>. The headquarters hotel is the

Doubletree by Hilton Hotel Portland, which is located just a few blocks away from the Convention Center, but SICB has established meeting rates with four other nearby hotels as well.

When arriving in Portland, your best bet for getting into town from the airport is to take the MAX light rail train. The MAX terminal is located at the SW corner of the airport terminal – just follow the signs towards ground transportation, at the far end of the baggage claim area. Purchase a MAX pass ticket BEFORE getting on the train using the pay stations or kiosks near the exit to the train terminal. Purchase a 2.5-hour ticket for the ride into town, because a one-week TriMet pass will be given to all meeting participants in your registration packet. This TriMet pass is valid on all forms of public transportation in Portland (MAX light rail, buses, Portland Street Car). This pass is important because many of the great bars, restaurants, and bookstores are only a 5-minute ride away, but they are across the river, and January can be a bit cold and wet in Portland! From the airport, board the Red Line MAX train bearing the sign, City Center & Beaverton; disembark at Lloyd 11th Ave MAX station; for the Doubletree Hilton, turn left upon disembarking from the train; the hotel is ½ block west (you may want a different stop if you are not staying at the Doubletree hotel).

**Member Benefit: 25%
Discount on
Oxford University
Press Books**

**Go to the SICB
Home Page**



SICB FINANCES - TREASURER'S REPORT

Karen Martin

SICB continues to operate with no expected increases in membership or meeting registration fees in 2015. The three major sources of income for SICB are: the membership dues, the annual meeting, and the journal. Offsetting these are expenses of administration, the annual meeting, and the journal, along with some additional costs. While each segment does not break even, taken as a whole the organization has been able to meet its financial obligations and support its mission.

To examine each component, the dues in FY 2015 brought in \$131,567 against administrative expenses of \$229,619. The annual meeting in West Palm Beach took in a total of \$355,644 against expenses of \$237,730, providing a net income of \$117,915. The journal provided an influx of \$326,511 against expenses of \$166,665, a substantial increase over previous years. We continue the 70%/30% profit split with the 70% going to SICB. For all sources of income, including that from investments, the total is \$991,810 against expenses in FY 2015 of \$1,041,135. As a result the preliminary net numbers for FY 2015 are negative, with a loss of \$70,308, for the year, although overall the assets of the society increased in FY 2015. These results are unexpected and being investigated. Final numbers will be presented at the annual meeting in Portland.

The success of the journal *Integrative and Comparative Biology* is strongly linked to the financial health of SICB. Recently, we entered into a new journal contract with Oxford University Press for 6.5 years. As you know, the journal has thrived under the stewardship of Editor Harold Heatwole since 2006. We anticipate many new initiatives at the start of Marty Martin's work in this role in 2016. Financially, the Oxford contract provides a booth for the publisher at our annual meeting, gives

SICB a \$25,000 "signing bonus" this year, and sets aside \$6,300 per year for editorial office support. We have the potential for four full-page ads per year that we have not traditionally used. Of interest to our members, online subscriptions are specifically included in the contract this time. The cost of online subscriptions to SICB will start at \$20 in 2016 but be reduced by \$5 per year, until 2020 when online subscriptions will be free for the membership. This will help to keep our membership costs low. Print subscriptions, on the other hand, will increase in cost starting in 2016. In the near future members will be able to choose whether to receive the journal in print or online only. In another online area, the current price for an open access manuscript is \$3,000, and this will be reduced to \$2,800 in the coming year.

The annual meeting in West Palm Beach was a scientific and financial success. Registration fees from members brought in the majority of the revenues, but non-members provided approximately \$95,800. Exhibitors provided \$24,300. Larger expenses included \$7,000 for the meeting app, and \$82,600 for sound and projection services. If you have comments about these services, please share them with the SICB officers. The meeting in Portland, OR, should also be a strong event with an excellent program and a well-planned location.

We are still waiting for the final accounting review of FY 2015 to be completed at press time. The status of the named funds and investments will be updated at the Annual Meeting in January and in the Spring Newsletter. Briefly, donations this past year were impressive, totaling \$58,242, including two generous donations of stock by Dr. Jarid Simons for the Hyman and Moore funds. The Bern fund benefitted from an active campaign by the Division of Comparative Endocrinology that continues into the present year. More details will follow in the near future. Thanks to all who provided new funds to these important programs within SICB. We appreciate your support!



www.SICB.org

*Mark your
calendar for*

*2017 New Orleans, LA
4-8 January 2017*

SICB EDUCATIONAL COUNCIL

Bram Lutton, Chair

The SICB Education Council is looking forward to the Portland meeting and has several exciting events planned. These include the Undergraduate Student Poster Session, the Moore Lecture and Morse Award, as well as the annual Teaching and Learning Workshop.

Teaching and Learning Workshop on K-12 Outreach

Last year's winner of the M. Patricia Morse Award for Excellence and Innovation in Science Education, given annually to a SICB member to recognize a record of achievement in education, was Dr. Linda Walters. We are fortunate that Dr. Walters, along with Education council member, Dr. Lisa Whitenack, will be offering an exciting Teaching and Learning Workshop at the meeting focused on K-12 outreach. The workshop will focus on sharing information and engaging meeting attendees on the benefits, opportunities, and practical advice for involving the K-12 community in faculty scholarship, broadly defined to include citizen science, service-learning, outreach and other forms of high impact engagement. The workshop will include presenters who work with pre-K through high school students and their teachers to strengthen their science and improve the community in which they live, as well as assessing these efforts and how to strengthen broader impacts sections of grant proposals. Pizza and drinks will be provided at the workshop, which will take place on January 6th at 7:00-9:00 PM.

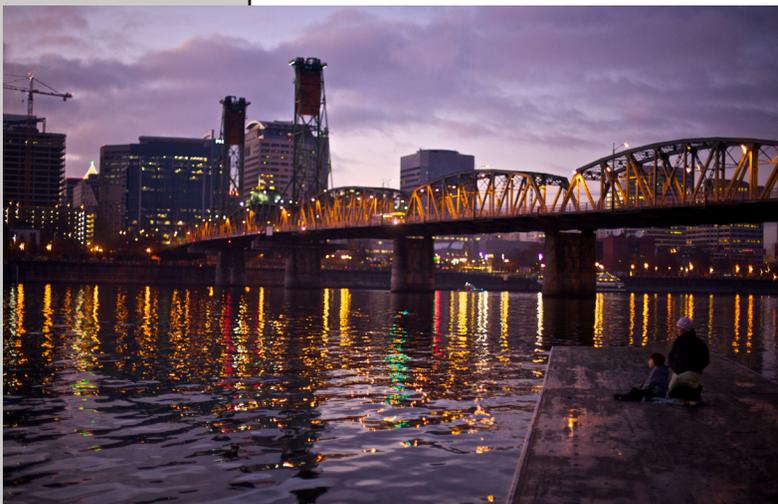
M. Patricia Morse Award for Excellence and Innovation in Science Education

Following in Dr. Walters' footsteps as the Morse Award winner for 2016 is another exceptional scientist and educator... *but we're going to keep that a secret* to be announced at the beginning of the Moore Lecture on January 7th, so don't miss it!

The John A. Moore Lecture

Also be sure to stick around on January 7th because you won't want to miss the annual Moore Lecturer, **Dr. Jay Labov**, who serves as a Senior Advisor for Education and Communications for the National Research Council. John A. Moore's work in the fields of embryology and genetics led to his election to the National Academy of Sciences. However, he is well known as an educator and for the creation of the Science as a Way of Knowing series. The Moore lectureship was established in 1990 by the SICB Education Council. Since that time a number of exceptional scientists and educators have graced the SICB meetings with their knowledge. Dr. Labov's talk, "**The Changing National STEM Education Landscape: Connecting the Dots,**" will focus on recent national trends to improve undergraduate and K-12 STEM education and how understanding both the education system and education policy can lead to more informed decision making at the local and state levels. Dr. Labov served for three years as Deputy Director for the NRC's Center for Education and was the study director and staff officer responsible for a number of NRC reports since 1998. He has served as Director of the Center for Education's Committee on Undergraduate Science Education, Committee on Science Education K-12, and the National Academies' Teacher Advisory Council. Dr. Labov is also currently the co-PI for a multiyear grant from the National Science Foundation to the Center for Edu-

[continued on page 7](#)



SICB EDUCATIONAL COUNCIL

[continued from page 6](#)

“Please contact the chair of the Educational Council (chair.edcouncil@sicb.org) with your interests and ideas, and help to continue growing the unique educational resources offered by SICB and its members.”

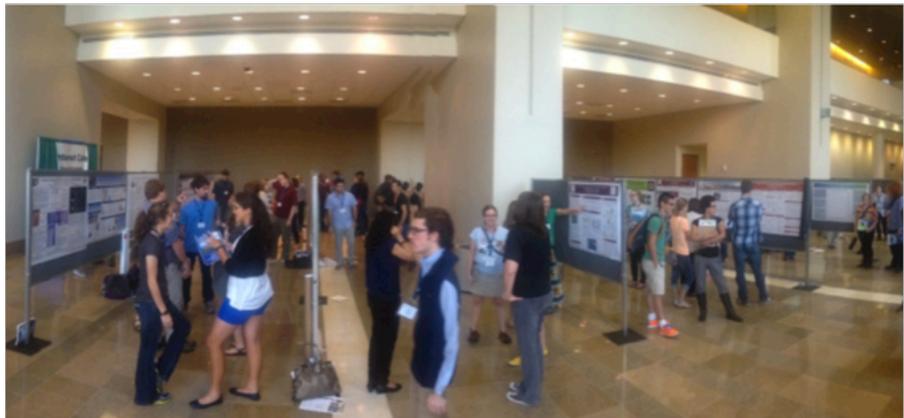
cation and an NSF grant to offer workshops to grantees of the NSF’s Math/Science Partnership Initiative and currently oversees the NRC’s and National Academy of Science’s efforts to improve the teaching of evolution in the public schools. Importantly for SICB, Dr. Labov recently expanded efforts of the National Academies to work more closely with professional societies on education issues. The Education Council has been very involved in this effort. In addition to Dr. Labov’s Moore Lecture, he will also be offering a talk on “Undergraduate biology education, teaching and research” the same day of the Moore Lecture (January 7th), so be sure to make it to that if you can!

Undergraduate Student Poster Session

We will be continuing the very popular undergraduate poster session

during the first day of the conference, at registration, and we hope to get as many posters involved with this as possible. Evidence indicates that undergraduate students get a number of benefits from presenting their posters early in the conference, and then again during the general poster sessions.

As a final note, please be sure to fill out the **SICB member survey** that is currently in preparation. The Education Council learned a great deal from the previous member survey, and we have implemented a number of the excellent suggestions made by members; we are now asking a few questions in the follow-up survey to strengthen the education goals of the society. For any additional questions, please contact the Education Council Chair (chair.edcouncil@sicb.org).



The 5th Annual Arrival Day Undergraduate Poster Display featured more than 100 posters to start the meeting (photo by Bram Lutton)



Broadening Participation Social, 2015



PROGRAM COMMITTEE MEETING FOR PORTLAND, OREGON



PUBLIC AFFAIRS COMMITTEE

Molly Jacobs, Chair

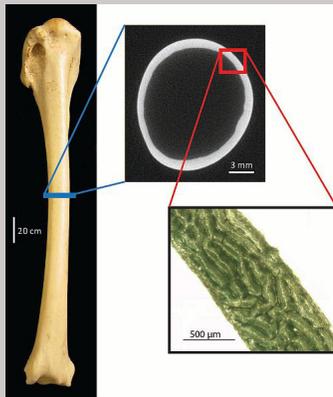
Student Journalism Internship Program

The Public Affairs Committee would like to remind SICB members that the Student Journalism Internship Program will be running again this year at the annual meeting. This program provides students who are interested in science writing with a real-world science writing experience at the SICB annual meeting in Portland. Each student will identify a talk or poster of their choice, conduct interviews, and write an original popular science piece that will be posted on the SICB website. The Science Journalism Internship is part of the Charlotte Mangum Student Support Program. Interested students must apply separately to BOTH programs to be considered. For more information, consult <http://www.sicb.org/meetings/2016/student-support.php>

Workshop on Public Outreach at the 2016 SICB Meeting

Explaining the Importance of "Odd-ball" Science: Strategies for Public Outreach

You know that your work tries to uncover basic truths about the way the world works. But explaining the importance of studying esoteric subjects like Gila Monster venom or the architecture of corals to the general public can be a struggle. This year's workshop on Public Outreach, brought to you by the SICB Public Affairs Committee and the Symposium on the Morphological Diversity of Intromittent Organs, will help members of the SICB community learn about and discuss effective ways to make the value of basic and seemingly arcane research subjects clear to a broad audience. The Workshop will be held at 8:15-10:00 PM on January 5th.



*From the DPCB
Researchers Database
Erin Simons
Evolution of the avian
locomotor apparatus*

BROADENING PARTICIPATION IN SICB

continued from page 2

our universities and societies, and to also obtain meaningful information from assessment. This is especially true when targeting underrepresented groups (URGs), for which there is limited information available. The second invited speaker was Dr. Steven Lee, who is the graduate diversity officer for STEM disciplines at the University of California, Davis. Dr. Lee's talk, "Understanding and minimizing unconscious biases in the STEM disciplines," presented interesting insights as to how we have unconscious bias starting from the application process of an incoming graduate student, to tenure and promotion decisions and beyond. Dr. Long engaged the group using an evidence-based activity, which focused on unconscious bias. The third speaker, Dr. Alison Hall, is the deputy director of the Division of Training, Workforce Development, and Diversity at the National Institute of General Medical Sciences, NIH. Dr. Hall presented data that the NIH has been collecting over the past 15 years for

URGs, but only from their programs that are offered through the NIH. Dr. Hall mentioned that it would be best if there was a way to combine all the information from multiple organizations that fund URGs in STEM disciplines. Dr. Hall also mentioned the programs that the NIH funds in her division that are specific for URG, from the graduate stage continuing through to the principal investigator. The last speaker was Dr. Oni Celestin, who is a AAAS fellow in the Division of Integrative Organismal Systems at NSF. Dr. Celestin mentioned a possible funding opportunity for societies through the NSF called INCLUDES0 which will be a comprehensive national initiative using collective impact on preparation, participation, advancement, and contributions of all STEM scientists and students who have traditionally been underserved and/or underrepresented. This initiative is from the Director's office, and will be NSF wide (instead of just in IOS). The budget for this program will be approximately \$15M, with \$1.4M going to BIO (including IOS). Some of the target

continued on page 10

BROADENING PARTICIPATION IN SICB

continued from page 9

objectives include impacting inclusion on a large-scale basis, such as professional and social networks, and using effective technologies designed for collective impact, empowering all youth for STEM disciplines by providing learning opportunities for middle grades and beyond, and targeting researchers from URGs along their entire career path.

Finally, the PIs from three of the funded societies reported on how their programs were running. SDB co-PI Dr. Graciela Unguez mentioned how their program of training undergraduates early in their career (freshman/sophomore) has provided those students with many skills and experiences that helped them advance toward a graduate or professional school degree. Three participants from the program were present to talk about their experiences in this program, Dylan Faltine-Gonzalez, an SDB fellow, Dr. Victor Varner, lab mentor, and Dr. Carmen Domingo, academic mentor. Each summarized their experiences and insights about the program, and how well "Choose Development" worked for themselves and their mentees. Additionally, Christine Weston, who is the "Choose Development" evaluator, provided comments about each of the participants' experiences from the past two years. Brooke Brothers from APS gave an update on their program, "Broadening participation through research experiences and professional socialization," and also had two participants present to speak about their experiences - IOSP fellow Lillian Horin and Dr. Rudy Ortiz, who was her research host. Both mentioned how this program gave Lillian experiences that have now led her to a career path in STEM. Finally, Dr. Mary Crowe gave an update on CUR activities, which were not

well attended this past year due to high costs and lack of advertising. She hopes to provide better workshops that are more affordable to faculty who would like to attend, but do not have the funds for this type of meeting.

Broadening Participation Activities at the 2016 SICB Meeting in Portland, OR

The Broadening Participation Committee will sponsor one workshop at the annual SICB meeting in 2016. The workshop leader will be Dr. Kirsten Rowell, who is the Director of the Doris Duke Conservation Scholars Program at the University of Washington. Dr. Rowell will speak about how to integrate diversity awareness into science institutions, from the bottom up. The workshop will be held on January 6th from 12:00 to 1:30 pm. Other activities will include our meet and greet social, held on January 3rd at 5:00-6:00 PM, the BP committee meeting (7:00-8:00 AM on January 4th), and the BP social on January 6th. Places and times TBA.

We welcome the participation of all SICB members in BP and look forward to hearing your comments and suggestions for broadening participation in our society in the next year. If you have ideas or comments, please contact chair.bpc@sicb.org



www.SICB.org



Attendees at the Broadening Participation Diversity Social on 6 January 2015 at Mojitos

PRESIDENT'S MESSAGE

By Peter Wainwright, SICB President

[continued from page 1](#)

to do is bring the great science and the rest will happen naturally!

Scientific meetings are a crucial part of our research world. They are one of the best opportunities we have to interact with colleagues who share our interests. Getting to know colleagues, share our passion with like-minded scientists, and becoming aware of emerging research accomplishments are substantial benefits of our annual meetings. SICB strives to make these meetings as accessible as possible to our younger members. Last year we spent well over \$100,000 subsidizing our students. And this year we have increased by \$10,000 our spending on the Grants in Aid of Research program. I am very happy to say that SICB has provided this level of support without raising dues or meeting registration costs for members in many years. I also want to emphasize how important this support is, by lowering the financial barriers to meeting attendance by students and supporting student research, we are making investments in their professional development. This is effectively an investment in the future of SICB.

IT'S ELECTION YEAR!

In 2016 we will hold elections for many of the major leadership positions within SICB. These will include President-Elect, Secretary-Elect, Program Officer-Elect, and Member-at-Large. We have a Nominations Committee that is chaired by Chuck Booth. If you have someone in mind whom you think would be especially good in one of these roles, or if you are interested in serving SICB in one of these capacities, I urge you to reach out to Chuck (booth@easternct.edu). I can tell you that being involved in SICB in these positions is interesting, fun and very rewarding. If you care about SICB you might be ideal for one of these roles. Please give some thought to whom you would like to see in these roles, and help Chuck and his committee find an excellent slate of candidates for the spring elections.



“Getting to know colleagues, share our passion with like-minded scientists, and becoming aware of emerging research accomplishments are substantial benefits of our annual meetings.”

THANK YOU HAL!

There are a number of interesting developments within SICB this year, perhaps none as significant as a changing of editorial leadership with our journal, *Integrative and Comparative Biology*. At the conclusion of the Portland meetings, Hal Heatwole will officially step down from his position as Editor after ten years of service in this role. This was a period for ICB marked by Hal's steady hand at the helm. ICB has an almost unique operating profile in focusing on the publication of symposia from our annual meetings. In order for manuscripts to arrive at the editor's desk in time for publication during the year the symposium was held, authors and editors must show great determination and cooperation. It takes a big effort from everyone to make this work and Hal has done a great job of streamlining the process and making it as easy as possible for authors while maintaining the high standards of the journal. We will miss Hal and I hope you will join me in thanking him when you see Hal in Portland. Thank you Hal!

OUR NEW ICB EDITOR – MARTY MARTIN

As Hal steps down we begin a new era with ICB under the leadership of Marty Martin. With 2016 approaching, Marty has been busy learning about the journal and shaping some innovations that he will implement. Marty has already appointed a group of four Associate Editors who will handle submitted manuscripts and who will advise Marty on other possible publication opportunities outside the normal symposium process. If you have ideas about other types of publications that might be appropriate for ICB, I would strongly encourage you to reach out to Marty and share them. Your ideas will be welcomed as we try to grow ICB and build its impact on our discipline. While you are talking with Marty, please thank him for taking on the job of Editor for ICB! This is a huge contribution to SICB and we are very lucky to have such a thoughtful and energetic person at the helm with our society's journal.

[continued on page 12](#)

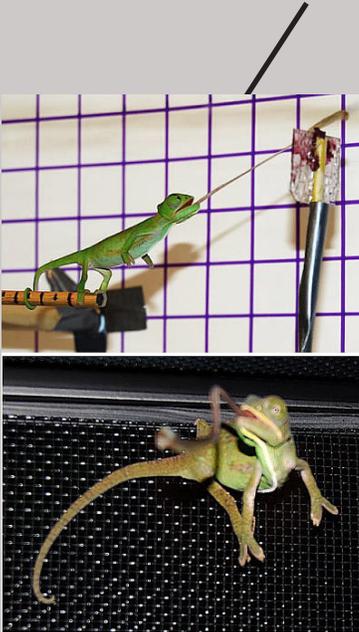
PRESIDENT'S MESSAGE

By Peter Wainwright, SICB President

[continued from page 11](#)

The Portland meetings will no doubt be upon us before any of us realizes it. But that's a good thing. I hope that in the meantime your research hits some high marks and your teaching is rewarding. I look forward to seeing you all in Portland

and having a chance to hear about your successes. Best wishes to all!



From the DVM
Researchers Database
Gary Gillis, Biology of
Animal Movement

EXPERIENCES IN SCIENCE EDUCATION- SIMULTANEOUSLY ENGAGING UNIVERSITY STUDENTS AND THE COMMUNITY IN MARINE CONSERVATION - LINDA WALTERS

LINDA WALTERS

[continued from page 1](#)

discussions, so I now push this really hard with my students. My conversation with Trish occurred back when snail mail was the only mail, so everything took a lot longer, and I think the letters might have actually been composed on a typewriter. Two of my top choices were Dr. Wethey and Dr. Woodin. I sent them both letters, having no idea that they were married! I also had no idea that Trish contacted them on my behalf as well...

Fast-forward twenty five-ish years...

I have been a member of the Department of Biology at the University of Central Florida for 18 years. For those who aren't familiar with UCF, it was established in 1968 and is the second largest University in the United States with over 63,000 students this academic year. Although most people think large student numbers equates to lack of quality teaching and caring by the faculty, I hope this article sets your mind at ease that faculty at large institutions care just as much about their students as those at smaller venues.

This was my first academic appointment and most days I know this is still the best place for me to have the most impact on students, colleagues and the community. I arrived as the first woman in the department with newborn son Josh and wonderful spouse Paul to start our lives in academia. Paul and I both traveled extensively as graduate students and post-doctoral fellows. For me, that included working for two years with

Dr. Mike Hadfield at the University of Hawaii, the inaugural winner of the M. Patricia Morse Award. I am now a part-time administrator (35% FTE) as the Director of my University's Center for Success of Women Faculty. With much administrative urging, we now have a dual-career hiring policy at UCF. If only we would have had this in place when I was hired in 1997....

"...I now had the academic freedom to try new strategies to simultaneously focus on career-readiness for my college-age students while making my science relevant to the community.."

Pre-tenure, my goal was to get tenure. As with many female colleagues, I made super-sure that my tenure and promotion file could not be dinged unless someone simply did not like me. Everyone at UCF had to meet one-on-one with the Provost before he said yes or no to your tenure file. I remember my meeting was short (which was considered good) and the only thought provoking question he asked was, "What sort of projects do you see yourself doing in 10 years?"

That question, my students, and my son's early teachers made me realize that I now had the academic freedom to try new strategies to simultaneously focus on career-readiness for my college-age students while making my science relevant to the community. The following are vignettes of some of my favorite efforts.

Merging Service-Learning with Experience-Based Learning:
Many of today's college students are provided with curricular experience-

[continued on page 13](#)

Experiences in Science Education, Part 2, by the Morse Awardee recipient

EXPERIENCES IN SCIENCE EDUCATION - SIMULTANEOUSLY ENGAGING UNIVERSITY STUDENTS AND THE COMMUNITY IN MARINE CONSERVATION - LINDA WALTERS

continued from page 12



Linda Walters (wearing sunglasses) and undergraduates in the field

based learning and co-curricular, authentic research opportunities. This is especially true of institutions with low student-to-faculty ratios. It is much more difficult at schools like UCF with large enrollments; less than 15% of the upper-division students in my marine biology classes enter with prior one-on-one research experience. When I started incorporating authentic research into my classes about 10 years ago (course enrollments of 20–60 students), I required that the project teams present their spring semester results at our University's SURE Showcase (Showcase of Undergraduate Research Excellence) that occurs toward the end of each spring semester. Engaging these students in a research showcase immediately changed the dynamics of the learning (in a good way). It converted the research from a "task for grade" into something real. Students learned that abstracts and posters were not something that started and ended with a single version that translated into a grade. Revisions, instead, happened repeatedly until the products were as good as we could make them. This was and continues to be a very new reality to most undergraduates. Likewise, critiquing each other's posters and practicing responses to judge's questions with the entire class was new (and necessary). Although I am usually exhausted by the time the show-

case occurs, I adore watching the entire class strutting around in business attire showing off what they have accomplished to their colleagues, friends and family. And, although I assure students they would not win awards when their class efforts are compared to individual projects that had been on-going for many more months/years, they often do win. I know this result is related more to their enthusiasm and speaking preparation than the depth of data collection and interpretation, but I'm quite OK with that.

In preparing students to present at the research showcase, I realized two things: 1) college students need much more practice at communicating sciences to non-scientists, and 2) these projects had produced some really interesting data that we really needed to share. Service-learning seemed like a perfect venue for this. I had already established a network of superstar preK-12th grade teachers through my outreach (see below). I coordinated with these educators to allow my students to present in front of their classes on their research topic, making sure that the UCF students also included hands-on efforts to engage their audiences. My university hosts a Service-Learning Showcase each spring. To ensure the UCF students realized the importance of communicating science to diverse audiences, the grade values for the research and service-learning efforts were the same. Thus, the research piece and the community engagement pieces were worked on side-by-side during the semester. Creativity was strongly encouraged for their presentations, posters and classroom activities. And creativity I received! Traditionally B-C grade students often shined as artists, led the development of "who-done-it" environmental skits, or the creation of games to understand topics such as displacement of native species by invasive species. A favorite of mine had

continued on page 14



EXPERIENCES IN SCIENCE EDUCATION - SIMULTANEOUSLY ENGAGING UNIVERSITY STUDENTS AND THE COMMUNITY IN MARINE CONSERVATION - LINDA WALTERS

continued from page 13

second grade students hopping around on one leg mimicking wading bird feeding behaviors on oyster reefs from a complementary project on wading bird usage of restored versus natural reefs. In collaboration with a social scientist at UCF, we have documented significant positive increases in science identity, especially in communication skills, associated with combining research and service-learning in this curricular setting.

Understanding local biodiversity via photo-organism collections:

In my marine biology class, we take many field trips to special habitats around the state of Florida. My goal is always to expose students to local biodiversity so that they can compare and contrast sites, as well as learn why each species is unique, important to the ecosystem, and, at least, the common name of each organism. I realized, however, that no matter how many times I would describe a species and even provide hand-outs or ID

books, students did not remember what they saw unless they thought there was an explicit test question coming down the pike. I did not want everything to be about memorizing or testing, but nor did I want my trips to simply be a fun day on the beach. I also did not want students to collect organisms simply to kill them to create a personal collection for a grade. So, about a decade ago, I started having students prepare photo-organism collections. I have modified the number of species and amount of information that needs to be submitted with each photo, but basically each student submits their photo, a second photo from the web of species if their photo is less

than optimal, scientific and common names of the organism, as well as habitat and biological information. How do I prevent cheating on this project? Each student receives a plastic, 6-inch ruler

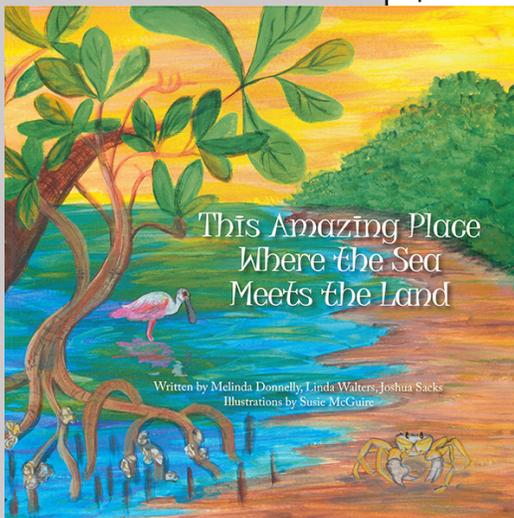
at start of semester and I hand-write each student's initials on the ruler. The ruler must be visible in all shots without special permission (not required for fish seen while snorkeling/diving or some birds). What I have found are students going out independently to all sorts of coastal areas that they would not otherwise have visited to complete their organism collection.

I participated in my schools' study abroad fair 2 weeks ago. Three students who had previously accompanied me to Belize helped at the event. Although 1.5 years had passed, all three remembered the names of all the fishes and many of the invertebrates and macroalgae from my photos. I was delighted. They also brought with them their photo-organism collections to share with prospective students. After the semester ends each year, I continue to get organism photos with visible rulers sent to me electronically from all around the globe. Whale photos are a favorite!

Creating children's books on marine conservation topics:

As a parent I found that Legos and story books were my son's favorite possessions. Legos creations were made and re-made, while favorite books were read so many times it should have been illegal. Teachers, especially those of younger children, asked me for ways to engage their students that combined conservation content and hands-on activities. The latter was easy - we needed to grow large numbers of mangroves for our restoration efforts, and they were easy enough to grow in kiddie pools that even the youngest children could participate in that hands-on effort. We expanded our mangrove nurseries to older classes that test various hypotheses on the mangroves to increase plant growth and thus improve our restoration efforts.

Having content to accompany the mangrove nurseries and our oyster restoration activities was harder. Many, many fact sheets have been produced for teachers that have never been



Cover of Linda's most recent children's book, co-authored by her post-doc Melinda Donnelly, and her son, Josh Sacks

continued on page 15

EXPERIENCES IN SCIENCE EDUCATION - SIMULTANEOUSLY ENGAGING UNIVERSITY STUDENTS AND THE COMMUNITY IN MARINE CONSERVATION - LINDA WALTERS

continued from page 14

read by teachers. I had large numbers of UCF students who would take turns participating in specific preK-12th grade school events, but nothing that would permanently stay with the teacher to continuously engage the students. To address this need, my lab, with the assistance of our classroom teacher friends, started producing children's books on marine conservation. The agencies that funded the community-based restoration were very excited about reaching many more people through this vehicle, and so embraced the idea of the books. At last count, my lab has produced seven children's books for preK through middle school reading levels with topics that range from marine invasive species, to sea level rise, to recreational boater impacts on biodiversity, to living shoreline stabilization. We print thousands of copies at a time and the books are always distributed for free to those who request them. I am not interested in the profit side of book publishing; it continues to be solely about getting the message out. And although our books are not vetted by a publisher, we always have 20 or more scientists and educators read the

book for content, readability, and engagement. We had an entire 5th grade gifted class critique our most recent preschool book on living shorelines. Likewise, a UCF graduate-level class of pre-service science education teachers assisted with the activities in a book geared toward middle schoolers on the impact of sea level rise on sea turtles, oysters and marshgrass.

Probably the most exciting for me is that my son has progressed from being a reader of our books to a co-author! Our most recent book, "This Amazing Place Where the Sea Meets the Land" was co-authored by my post-doc Dr. Melinda Donnelly, my son, and myself. Honestly, to me, it doesn't get much better than that! Since our first printing in April, we have already distributed over 1200 free copies.

In conclusion, I would like to again say thank you to Trish Morse for the courage, mentoring and being a role model to so many; thanks to the SICB Education Council for this great recognition and for recognizing the importance of science education; and, most importantly, thank you to husband Paul and son Josh for all of the above and much more.



Linda's son, Josh Sacks, helping in the field and gaining hands-on experience for the book.