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**SICB EXPERIENCES -  
SECRETS OF WAHZU LAGOON  
IN BAJA CALIFORNIA**

*By Lou Burnett, SICB President-Elect*

Wahzu Lagoon in Baja California is a poem, a stink, a gentle breeze, a beach, a mudhole, a romp in the surf, a roasted wienie, a balmy evening, a dream. Wahzu Lagoon is the old and the young, the novice and the veteran students of biology, the blue Datsun pickup, the row of ice chests, the camp stove, the beach chairs, the oxygen electrode, the crab nets, the shells, and the sand. The Wahzu is a way of life! It is a cold ("cool") Corona with sand stuck to the bottom...the "first beer of the day."



*Lou Burnett holding a beautiful blue fiddler Uca princeps. (photo by Jeremy Fields)*

I lived the dream! As a young faculty member at the University of San Diego, I embarked on a great adventure. For my wife Karen and me, relocating to Southern California in the late 1970s from the east coast was both a culture shock and exciting, but my biological adventure was just beginning. Karen was a postdoc at UCSD and later worked in the thriving biotech industry in San Diego. I was fresh off a postdoc at the University of Aarhus in Denmark, having had a wonderful and productive experience and a great European experience at that. And now I was in a new job in a place very foreign to me (i.e., Southern California), developing

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**PRESIDENT'S MESSAGE**

*By Peter Wainwright, SICB President*

Greetings SICB folks far and wide! I expect your fall semester or quarter is well under way and you are starting to recall wistfully the more relaxed days of summer. But at this time of year your SICB abstract is submitted for the upcoming meetings and you probably have not yet begun to panic about getting it together to deliver on what you promised. So, I hope you are enjoying another good year and that your life has been filled with first-hand experiences with integrative and comparative biology.

Speaking of the annual meeting, the SICB executive officers and program officers recently met in New Orleans at the meeting site for the upcoming meetings in January. The beautiful main Hilton Hotel is located along the Riverwalk about a block from the Aquarium of the Americas, Bourbon Street and an amazing array of restaurants and music clubs. The meeting rooms look very good and there will be a huge space for posters and all the socializing that takes place around them. It really seems like an ideal set-up and I think we are all going to enjoy a terrific conference. The program officers, led by Rick Blob, have assembled a terrific program from your abstracts. This year we are hosting 1910 abstracts and will have 11 excellent symposia on topics ranging from Evolutionary Novelty, Evolution of the Arthropod Body Plan, to Indirect Effects of Global Change. Once again it will truly be an integrative and comparative biology festival.

We will continue our tradition of strongly supporting student participation at the annual meetings and in their research. Our annual meetings are a rich opportunity for students to see a tremendous diversity of presentations and meet other integrative and comparative biologists, young and senior. The environment at our annual meetings is an ideal cauldron of scientific energy where

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

## **BROADENING PARTICIPATION IN SICB**

*By Stacey Combes, Chair, Broadening Participation Committee*

### **Broadening Participation Activities at the 2017 SICB Meeting in New Orleans**

The Broadening Participation Committee will sponsor one workshop at the annual SICB meeting in 2017. The workshop will be on the topic of "Microaggressions: The big impact of little things," and will be held on Saturday, January 7th from 12:00 to 1:00 PM. We will also be initiating a new "meeting mentor" program this year, offering to match BP award recipients with mentors in their field, who will accompany them to several poster sessions and social events to assist with networking and navigating the many events and opportunities at the meeting. We hope to expand on this program in future years, by offering meeting mentors to any BP participants, regardless of whether or not they receive a travel award. Other ac-

tivities at the 2017 meeting will include a meet and greet breakfast for BP award recipients and their meeting mentors, to be held on the first full day of the meeting, Thursday January 5th at 7:00-8:00 AM. We will also hold an evening social to honor BP travel award recipients, which is open to all SICB members, at an off-site location on Friday January 6th at 8:00-10:00 PM. Keep an eye out for more details in the meeting schedule!

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](mailto:chair.bpc@sicb.org)



*Recipients of the 2016 BP travel award were honored at the BP reception in Portland.*



## **SPDAC - USEFUL INFORMATION FOR STUDENT AND POSTDOCTORAL MEMBERS**

How to Get the Most Out of Your SICB Meeting: see the article by Alexandra Kingston, the Student/Postdoctoral Affairs Committee Representative for the Division of Neurobiology, Neuroethology, and Sensory Biology (DNB) in the [DNB Fall newsletter](#).

Are you looking for Postdoctoral opportunities? Sandy Kawano, Student/Postdoctoral Affairs Committee Representative for the Division of Comparative Biomechanics (DCB), has written an informative article in the [DCB Fall newsletter](#), "Advice on applying for a postdoc position" - recommended reading for anyone planning for a postdoc in the next couple of years.

## GREETINGS FROM THE SICB PROGRAM OFFICER

By Rick Blob



Rick Blob, Program Officer

### SICB is Back in New Orleans!

The SICB Program Committee met in New Orleans on September 24-25, 2016, to view our conference venue (the New Orleans Ernest N. Morial Convention Center) and organize our program of presentations and events for the January 4-8, 2017, Annual Meeting. I was personally excited to return to New Orleans, and it looks like lots of other folks were also! We received 1910 abstracts – an increase of more than 10% from our record last year in Portland – with over 1000 talks and over 800 posters. That translated into 146 oral platform sessions in addition to 33 oral sessions for our 11 symposia, to produce 14-15 concurrent sessions each day - PLUS 3 days of poster sessions - all fit into a 4-day scientific program. Besides the [symposia](#), some

special highlights of the program will include several sessions of talks and posters complementary to the symposia, as well as many special sessions dedicated to divisional Best Student Paper competitions. Even with the increase in submissions and a compressed schedule ahead of the meeting, the committee did fantastic work and put every session together before departing on Sunday afternoon. I want to personally recognize the effort invested by the whole committee as they rose to the challenge of a very big job this year.

But wait, there's more! Beyond the platform and poster sessions, we also have an exciting slate of keynote speakers and workshops. Past President Billie Swalla will kick off the meeting on the evening of January 4 with her Plenary Lecture, "Follow the Yellow Brick Road: An Odyssey from Myoplasm to Marine Biology Genomics." Lunch times will also be busy, with workshops planned by three SICB committees (Broadening Participation, Public Affairs, and Student/Postdoctoral Affairs), our regular workshop offered by NSF, a new workshop by the *Journal of Experimental Zoology* on "Publication Pointers for Students and Postdocs," special workshops on "RNA Seq Resources and Training" and "Establishing Standards for Video Data Management," and two symposium-sponsored workshops ("Evolutionary Impacts of Seasonality" and "A Primer on

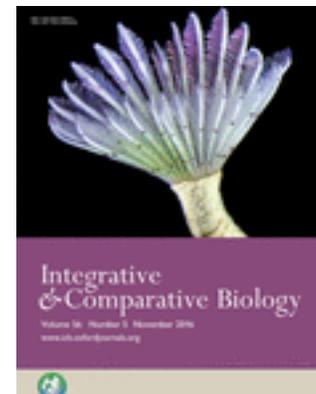
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**Member Benefit: 25%  
Discount on  
Oxford University  
Press Books**

**Go to the SICB  
Home Page**

## INTEGRATIVE AND COMPARATIVE BIOLOGY (ICB) UPDATE

A recent ICB editorial by Editor-in-Chief, Marty Martin, and the Associate Editors who are helping to lead the journal, is reprinted at the end of the newsletter. It can also be viewed at <http://icb.oxfordjournals.org/articleus/age?qca=icbiol;icw114v1>. Please read this for a summary of how the editorial board is moving the journal forward and what you can do to contribute.



## DEVELOPMENT COMMITTEE REPORT

*Robert Roer, Chair*



Society dues, income from our journal, and receipts from the annual meeting generally just meet the operating expenses of the Society. Other vital activities that SICB undertakes are supported by endowed funds and unrestricted contributions. The endowed funds recognize the accomplishments and excellence of students and young faculty (e.g., Bartholomew, Davis, Gans), support student participation and travel to the annual meeting (e.g., Mangum, Skinner, Wenner), support student research and research-related travel (e.g., Hyman, Grants-in-Aid of Research, Fellowship of Graduate Student Travel), and support lectures and symposia at the annual meeting (e.g., Prosser, Moore, Bern, Symposium Enhancement Fund).

If you attended the meeting in the past few years, you have seen our donors recognized by ribbons attached to their badges; the colors of the ribbons correspond to various tiers of giving.

There are five donor levels:

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

So far, since the last annual meeting, the Society has received \$11,586 in gifts to the endowed and general funds. This is great, but these contributions were made by only 37 donors. It would be wonderful if **everyone** attending this year's meeting would have a ribbon attached to their badges! Any contribution, no matter what amount, makes a difference and will be recognized. Please consider donating whatever you can afford and support the very important missions of the endowed funds.

Please also consider including SICB in your estate plans. This legacy is an excellent way to provide for the continuing health of our Society by including SICB in your will or as a beneficiary.

To make a donation on-line or find out about planned giving, go to the SICB home page ([www.sicb.org](http://www.sicb.org)) and click on "Donate to SICB" on the menu on the left side of the page.

Thanks and we look forward to seeing you in New Orleans!

## SICB EDUCATIONAL COUNCIL

*Bram Lutton, Chair*



*Undergraduate Posters displayed at the 2016 meeting in Portland. In New Orleans in 2017, the Educational Council will host the 7th Annual Arrival Day Undergraduate Poster Display featuring posters presented by undergraduate students.*

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

## SICB EDUCATIONAL COUNCIL, CONTINUED

*Bram Lutton, Chair*

*[continued from page 4](#)*

The Educational Council has some exciting news for the upcoming meeting in New Orleans. First, undergraduate students and advisers, please note that we are looking forward to another **Undergraduate Poster Display** near the registration desk on Wednesday, January 4th. The Ed Council would like anyone interested in the opportunity to practice their presentation skills (*in addition to* the afternoon poster sessions) to RSVP to the Ed Council Chair ([Chair.EdCouncil@sicb.org](mailto:Chair.EdCouncil@sicb.org)) at your earliest convenience.

We are very pleased to be inviting Rosalind Reid to provide the 2017 **John A. Moore Lecture** at 4 pm on the final day of the conference (Sunday, January 8th). As a journalist dedicated to science communication, Rosalind was an editor for the magazine, *American Scientist*, the interdisciplinary magazine of Sigma Xi, from 1992 to 2008; she currently serves as the Executive Director of the Council for the Advancement of Science Writing.



*Rosalind Reid will present the 2017 John A. Moore Lecture.*

**The M. Patricia Morse Award for Excellence and Innovation in Science Education**, which recognizes a SICB member at any career stage for significant achievement in science education, will go to Dr. Chris Gillen of Kenyon College this year. Congratulations, Chris!



*Chris Gillen has been selected by the Educational Council for the 2017 Morse Award.*

And finally, we will have an outstanding **Teaching and Learning workshop** focused on the Partnership for Life Science Education (PULSE), which will highlight the recommendations from *Vision and Change* (<http://visionandchange.org/>), introduce the PULSE tools, and share stories of how departments across the nation are working to meet the needs of 21st century biology education. The workshop is open to everyone and will be held the evening of Saturday, January 7th, at 7:30-9:00 pm, and refreshments will be served at the workshop.



**[www.SICB.org](http://www.SICB.org)**

*Mark your  
calendar for  
2017 New Orleans, LA  
4-8 January 2017*

## SICB PUBLIC AFFAIRS COMMITTEE

*Molly Jacobs, Chair*

### SICB and Social Media:

#### SICB on Twitter: @SICBtweets

As part of our push to improve SICB's social media presence, the Public Affairs Committee's Thom Sanger took over the SICB twitter account starting in early August. In the first month, we had a 200% increase in profile visits – help us grow these numbers! Follow @SICBtweets for cool science news, stories, and important information for the upcoming meeting in New Orleans.

#### Suggest a new SICB Hashtag for the 2017 meeting!

As in previous years, we'll be using #SICB2017 when we tweet about the upcoming meeting – but why stop there? Tweet your awesome hashtag ideas to us, or post them on the SICB facebook page. The PAC will keep track of suggestions and post/promote the best ones leading up to the meeting.

#### Student Journalism Internship Program:

The Public Affairs Committee would like to remind 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. If you are a student, consider applying for the 2018 meeting in Tampa. Each student journalist 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/2017/student-support.php>

#### PAC at the Annual Meeting Program Planning Meeting:

PAC member Thom Sanger participated in the September Program Committee meeting in New Orleans. In collaboration with the divisional program officers, he identified presentations to highlight for Newswise press releases at the annual meeting in January.

## SICB FINANCES - TREASURER'S REPORT

*Karen Martin*

SICB continued to operate with no increases in membership dues or meeting registration fees in 2016. SICB has three major sources of income: 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 most years, with sufficient reserves to cover small losses. At press time, we were still waiting for the final accounting review of FY 2016 to be completed; therefore the revenues and expenses from the journal and the administration for the previous fiscal year are not available at this time.

The annual meeting in icy Portland took in a total of \$393,972 against expenses of \$367,198, providing a net in-

come of \$26,774. That is positive but less than the previous year's annual meeting income of \$117,915 after expenses, even though the annual meeting in Portland brought in more revenue than the meeting in West Palm Beach. In 2016, registration fees from members brought in \$139,095, about a third of the revenue. Non-members provided approximately \$66,750, substantially less than the previous year. Exhibitors provided \$19,600, again lower than in West Palm Beach. Larger expenses included \$9,450 for the meeting app, and \$73,060 for sound and projection services. Our management company BAI was paid \$63,468 for meeting management in addition to their administrative fees. If you have comments about any of these services please share them with the SICB officers.

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## SICB FINANCES - TREASURER'S REPORT, CONTINUED

Karen Martin

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Because the success of the journal *Integrative and Comparative Biology* (ICB) is strongly linked to the financial health of SICB, we anticipate some changes at the start of Marty Martin's editorship in 2016. The cost of online subscriptions to SICB starts at \$20 in 2016 and will be reduced by \$5 per year, until by 2020, online subscriptions will be free for the membership. This will save expenses for our membership and administration. Print subscriptions, on the other hand, will increase in cost, starting in 2016. Members can choose whether to receive the journal in print or online only. The current price for an open access manuscript is \$3,000, and this will be reduced to \$2,800 in the coming year for articles in ICB.

This past year, the named funds and investments received donations of \$42,154, an impressive total, from 100 separate gifts. Dr. Jarid Simons donated over \$12,500 for the Hyman fund. The Bern fund benefitted from an active campaign by the Division of Comparative Endocrinology that brought in many new donors, including a gift of \$10,000 from the Zenyaku Kogyo Company and Mr. Koichi Hashimoto in Japan. In addition, DCE transferred funds from their dues into the Bern Fund, DVM transferred dues funds into the D. Davis fund, and an auction provided over \$3700 to the Hyman Fund. The total added to all named funds is therefore above \$52,000. Thanks to all

who provided new funds to these important programs within SICB. We appreciate your support!

In spite of these additional dollars, losses in the stock market and fees meant that some of the named funds did not maintain their value over the past year. The total for the invested portfolio decreased by \$7,466 and this was spread among the funds. In addition, expenses were charged to some funds, and as a result the balance for each fund is lower than anticipated. In the future the expenses of 4% may not be sustainable. See Table 1 for fund balances across the past three fiscal years.



Table 1. Balances for named funds at the end of the past three fiscal years. Increases have been the result of donations and gifts; decreases are the result of expenses and market losses.

	FY 2014	FY 2015	Donat FY16	Auction, Dues	FY 2016
G.A. Bartholomew Fund	\$173,094.04	\$169,861.51	\$110		\$163,854.05
L.H. Hyman Scholarship Fund	\$79,475.77	\$94,448.28	\$13,878	\$3,701	\$109,520.81
D.D. Davis Fund	\$15,526.90	\$17,187.40	\$3,520	\$3,924	\$24,746.17
John Moore Lectureship Fund	\$14,626.02	\$44,749.77			\$45,521.81
A.M. Wenner Fund	\$13,066.02	\$13,036.98	\$4,316		\$12,766.35
Dorothy Skinner Fund	\$17,035.89	\$20,603.25	\$1,050		\$21,511.18
Symposium Enhancement Fund	\$123,402.07	\$124,776.91	\$770		\$124,797.12
C. Mangum Fund	\$323,053.55	\$315,920.11	\$1,120		\$305,999.66
GIAR Fund	\$220,940.74	\$216,790.32	\$650		\$212,443.52
Carl Gans Award Fund	\$41,049.85	\$41,742.52	\$470		\$41,083.29
Prosser Fund	\$29,133.52	\$29,439.93	\$50		\$29,355.03
Bern Fund	\$12,165.00	\$15,165.00	\$15,570	\$3,000	\$34,178.82
			\$650		
<b>TOTALS</b>	<b>\$1,062,569.37</b>	<b>\$1,103,721.98</b>	<b>\$42,154</b>	<b>\$10,625</b>	<b>\$1,125,777.81</b>



## 2016 SICB MEMBER SURVEY

*Lou Burnett, SICB President-Elect*

"The timing of the annual meeting meets a number of strategic needs of the Society, including, but not limited to the timing of the various academic calendars, affordable venues, and venues convenient to get to."

The 2016 SICB Member Survey was developed over the course of one year with broad input from SICB Committees, the SICB Executive Committee, Burk and Associates, Inc. (BAI) Management Staff and other SICB officers. Information gathered from the survey is used by the leadership of the SICB to better plan for the future of the Society. The survey was made available online to SICB members in March 2016 for over one month with several reminders to members to complete the survey.

The survey was similar in design to the 2009 SICB Member Survey and consisted of 48 questions over 12 pages. The survey was designed to track answers to questions using the different categories of membership (e.g., Full Members, Postdoctoral Members, Graduate Student Members, and Student-in-Training Members). The questions were divided into different categories as outlined below. There were 614 responses.

### Some demographics of the respondents

**Summary.** These data are similar to those provided by the 2009 SICB Member Survey. There was a robust response from the Full Members of the Society and significant responses from the other member categories. More than two-thirds (68.1%) of the Full Members who responded have belonged to the Society for more than 10 years; this is an increase from 33.9% in the 2009 survey. Academic institutions are overwhelmingly on the semester system and this was true of the membership in 2009. Slightly less than half of the Full Member respondents come from large academic institutions with greater than 20,000 students. The degree programs (undergraduate and graduate) of respondents reflect degree offerings for undergraduates, masters, and doctoral students. But there are significant numbers from purely undergraduate institutions (20.9%) and institutions offering undergraduate and masters degrees (17.6%). Full Member respondents indicated a significant balance in expectations between teaching and research (52.1%). While 20.4% have expecta-

tions primarily in research, only 16.4% have primary expectations in teaching.

Responses from the different member categories are as follows.

- Full Members (includes full members, life members, emeritus members) = 370 (60.3%)
- Postdoctoral Members = 59 (9.6%)
- Graduate Student Members = 147 (23.9%)
- Student-in-Training Members = 38 (6.2%)

### Gender of respondents

- Female – 45.6%
- Male – 53.9%
- Other – 0.5%

The summary of the results of the survey are available on the SICB Website under the Resources tab >> Member Surveys >> Results of the 2016 Member Survey (or <http://sicb.org/resources/SICB%20Member%20Survey%202016%20Summary.pdf>).

### Highlights of the Survey:

**Annual Meetings.** Most members of the Society attend the annual meeting regularly (41.2% of all members attend every year and 21.7% of all members attend every other year). First-time attendees were 12.3% of the respondents. The timing of the annual meeting meets a number of strategic needs of the Society, including, but not limited to the timing of the various academic calendars, affordable venues, and venues convenient to get to. The affordability is a significant factor since the SICB Annual Meeting attracts many students and postdocs; more than 50% of the attendees are students and postdocs (58.1% at the 2016 Portland meeting). The data shown below reflect responses from all members (Full, Postdoctoral, Graduate Student, Student-in-Training) and Full Members. Overwhelmingly, SICB members are satisfied with the current timing of the annual meeting (82.6% in the current survey and 76.0% in the 2009 survey). The monthly breakdown of preferences for the timing of the meeting is consistent with the overall desirability of

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## 2016 SICB MEMBER SURVEY, CONTINUED

Lou Burnett, SICB President-Elect

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the currently established meeting time in early January. Meeting location was somewhat to very important to more than three quarters of all members.

**Development Activities of SICB.** The leadership of SICB has been very active in recent years in making sure that the various funds of the Society are well-managed and that the funds are appropriately serving their stated goals. The SICB Development Committee has been particularly helpful in thinking strategically about ways to enhance the Society's endowment to insure the financial stability of the organization. These funds help to keep the costs of the annual meetings and of membership low. The funds also provide important funding sources to support symposia and student research. The results of the survey revealed a growing participation of SICB members

in giving to the various funds that support the programs of the Society, but that more needs to be done to educate the membership on the funds, especially

the funds that support students and symposia, and to encourage members to give back to the Society through these funds.

**Research and Educational Resources (RER).** The SICB Educational Council received feedback on its efforts to revive and enhance the resources offered to members in the areas of teaching and research. The former "digital library" of SICB has been replaced by RER.

**SICB Journal – Integrative and Comparative Biology.** The journal of the Society is *Integrative and Comparative Biology*. The new editor-in-chief Marty Martin and the Editorial Board solicited feedback on the strengths and weakness of the journal and on what members wished to see as the new leadership considers a number of new initiatives.

Here is a breakdown on what members would like the editorial board to consider:

- invited reviews – 65.1% all members; 65.6% Full Members
- perspectives articles – 58.3% all members; 62.7% Full Members
- editorials – 22.2% all members; 26.1% Full Members
- STEM education-based articles – 45.0% all members; 46.2% Full Members
- Other – 6.9% all members; 8.3% Full Members

### A New SICB Open Access Journal.

Feedback was also solicited on the possibility of SICB establishing a new open access journal in integrative and comparative biology that would allow authors to submit traditional research articles. Based on the responses, the SICB Executive Committee is taking first steps toward establishing such a new journal by endeavoring to identify an editor-in-chief.



## NSF PROGRAM DIRECTOR OPENING

Interested in serving as a Program Director at the National Science Foundation? The Biological Sciences Directorate is searching for a permanent Program Director in the Division of Integrative Organismal Systems. NSF is seeking applicants with scholarly expertise in animal-focused research supported by the Integrative Ecological Physiology (IEP) Program of the Physiological and

Structural Systems Cluster ([http://www.nsf.gov/funding/pgm\\_summ.jsp?pims\\_id=504679&org=IOS&from=home](http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=504679&org=IOS&from=home)). Go to <https://www.usajobs.gov/GetJob/ViewDetails/452012700> for the official announcement of this position opening, which closes on November 29, 2016.

## GREETINGS FROM THE SICB PROGRAM OFFICER, CONTINUED

By Rick Blob

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Incorporating the Microbiome into Integrative and Comparative Biology”). We will also have our evening Teaching and Learning-X workshop focusing on the Partnership for Life Science Education (PULSE) and a lunchtime workshop on Sketchnotes sponsored by the Public Affairs Committee. With this number of workshops and a common preference for lunch-break time slots, many have to run at overlapping times; however, the diversity and abundance of these sessions give us a great opportunity for some stimulating perspectives and interactions.

The other important responsibility of the SICB Program Committee was to select the Symposia for the 2018 SICB meeting in San Francisco. We had an outstanding group of proposals and selected 11 that span all SICB divisions. I'll report more details in the next newsletter...but remember that it is never too early to start thinking about proposals for 2019 in Tampa! What better place to start planning than at the annual meeting, when we're surrounded by new ideas and potential collaborators and speakers? Please find me, or another member of the program committee, if you'd like to discuss ideas, or find out more about the symposium proposal process (or, to get started see <http://www.sicb.org/resources/SICB%20Symposium%20Policies%20and%20Guidelines%20Final.pdf>).

Besides our exciting scientific program, New Orleans is a wonderful venue for the meeting. The Convention Center is a short walk from nearby hotels, the riverfront, and other attractions like the Audubon Aquarium and Audubon Insectarium. It is located in the Arts District, at the edge of the French Quarter with its great sites for food (don't leave without trying gumbo or beignets), live music, and other entertainment. Where else can you watch someone dance to "Eye of the Tiger" in a gold Darth Vader suit on a street corner at 2 in the afternoon? But New Orleans doesn't end in the French Quarter! Streetcar lines pass right next to the hotel and offer an easy, inexpensive ride to the Garden District

and beyond. Along with our wonderful group from Burk & Associates, Inc., we'll be working with folks from local universities to put together an insider's guide of "Notes from the Underground" with suggestions for seeing the city. Travel information is already posted on the SICB website (<http://www.sicb.org/meetings/2017/travel.php>). Although there is no public transit from the New Orleans airport to the conference site, SICB has organized a discounted service by Airport Shuttle for \$40 (round trip) with advance booking (<http://airportshuttleneworleans.hudsonltd.net/res?USERIDENTRY=SICB0117&LOGON=GO>). The airport is also served by Uber (~\$34 one way) and city taxis (\$36 flat rate one way from taxi line, ride share also available). Child care will again be provided during the annual meeting. If you are interested in taking advantage of this service, please fill in the survey by November 15th: [sicb.org/meetings/childcareform/index.php](http://sicb.org/meetings/childcareform/index.php)

The Program Committee includes Sherry Tamone (Past Program Officer), Allison Welch (DAB), Jake Socha (DCB), Ignacio Moore (DCE), Jason Podrabsky (DCPB), Yui Suzuki (DEDB), Sarah Durant (DEDE), Chris Tracy (DEE), Bruno Pernet (DIZ), Chuck Derby (DNB), Todd Oakley (DPCB), Manny Azizi (DVM), Elizabeth Davis-Berg (AMS), and John Zardus (TCS). In addition, this year we were assisted by Carol Fassbinder-Orth (DEDE) and Wes Dowd (DCPB). We were also joined by Thom Sanger from the Public Affairs Committee, who helped compile suggestions for presentations to include in press releases, and by Marty Martin, the Editor-in-Chief for *Integrative and Comparative Biology*, who participated in our discussion of symposia. The group made an intense and challenging job interesting and fun. Please take a moment to thank these hard-working folks if you see them at the meeting!



## PROGRAM OFFICER MEETING, NEW ORLEANS



"The beautiful main Hilton Hotel is located along the Riverwalk about a block from the Aquarium of the Americas, Bourbon Street and an amazing array of restaurants and music clubs."

## PRESIDENT'S MESSAGE, CONTINUED

By Peter Wainwright, SICB President

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students can establish career-lasting friendships and revel in shared enthusiasm. SICB will spend well over \$100,000 this year in support of our students in the form of Grants-in-Aid of Research and travel awards for the annual meeting. I look forward to seeing and meeting many new students in New Orleans this year.

Since our last conference in Portland, SICB has been moving forward on several fronts and there is important news to relay to you with this newsletter.

### NEW OPEN ACCESS SICB JOURNAL: SEARCH FOR FOUNDING EDITOR-IN-CHIEF

After extensive consultation with the SICB membership, including several questions asked in our society-wide survey and discussions with Marty Martin, the Editor of our existing journal, we have decided to launch a new society journal: **Integrative & Comparative Biology Open**. This will be an all-open-access journal that publishes high-quality primary research papers in all areas of integrative and comparative organismal biology. The journal will form a strong complement to our existing journal that primarily publishes the proceedings

from our symposia. When established, this journal will significantly strengthen SICB's position as the top scientific society in the world in this area of biology. Articles published in this journal will be freely available to interested readers around the world regardless of the quality of their institutional libraries.

The first crucial step in developing this journal will be to appoint a **Founding Editor-in-Chief** with the energy and vision to successfully oversee the exciting start-up period. We have launched an open search for this person and plan to appoint her or him before the full structure of the journal is deter-

mined and before the business contract with a publisher is negotiated. This will allow the Founding Editor to direct these crucial steps in collaboration with SICB, maximizing the opportunity to put his or her imprint on the journal. If you are potentially interested in this position or have a recommendation for us, I urge you to communicate with the search committee (Chair, Elizabeth Brainerd, [editorsearch@sicb.org](mailto:editorsearch@sicb.org)). The search committee will be accepting applications until March 1, 2017.

### DONATE TO SICB!

I would like to encourage you to consider making a donation to SICB this year. SICB is financially stable and has been able to continue an exceptionally high level of support for students without increasing the dues or meeting registration fees for several years. We maintain a number of named funds, many of which are invested endowment accounts that provide revenue that is used for a wide range of functions including funding special lectures, major awards, student paper prizes, and grants in aid of student research. Have you or your students benefitted from the use of these funds? If you are a student, have you recently benefitted from SICB's strong support of students? Please consider making a donation to SICB. These funds are one of the best ways that we have of ensuring our legacy of strong student support, and a healthy scientific society. You will find a "Donate to SICB!" on the SICB homepage ([www.SICB.org](http://www.SICB.org)). This link will take you directly to a page that lists our named funds and their purposes. Remember that SICB is a non-profit, so donations are tax deductible. Any amount helps us build a stronger society!

It is only three short months until the annual meetings in New Orleans. I hope the rest of your fall goes well, that you manage to find time to make good progress on your favorite research project, and I look forward to seeing you at the conference in early January. Be good to the students in your classes and share with them some of the fascinating world of integrative and comparative biology. Best wishes to all!



"It was no accident that the place, the animals, and their natural history became the context of the research questions."

## SICB EXPERIENCES - SECRETS OF WAHZU LAGOON IN BAJA CALIFORNIA, CONTINUED

By Lou Burnett, SICB President-Elect

*continued from page 1*

new courses and getting my research off the ground.

I occupied much of my free time exploring new and natural environments, the intertidal of Southern California and the breathtaking deserts in the region. And then I was introduced to the charm and beauty of some special places in Baja California. The first trips down into Mexico were amazing. I think it was quite by accident that a place just south of San Felipe in the Gulf of California (Sea of Cortez) became a favorite spot to take my students, do field observations, and col-



*Wahzoologists from the University of San Diego*

lect animals. It was a wild place where the desert met the somewhat hypersaline waters in the very northern part of the gulf. Beginning in the early 1980s I made one or two trips a year to this

wild place. I almost always took undergraduate research students with me. Sometimes a fellow faculty member or two would go along. The early trips were mostly for fun and for exploring what was there. Later on, the trips would be to understand some of the natural history and physiology of the intertidal organisms that we found; and for fun. The place we went was somewhat south of San Felipe and I don't think it had a name, but we nearly immediately dubbed our lagoon the Wahzu Lagoon! In later years, and especially at SICB meetings, we would tip a beer and say "Up the Wahzu." You had to have been there to understand.

It was no accident that the place, the animals, and their natural history became the context of the research questions. My scientific mentors were two amazing women who taught me to view organisms in the context of their surroundings, their ecology, and their natural history. My undergraduate mentor at the College of William and Mary was Charlotte Mangum (SICB President in 1994). Winona Vernberg was my doctoral advisor at the University

of South Carolina. The functional questions that Charlotte and Winona asked were based on their views of the whole organism in its broadest context. Winona and her husband F. John Vernberg had made important and interesting findings using fiddler crabs and so I was very familiar with fiddler crab biology. When I first visited the Wahzu in the early 1980s, I was astounded to find one of the largest and most beautiful fiddler crabs I have ever seen, *Uca princeps*. They were a gorgeous brilliant blue color and had a dominant claw that was as big or bigger than the crab itself. *Uca princeps* would become one of our favorite research animals. The best thing though was collecting *Uca*; their large burrows required you to extend your arm deep into the burrow in the mud up to your armpits. It made for some great photos!



*The name of our initial campsite on the beach was Laguna Percebu. Very primitive. We soon moved further south and had our own version of primitive - Wahzu Lagoon.*

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## EXPERIENCES, CONTINUED - LOU BURNETT

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*Intertidal mudflats, home of the blue fiddlers*

The Wahzu Lagoon was not especially easy to get to. It was about a five hour drive from San Diego. One could either drive to Calexico, California, and cross the Mexican border into Mexicali and then drive south through some very interesting villages and some pretty rough terrain before entering the upper Gulf of California. This was our most frequent path. Sometimes, however, we crossed the border into Tijuana (always an adventure) and drove down the coastal highway to Ensenada, a large fishing city, and then cut across the upper Baja peninsula across the mountains. Ideally, we would arrive in San Felipe in daylight where we immediately went to our favorite establishment and feasted on fish tacos and purchased other provisions. Since then, I have sampled fish tacos many times in many places and none have compared to the homemade tortillas and fish of San Felipe. After having our fill of fish tacos, it took us another hour of driving on dirt roads to reach our primitive campsite at the Wahzu. The campsite was always on the beach, which we pretty much had to ourselves. Unpacking and setting up camp was done rapidly so we could walk along the beach and then sit around a fire roasting hot dogs; this became our simple and traditional meal on the first day.

Most of these trips were great experiences. But there was one exception. Our caravan of three or four cars arrived later than usual in the area and we embarked to our campsite on the dusty dirt roads well after dark. There were patches of the drive that kicked up so much dust it was like driving into a dense fog bank where one could see nothing ahead. In one of these dense "dust banks," my 1976 Datsun pickup truck had an unfortunate meeting with a cow! The collision demolished my radiator and windshield. Fortunately, no one was hurt (except the cow). Thankfully I had purchased the special auto insurance that one gets when driving into Mexico. The insurance paid the farmer for the cow and the body work on my truck once we towed it back to San Diego. It was a long and painful weekend, and an embarrassing article subsequently appeared in the university newspaper.

The other amazing organism that became a significant part of our research activity was the blue crab *Callinectes bellicosus*. Having grown up spending part of each summer on the Chesapeake Bay, I was very familiar with the Atlantic blue crab, *Callinectes sapidus*. While *C. sapidus* has a mean temperament and will snap at you from its tank when you walk



*One of my favorite photos. We sent George Bourne (right) into town to purchase supplies, with the help of Nancy Sanders. Cases of Corona waiting for pick-up!*



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## EXPERIENCES, CONTINUED - LOU BURNETT

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into the room, *C. bellicosus* is equally as mean and lives up to its name. We harvested many of these crabs using the methods I used as a kid of standing on the shore, tossing a line into the water with some bait on the end and slowly pulling the bait toward the shore with a crab attached. And then nabbing it with a crab net. The students loved this and it kept us busy for many hours of each trip.



*The intertidal mud crabs Eurytium albidigitum*

We transported many of these crabs and the blue fiddlers back to the lab in San Diego. They provided fodder for a number of studies on osmoregulation and hemocyanin function. There was another crab species that was most interesting, perhaps the most interesting of all the crabs we encountered. It was a mud crab *Eurytium albidigitum* and it lived in shallow burrows along the small tidal creeks that were exposed to the air at low tide. What is interesting about it was that it is an osmoconformer; this was somewhat unexpected. But even more interesting is that upon exposure to the air its hemolymph pH declines significantly. In the parlance of acid-base physiology, it has a respiratory acidosis. Lots of crabs show this when they are air exposed, but they all compensate for this acidosis partially returning the hemolymph pH to the original pH, or

nearly so. This mud crab, however, did not compensate for the acidosis at all. I speculated that this uncompensated respiratory acidosis was related to its osmoconforming inability to move ions around between the ambient medium and the hemolymph. It would be interesting to see if any other intertidal crab that is normally exposed to the air and which is also an ion and osmoconformer shows this lack of compensation. Upon aerial exposure, this mud crab becomes quiescent unlike the purple shore crab *Pachygrapsus crassipes*, which is very active in air and compensates for a respiratory acidosis. Only a comparative approach is likely to reveal the answer.

One of the great things about having good access to this special place is that many of my colleagues and friends over the years accompanied us Up the Wahzu. San Diego is a popular destination for scientists and especially when the comparative section of the American Physiological Society meets there. So staying in the area after a conference for a few extra days allowed us to show off our place. Some photos reveal that this was a popular thing to do. The Burnett Lab led numerous expeditions to our special place in Mexico with scientists tagging along.



*A group of Wahzuers. Top l to r - Nancy Sanders, Chris Bridges, David Towle, Lou Burnett. Bottom l to r - Peter deFur, Steve Bishop, Lynn Bishop, Steve Morris, George Bourne.*

Subsequent "Wahzu Parties" at SICB meetings were populated with veterans of these trips where stories of the great trips up the Wahzu were often embellished and got better over the years. Sadly, we

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**EXPERIENCES, CONTINUED - LOU BURNETT***continued from page 15*

don't have those gatherings very frequently these days, but the adventure of the trips to this exotic land were an important part of what my students and I did when I was a young faculty member at the University of San Diego. It was good to impart to the students the excitement of field work accompanied by good and solid scientific questions about organisms – the way my mentors Charlotte Mangum and Winona Vernberg taught me.

My last trip there was sometime in the late 1980s. If I had the chance to go there again, I probably would not because I fear it has changed with the encroachment of development. Better to remember the good times and think of the great things we all learned. It's fun to relive these times with colleagues on occasion when we see each other at SICB.

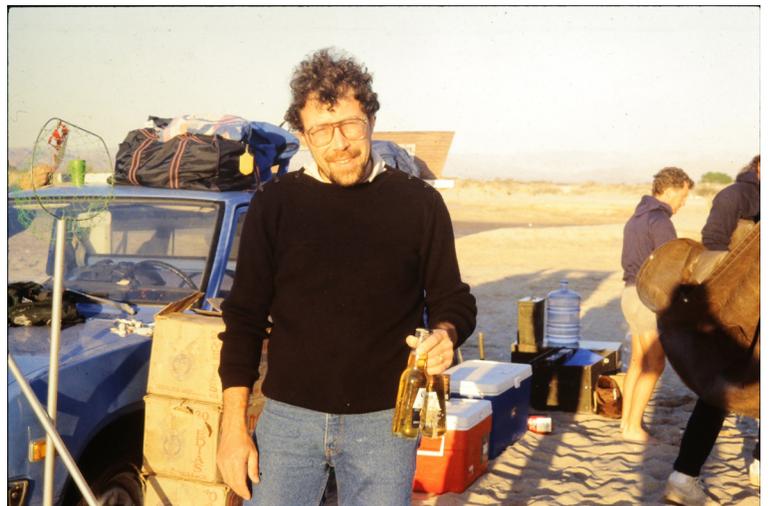
*Lou Burnett moved from the University of San Diego to the College of Charleston in 1991 where he is a Professor of Biology. At the College of Charleston, he served a term as chair of the Department of Biology and the director of the Grice Marine Laboratory for 20 years.*



*Bill Zamer, field biologist...in his hat*



*David Towle sorting some crab tissue samples. Corona bottle for scale.*



*Chris Bridges, University of Düsseldorf, experiences the Wahzu. Blue Datsun pickup in the background.*



## EDITORIAL

### Editorial for *Integrative and Comparative Biology*

It is a great privilege to serve as editors of *Integrative and Comparative Biology (ICB)*. The Journal, and its host institution (The Society for Integrative and Comparative Biology (SICB)), have a long history of communicating some of the best and most insightful ideas in organismal biology. It is also a privilege to be part of such an august lineage of editors. Our field has experienced both triumphs and challenges since the first issues of *American Zoologist*. Organismal biology is now returning to prominence, and we think that *ICB* is playing a key role in that resurgence. In the last 10 years, Harold (Hal) Heatwole elevated *ICB* to the stature it now enjoys. During his tenure, Hal increased the Journal's impact factor substantially, augmented the geographic reach of the Journal, and increased *ICB*'s visibility by making papers discoverable in PubMed. It is with humility and trepidation that we take the reins from him.

#### New operations for *ICB*

Fortunately, for the field and for the Journal, *ICB* will become the product of a large group of dedicated individuals. A key operational change in the Journal includes the appointment of an exceptionally talented group of Associate Editors and Board Members to complement the Editor-in-Chief.

The new Editor-in-Chief is Lynn (Marty) Martin, a vertebrate ecophysiologicalist. Marty's laboratory studies how immunological, hormonal, and behavioral variation at the level of individuals affects population and community level processes, namely the distribution of species and dynamics of infectious diseases.

The new Associated Editors are: Anna Ahn, Ryan Earley, Cameron Ghaleb, and Art Woods.

Anna studies the motor control and biomechanics of terrestrial locomotion from the level of the muscle to the whole body. She examines vertebrate and arthropod systems to understand the mechanisms underlying animal movement.

Ryan works to understand the evolutionary, ecological, social, and physiological mechanisms underlying

phenotypic variation. He focuses on reproductive and aggressive behaviors, life history characteristics, and sexual plasticity, primarily in fish. His collaborative work has recently integrated elements of population and quantitative genetics and functional morphology to unravel the remarkable biology of a self-fertilizing hermaphroditic fish.

Cameron works at the interface of evolutionary, behavioral, and physiological ecology. He is interested in the interplay between natural selection, phenotypic plasticity, and gene flow and how these factors facilitate and constrain adaptive evolution. His current projects include studies of birds, fish, and aquatic insects, and how environmental factors such as climate variability and salinity shape their physiology and distribution.

Art works on the physiological ecology of invertebrates, including insects and marine invertebrates. He is interested in theoretical approaches to integrating organismal systems and in understanding how physiology influences the responses of organisms to climate change.

These editors are responsible for deciding on the final disposition of manuscripts in light of Board Members' advice, and making strategic decisions about the direction of the Journal; more about these "big picture" things below.

An additional major change at *ICB* is the enhanced role of the Board Members (Table 1). The Board Members now liaise directly with authors, recruit referees, and evaluate reviews and correspondence to ensure that Journal contributions are of the highest quality. Board Members are uniquely situated to ensure that the exceptionally diverse manuscripts submitted to *ICB* are cutting edge and accurate. To address the extra workload associated with this change, each Division maintains a representative Board Member, and we have also recruited several International Representatives and additional Associate Board Members. This extra brainpower will help us to keep manuscript quality high without imposing too much of a burden on individual members.

**Table 1** Board Members of *ICB*

Name	Division represented	Expertise
Diana Hews	Animal Behavior	Behavioral endocrinology
Ty Hedrick	Comparative Biomechanics	Animal flight aerodynamics
Henry John-Alder	Comparative Endocrinology	Evolutionary endocrinology
Donvan German	Comparative Physiology and Biochemistry	Nutritional physiology
Ken Field	Ecoimmunology and Disease Ecology	Mammalian immunology
Michael Sears	Ecology and Evolution	Thermal physiology
Robert Zeller	Evolutionary Developmental Biology	Developmental neuroscience
Bruno Pernet	Invertebrate Zoology	Invertebrate development
Richard Satterlie	Neurobiology	Locomotor control
Lars Schmitz	Phylogenetics and Comparative Biology	Evolution of vertebrate vision
Sharlene Santana	Vertebrate Morphology	Feeding ecomorphology
Manny Azizi	Associate Member	Muscle evolution
Stephane Hourdez	Associate Member	Ecophysiology in extreme environments
David Julian	Associate Member	Invertebrate stress biology
Jun Kitano	Associate Member	Fish physiological adaptation
Berry Pinshow	Associate Member	Ecophysiology
Julia Sigwart	Associate Member	Mollusc phylogenetics
Jonathon Stillman	Associate Member	Marine ecophysiology
Ann Tarrant	Associate Member	Marine molecular biology

## The purview of *ICB*

Going forward, *ICB* will continue to face unique challenges due to its tradition of publishing all symposia papers in the year they are presented. This means that *ICB* must follow a very tight publication schedule. Submissions, reviews, and revisions must all occur quickly. Authors, referees, and editors must be on their toes, and symposium organizers must remain engaged in the publication process from the time their proposal is accepted until their symposium proceedings are in print. In other words, *ICB* requires close integration of all players in the publishing process.

Beginning later this year, *ICB* will be augmented with new types of papers. We hope to convince future Bartholomew, Bern, and other SICB award winners to submit written versions of their plenaries. We also plan to recruit reviews, opinions, and other types of articles on various topics, some perhaps arising from roundtables or workshops held at annual meetings. Already, we have an exciting miniseries on systems approaches in organismal biology in 2017. A paper on handling large datasets is in the works too. Other papers will be solicited directly from SICB members or from other authors not historically affiliated with SICB. Because *ICB*'s coverage is so diverse, we have the opportunity to attract proceedings

of symposia from other meetings; already, we have some such papers slated for publication in late 2016, and we encourage you to suggest similar contributions from your meetings outside SICB.

Critically, we will not dictate the content of *ICB* as editors, and we encourage all of you to let us help you realize your ideas in *ICB*'s pages. Think creatively about how *ICB* can help you achieve more from your symposium than what happens at the annual meeting. You might invite authors from companion sessions to contact us about submitting papers to the Journal. You might work with invited speakers on a methods or multi-author synthetic paper; many are starting to use symposium introductions in this way. You might even submit streamlined versions of the discourse from round tables about the direction of your field. A table napkin from a chat at the bar might be a stretch, but otherwise we encourage you to share your ideas with us.

We are especially excited to attract submissions from graduate students and post-docs, as individuals at these career stages often straddle subfields with ease. We are very excited to integrate trainees more into *ICB*, and are now looking for a graduate student or postdoc to serve as our social media guru. SICB is getting much better at using social media such as Facebook, Twitter, and Snapchat, but *ICB* too

would benefit from using these mechanisms. Please contact us if you are interested in this opportunity.

In the end, our vision is to continue the upward trajectory of *ICB*, so that it may come to resemble, in content and stature, the *Trends* journals, *Physiological Reviews*, and other journals that reach diverse and broad readerships. We hope that you will help us move along this trajectory so that your *ICB* papers will be viewed with the same prestige as the top journals in any field.

### **ICB and the future of organismal biology**

What might the future hold for *ICB*, and how might our Journal catalyze new and exciting science? One obvious source of guidance is the Grand Challenges papers, published in 2009–2011. Those 10 works highlighted conceptual and structural problems in different organismal fields, and proposed a set of paths forward. Now, 5 years on, we would like to know how the SICB community feels about progress towards these challenges, and whether significant new challenges have arisen. We plan to survey SICB in the near future and will publish the results in *ICB*. In our opinion, SICB members have already made amazing progress on the Grand Challenges. However, going forward, there is clearly still a lot to do, and we urge authors to think as big as they can about their study areas. Thinking big can mean bringing approaches and techniques together in novel ways. We see this happening all the time in *ICB* papers, and indeed, such new approaches have become so common that we perhaps do not give ourselves enough credit for progress made; the bar for “being integrative and comparative” is always rising! Thinking big can also involve efforts to solve problems by hybridizing ideas that have never been crossed before. This thinking is often difficult, and somewhat risky, but we urge authors to be as audacious as possible. Transformative work is never guaranteed, but integrative and comparative approaches have proven track records of progress.

Thinking big can also mean being comparative in new ways. Perhaps the central conundrum of biology is that any individual scientist or research group can focus on only a sliver of life—yet we often want to discover principles and processes that apply as broadly as possible. Recent advances make this goal increasingly feasible: new statistical and experimental approaches, better techniques for collecting high-

throughput data, and faster, more robust methods for reconstructing evolutionary relationships. Although *ICB* has long been an incubator for comparative biology, we expect to see spectacular advances in the next few years as research groups increasingly move away from “model” organisms into the wilds of extant diversity.

Lastly, thinking big can come in the form of developing, refining, and scrutinizing empirically the theoretical foundations of individual subdisciplines. This form of “integrative” is more vertical within fields than the horizontal forms of integration described above, but it is very valuable nonetheless. One of the real strengths of the SICB system for identifying and supporting symposia is that it brings together sets of experts on particular topics. Making progress on some of those topics may not require horizontal integration so much as clear identification of fundamental problems, and the development of theory and experiments for testing them. Such fundamental advances often are so influential because they organize entire fields, and we want *ICB* to be the medium through which these advances are disseminated.

Based on actions they have taken already, National Science Foundation and other funding bodies appear to agree that the SICB directive is productive and promising (e.g., the genomes to phenomes initiative, developing computational infrastructure through CyVerse, etc.). So, there is strong reason to believe that continuing our courses of action—connecting related disciplines, inventing and using new tools, and investing heavily in multidisciplinary experiences for our trainees—will continue to enrich biology. SICB also genuinely excels in the area of student support and mentorship. No other biological society invests as much in its future practitioners as SICB, and continued devotion to our students will ensure that organismal biology will remain healthy and influential for years to come. We will do our best to ensure that *ICB* continues to support these strengths, we are honored to serve as your editors, and we look forward to talking with you at SICB 2017. See you in New Orleans!

*Lynn B. Martin*

*Anna N. Ahn*

*Ryan Earley*

*Cameron K. Ghalambor*

*H. Arthur Woods*