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EXPERIENCES—THE LIFELONG EXCITEMENT AND CHALLENGES OF SCIENTIFIC DISCOVERY IN MARINE BIOLOGY

by M. Patricia Morse
President of SICB/ASZ 1985

What is it that wakens the passion in a young person to discover the natural world around them? Is it the fortune of their place of birth? Is it the gazing into a colorful cave of sea anemones while on a Bates College student field trip on the Maine coast? Is it being in the



Fig. 1. Standing next to the bust of the Hungarian Nobel Prize winner, Albert Szent-Gyorgyi at the Hungarian Academy of Science. Taken at the World Conference on Science, 1999.

right places to meet amazing mentors? I would suggest it is all of these and the best part, spending a lifetime in academics and having wonderful students to share this

(Continued on page 6)

SALT LAKE CITY IS CALLING!

by Rich Satterlie, President

Salt Lake City is calling. We had a very successful meeting in Seattle, both in terms of attendance and comments (formal and informal). We are now running full speed into the planning period for SLC.

One aid to the success of the Seattle meeting (so I'm told) was the distribution of the *Notes from the Seattle Underground*. We already have one volunteer to help put together the next one—**Notes from the Salt Lake City Underground**—but we need additional volunteers to give us the scoop of places to go and things to do. Step forward, please. One draw of the area, and the time of year, is skiing. If enough members are interested, we could look into skiing packages that could bracket the meeting. Also, I'm told

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GRAND CHALLENGES—NEXT STEPS

by Brian Tsukimura, Program Officer

Identifying the Grand Challenges of Organismal Biology has been a yearlong process. Numerous "Grand Challenge" articles have been published in the Society's journal *Integrative and Comparative Biology*. As a next step, a workshop on the **Implementation of Grand Challenges in Organismal Biology** was assembled on January 6, 2010 at the annual meeting in Seattle. Three sessions involving both authors of papers describing the Grand Chal-

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SICB Goes to a 4-Day Meeting

by Rich Satterlie, President

With the cold weather's hold loosening and daylight savings time finally here, we (the Executive Officers) are building optimism for the next annual meeting in Salt Lake City. We are also deep into planning, and one theme keeps tripping our spring into Spring. We are dealing with larger meetings, fielding complaints about concurrencies and tight schedules, feeling the sting of trying to shoehorn so many special talks, new workshops, successful symposia, and so many types of business meetings and socials into

a three-and-one-half day schedule. For this reason, we (again, the Executive Officers with input and a favorable vote from the entire Executive Committee) will be expanding the meeting time to four full days, starting with the Salt Lake City meeting. One particular limitation has hit us full in the face. We are setting records for donations to special funds (more below) and yet we are at our limit for special Society-wide lectures associated with these special funds. In many ways, we are victims of our own success. Of course, our last two meetings may represent an unusual blip in the long run, but we have struggled

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HOW TO FIND A ROCKIN' POSTDOC?

How did you find a good postdoc? How did you decide which postdoc to take? These are some of the most common questions I have gotten in the past two years. I usually try to answer these questions as honestly as I can, but in truth, I have only found the one postdoc, and much of it was serendipitous. With these questions in mind, I enlisted the help of some additional DCB postdocs. You will see some similarities and some differences in their experiences. This just goes to show that there are "plenty of ways to skin a cat." Good luck with your searches!

Marianne Porter, *Student/Postdoctoral Affairs Committee Representative for the Division of Comparative Biomechanics*

Tips from Mason Dean, Alexander von Humboldt Post-doctoral Fellowship – Max Planck Institute, Potsdam, Germany

Post-doc, where art thou? The postdoc search is like any hunt; the thing you want might land in your lap (e.g., it can't hurt to get the

word out through colleagues that you will be "on the market" soon) but you'll have a better chance going out and drumming things up yourself. This is daunting considering the range of possible *who's*, *where's* and *what's* – it's fine and common to not have a solid clue what you want to do next, so why not start by trimming away the things you *don't* want? Try asking yourself the same questions you would if you were deciding where to go on vacation.

Do I want something familiar or something new? You've spent years in your doctoral comfort zone and venturing out is scary, but when else will you have a chance to dabble in another field or subdiscipline? Taking this time to learn some new skills will certainly make you more appealing and broadly-trained when you apply for jobs later. (Lately, slapping "interdisciplinary" on anything ups its chance for getting research money!) Think about what techniques you need to answer your

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SICB finances are solid and the prospects for the future are bright.

WEATHERING THE STORM, SICB ON SOLID FISCAL GROUND – TREASURER’S REPORT

By Bob Roer, SICB Treasurer

I take over the office of treasurer for a society whose finances are solid and whose prospects are bright, despite the state of the economy over the past two years. This is due, in large part, to the sound and thoughtful fiscal management of SICB by the outgoing treasurer, Ron Dimock. As Ron mentioned in this newsletter last year, he’s been accused of having a fixation on keeping SICB solidly in the black. This fixation has served us well. Ron’s stewardship (in partnership with Burk & Associates, Inc.) of our endowment, revenues and expenditures has kept the Society healthy. I will be similarly “fixated.”

Outlook for the Bottom Line on the Seattle Meeting

While not surpassing the record for attendance at the 2009 Boston meeting (1836 attendees), registration for the Seattle meeting was the second highest in the history of the Society at 1672. Registration fees for the meeting totaled \$274,990. While Burk & Assoc. are still working on the final details of the expenses, including approximately \$50,000 in AV costs, the meeting should come in significantly in the black, to the tune of \$50K. For comparison, the net income (loss) for the last six annual meetings is shown below.

Clearly the losses experienced in the 1990’s and into the first years of this century could not be allowed to continue. While the annual meeting should not be a money making enterprise, it is critical that it remains consistently in the black in order for the society to be able to sustain support for students, divisional budgets and symposia.

Endowment Makes a Significant Recovery

In the annual treasurer’s report to the Executive Committee, Ron reported that since 2002 the Society has invested \$779,498 with Dominion Financial Consultants, LLC under the guidance of Matthew Tederick. The endowment principle was \$1,160,976 on 31 December 2007. The ensuing economic downturn saw the value of the portfolio decrease by nearly \$300,000, with a 2008 year-end worth of \$836,475. While this was a devastating 30.88% loss, our decrease was not as severe as that of the S&P 500, which lost 33.99% in value. At the time this newsletter was published last spring, the continued decline in the market left the portfolio value at just \$706,000 – wiping out all of our previous capital gains and then some. Fortunately, the second quarter of 2009 finally saw an upswing in the market, and by 29 December 2009, the value of our portfolio had increased by 21.52% to \$972,968. For comparison, the S&P 500 increased by 19.57% over the same period. The good news is

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YEAR	LOCATION	NET INCOME (LOSS)
2004	New Orleans	\$1,934.81
2005	San Diego	\$3,652.47
2006	Orlando	\$(31,218.78)
2007	Phoenix	\$(28,330.19)
2008	San Antonio	\$32,629.83
2009	Boston	\$94,747.05

“A Special Symposium will honor Karel Liem at a [joint meeting of Ichthyologists & Herpetologists, July 7-12, 2010.](#)”

KAREL FREDERIK LIEM, 1935 - 2009

It is with great sadness that we report the passing of Karel Liem last fall on September 3rd, 2009. Karel was a great friend and mentor to many of us in SICB, and he played a major role in both the Division of Vertebrate Morphology and in the society at large, serving as SICB President in 1989. Karel was the Henry Bryant Bigelow Professor of Ichthyology and Curator of Ichthyology in the Museum of Comparative Zoology at Harvard.

Karel was born in Indonesia on November 24, 1935, and attended the University of Indonesia where he graduated in 1957. He continued there to produce a master's



thesis on frog development (1958) and then attended the University of Illinois where he received his Ph.D. degree in 1961 working on the phylogeny of anabantoid fishes. Karel was a Lecturer in Evolutionary Biology at the University of Chicago, Associate Curator at the Field Museum, and Assistant and Associate Professor of Anatomy at the University of Illinois. He also served as a visiting professor at the Univ. of Liedon.

At Harvard where he was a member of the faculty from 1972 to 2009, Karel was the driving force behind a substantial renovation of a much neglected fish collection in the Museum of Comparative Zool-

ogy, and via a series of NSF grants he completely modernized the collection. Also through his efforts the collection was cataloged digitally and nearly tripled in size. Karel's research at Harvard focused on the biomechanics and evolutionary diversification of cichlid fishes, although he undertook many other studies on fish respiration and related topics. Karel with his wife Hetty served as co-Masters of Dunster House (1989-2001), a position that he very much enjoyed but that also involved substantial administrative and managerial responsibility. At Harvard (and Friday Harbor Labs where Karel often taught in the summer) Karel was famous for his teaching, and he won numerous teaching awards. He taught one of the introductory biology courses to Harvard freshman for many years, as well as a comparative anatomy class in the extension school. But it was his Biology of Fishes class (Bio. 130) that inspired so many students; I can still vividly recall my excitement during the first days in the fish class as Karel introduced topics in biomechanics and fish biology with a contagious enthusiasm and an eye toward unresolved questions that he challenged us to investigate. From this teaching, Karel produced a number of textbooks, none more influential than "Functional Anatomy of the Vertebrates" (with co-authors Warren Walker, Willy Bemis, and Lance Grande).

Most of us will remember Karel for his infectious laugh, his tremendous good humor and practical jokes, his love of travel and the many stories that emerged from these trips, and especially his selfless mentoring efforts which launched so many careers in science and medicine. He will be greatly missed.

*George Lauder
Museum of Comparative Zoology
Harvard University*



PROFESSOR CARL GANS, 1923-2009

Carl Gans died peacefully on 30 November 2009 in Austin, Texas, where he had resided for more than a decade while an adjunct faculty member in the Section of Integrative Biology at the University of Texas. Carl

served in 1977 as President of the American Society of Zoologists (now SICB), and was active in our society for more than forty years. He also founded and acted as chief editor for the monumental series *Biology of the Reptilia* (1969 to present, with the final volume #22 due out in spring 2010), and served as editor of the *Journal of Morphology* for a remarkable 25 years. Carl also either authored or co-

authored four books, and made foundational contributions to the fields of comparative biomechanics and vertebrate functional morphology.

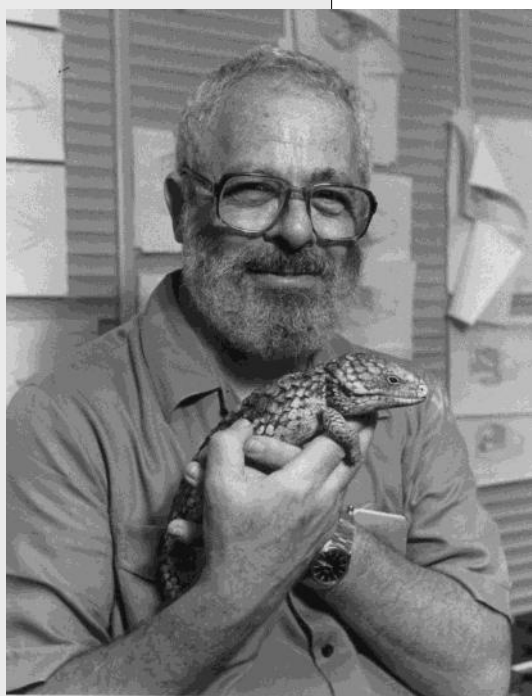
Carl's background in biological research can perhaps best be described as non-traditional. In 1939, Carl and his family arrived in the United States as refugees from Germany. Following service with the U.S. Army in the Pacific Command from 1944 - 1946, Carl proceeded to earn multiple degrees in engineering from NYU and Columbia. After eight years as a practicing engineer in the electric power industry, he returned to academic studies and obtained a Ph.D. in biology from Harvard in 1957. His first academic appointment was at the University of Buffalo (later SUNY-Buffalo), followed by relocation to the University of Michigan as Professor of Zoology (including ser-

vice as departmental chair), where he remained until his retirement and relocation to Austin in 1997.

One of the many distinctive features of Carl's career was the firm embedding of biomechanical studies within the broader contexts of evolutionary biology and natural history. Of his approximately 700 publications, a sizable fraction was dedicated to the systematics of amphibians and reptiles, and of amphibiaenians in particular. Extensive field collecting supplemented his detailed laboratory investigations into diverse mechanisms of vertebrate feeding, respiration, and locomotion. In collaboration with Professor Glenn Northcutt, Carl also advanced an innovative hypothesis for vertebrate origins deriving from neural crest progenitors to the vertebrate head. Conceptual precursors to the modern fields of integrative biology, evolutionary physiology, and comparative biomechanics can all be identified in Carl's scientific papers from the 1960's and 1970's. As befitted such a widely published author with extensive editorial practice, Carl was also an inveterate bibliophile. His extensive personal library, with more than 20,000 items of biological interest, was donated to the Ben-Gurion University of the Negev in Israel.

To celebrate Carl's abundant scientific and editorial contributions over many decades, SICB's Division of Comparative Biomechanics established in January 2010 the "Carl Gans Award," to be given annually in recognition of outstanding contributions to the field of biomechanics (go to the [Division of Comparative Biomechanics](#) in this newsletter). Carl was an extraordinary scientist and individual, and his many friends and colleagues around the world are pleased to honor his memory in this way.

Robert Dudley, Department of Integrative Biology, University of California, Berkeley



*“Watch for
announcements of
the new Carl Gans
Award.”*



EXCITEMENT & CHALLENGES OF DISCOVERY IN MARINE BIOLOGY — M. PATRICIA MORSE

(Continued from page 1)

continuous acquisition of passion and knowledge. Serendipity also plays an exciting and major role.

I am a native of Woods Hole, Massachusetts, even born on Cape Cod! And much credit for my career in science can be associated with the encouragement from my high school biology teacher, Helen McKenzie. She arranged a job for me at the Marine Biological Laboratory (MBL) - doing dishes for the Nobel Prize winner, Albert Szent-Gyorgyi (Fig.1). While at Bates College, I spent summers fertilizing clams and urchins (and of course doing acid washes on dishes) in the laboratory of George H. A. Clowes. Although sur-

rounded by excellent world-class researchers, I was never a real participant in asking the questions or doing the science. But my senior thesis at Bates College - on the microanatomy of a jellyfish sense organ - was a total hands-on experience and drove the passion within me to work on invertebrates.

When in graduate school, I chose to study the functional morphology of feeding and development of several nudibranch molluscs. This led me to an interesting event later in 1976 when I was among eight scientists at the MBL in Woods Hole

invite to have a twenty minute audience with Japan's natural historian (of nudibranchs!) and Emperor Hirohito (Fig. 2).

It was after taking a position at Northeastern University, that I met and worked with Vera Fretter (Reading University - England), while teaching with her at Catalina Island, USC, California. She taught

me that you could know all about the insides of molluscs and how they really work. It took me ten years to publish the paper from that summer on the functional morphology of the digestive system of *Pleurobranchia californica* (Morse, 1984). But during that period and long after, I was sold on using careful and minute dissection, light mi-

croscopy, electron microscopy and experimental approaches to understanding the functional micro-morphology of molluscan systems.

The American Society of Zoologists (ASZ) was my meeting! One never forgets that first paper!! In 1971 I organized a three-day ASZ symposium on the Biology of the Turbellaria honoring the famous woman zoologist, Libbie H. Hyman, and it was during that meeting that I discovered the world of interstitial organisms. During the following summer of 1972 I met Dr. Bertil

(Continued on page 7)

**“Experiences—Part 8
in a series
of articles about the research
experiences of members of
SICB.**

**“SICB members
like a good story about
an expedition,
a field experience,
a lab experiment
or another
researcher.”**

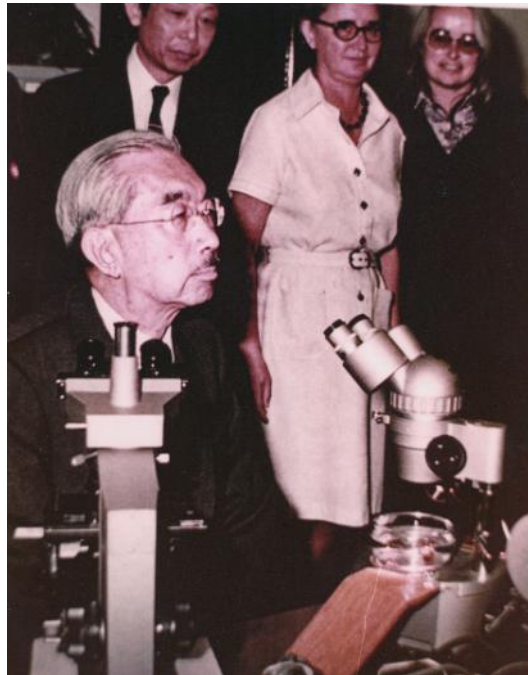


Fig. 2. Audience at the MBL in Woods Hole with the Emperor Hirohito of Japan. (from a Japanese magazine, 1976).

EXCITEMENT & CHALLENGES OF DISCOVERY IN MARINE BIOLOGY — M. PATRICIA MORSE

(Continued from page 6)

Swedmark at the Kristineberg Marine Laboratory in Sweden, and he taught me the techniques for work with interstitial molluscs. In 1976 I described the first interstitial acochliidiacean mollusc (Fig. 3) from coastal USA, *Asperspina riseri* from Maine (Morse, 1976). This led to being encouraged by Paul Illg to come to the University of Washington Friday Harbor Laboratories where he and Mike Hadfield had found some of these molluscs in coarse sand environments. And in 1977 I began what

became an every summer excursion across country to FHL and there found and described and interstitial solenogasters, *Meiomenia swedmarki* (Fig. 4) (Morse, 1979).

The role of serendipity comes in here, as I received a Fulbright Fellowship (1978) to study in Fiji. It was there on the coarse sandy beach at the Korolevu resort that I discovered

numerous interstitial priapulids and described probably the World's 14th extant species, *Meio-*

priapulidis fijiensis (Fig. 5) (Morse, 1981).

During the 1980ies, the study of biomechanics was in full swing at FHL, and led by scientists such as Steve Wainwright, Mimi Koehl, Tom Daniel, Steve Vogel, Mark Denny Mike Labarbara and Jim Gosline (to name a few). As a new officer in ASZ, I talked (should I say coerced) Tom, Mark and Mike to organize an ASZ biomechanics symposium, a first for the USA! It is an area of research that is totally integrative, utilizing engineering principles, mathematics and models

to understand organism function. It has remained a central part of SICB to this day and in 2007, under the leadership of Bob Full, the Division of Comparative Biomechanics

was added. At Northeastern University, several of my MS and Ph.D. students and I worked together on the heart-kidney complex and blood of numerous bivalve molluscs and it was

that work that I summarized in my ASZ past-president's lecture on a

(Continued on page 8)



Fig. 3. Opisthobranch acochliidiacean mollusc.

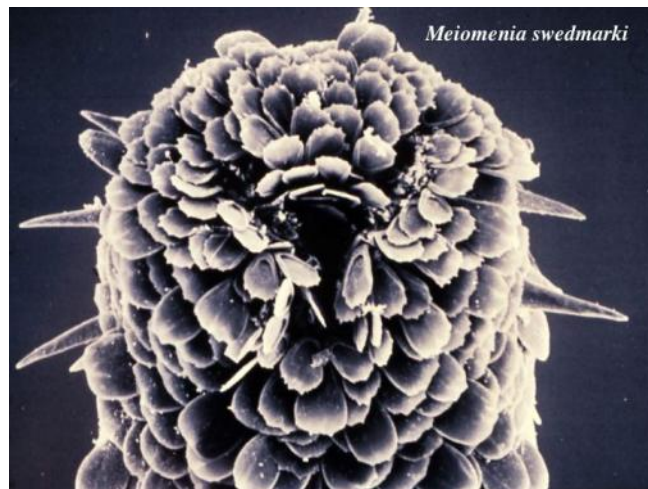


Fig. 4. *Meiomenia swedmarki*, interstitial aplacophoran mollusc from Reid Rock Washington.

“And in 1977 I began what became an every summer excursion across country to Friday Harbor Laboratories...”



“The passion for studying the molluscs and working on the shores, whether East or West Coasts never retires!!”



Fig. 5. *Meiopriapulus fijiensis*, interstitial priapulid from Korlevu, Fiji.

EXCITEMENT & CHALLENGES OF DISCOVERY IN MARINE BIOLOGY — M. PATRICIA MORSE

(Continued from page 7)

comparative study of the excretory system in bivalve molluscs (Morse, 1987). Another case of serendipity occurred when observing high magnifications in the electron microscopy of the heart-kidney complex of the protobranch bivalve, *Acila castrensis*. I found squares and circles that looked very much like hemocyanin – although this blood pigment had never been found in bivalve molluscs. Here is where integrative studies really came into play. I worked with a cell biologist colleague who contributed gel electrophoresis of the large extracellular molecule, another cell person who demonstrated copper in these large molecules, and with the expertise of a student colleague, we put together a paper that was accepted and published in *Science* (Morse *et al*, 1986). The research in my laboratory utilized injection experimentation and scanning and electron microscopy as an important

tools for understanding molluscan micro functional morphology (really how clams pee!) and sub lethal effects of pollutants on bivalve molluscs (summarized in Morse and Zardus, 1997). There is still so much to be done, but one of the most rewarding moments was several summers ago (2008), a graduate student from Auburn University walked into the University of Washington Friday Harbor Laboratories course in Developmental Biology. In his hand was a copy of a scientific re-

print that he called to the attention of the course instructor, Billie

Swalla. He was very interested in finding this very small mollusc featured in the article but, in his own words, was aware that this was written a *long* time ago (1979) and he was not sure if he would be able to find the organism. Billie took one look at the paper and declared, “That author is Trish!” Thus began



Fig. 6. Trish in the intertidal.

a re-entry into my work with the interstitial molluscs that began in the 1970ies, and had been put on the shelf - the concept of my retirement (after 38 years) became a reality. Suddenly, descriptive morphological understanding of a new species written 30 years ago, of an unusual and seldom seen class of molluscs, has taken on an importance to the studies of a new generation of students. The reason is the amazing growth of DNA knowledge, molecular technologies and development of experimental hypotheses that will lead to a better understanding of the relationships among the phylum Mollusca. The passion for studying the molluscs

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*Symposium
Proposals for 2012
Charleston, SC are
due on August 16,
2010.*

*Abstract Deadline
for Salt Lake City
2011 is
Sep 3, 2010—Plan
Ahead!*



PROGRAM OFFICER REPORT

BRIAN TSUKIMURA, PROGRAM OFFICER

Greetings from Central California! As my first act as Society-wide Program Officer, I would like to extend our gratitude to Ed Rosa-Molinar, now the Past-Program Officer, for two years of service as Program Officer, and 5 years as DPO for DEDB, where he was instrumental in developing and maintaining our current program structure. In addition, we all should commend the Divisional Program Officers (DPO), Sue Burk, Lori Strong, staff at Burk and Associates, and Ruedi Birenheide work very hard to provide you an outstanding program every year.

Important deadlines:

1. The deadline for the submission of the symposium applications for the **2012 meeting in Charleston, SC** is Monday, **August 16, 2010**. Look on the SICB website for symposia guidelines. Also be sure to speak with your Divisional Program Officer for assistance and funding opportunities.

2. The deadline for Abstracts for the **2011 Salt Lake City Annual Meeting** is Friday, **September 3, 2010**.

Great news from the 2010 Seattle meeting We had 1722 attendees with 1329 received presentation abstracts (117 of which were from the symposia). This number is just slightly smaller than our largest meeting in Boston 2009, which had 1836 attendees and 1363 presentation abstract. We are looking forward to another large gathering.

On to Salt Lake City!

Society-wide Symposium:

Speciation in Marine Organisms—Organized by M.P. Miglietta and supported by DEDB, DEE, DIZ, & DESB.

Regular Symposia:

The Biomechanics and Behavior of Gliding Flight—Organized by R. Dudley and supported by DAB, DCB & DVM

Biinspirations and Applying Mechanical Design to Comparative Experimental Biology—

Organized by B. Flammang and supported by DCB, DIZ & DVM

Neuroecology: Neural Determinants of Ecological Processes from Individuals to Ecosystems—Organized by C. Derby and supported by DAB, DEE & DNB

Environment, Energetics and Fitness: a Symposium Honoring Donald W. Thomas—Organized by

M.S. Wojciechowski and supported DCPB & DEE

Bridging the Gap Between Ecoimmunology and Disease Ecology—Organized by S. French and supported by DCE & DEE.

Synthesis of Physiologic Data from the Mammalian Feeding Apparatus using FEED, the Feeding Experiments End-User Database—Organized by S.H. Williams and supported by DCPB, DNB, DESB, & DVM

Environmentally-Cued Hatching Across Taxa: Embryos Choose A Birthday—Organized by K. Martin and supported by DAB, DCPB, DDCB, DEDB, & DIZ

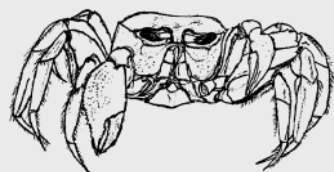
I've Got Rhythm: Neuronal Mechanisms of Central Pattern Generators—Organized by D. McPherson and supported by DAB, DCB, and DNB

A synthetic approach to the response of organisms to climate change: The role of thermal adaptation—Organized by M. Sears and supported by DAB, DCPB & DEE

Population Dynamics of Crustaceans—Organized by J. Buhay and supported by DIZ & TCS



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Comparative
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Press.](http://www.oup.com/academic)*



JOURNAL REVIEWED BY PANEL

In August 2008, then SICB President John Pearse appointed an *ad hoc* committee to review the status and operations of the SICB journal *Integrative and Comparative Biology (ICB)*. The committee was chaired by Chuck Booth and committee members were Rick Blob, Linda Walters, John Wingfield, and Sally Woodin. President Pearse charged the committee with addressing ten specific items. The committee issued its final report to the SICB Executive Committee on January 7, 2010 at the meeting in Seattle. The committee gathered information with interviews of the publisher, the SICB Executive Officer Brett Burk, the *ICB* Editor Hal Heatwole, and members of the *ICB* Editorial Board. In addition, the committee developed a series of questions that were posed to the membership of SICB through the member survey issued in the fall of 2009.

The committee concluded that the journal is in very good shape and issued the following **recommendations**.

1. If it is eventually decided that additional types of invited reviews or perspectives are to be published, the need for an assistant or associate editor, or guest editor, to handle the increased workload should be re-
2. Editorial Board members should be proactive in suggesting symposium topics.
3. A process should be developed to allow publication in the journal of occasional, appropriate critical commentary on *ICB* articles, along with a concurrent reply by the original author(s).
4. The SICB and Divisional Program Officers and the Editorial Board should continue to seek ways to identify the best possible symposium topics and to recruit symposium organizers who can bring symposium proposals to fruition, with the ultimate goal of getting the best symposium presentations submitted for publication in *ICB*.
5. The Executive Committee and Editorial Board should consider ways to make more effective use of the 50 complementary *ICB* subscriptions afforded the society by the *ICB* publishing contract (e.g., as perquisite for non-SICB symposium speakers).
6. SICB should support the efforts of the Oxford University Press in seeking PubMed listing.
7. SICB and the Oxford University Press should work to develop an online-only subscription option.

25% Discount from Oxford University Press

We can add another perk to SICB membership, with gratitude to one of our loyal exhibitors (and parent company of the publisher of *Integrative and Comparative Biology*, our jour-

nal). Oxford University Press extends an offer of a **25 percent discount** on relevant books in biology **to members of SICB**. Please stop by the Oxford booth at the Salt Lake City meeting and thank them for their generosity. You may find a book or two you like as well.

Meanwhile, go to the [SICB web site](http://www.oup.com) and you will find a link to the OUP offer on the home page.

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GRAND CHALLENGES—NEXT STEPS

(Continued from page 1)

challenges in Organismal Biology (R. Denver, K. Halanych, S. Sower, and D. Padilla) and executive board members from outside professional societies (B. Alberts - [American Society for Cell Biology](#), H. Carey - [American Physiological Society](#), J. Ha - [Animal Behavior Society](#), D. Raible - [Society for Developmental Biology](#), and J. Whittaker - [Sigma Xi](#)) convened to discuss Grand Challenges and the new directions in which organismal biology should develop. Two major implementation arenas emerged: 1) Research

areas involving interdisciplinary cooperatives that might move beyond standard model organisms and methodologies, plus the abilities to

collect and properly analyze these new data; and 2) Education at all levels (high school, undergraduate, graduate, post-doctoral and tenure-track faculty), including informing the public, legislators and granting agencies of the importance of Organismal biology. This is an oversimplification of the discussion at the workshop, but are points that would be gladly debated on our **blog**. Please participate! <http://www.sicb.org/gch/blog.php>.

A Grand Challenges webpage has been established to continue to keep everyone up to date: <http://www.sicb.org/gch/index.php>. You can get there by clicking on the Grand Challenges logo from the SICB home page. We have included the copies of some presentations from the workshop to allow the re-examination of topics brought about by the panelists, and to stimulate further discussion of the topics. Stay tuned.



Support your favorite SICB fund.

Click on the "donations" button on the home page.



WEATHERING THE FISCAL STORM

(Continued from page 3)

that our portfolio has consistently out-performed the S&P 500 (a tribute to the sage investment advice of Matt Tederick) and that we have recovered well over half of the loss sustained in 2007, 2008 and the first quarter of 2009.

The State of the Society Finances

The Society's total assets, as of the audit on 30 June 2009, were \$1,304,782.31. With the intervening improvement in our investment portfolio and the predicted success of the Seattle meeting, our position should be somewhat better than that. The Journal continues to operate with a positive balance and our cash accounts are in good shape. Despite the external economic pressures, SICB is a fiscally healthy society.

Dr. Len Kirschner Endows the C. Ladd Prosser Symposium Fund

Dr. Len Kirschner, long-time member of SICB and professor emeritus of Washington State University, has donated \$25,000 to endow the "C. Ladd Prosser Symposium Fund." The purpose of the fund will be to honor Ladd Prosser's outstanding scientific contributions to the field of comparative physiology and to recognize his service to the Society.

The fund will provide partial support for a symposium at the annual SICB meeting, the topic of which falls within the purview of comparative animal physiology and is consonant with Professor Prosser's scientific opus. Len and the executive committee encourage the membership to join in honoring Ladd Prosser by contributing to the fund. Thanks to Len for his very generous support of SICB!

SICB BYLAWS AMENDMENT

This is an official notice that the following amendment to the SICB Bylaws is proposed by the SICB Executive Committee. It will appear on the spring ballot, to be circulated on or about the first of May 2010. This notice is in accordance with the SICB Bylaws Article XVI. Sections 1 and 2. It has been posted on the [SICB web site](#) since 23 Feb 2010.

This amendment will prove a uniform platform for all Best Student Presentation Awards, which are administered through the individual divisions of SICB.

Proposed SICB Bylaws Amendment

Article XVI: Awards (NEW)

Section 1. Best Student Presentations. Each division may elect to have awards for best student presentations at the annual meeting. Separate awards may be given for best oral presentation and best poster presentation. Each division is responsible for securing a panel of judges and establishing procedures for selecting award recipients. Divisions may have additional restrictions or requirements than those set forth here. Competitors must be members of SICB and are responsible for checking divisional rules.

Student-in-Training Members, Graduate Student Members and those who have received a Ph.D. within 12 months of the competition are eligible to compete for awards. A presentation (oral or poster) may be entered in only one divisional contest. A student who wins best oral presentation in a given division may not compete in best oral presentation contest in that same division in the future. A student who wins best poster presentation may not compete in best poster presentation contest in that same division in the future. Student award winners

in one division are not excluded from competing for awards in other divisions in other years.

Article ~~XVI~~ XVII: Bylaws (RENUMBERED)

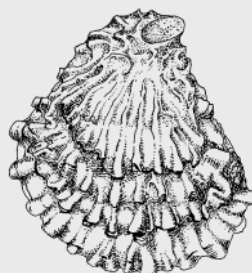
Section 1. Proposed amendments of the Bylaws may be originated by the Executive Committee or by the members of the Society. Proposals from members shall be submitted to the Executive Committee in writing and shall bear the signatures of at least twenty-five members.

Section 2. The Bylaws may be amended by a two-thirds vote of the members voting by ballot, provided a quorum of the Society membership votes (see Article V of the Constitution). Proposed amendments to the Bylaws shall be posted by the Society Secretary on the Web Page at least one month prior to voting. Ballots will be made available to the membership and one month will be allowed for voting. The ballot closing date shall be stated on the ballot.

Section 3. Votes will be collected and tabulated and the Secretary will notify the Executive Committee of the results. The Secretary will also post the results on the Society's Web Page and in the appropriate fall or spring Newsletter.

Section 4. Amendments shall become effective following their adoption as stated in Article ~~XVI~~ XVII Sections 1-3.

This SICB Bylaws Amendment will appear on the ballot in May.



R. Dudley—SICB Researchers Database

MEMBER SURVEY—A REPORT

Have you ever complained about the timing or the location of the annual meeting? Some members have. The SICB decided that it was time to pose some questions about various issues to the membership. Beginning in 2007 the concept of a large and significant member survey was formulated. In 2008 preliminary questions were formulated by the Executive Officers and sent to the Executive Committee for input and comment. Survey question development continued through 2009 and the ICB Review Committee (see elsewhere in this newsletter) and the Educational Council contributed their own sets of questions. The survey was sent to the membership in the fall of 2009. A total of 850 SICB members, or greater than one third of the membership, responded to the survey – a remarkable and excellent result. More than half or 442 of the respondents were Full Members of SICB. Among the remaining member categories 12% of the Postdoctoral Members, 32.1% of the Graduate Student Members and 3.9% of the Student-in-Training Members responded. Female respondents were 42.8% and males 57.2%.

Some of the results of the survey were reported to the Society at the 2010 annual meeting in Seattle. In this article, answers to some of the survey questions are documented. Since the survey had many parts to it, only a portion will be presented in this newsletter with the remainder summarized in subsequent newsletters. The results of the survey will help the Society officers better plan for the annual meeting and the programs of the Society.

Semesters or Quarters. One of the questions posed was the organization of calendars since most members belong to academic institutions. 78.2% of the respondents are on the semester system, 14.8% are on quarters, and 6.9% responded not applicable. These answers change

very little when filtered for only Full Members.

The questions below on the demographics of the member institutions are filtered to include only answers from the Full Members.

Kind of Institution. Question: Indicate the selection below that best describes your institution with respect to programs in biology or programs where students can study biology.

- Only undergraduate programs – 18.8%
- Undergraduate and master's programs, but no doctoral programs – 14.7%
- Undergraduate, master's and doctoral programs – 59.5%
- Not applicable – 7.2%

Institution Size. Which best describes the size of your institution? The categories include undergraduate and graduate students.

- < 2,500 – 13.3%
- 2,500 to 5,000 – 9.3%
- 5,001 to 10,000 – 12.0%
- 10,000 to 20,000 – 22.4%
- > 20,000 – 37.3%
- Not applicable – 5.7%

Institution Description. Which best describes your institution?

- primary expectations in research productivity – 31.7%
- balanced research and teaching expectations – 46.2%
- primary expectations in teaching – 18.8%
- other – 0.7%
- not applicable – 2.7%

In the fields below, the first number is for Full Members and the second number in parentheses is for all members.

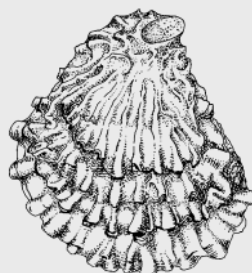
Duration of Society Membership.

How long have you been a member (of any status) of this Society?

- just joined – 3.8% (15.9%)
- 1-3 years – 5.9% (21.3%)
- 3-5 years – 7.7% (12.5%)
- 5-10 years – 19.0% (16.5%)
- 10-20 years – 27.1% (14.9%)

(Continued on page 14)

*Member Benefit:
25% Discount on
Oxford University
Press Books
Go to the SICB
Home Page*



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

MEMBER SURVEY REPORT (CONT.)

(Continued from page 13)

- 20-30 years – 20.1% (10.5%)
- > 30 years – 16.3% (8.5%)

Divisional Affiliation. What do you consider your primary divisional affiliation (choose only one)?

- Animal Behavior – 4.8% (8.5%)
- Comparative Biomechanics – 6.8% (9.2%)
- Comparative Endocrinology – 10.2% (8.4%)
- Comparative Physiology & Biochemistry – 24.8% (18.2%)
- Developmental & Cell Biology – 2.5% (3.2%)
- Evolutionary Developmental Biology – 6.4% (6.3%)
- Ecology & Evolution – 8.0% (14.8%)
- Invertebrate Zoology – 11.6% (8.9%)
- Neurobiology – 5.0% (3.8%)
- Systematic & Evolutionary Biology – 3.9% (4.3%)
- Vertebrate Morphology – 16.1% (14.6%)

Questions about the SICB Annual Meeting

Attendance at Annual Meetings.

In general, how often do you attend the SICB annual meeting?

- every year – 34.1% (36.6%)
- every other year – 22.6% (22.7%)
- every 3 to 5 years – 23.0% (14.8%)
- rarely – 14.1% (14.4%)
- never – 6.2% (11.5%)

Timing of the Annual Meeting.

Choose the option that best describes your position on the present timing (early January) of the annual meeting.

- While not always at a perfect time, I am satisfied with the present timing of the annual meeting. – 76.7% (77.3%)
- I am not satisfied with the timing of the annual meeting. – 23.3% (22.7%)

Meeting timing references over the course of the year.

The year was divided into pieces of approximately two months. Members listed the current meeting time as “highly desirable” 35.0% (31.5%) or “desirable” 41.8% (42.3%); the next best time was June/July – “highly desirable” 14.6% (13.6%) and “desirable” 34.7% (32.8%). January, after the current meeting time, was next, then the August/September period. Interestingly, the old meeting time between Christmas and New Years was listed a “undesirable” 21.4% (19.3%) and “highly undesirable” 56.7% (62.2%).

Meeting Location. How important is the location of the meeting in deciding whether or not to attend?

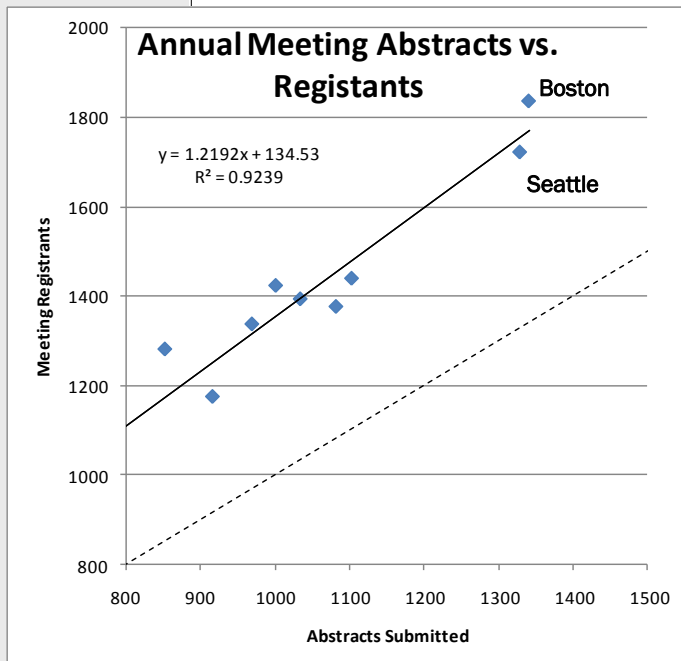
- very important – 22.2% (22.5%)
- somewhat important – 56.9% (58.0%)
- not important – 20.8% (19.5%)

Researchers Database

Hormone action in animal development—The Robert Denver laboratory is interested in how the environment influences the production of neurohormones and consequently how neurohormones control the stress and thyroid axes.

The photo and a more extensive description of this research can be found on the SICB member database.





Annual Meeting Statistics

The annual meeting of the SICB in Seattle was our second largest meeting in recent history. It allowed us to place another point on the relation between the number of abstracts submitted and the number registering for the meeting. This relationship proves to be very helpful in the planning during the last few months leading up to the meeting.

Other Seattle meeting facts:

- total # of exhibitors = 36
- total # registering **and** presenting:
- full members = 434
- postdoc members = 118
- grad student members = 565
- SIT members = 172

Providing your demographic information for SICB is important in assisting in documenting member diversity.



SLC CALLING

(Continued from page 1)

night skiing is a possibility and is great fun. Let us know how we can supplement the scientific side of the meeting for our members. We are not a travel agency, but we can frequently solicit special deals from local enterprises.

I'll steal some of the Program Officer's thunder (sorry Brian). Please pay attention to the various deadlines that will be announced for submission of workshops, symposia, and eventually abstracts. We have these deadlines for a reason—to lessen the “oops, missed the deadline” related panic that creates significant additional workload for all of your colleagues who construct the intricate schedule of our annual meetings. It's very easy to complain about those schedules, but putting them together is a thankless job that requires time, patience, and sometimes a calming influence that is one step from a straightjacket and electroshock therapy. Your cooperation will be greatly appreciated.

Going into the Salt Lake City meeting, our membership is strong despite the trends we see in our local and national economies. We have 200 more members than last year at this time, but there are nearly 1,000 individuals who have not paid 2010 dues! One group we would like to address, however, includes members who do not regularly attend our annual meetings. If you are in that category, we would like to encourage you to support the society by regularly paying dues, even in years you do not plan to attend. Only paying dues in the years of meeting attendance loses the **loyal member discount**, but also decreases our ability to provide the wonderful support packages we supply to our many student members (as well as impacting other programs and activities). Of course, we thank you all for any membership support you provide.

Please pass on your comments concerning the upcoming meeting to your divisional or society officers. As a reminder, the next meeting (after SLC) will be in Charleston, South Carolina, with subsequent meetings scheduled for San Francisco and Austin, Texas.

We have had wonderful success in terms of generous contributions from our membership...”



SICB GOES TO A 4-DAY MEETING

(Continued from page 2)

with this question in the past, mostly generated by member complaints and “emergencies” that pop up at the actual meetings. In the past, we have also discussed a reduction in the duration of contributed talks, but that would only deal with one or two of many time-crunch related problems in our meeting planning.

On a positive note (and related to the above), we have had wonderful success in terms of generous contributions from our membership (and others). Our Carl Gans fund found widespread support and shattered the funding-level threshold for establishment of a named fund. We are on the verge of full endowment of another named fund—the C. Ladd Prosser fund—largely due to the generosity of one of our members, Dr. Leonard Kirschner. This latter fund will be used as a symposium-enhancement fund, and can be available to symposia that honor the pioneering in-

terest of Ladd Prosser in a comparative approach to physiological research.

On the subject of endowments, I will once again ask each of you to forego that one cup of fancy coffee and donate the equivalent of that cup-of-Joe to your favorite society fund. The donation is easy—just go to the donations page of the website. In the next few months (after tax time), I’ll be donating the equivalent of the normal membership dues to my favorite fund—the SICB Symposium Fund. I’m a life member, and I would like to challenge all other life members to donate a membership fee (or part of one) to the society to match mine.

Sorry for the begging, but the benefits to society activities, and to its future through for-perpetuity endowments, is immeasurable. We are way behind many of our fellow societies in terms of endowments, but we are also making incredible gains. And we have or members to thank for those gains. Thank you all.

Experiences—Morse

(Continued from page 8)

and working on the shores, whether East or West Coasts (Fig. 6) never retires!!

PAPERS IN THIS ARTICLE:

Morse, M. P. 1976. *Hedylopsis riseri* sp.n., a new interstitial mollusc from the New England Coast (Opisthobranchia, Acochliidae). Zool. Scripta **5**:221-229.

Morse, M. P. 1979. *Meiomenia swedmarki* g.n., sp.n., a new interstitial solenogaster from Friday Harbor, Washington. Zool. Scripta **8**:249-253.

Morse, M. P. 1981. *Meiopriapulid fijiensis* n.gen., n.sp. An interstitial priapulid from coarse sand in Fiji. Trans. Amer. Micr. Soc. **10**:239-252.

Morse, M. P. 1984. Functional adaptations of the digestive system of the carnivorous mollusc, *Pleurobranchaea californica* MacFarland, 1966. J. Morph. **180**:253-269.

Morse, M. P., E. Meyhöfer, J. J. Otto and A. M. Kuzirian. 1986. Hemocyanin respiratory pigment in bivalve molluscs. Science **231**:1302-1303

Morse, M. P. 1987. Comparative Functional Morphology of the Bivalve Excretory System. Amer. Zool. **27**: 737-746.

Morse, M. P. and J. D. Zardus. 1997. Bivalvia. In: *Microscopic Anatomy of Invertebrates*. Vol 6A: *Mollusca II*. F. W. Harrison and A. J. Kohn (Eds.). Chapter 2, pp 7 - 118. Wiley Liss Inc., New York, NY.

HOW TO FIND A ROCKIN' POSTDOC

(Continued from page 2)

research questions, and then look for advisors who can offer those... and would be willing to teach them! Chances are they're also interested in learning what you have to offer.

Is the setting important or just the amenities or both? Think about what you need to be productive - I know many people who could care less where they live as long as the lab is equipped. For me, a good research environment is key, but work-time has to be balanced by rich experiences off-the-clock - I get a lot more done if I like where I'm living.

How long do I want to be gone?

The length of your position will likely be shaped by things out of your control (e.g., my fellowship is two years long and is non-extendable) but, since every career-related thing usually needs to be done in advance, it can't hurt to have a rough timeline in mind. Also, one-year and three-year research plans are quite different in scope and one may seem much more appealing to your research interests.

Do I want things arranged for me or do I want to organize things myself? By this point you might rather use your dissertation as a doorstop than a stepping stone to the next project - slipping into an existing research program means the frameworks and techniques may already be in place and you can "take off running." On the other hand, if you write or co-write a grant for your own research you'll have the freedom to ask and answer your own questions...of course this is contingent upon getting the money and finding an advisor who is excited to let you shape your own path in their lab.

Of course, the same "matching" processes also apply as during your Ph.D. search. Read your potential advisor's papers and talk to their ex

-students (especially postdocs!) to get a feel for what it would be like in the lab....then jump right in, good luck!

*Tips from **Brooke Flammang**, incoming Postdoctoral Researcher with George Lauder at Harvard University*

Make sure your postdoc is somehow in line with what you studied previously - it should be an addition to your story not an entirely new chapter. Think about your future job talks - how will you tie together all the great work you have done? Also, just keep your eyes out for opportunities, talk to everyone you can, and be flexible - the best opportunity may pop up where you least expect it.

*Tips from **Natalia Taft**, Postdoctoral Researcher with Neil Shubin at the University of Chicago*

The depressing thing is that I think it's a lot of luck, finding the right person at the right time. I was lucky enough to find someone who has money who was interested in the questions I was interested in. Even though my advisor has money, the first thing I did when I arrived was to write a big NSF grant. So, it's important to have a clear idea of what you want to do and how you can achieve those goals with the advisor you want to work with.

Therefore, it's important to have a clear image of the big questions you are interested in, and have a number of ideas about how to tackle them using different methods. I was advised by a number of people to find a postdoc that I could use to expand my research toolkit, and I think that's great advice. So, in my postdoc, I've expanded my interests to include developmental biology and paleontology, but I'm still tackling the big questions I am interested in.

(Continued on page 18)

"...a good research environment is key, but work-time has to be balanced by rich experiences off-the-clock..."

Researchers

Database

Send a short paragraph and a photo representing your research to your divisional secretary.

The photos appear on the SICB homepage and change each time the page is refreshed.

This is a great way to recruit students into your laboratory.



HOW TO FIND A ROCKIN' POSTDOC

(Continued from page 17)

Once you focus your questions, then it's easier to identify potential people to work with. I talked to folks on my committee and networked at SICB to find people who may be interested in my ideas and who may have money. Really, it came down to three people that I really wanted to work with, who I thought would be a good fit, and approached them directly. The other two folks I talked to about a postdoc were helpful and are people I would also consider working or collaborating with in the future.

If a potential advisor doesn't have money, but you can convince them your ideas are worthwhile, you will probably be writing a grant proposal to work with them. You should have some preliminary data from your dissertation, and at least an outline of where you want to go from there. This is a process that is best started EARLY. At least 6-12 months before you defend. I didn't

start that early, but I didn't land a postdoc until 3 months after I defended, which was a little scary.

I think the best advice I can offer is don't be afraid to approach someone about a postdoc. Talk to them at meetings, or send them an email. By the time you are interviewing for a postdoc, you should feel confident in your ability to do good work and have your own ideas. So, I would advise people to practice talking about their ideas with advisors and other grad students so that when the time comes to do it in an interview, you feel comfortable and confident. The hardest question I got at my postdoc interview was, "If you could do anything, what would you do?" Luckily, I had been thinking about it a lot and had an easy time launching into it.

Editors Note: *This article was written for the Division of Comparative Biomechanics. It is so interesting, we wanted to share it with all members!*

Researchers Database

Ever noticed the cool images on the upper left hand corner of the SICB web page? They change every time the screen is refreshed.

Submit your photos and brief paragraphs to your **divisional secretary**. It is a great way to advertised what you do. It is a great way to recruit students.

This great photo of a woodrat is from the [DCB Researchers Database](#) and was contributed by John Hutchinson.

"My team's research program takes a multidisciplinary approach to evolutionary and biomechanical questions about animal locomotor form and function. The major questions I am interested in are (1) how does the size of giant land animals constrain their stance, speed, and gait? and (2) how do musculoskeletal anat-



omy and mechanics evolve across major transitions, including size increases/decreases? Hence my work takes both ahistorical (how do animals work at any one point in time?) and historical (how does how animals work change over time?) perspectives."



Candidates

President:

- *Stacia Sower*
- *Billie Swalla*

Ballots will be issued later in the spring.



CANDIDATE PROFILES—SPRING ELECTIONS

SICB President **Stacia Sower**

Stacia A. Sower

Current position: Director Center for Molecular & Comparative Endocrinology; Professor - Molecular, Cellular & Biomedical Sciences (MCBS); Prof. - Center for Marine Biology, Univ. of New Hampshire

Education: B.A. Univ. of Utah (1973); M.S. (1978) Ph.D. (1981) Oregon State Univ.; Postdoc Fellow, Univ. of Washington (1980-83).

Professional experience: Prof., Dept. of Biochemistry & Molecular Biology (changed to MCBS, 2009), UNH (1992-pres.); Interim Assoc. Dean of Research & Associate Director of Agricultural Experimental Station, UNH, (2005-2007); Interim Assoc. Dean of Research & Grad. Studies, UNH, (2007-2008); Arthur K. Whitcomb Professorship, UNH (1999-2002); Prog. Director, Integrative Animal Biology, NSF (1996-97); Chair - Biol. Sciences POWRE Program, NSF (1997); Visiting Prof. MacQuarie Univ., Australia (1994) & Kitasato Univ., Japan (1992) & Univ. of Cape Town Medical School (1984-85); Assoc. Professor, UNH, (1987-92); Assist. Professor, UNH (1982-87); Fisheries Biologist, Peace Corps, Venezuela (1973-75).

SICB activities: DCE Chair (2008-10); Panel Member, Grand Challenges Workshop 2010; Co-author 2009 Grant Challenge Paper for DCE; Co-Organizer 2010 SICB Symposium "Insights of Early Chordate Genomics..."; SICB Prog. Officer 2002-04; Co-Organizer Symposium "Honoring Erika M. Plisetkaya...", 1999; Panelist - workshop "Integration of Research & Education: What are our Responsibilities?", (1996-97); Prog. Officer, DCE, (1995-97); Participant Grad/Postdoc Student Workshop (1993-94); DCE Best Student Paper Committee (1988-89, 1992 - Chair 1986-87); Secretary, DCE (1988-

89).

Other memberships: Endocrine Soc.; Soc. for Neuroscience; Internat. Fed. of Comp. Endocrinology

Research interests: [My research](#) emphasizes multidisciplinary approaches to studying the molecular evolution of the neuroendocrine system in basal vertebrates. Ongoing studies focus on molecular, biochemical and functional studies of gonadotropin releasing hormones & receptors and pituitary glycoproteins & receptors in lamprey to test the overall hypothesis that lamprey hormones share common functional and developmental features.

Statement of Goals: The biological sciences are undergoing sweeping and exciting changes. SICB can continue to build on its strengths and continue to be one of the leaders in the 21st century as we move towards an increased emphasis of integrative and multidisciplinary biology. During the past 2 years, SICB has provided excellent leadership and with its members have made great strides in several publications regarding the Grand Challenges in Organismal Biology. My goals include being proactive and an advocate for the society and continuing the efforts on the implementation of the grand challenges; being an advocate, promoting and strengthening our outreach, diversity and educational activities; strengthening our international interactions, to work with our outstanding management group, Burk and Associates, and continue to work towards retaining members and encouraging and attracting new members, especially students and postdocs. Finally, I would look forward to the opportunity to work with our vital and energetic membership to meet the many challenges that we face.

CANDIDATE PROFILES—SPRING ELECTIONS

SICB President **Billie Swalla**

Candidates

President:

- *Stacia Sower*
- *Billie Swalla*

Ballots will be issued later in the spring.



Billie J. Swalla

Current Position: Professor of Biology, University of Washington, Seattle, WA.

Education: B.Sc. with Honors. University of Iowa (1980); M. Sc. University of Iowa (1983); Ph.D. University of Iowa (1988); Postdoctoral Fellow (1988-90) University of Texas at Austin, Tx and (1990-94) Bodega Marine Lab, University of California at Davis, CA.

Professional Experience:

Assistant Professor (1994-1997) Vanderbilt University, Nashville, TN; Assistant Professor (1997-1999) Penn State University, State College, PA; Associate Professor to Professor of Biology, University of Washington (1999-2010).

SICB Activities: Member of Division of Developmental and Cell Biology (DDCB) since 1988; Served on the President's Advisory Committee from 1994-1997. served as Program Officer of DDCB from 1996-1999. Created

the Division of Evolutionary and Developmental Biology (DEDDB) in 2000 and member since then. Served as Chair of DEDB 2005-2007. SICB Nominations Committee in 2004 and 2008.

Other Memberships: Member of the Society for Developmental Biology (SDB) since 1986. Co-organizer of the regional Northwest Developmental Biology meeting in 2004 and local organizer of the National SDB Meeting in Seattle in 2001. Member of the Society for Molecular Biology and Evolution (SMBE) since their inaugural meeting in June of 1992. Currently an Associate Editor for MBE. Member of the Society for Systematic Biology and Society for

the Study of Evolution. Associate Editor for Evolution from 2007-2009. Member of Society for the Advancement of Latinos/Chicanos and Native Americans in Science (SACNAS) from 2008-2010 and Latin American Society for Developmental Biology (LASDB) from 2008-2010. Working to increase diversity of scientists world-wide.

Research Interests: Development and Evolution of the Chordates. Comparative Embryology of Metazoans. Deuterostome Phylogeny and Evolution of Body Plans. Phylogeny and Taxonomy of Tunicates. Phylogeny and Taxonomy of Hemichordates. Evolution of Developmental Pathways and Gene Networks.

Statement of Goals: The Society for Integrative and Comparative Biology (SICB) has a critical role to play in a world of science where specialization and model systems are increasingly becoming the norm. Biological organisms live and exist within their environment and can only be understood through an integrative approach of study. The Divisional nature of SICB allows flexibility for new research areas to coalesce and flourish and we will continue to attract new integrative areas of Biology. We can do more in the areas of outreach to educate the general public on science and the importance of comparative and integrative research. We should continue our efforts to increase diversity in science, looking forward to the day when we no longer need special programs for diverse students and faculty because they reflect our general diverse population. I am committed to SICB and strengthening the society through excellent national meetings, outreach and education, and building our future through support of our student and postdoctoral memberships.



Candidates

Secretary:

- *Lou Burnett*
- *Jonathon Stillman*

Ballots will be issued later in the



CANDIDATE PROFILES—SPRING ELECTIONS

SICB Secretary **Lou Burnett**

Louis Burnett (incumbent)

Current Position: Professor of Biology, Director of the Grice Marine Laboratory, College of Charleston, South Carolina

Education: B.S., College of William and Mary (1973); Ph.D. University of South Carolina (1977); Postdoctoral Fellow: 1978, University of Aarhus, Denmark

Professional Experience: Assistant through Full Professor, University of San Diego, 1978-1991; Dept. Chair, University of San Diego, 1988-1991; Professor and Dept. Chair, College of Charleston, 1991-1996; Director, Grice Marine Laboratory, 1991-present

SICB Activities: Member for over 35 years; Secretary (2006-present); Program Officer, DCPB (1989-1990); Chair, DCPB (1993-1995); associate editor of *American Zoologist* (1998-1999); International Union of Physiological Sciences (IUPS) representative for SICB (2006-2009); International Union of Biological Sciences (IUBS), Section of Comparative Physiology and Biochemistry, representative for the DCPB; co-organized a number of different symposia for SICB.

Other Memberships: American Physiological Society; Council on Undergraduate Research; Coastal & Estuarine Research Federation; National Shellfisheries Association; Sigma Xi; Southeastern Estuarine Research Society

Research Interests: The environmental physiology of animals; the

influence of environmental variables on the physiology and biochemistry of animals; the evolution of the transition from water breathing to air breathing in animals; the effects of environmental variables, especially hypoxia, hypercapnia, and temperature on disease resistance in animals.

Statement of Goals: The highly integrative nature of this society played a significant role in how I viewed the world as a scientist when I first joined SICB as a graduate student in the 1970's. It is what keeps me and my students coming back to meetings year after year. I continue to enjoy serving SICB in various capacities and I believe that my experiences within the structure of SICB place me in a good position to contribute to the society's Executive Committee. As current secretary of the society I have embarked on a major reorganization and redesign of the SICB web site. A part of this project is to make the SICB web site a major place for SICB business to take place and to serve as an archive for the societies activities. I launched and supervised a major membership survey this past year; this survey will provide the society with a wealth of information to plan for the future. With the help of our webmaster and divisional secretaries we have revitalized the SICB newsletter, adding new features such as the "Experiences in Integrative and Comparative Biology" articles that I hope the membership enjoys. I also established a regular SICB member update mailing to the membership giving a brief and informative glimpse of society activities. I seek one more term in order to continue and strengthen some of these initiatives in the society that has meant much to me.

Candidates

Secretary:

- *Lou Burnett*
- *Jonathon Stillman*

Ballots will be issued later in the



CANDIDATE PROFILES—SPRING ELECTIONS

SICB Secretary **Jonathon Stillman**

Jonathon Stillman

Current Position: Assistant Professor, Romberg Tiburon Center and Department of Biology, San Francisco State University, Adjunct Assistant Professor, Integrative Biology, Univ. of California Berkeley.

Education: B.S. University of Minnesota (1991); Ph.D. Oregon State University (1998); Postdoctoral Fellow (1999-2000) Johns Hopkins University, (2001-2003) Hopkins Marine Station, Stanford University.

Professional Experience: Visiting Assistant Professor (2000-2001) Occidental College; Assistant Professor (2003-2005) University Hawaii Manoa; Assist. Professor (2005-2009) San Francisco State University; Adjunct Assistant Professor (2009) Univ. of California Berkeley.

SICB Activities: Member since 1990; Secretary DCPB (2006-2007); Co-author of one Grand Challenges in Organismal Biology manuscript (2010); Organized symposium "Recent Advances in Crustacean Genomics" 2008; Symposium participant "Genomic and Proteomic Approaches in Crustacean Biology" 2006, and "Physiological Ecology of Rocky Intertidal Organisms: From Molecules to Ecosystems" 2002.

Other Memberships: None currently, have been member of AAAS, Sigma Xi, APS, Protein Society, and AIBS in the past.

Research Interests: Marine environmental physiology, ecological consequences of physiological response limits in the context of climate change (global warming, thermal stress and ocean acidification), functional genomic approaches in comparative physiology. Current projects include elucidation of correlated changes in thermal phenotype and gene expression during thermal acclima-

tion, acclimatization, and stress responses in porcelain crabs, comparative thermal physiology of porcelain crab larvae, effects of ocean acidification on porcelain crab larval development and physiology, functional genomics of porcelain crabs, thermal biology of corals that survive extreme conditions in a Samoan lagoon, metabolic responses to environmental salinity in an invasive clam in San Francisco Bay, intrinsic and extrinsic mechanisms of stabilization of the metabolic enzyme lactate dehydrogenase, and physiological and genomic responses of unicellular calcifying algae called coccolithophores to ocean acidification.

Statement of Goals: Since 1987 when I attended my first SICB (ASZ) meeting as a freshman undergraduate student the society has been an important mainstay of my professional career. In the 23 years since that meeting widespread changes have occurred within the society: new vibrant divisions with growing membership, some divisions that are presently smaller than they have historically been. These changes demonstrate the dynamism of SICB as a society that works to represent the changing face of integrative biology and their members. The strengths of SICB as a student friendly meeting that still draws some of the most notable senior researchers in their fields are important to maintain. The website of SICB has been dramatically improved over the past few years and serves as the society's public face. As secretary I will work to ensure that the website continues to improve and that its content remains accessible and current to highlight the work of SICB members to the general public, to secondary educators, to our peers, and to funding agencies.

Candidates

Program Officer:

- *Jon Harrison*
- *Bob Thacker*

Ballots will be issued later in the spring.



CANDIDATE PROFILES—SPRING ELECTIONS

SICB Program Officer **Jon Harrison**

Jon Harrison

Current Position: Professor, School of Life Sciences, Arizona State University, Tempe, AZ.

Education: B.Sc. University of Toronto (1978); Ph.D. University of Colorado, Boulder, (1987); Postdoctoral Fellow (1987-1990) University of British Columbia.

Professional Experience: Assistant Professor, Assoc. Professor, Professor, School of Life Sciences, Arizona State University (1991-present); Associate Director (2005-2009)

SICB Activities: Member of SICB since 1982; DCPB Program Chair 2000-2003; Co-Organizer (with Robert Sterner): Cross-Society Symposium on: "Integrated Research Challenges: Biological Stoichiometry from Genes to Ecosystems:" for Toronto, 2003 meeting; Co-Organizer (with John E. Phillips):

Symposium on "Responses of terrestrial invertebrates to variation in temperature and water availability: molecular, organismal, and evolutionary approaches" (Albuquerque, 1996); Best Student Paper Judge, DCPB (multiple meetings); DCPB Nominating Committee (1990).

Selected Honors: Faculty of 1000 in Biology (Physiological Ecology, 2009-present). Elected Fellow of the American Association for the Advancement of Science, 2005; The Scholander Award, American Physiological Society, 1990; Izaak Walton Killam Postdoctoral Fellowship, 1988, National Science Foundation (NATO) Postdoctoral Fellowship, 1988; Best Student Paper Award, DCPB, American Society of Zoologists, 1986.

Other Memberships and Ser-

vice: American Physiological Society (Program Officer of Comparative and Evolutionary Physiology Section from 2006-2009, Chair of Organizing Committee for 2010 APS Intersociety meeting: Global Change and Global Science, Comparative Physiology in a Changing World, Scholander Award Selection Committee for multiple years, Organizing Committee for 2006 APS Intersociety meeting in Comparative Physiology); Member of the International Union for the Study of Social Insects; Past-Member of Canadian Society of Zoologists, Entomological Society of America and the Organization for Tropical Studies. NSF Workshop Organizer: Variable Atmosphere Laboratory (VAL) for Climate Change Research. (2008 - 2009); Collaborative Development Team, Advanced X-ray Imaging Facility, Argonne National Labs (2008-present); Physiological and Biochemical Zoology, Associate Editor (2007-present), Editorial Board (1999-2007); Co-Organizer (with Stefan Hetz and Timothy Bradley): International Congress in Entomology Symposium on: "O₂ uptake, H₂O loss, and oxygen radical production: finding the balance, Brisbane, Australia, 2004.

Research Interests: Ecological and evolutionary physiology, insect physiology, respiratory and nutritional physiology, organismal and community responses to climate change, curriculum development and evaluation.

Statement of Goals: SICB is a very important and unique international scientific society. As program officer, I would focus on developing scientific programs for SICB that: 1) enhance and integrate sections, 2) enrich our trainee experiences, and 3) promote outreach in education and policy.

CANDIDATE PROFILES—SPRING ELECTIONS

SICB Program Officer **Bob Thacker**

Candidates

Program Officer:

- *Jon Harrison*
- *Bob Thacker*

Ballots will be issued later in the spring.

Robert (Bob) W. Thacker

Current Position: Associate Professor of Biology, Department of Biology, University of Alabama at Birmingham.

Education: B.S. Duke University (1990); Ph.D. University of Michigan, Ann Arbor (1995).

Professional Experience: Associate Professor of Biology, Department of Biology, University of Alabama at Birmingham (2006-Present); Scientist, Center for AIDS

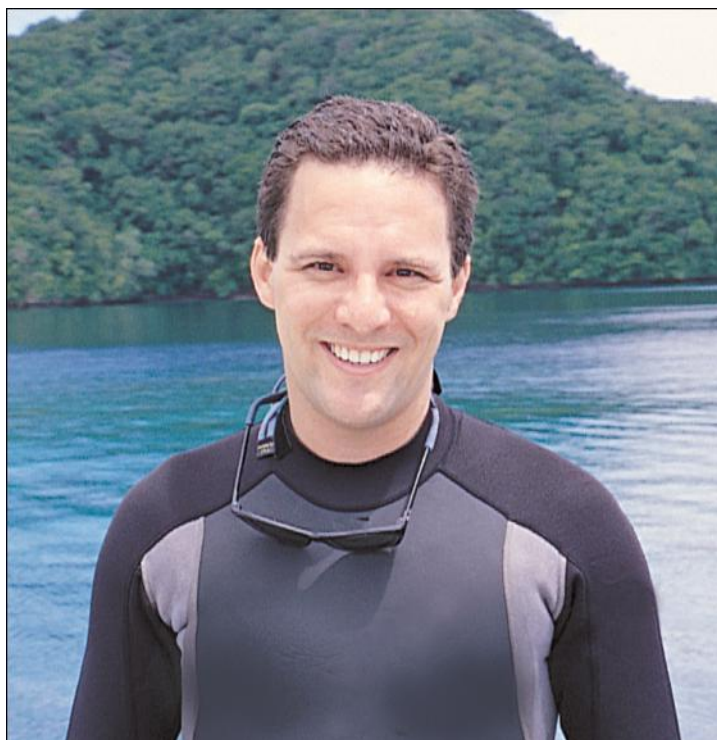
Research, University of Alabama at Birmingham (2006-Present); Assistant Professor of Biology, University of Alabama at Birmingham (2000-2006); Postdoctoral Research Associate, University of Guam Marine Laboratory (1995-1996, 1998-2000); Postdoctoral Research Associate, Kewalo Marine Laboratory, University of Hawaii at Manoa (1996-1998).

entations, 2002-present; Secretary of the Division of Invertebrate Zoology, 2004-2007; Member of the Student Support Committee, 2005-2007; Editor, *Invertebrate Biology*, 2008-present; Member of *Integrative and Comparative Biology* Editorial Board, 2010-present.

Other Memberships: American Microscopical Society, American Society of Microbiologists, Ecological Society of America, International Society for Reef Studies, International Symbiosis Society, Society of Systematic Biologists.

Research Interests: Ecology, evolution, and systematics of sponges; evolutionary and chemical ecology of cyanobacteria; evolutionary ecology of sponge-microbe symbioses.

Statement of Goals: Since joining SICB as a graduate student in 1992, I have attended and presented at annual meetings to broaden my perspectives across multiple disciplines. If elected, I will work with the



SICB divisional program officers to strengthen the society's tradition of integrative symposia, workshops, and contributed sessions. I will seek to enhance the annual meetings by creating session topics that bridge divisional affiliations and will assist symposia organizers in raising funds to support their sessions. I strongly support the inclusion of career development and mentoring activities at the annual meetings.

SICB Activities: Member of SICB since 1992; Judge of Student Pres-



Candidates

Member-At-Large:

- Amy Moran
- Pat Walsh

Ballots will be issued later in the spring.



CANDIDATE PROFILES—SPRING ELECTIONS

SICB Member-At-Large **Amy Moran**

Amy Moran.

Current Position: Assistant Professor of Biology, Clemson University, Clemson, SC, USA.

Education: B.A. Bates College (1990); Ph.D. University of Oregon (1997); Postdoctoral Fellow (1998-2000) Friday Harbor Laboratories, University of Washington; Postdoctoral Fellow (2000-2002) University of Southern California, Wrigley Institute for Environmental Studies.

Professional Experience: Research Assistant Professor (2002-2005) University of North Carolina, Chapel Hill; Assistant Professor (2005-2010) Clemson University.

SICB Activities: Program Officer for Division of Invertebrate Biology (2005-2008); Member of Student Support Committee (2010 - 2012); Co-organizer of SICB symposia in 2005 and 2010; Member of SICB and Division of Invertebrate Zoology since 1994; Member of Divisions of Ecology and Evolution and Comparative Physiology and Biochemistry, various years; judge of student talks and posters, various years.

Other Memberships: Society for the Study of Evolution; American Microscopical Society; American Association of Underwater Scientists; Sigma Xi; editorial board, Invertebrate Biology.

Research Interests: Physiological ecology and evolution of marine invertebrates, particularly the evolution of life histories and larval de-

velopmental strategies; evolution of reproductive modes; functional morphology and physiology of early life history stages; Antarctic marine biology; life history adaptations to

extreme temperatures and changing environments.

Statement of Goals:

Like many SICB members, I joined the Society early in graduate school and have attended meetings regularly ever since. What drew me to the society initially was its broad focus on organismal biol-

ogy at many levels of organization, and it is because of this focus that I still think of SICB as my home society. If elected as member-at-large, my goals would be to actively canvass different groups within the Society and represent their concerns and perspectives at Executive Committee meetings. My diverse experiences within the society - as a divisional Program Officer, member of various divisions (DIZ, DEE, DCPB), serving on the Student Support Committee - have exposed me to a number of different perspectives on how the Society functions. SICB is a well-run, exciting, and cutting-edge organization, but communication between the different levels of organization can always be improved. I would enjoy the opportunity to gather perspectives from the general membership, help to streamline communication and, hopefully, make more members aware of how the Society works and how they can participate.



Candidates

Member-At-Large:

- Amy Moran
- Pat Walsh

Ballots will be issued later in the spring.



CANDIDATE PROFILES—SPRING ELECTIONS

SICB Member-At-Large **Pat Walsh**

Patrick J. Walsh

Current position: Professor and Canada Research Chair (Environmental Health and Genomics), Department of Biology, University of Ottawa

Education: B.S., Biology and Chemistry, University of Miami (1975); Ph.D., Marine Biology, Scripps Institution of Oceanography, University of California, San Diego (1981).

Professional Experience: Director, NIEHS Marine and Freshwater Biomedical Sciences Center, University of Miami, 1999-2006; Co-Editor-In-Chief, *Comparative Biochemistry and Physiology*, 2001-present; Division Chair, Marine Biology and Fisheries, University of Miami, 1991-1995; Assistant, Associate and Full Professor, University of Miami, 1984-2006; Professor Emeritus, University of Miami, 2008; Assistant Professor, Department of Biology, University of Ottawa, 1983-84; Postdoctoral Fellow, Department of Biology, University of Ottawa, 1981-1983.

SICB Activities: Member since 1983; Student presentation judge for DCPB; Numerous contributed presentations; DCPB Chair, 2006-2008; DCPB/SICB representative to the International Congress of Comparative Physiology and Biochemistry, 2009-present.

Other Memberships: AAAS (Fellow, 1995); Sigma Xi; Society for Experimental Biology; American Physiological Society; Canadian So-

ciety of Zoologists; Society for Environmental Toxicology and Chemistry; American Fisheries Society (Physiology Section); Editorial Board, *Physiological and Biochemical Zoology*, 1997-2004; Consortium for Oceanographic Research and Education (CORE), Committee on Oceans and Human Health, 2003-2006.

Research Interests: Comparative and evolutionary aspects of the physiology, biochemistry and molecular biology of aquatic animals, especially marine fish, mollusks, crustaceans and cni-

darians, and especially nitrogen metabolism and excretion; physiology and biochemistry of xenobiotic metabolism; biochemical and molecular genetics of populations.

Statement of Goals: I have been a rank and file member of ASZ/SICB for a number of years, and the Chair of DCPB once, and have been able to observe the 'evolution' of the Society. As an 'at-large' member of the Executive Committee, I believe my responsibilities would be to try to bring to the table the viewpoints of the 'typical' member, and especially those views that might fall between the cracks and perhaps get missed by divisional officers and divisional agendas. I believe that an important strength of SICB is its emphasis on the meeting experience for our student and postdoctoral trainees. Since they are the future of SICB, I would also try to insure that their 'voice at the table' does not get drowned out by us old folk.

