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formerly the American Society of Zoologists
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SICB News



letter

Fall 1996

Willy's Top 10 Reasons to Join Us for the SICB 1996 Annual Meeting!



**Society for Integrative
and Comparative Biology**



**Albuquerque,
New Mexico 1996**



10. Great southwestern food, hospitality, mountains, deserts and art.
9. The most student-friendly national meeting. Period.
8. Seven fantastic symposia and hundreds of contributed papers in our divisional sessions.
7. You'll never find a more totally committed or fun group of biologists.
6. It's the last time you can spend Christmas Week with SICB.
5. Great exhibits and discounts abound.
4. Party on Amtrak's Southwest Chief to or from the meeting.

3. Three new interdivisional sessions on reproduction, feeding and locomotion.
2. Take the tramway to Sandia Crest while you contemplate that dream post-meeting ski trip.
1. It's the middle of the job season!

Past Presidential Address

A highlight of the SICB 1996 Annual Meeting will be Charlotte Mangum's Past Presidential Address titled "Significant Evolutionary Events in the History of Oxygen Carriers." Due to recurring illness, Charlotte will be unable to attend the meeting. Her address will be presented by DCPB Program Officer Nora Terwilliger. The address will be presented on Saturday, December 28 from 5:30-6:30 pm.

For more information...

See the Annual Meeting article on page 7 and the Annual Meeting Registration Packet enclosed with this newsletter.

SICB Annual Meeting Dates

Historically, SICB has held its Annual Meeting during the last week in December. After 1996, all Annual Meetings will be held in early January versus right after the Christmas holiday. Because of this change in the scheduling, there will not be an Annual Meeting held during the calendar year of 1997.

December 26-30, 1996

Albuquerque Convention Center
Albuquerque, N.M.

January 3-8, 1998

Boston Marriott Hotel
Boston, Mass.

January 6-10, 1999

Adam's Mark Denver
Denver, Colo.

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Message from the President, Michael G. Hadfield

The summer has seen your officers and the management staff in Chicago remaining hard at work on the many initiatives before us and preparing for the SICB 1996 Annual Meeting in Albuquerque, December 26-30. Great progress has been made on nearly all fronts.

The meeting promises to be among our best with a program of timely and excellent symposia. We are particularly delighted to welcome our long-time colleagues in the Animal Behavior Society back with us in sponsoring a two-day symposium. Looking ahead to future meetings, our invitation to the Ecological Society of America to join us in Boston in January 1998 has been accepted. It is our goal to convince a number of professional biological societies with whom we share much in interest and membership to join us in sponsoring our Annual Meetings. We find that there is a good section of the memberships of these societies who find a winter meeting much more agreeable to their professional schedules than the summer dates when ABS, ESA and several other societies meet.

The SICB national officers met in Chicago on July 26-27 for a first-time "strategic planning meeting." We were joined by four people from our management staff and Martin Feder, chair of the Society's new Program Advisory Committee. The goal of the meeting was to determine major action items for the Society to be tackling in the next two-three years, to prioritize them, and to develop strategies for achieving the goals. Items such as fund-raising for the Grants-in-Aid endowment, membership building and enhancing the programs at our meetings were among those discussed at length. A series of major objectives was selected for presentation to the full Executive Committee in December for discussion and adoption. I am convinced that this was a valuable exercise and one that will probably become a regular function at two-three year intervals. The prioritized goals of the Society will be announced in the Spring 1997 *SICB Newsletter*, after the Executive Committee has had the opportunity to rework and vote upon them.

In August we began the move of our World Wide Web site from Berkeley to our Chicago headquarters. Our debt to Bob Full and his colleagues at the University of California for bringing us into the "electronic age" is very great, and they deserve the continuing gratitude of us all. The staff at SICB headquarters now includes individuals with exceptional experience in establishing and enhancing our SICB home page. Look for expanded information and services there soon.

And so we will complete 1996 with a Society in very sound shape. Our financial picture is good. Our journal is in great shape and still getting better. Our meetings are terrific and improving (watch for innovations in "fast-

breaking science" as early as this year). We continue to work toward adding new journals to the "rewards" of SICB members. BUT our membership numbers remain a large and somewhat frightening problem. I have attempted to explain in each "Message from the President" that I have written and in each address at our Annual Meetings that our decreased ranks threaten the very existence of the Society. Membership numbers determine the strength of our "voice," when we speak on matters of national and international importance to biological scientists. They affect the cost of belonging to SICB. They impact the cost of our meetings, because only by increased participation by paying attendees can the costs to all members decrease.

ONLY YOU, the SICB membership, can turn the trend of declining membership around. If you value the Society, as I'm sure many of you do after your many, many years of participation, then you must realize that only by convincing your colleagues and your graduate students of the current and growing value of membership in SICB will we grow. The time for critical action is now. We cannot afford another year of status quo or declining membership.

This is my fourth and, to my relief, last Message from the President. These two years have been arduous, but rewarding. I have discovered that the SICB president must now play a role equivalent to that of Chairman of the Board of a large and prosperous business. There are uncountable daily matters to consider and decisions to make. With over 2,000 "shareholders," there is a large constituency to serve and to satisfy. Like all good businesses, growth and innovation are essential, and it is the job of the president to make certain that both occur. I came into the presidency with next to

zero skills in these areas, and I have learned an incredible amount.

I am satisfied that the Society has progressed, and concerned that the job before us remains large. No small part of the satisfaction I have found in the presidency has come from the incredible people with whom I have worked. At SICB headquarters, Laura Jungen, Leona Caffey and Pam D'Argo especially, because I have worked long and hard with them, have gained my gratitude, respect and great personal affection. I will miss dealing with them on an almost daily basis. The SICB national officers with whom I have worked most intensively, Treasurers Kathy Packard and Mary Beth Saffo, have carried the financial responsibilities of the SICB with vigor, intelligence and personal sacrifice. My -- and your -- debt to them is great. I am fortunate to have made great friendships with both of these remarkable people. During my term, our Secretary Sue Peters, and Program Officers Frank Moore and Willy Bemis have taught me what contribution and dedication mean. I couldn't even have gotten started without the example and council of my predecessor Charlotte Mangum, and President-Elect Alan Kohn's efforts have made this last year an easier one for me. The other members of the SICB Executive Committee have also been supportive of our efforts to speed up the rate at which we change, update and innovate in the Society. Their willingness to participate throughout the year in the "electronic executive committee meetings" that I instituted in 1995 has been especially gratifying to me.

Finally, my thanks to those of you who are the genuine volunteers, those serving on the many appointed committees that keep the SICB functioning at all levels. I, and all of you, have an enormous debt to all of these people.

New Society Officers Elected

The Society for Integrative and Comparative Biology's Secretary Susan E. Peters announces the following results of the General Elections, held in the spring of 1996:

President-Elect

John G. Hildebrand

1997-98

University of Arizona

Treasurer-Elect

Kimberly Gray Smith

1997

University of Arkansas

Member-at-Large

Mark Q. Martindale

1997-99

University of Chicago

SICB Advocacy Alerts

At the SICB Strategic Planning Meeting, participants recommended enhancing the information provided to SICB members concerning support of the biological sciences. This includes pending relevant legislation and other matters on which members should be well informed and on which they may wish to respond, e.g. to appropriate elected officials.

SICB members will receive notices via e-mail regarding such issues. One of the advocacy alerts sent out recently to members was "Congress has 27 Days to Act on Key Bills."

These notices are received at SICB from the Council of Science Society Presidents and other sources. Therefore, some of the members may receive this information from other sources and SICB regrets the duplication. Please call or e-mail the SICB Business Office with any questions.

Message from the Treasurer, Mary Beth Saffo

As we approach the end of the fiscal year, SICB is in good financial shape. Our projected reserves for the end of 1996 are about \$320,000, a value that is just short of our hoped for 40% of our operating expenses. At the same time, however, the growing number of exciting and innovative proposals for reinvigorating our Society, if all enacted, will increase our operating expenses significantly. To keep our finances balanced during this period of change, we will need either: 1) to restrict the funding (and therefore the realization) of new initiatives or 2) to increase our income to fund fully these new initiatives. I very much hope we can choose the second route -- but we need the help of our membership to make this work.

There are several ways for us to increase our income:

1. Greater interest rates for our reserve funds. In Spring 1996, we invested \$100,000 of our reserves in a ladder array (one-three years) of Certificates of Deposit (CDs). These CDs provide FDIC security and greater interest rates than our money market and checking funds.

Our goal in 1997 is to increase our CD investment to equal, or exceed, the value (currently about \$115,000) of

our general and special purpose endowment funds.

2. Increased membership and increased meeting attendance. Please do take advantage of all the new programs in SICB by renewing your membership in the Society!

Currently, our Annual Meeting operates at a significant loss. Increased attendance will help us pay for improvements to our meeting, including innovative plans for new sorts of workshops, special lectures and symposia.

3. Increased contributions to special purpose funds, for support and recognition of young investigators and for special programs at Annual Meetings. Adding a new dimension to long-standing student award programs in the Divisions of Invertebrate Zoology and Vertebrate Morphology (Libbie H. Hyman Award, Dwight D. Davis Award), the Division of Comparative Biochemistry and Physiology is now actively soliciting funds for the George A. Bartholomew Fund.

We are especially anxious for contributions for our new SICB Grants-in-Aid of Research program, which was designed to support graduate student research. To get the program off the ground, we have allocated \$5,000 this year from our operating budget.

However, in the long run, this program is designed to be supported by member contributions. Help us ensure a long life, and continued growth, for this worthy new program!

For some years we have helped fund some of the Annual Meeting expenses of many of SICB's graduate students, in return for their assistance at the Annual Meeting. Contributions to the SICB Student Support program will help us continue to assist graduate students in this way.

For your convenience, donation blanks (and further information on special funds) are included in membership renewal forms and in this newsletter.

Your benefits: a worthy tax deduction, recognition in the *SICB Newsletter*, and continued development and invigoration of SICB programs!

4. New sources of income. Mike Hadfield is appointing a new endowment committee, whose primary charge will be the identification and solicitation of funds from private foundations, to support special programs at the Annual Meeting, and other new projects of the Society.

If you have questions about these or other issues, please feel free to contact me, either directly or through the SICB Business Office.

Educational Council News

At the upcoming Albuquerque meeting, the Council will join forces with the National Science Foundation to organize an evening workshop titled "Integration of Research and Education: What are our Responsibilities?" Our purpose will be to update the membership on activities that are ongoing both at NSF and within SICB. The workshop is slated to begin at 7 pm on Sunday, December 29 and will include presentations by panelists from both NSF and SICB. There will also be time for members to engage in roundtable discussions and share

information on special programs and materials. Members who wish to share their ideas at the workshop or need further information should contact Council Chair Sue Cook via e-mail (scook@hboi.edu).

In Albuquerque the Council also plans to conduct an educationally-focused survey of SICB members. Our purpose will be to compile statistical data on the teaching activities of the membership and to solicit input on what the Educational Council should be doing over the next several years.

Steady progress is being made on

the career brochure with a first draft due to the SICB office early in October. We are making a special effort to make sure that the brochure reflects the SICB membership. Anyone eager to submit materials (photos and descriptions of research and courses taught) can still do so. Please send to: Dr. Nina Caris, Department of Biology, Texas A&M University, College Station, TX 77843, e-mail: nina@bio.tamu.edu.

- Sue Cook, Chair
SICB Educational Council

Message from the Secretary, Susan E. Peters

I hope we are all getting ready for the upcoming SICB 1996 Annual Meeting in Albuquerque. It promises an excellent series of symposia and paper sessions. This year, the participants will

[The *SICB Newsletter*] is your vehicle for spreading the word to colleagues in the Society; please let us hear from you.

be giving presentations either in inter-divisional sessions, sessions on symposium-related topics, or our traditional divisional presentations. Please make plans to come and join in the excitement! This will also be the last December meeting of the SICB. As noted elsewhere in this issue, future meetings will be held during the first week in January.

This is also my last entry as your Secretary. The past three years have been exciting as we have instituted many new programs and, I think, prepared our Society for continuing growth in the new century.

My thanks go to our staff in Chicago for their patience and assistance in developing our newsletter into a more informative and user-friendly format. I also want to thank our Past-President Charlotte Mangum for much help as I began my term as Secretary, and especially our President Mike Hadfield for his thoughtful and dynamic leadership of the Executive Committee and of our Society. Our incoming Secretary Tom Wolcott will carry on from here, and I wish him the best of luck. But please remember that he, and your Divisional Secretaries, depend on you for information and input to the *SICB Newsletter*. This is your vehicle for spreading the word to colleagues in the Society; please let us hear from you. Thanks.

Report from the Public Affairs Committee

In keeping with our charge to foster the educational, social and global concerns of the Society, we have undertaken to present several exciting program items at the SICB 1996 Annual Meeting, which is our first meeting as the Society for Integrative and Comparative Biology. These items are designed to focus on topics with examples in the Southwest, but of general interest, too.

We are planning a Public Affairs panel discussion at the SICB 1996 Annual Meeting on Saturday, December 28 from 10 am - 12 noon. The discussion will examine various issues concerning water resources. Potential topics include among others: aquifer conditions, the impact of human diver-

sion of water on the environment, and conservation of water resources. Through the Public Affairs Committee, the Society continues to provide financial support to the Science Writers Workshop at the MBL. Through this connection, we plan to host several science writing fellows at the Annual Meeting again this year. This interaction was especially productive with four writers attending the last meeting.

We plan to continue the well-received media workshops that we've sponsored in past years. They will be held twice -- Friday, December 27 and Sunday, December 29, both from 3-5 pm. These are designed to offer training on how to communicate with the news media to seminar organizers,

SICB Prospective Member Packet

The SICB Business Office and the Membership Committee have been working on the creation of a new prospective member packet.

Included in the packet will be a membership brochure which will highlight SICB benefits as well as provide general Annual Meeting information and historical Society information. Other documents to be included are the Society's Code of Ethics, *American Zoologist* available back issue list, discounted journal information, and an SICB merchandise order form and information sheet.

If you would like to receive some prospective member packets to distribute to prospective members or know of someone who would like to receive a packet, please contact the SICB Business Office.

Society and Divisional Officers and committee members. The focus this year will be on written media, such as press releases, instead of interviewing. The members of the Public Affairs Committee will contact Divisional Officers and seminar organizers in order to prepare press materials that can be used for media contacts before the meeting.

With these activities we are hoping to strengthen the positive media coverage of our Society's activities on both the local and national levels.

- R. Andrew Cameron (DDCB) and
Peter L. deFur (DCPB), Co-Chairs,
SICB Public Affairs Committee

American Zoologist - From the Editor's Desk

Last January I assumed the editorship of *American Zoologist* from Dr. Milton Fingerman, who had ably and steadily overseen the journal's affairs since 1981. Beginning now and continuing in this column over the next year or two, I will announce a series of changes in journal policies and procedures that are being implemented with the approval and assistance of the Editorial Board and other members of the editorial staff. These changes are being made to enhance the journal's already strong reputation as one of the world's leading professional publications in zoological science, to improve our day-to-day operations (and especially to take advantage of recent technological innovations as we approach the era of electronic publishing), and to trim costs in a period of increasingly scarce financial resources for science education and basic research. First, however, I wish to formally acknowledge the outstanding contributions of Milt Fingerman to the journal made during the 15 years while he was Editor, and to thank him on behalf of both the Society and its journal for his remarkable record of professional service.

Manuscript content and review - The principal journal content remains invited symposium proceedings from the Society's Annual Meetings. As before, these will be supplemented with mini-reviews, book reviews, past-presidential addresses, etc., and plans are underway to begin publishing research papers by student-prize winners from the Annual Meetings. All manuscripts are subjected to standard, anonymous peer review administered by the editorial office. An invitation to present an oral symposium paper and submit a corresponding manuscript does not guarantee publication.

Journal format, style, etc. - We are reviewing virtually all aspects of journal format, style, etc., and making changes that are deemed appropriate and desirable. Minor modifications have already been made to the journal's masthead (inside front cover), and many of you

may have noticed that, beginning with 1996 issue no. 3, journal contents are listed on the outside back cover. Changes being considered at this time include choice of cover stock (i.e., the paper used for front and back covers), the format used to list authors' names and addresses on each article's title page, and a new cover image and design.

Electronic publishing and time to publication - The journal is working to conduct as much of its business electronically as can be managed effectively and wisely. Electronic mail is a standard mode of communication among *American Zoologist's* editors, authors and reviewers, and we hope to establish by year's end a journal web site linked to the Society's home page. This site will contain the Instructions to Authors, lists of recent and upcoming journal contents, and other pertinent information for both contributors and readers. We will continue to explore with Allen Press possibilities for transmitting manuscripts electronically. A principal motive for these changes is to minimize the interval between submitted manuscript and published paper, and initial steps taken in this direction are already having a positive effect: proceedings from the aquatic locomotion symposium from last winter's meeting in Washington, D.C., are on target for publication in 1996 issue no. 6, a period of less than 12 months following the oral presentations.

Cost of publication - The journal has adopted new price schedules for excess

page charges and reprints. Both changes reduce the cost of publication to authors. The mandatory excess-page charge was lowered by 10% from \$150 to \$135 per page, and the reprint price schedule adjusted to lower the minimum order size from 300 reprints to 100.

Editorial personnel - Implementation of these changes has only been possible due to the already considerable efforts by several people who have been added to the journal's editorial staff since last January, as well as the help of the existing Editorial Board and staff. Kristin Lopez has joined Claudia deGruy as a paid Assistant Editor (half-time each), and Todd Gleeson, David Norris, Gary Packard and Elizabeth Brainerd have been appointed as Associate Editors. Appointment of an additional three or four Associate Editors is anticipated over the next few months in order to bring the editorial staff to full strength.

As you can see, there's a lot going on at *American Zoologist*. We would very much like to hear from members of the Society and learn their reactions to these developments (both good and bad) and receive suggestions of additional ways in which the journal can better serve the needs and interests of the science of zoology and its practitioners. I look forward to seeing many of you at this winter's meeting in Albuquerque, and wish everyone a rewarding holiday season.

- *American Zoologist* Editor Jim Hanken

AZ's Journal Impact Factor

The *American Zoologist* has been rated by the Science Citation Index as the third-leading zoology journal worldwide in terms of impact factor. This attests to the excellent reputation of the journal.

Number one is *Systematic Zoology/Biology* with an impact factor of 6.166 with a half life greater than 10. Second is *Behavioral Ecology* at 5.000, with it's half life at 2.4. Third is *American Zoologist* at 2.033, with a half life greater than 10. Below this, *Journal of Experimental Zoology* is seventh at 1.444 and *Journal of Zoology* is 21st at 0.806.

Educational Opportunities Await You at the SICB 1996 Annual Meeting

December 26-30, 1996 marks the SICB 1996 Annual Meeting at the Albuquerque Convention Center in Albuquerque, N.M.

This event will be co-sponsored by the Animal Behavior Society, American Microscopical Society and The Crustacean Society.

The SICB 1996 Annual Meeting symposia to date include:

Society-Wide Symposium -- Responses of Terrestrial Invertebrates to Variation in Temperature and Water Availability: Molecular, Organismal and Evolutionary Approaches - Explore how terrestrial invertebrates cope with thermal and hydric stresses by integrating recent studies at the molecular, organismal and evolutionary levels.

Society-Wide Symposium -- Animal Behavior: Integration of Proximate and Ultimate Causation - The two major historic approaches to behavior concern proximate (how) and ultimate (why) questions. Speakers will work to integrate these two approaches as applied to vertebrates.

A Tribute to Stephen A. Wainwright: Mechanical Design in Organisms - This two-day series of contributed paper sessions will feature many short talks by people whose work has been influenced by Wainwright.

Developmental Endocrinology of Non-Mammalian Vertebrates - Hormonal control of embryonic and larval development is featured in presentations on lamprey, lungfish and teleost development, as well as amphibian metamorphosis and sex determination in reptilian and avian embryos.

The Biology of Lipids: Integration of Structure and Function - Speakers will provide a broadly synthetic review of lipids as structural components of cells and organisms, lipid metabolism and transport, and the importance of lipids in regulating biological processes.

Evolution of Development: Patterns and Process - What is the role of development in generating biological diversity? This one-day symposium examines this question using



**Albuquerque,
New Mexico 1996**



animals ranging from various arthropods to amphioxus to blind cave fish.

Muscle Properties and Organismal Function: Shifting Paradigms - Many recent experiments challenge established views of muscle function. The emerging paradigm will be explored from a comparative perspective.

In addition, the divisional sessions will feature hundreds of contributed papers.

Don't miss the SICB 1996 Annual Meeting. Many exciting educational and networking opportunities await you.

For more information, please see the Registration Packet included with this newsletter or call the Business Office.

Order Your SICB Merchandise Today



T-Shirt	\$11
Mousepad	\$7
Mug	\$5

Proudly display the Society for Integrative and Comparative Biology's logo at your computer, your desk and your school. For more information or to order, call the SICB Business Office.

Constitution and Bylaws Results

All of the Constitution and Bylaws changes which were voted on by the membership this past March passed, including the Conservation Committee Resolution, which was printed on page i of *American Zoologist* Volume 36, issue number 3.

If you have any questions about the spring mail ballot, please contact the SICB Business Office.

SICB Members in the News

Bob Full Receives Distinguished Teaching Award

Bob Full was selected by a committee at University of California - Berkeley to receive the Distinguished Teaching Award. Full earned the award by his continued efforts to encourage undergraduates to participate in research projects and publish papers. Over the past 10 years, 50 undergraduates have participated under his direction.

"I believe the division between teaching and research is largely artificial. It's not difficult to move a student from personal discovery to universal discovery," Full said recently. "Critical thinking gives students the ability to do quality research."

Full was also instrumental in the effort to allow undergraduates to present papers in ASZ. He is currently active on SICB's Electronic Communications Committee and Program Advisory Committee.

Barbara Block Wins Grant Award

Barbara Block of Stanford University earned a \$245,000 grant from the MacArthur Foundation "genius" awards. The MacArthur Foundation is a Chicago-based philanthropy that has been giving no-strings-attached, five-year grants since 1981 to help winners further their groundbreaking work. Twenty-one grants were awarded this year to artists, writers, scientists and grass-roots leaders.

First International Symposium

Biology of Vertebrate Sex Determination

This symposium will take place April 7-11, 1997 in Honolulu, Hawaii. Speakers scheduled to participate include:

Roger Short - The Difference Between a Testis and an Ovary

Yoshitaka Nagahama - Involvement of Sex Steroids in Gonadal Differentiation in Fish

Jeff Lang - Sex Determination and Growth: An Ectothermic Perspective

Claude Pieau - Sexual Differentiation of the Gonads as a Function of Temperature in the Turtle, *Emys Orbiculatus*: Growth, Endocrine Function and Intersexuality

Al Place - Molecular Studies on the Role of Aromatase in Sex Determination in Reptiles

Andrew Sinclair - Analysis of Novel Differentially Expressed Genes in the Chick Genital Ridge

Mike Clinton - Hunting for Differentially Expressed Genes in the Developing Chick Gonad

Kiyoshi Shimada - Steroidogenic Enzyme Gene Expression in Chick Embryos

Jenny Marshall Graves - Evolution of Mammalian Sex Chromosomes and SRY

Shirley Tilghman - Genomic Imprinting: Its Mechanism and Evolution in Mammals

Huntington Willard - X-inactivation and Dosage Compensation in Humans and Mice

Anne McLaren - Sex Determination in Germ Cells

Robin Lovell-Badge - The Role of SRY in Mammalian Sex Determination

Andrew Sinclair - The SOX 9 Gene and Human Sex Determination

For more information, please contact Dr. Valentine Lance, CRES, P.O. Box 551, San Diego, CA 92112; 619/557-3944; Fax: 619/557-3959; e-mail: lvalenti@sunstroke.sdsu.edu.

Graduate Student Program Grants-in-Aid of Research

SICB has instituted an annual Grants-in-Aid of Research program for graduate students in degree programs, who are active members of SICB.

Awards will be made to support scientific investigation in any of the areas of integrative and comparative biology represented within SICB. Awards will be initially made in amounts of \$1,000, all of which must be spent in direct support of the proposed study. Resources are available to permit five awards in this first cycle.

Interested students can request application materials from the SICB Business Office using the postcard enclosed with this edition of the *SICB Newsletter*. Closing date for receipt of applications and supporting letter will be December 1, 1996. Applicants will be notified of GSSC decisions within six weeks after the next SICB Annual Meeting.

*-Malcolm Gordon, Chair
SICB Graduate Student
Support Committee*

Past-President Jane Oppenheimer

We are saddened to learn of the death last March of Dr. Jane M. Oppenheimer, who served as President of the ASZ in 1973. Dr. Oppenheimer had a long and distinguished career in her field of developmental biology, and was a noted historian of science.

Please see the article on page 24 for a detailed summary of Dr. Oppenheimer's life and career.

Appeal for New International Congress of Zoology

The last (XVIIth) International Congress of Zoology was held in Monte Carlo in 1972. During the decades since then, there have been many new

During the decades since then, there have been many new advances in systematics, conservation, biodiversity and related fields.

advances in systematics, conservation, biodiversity and related fields. These exciting developments should be

appreciated by an international forum of zoologists where researchers in diverse areas can share information on important new advances. For example, topics could include new concepts in vertebrate evolution, the zoology of clonal animals, present views on the protozoa, sociobiology, cladistics, molecular taxonomy, modern embryology, the new vision on the Cambrian revolution, neo-catastrophism, vicariance zoogeography, in situ and ex situ conservation, cryopreservation, etc.

Drs. F.D. Por (Hebrew University) and R.M. Polymeni (University of Athens) are proposing to bring forward the rich and unifying aspects of zoology, by organizing a new International Congress of Zoology. They

request that interested zoologists send them suggestions regarding the themes and structure of the proposed Congress. More important, they need personal commitments to help organize symposia, workshops and help find funding sources. They wish to establish an active and representative Action Committee as soon as possible to help generate the organization and funding necessary for this endeavor. Anyone with suggestions or who wishes to volunteer to assist them should contact Dr. Rosa Polymeni, University of Athens, Department of Biology, Section of Zoology, 15784 Athens, Greece, Tel.: +30.1.7284364, Fax: +30.1.7284604, e-mail: rpolime@atlas.uoa.gr.

SICB Benefits Never End

Members Receive Discounted Journals

Don't miss out! SICB members can take advantage of special offers on these scientific journals! Prices and contacts are as follows:

Journal	1997 Subscription Price	Contact
<i>Brain, Behavior & Evolution</i>	\$340 for faculty \$174 for students, post-docs, non-faculty	S. Karger AG Basel Journals Distribution P.O. Box CH-4009 Basel SWITZERLAND E-mail: karger@karger.ch
<i>Comparative Biochemistry and Physiology</i>	Part A: \$114 Part B: \$114 Part C: \$90 All parts: \$239	SICB Business Office
<i>General and Comparative Endocrinology</i>	\$120 if institution subscribes \$180 if institution doesn't subscribe	SICB Business Office
<i>Journal of Morphology</i>	\$150 members residing in N. America (Canada - add 7% Goods and Service tax) \$222 members residing outside of N. America	Ms. Miriam Pedone John Wiley & Sons Tel: 212/850-8780 Fax: 212/850-6021 E-mail: mpedone@wiley.com
<i>Physiological Zoology</i>	\$53 members residing in U.S. \$64 members residing outside U.S. and Canada \$67.71 for Canadian members	University of Chicago Press Tel: 312/753-3347 Fax: 312/753-0811 E-mail: subscriptions@journals.uchicago.edu

Announcements

Career Planning and Mentoring

The National Research Council's **Career Planning Center for Beginning Scientists and Engineers** (<http://www2.nas.edu/cpc>) provides information and guidance to students who are trying to get a job, planning their careers or making educational choices. Undergraduates, graduate students and recent graduates can now turn to an online center at no cost! There are six components to the online center: 1) the Bulletin Board allows students to discuss education and employment opportunities with other students, and with engineers and scientists employed in a variety of settings; 2) the Advice Center gives students the opportunity to have one-on-one mentoring by scientists and professionals; 3) the Employment and Fellowship Center offers links to many online job, fellowship and postdoctoral positions that are available, as well as a location where companies can announce positions and students can add their resumes; 4) the Resource Center is a collection of links to documents published by the Academy-complex, disciplinary societies, university programs and others; 5) the Trends and Changes in Job Market section provides analysis of the trends in science and engineering education and employment from a student perspective; 6) the Linkage Center is a collection of hypertext links where students can connect easily to existing activities at scientific and engineering disciplinary societies, government agencies, universities, potential employers and student organizations.

The **National Research Center** has been so successful with its Career Planning Center for Beginning Scientists and Engineers (see above) that it is soliciting scientists and engineers to serve as Mentors in its Advice Center.

Mentors form a personal relationship with young scientists and have the opportunity to discuss many issues including ethical, ideological, as well as practical skills. All correspondence is by e-mail, so it is not too onerous a task, and the benefits are many. To find out more or to sign up to be a mentor, access the mentor form directly at <http://www2.nas.edu/cpcadv/mentor.html> or send an e-mail to ewojtasz@nas.edu (subject line: Mentor Volunteer).

Fellowships

Smithsonian Fellowships for 1997 are now open for application. The deadline for receipt of applications is January 15, 1997. Postdoctoral fellowships (to those possessing the Ph.D. less than seven years) and Senior Fellowships (to those holding the Ph.D. for more than seven years), as well as Predoctoral Fellowships (to doctoral candidates) are offered in areas of History of Science and Technology, Anthropology, Biological Sciences, Earth Sciences and Materials Analysis. Also available are Graduate Student Fellowships (for those completing at least one semester but not advanced to candidacy). Through its Minority Internship Program the Smithsonian also offers opportunities for minority undergraduate and beginning graduate students to participate in 10-week research and museum-related projects. Deadline for internship application is February 15, 1997 for the 1997 internships. For information on Fellowship and Internship Programs, contact the Smithsonian Institution, Office of Fellowships & Grants, 955 L'Enfant Plaza, Suite 7000, Washington, DC 20560; e-mail: siofg@sivm.si.edu.

Software

BIOSIS, the world's largest abstracting and indexing service for the life sciences, and **Ovid Technologies** announce their collaboration making BIOSIS GenRef available on CD. BIOSIS GenRef is a comprehensive bibliographic database covering multiple genetics disciplines. For more information contact the Marketing and Sales Dept. at 800/532-4806 or 215/587-4847; Fax 215/587-2016; e-mail: info@mail.biosis.org.

Publications and Videos

American Type Culture Collection, announces that the 19th Edition of ATCC's Bacteria and Bacteriophage Reference Guide is available for \$45 within the U.S. and \$55 elsewhere. The Guide references over 14,000 bacterial strains available to qualified scientists. The 1996 Ordering Catalog, an abbreviated version of the Guide with ordering information is also available. Contact ATCC, 12301 Parklawn Dr., Rockville, MD 20852-1776; 301/881-2600 x277; Fax: 301/816-6361; e-mail: sales@atcc.org.

Integrity in Scientific Research, a set of five videos is now available from the American Association for the Advancement of Science. Sponsored by the Scientific Freedom, Responsibility and Law Program in the Directorate for Science & Policy Programs of the AAAS, these videos give students and faculty the opportunity to discuss integrity issues based on dramatizations of real-life situations, and are an effort to increase the awareness of ethical problems among scientists and to improve their ethical decision-making skills. Videos are available for \$79.95 (\$63.96 to AAAS members); call 202/326-6600.

SICB's New Information Line

SICB members and prospective members now have the ability to receive information 24 hours a day using SICB'S toll-free line (800/955-1236). The call processing system provides information on several topics and also allows members to directly reach staff members using their extensions (see list of options and extensions below). We encourage you to use this new service so the Business Office may more effectively assist you.

Dialing Options

- 0 - Use this option if you know the name or extension of the person you're trying to reach
- 1 - Membership and general SICB information

- 2 - SICB 1996 Annual Meeting information
- 3 - Abstract information
- 4 - Student support at the SICB 1996 Annual Meeting
- 5 - Exhibiting at the SICB 1996 Annual Meeting
- 6 - Information about future SICB Annual Meetings
- 7 - Purchasing an SICB mailing list
- 8 - "Cryptic Fauna of Marine Sand" videotape
- 9 - Request a Grants-in-Aid of Research application

In order to assist you in reaching the appropriate staff person, their names, extensions and what they handle is listed to the right:

Annual Meeting/Student Support

Corinne O'Brien - x3283
Wilma Salvatore - x3294

Abstracts/Exhibits

Anne Leuck - x3541
Corinne O'Brien (abstracts only) - x3283

Marketing/Media Relations

Christine Bennett - x3302

Administration/Membership/Grants-in-Aid/American Zoologist/Merchandise/Other

Micki Unkrich - x3667
Pam D'Argo - x3774

Contributors to SICB Funds 1995 - 1996

As of September 9, 1996

The following list includes contributors to SICB funds for the calendar year 1995 and 1996 as of September 9, 1996. The SICB wishes to thank all individuals who have so generously supported the Society and its initiatives.

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Message from the Chair, Steve Nowicki

I am very excited about the upcoming SICB Annual Meeting in Albuquerque, N.M., my first as DAB Chair. As always, I look forward to

This Society's Annual Meeting is the one time I know I can sample happily across all these disciplines, a little like a kid in a candy shop.

hearing from and interacting with colleagues working both in animal behavior and in the many areas with which animal behavior finds a natural interface. These areas, as diverse as functional morphology, endocrinology and ecology, all are well-represented in SICB. This Society's Annual Meeting

is the one time I know I can sample happily across all these disciplines, a little like a kid in a candy shop.

This year promises to be especially exciting with the symposium "Vertebrate Behavior: Integration of Proximate and Ultimate Causation" organized by Lee Drickamer. I expect we will see a lot of interaction among colleagues from diverse disciplines centered around this symposium, which is jointly supported by DAB and the Animal Behavior Society (ABS). I hope the symposium will provide a good springboard for us to continue to build participation in DAB.

On that note, I am eager to hear your suggestions at the Albuquerque meeting or by phone or e-mail, if you're not there, about future DAB-sponsored symposia. Moving the SICB meetings to early January creates an

opportunity for us to increase participation in DAB. I hope to continue to build strong links between DAB and other SICB divisions, as well as between DAB and ABS, through joint symposia and other programs.

This is the last newsletter to be put together by our current Secretary, Dr. Anna Ross, who has served the DAB well for many years. First, let me extend an enthusiastic "Thank you" to Anna on behalf of DAB for all her hard work. Second, let me urge you to vote for our new DAB Secretary. We have two outstanding candidates for this position, Paul Cupp and Peter Smallwood, and I am sure both will do an equally outstanding job. Additional biographical information on Drs. Smallwood and Cupp are provided on page 15.

I look forward to seeing you in Albuquerque!

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Message from the Program Officer, Brent M. Graves

Our 1996 Annual Meeting in Albuquerque is approaching fast. We have an impressive array of abstracts that have been submitted from members of the Division of Animal Behavior, and it looks to be an exciting meeting. When you are from the shores of Lake Superior, a December meeting in New Mexico sounds especially good.

The Division of Animal Behavior will co-sponsor a Society-Wide symposium titled "Animal Behavior: Integration of Proximate and Ultimate Causation." The two major historic

approaches to behavior concern proximate (how) and ultimate (why) questions. In this two-day symposium organized by Lee Drickamer, 18 speakers will work to integrate these two approaches as applied to vertebrates. The symposium will build upon recent advances in behavioral ecology and neurobiology that make this an ideal time to achieve a new, synthetic approach to behavior. The proceedings of this symposium will be published in *American Zoologist*. A list of speakers and titles appears

below. Obviously, the DAB symposium for the 1996 meeting will be exciting. I'll see you there.

The Division of Animal Behavior is actively soliciting ideas and organizers for symposia for the January 1998 (Boston) and January 1999 (Denver) meetings. Organizing a symposium can be both personally and professionally rewarding. If you have ideas, please contact me (bgraves@nmu.edu) soon to begin the planning process.

Animal Behavior: Integration of Proximate and Ultimate Causation Speakers and Titles for the December 1996 DAB Symposium

Adkins-Regan, E. - Hormonal Mechanisms of Mate Choice.

Asa, C. - Integration of Canid Reproductive Physiology and Behavioral Ecology.

Barfield, R.A. - Neuroendocrine Integration of Sociosexual Behavior: An Ethophysiological Approach.

Barlow, G. - What Constitutes an Adequate Explanation of Behavior?

Bass, A. - Shaping Brain Sexuality.

Crews, D. - Proximate Mechanisms Underlying Individual and Sexual Variation.

Drickamer, L.C. - Integration of Proximate and Ultimate Causation: Methods Issues.

Duvall, D. - Evolutionary, Behavioral and Physiological Ecology of Sexual Size Dimorphism and Sexual Strategy in Rattlesnakes: Integrating Proximate and Ultimate Factors.

Gowaty, P.A. - Female Resistance to Male Control: Functional/Evolutionary Hypotheses Predict Yet-Undiscovered Proximate Mechanisms.

Houck, L.D. - Integration of Proximate and Ultimate Causation in Amphibian Research.

Kodric-Brown, A. - Sexual Dichromatism and Temporary Color Changes in the Reproduction of Fish.

Moore, M. - Evolution and Endocrine Control of Alternative Male Reproductive Phenotypes.

Nelson, R. - Photoperiodic Mediation of Seasonal Breeding and Immune: Function in Rodents: A Multi-Factorial Approach.

Nowicki, S. - Song Learning, Early Nutrition and Sexual Selection: A New Hypothesis.

Sargent, C., H. Y. Van, V. N. Rush, and B. D. Wisendon - Integrating Behavioral and Sensory Ecology in Fish.

Silverman, A.J. - Mast Cells in the Brain: Changes Associated with Reproduction.

Wingfield, J. - Testosterone, Aggression and Sexual Dimorphism in Birds.

Wynne-Edwards, K.E. - Inter-specific Variability and Physiological Constraints in the Evolution of Mammalian Reproductive Physiology.

DAB Student Paper Awards

Students: Plan Now for Boston (January 1998) and Denver (January 1999)

The Division of Animal Behavior offers three different student paper awards. There may be two Division of Animal Behavior Best Student Paper

DAB will offer an Adrian M. Wenner Outstanding "Strong Inference" Award presented for the best oral or poster paper based upon the strong inference approach in experimental design and execution.

Awards presented, one for the student making the best oral presentation and one for the student making the best poster presentation.

Additionally, DAB will offer an Adrian M. Wenner Outstanding

"Strong Inference" Award presented for the best oral or poster paper based upon the strong inference approach in experimental design and execution. (See: Platt, John R. 1964. Strong inference. *Science* 146:347-353; Chamberlin, Thomas Crowder. 1965 [1890]. The method of multiple working hypotheses. *Science* 148:754-759; Wenner, Adrian M. 1989. Concept-centered versus organism-centered biology. *American Zoologist* 29:1179-1199.)

To be eligible for the DAB student paper awards, the applicant must be a member of SICB and the Division of Animal Behavior and must indicate his or her intention to compete on the transmittal form. Eligible papers must be oral or poster presentations of original research by a graduate student or Ph.D. whose degree was awarded no more than one year prior to the time of the meeting.

Request for Symposium Ideas

Brent M. Graves and Steve Nowicki are actively seeking proposals for symposia at future SICB meetings. We are interested in building interest and participation in SICB and in our Division. Please contact one of them if you have an idea for a DAB symposium.

Mini-Symposia

Do you want to address a "hot topic" at a future SICB meeting? Do you need a shorter lead time than the two years required for a symposium? You can work with our Program Officer to put together about seven speakers for a dedicated oral paper session. SICB can publicize this on the transmittal form to solicit related papers. "Mini-symposia" would not require publication in the *American Zoologist*.

Judges for the 1996 DAB Student Paper Awards

If you do not have a student competing for this year's awards and you are interested in serving as a judge for either oral or poster papers, please contact Steve Nowicki or Brent M. Graves.

DAB Candidates for Election

The election for DAB Secretary is being conducted through this issue of *SICB Newsletter*. The three-year term for the newly elected Secretary (1997-99) will begin following the annual DAB Business Meeting at the SICB 1996 Annual Meeting in December. Brent Graves and Steve Nowicki served on the 1996 DAB Nominating Committee and they have identified two outstanding candidates for DAB Secretary: Dr. Paul Cupp and Dr. Peter Smallwood.

Please Mail Your Ballot Now to Vote for DAB Secretary.

Candidates for Secretary

Paul Cupp

Education: B.S., Eastern Kentucky University; M.S., Eastern Kentucky University; Ph.D., Clemson University, 1974.

Current Position: Professor, Department of Biological Sciences, Eastern Kentucky University.

SICB Activities: Member of ASZ/SICB since 1972; Member of the SICB Educational Council (1994-96)

Research Interests: Territoriality, thermal biology and chemical ecology of amphibians.

Peter Smallwood

Education: B.S., Ohio State University, 1983; M.S., University of Chapel Hill, 1985; Ph.D., University of Arizona, 1992; Postdoctoral Fellow in Integrative Biology at Bryn Mawr College, 1992-94.

Current Position: Lecturer in Biology, University of Pennsylvania, 1995-97.

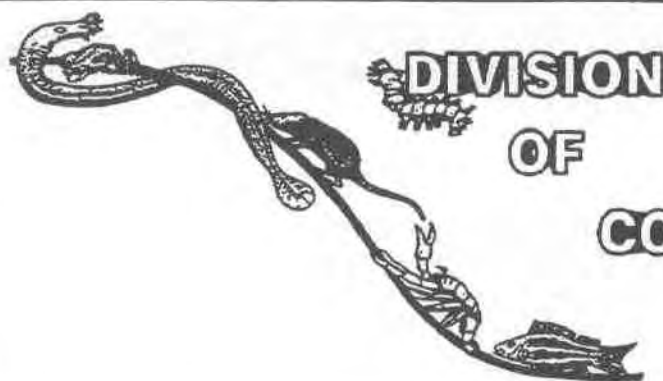
Professional Experience: Visiting Assistant Professor at Bryn Mawr College, 1994-95.

SICB Activities: Joined ASZ in 1986; Best Student Paper award: ASZ: Division of History and Philosophy of Biology, 1986, "The use and misuse of genetic assimilation."; Best Student Paper Award: ASZ: Division of Ecology, 1987, "Tests of hypotheses of the foraging and storing strategies of gray squirrels"; Best Student Paper Award, ASZ: Division of Animal Behavior 1990, "Optimal foraging and niche partitioning: The conflict resolved."

Service to the Society during the Atlanta meeting: "Lord of the Carousels," i.e., organized AV assignments of about 75 graduate student recipients of ASZ travel grants; Served on the Graduate Student/Postdoctoral Affairs 1988-92; Organized DAB symposium in 1994 (St. Louis) titled "Symposium on Risk Sensitivity in Animal Behavior."

Research Interests and Goals Statement: Behavioral ecology (broadly defined). Foraging strategies of squirrels, and ecological effects of their foraging and storing preferences. Foraging strategies of spiders. Kestrel breeding behavior (sex-ratio strategies). I'm also interested in educational issues, particularly how to help new faculty and graduate students become better teachers. While at the University of Arizona, I developed a one semester course for new teaching assistant's on teaching skills, which seemed to be very successful.

Finally, I think it is very important for us as working scientists to make our work and expertise accessible to the public. To that end, I have co-authored a semi-popular article on our squirrel work (Natural History), and have made myself available to local reporters as a consultant for stories involving deer overpopulation problems.



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ENDOCRINOLOGY



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Message from the Chair, F.M. Anne McNabb

By the time you receive this Fall newsletter, I hope many of you will have submitted abstracts for the SICB 1996 Annual Meeting in Albuquerque, December 26-30. The Division will be providing partial support for two symposia: Thommes/Epple - "Developmental Endocrinology of

presented at those meetings. Karl Nicoll hosted a Western Regional Meeting at the University of California, Berkeley in March and reports they had 125 people registered and 43 talks presented. There were two invited lectures, one by Lou Guillelte and one by Walt Dickhoff, who was the recipient of the Irving I. Geschwind Memorial Award.

Terry Barry hosted a Midwest Regional Meeting in June at the University of Wisconsin, Madison. He reports that over 40 contributed papers were presented by attendees ranging from undergraduates to senior professors.

Four of us from DCE and DCPB hosted a joint Endocrinology/Physiology Eastern Regional Meeting at Mountain Lake, Va. the first weekend in October. Our Division also helped support the International Symposium on Amphibian Endocrinology, which was held at the University of Colorado in Boulder in June and hosted by Dave Norris. That meeting included endocrinologists from 11 foreign countries and from many parts of the U.S. There were 40 oral presentations and 27 posters.

It is clear from this listing of meetings that partial support from our Divisional budget is very important to the success of regional meetings. This is a good example of the way SICB dues help to support research and graduate training through meeting sponsorship and partial subsidy of graduate and postdoctoral papers/

Our Division has helped sponsor a number of regional comparative endocrinology meetings.

Non-Mammalian Vertebrates" (DCE Symposium), and Harrison et al. - "Responses of Terrestrial Invertebrates to Variation in Temperature and Water Availability: Molecular, Organismal, and Evolutionary Approaches" (Society-Wide Symposium). We congratulate Bob Thommes and August Epple on the award of an NSF grant in support of their symposium. Two other symposia, "Biology of Lipids: Integration of Structure and Function" (Allen Gibbs) and "Animal Behavior: Integration of Proximate and Ultimate Causation" also include some endocrinological topics.

Our Division has helped sponsor a number of regional comparative endocrinology meetings, and the organizers have kindly provided information about attendance and papers

attendance at meetings. I hope all of you encourage both students and faculty who are not SICB members, but attend these meetings, to join SICB.

Future regional meetings are already in various stages of planning. Bob Dore and Peter Thomas will co-sponsor the joint Western/Southwest Regional Comparative Endocrinology Conference, March 21-22, 1997. The meeting will be held on the campus of the University of Denver. To get on the mailing list, please contact Bob at rdore@du.edu.

Bob Dore (Chair-Elect) is preparing a list of symposia held at SICB/ASZ meetings in recent years. This will be very helpful to us in looking to the future. Several DCE members are planning symposia for the Boston and Denver meetings, so expect to hear more about those at our Business Meeting in Albuquerque.

Mark Sheridan, our Program Officer-Elect, has assumed his duties early. Mark replaced Stacia Sower, who began a term as Program Officer for Animal Systems Physiology (which includes endocrinology and was formerly Integrative Animal Biology) at NSF on September 1. We thank Stacia for her service to the Division during her time as Program Officer, and we are pleased to have a comparative endocrinologist from DCE at NSF. We also thank Mark for stepping into office early and dealing with an extra year of arranging the program for the national meeting. Mark has been ably serving the Society in another capacity for several years as the Chair of the Graduate Student/Postdoctoral Affairs Committee. Brian Tsukimura, also from DCE, will take over as Chair.

I'm looking forward to seeing many of you at the Albuquerque meeting. If you have issues you wish to have considered at our DCE Business Meeting or by the SICB Executive Committee please let me know.

Message from the Secretary, Henry John-Alder

The Executive Committee of the Division of Comparative Endocrinology is interested in addressing the issue of recruiting new members and

The Executive Committee of the Division of Comparative Endocrinology is interested in addressing the issue of recruiting new members and re-recruiting lapsed members.

re-recruiting lapsed members. Lists of recently lapsed members have been obtained from SICB with the intent of targeting individuals on those lists for re-recruitment. Anyone with ideas about membership should send them to me via e-mail at HBJ@biology.rutgers.edu.

The proceedings of the Fifth International Symposium on Reproductive Physiology of Fish, July 2-8, 1995, University of Texas, Austin, are

available in *Reproductive Physiology of Fish*, edited by F.W. Goetz and P. Thomas and published in March 1996. The paper-bound book contains 389 pages and costs \$22. The Fifth Symposium served as a forum for the communication of recent advances on all aspects of the reproductive physiology of fish, and the book contains 40 reviewed articles covering the pituitary and gonadotropins, the hypothalamus and brain, behavior, gonadal physiology and gametogenesis in addition to 180 one-page papers of the poster presentations.

Payment for the book must be paid in U.S. dollars with a check drawn on a U.S. bank or an international money order in U.S. dollars, and paid to the order of The University of Texas. The price of \$22 includes packaging and surface mail to anywhere in the world. Orders should be mailed to: 5th International Symposium, c/o The University of Texas at Austin, Marine Science Institute, 750 Channelview Drive, Port Aransas, TX 78373-5015 USA.

Update on Silastic Tubing

Submitted by Diana K. Hews, Indiana State University

This notice is directed towards comparative endocrinologists who use non-sterile Silastic tubing (Dow Corning) to make implants for steroid hormones. Because of lawsuits, Dow Corning no longer sells this directly to users. It is becoming increasingly difficult or impossible to find vendors that still have some in stock to sell.

However, there is a company that has arranged to have Dow Corning make it for them. They will sell it to other users, but Dow Corning requires them to obtain certification that the customer will not be using the Silicone tubing in a human application. The certification involves signing some forms. Contact the company for copies of these forms and further information: Konigsberg Instruments, Inc., 2000 Foothill Boulevard, Pasadena, CA 91107, 818/449-0016, Fax: 818/449-1086.

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Message from the Chair, David W. Towle

We are looking forward to an outstanding SICB 1996 Annual Meeting in Albuquerque, December 26-30, with three symposia sponsored or co-sponsored by the Division and many contributed papers and posters. The location has stimulated much interest in the physiology and biochemistry of desert organisms, and I extend an invitation, particularly to southwestern members and their students, to participate in the meeting.

Now is an excellent time to encourage your graduate students and colleagues to become members of the Division.

The Division continues to sponsor two journals, *Comparative Biochemistry and Physiology*, edited by Peter Hochachka and Tom Mommsen, and *Physiological Zoology*, edited by Charlotte Mangum with Greg Snyder as associate editor. Because of ill health, Dr. Mangum's role as Editor-in-Chief is being assumed by Dr.

Snyder. The divisional executive board will be considering suggestions for new associate editor(s) of PZ over the next several months. Nominations may be submitted to me at: towle@lfc.edu or by regular mail.

Nora Terwilliger, Program Officer, describes our Division's plans for the January 1998 meeting in Boston, which include a major symposium in the area of evolutionary physiology and a cross-divisional symposium on circulatory systems. It is not too early to be generating program ideas for the January 1999 meeting in Denver! Please let any member of the divisional executive board know your thoughts. We look forward to considering your ideas in Albuquerque.

Included with this newsletter is candidate information for the election of Chair-Elect and Program Officer of the Division. Please vote! Your support is important.

Now is an excellent time to encourage your graduate students and colleagues to become members of the Division. With the change in name of the Society and a refocusing of energy, new ideas concerning programming and organization are welcome. We invite your full participation!

Message from the Program Officer, Nora Terwilliger

Many opportunities to learn what's new and interesting in integrative and comparative biology are in store for us at the SICB 1996 Annual Meeting in Albuquerque. Whether or not you're planning to present a talk or poster, I hope you'll be there. The Division of Comparative Physiology and Biochemistry is sponsoring two symposia and co-sponsoring a third:

1. Responses Of Terrestrial Invertebrates To Variation In Temperature And Water Availability: Molecular, Organismal and Evolutionary Approaches. This Society-Wide symposium on thermal and hydric stress has been organized by Jon Harrison and John Phillips. The southwest will be the perfect setting for this superb program on desert biology.

2. The Biology Of Lipids: Integration Of Structure And Function. Allen Gibbs and Lisa Crockett have put together an excellent collection of topics and speakers that will provide a timely update on the structural and functional roles of lipids. Look for a Poster Cluster on this topic as well.

3. Muscle Properties And Organismal Function: Shifting Paradigms. DCPB is co-sponsoring this organismal approach to skeletal muscle organized by John Bertram, Division of Vertebrate Morphology, and Rich Marsh, Division of Comparative Physiology and Biochemistry.

There will be other symposia as well, plus contributed papers, poster sessions, the Bartholomew Award lecture, and your friends and colleagues.

Another feature of the meeting will be Charlotte Mangum's Past Presidential Address. As some of you know,

Charlotte has had a recurrence of cancer that will probably prevent her from attending the meeting in Albuquerque. She is preparing her Past Presidential Address and has asked a colleague to read it for her at the meeting. Check your program to be sure and include this in your meeting schedule.

Looking ahead to SICB 1998 Annual Meeting, January 3-8, 1998 in Boston, we have several symposia in the planning stages. Bill Zamer and Tim Bradley are organizing an Evolutionary Physiology symposium, and

Charlotte Mangum has put together the first in a series of half-day cross-divisional symposia designed for general coverage of Big Questions of broad interest and teaching usefulness. The Boston topic will be "Origin and Further Evolution of Circulatory Systems." The final date for submitting symposia for the Boston meeting is close, but there is still time for a last minute inspiration.

Other Meetings of Interest

Western Society of Naturalists, La Paz, Baja California, Mexico, January 8-11, 1997.

The Crustacean Society, Mobile, Ala., Summer, 1997.

33rd International Congress of Physiological Sciences (IUPS), St. Petersburg, Russia, July 1-6, 1997.

ESCPB and Potchefstroom Universiteit International Conference for Comparative Physiology and Biochemistry, Skukuza National Park, South Africa, August 31-September 6, 1997. DCPB/SICB is a participating society, along with Society for Experimental Biology (UK) and Australian and New Zealand Society for Comparative Physiology and Biochemistry.

5th International Congress of Comparative Physiology and Biochemistry (IUBS), Calgary, August 23-28, 1999. Note: 1999 is far off in the future, but we are soliciting symposia topics now. All participating societies, including DCPB, will each submit five proposals for inclusion in the final program. Broad themes for the meeting include biotechnology and biochemical control, cell and molecular control, endocrinology and development, physiology and regulatory control, and neurosciences. The Organizing Committee is especially interested in topics that summarize advances or present conflicting views in rapidly developing areas and communicate an overall view to the membership. Have an idea? Think about it, contact Nora Terwilliger for a proposal form, talk to colleagues, plan, and send your proposal before March 1, 1997.

DCPB Candidates for Election

Candidates for Chair-Elect

Timothy J. Bradley

Current Position: Professor and Chair of Ecology and Evolutionary Biology, University of California, Irvine.

Education: B.A., Biology, Vanderbilt University, 1971; M.S., Zoology, University of Oklahoma, 1973; Ph.D., Zoology, University of British Columbia, 1976.

Professional Experience: Postdoctoral work, Physiology-Anatomy, University of California, Berkeley, 1976-1977; Postdoctoral work, Anatomy, Albert Einstein College of Medicine, 1977-1979; NIH Postdoctoral Fellowship, 1978-80; Assistant Professor, Developmental and Cell Biology, UCI, 1980-1985; Associate Professor, Developmental and Cell Biology, UCI, 1985-1989; Professor, Ecology and Evolutionary Biology, UCI, 1989-present.

Other Memberships: American Physiological Society, American Association for the Advancement of Science. Fellow, American Association for the Advancement of Science, elected 1992.

Research Interests: Epithelial ion transport and osmoregulatory mechanisms in insect species primarily, also in mammals, fish and plants. Epithelial structure and function, interaction of mitochondria and membranes in the transporting process, hormonal control of epithelial function and morphogenesis, the evolution of osmoregulatory mechanisms.

Goals Statement: As Chair of the Division of Comparative Physiology and Biochemistry, I would seek to have the Division serve as a central clearing house for communication between Division members, and to promote and facilitate symposia which enhance our research and teaching capabilities. I would represent and promote the Division's interests within the Society, and I would seek to provide input from the Division's members to the editorial boards and publishers of the journals associated with our Division.

Donald L. Mykles

Current Position: Professor of Biology, Colorado State University, Fort Collins.

Education: A.B. (summa cum laude), Biological Sciences, University of California, Santa Barbara, 1973; Ph.D., Zoology, University of California, Berkeley, 1979.

Professional Experience: Postdoctoral Fellow, Biochemistry, Biology Division, Oak Ridge National Laboratory, 1979-83; Postdoctoral Fellow, NIH Training Grant in Aging, 1979-1981; Muscular Dystrophy Association Postdoctoral Fellow, 1981-1983; Research Associate, Biochemistry, Biology Division, Oak Ridge National Laboratory, 1983-85; Assistant Professor, Biology, CSU, 1985-88; Associate Professor, Biology, CSU, 1988-93; NSF Presidential Young Investigator, 1989-94; Fulbright Scholar and Guest Professor, University of Heidelberg, 1991; Professor, Biology, CSU, 1993-present.

Other Memberships: American Association for the Advancement of Science, American Microscopical Society, American Society for Biochemistry and Molecular Biology, American Society for Cell Biology, The Crustacean Society, Sigma Xi, Society of General Physiologists.

Research Interests: Molting and growth in decapod crustaceans, specifically the expression and degradation of muscle proteins, using biochemical and molecular biological approaches. Calcium-dependent and ATP/ubiquitin-dependent proteolysis during molt-induced claw muscle atrophy in land crab; regulation of fiber-type switching during claw differentiation in lobster. Cloned cDNAs encoding ubiquitin, myosin heavy chain, tropomyosin, and other myofibrillar proteins; developmental regulation of these genes.

Goals Statement: As the largest division within SICB, Comparative Physiology and Biochemistry is an important constituency for strengthening and promoting comparative biology nationally and internationally. I support efforts by the Society to broaden the appeal of Physiological Zoology and improve and expand the content of Comparative Biochemistry and Physiology. The Society should also continue to provide a forum for biological research, science policy, and education through symposia, mini-symposia, and workshops at our Annual Meeting, as well as at regional meetings. As Chair, I will encourage expansion of poster sessions, while limiting oral presentations to organized symposia and workshops. This has been used by many societies to promote one-on-one interaction and reduce scheduling conflicts. We must also be more aggressive in increasing our membership.

Candidates for Program Officer

Robert D. Roer

Current Position: Professor, Research Physiologist, Assistant Chair for Graduate Studies, University of North Carolina at Wilmington.

Education: Sc.B., Aquatic Biology, Brown University, 1974; Ph.D., Zoology, Duke University, 1979.

Professional Experience: Visiting Scientist, Zoology Department, University of Reading, England, 1975; Assistant Professor, Associate Research Physiologist, UNCW, 1979-1985; Assistant Director, Institute for Marine Biomedical Research, UNCW, 1981-1986; Associate Professor, UNCW, 1985-1990; Professor and Research Physiologist, Department of Biological Sciences and Center for Marine Science Research, UNCW, 1990-present; Assistant Chair for Graduate Studies, 1994-present.

SICB Activities: Participant, three symposia sponsored by Division of Comparative Physiology and Biochemistry (DCPB); George Bartholomew Award Committee of DCPB, 1995 - present (Chair 1996 - present); former President, UNCW Chapter, Sigma Xi; Committee on Grants-in-Aid of Research, Sigma Xi.

Other Memberships: Sigma Xi, American Physiological Society, The Crustacean Society (Charter Member).

Research Interests: Mechanisms of membrane transport in relation to osmoregulation and biomineralization, mineral nucleation in the crustacean cuticle, and fluid dynamics in relation to bone physiology.

Neal J. Smatresk

Current Position: Professor and Acting Chair of Biology, University of Texas at Arlington.

Education: B.A., Biology, Gettysburg College, 1973; M.A., Biology, State University of New York at Buffalo, 1978; Ph.D., Zoology, University of Texas at Austin, Port Arkansas Marine Laboratories, 1980.

Professional Experience: Postdoctoral trainee, University of Pennsylvania School of Medicine, 1980-82; Assistant Professor, UTA, 1982-88; Associate Professor, UTA, 1988-93; Professor, UTA, 1993-present. Acting Chair of Biology, UTA, 1993-94; Chair of Biology, UTA, 1994-present; President, Academic Association of Departmental Chairs, UTA, 1995-present. Teacher of the Year Award (Chancellor's Council Outstanding Teacher), UTA, 1988; Leadership Development Award, UTA, 1995.

SICB Activities: Symposium organizer for "Current perspectives on the evolution, ecology and comparative physiology of bimodal breathing" for ASZ; symposium organizer for "Respiratory Neurobiology" for the intersociety meeting of APS, ASZ, IUBS, and SEB, 1994.

Other Memberships: American Physiological Society, American Association for the Advancement of Science, Society for Neuroscience.

Research Interests: Comparative respiratory physiology, neural control of breathing, bimodal breathing in lower vertebrates, and the evolution of ventilatory control mechanisms.



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Chair 1995-96

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Secretary 1996-98

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Message from the Chair, John B. Morrill

The *SICB Newsletter* reports by Charles H. Ellis, Jr. and Billie J. Swalla cover most of our newsworthy items. The forthcoming SICB 1996 Annual Meeting at Albuquerque marks the beginning of several new directions. Mark Martindale and Billie Swalla have gathered an outstanding group of speakers for a most timely, topical symposium on "Evolution and Development: Patterns and Processes."

This is a unique opportunity for graduate students and others to participate via attending and presenting posters and platform papers that relate to this developing arena of developmental biology and comparative embryology. This meeting is a great opportunity for graduate students to compete for the 1996 Best Student Presentation Award of \$100 plus copies of at least 10 back issues of

American Zoologist that have major developmental biology symposia.

This year and this meeting are appropriate to all of us helping to

This year and this meeting are appropriate to all of us helping to increase our membership.

increase our membership. With a current membership of 212, we are only the fifth largest of the Society's 10 divisions. Our Society and especially our Division offers people interested in comparative embryology and developmental biology the best of all professional worlds in what is becoming interesting to all developmental biologists.

Message from the Secretary, Charles H. Ellis, Jr.

Since the last *SICB Newsletter*, we have learned of the passing of two colleagues, Jane Oppenheimer and Sven Horstadius, truly major figures of twentieth century developmental biology. Their respective contributions were not only initially noteworthy, they have stood the test of time and now serve as foundations for current approaches to fish development and embryonic pattern formation. Each of these colleagues is greatly missed by his or her many students and coworkers, and even by those who knew them only through their publications.

We are fortunate to have received essays in memory of Drs. Oppenheimer and Horstadius, which can be found on pages 24-25 of this newsletter.

Margaret Hollyday's remembrance of Dr. Oppenheimer first appeared in the *Society for Developmental Biology* newsletter and is reprinted with the author's permission. The memorial to Dr. Horstadius was sent to us by Lennart Olsson. Our thanks go out to them for so beautifully summarizing two outstanding lives in science.

Message from the Program Officer, Billie J. Swalla

Greetings from the DDCB Program Officer!

I hope that you all got your abstracts in on time and encouraged your friends and co-workers to come to the SICB 1996 Annual Meeting in Albuquerque this December. Mark Martindale from the University of Chicago has organized an excellent symposium for our Division at the upcoming meetings. Mark accomplished this impressive program on short notice and limited funds for speakers, so we should thank him and the speakers at the meeting for their contributions. Here's the program as it currently stands:

Evolution of Development: Patterns and Processes

Morning Session

Welcome - **Mark Q. Martindale**,
University of Chicago

Margaret McFall-Ngai, University of
Southern California - Intercellular
Symbiosis: Evolution of Novel Tissues

Tim Karr, University of Chicago -
Intracellular Symbiosis: Cytoplasmic
Incompatibility and the Evolution of
Cytoplasmic Organelles

Linda Holland, Scripps Institute of
Oceanography - Evolution of Unique
Cell Types: Amphioxus and the Ori-
gins of Neural Crest

Andy Cameron - Type 1 Embryogen-
esis, Set-Aside Cells and Adult Body
Plans

Barbara Boyer, Union College -
Modifications of Developmental Pro-
grams: Evolution of Spiral Cleavage

Richard Emlet, University of Oregon
- Functional Morphology and the
Evolution of Larval Body Plans

Afternoon Session

Dave Gardiner, University of Califor-
nia at Irvine - Evolution of Vertebrate
Limbs: Robust Morphology and
Flexible Development

Nipam Patel, HHMI, University of
Chicago - Arthropod Evolution: Mole-
cular Control of Segmentation and
Segmental Specialization

Vicki Prince, Princeton University -
Axial Patterning in Vertebrate
Embryos

I hope that you all got your abstracts in on time and encouraged your friends and co-workers to come to the SICB 1996 Annual Meeting in Albuquerque this December.

Bill Jeffery, University of California
at Davis - Regressive Evolution:
Control of Eye Development in White
Eyeless Cavefish

Mark Q. Martindale, University of
Chicago - Radial and Biradial Devel-
opment: On the Road to Bilaterality

With this great group of speakers
coming, we hope that you all will
attend with your students.

You may have noticed some changes
in the abstract form this year. In order
to facilitate programming, there were
places to check that your contribution
was "Divisional," "Symposium Related"
or "Interdivisional." These cate-
gories were created in an ongoing
quest to facilitate interactions between
members of different divisions with
similar interests. For those who
checked "Symposium Related", your
paper will be scheduled on a *different*
day than the symposium, in a con-
tributed paper session with others like
yourself.

Also, you may have noticed we lim-
ited the choice of keywords in order to
help the program officers effectively
and efficiently schedule papers. We're
trying these new ideas out and hope
they work. Please let me know what
you think of the scheduling at the
meetings. I will listen and do my best
to come up with a creative solution to
any problems next time around. If
you think things are working well, I'd
like to hear those comments, too.

We're also already planning pro-
grams for the Boston meetings, to be
held January 3-7, 1998 in Boston.

Judy Venuti from Columbia Univer-
sity is organizing a symposium on
"Myogenesis in Metazoans" and there
will be another one jointly sponsored
with the Division of Vertebrate Mor-
phology on "Neural Crest Origins and
Evolutionary Patterns" by Lennart
Olsson and Brian Hall. Please think
about attending and presenting some
of your own research next year if you
can't make it this year.

Finally, if you have some ideas for
topics you'd like to see covered at the
meeting to be held January 6-10, 1999
in Denver, please discuss them with
me in Albuquerque. I'm looking for-
ward to a great meeting and seeing
you all there!

In Memory

Jane Marion Oppenheimer, 1911-1996

by Margaret Hollyday, Bryn Mawr College

Jane Marion Oppenheimer, who died on March 19, 1996 at the age of 84, achieved international distinction as an embryologist and historian of science. She was born in Philadelphia on September 19, 1911.

After graduating from Bryn Mawr College in 1932 where she majored in zoology, she became a graduate student at Yale University. There she was influenced by John Spangler Nicholas, her Ph.D. advisor, whom she credits with focusing her intellectual interests on both embryology and its history, and by Ross Granville Harrison, Director of the Osborn Zoological Laboratories, the leading American embryologist of the day. She received her Ph.D. in zoology from Yale University in 1935.

The work she began as a graduate student formed the basis for her experimental career. Nicholas introduced her to the embryo of the common minnow or killifish, *Fundulus heteroclitus*. Nicholas had previously devised a method for dechorionating the embryo, thus making it possible to perform precise experimental manipulations on teleost embryos for the first time. Oppenheimer independently pursued the work on *Fundulus*, while Nicholas pursued his own interests in rat embryology and nervous system function.

Dr. Oppenheimer joined the faculty of Bryn Mawr College in 1938 as an instructor in biology. She retired from the college faculty in 1980 as the William R. Kenan, Jr. Professor of Biology and History of Science.

She belonged to numerous professional and scholarly societies. She was president of the American Society of Zoologists (1973) and a fellow of the American Association for the Advancement of Science. Her many

honors included election to the American Philosophical Society, of which she was Secretary from 1987-92, and the Academy of Arts and Letters.

Among her national and international awards were the Otto H. Hafner Award from the American Association of the History of Medicine and Medical Library Association, the Karl Ernst von Baer Medal from the Estonian Academy of Sciences, and the Wilbur Lucius Cross Medal from the Yale Graduate Alumni Association.

Professor Oppenheimer's writings will continue to be a source of valuable information and inspiration for others similarly interested in following threads of modern ideas to their historical precedents.

Bryn Mawr College recognized her teaching with the Christian R. and Mary F. Lindback Award for distinguished teaching in 1976. Professor Oppenheimer was named a "Distinguished Daughter of Pennsylvania" in 1981.

Dr. Oppenheimer made a number of important contributions to teleost embryology. A group of seven papers published from 1934-37 is especially noteworthy. She showed that induction of a secondary axis including neural structures can and do occur in *Fundulus* when grafts of vitally stained dorsal lip material from young gastrulae are implanted into hosts the same stage as the donor. Those grafting experiments demonstrated that the dorsal lip of the fish embryo showed the same organizer activity as did the dorsal lip of amphibian embryos.

Dr. Oppenheimer also performed fate mapping experiments of the fish embryo blastoderm and described cell

movements of gastrulation. She published a staging series for *Fundulus* embryos. These early papers provide a wealth of information about the early development of the fish embryo of interest to contemporary workers.

Throughout her career as an embryologist, Dr. Oppenheimer continued to exploit the methods of experimental embryology to explore questions of inductions, differentiation capabilities and regulation. One of her last *Fundulus* projects involved sending

embryos into space to study the effects of zero gravity on embryonic development. She participated in the first joint U.S./U.S.S.R. cooperative venture; *Fundulus* embryos were included on the 1975 Apollo-Soyuz space shuttle mission.

As an historian of science and medicine, Dr. Oppenheimer wrote numerous articles and reviews, many on the origins of embryology. She enjoyed intellectual history and was motivated to write about her library discoveries believing that "life in our laboratories is made more meaningful to us when we know something about our intellectual forebears."

A topic of special interest to her was the relationship of embryological data to evolutionary theory. She also relished telling dramatic stories about early physiological and surgical discoveries. Her biographical work included some of the great historical figures in embryology such as Karl E.

In Memory

Sven Horstadius, 1898-1996

by Lennart Olsson, Department of Environmental and Developmental Biology, Uppsala University and Department of EPO Biology, University of Colorado at Boulder

von Baer, Curt Herbst and Ross Harrison. The influence of her work can be seen in a number of disciplines including developmental biology and the history of science, anthropology, evolutionary biology and psychology. Professor Oppenheimer's writings will continue to be a source of valuable information and inspiration for others similarly interested in following threads of modern ideas to their historical precedents, especially for more recently educated American scientists whose lack of foreign language training will prevent them from reading original sources.

Jane M. Oppenheimer was an exacting scholar whose attention to detail was noteworthy; she was also a prodigious book reviewer with more than 400 published reviews. She respected others who were erudite and had little patience for those who lacked rigor in scholarship. Colleagues who were creative and imaginative as well as rigorous gained her admiration.

In recent years, she was delighted by the resurgence of interest in teleost embryology, and she followed modern work on zebrafish development with considerable interest. As much as she appreciated the recognition given her once overlooked *Fundulus* embryological work done more than one-half century ago, she would have been dismayed by the incorrect attributions and bibliographic errors which occur not infrequently in modern journal articles. As an historian and a scientist, she took pains to get all her facts right and to place them in the context of a broader conceptual framework. Borrowing a sentence from one of her own book reviews: "The qualities of her work are inseparable from those of her person."

Earlier this year Sven Horstadius, this century's internationally most well known Swedish zoologist, passed away at age 98.

Horstadius worked with a variety of experimental organisms, but most of

He had exceptional experimental skills and was to develop techniques for separating and exchanging cells in the tiny sea urchin embryo.

his work dealt with sea urchin development. Horstadius was part of the twicklungsmechanik tradition started by Roux, Driesch and other German developmental biologists at the turn of the century. He had exceptional experimental skills and was to develop techniques for separating and exchanging cells in the tiny sea urchin embryo. In this way he was able to test the double gradient theory of his mentor John Runnstrom.

One famous experiment was to separate the sea urchin embryo into two halves at the eight-cell stage and see what each half formed. If separated vertically, so that each half gets both animal pole and vegetal pole cells, two normal - albeit small - larvae develop. If separated horizontally, only the vegetal pole cells will form a larva; the animal pole cells will form a ciliated ball or dauerblastula. This vindicated Runnstrom's gradient theory. In the first experiment, the double gradient was kept intact, whereas in the second it was destroyed and therefore development could not proceed

normally. After having spent the early years of his career with Runnstrom at the Wenner-Gren Institute in Stockholm, Horstadius became a professor at Uppsala University in 1942, but continued to collaborate with Runnstrom. The sea urchin work was summarized in 1973 in the excellent monograph - *Experimental Embryology of Echinoderms*.

Horstadius also studied the development of the neural crest in the axolotl. In collaboration with Sellman he did fate mapping with vital dyes and experimental manipulations of portions of the neural crest and neural tube. This work also was magnificently summarized in a monograph, *The Neural Crest*, published in 1950. The importance of this book was such that it was reissued in 1988, the year when Horstadius turned 90, together with a modern review of neural crest biology by Brian Hall.

Sven Horstadius was recognized as a leading researcher in his field and given several honorary degrees. He was a member of illustrious societies such as the Royal Society and the Vatican Academy. He was also an ornithologist and a very good nature photographer. A collection of his photographs is exhibited in the Department of Zoology at Uppsala University.

A symposium honoring the 100th anniversary of Sven Horstadius' birth is planned to be held in Stockholm and Uppsala in the summer of 1998.

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Chair 1995-96

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Secretary 1994-96

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Message from the Chair, Howard R. Lasker

As I bow out, I would like to thank Don Levitan for his service as Secretary for the Division. The Division and the Society is dependent on individuals willing to devote some time and imagination to keeping things going. Although the work as a Division officer is not particularly onerous, it always comes at a "bad time." Don and all of the previous officers deserve our thanks.

I would also like to welcome our new officers, Dianna Padilla and Sarah Cohen. The next couple of years may be quite exciting for the Division and I wish them good luck in their efforts.

My enthusiasm for the future is based on what I hope will be a continuing relationship between SICB and the Ecological Society of America (ESA). The ESA will be one of the sponsoring societies of the January 1998 meeting in Boston. Attendance by some additional ecologists and evolutionary biologists can only increase the breadth and depth of talks at the meeting, and I hope the meeting will provide a venue for ESA members who do not usually attend the ESA summer meetings. We are working on a symposium to inaugurate the joint meeting, and the next newsletter will have more information about that. The joint meeting, which in no way affects the ESA's regular summer meeting, is a trial venture for ESA. A good range of talks and good attendance should help make it an ongoing relationship. Please start spreading the word among your students and colleagues.

The Society's final Christmas-New Year's meeting is set for Albuquerque this December and as always I look forward to seeing Division members there. We are one of the cosponsors of "Responses of Terrestrial Invertebrates

to Variation in Temperature and Water Availability: Molecular, Organismal and Evolutionary Approaches." This symposium, interdivisional sessions on feeding and foraging and on reproduction and life cycles, along with the regular Division sessions and a great location, should make for an interesting meeting. I hope many of you will attend. For those who do make it, please note that our Division Business Meeting is scheduled for the end of the first full day of talks (Friday, December 27). It is difficult to get people's attention on the first day of the meeting, but we are keeping that slot to minimize conflicts with the DIZ and DAB meetings. If you make it to Albuquerque, please attend the Business Meeting.

Finally, the Division will be holding elections in the Spring for Program Officer. Please contact me or one of the incoming officers if you would like to nominate yourself or someone else.

See you in Albuquerque.

Report from the Secretary, Don Richard Levitan

Election Results

With 29 ballots being cast, Dianna K. Padilla of the University of Wisconsin has been elected Chair for the 1997-98 term and C. Sarah Cohen of Stanford University has been elected Secretary for the 1997-99 term. Congratulations to the new officers and thanks to Frederic J. Janzen for participating as a candidate.

Officers

Jane Maienschein

Chair 1996-97

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Upcoming Events

◆ Forum on Educational Issues in History and Philosophy of Science, or Science in Society, 1997 Meeting.

◆ Forum on Integrative Issues in Biology, 1998 Meeting.

Message from the Officers

In the interest of expanding the scope of our division, we hope to promote discussion of larger issues about the nature of biological sciences and their social implications. In the interest of having the most fun and making the most impact with that discussion, we hope to involve the entire Society. Ideally, we would like to help organize a Society-Wide symposium asking "Why Integrate and Compare?" for the Boston meeting. Any suggestions and reactions are welcome for this and related contributed paper sessions or symposia.

Jane Maienschein
Chair

Joseph L. Graves, Jr.
Secretary

Keith R. Benson
Program Officer

Message from the Secretary, Joseph L. Graves, Jr.

I would like to congratulate Dr. Sydney Cameron and the other organizers of the conference entitled "Women in Evolution: A Gathering of Scientific Perspectives." This gathering is sponsored by the Sloan Foundation, National Science Foundation, Rockefeller Foundation, University of Arkansas and the Arkansas Department of Health and Education. This conference was held September 18-20, 1996 at the University of Arkansas in Fayetteville.

The goals of the conference were to recognize the achievements that women have made and continue to make in the field of evolutionary biology, to assess the social and professional climate in which women in science work today, and to chart a course of action that will expand the opportunities in Arkansas (and elsewhere) for women to participate in science at all educational levels.

The emphasis of the conference was on the excellence that exists among the pool of women researchers in the major subdisciplines within the field of evolutionary biology, including molecular evolution, evolution of form and development, speciation and phylogeny, evolution of behavior, and evolutionary ecology and biodiversity. Speakers from across the country attended, representing different levels of career experience, from senior graduate

students to distinguished professors. This conference was very informative at a number of levels.

One would have thought that as we entered the new millennium that all researchers in evolutionary biology

The emphasis of the conference was on the excellence that exists among the pool of women researchers in the major subdisciplines within the field of evolutionary biology.

would have welcomed the convening of this conference. Sadly, however, the organizers were hazed with condescending comments on at least one electronic bulletin board, reputedly devoted to announcements and discussion relevant to evolutionary biologists (evoldir). To their credit, the organizers of the conference received these insults with great professionalism. Those of us who commented in defense of the organization of the conference were also insulted, both publicly and privately on the internet.

continued on next page

Message from the Secretary, Joseph L. Graves, Jr.

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The evoldir was not designed as a discussion group. Despite that there have been some general discussions that have proceeded there. For example, a request for aid in preparing material for a debate with a creationist, or the posting of results concerning the possible discovery of evidence of Archaeobacteria

example, there are only two African-Americans holding tenure track appointments in the United States (only one tenured). At least one member insisted that discussions of science and society had no place on the board.

Finally, the indignation that followed the insults connected to the

board continues to post inflammatory race, IQ and craniometry postings, with no comments about the unsuitability of this material for the evolution directory.

What are we to conclude from this? One conclusion might be that science and society is only interesting or supportable, to today's evolutionary biologists, when analysis does not challenge the status quo of science practice. Thus, postings that denigrate women or "racial minorities" are acceptable.

On the other hand, postings that highlight the oppression of these groups, or question the objectivity of science practice are denigrated. This conclusion certainly supports the call of this section for a Society-Wide symposium of the type described in the DHPB Message from the Officers on the previous page.

Why Integrate and Compare? In addition, we should ask, what should we be integrating and comparing? This may be the call of this society for the new millennium.

One conclusion might be that science and society is only interesting or supportable, to today's evolutionary biologists, when analysis does not challenge the status quo of science practice.

on a Martian asteroid, were considered legitimate topics of discussion. Two examples of discussion on the board were received with extremely negative comments. A few months ago, I reacted with indignation to a flippantly bigoted post concerning affirmative action. My reply reported that in the field of evolutionary biology, there has been no appreciable affirmative action. For

Women in Evolution Conference lead to the call for the complete banning of science and society discussions from the list. Of those list members voting, the majority supported the notion that science and society discussions were not proper content for the board (although they indicated that "regular" science discussions would be "okay"). It is noteworthy that one member of the



Masthead art by G.A. Drew, 1911

Message from the Chair, Jan A. Pechenik

As August draws to a close, my thoughts turn naturally to Albuquerque and our upcoming SICB 1996 Annual Meeting. I hope that's where yours are, too. The biomechanics symposium in honor of Stephen Wainwright should pretty much guarantee a fine meeting -- add in all the other talks, posters, symposia, camaraderie and the attractive surroundings of New Mexico and I know you'll be sorry if you miss this one. It would be especially great to see a record number of graduate students in attendance, and a record number

of entries in the student competition for Best Paper/Poster Awards.

The Graduate Student Best Paper Awards Committee (GSBPAC, chaired by Chuck Booth) has been working hard this summer to improve the procedures for reviewing the presentations. I had been concerned particularly about: 1) the difficulty of judging papers and posters for a single award, 2) the fact that some presentations were evaluated by a single judge, and 3) the absence of constructive feedback to entrants. The Committee has addressed all three issues. It

recommends that separate awards be given for posters and oral presentations, and has designed separate evaluation forms for them. We can vote on this decision at the business meeting in Albuquerque (yet another good reason to come); meanwhile, we are reprinting a working draft of the evaluation forms here, so that all can be aware of the criteria to be used in the judging (see pages 33-34). Each paper or poster will be assessed by at least two judges, and all entrants will receive a copy of the judges'

continued on next page

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Message from the Chair, Jan A. Pechenik

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comments by mail after the meeting. If you have suggestions for further improving the procedures, please contact Chuck directly at booth@ecsuc.ctstateu.edu.

At the 1995 Annual Meeting we agreed to award a first place prize (\$100 cash award, a selection of books from Oxford University Press, and a free renewal of student membership in the Society for the following year) and a second place prize (free renewal of membership in the Society for the following year). I hope we can agree to award first and second place prizes in both the poster and oral presentation categories. First place winners will also be invited by Jim Hanken to submit a manuscript to *American Zoologist*, based on their presentation. Thanks to Donna Wolcott and Daphne Fautin (of GSBPAC) for working with Chuck on these important issues.

Remember, too, that we have one additional student award to make - the Adrian M. Wenner Strong Inference Award, which also carries a cash prize of \$100. It can be awarded for either an oral presentation or a poster. To be considered for this award, the paper or poster must provide a clearly articulated initial hypothesis, must explicitly list all alternate hypotheses, and must describe experiments designed to clearly distinguish among the hypotheses so that at least one of the alternatives can be convincingly excluded. Finally, the experiments must be executed cleanly.

Now is a good time to start thinking about applying for -- or reminding your students to apply for -- the Libbie Hyman Scholarship, given to support a student's first experience at a field station. The 1996 award went to Megan Jo Dell, a graduating senior at the University of Puget Sound in Tacoma, Wash., to support independent research on the inducible defenses of sea anemones at the Friday Harbor Laboratories. The award has

recently been for about \$650, the amount varying somewhat from year to year with fluctuations in interest rates. Competition has been limited in recent years, so unless applications surge this year, you or your students have pretty nice odds of winning the prize. Address queries and requests for applications to Gordon Hendler (hendler@mizar.usc.edu).

While we're on the topic of thinking ahead, it would be good to see proposals coming in for the January 1998 Boston meeting, for formal symposia or less formal workshops. It's a great opportunity to fine-tune your organizational skills, make new friends, and do a real service for the Division and the Society. It can't hurt, either, that Jim Hanken has been working hard to increase the prestige of the *American Zoologist* (which, don't forget, has first right of refusal for publishing all symposium proceedings). Get a copy of the newly revised form for proposals from the SICB Business Office (sicb@sba.com); talk with our current Program Officer Jon Norenburg (norenbur@onyx.si.edu) and our incoming Program Officer,

Damhnait McHugh (dmchugh@oeb.harvard.edu); and send copies of all correspondence to *American Zoologist* Editor Jim Hanken (amerzool@colorado.edu) and SICB Program Officer Willy Bemis (wbemis@bio.umass.edu).

As this will be my last column as Chair of DIZ, let me take the opportunity to thank all the other officers - present and incoming - for being such great people to work with. With people like this in the Division I know there are sure to be many good things ahead for us.

Finally, please consider joining the American Microscopical Society if you have not already done so. A mere \$36 (\$18 for students - what a deal) brings you a year of *Invertebrate Biology* (plus the opportunity to present two papers at our joint Annual Meeting!). DIZ and AMS share many interests and concerns; joining AMS is a good way to enhance interaction among our respective members. Contact Vicki Pearce for an application (vpearce@cats.ucsc.edu).

American Museum of Natural History Research Fellowships and Grants

Fellowships - Research fellowships are available to postdoctoral researchers and established scholars starting in the summer and fall 1997. The fellowships support independent research in association with the resident staff. Areas include vertebrate and invertebrate zoology, paleozoology, anthropology, earth and planetary sciences. All fellowship applications should be postmarked by January 15, 1997.

Grants - Research grants are available to advanced predoctoral candidates and recent postdoctoral researchers in the fields of zoology and paleontology. Awards average \$700. Postmark dates for each grant program: Theodore Roosevelt (North American Fauna) - February 15, 1997; Lerner-Gray (Marine Zoology) - March 15, 1997.

Request information and application forms from: The Office of Grants and Fellowships, American Museum of Natural History, Department A, Central Park West at 79th Street, New York, NY 10024.

The Teacher's Corner, Jan A. Pechenik

DIZ is a remarkably diverse Division whose members represent an impressively wide range of interests. More than 300 SFAKOB members (Society For All Kinds of Biology) list our Division as their primary affiliation in the Society, and many more list us as their secondary affiliation. Indeed, we are diverse to the extent that many - maybe even most - talks given under the DIZ banner could just as easily be given through the Divisions of Ecology and Evolution, Animal Behavior, Comparative Physiology and Biochemistry, Developmental and Cell Biology, History and Philosophy of Biology, Systematic Zoology, or Neurobiology. Well, gosh: That's everything there is, except for Vertebrate Morphology, and even there it's not too difficult to picture some areas of substantial overlap (pesky cephalochordates). Certainly I have heard papers presented in each of those other divisions that could just as easily have been given in DIZ sessions. That's why our Program Officer in particular has such a difficult time scheduling sessions to avoid excessive overlap with related sessions in other Divisions.

What is the glue that binds us together as members of DIZ?

I'm guessing that probably more than anything else, it's something to do with teaching. Most of us either teach about invertebrate biology, have taught about invertebrate biology, expect to teach about it, or actually hope to teach about it in the future. So, it puzzles me that there isn't more visible interest in talking about the part of our lives that we devote to teaching. Other societies - ESA and AIBS come to mind immediately - discuss issues related to teaching at their meetings and in their publications. Teaching undergraduates about invertebrates can be a time-consuming, tiring, frustrating, unproductive

nuisance. But it can also be a stimulating, invigorating opportunity to clarify our thinking about key issues and transmit our knowledge of, and enthusiasm for, invertebrate biology to a new generation. There are lots of things that could be discussed.

I created The Teacher's Corner (R.I.P.) to test the waters, and I must say I feel like I'm almost the only person in the pool. Surely there is more interest out there somewhere; I hope others can find creative ways of mobilizing it. Judging from articles appearing in vehicles like *Science*,

BioScience, and national newspapers, serious, energetic discussion about what we teach, why we teach, and how we teach will be healthy for DIZ and for Invertebrate Zoology as a discipline. How about organizing a workshop on some aspect of teaching invertebrate biology for the Boston meeting? If you don't want to organize anything but would be interested in giving a talk or workshop, please contact me. If I hear from enough people maybe I'll try to make something happen.

Program Notes

Symposia of interest to members of our division at the SICB 1996 Annual Meeting in Albuquerque include:

Responses of Terrestrial Invertebrates to Variation in Temperature and Water Availability: Molecular, Organismal and Evolutionary Approaches. Explore how terrestrial invertebrates cope with thermal and hydric stresses by integrating recent studies at the molecular, organismal and evolutionary levels.

A Tribute to Stephen A. Wainwright: Mechanical Design in Organisms. This two-day series of contributed paper sessions will feature many short talks by people whose work has been influenced by Wainwright.

Evolution of Development: Patterns and Process. What is the role of development in generating biological diversity? This one-day symposium examines this question using animals ranging from various arthropods to amphioxus to blind cave fish.

Muscle Properties and Organismal Function: Shifting Paradigms. Many recent experiments challenge established views of muscle function. The emerging paradigm will be explored from a comparative perspective.

The Biology of Lipids: Integration of Structure and Function. Speakers will provide a broadly synthetic review of lipids as structural components of cells and organisms, lipid metabolism and transport, and the importance of lipids in regulating biological processes.

Message from the Secretary, Donna L. Wolcott

The blessing of bylaws is that they provide some institutional memory about how an organization is to function. The curse is that changes to

If the Division wishes to offer two Best Presenter awards, one for oral and one for poster presentations, the bylaws would be amended.

anything specified in the bylaws must be through amendment. (I know, because I read it in the bylaws...). If the Division wishes to offer two Best Presenter Awards, one for oral and one for poster presentations, the bylaws

Message from the Graduate Representative, Michelle Duval

I am looking forward to the SICB 1996 Annual Meeting in Albuquerque, as we have planned some interesting events for graduate students and postdoctorates. First, we are planning to have the Career Center in a more obvious and accessible area, hopefully closer to the vendor displays so that more folks will be inclined to use this resource. Also, we are trying to set up a computer so that people can explore career opportunities and resources available through the internet.

For our workshop this year, our focus is on writing. A workshop will cover writing for journals, writing of c.v.'s and resumes, etc. Since this is an area which everyone (no matter

would be amended as follows:

Article XVI. Graduate Student Paper Presentation Awards

Section 1. At each Annual Meeting of the Division of Invertebrate Zoology, there may be ~~two~~ graduate student monetary awards for best contributed papers ~~or~~ and posters. **A first and second prize may be awarded in each category.**

As Jan mentioned in his message, Chuck Booth has developed new forms for use in judging Best Student Paper and Best Student Poster presentations. Their inclusion in the newsletter allows prospective presenters (and not just the students!) to see what is judged to contribute to a good presentation (see pages 33-34). Your input is solicited; contact Chuck Booth at booth@ecsuc.ctstateu.edu.

how experienced!) can use suggestions on from time to time, we are hoping to see a good turnout.

I am still hopeful that the Graduate Student and Postdoctoral Affairs Committee can initiate a more "informal" divisional meeting in the summer, maybe on the side of the continent opposite from the site of the Annual Meeting.

Anyone interested in being the DIZ graduate/postdoctoral representative for the 1998/1999 Annual Meetings contact myself or Jan Pechenik. I would be more than willing to help the next person try to move the summer meeting initiative along.

Libbie Hyman Memorial Scholarship

For the 1997 Field Station Season

This scholarship, in memory of Libbie H. Hyman, one of America's foremost invertebrate zoologists, is to provide assistance to students to take courses *or* to carry on research on invertebrates at a marine, freshwater or terrestrial field station. The amount of the 1997 award is about \$650. The Hyman Grant is intended to help support a *first* field station experience for a first or second year graduate student, or an advanced undergraduate. Application forms and further information are available from:

Dr. Gordon Hendler, Chair
SICB Libbie Hyman Scholarship Committee
Natural History Museum of
Los Angeles County
900 Exposition Boulevard
Los Angeles, CA 90007
Fax: 213/746-2999
E-mail: hendler@bcf.usc.edu

Completed applications should be sent to Dr. Hendler and must include:

1. Application form.
2. Two letters of recommendation from faculty members.
3. Transcripts of both undergraduate and, if applicable, graduate work.

Deadline: March 1, 1997
Notification of awards:
April 15, 1997

**Society for Integrative and Comparative Biology
Division of Invertebrate Zoology
1996 Graduate Student Best Paper Award
POSTER PRESENTATION**

Student Name _____

Abstract No. _____

Please rate each of the 10 categories from 1 (poor) to 5 (outstanding), with average = 3.
Written comments for presenter are strongly encouraged.

CONTENT

1. **Objectives:** Were research objectives clearly stated? Was all background information relevant? Was sufficient background information given? _____

2. **Research Design:** Were methods and experiments/observations appropriate to the research objectives? _____

3. **Data Analysis and Conclusions:** Were data analysis and conclusions appropriate to the data and research objectives? _____

4. **Thoroughness:** Did methods, analysis, and conclusions indicate a thorough and technically sound study? _____

5. **Creativity and Significance of Research** _____

PRESENTATION

6. **Layout:** Was poster layout well organized and easy to follow? _____

7. **Text:** Was text, especially methods and results, presented clearly and concisely, and not excessive? _____

8. **Graphics:** Were tables, graphs, photographs, etc., clear and easy to interpret? _____

9. **Discussion:** Did presenter explain the poster clearly and knowledgeably? _____

10. **Response to Questions:** Did presenter respond effectively to questions from the judge or viewers? _____

TOTAL (50 pts. max.) _____

Use back of page for additional comments to presenter.

Evaluation of presentation for Adrian M. Wenner Strong Inference Award:

(N/A = not appropriate; 1 = poor; 5 = outstanding)

Criteria:	a. Clear initial hypothesis	b. Explicit alternative hypothesis(es)
	c. Appropriate tests of hypotheses	d. Experiment(s) executed cleanly

Additional comments for judging committee: _____

Judge's name (print) _____ Signature _____

**Society for Integrative and Comparative Biology
Division of Invertebrate Zoology
1996 Graduate Student Best Paper Award
ORAL PRESENTATION**

Student Name _____

Abstract No. _____

Please rate each of the 10 categories from 1 (poor) to 5 (outstanding), with average = 3.
Written comments for presenter are strongly encouraged.

CONTENT

1. **Objectives:** Were research objectives clearly stated? Was all background information relevant? Was sufficient background information given? _____

2. **Research Design:** Were methods and experiments/observations appropriate to the research objectives? _____

3. **Data Analysis and Conclusions:** Were data analysis and conclusions appropriate to the data and research objectives? _____

4. **Thoroughness:** Did methods, analysis, and conclusions indicate a thorough and technically sound study? _____

5. **Creativity and Significance of Research** _____

PRESENTATION

6. **Organization:** Was presentation well organized and easy to follow? _____

7. **Clarity:** Were procedures, data, and concepts explained clearly and concisely? _____

8. **Delivery:** Did presenter speak clearly, knowledgeably, and at an appropriate pace, avoid distracting mannerisms, and hold the audience's attention? _____

9. **Visual Aids:** Were visual aids used effectively? Were they clear and easy to read or interpret? _____

10. **Response to Questions:** Did presenter respond effectively to questions from the audience? _____

TOTAL (50 pts. max.) _____

Use back of page for additional comments to presenter.

Evaluation of presentation for Adrian M. Wenner Strong Inference Award:
(N/A = not appropriate; 1 = poor; 5 = outstanding)

Criteria: a. Clear initial hypothesis b. Explicit alternative hypothesis(es)
 c. Appropriate tests of hypotheses d. Experiment(s) executed cleanly

Additional comments for judging committee: _____

Judge's name (print) _____ Signature _____

Great Invertebrate Zoologists

S. Stillman Berry, Biologist Extraordinaire*by Larry T. Spencer, Plymouth State College*

This will be an informal, rather than formal essay concerning S. Stillman Berry, an American biologist whose life work consisted of the study of mollusks, flowers and California natural history. Although one might argue, and with considerable merit, that Berry does not belong amongst the pantheon of great invertebrate zoologists that have appeared in this column, I would counter each and every argument presented by saying "If you think 'X' is greater than Berry, why haven't you written up a biography of 'X' for DIZ?" Besides, greatness lies in the eyes of the beholder. As a young zoologist, I thought Louis Agassiz was the greatest invertebrate biologist to have lived on these shores. Now as a more mature zoologist, I see that Agassiz's strengths in many cases were undone by his weaknesses, and he no longer shines as brightly in my constellation of invertebrate biologists.

Berry made contributions over a long period of time (he lived to be ninety-seven years old), and in a variety of areas. I won't attempt to delineate each and every one of his contributions, but will summarize them as follows: his work on the cephalopods, his work on other groups, and his work as the first librarian at Scripps Institution of Oceanography.

Berry, born in Unity, Maine in 1887, spent most of his life in California and Montana. He attended Stanford University for his bachelor's degree, Harvard for his master's degree, and returned to Stanford for his Ph.D. It was through his Ph.D. research that he made his first contributions to cephalopod biology. He continued to work on cephalopods for the rest of his life. In fact, his last oral presentation, made shortly before his death, concerned a cephalopod. His most important contribution was in taxonomy, and his work on the

cephalopods of the Pacific Ocean set the basis for our knowledge concerning that fauna. A few of his papers describe the biology of the creatures, most notably a two-part paper dealing with light production. Berry's contributions to cephalopod and molluscan taxonomy are more fully described in a paper by Berry and Sweeny.

Berry was an outstanding naturalist, with very catholic interests. His primary group of interest was the mollusks, with many papers on living and fossil forms. I first became interested in him while at Oregon State University where my research dealt with a family of mesopelagic squid in collections made from the eastern Pacific. Of great importance to me was a 1910 monograph, "A Review of the Cephalopods of Western North America." In the process of researching Berry for a presentation at the Fourth International Congress on the History of Oceanography (held at Scripps, summer of 1993), I was very surprised when I came across an obituary notice entitled "Stillman Berry of Stanford: Leading Breeder of Flowers." The notice went on to describe his work on the genetics of irises. Further research brought to light his authorship of a chapter in the 1933 edition of Edmund C. Jaeger's book, *The California Deserts; A Visitor's Handbook*.

In my mind, one of Berry's most important contributions was as the first librarian at Scripps, 1913-1916. His tenure, although short, was highly productive. With very limited funds, Berry was able to expand the collections at Scripps by actively soliciting from other institutions and book-sellers, second copies, used editions, trades of duplicates already in the Scripps collections, and promised exchanges for future publications to result from the work of Scripps researchers. Many of his purchases came from libraries in Europe that

were beset with financial problems associated with the start of World War I. The collection expanded many-fold during his time as librarian. Berry himself was a judicious purchaser of scientific books and journals, a trait honed during his stay in Boston while working on his master's degree at Harvard and further refined throughout the remainder of his life. It was this knowledge of books that aided him in his purchases of books for the Scripps library.

Other than the short time period at Scripps, Berry was never really paid as a scientist. Profits from the family ranch, the Winnecook in Montana, funded his book purchases, his travels to conferences and museums, and his daily existence at his home in Redlands, Calif. Of course, his well-developed ability to squeeze the greatest value from every penny never hurt. In conversations with Clyde Roper concerning Berry, Roper described the Redlands home as "organized clutter". Berry apparently never discarded anything, assuming that all items had some future value, including empty cereal boxes. Roper also mentioned that when Berry visited the Smithsonian, he stayed in very "cheap hotels" even when doing so meant staying in more trouble-prone areas of Washington, D.C.

Roper has authored a number of papers on Berry and his taxonomic studies. Before Berry's death in 1984, Roper convinced Berry to donate his books and papers to the Smithsonian Institution and those materials are now cataloged and reside in the archives of that institution. Persons desiring more complete bibliographic references on Berry's life and work should contact me directly at the address below.

Contributed by Larry T. Spencer, Natural Science Department, Plymouth State College, Plymouth, NH 03264 (larrys@plymouth.edu).

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Message from the Chair, David J. Prior

As a result of the recent election, Dr. Kiisa Nishikawa of Northern Arizona University is serving as Secretary, Dr. Richard Satterlie of Arizona State University is serving as Program Officer and I am serving as Chair. We will

The Division of Neurobiology is actively pursuing ASZ/SICB traditions and working to develop new approaches to paper session and symposium organization.

organize the election of new officers for next year at the SICB 1996 Annual Meeting, December 26-30, 1996 in Albuquerque, N.M.

Our divisional membership continues to grow; 63 members with primary

affiliation and 155 members with secondary affiliation. Rich Satterlie is expecting several paper sessions and a shared poster session at the Albuquerque meeting. In addition, we intend to host a DNB evening social.

The Division of Neurobiology is actively pursuing ASZ/SICB traditions and working to develop new approaches to paper session and symposium organization. The Division of Animal Behavior has proposed that we join them in sponsoring a symposium at the next SICB Annual Meeting in Boston, January 3-8, 1998. Rich Satterlie and the Program Officer of DAB (Brent Graves) will be discussing potential "behavioral neurobiology" topics.

In summary, I believe DNB is providing a discipline focus in the sort of venue that we have appreciated for so long in ASZ and our various "nerve-nets".



Message from the Chair, Carole S. Hickman

Our Division continues to play an unusual role within SICB of making systematics a central and vibrant part of all of the Divisions. For months I have been dreading writing this message, because I have little to say to the small core of primary members of the Division. We are growing, slowly. I am especially pleased that most of our new members are students! I also am pleased to predict that we have twisted enough arms for a contributed paper session at the Albuquerque meeting.

I regret to report that the symposium on Polymorphic Characters that appears on the abstract form and on our web page did not get off the ground. The Division is still struggling to develop an active primary membership, and the message that follows is a kind of warning that we are plotting a raid on the other Divisions. The rest of this message is addressed to systematists in other Divisions.

I thought you might like to know a bit about yourselves. Armed with a list from headquarters of members who have listed DSZ as a secondary affiliation, I spent a day sleuthing. There are 309 of you. Most of you are primary members of DVM (115) or DIZ (83), although there are a healthy 23 in DCPB and 21 in DEE. There are closet systematists in all Divisions within the Society.

Here are some of the most illuminating data about those of you who are primary members of other Divisions. Two are former program directors of the Systematic Biology Program at the National Science Foundation and at least six have served on the Systematics Panel. Thirty-four of you are at museums with oversight of major systematic collections, 26 at museums in the United States and eight in museums abroad. Fourteen of you are at field stations or marine laboratories. I recognize at least 15 of you as

acknowledged experts in the systematics of a major group of organisms. Among you there are those who have organized and participated in major symposia focusing on systematics and phylogenetics at OTHER national and international meetings over the past two years. Some of you have made important contributions to systematic theory and practice. And on the academic side, some of you are providing training in systematics in departments with a strong systematic mission.

What does it all mean? I don't know why this situation exists, nor do I think it serves much purpose to speculate. The real question is whether this is something SICB wants to change? Is the wimpy Division that is currently in place sending a misleading message about the fundamental importance of systematics in modern integrative and comparative biology? I see two alternatives. We can disband the Division on the grounds that systematics, like evolution, is already a prime moving force in each of the other divisions. The alternative is to launch a campaign to seek out the more than 300 SICB members who are secondary affiliates with DSZ and ask them to change their primary membership. We will try the latter approach first in the spirit of clarifying the will of the Society.

Your officers in DSZ all have their primary memberships in other Divisions, and none of us realized quite what we were getting ourselves into. We apologize for having spent so long so low on the learning curve and hope to make up for lost time next year.

We look forward to a big turnout of systematists, both primary and secondary, at the SICB 1996 Annual Meeting in Albuquerque. I invite and urge you to attend the Division Meeting. It will not be a traditional business meeting, but a meeting about issues!

Officers

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Chair 1996-97

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Message from the Secretary, Dominique A. Didier

Systematics is hot! Yes, it's a hot topic and the news is out that without systematics we lack critical information for understanding life on this planet. Today there are more ways than ever to learn about systematics and new and innovative techniques for phylogenetic analysis are available. In the

Today there are more ways than ever to learn about systematics and new and innovative techniques for phylogenetic analysis are available.

last newsletter, mention was made of some of the bioresources available on the internet. I've been cruising the internet lately and am astounded by the resources available to systematists. Anyone with a computer and an internet connection should take a moment to check out what's on the World Wide Web.

Many of you may already be familiar with the Tree of Life project (ToL) spearheaded by David and Wayne Maddison (see *Science* 273:568-570). In their words, "The Tree of Life

project is a multi-authored collection of linked pages on the World Wide Web. Each page contains a diagram of the phylogeny of a particular clade - if no adequate phylogenetic hypothesis is available, a classification listing the contained taxa is given. The root of each tree is a hypertext link taking one to the containing clade [and] each terminal taxon name can be a hypertext link that takes one to that taxon's page. . . Eventually, one would reach terminal pages referring to species, though in many branches, the Tree will not be that finely resolved for a number of years. Each page would include, in addition to the tree or classification, pictures of representatives of the group, and Introduction, Characteristics, Discussion of Phylogenetic Relationships, and References sections. Other sections could be added to the page at the discretion of the authors."

You can check out the Tree of Life at <http://ag.arizona.edu/ENTO/tree/phylogeny.html>. If you're interested in contributing, then check out this page: <http://phylogeny.arizona.edu/tree/sep/tolcontributors.html>.

Another exciting Web page is TreeBASE, designed by Michael Donoghue and Michael Sanderson. You'll find TreeBASE at: <http://phylogeny.harvard.edu/treebase>. Don't assume that because both the

Tree of Life and TreeBASE present phylogenies that they are redundant. In fact, the goals of these two projects are quite different and together they serve as an important resource for systematists.

If you're looking for information on systematics software check out the Hennig Society Home Page. I couldn't reach it at <http://www.vims.edu/mes/hennig/frames.html>, but you can pick it up from the ToL pages at <http://phylogeny.arizona.edu/tree/programs/programs.html>. This list of computer programs for phylogenetic analysis provides a description of each program, how to get the software, computer requirements, as well as links to other home pages related to systematics. A must see!

If you're interested in happenings in systematics outside of this Society try the Society of Systematic Biologists (<http://www.utexas.edu/ftp/depts/systbiol/>). Here you'll find information on upcoming meetings and symposia as well as table of contents for recent issues of *Systematic Biology*.

Now more than ever systematics resources are available to a diverse audience. After you check out these pages I'm sure you'll agree with my opening statement, so let's spread the good systematics news.



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Message from the Chair, Sharon B. Emerson

It looks as if it is going to be a great year for vertebrate morphology. First the SICB 1996 Annual Meeting in Albuquerque with an outstanding cast of participants for the symposium on muscle physiology, and then on to England in the summer to catch up on the international scene. Lots of opportunity for interaction and collaboration...to say nothing about travelling to some stellar locations.

Seriously, the meeting in Albuquerque looks terrific with a number of symposia that should be of broad interest to members of DVM: developmental endocrinology, evolution of developmental mechanisms, proximate and ultimate causes of animal behavior, and, of course, the special tribute to Stephen Wainwright. I look forward to seeing most of you there.

I want to take this opportunity to congratulate Peter Wainwright on becoming Chair-elect for the Division of Vertebrate Morphology. Peter will

take over the office of Division Chair in January 1997. I know he will do a great job guiding the Division through the next couple of years.

I also want to remind all of you that it isn't too late to make an entry for the new logo for the Division. So far I have received two drawings for consideration, both of which prominently feature a fish as the organism of focus. If any of you amniote biologists want to get in on this contest, now is the time to take pen in hand.

I will close with a final request: Try to keep thinking of new ways in which we, as a division, can stay in the forefront of comparative and integrative biology -- innovative ideas for symposia, workshops, featured speakers, etc. are always welcome. Any of the officers would be more than happy to talk with you about such thoughts by e-mail or in person at the meetings. Looking forward to hearing from you in Albuquerque.

Message from the Program Officer, John Hermanson

As I write this, the abstract deadline for the SICB 1996 Annual Meeting in Albuquerque is fast approaching. Hopefully, I'll be grumbling (wistfully) in a few weeks as I try to sift through piles of abstracts and sort them into practical and timely groupings within the meeting schedule. Our Division will be a prime mover behind a symposium on muscle being organized by John Bertram and Richard Marsh. The symposium, "Muscle Properties and Organismal Function: Shifting Paradigms," will be co-sponsored by the Division of Comparative Physiology and Biochemistry. One theme of this symposium is to look at

old concepts of muscle structure and function, and to present new interpretations of, or fundamental shifts in, the prevailing paradigms. This one-day symposium should be a great refresher for those whose research interest centers on neuromuscular biology, or for those who simply need an update on the subject.

I don't need to say too much about the symposium honoring Stephen Wainwright. Information about that session should be elsewhere in this newsletter. These sessions should draw a large and illustrious crowd of presenters and attendees.

International Congress on Vertebrate Morphology

Plans for the Fifth International Congress on Vertebrate Morphology (ICVM-5), July 12-17, 1997, in Bristol, U.K., are well underway, and members of the International Society of Vertebrate Morphology should be receiving the call for abstracts soon. Early registration for a reduced fee is possible until November 1, 1996 and the abstracts will be due December 15, 1996. As with ICVM-4 in Chicago, the abstracts will be published in the *Journal of Morphology*.

In addition to the contributed papers, ICVM-5 will feature plenary lectures by Dick Aldridge, Jenny Clack, Ted Garland, Axel Meyer and R. Nieuwenhuys. Symposia and workshops include:

- Chordate-craniate transition
- Comparative morphology of the oviduct and uterus
- Developmental basis of limb evolution
- Ecomorphology, elongation and limblessness
- Brainstem and motor patterns
- Flight
- The evolution of morphology
- Larval forms and invertebrate origins
- Asymmetry in chordates and endohinoderms

- Major transitions in trophic and cranial systems at the KT boundary
- Ontogeny and phylogeny
- The role of cells in evolution
- Pneumatization of the skull
- Allometry and heterochrony
- Computer techniques in teaching morphology
- Hagfish
- Imaging techniques
- The famous Howie Evans fish wet lab.

Bristol is about 120 miles west of London. The city preserves much of its historic past as a trade and maritime center. During 1997, Bristol will be celebrating the 500th anniversary of John Cabot's voyage to the New World.

For more information or to get on the mailing list, contact Jeremy Rayner, School of Biological Sciences, University of Bristol, Woodland Road, Bristol BS8 1UG, U.K. (Tel.: +44-117-928-8111; Fax: +44-117-925-7374; E-mail: icvm97@bristol.ac.uk) or visit the Web site at <http://www.bio.bris.ac.uk/icvm.html>.

Call for Papers - Zoologischer Anzeiger

Zoologischer Anzeiger - a journal of comparative zoology - morphology, systematics, biogeography.

Zoologischer Anzeiger, the oldest German scientific journal in the field of zoology (founded in 1878 by Victor Carus) has been reshaped with vol. 234. From vol. 234 on, *Zoologischer Anzeiger* is devoted to comparative zoology.

Contributions to be published here should include comparative aspects, at least in the discussion, better so also in principle, i.e. in the introduction, material and results sections. Comparison does not necessarily need to include phylogenetic aspects, although these are welcome. More-

are no page charges, 30 reprints are free. Manuscripts may be submitted to any of the editors, however, submittance to the Responsible Editor listed below is appreciated.

Professor Dr. Clas M. Naumann (Editor-in-Chief) and Dr. Michael Schmitt (Managing Editor): Zoologisches Forschungsinstitut und Museum Alexander Koenig, Adenauerallee 160, D-53113 Bonn, Germany, Fax: +49-228-9122-286, E-mail: m.schmitt@uni-bonn.de -- Insecta

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