



# NEWSLETTER

## Animal Behavior Society

Vol. 43, No. 4  
November, 1998

Susan A. Foster, Secretary

A quarterly publication

Cristin Hulslander, Editorial Assistant  
Department of Biology, Clark University, 950 Main St., Worcester, MA 01610 USA

### VOTE, VOTE, VOTE!!!!!! 1998 ABS ELECTIONS

In the last election, voter response was somewhat greater than previously, but could improve substantially. Election information and ballot are enclosed. You may vote using this ballot or by email, by responding to the ballot you will receive if the Central Office has your e-mail address and you have approved such use. Your name must be on the envelope or ballot to be counted.

### A MESSAGE FROM THE PRESIDENT

#### MEREDITH WEST

On October 14, 1998, Steve Emlen, Steve Nowicki and I visited at NSF with Drs. Mary Clutter and James Edwards from the BIO directorate and Dr. Bruce Umminger from the IBN division. We discussed the letter (reprinted here) we had sent ahead of time and discussed in more detail three general issues: the role of animal behavior in science education, the impact of animal behavior on integrative sciences, and growth and evolution of the field over the last quarter century. Of special concern to us is how to handle our success: now that we have trained a new generation of animal behaviorists, how can we support research and teaching careers? I would love to be able to say we solved the problem, obviously we did not. It is now out on the table and we hope to follow up our first meeting with further discussion and writing and other NSF and NIH meetings to propose concrete mechanisms to capitalize on our growth. In the letter and in the meeting, we emphasized that we need NSF (it has been the strongest and almost sole federal supporter of animal behavior research). But we also stressed that NSF needs us. Among the metaphors that recurred were animal behavior as a stepping

stone, a magnet, and a gateway, themes described in more detail in the letter.

The meeting was followed by an informal lunch session in which each of us described specific research directions that we thought would be of general interest. The lunch was well attended and engaging for the the three of us

Finally, Dr. Clutter has agreed to speak at our upcoming ABS meeting! Thus, the ABS has the opportunity to express its gratitude to NSF for its vision on our behalf in the past and has a chance to discuss about future directions. Feel free to e-mail me (mewest@indiana.edu) with reactions and ideas.

### LETTER SENT TO NSF

8 September, 1998

Dr. Mary E. Clutter  
Assistant Director  
Directorate for Biological Sciences  
National Science Foundation  
4201 Wilson Blvd., Room 605N  
Arlington, VA 22230

Dr. Bruce Umminger  
Director  
Division of Integrative Biology and Neuroscience  
National Science Foundation  
4201 Wilson Blvd., Room 685  
Arlington, VA 22230

Dear Drs. Clutter and Umminger:

We are writing as representatives of the Animal Behavior Society, International Society for Behavioral Ecology, and Society for Integrative and Comparative Biology. We hope to meet with you soon in Arlington to discuss the Animal Behavior Program within the IBN Division. Before such a meeting, we want to call your attention to the significance of the research and educational missions of animal behavior and behavioral ecology. We believe that our field has a special role to play over the next decade in setting the research agenda for the

biological sciences and in attracting students to careers in science.

The broad objectives of the modern discipline of animal behavior and behavioral ecology are to discover and disseminate basic information on the ecological and evolutionary significance of behavior including genetic, neurobiological, and experiential mechanisms. The field has a long history of discoveries about the nature of behavior itself and its diversity of form and function (discoveries leading to a Nobel Prize in 1973 to three of the founders: Konrad Lorenz, Niko Tinbergen, and Karl von Frisch). The scope of the field has diversified since the 1970's to capture the seminal role of behavior at many levels of biological organization from predicting behavioral strategies and exploring the dynamics of animal populations to illuminating the microgenesis of brain structure.

The growth of animal behavior and behavioral ecology as a scientific discipline stems from its inherently integrative nature, as it gathers together questions and methodologies across levels of analysis (e.g. from molecules to ecosystems), across levels of explanation (from proximate mechanism to ultimate evolutionary causation), and across diverse taxa including our own species. The cross-cutting nature of such behavioral studies challenges established boundaries in science (such as "ecology," "evolution," "genetics," "neurobiology," "psychology," "physiology") and in so doing, promotes and sustains the development of new conceptual approaches in biology overall. We believe that by exposing students to research rooted at the outset in integration, we have begun to train a generation of scientists who are less inhibited by traditional disciplinary boundaries in science regardless of the area they ultimately pursue.

The over arching commitment to an integrative approach is one of the major reasons that animal behavior/behavioral ecology is one of the most rapidly growing areas within biology. Such growth is attested to (1) by the proliferation of new behavioral journals and the expanded frequency of publication of established ones, (2) by swelling numbers of new investigators joining professional behavioral societies, (3) by very large enrollments in animal behavior classes at universities throughout the country, (4) by continued strength in numbers and quality of applicants to animal behavior graduate programs (including significant numbers of women), (5) by the NSF's 1995 designation of animal behavior as a separate field of graduate study and (6) by continued, strong interest in the field by educators and by the general public. That such growth is occurring at a time when other sciences are having difficulty attracting and retaining good students is an external sign of the power of our field to act as a magnet for science.

The robust state of our field also bears on potential health of many other areas within the biological sciences. Behavior is the obligatory gateway for a growing number of scientists seeking to understand biological entities such as the brain or genome. The quality of such neurobiological or genetic work rests squarely on the quality of knowledge about behavior, a fact with important implications for science and society. Our field now carries an increasingly significant burden of discovery and scrutiny to enable interdisciplinary work to be guided by the most relevant and up-to-date knowledge about the nature of behavioral systems and mechanisms. For example, some of the most exciting work in quantitative mapping of genes is emerging from work with social insects such as honeybees where it is possible to specify behavioral traits with ecologically known properties (such as specific details of foraging). So too, our knowledge of the brain begins and ends with knowledge of behavior. The contributions of animal behaviorists have made possible some of the most detailed studies of the crucial dynamic between brain growth and individual experience: young animals that do more grow brains with different characteristics than animals in less stimulating circumstances. Moreover, the specific nature of the animal's activity matters: motor learning, as opposed to spatial learning, has different neural consequences. An interdisciplinary dependency is also emerging between animal behavior/behavioral ecology and new approaches in computer science and bioinformatics. Such investigators are looking to us to learn about natural perception-action systems and animate instances of distributed intelligence. Behavior-based robotics, computational modeling, and situated cognition demand studies of naturally occurring organism-environment interactions to model and simulate neural, genetic, and evolutionary mechanisms.

The strong commitment of animal behavior and behavioral ecology to studying animals in appropriate evolutionary and ecological contexts has allowed the fast translation of basic knowledge into other fields of science and engineering. Our field has also shown a sustained ability to contribute to relevant issues in society today. Research in animal behavior and behavioral ecology has led to advancements in (1) conservation biology and wildlife management, by identifying social and ecological conditions under which the behaviors of target species maximize reproduction and survival, (2) Darwinian medicine, by illuminating possible adaptiveness of behavioral responses to disease and manipulation of such responses by disease organisms, discovering chemical compounds used in communication or protection that also have potential medicinal value, and identifying the genetic predispositions underlying behavioral disorders in animals and humans, and (3) social

cooperation in animals including humans, by identifying contexts in which natural selection promotes cooperation and minimizes conflict and (4) human development, by articulating the comparative rules of learning, communication, and cognition.

We must also emphasize the central role of our field in science education. The "magnet" and "gateway" properties of our field mentioned above are conspicuously apparent to educators. To begin with, people find animal behavior fascinating, as evidenced by the enormous and growing popularity of nature shows on television. This interest may be only superficial, but it provides a "hook" to bring students and the public into a deeper understanding of science as a process. There is a growing trend in introductory biology courses to begin exposing students to biology on the level of the whole organism -- which typically involves animal behavior -- and then moving from this point to lower and higher levels of biological organization. Duke University's "Science of Life" project, funded in part by an NSF RAIRE award, provides one example of this approach to innovation in the introductory biology curriculum. Our professional societies now find themselves devoting significant resources to accommodate requests for help in designing appropriate science curricula. Our members have enthusiastically responded to the call. For example, the ABS web-site ([www.cisab.indiana.edu/ABS](http://www.cisab.indiana.edu/ABS)) provides examples of classroom exercises in animal behavior provided by our members for K-12 educators and provides information on where teachers can obtain additional exercises. Professor Bob Matthews of the University of Georgia has shared one of his highly touted Wowbug exercises (starring pint-sized insects with 17-day life cycles, startling behaviors, and strange morphologies) for the ABS web page. Professor James Gould has developed computer interactive behavioral exercises for his animal behavior and general biology classes at Princeton, and Professor Susan Riechert, in cooperation with two colleagues at the University of Tennessee, is adding a computational component to behavioral exercises in an NSF-sponsored effort to obtain quantitative literacy in the life sciences.

It goes without saying that the accomplishments noted above would not have been possible without the vision and support of institutions such as the NSF. The NSF is the major source of funding for our field and the structure of the IBN division and the BIO directorate has directly facilitated the integrative efforts we have stressed throughout this letter. We are convinced that investment in the future of animal behavior and behavioral ecology will have a disproportionate positive impact on the nature of basic, biological research, as well as on science education. We hope to work with you to insure a

healthy future for our science and its links to future scientists.

We look forward to talking with you in person about some of these issues. Several of us plan to visit your offices at your earliest convenience. We will communicate with your secretaries to coordinate such a visit. We thank you for your time and for this and future opportunities to discuss the mutual goals of our societies and the NSF.

Sincerely yours,

Stephen T. Emlen, President, International Society  
for Behavioral Ecology  
Stephen Nowicki, Chair, Division of Animal  
Behavior, Society for Integrative and Comparative  
Biology  
Meredith West, President, Animal Behavior Society

### CALL FOR NOMINATIONS FOR ABS CAREER AWARDS

In recent years, the Animal Behavior Society has made a series of Career Awards. With these awards we recognize scholars in our discipline at various stages of their careers. These awards and their recipients are: **Distinguished Animal Behaviorist-** outstanding lifetime achievement in animal behavior. J.P. Scott, W.D. Hamilton, P. Marler, J. Maynard Smith, G. Woolfenden, L. Brower, L.R. Aronson, J.P. Hailman.

**Exemplar Award-** major long-term contribution. J.A. Stamps, D. Mock, J. Altmann, J. Alcock, D. Dewsbury.

**Quest Award-** outstanding seminal contribution. K. Sullivan, M. Zuk, J.C. Wingfield, P. Gowaty.

**Outstanding New Investigator-** outstanding contribution by a new investigator. L.A. Dugatkin, A. Basolo, D.P. Chivers, H.K. Reeve.

To make a nomination: All members of the society are encouraged to prepare and submit nominations for these awards. To aid the Selection Committee and to help codify the procedures involved, the following items must be submitted for a nomination: (1) a letter of nomination indicating the award for which the nominee is being proposed. It should provide details on the reasons the nominee should be considered for that award, (2) a curriculum vitae of the nominee, and (3) additional supporting letters from colleagues solicited by the nominator. These materials should be sent to David Duvall, Chair, Career Awards Committee, Department of Zoology, Oklahoma State University, Oklahoma State University, Stillwater, OK, 37996-1610, USA. E-mail: [duvalld@okway.okstate.edu](mailto:duvalld@okway.okstate.edu). DEADLINE: Feb. 1, 1999.

## DIRECTION OF CORRESPONDENCE

**ABS Newsletter** and general correspondence concerning the Society: Susan Foster, Dept. of Biology, Clark University, 950 Main St., Worcester MA, 01610-1477, USA. Deadlines are the 15th of the month preceding each Newsletter. The next deadline is January 15, 1999.

Articles submitted by members of the Society and judged by the Secretary to be appropriate are occasionally published in the ABS newsletter. The publication of such material does not imply endorsement by the ABS of the opinions expressed.

### **Animal Behavior Society Web Site:**

<http://www.cisab.indiana.edu/ABS>

**Animal Behaviour:** manuscripts and editorial matters: Animal Behavior Office, 2611 East 10th St., Office 170, Indiana University, Bloomington, IN 47408-2603, USA. Phone (812) 856-5541. Fax (812) 856-5542. Email: [aboffice@indiana.edu](mailto:aboffice@indiana.edu).

**Change of Address:** missing or defective issues of *Animal Behaviour*: Animal Behavior Office, 2611 East 10th St., Office 170, Indiana University, Bloomington, IN 47408-2603, USA. Phone (812) 856-5541. Fax (812) 856-5542. Email: [aboffice@indiana.edu](mailto:aboffice@indiana.edu).

## ABS OFFICERS

**President:** Meredith West, Departments of Biology and Psychology, Indiana University, Bloomington, IN, 47405, USA. E-mail: [mewest@bio.indiana.edu](mailto:mewest@bio.indiana.edu).

**First President-elect:** Andrew Sih, Center for Ecology, Evolution and Behavior, University of Kentucky, Lexington, KY, 40506-0225, USA. E-mail: [andy@darwin.ceeb.uky.edu](mailto:andy@darwin.ceeb.uky.edu).

**Second President-elect:** Patricia Gowaty, Institute of Ecology, University of Georgia, Athens, GA, 30602-2602, USA. E-mail: [gowaty@ecology.uga.edu](mailto:gowaty@ecology.uga.edu).

**Past President:** David Duvall, Dept. of Zoology, Oklahoma State University, Stillwater, OK, 74078, USA. E-mail: [duvalld@okway.okstate.edu](mailto:duvalld@okway.okstate.edu).

**Treasurer:** Marlene Zuk, Dept. of Biology, University of California, Riverside, CA, 92521, USA. E-mail: [mzuk@citrus.ucr.edu](mailto:mzuk@citrus.ucr.edu).

**Secretary:** Susan Foster, Dept. of Biology, Clark University, 950 Main St., Worcester, MA, 01610-1477, USA. E-mail: [sfoster@clarku.edu](mailto:sfoster@clarku.edu).

**Program Officer:** Emília Martins, Department of Biology, University of Oregon, Eugene, OR, 97403, USA. E-mail: [emartins@evolution.uoregon.edu](mailto:emartins@evolution.uoregon.edu).

**Parliamentarian:** Kimberly Sullivan, Department of Biology, Utah State University, Logan, UT, 84322-5305, USA. E-mail: [yejunco@cc.usu.edu](mailto:yejunco@cc.usu.edu).

**Editor:** Bennett G. Galef, Jr., Dept. of Psychology, McMaster University, Hamilton, ON, L8S 4K1, Canada. E-mail: [galef@mcmaster.ca](mailto:galef@mcmaster.ca).

**Members-at-Large:** Ken Yasukawa, Department of Biology, Beloit College, Beloit WI, 53511, USA. E-mail: [yasukawa@beloit.edu](mailto:yasukawa@beloit.edu).

Michelle P. Scott, Dept. of Zoology, University of New Hampshire, Durham, NH, 03824, USA. E-mail: [meps@christa.unh.edu](mailto:meps@christa.unh.edu).

James Ha, Regional Primate Research Center, University of Washington, Seattle, WA, 98195-7330, USA. [jcha@u.washington.edu](mailto:jcha@u.washington.edu).

**Historian:** Donald Dewsbury, Dept. of Psychology, University of Florida, Gainesville, FL, 32611, USA. E-mail: [dewsbury@webb.psych.ufl.edu](mailto:dewsbury@webb.psych.ufl.edu).

## CALL FOR SYMPOSIA FOR THE 2000 ANNUAL MEETING

Symposium proposals for the 2000 annual meeting must be submitted to the Program Officer by May 1, 1999. Proposals may be submitted by e-mail or regular post to Program Officer, Emília Martins, Department of Biology, University of Oregon, Eugene, OR 97403; e-mail: [emartins@evolution.uoregon.edu](mailto:emartins@evolution.uoregon.edu).

## CALL FOR APPLICATIONS ABS Student Research Grants

The ABS Research Grants Committee announces the 1999 competition for funds in support of student research. Only student members of ABS who are enrolled in graduate programs are eligible to apply. A total of \$15,000 (US) will be available to support ten students at a level of no more than \$1,000 each and an additional ten students for up to \$500 each. The DEADLINE for receipt of completed applications is 11 JANUARY 1999. No late applications will be accepted. Applications will be reviewed by two or three referees and funded projects will be announced by 1 April 1999. The preferred method for receiving and submitting application materials is at <http://www.cisab.indiana.edu/ABS/Grant/absgrants.html> through the world wide web and any browser.

For those who prefer not to submit electronically, a paper version of the application materials is available upon request from: Dr. Ken Yasukawa, Beloit College, Department of Biology, Beloit, WI 53511, USA.

## CALL FOR APPLICATIONS Developing Nations Research Grant

The Animal Behavior Society announces the second annual Developing Nations Research Grant Competition. Two grants of up to \$700 (US) will be awarded to provide financial support for scientific studies of animal behavior conducted by students or more established members of the Animal Behavior Society (ABS). Only current members of the Animal Behavior Society residing in developing nations are eligible (student members of ABS are also eligible for the Student Research Grants Competition). The following are not considered developing nations: The United States, Canada, Israel, Japan, Australia, New Zealand, Iceland, Norway, Sweden, Finland, Denmark, Germany, The Netherlands, Belgium, Luxembourg, France, The United Kingdom, Ireland, Switzerland, Austria, Italy, Spain, and Portugal. The DEADLINE for receipt of completed applications is 11 JANUARY 1999. All applications must be submitted in English. Applications will be reviewed by two or three referees and funded projects will be announced by 1 APRIL 1999. The preferred method for acquiring application materials is available at: <http://www.cisab.indiana.edu/ABS/Grants/index.html> through the world wide web and any browser. Applications can be submitted via e-mail at [mps@christa.unh.edu](mailto:mps@christa.unh.edu). Paper versions can be downloaded from the http address above, or are available upon request from Michelle Scott, Dept. of Zoology, University of New Hampshire, Durham, NH 03824, USA, E-mail: [mps.christa.unh.edu](mailto:mps.christa.unh.edu).

## 1999 WARDER CLYDE ALLEE COMPETITION

The Warder Clyde Allee Competition for Best Student Paper will take place on the second day of the 1999 Annual Meeting at Bucknell University 26 June - 1 July, 1999. Eligible students are encouraged to participate.

**Eligibility requirements:** Any independent student research (including, but not limited to, the doctoral dissertation) most of which is unpublished at the time of submission for the session is eligible. The work presented may be part of a larger collaborative effort, but the student should have the principal responsibility for the conceptualization and design of the research, collection and analysis of data and interpretation of results. Only single-authored papers are eligible. Entrants cannot have completed defense of the doctoral dissertation before the preceding ABS annual meeting (July 1998) and an individual can enter the Allee Competition only once per lifetime.

**To enter:** Students must indicate their desire to be considered for the competition by checking the

appropriate box on the abstract submittal form for the annual meeting, submit a written version of their paper which includes their addresses, telephone numbers and e-mail addresses, fill out a signed and dated form indicating that they meet all eligibility requirements (to be supplied to entrants after receipt of their written papers), present a spoken version during the 1999 Annual Meeting, attend both the Allee welcoming dinner on the evening before the competition day, and attend the banquet during the Annual Meeting. The spoken portion of the competition is limited to 18 students. If more than 18 students enter, the Allee Judges will select the best 18 submitted papers for the spoken paper session and further eligibility. Four (4) copies of a written version of no more than 7 double-spaced text pages and no more than a total of 4 tables and/or figures (this limit does not include abstract, references or acknowledgments) must be received by Dr. Patricia Adair Gowaty, ABS Allee Competition Chair, Institute of Ecology, University of Georgia, Athens, GA 30602-2602, USA by the due date for submission of abstracts for the annual meeting. **THOSE INTERESTED IN THE COMPETITION SHOULD BE SURE TO CHECK THE DEADLINE DATE FOR ABSTRACT SUBMISSIONS FOR PAPERS AT THE ANNUAL MEETING.**

If significant new results arise after submission, students may submit a one page addendum to their papers up to 30 days before the first day of the Annual Meeting.

Questions should be addressed to Patty Gowaty (e-mail: [gowaty@ecology.uga.edu](mailto:gowaty@ecology.uga.edu)).

## CALL FOR NOMINATIONS FOR SERVICE AWARDS

Beginning in 1996, the Animal Behavior Society makes up to three awards each year, called Exceptional Service Awards, to individuals from our organization who have consistently aided the Society in its organization and operations.

To make a nomination: Members of the Society are encouraged to submit nominations for this award. The nomination consists of a letter outlining the contributions that the nominee has made to the Animal Behavior Society. Additional supporting letters from colleagues may be submitted. These materials should be sent to: David Duvall, Chair, Career Awards Committee, Department of Zoology, Oklahoma State University, Oklahoma State University, Stillwater, OK, 37996-1610, USA. E-mail: [duvall@okway.okstate.edu](mailto:duvall@okway.okstate.edu). DEADLINE: Feb. 1, 1999.

**NOMINATIONS SOLICITED FOR THE  
WILLIAM C. BROWN ANIMAL BEHAVIOR  
TEACHING AWARD**

Thanks to the generosity of William C. Brown Publishers, the Animal Behavior Society solicits nominations for the William C. Brown Animal Behavior Teaching Award for 1999, to be awarded at the 1999 ABS meeting at Bucknell University. The awardee will receive a \$500 personal stipend and a grant of \$500 to enhance undergraduate instruction in animal behavior at the awardee's institution. Nominees for the award must show evidence of effective and innovative teaching and have a reputation among peers and students for excellence in undergraduate animal behavior instruction maintained over a number of years. Persons wishing to make a nomination must submit a one-page nomination letter and names, addresses and phone numbers of at least two additional references. Selection will be made by the ABS Education Committee. Upon receipt of a nominating letter, the committee will solicit supporting materials such as course syllabi, student evaluation summaries, letters from students or peers, documentation of teaching awards and innovations, textual or laboratory materials, and other indicators of superior undergraduate teaching. Nominators and nominees must be members of the Animal Behavior Society; current officers and committee chairs of the Animal Behavior Society are not eligible for nomination. Nominations must be submitted by **Jan. 15, 1999**, to: Dr. Michael Renner, Chair of the ABS Education Committee, Dept. of Psychology, West Chester University, West Chester, PA 19383.

**ETHNIC DIVERSITY FUND STUDENT  
REGISTRATION FEE AWARDS**

A limited number of awards will be made from the Ethnic Diversity Fund to cover registration fees for graduate students attending ABS annual meetings. Applicants must be enrolled in a graduate program at the time of application and must be members of under-represented minorities, including those living in North America who are of African, Asian, or Latin American descent and those who are of Native American heritage, citizens of Latin American countries, and non-white citizens of African countries. Awards will be made by a lottery including all valid applications received before 1 March 1999. A letter of application and a signed statement from the student's major professor confirming the student's graduate status should be directed to Marlene Zuk, Department of Biology, University of California, Riverside, CA 92521. E-mail: [mzuk@citrus.ucr.edu](mailto:mzuk@citrus.ucr.edu).

**TRAVEL AWARDS FOR LATIN  
AMERICANS  
ABS ANNUAL MEETING BUCKNELL  
UNIVERSITY  
26 June-1 July, 1999**

There will be 4 grants averaging \$200, awarded to Latin American faculty and students presenting a paper or poster at the annual meeting. These grants are intended to help defray the cost of housing and meals. Priority will be given to applicants with no other source of funds to support travel. Please send a letter indicating your academic status and your e-mail address, a copy of your abstract, and a budget of meeting-related expenses indicating the amount of funding from other sources to Dr. Michelle P. Scott, Department of Zoology, Rudman Hall, University of New Hampshire, Durham, NH 03824 USA or electronically to [mps@christa.unh.edu](mailto:mps@christa.unh.edu) by February 1, 1999. Applicants will be notified of results by February 21, 1999. If a letter of invitation from ABS will assist in obtaining additional travel funds, contact Zuleyma Tang-Martinez SZTHALP @umslvma.umsl.edu.

**POSSIBLE TRAVEL AWARDS  
INTERNATIONAL ETHOLOGICAL  
CONFERENCE, BANGALORE, INDIA,  
2-9 August 1999.**

The U.S. Ethological Conference Committee is applying for a grant from NSF for partial support of travel for younger scientists to attend the XXVI IEC meeting. If we are funded, the U.S. Ethological Conference Committee (USECC) will use funds to support younger scientists --defined as those who received their Ph.D. degree between 1994 and 1998 or will complete their Ph.D. during 1999. To apply for a travel award, please submit the following items to Dr. H. Carl Gerhardt, Division of Biological Science, University of Missouri, Columbia, MO 65211 to be received no later than 15 January 1999: (a) seven (7) copies of a 1-2 page curriculum vitae, (b) 7 copies of the abstract you will be submitting for consideration to the IEC program and (c) 7 copies of two letters of recommendation sent separately by the recommendors. For those who have not completed their Ph.D., it is desirable that the major professor include an assurance that the degree will be completed during 1999. Deadline for applications is 15 January 1999. We hope to notify all applicants of the outcome of their applications by 1 June 1999. Other questions about this competition may be addressed to Dr. Gerhardt at the address above (phone 573-882-7219; email: [bioscarl@showme.missouri.edu](mailto:bioscarl@showme.missouri.edu) or [gerhardth@missouri.edu](mailto:gerhardth@missouri.edu)).

## 1999 MEMBERSHIP RENEWALS

Renewal / Status forms for 1999 have now been mailed to all active and lapsed members with valid addresses on file. If you haven't received yours or your envelope was missing the information form or the renewal form, please contact the central office (aboffice@indiana.edu) or use the Application/Renewal form on the back of this newsletter. You may also download a form from the ABS web site at <http://www.cisab.indiana.edu/ABS/Member/index.html>. If your membership lapsed in 1998 and you wish to order 1998 journals, you may do so by pay 1998 dues (same as 1999) and note that you wish to receive 1998 journals on your form and/or check.

### ANIMAL BEHAVIOR SOCIETY ANNUAL MEETINGS

**1999:** 26 June - 30 June at Bucknell University,  
Lewisburg, PA.  
**2000:** 5 - 10 August at Morehouse College,  
Atlanta, GA.  
Watch the ABS website for details.

## MEETINGS

**XXVI International Ethological Conference** will be held in Bangalore, India, 2-9 August 1999. Bangalore is the garden city of India, and is the fifth largest metropolis of India. It has well-laid gardens, avenues and architecture. The main announcement has been mailed and should have been received by all ABS members. If you did not receive this information or have questions regarding the meeting, contact Dr.(Mrs) Shakunthala Sridhara, Secretary General, XXVI International Ethological Conference, Univ. of Agricultural Sciences, G.K.V.K., Bangalore-560 065, India.

### Symposium honoring Murray Littlejohn

Speciation and other forms of evolutionary diversification: Insights from studies of geographical variation and hybridization. The symposium will be held from 21-22 June 1999 at the University of Missouri, Columbia. Invited speakers include: Michael Arnold, Roger Butlin, Richard Harrison, Dan Howard, Carl Gerhardt, Murray Littlejohn, Stanley Rand, Kerry Shaw, and Jacek Szymura. Contributed papers matching the theme of the symposium plus other topics studied by Dr. Littlejohn (e.g., bioacoustics, interspecific interactions) are hereby solicited. Registration fee: \$40; Dinner honoring MJL: \$45. A limited number of dormitory rooms as well as commercial lodging will be available.

Interested individuals are urged to contact Carl Gerhardt (gerhardth@missouri.edu; 573-882-7219) to obtain information and registration materials.

## OPPORTUNITIES

The Secretary would like to remind you that although I try to avoid listing situations that are already filled, the time lag between submission and arrival of the Newsletter can cause this to occur. Please contact those offering the opportunities before applying.

**Postdoctoral and graduate opportunities in animal behavior at Indiana University.** The Program in Animal Behavior at Indiana University seeks outstanding candidates for training in animal behavior that combines approaches from biology, neuroscience, and psychology. POSTDOCTORAL candidates should apply by March 1st for a one-year position with the possibility of funding for two years. PREDOCTORAL candidates should apply by Jan. 15th for fall 1999. Inquiries to CISAB, 402 N. Park, Indiana University, Bloomington, IN 47405; (812) 855-9663; FAX (812)855-0411, email: lisummer@indiana.edu, internet: <http://www.cisab.indiana.edu>. Applications by minorities and women are encouraged. AA/EOE. US citizenship is not required.

### Undergraduate Summer Research Internships

The Center for the Integrative Study of Animal Behavior (CISAB) at Indiana University invites applications to our NSF-supported Research Experiences for Undergraduates Program in Animal Behavior. Subject to renewal a total of 10 internships will be awarded to students to participate in this program from 31 May through 7 August 1999. Each internship provides at least a \$2500 stipend, room & board, and transportation costs to and from Indiana University or the study site. Undergraduates from groups underrepresented in science (women, racial/ethnic minorities, first generation college, low income families, or persons with disabilities) are encouraged to apply, but all applicants will be considered. Applications will be accepted until all positions are filled. For further information and application forms contact Linda Summers, at (812) 855-9663 or lisummer@indiana.edu.

## 1999 ANIMAL BEHAVIOR SOCIETY MEETING BUCKNELL UNIVERSITY, LEWISBURG, PENNSYLVANIA

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Bucknell University is pleased to invite you to attend the 36th Annual Meeting of the Animal Behavior Society. The Local Organizing Committee is planning an exciting program and hope that you will make plans to attend.

**Meeting Dates:** June 26 - 30, 1999

**Web Site:** Information about the meeting can be accessed on the World Wide Web at the ABS web site: <http://www.cisab.indiana.edu/ABS>

**Conference Site:** Bucknell University is in historic Lewisburg, Pennsylvania, a small, picturesque town located in central Pennsylvania. The 300-acre campus overlooks the rolling hills of central Pennsylvania and the Susquehanna River. Meeting spaces are very close to one another as well as to residence halls. The campus is hilly in parts, so if you will need assistance moving from one building to another, please notify the organizers, who will accommodate these needs.

**Weather and Suggested Attire:** Summer days in Lewisburg are usually quite pleasant, though it is not unusual for them to be warm and humid. The evenings usually cool the air. All of the assigned residence halls, dining rooms, and meeting areas are air-conditioned. Shorts and sandals are acceptable for all meetings, and area restaurants accept casual attire.

**Housing:** Most participants will be housed in Vedder Hall. Double rooms predominate although some singles are available. A limited number of apartment-style spaces are available on the west-campus for families requesting them. With the three housing options there are two meal plan packages.

**Extra days:** The conference package includes Wednesday night lodging and breakfast on Thursday, after the concluding celebration Wednesday night. Participants who wish to come a day early or stay a day late may do so at a nominal charge, without food service.

**Parking:** All registered participants may park on campus for free. A parking pass will be included in your registration packet.

**Program:** The program will be made available on the ABS web page. We will follow the shortened schedule tried last summer in Carbondale, so that the meeting is a total of only 4 days in length. In addition to the film session and other regular meeting activities, we will have a special evening presentation by the ABS Education committee, an "academic karaoke" night, and an image exhibit with art and photographs from ABS members (see Call for Papers for details). The opening cookout on Saturday evening is a special event, for which there is a separate sign-up. The closing celebration and dinner is included in each meal plan.

Gail Michener will give the Keynote Address. Fellows lectures will be presented by Lynne Houck and Stephen Nowicki.

**Closing celebration:** This year, a less formal closing celebration will take the place of the traditional banquet on Wednesday evening. This will be a special time when we come together and recognize the meritorious achievements of some of our members, and socialize with friends over dinner and music.

**Off-Campus lodging.** Although we strongly urge participants to stay on campus, there are several hotels and campgrounds nearby. Hotels range from national chains like Best Western (524-5500) and Days Inn (523-1171) to distinctly local ones like The Pineapple Bed and Breakfast (524-6200) and the recently restored historic Lewisburg Hotel (523-7800), or others (call the Conference Office (524-3095) for information). There are private campgrounds nearby and a state park less than 20 miles away. Participants wishing to book rooms at these hotels or spaces at the campsites should do so on their own. Please note that the area code for this part of Pennsylvania will change on December 5 to 507.

**Other Events and family information:** Families are welcome at these meetings, and you will find that Lewisburg and Union County are very family-friendly.

Of particular interest to families is the existence of nearby Knoebel's Grove Amusement park, a charming old-fashioned, no-admission fee amusement park, a twenty minute drive. Also, there is a wonderful Farmer's Market every Wednesday in Lewisburg which brings area farmers, bakers, crafters, and the like to peddle their wares, including several Amish farm families. Natural attractions, well within an hour's drive, include Penn's Cave, explored by boat; Woodward Cave; Tall Timbers national landmark; R.B. Winter State Park and nature center, and many pleasant short hiking trails within the immediate area.

Bucknell's campus includes an 18-hole golf course, lighted tennis courts, and playing fields. Participants have access to all fieldhouse facilities including a weight room, indoor track, and squash and racquetball courts. Additionally, we will make available 6 hours of swimming time in an indoor pool on three afternoons just before dinner. Information on reserving tee times will be sent to interested participants, who must arrange this themselves.

**Access to Bucknell University:** Bucknell is an easy drive from most east coast cities, as it is on U.S. Route 15, 10 miles south of Interstate 80. The most convenient airport is Harrisburg International, a 1 hour drive. We will offer approximately 4 shuttles a day, for which riders will be charged \$40 round-trip. We MUST have your arrival and departure times by May 1st in order to assure you of a space on our shuttles. Otherwise, a list of rental car agencies will be supplied.

There is no public transportation in Lewisburg and taxis are extremely limited. The downtown area, including many fine shops and a variety of mostly American fare restaurants, is well within walking distance of the campus.

**Child Care:** We will provide a list of babysitters with American Red Cross certification to those who request it. We have also contacted local childcare facilities, who may have some space available to accommodate the needs of our conference-goers.

**BUCKNELL UNIVERSITY**  
**ANIMAL BEHAVIOR SOCIETY MEETING, June 26-30, 1999**

**HOUSING RESERVATION FORM**

**Mail to:** ABS 1999 Office, c/o Michael E. Pereira, Dept. of Biology, Bucknell University, Lewisburg, PA 17837

**PACKAGE DESCRIPTION:** Two packages are available to provide on-campus housing and meals. Please complete and return this form, along with full payment, no later than May 1, 1999. Confirmation letters will be sent, along with travel directions, upon receipt of this form with payment.

**RESERVATION INFORMATION** (Please use a separate form for each person.)

**Name (Last, First, Initial):** \_\_\_\_\_ **M** **F** \_\_\_\_\_

**Mailing Address:** \_\_\_\_\_

**City/State/Province/etc.** \_\_\_\_\_

**Phone** ( ) \_\_\_\_\_ **Fax** ( ) \_\_\_\_\_ **E-mail** \_\_\_\_\_

Double occupancy roommate request: \_\_\_\_\_

Only mutual roommate requests will be honored. If no request is made, a roommate will be assigned.

Please note any special conditions with which you need assistance: \_\_\_\_\_

**FEE CALCULATION**

**Package A** (Lodging Sat-Wed/Bkfst Sun-Thurs/Lunch Sun-Wed, closing celebration)

DOUBLE OCCUPANCY \$190/person = \$ \_\_\_\_\_

SINGLE OCCUPANCY \$215/person = \$ \_\_\_\_\_

FAMILY APTS (limited availability, limited to families, includes one meal plan)  
 \$366/family = \$ \_\_\_\_\_

(add'l meal plans for this option only @ \$66/person. Circle: 1 2 3 ) = \$ \_\_\_\_\_

**Package B** (Package A, plus all dinners)

DOUBLE OCCUPANCY \$215/person = \$ \_\_\_\_\_

SINGLE OCCUPANCY \$240/person = \$ \_\_\_\_\_

FAMILY APTS (limited availability, limited to families, includes one meal plan)  
 \$390/family = \$ \_\_\_\_\_

(add'l meal plans for this option only @ \$90/person. Circle: 1 2 3 ) = \$ \_\_\_\_\_

**Extra nights** (available June 25 and July 1)

DOUBLE OCCUPANCY Date: \_\_\_\_\_ \$25/person/night=\$ \_\_\_\_\_

SINGLE OCCUPANCY Date: \_\_\_\_\_ \$30/person/night=\$ \_\_\_\_\_

FAMILY APARTMENTS (limited availability)

I plan to arrive on (date): \_\_\_\_\_ at (time): \_\_\_\_\_

I plan to depart on (date): \_\_\_\_\_ at (time): \_\_\_\_\_

**PAYMENT IN U.S. FUNDS:** Deadline for reservation and prepayment is **May 1, 1999**. Bucknell University can not accept credit card payments. Please pay by check or money order, in U.S. Funds, drawn on a U.S. Bank, made payable to **Bucknell University**.

All rooms are air conditioned and have telephones. Linen is provided, which includes sheets, a blanket, pillows, and towels. Extra blankets are not provided. The halls have communal bathroom facilities adequate for each floor.

**BUCKNELL UNIVERSITY**  
**ANIMAL BEHAVIOR SOCIETY MEETING, June 26-30, 1999**

**REGISTRATION FORM**

**Mail to: ABS 1999 Office, c/o Michael E. Pereira, Dept. of Biology, Bucknell University, Lewisburg, PA 17837**

**NOTE TO PRESENTERS:** This completed form and payments must be received by **March 12, 1999**. If submitting an abstract, please sign the following statement:

By submission of this abstract to ABS, I declare that the research reported herein was conducted in compliance with the ABS Guidelines and all laws applicable to my work.

signature: \_\_\_\_\_

**REGISTRANT INFORMATION:** (One registrant per form. Photocopy form as needed.)

Name (Last/First/Initial): \_\_\_\_\_

Name preferred on Badge: \_\_\_\_\_

Institution: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

City/State-Province/Zip-Postal code/Country: \_\_\_\_\_

Phone ( \_\_\_\_ ) \_\_\_\_\_ Fax ( \_\_\_\_ ) \_\_\_\_\_

E-mail \_\_\_\_\_

<b>FEE SCHEDULE:</b>	<i>On/Before May 1, 1999 *</i>	<i>After May 1, 1999</i>		
ABS Member	\$140	\$160		\$ _____
Non-member	\$165	\$185		\$ _____
Student	\$75	\$90		\$ _____
Guest/Spouse	\$65	\$85	# _____	\$ _____
Sat Evening Cookout	\$15	\$20	# _____	\$ _____
Shuttle from Harrisburg	\$20**	NA	# _____	\$ _____
Shuttle round trip	\$40**	NA	# _____	\$ _____
T-Shirts: Indicate Size: (M L XL)	\$10	\$15	# _____	\$ _____
		<b>TOTAL ENCLOSED</b>		<b>\$ _____</b>

Do have any special conditions with which you need assistance? Please describe:  
 \_\_\_\_\_  
 \_\_\_\_\_

\*\*We must have airline arrival times by May 1<sup>st</sup> to ensure a spot on the shuttle.

Please send information on childcare \_\_\_\_\_ Ages of children \_\_\_\_\_

**METHOD OF PAYMENT: US FUNDS DRAWN ON A US BANK ONLY**

Payment must accompany form. Bucknell University can not accept credit card payments.

Deadline for reservation and payment is **May 1, 1999**. (March 12, 1999 for presenters.)

Check made payable to **Bucknell University**.

## CALL FOR PAPERS

1999 ABS Annual Meeting; June 26-30  
Bucknell University; Lewisburg, PA

**FINAL DEADLINE FOR RECEIPT OF ABSTRACTS AND IMAGES: March 12, 1999.**

**ABSTRACTS** must be submitted in electronic form, either through the ABS WWW page (<http://www.cisab.indiana.edu/ABS/>) or via regular mail (hard copy, 3.5" floppy diskette, and **abstract transmittal form**). No late or FAX submissions will be accepted.

**REGISTRATION MATERIALS** and payment must be received by Bucknell University hosts at the same time as the abstract is submitted. Registration forms are included in this ABS Newsletter.

**LIMITATIONS:** ABS members may present or sponsor only one contributed paper at an Annual Meeting. When a member is a co-author with a non-member who is presenting, the member sponsors the paper. A member may show one film and participate in an invited paper session or symposium in addition to giving or sponsoring one contributed paper. The research reported at an Annual Meeting must comply with all applicable laws concerning animal care and welfare.

### **CONTRIBUTED PAPERS:**

**TALKS** will be 20 min. in length with 15 min. for presentation and 5 min. for discussion. A single slide projector (standard 2x2) and an overhead transparency projector will be available.

**POSTER PAPERS** will be on display throughout the meetings, with hours for author attendance scheduled during two evenings. Poster papers are highly recommended: posters can facilitate discussion, perusal of data and one-to-one exchanges of ideas. The **FOUNDERS AWARD** will be given for the best poster paper at the Annual Meeting. All ABS members are eligible to compete. If you wish your poster to be considered for this award, please mark that category on the Abstract Transmittal Form. Detailed instructions will be mailed to those in the competition.

**ALLEE AWARD:** The W.C. Allee Award will be presented for outstanding student paper at the Meeting, and is judged on the basis of both a talk and a written manuscript. Any independent research that is largely unpublished by March 12, 1999 is eligible for this cash and book award, provided that the student has not competed before and has not completed the final defense of a doctoral dissertation before June 1998. Each paper must have a single author. To compete, register, submit an abstract, and send 4 copies of a manuscript (no more than 7 pages of double-spaced text plus 4 tables and/or figures, written in the *Animal Behaviour* format) to the Program Officer. A single page update may also be submitted to the Program Officer up until June 10.

**IMAGE DISPLAY:** The ABS Education committee is soliciting entries for a new Image Display. Images will be displayed during the Annual Meeting and possibly be added to the ABS WWW site for use as a teaching resource. Images may include photographs or other artwork that exhibit animals, behavior, study sites, or methodology. They must also include an educational caption explaining why the image is important (see instructions). Images should be mailed to the Program Officer: Emilia P. Martins; Dept. of Biology; University of Oregon; Eugene, OR 97403 USA **by March 12, 1999**. They may be retrieved by contributors at the end of the meeting.

**SYMPOSIA AND INVITED PAPER SESSIONS:** ABS strongly encourages members to plan a session of invited papers or a symposium for a future meeting. If interested, please contact the Program Officer as soon as possible for proposal format and additional information. Proposals for the 2000 meeting in Morehouse College, Atlanta GA must be submitted by **1 May 1999**.

## ABSTRACT PREPARATION & SUBMISSION

1. Abstracts and registration materials must be received no later than **March 12, 1999**.
2. The **format** for your abstract must be as follows:  
FIRST LINE: Title - Use all capital letters. Titles on all forms must be the same.  
SECOND (and maybe third) LINE: Authors' names and complete mailing address. Use "&".  
FOLLOWING LINES: Text of abstract organized as follows:
  - a. Specific objectives - include a brief statement.
  - b. Methods - include a brief description as necessary.
  - c. Results - provide a clear, specific summary of findings.
  - d. Conclusions

Align title, authors and text along left margin, indenting only the first line of text. Example:

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### MECHANISMS OF VOCAL PRODUCTION IN BUDGERIGARS

E. F. Powell, O. N. Larsen & R. J. Dooling, Department of Psychology, University of Maryland, College Park, MD 20742

How birds produce complex vocalizations is still not completely understood, even though much is known about the anatomy of the vocal apparatus...

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3. The abstract must not exceed 200 words, including the title and authors. All hard copies must be laser printer quality & printed within a space 3 in. high and 7 in. wide near the top of the page.
4. **Abstract submission** (to arrive by midnight, **March 12, 1999**).
  - **WWW submission:** We prefer that you submit your abstract electronically via the ABS Web site (<http://www.cisab.indiana.edu/ABS/>). Click on "Meetings" and follow the instructions for submitting an abstract.
  - **Regular Mail submission:** Alternatively, you may mail a 3.5" diskette with the abstract (files in a major word-processor and on a PC diskette preferred) to the Program Officer (address below). The diskette should be labeled with name of presenting author, title of abstract, and software/version used; no other files should be on the disk. If submitting an abstract via regular mail, include also one **hard-copy** of the abstract and a copy of the **Abstract Transmittal Form**.
  - Mail **registration materials and payment** to the local hosts at Bucknell University. In doing so, please **sign the statement** regarding ABS guidelines. Your abstract will not be considered until registration materials and signed statement have been received.

## IMAGE PREPARATION & SUBMISSION

1. No more than 2 images per person will be accepted.
2. Images should be no smaller than 8x10 in. and no larger than 24x36 in.
3. Each image must include an **educational caption** including a) explanation of why the image is important, b) citation (if the image has been published), c) references for further information, and d) name and address of submitter.
4. Also include a **signed statement** indicating a) that the image is copyrighted and that ABS has permission to exhibit it, and b) that ABS will not be held responsible in case of damage or loss.
5. **Mail** images, caption, and copyright statement to the Program Officer (address below) by **March 12, 1999**. Images may be retrieved at the end of the meeting.

**Dr. Emília P. Martins, ABS Program Officer**  
**Department of Biology**  
**University of Oregon**  
**Eugene, OR 97403 U.S.A**

## ABSTRACT TRANSMITTAL FORM

1999 ABS annual meeting – Bucknell University

Return this form to Emilia P. Martins, ABS Program Officer; Department of Biology; University of Oregon; Eugene, OR 97403 U.S.A. If you do not submit an abstract through the ABS Web site, also include a copy of the abstract on 3.5" floppy disk. Registration materials go to Bucknell.

1. Title of paper (Please type or print)

2. Authors' Names (first, middle initial, last; place asterisk to left of presenting author's name.)

3. Institutional Affiliation

4. Mailing Address of Presenting Author

5. E-mail (please!)

Phone (office):

(home):

6. Category of Presentation (check one only)

ABS Poster

ABS Regular 20-min talk

ABS Allee Award talk

ABS Founders Award Poster

ABS Symposium talk or Invited Paper

7. Category of ABS membership of presenting author (check one only):

Regular

Student

Foreign Scientist

Sponsored Non-Member

8. Please rank (e.g., "1" for first choice) the top three categories that best describe your paper topic. (Your choices do not guarantee that your paper will be in a session by that name.)

sensory mechanisms

sexual selection

communication

evolution/phylogeny

theory

foraging

predator/prey

parental care

development/learning

hormonal or neural mechanisms

other \_\_\_\_\_

9. Would you be willing to chair a session (Please!)?

Yes

No

If yes, please note topics in which you are particularly interested or any time conflicts at meeting

(Also fill in email above!)

10. Is this presentation based on research sponsored by an ABS research grant?  Yes  No

11. Is this your first presentation at a national ABS meeting?

Yes

No

12. A single standard 2x2 slide projector and an overhead transparency projector will be available. Do you also require a VHS tape player? (NOT available for posters)  Yes  No

13. If you find that you are unable to present your paper at the meeting, please contact BOTH the Program Officer and local hosts BEFORE THE START OF THE MEETING. Failure to do so may result in being barred from presenting a paper the following year.

## CANDIDATES FOR THE 1998

### ELECTION OF OFFICERS

#### SECOND PRESIDENT ELECT

##### **Michael D. Beecher**

Education: B.A., 1963, Reed College  
Ph.D., 1970, Boston University  
Present position: Professor of Psychology & Zoology, University of Washington  
Research interests: Evolution and mechanisms of animal communication; bird song; social behavior; kin recognition.  
ABS and related activities: ABS Fellow, 1998; Editor, *Animal Behaviour*, 1994-97, Editorial Board, 1985-1988, 1997-present; ABS-ASAB Negotiating Committee, 1997; ABS-ASAB Liaison Committee, 1997-present; Chair, Ethics Committee, 1987-1990; Allee Award judge, 1986; NSF Animal Behavior Panel, 1992-1995; DAB-ASZ Symposium organizer, 1980; Head, UW Animal Behavior Program, 1980-present.

##### **Susan A. Foster**

Education: B.S., 1975, University of Wisconsin, Madison.  
Ph.D., 1984, University of Washington  
Present Position: Associate Professor of Biology, Clark University, Worcester, MA  
Research Interests: Evolution of behavior and life history; phylogenetic and comparative approaches to the study of behavioral homoplasy and ritualization; geographic variation in behavior.  
ABS and related activities: ABS symposium organizer, 1991, Member, ABS Research Grants Committee 1991-1992; ABS Secretary 1993-1999; recipient, NSF Presidential Faculty Fellowship, Member, Advisory Panel for Presidential Faculty Fellowships (NSF, 1993), for Dissertation Awards (NSF 1993), for Population Biology and Physiological Ecology (NSF 1995), for Leadership Opportunities in Science and Humanities Education (NEH, NSF, FIPSE, 1994), Member, Committee of Visitors for Physiology and Behavior Cluster (NSF 1994), for IBN Division (NSF 1997). *Copeia* editorial board 1994-present, ASIH Board of Governors 1998-2003.

#### SECRETARY

##### **Debra L. Forthman**

Education: B.A., 1976, University of California, Riverside  
M.A., 1979, University of California, Los Angeles  
Ph.D., 1984, University of California, Los Angeles  
Present Position: Director of Field Conservation, Zoo Atlanta, Atlanta, GA  
Research Interests: feeding behavior and ecology; human-wildlife conflict; primate, carnivore, ungulate social behavior and development; behavior management in domestic and wild animals in captivity.  
ABS and related activities: Member, Film committee (1986-89), Member, Board of Professional Certification (1993-1996), Chair, Animal Care Committee (1996-present), Certified Applied Animal Behaviorist.

##### **Stephen M. Shuster**

Education: B.S., 1976, University of Michigan  
M.S., 1979, University of New Mexico  
Ph.D., 1987, University of California, Berkeley  
Current Position: Associate Professor of Invertebrate Zoology, Northern Arizona University, Flagstaff, AZ  
Research Interests: Mating system evolution; alternative mating strategies; behavioral and population genetics; sexual conflict; isopod crustaceans.  
ABS and related activities: Allee Competition, 1986; ABS Young Investigator Travel Award 1991; Organizing Committee, 1996 ABS Meeting, Flagstaff, AZ; Reviewer, *Animal Behaviour* since 1989.

#### MEMBER AT LARGE

##### **Shelley Adamo**

Education: B.Sc., 1985, University of Toronto  
Ph.D., 1990, McGill University  
Present Position: Assistant Professor of Psychology, Dalhousie University  
Research Interests: ecological immunology (selection pressures on immune systems and immune-behavioural connections); animal communication in insects and cephalopods.  
ABS and related activities: Reviewer for *Animal Behaviour*, Associate Director of the Grass Fellowship Program (Summer, 1999, Marine Biol. Lab), Secretary/Treasurer for the Halifax Chapter of the Society for Neuroscience (1997).

**Scott P. Carroll**

Education: B.S., 1980, University of Minnesota  
 M.S., 1983, University of Oklahoma  
 Ph.D., 1991, University of Utah  
 Present Position: Research Associate Professor of  
 Entomology, University of California, Davis  
 Research Interests: Adaptive plasticity in male mating  
 strategy and rapid ongoing evolution in host  
 plants of the soapberry bug.  
 ABS and related activities: Awards Committee, 1995-  
 1997.

**The order of listing of candidates may influence voting. Please avoid this bias in making your choices. This year the candidates are listed in alphabetical order.**

**CANDIDATES FOR THE 1998 ELECTION  
 TO MEMBERSHIP ON THE U.S.E.C.C.**

**Only U.S. members of ABS may vote in this part of the election. The U.S.E.C.C. has six members, three of whom serve as delegates to the IEC Council. The U.S.E.C.C. term is six years and the terms of two members expired in August 1998. Two new members will be elected. The candidate with the most votes becomes a member of the U.S.E.C.C. and a delegate to the IEC Council. The runner-up also becomes a member of the U.S.E.C.C. and will serve as an alternate to the IEC Council in the event the delegate is unable to attend.**

**Jennifer Fewell**

Education: Ph.D., 1988, University of Colorado,  
 Boulder  
 Present Position: Assistant Professor of Biology,  
 Arizona State University, Tempe, AZ  
 Research Interests: Evolution of social structure in  
 insects including the contribution of genetic  
 variation to individual task choice, and the  
 integration of individual behavior into division of  
 labor at the group level.  
 ABS and related activities: Chair, Membership  
 Committee (1997-1999); Judge, Founders'  
 Memorial Poster Award (1997); President-elect,  
 North American Section of the International  
 Union for the Study of Social Insects (IUSSI).

**Lynne D. Houck**

Education: Ph.D., 1977, University of California,  
 Berkeley  
 Present Position: Associate Professor of Zoology,  
 Oregon State University, Corvallis, OR  
 Research Interests: Sexual selection and the evolution  
 of behavior, behavioral determinants of  
 reproductive success, and chemical communication  
 during reproduction in terrestrial salamanders.  
 ABS and related activities: ABS Fellow, 1997; ABS  
 Program Officer (1989-1992), Co-host for the  
 2001 ABS annual meeting.

**Fred Singer**

Education: Ph.D., 1987, University of Minnesota  
 Present Position: Associate Professor of Biology,  
 Radford University  
 Research Interests: Behavioral ecology, evolution and  
 mechanisms of communication; use of historical  
 case studies to promote active learning in humans.  
 ABS and related activities: Proxy Delegate 1995  
 IECC, NSF Travel award to 1991 IEC.

**Paul J. Weldon**

Education: Ph.D., 1983, University of Tennessee,  
 Knoxville  
 Present Position: Professor of Biology, College of  
 Notre Dame, Baltimore, MD, and Research  
 Zoologist, Conservation and Research Center,  
 Smithsonian Institution, Front Royal, VA  
 Research Interests: Vertebrate chemical ecology, both  
 chemical production and chemical perception in  
 snakes, crocodylians, and artiodactyl mammals.  
 ABS and related activities: Member, ABS Committee  
 for Endowments (1998-2000), Member, Natural  
 Products Advisory Panel of National Academy of  
 Sciences and the Science Advisory Council of the  
 National Aquarium in Baltimore.

**PROPOSED CHANGES IN THE ABS  
 CONSTITUTION:**

*A vote of the ABS membership is required to change the Constitution of the Society. The following changes were approved by the Executive Committee at the Annual Meeting in July. For these changes to take effect, the membership must vote in favor of the changes.*

The proposed changes (next page) change the terms Editor to Executive Editor and Editorial Board to Editorial Advisory Board in compliance with usage on the cover of *Animal Behaviour*.

Proposed deletions are shown in [brackets] and proposed additions are underlined.

#### **Article 4. Officers**

##### **Section 1. The officers of this Society are:**

[Editor] Executive Editor

##### **Section 3. Term of office:**

The term of office shall be one year except in the case of Secretary, Treasurer, Parliamentarian, [Editor] Executive Editor, and Program Officer, whose terms shall be three years each.

##### **Article 8. Section 2 d. (2)**

The [Editor] Executive Editor shall be replaced by [a member of the Editorial Board] one of the Editors chosen by the President and approved by the Executive Committee.

END OF ELECTION INFORMATION. BALLOT  
ON PAGE 19

#### **OPPORTUNITIES CONTINUED.....**

**Volunteers** needed for study of behavioral ecology of Utah prairie dogs. Topics of research include multiple paternity, alarm calling, infanticide, communal nursing, levels of inbreeding, demography, and population dynamics. Study colony is in Bryce Canyon National Park, Utah. Field season starts 5 March and ends 10 July. Academic credit is possible, and several previous field assistants have applied research towards either senior thesis or Master's degree. Please contact John L. Hoogland, The University of Maryland, Appalachian Laboratory, Frostburg, Maryland. Telephone: 301-689-7130 (work after 10 December; before 10 December, call 301-689-3115.x216) or 301-689-8076 (home). FAX: 301-689-7200 (after 10 December; before 10 December, use 301-689-8518); E-mail: hoogland@al.umces.edu

**Opportunity in QTL mapping of learning behavior in honey bees.** We have recently identified several quantitative trait loci that are involved in Latent Inhibition and Reversal Learning in honey bees. We will now begin a series of studies designed to more specifically map these loci and to understand the ecological relevance of individual variation in these types of learning behavior. Experience in, or a willingness to learn, the following techniques is required: instrumental insemination and breeding of honey bees; PCR-based techniques involved in identification of QTLs; behavioral mechanisms of

learning. The position will be for 2-4 years. Address inquiries and/or send CV and addresses of three references to Dr. Brian H. Smith, Depts. of Entomology and Evolution, Ecology, and Organismal Biology, 1735 Neil Ave, Ohio State University, Columbus, OH 43210 (smith.210@osu.edu; <http://iris.biosci.ohio-state.edu/honeybee>).

##### **Systems neurobiology or computational**

**neuroscience.** Cornell University. The Section of Neurobiology and Behavior invites applications for a tenure track position at the assistant professor level. Applicants must have a Ph.D., an excellent record of scientific productivity, and a commitment to undergraduate and graduate teaching. Candidates should have research interests in neuroethology with expertise in one or more of the following areas: sensory or motor systems, evolutionary neurobiology, neural modeling. Send Curriculum Vitae, Statement of Research Interests, Statement of Teaching Interests, up to three publications, and three letters of reference to: Chair, Search Committee, Section of Neurobiology and Behavior, Cornell University, Ithaca, NY 14853-2702. Review of applications begins December 1 1998. Women and minority candidates are strongly encouraged to apply. Cornell University is an Equal Opportunity/Affirmative Action Employer.

**Volunteer** primate keepers are needed to work with the gibbons at the International Center for Gibbon Studies, an hour north of Los Angeles. Duties include preparing and distributing food, changing water, cleaning enclosures, observing behavior, entering data into Macintosh computer, maintaining grounds, etc. Work is from approximately 6:30am to 5pm, seven days per week. Opportunities for time off depend on the number of volunteers. Lodging is provided; volunteers are responsible for transportation to and from the center and for their food while here. Applicants must be at least 20 yr old, self motivated, love animals, get along with a variety of people, be in good physical condition and able to work outside in extreme weather. They will need to have the following medical tests: stool cultures, ova and parasite stool test, standard blood chemistry and hematology, tuberculosis and Hepatitis B. Also required are vaccinations for tetanus within the last five years, measles (Rubeola), and (if the test showed no titer) Hepatitis B. Applications may be requested from Patti Dahle, Volunteer Coordinator at (805) 943-4915 or [gibboncntr@aol.com](mailto:gibboncntr@aol.com).

**Behavioral Biologist.** The Division of Biological Sciences at the University of Missouri-Columbia invites applications for a tenure-track faculty position at the assistant or associate professor level. The successful applicant will study basic mechanisms and/or evolution of behavior. We are particularly interested in individuals whose research interests complement strengths of our current faculty: behavioral ecology, evolution of behavior, and neuroethology. (website: <http://www.missouri.edu/~biosciwww>). The Division offers highly competitive salaries, generous start-up packages, modern research laboratories and support facilities, abundant field sites in the vicinity of Columbia, an active graduate program with institutional support for students and postdoctoral associates, and an interactive faculty. We are firmly committed to fostering ethnic and racial diversity on our faculty and strongly encourage applications from women and members of minority groups. The University features a new interdisciplinary program in Conservation Biology. Send curriculum vitae, selected reprints, statement of teaching and research interests, and three letters of reference to Dr. John David, Chair, Division of Biological Sciences, University of Missouri, Columbia, MO 65211-7400. Complete applications should be received by December 1, 1998. The University of Missouri is an Equal Opportunity/Affirmative Action Employer.

**Assistant Professor.** Specialization in Animal Behavior / Psychobiology. The Psychology Department at the University of Nebraska at Omaha and the Nebraska Behavioral Biology Group invites applications for a tenure-track Assistant Professor position with emphasis on the mechanisms of behavior. The successful candidate will conduct research at the interface between proximate and ultimate levels of analysis, and will develop a fundable research program. Research area in the links between behavior and its molecular, immunological, neuroendocrine, or physiological substrates is preferred, although candidates in all areas are encouraged to apply. The successful candidate will teach undergraduate and graduate courses in the department's degree programs (BA/BS, MA, and PhD). UNOmaha, along with UN-Lincoln and Creighton University, has a commitment to developing research and training expertise in behavioral biology. Collaborative and collegial relationships and the shared resources of the twelve-member faculty of the Nebraska Behavioral Biology Group would be available. For further information about the program and the position, contact Jeff French ([jfrench@unomaha.edu](mailto:jfrench@unomaha.edu)) and visit our web site (<http://cricket.unl.edu>). Scientists with a completed Ph.D. (post-doctoral experience preferred) may apply by sending a letter of application, curriculum vitae,

and names of three references to Psychobiology Faculty Search, c/o Dr. Kenneth Deffenbacher, Chair, Psychology Department, University of Nebraska at Omaha, Omaha NE 68182-0274. Applications received by 1 December 1998 will receive full review, and the position will remain open until a suitable candidate is hired. UNOmaha is committed to a pluralistic community through Affirmative Action and Equal Opportunity.

**Seasonal Office Assistant** - Assist in operations of biological research station office and nature shop: taking reservations, answering phones, greeting guests, supervising volunteers, etc. Begin March 14, 1999, through September 1999. Five-day week; salary \$235/wk, plus room (shared) and board. Applicant must be punctual, organized, enjoy people, and be interested in living in a remote setting (Chiricahua Mountains) and working with biological researchers. Biological training an asset. Call and send résumé to: Dr. Wade C. Sherbrooke, Director, Southwestern Research Station, American Museum of Natural History, Portal, AZ 85632. Phone and fax: 520-558-2396; e-mail: [swrs@amnh.org](mailto:swrs@amnh.org).

**Volunteers** - Approximately 30 volunteer positions are open in 1999 at the American Museum of Natural History's Southwestern Research Station in Portal, Arizona. The volunteer program is run annually and offers students in biological sciences outstanding opportunities to observe and become involved with scientists doing field research. Food and lodging are provided to volunteers in exchange for twenty-four hours per week of routine chores, with the remaining time available for research activities. The program is open to both undergraduate and graduate students; the latter may pursue their own research projects. Faculty knowing of promising students should alert them to this opportunity for professional experience toward, development of, and evaluation of their career goals. Volunteers are needed between March 14 and November 1. Appointments are for part of this period, with a minimum appointment of six weeks. Applicants for spring positions (March-May) should submit applications by February 15, summer volunteers (June-August) by April 1, and fall volunteers (September-November) may apply any time. For applications, write: Dr. Wade C. Sherbrooke, Director, Southwestern Research Station, American Museum of Natural History, Portal, AZ 85632 USA; telephone 520-558-2396; e-mail: [swrs@amnh.org](mailto:swrs@amnh.org).

**BALLOT: 1998 GENERAL ELECTION OF  
THE ANIMAL BEHAVIOR SOCIETY**

**MAIL BALLOTS IN AN ENVELOPE  
BEARING YOUR NAME TO:**

**MICHELLE P. SCOTT, ABS MEMBER-AT-  
LARGE, DEPARTMENT OF ZOOLOGY,  
UNIVERSITY OF NEW HAMPSHIRE,  
DURHAM, NH 03824**

**BALLOTS POSTMARKED AFTER JANUARY  
15, 1999, CANNOT BE COUNTED**

You may cast write-in votes. We are electing three officers (terms begin July 1, 1999). All ABS members (regular members), student members, joining members and active Fellows may vote. Results will be announced in the February Newsletter.

**ABS OFFICERS**

Vote for one candidate for each office by placing an X in the blank following your choice. The candidate with the most votes will win the election. In case of a tie a run-off election will be held.

**FOR SECOND PRESIDENT-ELECT:**

Michael D. Beecher \_\_\_\_\_

Susan A. Foster \_\_\_\_\_

Write-in \_\_\_\_\_

**FOR SECRETARY:**

Debra L. Forthman \_\_\_\_\_

Stephen M. Shuster \_\_\_\_\_

Write-in \_\_\_\_\_

**FOR MEMBER-AT-LARGE:**

Shelley Adamo \_\_\_\_\_

Scott P. Carroll \_\_\_\_\_

Write-in \_\_\_\_\_

**MEMBERS OF U.S.E.C.C.**

**(Only U.S. Members of ABS may vote)**

Place an X in the blanks following your two choices. The candidate with the largest number of votes will become the Council member and the runner up the alternate.

Jennifer Fewell \_\_\_\_\_

Lynne Houck \_\_\_\_\_

Fred Singer \_\_\_\_\_

Paul Weldon \_\_\_\_\_

**PROPOSED CONSTITUTION CHANGES**

Vote YES (for change) or NO (against change).

**ARTICLE 4.**

Section 1. YES \_\_\_\_\_ NO \_\_\_\_\_

Section 3. YES \_\_\_\_\_ NO \_\_\_\_\_

**ARTICLE 8**

Section 2d. YES \_\_\_\_\_ NO \_\_\_\_\_

**MESSAGE FROM NSF  
FRED STOLLNITZ**

This is to remind you that the postdoctoral fellowship programs in molecular evolution and biosciences related to environment have been terminated.

The program announcement for the new program of postdoctoral fellowships in biological informatics has been posted on our webpage. Program announcement (NSF 98-162) is available only on the web. It is most easily accessed by an online document search. Go to [www.nsf.gov](http://www.nsf.gov) on the internet, click on "documents" on the bottom of the page, select "search by document reference number," and enter NSF 98-162. All applications must be submitted through Fastlane. Instructions are in the program announcement. The deadline is December 11, 1998.

The Minority Postdoctoral Fellowship program (NSF 94-133) is ongoing and this year's deadline is December 4, 1998. The program announcement for the Minority Postdoctoral Fellowships is also on the web and applications can be made through Fastlane. However, we do have printed copies of NSF 94-133 and applications can be submitted in hard copy.

**APPLICATION / RENEWAL for ANIMAL BEHAVIOR SOCIETY MEMBERSHIP**

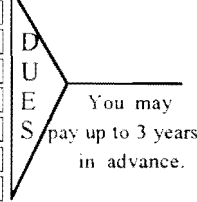
**This is a (please check one):**

- RENEWAL - make any corrections beside mailing label at bottom of page.
- NEW MEMBERSHIP. **Print or type full name and mailing address at bottom of page.**
  - Begin my membership now (send back issues).  Begin my membership January \_\_\_\_\_ (year).

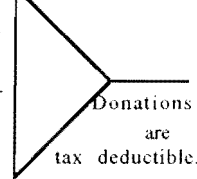
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_ E-mail: \_\_\_\_\_

I would like ABS to send relevant mailings (e.g., ballots, renewal reminders) to me via e-mail. My correct e-mail address is \_\_\_\_\_. **YOUR E-MAIL ADDRESS WILL NOT BE SOLD OR DISSEMINATED TO OTHER ORGANIZATIONS EVEN IF YOU CHECK THIS BOX.**

**MEMBERSHIP CLASS**

- |                                |      |                          |   |
|--------------------------------|------|--------------------------|---|
| ) Regular Member               | \$46 | <input type="checkbox"/> |  |
| ) Student Member*              | \$23 | <input type="checkbox"/> |   |
| ) Multiple (Joint) Member†     | \$28 | <input type="checkbox"/> |   |
| ) Emeritus Member              | \$23 | <input type="checkbox"/> |   |
| ) Newsletter Only (nonmember)  | \$ 8 | <input type="checkbox"/> |   |
| ) Developing Nations Member*   | \$25 | <input type="checkbox"/> |   |
| 0) Developing Nations Student* | \$15 | <input type="checkbox"/> |   |

**VOLUNTARY CONTRIBUTIONS**

- |                       |       |   |
|-----------------------|-------|---|
| Ethnic Diversity Fund | _____ |  |
| Research Awards Fund  | _____ |   |
| Unrestricted Fund     | _____ |   |

<p><b>TOTAL PAID</b></p> <p>Include LATE FEE if appropriate</p>
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**RENEWALS ARE DUE BY DECEMBER 1st. THEREAFTER, INCLUDE A \$10 LATE FEE.**

- Check or Money Order
  - Visa  Master Card  American Express  Discover
- Acct: \_\_\_\_\_ Expires: \_\_\_\_\_

Signature of card holder: \_\_\_\_\_  
 Members are reminded it costs ABS \$2 to process credit card payments. Please consider adding this much (or more) to your total.  
 please add \$\_\_\_ to my total to help ABS offset credit card processing costs.  
 Please send a receipt for tax purposes.  Please acknowledge via e-mail.

\* My **Student Membership** is endorsed by \_\_\_\_\_  
 Dept. Head, ABS Member or Fellow Print Name Signature  
**YOU MUST INCLUDE THIS (RENEWING Members may send photocopy of current ID instead)**

† My **Multiple (Joint/Spouse) Membership** is with \_\_\_\_\_  
**YOU MUST SPECIFY a FULL MEMBER with whom you share a copy of the journal.**

- The following nations shall not be considered **Developing Nations**: The United States, Canada, Israel, Japan, Australia, New Zealand, Iceland, Norway, Sweden, Finland, Denmark, Germany, The Netherlands, Belgium, Luxembourg, France, The United Kingdom, Ireland, Switzerland, Austria, Italy, Spain, and Portugal.

Send this form with payment to:	<b>Animal Behavior Society</b> 2611 East 10th St., Office 170 Indiana University Bloomington, IN, USA 47408-2603 FAX (812) 856-5542	<b>EMAIL: aboffice@indiana.edu</b> to report Journal Delivery errors <b>ADDRESS CHANGES, or other membership problems.</b>
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