



# NEWSLETTER

## Animal Behavior Society

Vol. 43, No. 2  
May, 1998

A quarterly publication

Susan A. Foster, Secretary

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

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### CANDIDATES FOR 1998 ELECTION OF OFFICERS

The following persons have been nominated as candidates for ABS offices. The election ballot will appear in the November 1998 Newsletter and terms will begin following the annual meeting in 1999.

#### Second President-elect

Michael D. Beecher, University of Washington  
Susan A. Foster, Clark University

#### Secretary

Debra L. Forthman, Zoo Atlanta  
Stephen M. Shuster, Northern Arizona University

#### Member-at-Large

Shelley A. Adamo, Dalhousie University  
Scott P. Carroll, University of New Mexico

Additional nominations may be made by letter to the 1997-1998 Nominating Committee Chair Susan Riechert, Department of Ecology and Evolutionary Biology, University of Tennessee, Knoxville, TN, 37996-1610, USA. Nominations must be signed by five or more ABS members in good standing (ABS Constitution, Article 8, Section 2) and must be received by September 10, 1998.

### CALL FOR SYMPOSIA FOR THE 1999 ANNUAL MEETING

Symposium proposals for the 1999 annual meeting must be submitted to the Program Officer by two months prior to the *previous* (1998) annual meeting or by May 15, 1998. Proposals may be submitted by email or regular post to Program Officer Anne Clark. For information email [aclark@binghamton.edu](mailto:aclark@binghamton.edu).

### ANIMAL BEHAVIOR SOCIETY RESEARCH GRANT WINNERS

The Animal Behavior Society Research Grants Committee is pleased to congratulate the following 17 recipients of ABS Student Research Grants for 1998. The Committee had US\$12,000 to award this year. The award winners listed below were selected from a highly competitive field of 92 meritorious proposals, representing a success rate of 18.5%.

Andrade, Maydianne C.B. "The cost of sexual cannibalism for male redback spiders: is every copulation equally valuable?" \$1000.

Angelom, Lisa M. "Sexual selection and hermaphroditic strategies in opisthobranch gastropods". \$500.

Benson, David P. "Causes and consequences of the evolution of monogamy in White-tailed Ptarmigan". \$500.

Doerr, Veronica A.J. "Alternative dispersal tactics in birds: the roles of individual quality, habitat quality and sociality". \$1000.

Downes, Sharon J. "Phenotypic plasticity and predation vulnerability: using developmental biology to test optimal foraging theory". \$500.

Foster, Melissa. "The role of social structure in preventing inbreeding in voles". \$500.

Fraser, Gail S. "The relationship between ornamentation and parental contribution in Crested Auklets". \$500.

Gill, Sharon. "Mutual mate choice in a tropical duetting species, the buff-breasted wren". \$500.

Higgins, Laura A. "Does reinforcement occur in male calling song and female preference between field crickets (*Gryllus integer* and *G. rubens*)?" \$1000.

Isvaran, Kavita. "Factors influencing mating system variation in blackbuck (*Antelope cervicapra*)". \$500.

Kelly, Clint D. "Effects of predation risk on variance in male mating success in the Trinidadian guppy, *Poecilia reticulata*". \$1000.

Kolluru, Gita R. "The effects of parasitization on field cricket reproductive activity". \$500.

MacDougall-Shackleton, Elizabeth. "Song dialects, mating success and gene flow in mountain white-crowned sparrows". \$1000.

Nelson, Brian. "A population level study of eastern towhee spectral and temporal correlation with production sound-pressure level". \$1000.

Passek, Kelly M. "Use of DNA fingerprinting techniques to investigate the occurrence of extra-pair paternity in the lizard, *Anolis carolinensis*". \$500.

Robnette, Renee L. "The role of kinship in determining food theft by Northwestern Crows (*Corvus caurinus*)". \$500.

Welter, Stephane M. "The phenotypic and genetic integration of antipredator traits in different selective environments". \$1000.

#### ANIMAL BEHAVIOR SOCIETY DEVELOPING NATIONS GRANTS

The Animal Behavior Society is pleased to congratulate the following recipients of Developing Nations Grants for 1998.

Arnella, Miguel A. "Seasonal behavioral changes in cactus-feeding ants". \$650.

Bazua-Duran, Carmen. "Habitat-related dialects in bottlenose dolphins from the Gulf of Mexico: Spectral and statistical analysis of whistle structures and its application in dolphin ecological studies". \$700.

Downes, Sharon. "Phenotypic plasticity and predation vulnerability: Using developmental biology to test optimal foraging theory". \$580.

#### 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 July 15, 1998.

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

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

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

**Past President:** Susan Riechert, Dept. of Ecology and Evolutionary Biology, University of Tennessee, Knoxville, TN, 37996-1610, USA. E-mail: [sriecher@utk.edu](mailto:sriecher@utk.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:** Anne Clark, Department of Biological Sciences, Binghamton University, Binghamton, NY, 13902, USA. E-mail: [aclark@binghamton.edu](mailto:aclark@binghamton.edu).

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

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

**Members-at-Large:** Jean-Guy Godin, Department of Biology, Mount Allison University, Sackville, N.B., E4L 1G7, Canada. E-mail: jgodin@mta.ca.  
Ken Yasukawa, Department of Biology, Beloit College, Beloit WI, 53511, USA.  
E-mail: yasukawa@beloit.edu.

Michelle P. Scott, Dept. of Zoology, University of New Hampshire, Durham, NH 03824, USA. E-mail: mps@christa.unh.edu.

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

**A NEW LOOK FOR  
ANIMAL BEHAVIOUR**

Beginning July 1998:

- \* New cover
- \* New A4 (8.5x11 in) format
- \* New font, paper and section headers

Plus:

- \* Reviews
- \* Forum on the web  
(titles published in the journal)

Instructions for new sections in May 1998 issue.

**WEBSITE ADDITIONS**

**ANIMAL BEHAVIOR SOCIETY  
GRADUATE PROGRAM BULLETIN**

The 1996 Animal Behavior Society Graduate Program Bulletin (Canada, Mexico and the United States), prepared by the ABS Education Committee, is once again available. It is on line at the ABS web site: <http://www.cisab.indiana.edu/ABSResource/index.html>. Hard copy is also available for \$8.00 from the Central Office (see direction of correspondence).

**ABS OFFICIAL DOCUMENTS**

The Constitution, Bylaws and Handbook are on line at the ABS web site: <http://www.cisab.indiana.edu>. Also posted are committee membership lists and a variety of other items concerning the Society and its members.

**ANIMAL BEHAVIOR SOCIETY, INC.**

STATEMENT OF REVENUES, EXPENSES, AND  
OTHER CHANGES IN NET ASSETS — CASH BASIS  
FOR THE YEAR ENDED JUNE 30, 1997

<b>BEGINNING NET ASSETS:</b>	
CASH:	\$
Certificates of Deposit	120,000
Checking Account	44,591
Savings Account - Ethnic Div.	6,448
Editor's Fund	5,107
Secretary's Fund	955
<b>TOTAL BEGINNING NET ASSETS JULY 1, 1997</b>	<b>177,101</b>

<b>REVENUE RECEIVED:</b>		\$
Membership Dues – Dev. Nation	1,400	
Membership Dues – Emeritus	1,340	
Membership Dues – Joint	1,135	
Membership Dues – Regular	79,092	
Membership Dues – Student	20,791	
ABS Certificate	350	
Certificate Renewal	165	
Credit Card Refunds	402	
Graduate Programs	416	
Interest Income	6,939	
Label List	1,020	
Late Fees	5,886	
Program Income	1,875	
Subscriptions	303	
Donations - Ethnic Div. Fund	1,403	
Donations - David Tuber Fund	5,161	
Donations - Research Awards	4,950	
Donations – Unrestricted	1,152	
<b>TOTAL REVENUE RECEIVED</b>		<b>133,780</b>

<b>LESS EXPENDITURES</b>		
AIBS Dues	250	
Accounting	750	
Animal Care	250	
Certification Committee	366	
Development Committee	417	
Editor's Expenses	82,482	
Ethics Committee	233	
Ethnic Diversity Awards	269	
First President-Elect	200	
Insurance	3,100	
Member Credits	353	
Membership Committee	419	
Miscellaneous Expense	314	
Parliamentarian	383	
Past-President	384	
President's Expenses	3,133	
Program Committee	8,011	
Research Grants	10,200	
Second President-Elect	700	
Secretary's Expenses	11,795	
Treasurer's Expenses	10,253	
<b>TOTAL EXPENDITURES</b>		<b>134,262</b>

CHANGE IN NET ASSETS	(482)
NET ASSETS AT BEGINNING OF YEAR	177,101
NET ASSETS AT END OF YEAR	176,619

**ENDING NET ASSETS:**

CASH	\$	
Certificate of Deposits		126,830
Checking Accounts		35,679
Savings Account - Ethnic Div.		7,690
Editor's Fund		4,023
Secretary's Fund		1,315
Membership Fund		1,082

**TOTAL ENDING NET ASSETS, JUNE 30, 1997** **176,619**

**NOTES TO STATEMENT OF CASH RECEIPTS  
AND DISBURSEMENTS AND CHANGES IN NET  
ASSETS JUNE 30, 1997**

**NOTE A — SUMMARY OF SIGNIFICANT  
ACCOUNTING POLICIES**

BASIS OF ACCOUNTING

The accompanying financial statement has been prepared on the cash receipts and disbursements basis of accounting. Under that basis, the only asset recognized is cash, and no liabilities are recognized. All transactions are recognized as either cash receipts or disbursements, and noncash transactions are not recognized. The cash basis differs from generally accepted accounting principles primarily because the effects of outstanding promises to give and obligations for expenses unpaid at the date of the financial statement are not included in the financial statement.

INCOME TAX STATUS

The Organization is exempt from federal income tax under Section 501 (c)(3) of the Internal Revenue Code.

DONATED SERVICES

No amounts have been reflected in the financial statements for donated services. The Organization pays for most services requiring specific expertise. However, many individuals volunteer their time and perform a variety of tasks that assist the Organization in many ways.

DONATED GOODS

No amounts have been reflected in the financial statements for goods donated by various members and/or institutions during the year. Approximately \$3,395 in goods were donated.

**NOTE B — RESTRICTIONS ON NET ASSETS**

RESTRICTED AND UNRESTRICTED REVENUE

Contributions received are recorded as increases in unrestricted or restricted net assets, depending on the existence of any donor restrictions. As of June 30, 1997, the following restricted assets were being held:

Ethnic Diversity Fund	\$7,690
David Tuber Award Fund	\$5,683

The monies from the Ethnic Diversity Fund are used to promote ethnically diverse participation in Organization activities. The David Tuber Award Funds are used to support research in applied animal behavior. The executive committee must approve expenditures from these funds.

Monies are also received for Research Awards which are given to persons doing research in animal behavior. For the year ended June 30, 1997 \$4,950 was received, and \$10,200 was paid out in grants.

**NOTE C — CERTIFICATES OF DEPOSIT**

Certificates of deposit totaling \$126,830 are included in cash in the accompanying financial statements. The certificates bear interest ranging from 3.87% to 5.28% and have maturities of three months, with penalties for early withdrawal. Any penalties for early withdrawal would not have a material effect on the financial statements.

**NOTE D — SUBSEQUENT EVENTS**

A new relationship has been established with the Association for the Study of Animal Behaviour (ASAB) in the United Kingdom. Under this agreement, ASAB retains ownership of the journal 'Animal Behaviour', but agrees to split the journal proceeds (library sales and electronic subscription sales) with the organization. This should amount to an additional \$50-80,000 per year in income.

A permanent central office has been established at Indiana University, to be funded by an annual renewable grant from the organization for at least six years. For the year ended June 30, 1998, an amount of \$87,000 will be paid to Indiana University to maintain this office. This amount will be set each year by the organization executive committee.

**NATIONAL SCIENCE FOUNDATION  
ANNOUNCEMENT NUMBER EP 98-8A1  
DEPUTY DIRECTOR  
DIVISION OF INTEGRATIVE BIOLOGY  
AND NEUROSCIENCE  
DIRECTORATE FOR BIOLOGICAL  
SCIENCES  
NATIONAL SCIENCE FOUNDATION  
Arlington, Virginia 22230**

The National Science Foundation's Directorate for Biological Sciences (BIO) is seeking qualified candidates for the position of Deputy Director, Division of Integrative Biology and Neuroscience (IBN). The IBN Division is responsible for funding research in the areas of Neuroscience, Developmental Biology, and Physiology and Ethology. The Deputy participates with the Division Director in providing leadership to the Division's programs and assists the Division Director in carrying out Division-wide responsibilities such as preparation of budget submission for Congress and recruitment of scientific staff. The Deputy also assumes the Division Director's role in the absence of the Division Director. Additional information about the Division's programs is provided on the BIO Home Page on the World Wide Web (<http://www.nsf.gov/bio/ibn/ibn-pd.htm>).

Information about the assignment options is provided on NSF's Home Page (<http://www.nsf.gov/home/chart/start.htm>).

**IPA Assignment** Individuals eligible for an IPA assignment with a Federal agency include employees of State and local government agencies or institutions of higher education, Indian tribal governments, and other eligible organizations in instances where such assignments would be of mutual benefit to the organizations involved. Initial assignments under the IPA mechanism may be made for a period of up to two years. The individual remains an employee of the home institution and cost-sharing arrangements are generally negotiated between NSF and the home institution.

**Senior Executive Service (SES) Limited**

**Term** Individuals may receive a temporary Federal Senior Executive Service appointment within the ES-1 to ES-3 range (currently \$106,412 to \$116,495). SES limited term appointments have a three-year maximum limit.

Interested applicants should submit a curriculum vitae or Federal application form, publications list, and a letter referencing qualifications and preferred

assignment option to the address listed below. The formal consideration process will begin in late April.

National Science Foundation. ATTN: EP 98-8A1.  
Executive Personnel and Development Branch,  
Division of Human Resource Management  
4201 Wilson Boulevard, Suite 315  
Arlington, VA 22230

**Phone: 703/306-0755**

**Hearing Impaired Individuals should call:  
703/306-0189**

NSF IS AN EQUAL OPPORTUNITY EMPLOYER  
COMMITTED TO EMPLOYING A HIGHLY  
QUALIFIED STAFF THAT REFLECTS THE  
DIVERSITY OF OUR NATION.

**QUALIFICATIONS REQUIREMENTS**

Essential

**EXECUTIVE/MANAGERIAL**

1. Ability to develop and implement an organizational vision that integrates key national science, technology, and education goals. Includes understanding of the relative roles and relationships of Federal, academic and private organizations involved in the conduct and support of research and education in the biological sciences. Includes the ability to formulate effective program strategies consistent with the overall goals of the organization.
2. Ability to lead people and foster high ethical standards in meeting the organization's vision, mission and goals. Includes knowledge and ability in promoting quality through the effective use of performance standards and assessment. Includes valuing cultural diversity and other differences, promoting developmental opportunities, fostering commitment and team spirit, and constructively resolving conflicts.
3. Knowledge and ability in planning, prioritizing, and coordinating both disciplinary and multidisciplinary research programs in biology. Includes the ability to make timely and effective decisions and to produce results through strategic planning, and the implementation and evaluation of programs and policies. Includes the ability to change and balance complex and diverse program demands within available resources in response to major changing needs in research and education.
4. Ability to utilize human, financial, material, and information resources in a manner that instills public trust and accomplishes the organization's mission and to take advantage of new

technologies to enhance the effectiveness of decision making. Includes ability in recruiting and selecting staff, allocating financial resources, and managing budgetary processes.

5. Ability to serve as a key spokesperson for a major organization involved in the support of biological research and education and to foster partnerships. Includes the ability to coordinate organizational strategy and initiatives with representatives of scientific communities, including academic researchers and those responsible for the administration of research and educational institutions. Includes ability to interact constructively with Federal officials, representatives of professional organizations and the public sector, in the U.S. as well as overseas.

#### Desirable

1. Ability to achieve organizational goals through effective and innovative management approaches emphasizing interdisciplinary coordination and teamwork.

#### Essential

##### **PROFESSIONAL/TECHNICAL**

1. Ph.D. or equivalent professional experience or a combination of education and equivalent experience in a biological subdiscipline supported through the programs of the Division (e.g., developmental biology, neuroscience, and physiology and ethology).
2. Substantial research contributions and strong evidence of scholarship in developmental biology, neuroscience, and physiology and ethology and innovative leadership in research administration.

#### Desirable

1. Demonstrated broad knowledge of diverse fields of biological sciences.
2. Demonstrated knowledge of relevant academic community and recognized professional standing in the scientific community as evidenced by publications and/or professional leadership and awards.
3. Knowledge of grant and contract administration, fiscal management, and budget preparation with experience in scientific research support.
4. Continued professional research activity in the biological sciences or related field.

### **1998 ANIMAL BEHAVIOR SOCIETY ANNUAL MEETING**

July 18-22 at Southern Illinois University,  
Carbondale, IL, USA. For information see:  
<http://www.cisab.indiana.edu/ABS>.

#### **MEETINGS**

**ASAB Meeting: Genetic Analysis of Behaviour.** 3 and 4 December, 1998, London, UK. Organizers: Dr. Mike Ritchie and Prof. Bambos Kyracou. The genetic control of behaviour has always been a focus of interest and controversy. Genetic analysis of behaviour is currently making considerable progress in two areas. Molecular techniques can allow estimates of the number of genes influencing a trait, the identification of specific genes, their isolation and manipulation. From a more evolutionary perspective, attention focuses on estimating the genetic variance and covariance of behaviours in natural populations. These approaches rarely interact. The meeting features invited speakers from both ends of this spectrum, with the hope of stimulating cross-fertilisation. We also welcome contributed talks. Please send an abstract, by end of June 1998 to: Mike Ritchie, Environmental & Evolutionary Biology, Bute Building, University of St Andrews, St Andrews, Fife, KY16 9TS Scotland. E-mail: mgr@st-and.ac.uk. Fax: +44 (0)1334 463600. Conference grants are available for student members of ASAB. Information will be posted on the announcements page at: <http://medialab.st-and.ac.uk/seeb/BSGgroup/BSGgroup.htm>

**9th Biennial Meeting of the International Society for Comparative Psychology** will be held in Cape Town, South Africa, September 1-5, 1998. The meeting is hosted by Professor L.C. Simbayi and the Department of Psychology on the campus of the University of the Western Cape. The Society welcomes current scientific studies on all aspects of comparative psychology, and also includes a regional perspective of animals, animal behavior or animal ecology as related to South Africa. The meeting format includes a variety of symposium topics, individual papers and poster presentations. Pre- and post-conference activities and tours will be available. Abstracts and symposia proposals are invited. For information please contact Professor L.C. Simbayi, Department of Psychology, University of the Western Cape, Private Bag X17, Bellville 7535, Cape Town, South Africa. Tel: 04 04 22011. Fax: 04 04 31643. Email: L.SIMBAYI@chs.uwc.ac.za.

## 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. For 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.

**Measuring Behavior '98**, the 2nd International Conference on Methods and Techniques in Behavioral Research. Groningen, The Netherlands, 18-21 August 1998. The conference will devote special attention to integration of behavioral research with physiological measurements. Symposium topics are: behavioral recording, behavioral analysis, brain imaging and behavior, biotelemetry and behavior, behavior and physiology, behavioral models. Oral presentations will be limited to invited speakers and delegates who submit abstracts of outstanding quality on a subject of general interest. Poster sessions, demonstrations, scientific tours, technical training, and user meetings will be offered. For information: Measuring Behavior '98, Conference Secretariat, P.O. Box 268, 6700 AG Wageningen, The Netherlands. Tel 31-317-497677; Fax: 31-317-424496, Email: mb98@noldus.nl. <http://www.noldus.com/events/mb98/mb98.htm>.

## ANNOUNCEMENTS

### The International Society of Comparative Psychology

(1) Publishes a quarterly journal, the *International Journal of Comparative Psychology*, of refereed research reports, reviews, and theoretical articles. Manuscript submissions are welcomed from members and nonmembers alike. Manuscripts or queries should be addressed to Lesley J. Rogers, Professor of Neuroscience and Animal Behaviour, School of Biological Sciences, University of New England, Armidale, New South Wales, 2351 Australia. Tel. 61-67-73-3969; fax 61-67-73-3452; email: [lrogers@metz.une.edu.au](mailto:lrogers@metz.une.edu.au).

(2) Maintains a discussion list open to both members and nonmembers. Anyone may gain access by contacting Mauricio R. Papini at [papini@gamma.is.tcu.edu](mailto:papini@gamma.is.tcu.edu) or by a do-it-yourself: send a message to [LISTSERV@TCU.EDU](mailto:LISTSERV@TCU.EDU) with the text SUBSCRIBE ISCP-L.YOUREMAIL.YOURNAME.

(3) Membership information may be obtained by contacting Gary Greenberg, Dept. of Psychology, Wichita State Univ., Wichita, KS 67208, USA, email: [greenber@wsuhub.uc.twsu.edu](mailto:greenber@wsuhub.uc.twsu.edu) or Mauricio Papini, Dept. of Psychology, Texas Christian University, TCU Box 298920, Fort Worth, TX 76129, USA. email: [papini@gamma.is.tcu.edu](mailto:papini@gamma.is.tcu.edu).

## 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 position in auditory neuroethology.** Two-year position is available for electrophysiological studies of acoustic signal decoding in frogs. These studies will be part of a continuing research effort by Ryan, Wilczynski, and Rand to investigate the evolution of signal decoding in the túngara frogs and their close relatives. Address inquiries and/or send CV and addresses of three references to Dr. Michael Ryan at: [mryan@mail.utexas.edu](mailto:mryan@mail.utexas.edu), or: Dept. of Zoology, University of Texas, Austin TX 78712. (<http://uts.cc.utexas.edu/~ryanlab>).

**Volunteers** - Approximately 30 volunteer positions are open in 1998 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 field research. Food and lodging are provided in exchange for 24 hr per week of routine chores, with the remaining time available for research. The program is open to undergraduate and graduate students; the latter may pursue their own research. Volunteers are needed between March 15 and Nov. 1. Appointments are for part of this period, with a minimum of six weeks. Applicants for spring (March-May) should submit applications by Feb. 15, summer volunteers (June-August) by April 1 and fall volunteers (Sept. - Nov.) any time. Dr. Wade C. Sherbrooke, Director, Southwestern Research Station, American Museum of Natural History, Portal, AZ, 85632, USA. Phone (520) 558-2396; e-mail: [swrs@amnh.org](mailto:swrs@amnh.org).

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	VOLUNTARY CONTRIBUTIONS	TOTAL PAID
(1) Regular Member     \$46 <input type="checkbox"/> (2) Student Member*   \$23 <input type="checkbox"/> (4) Multiple (Joint) Member†   \$28 <input type="checkbox"/> (5) Emeritus Member     \$23 <input type="checkbox"/> (8) Newsletter Only (nonmember) \$ 8 <input type="checkbox"/> (9) Developing Nations Member* \$25 <input type="checkbox"/> (10) Developing Nations Student* \$15 <input type="checkbox"/>	<input type="checkbox"/> D <input type="checkbox"/> U <input type="checkbox"/> E <input type="checkbox"/> S	
You may pay up to 3 years in advance.		Include LATE FEE if appropriate
	<input type="checkbox"/> Ethnic Diversity Fund _____ <input type="checkbox"/> Research Awards Fund _____ <input type="checkbox"/> Unrestricted Fund _____	<input type="checkbox"/>
		Donations are tax deductible.

**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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Animal Behavior Society S. Foster, Secretary Dept. of Biology Clark University 950 Main St. Worcester MA USA 01610-1477	Non-Profit Organization U.S. POSTAGE PAID WORCESTER, MA PERMIT NO. 1886
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ADDRESS CORRECTION REQUESTED

STEVE RAMEY  
 ANIMAL BEHAVIOR SOCIETY  
 INDIANA UNIV  
 2611 E 10TH #170  
 BLOOMINGTON IN 47408-2603  
 USA

1 DEC 2001