



NEWSLETTER

Animal Behavior Society

Vol. 46, No. 4
November 2001

A quarterly publication

Stephen M. Shuster, Secretary

Emily C. Omana, Editorial Assistant
Department of Biological Sciences, Northern Arizona University, Flagstaff, AZ 86011-5640 USA

VOTE, VOTE, VOTE!!!!!! 2001 ABS ELECTIONS

Voter response was slightly lower (10%) in 2000 than in 1999 (11%). ***Please*** take the time to vote in the upcoming election! Election information and ballot are enclosed in this newsletter. You can vote using this ballot, OR ***you can vote by email***, provided that the Central Office has your e-mail address and you have approved its use for this purpose. ***If you vote by regular mail, your name MUST be on the envelope for your ballot to be counted.***

FORTRAN Program Generates Effective Artificial Courtship Song

Becky Talyn* & Harold Dowse[†]

*Department of Biology, Denison University, Granville, OH

[†]Department of Biology, University of Maine, Orono

Examinations of animal communication functions often involve playing sounds and observing responses. Studies may use three designs: 1) one recording used repeatedly or modified to make treatments, 2) multiple exemplars per treatment using naturally-occurring differences among treatments, or 3) artificial signals that mimic natural sounds. Option three provides a unique opportunity to control each sound parameter independently, without risking pseudoreplication by exploiting one exemplar (Kroodsma, 1989). We used a FORTRAN computer program to create *Drosophila* songs with identical parameters, or differing in a single parameter. These resembled recorded songs; males and females responded to them as biologically meaningful.

GENERATED SONGS. Our program creates songs employing 22 user-set parameters (see web page). Stochasticity is introduced, making songs more natural and rendering songs with otherwise identical parameters different in temporal structure. For example, each song begins with silence of duration $0.5 * (\text{inter-train interval} * (1 - \text{interval variation}) + 2 * \text{inter-train interval} * \text{random number range } 0-1 * \text{inter-train interval})$. Therefore the average initial

silence is half the duration of the average inter-train interval, but differs depending on *random number*. This approach is used throughout the program to add variability to most parameters.

Pulses are sine waves of set frequency, with a parabolic amplitude envelope of set duration and frequency. Pulse trains are organized with set inter-pulse interval and pulses per train, and inter-pulse interval cycles (cycles reviewed in Alt, et al. 1998 and others). Sine trains are sine waves of set amplitude, frequency, and duration. Parameter values used were published or measured averages for *D. melanogaster* (see web page). Average inter-pulse interval was set at 44 ms instead of 28 ms.

PLAYBACK EXPERIMENTS. We verified the effectiveness of artificial vs. recorded songs by playing each song to two groups of ten pairs simultaneously (40 pairs/song; 5 artificial and 15 recorded songs). We measured courtship effort (CE), the average proportion of unmated males courting, and mating amount, the cumulative number of pairs.

To verify that flies interpret artificial songs as courtship, we used the observation that males increase movement and court nearby males during playbacks (Crossley et al. 1995). We observed one winged and one wingless male under a microscope (12X), and counted wing flicks using event recorder software written in Turbo Basic® by H.D. Playback sets consisted of one-minute each of three artificial sounds – pulse, sine and white noise – presented to different males in all 6 orders.

RESULTS. Females responded to generated song as a biologically meaningful signal. Mating amount was consistent between recorded and artificially generated treatments, both higher than silence (Fig. 1a). Wingless males courted more when played recorded song than during no-song controls (Tukey post-hoc test, $df=104$, $p=0.039$). However, CE did not differ during generated vs. recorded songs ($p=0.143$) or any other combination.

Males responded to artificial song by wing flicking at a cohabitating male. More flicking occurred during pulse or sine than during white noise (Fig. 1b; Bonferoni adjusted paired t-test), indicating that both

sounds stimulated the auditory system.

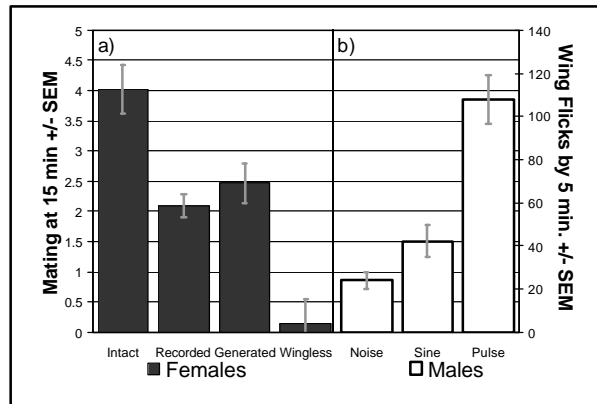


Figure 1: a) Females respond to recorded and artificial courtship song. Both elicit significantly more mating with wingless males than in the absence of playback. b) Males respond to pulse and sine song as biologically relevant signals.

SUMMARY. This program generated songs that males and females recognized as meaningful signals. Females mated during artificial and recorded songs. Males responded to pulse and sine components. Importantly, the program could generate many animal sounds, particularly those with amplitude, rather than frequency, modulated structures. With some simple modifications, it could generate more complex sounds, allowing researchers to avoid problems encountered when using recorded song playbacks. More information and the executable file are available on my web site: www.denison.edu/~talynb/Drosophila.html.

LITERATURE CITED

- Alt, S., Ringo, J., Talyn, B., Bray, W. & Dowse, H. 1998. The *period* gene controls courtship song cycles in *Drosophila melanogaster*. *Animal Behaviour*, 56, 87-97.
- Crossley, S. A., Bennet-Clark, H. C. & Evert, H. T. 1995. Courtship song components affect male and female *Drosophila* differently. *Animal Behaviour*, 50, 827-839.
- Kroodsma, D. E. 1989. Suggested experimental designs for song playbacks. *Animal Behaviour*, 37, 600-609.

DIRECTION OF CORRESPONDENCE

ABS Newsletter and general correspondence concerning the Society: Stephen M. Shuster, Department of Biological Sciences, Northern Arizona University, Flagstaff, AZ 86011-5640, USA. stephen.shuster@nau.edu. Deadlines are the 15th of the month preceding each Newsletter. The next deadline is **15 January 2002**. 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 ABS endorsement of the opinions expressed by contributors.

Animal Behavior Society Web Site:
<http://www.animalbehavior.org/>

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

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

ABS OFFICERS

President: Michael D. Beecher, Department of Psychology, University of Washington, Seattle, WA 98195, USA. E-mail: beecher@u.washington.

First President-elect: Anne B. Clark, Department of Biological Sciences and Center for Developmental Psychobiology, Binghamton University (SUNY), PO Box 6000, Binghamton, NY, 13902-6000 USA. E-mail: aclark@binghamton.edu.

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

Past President: Patricia Adair Gowaty, Institute of Ecology, University of Georgia, Athens, GA 30602-2602, USA. E-mail: gowaty@ecology.uga.edu.

Treasurer: Nancy G. Solomon, Miami University of Ohio, Department of Zoology, Miami University, Oxford, Ohio 45056, USA. E-mail: solomong@muohio.edu.

Secretary: Stephen M. Shuster, Department of Biological Sciences, Northern Arizona University, Flagstaff, AZ 86011-5640, USA. Email: stephen.shuster@nau.edu.

Program Officer: James C. Ha, Primate Center, Box 357330, University of Washington, Seattle, WA 98195-7330, USA. Email: jcha@u.washington.edu.

Assistant Program Officer: Philip K. Stoddard, Department of Biological Sciences, Florida International University, University Park, Miami, Florida 33199, USA. Email: stoddard@fiu.edu.

Parliamentarian: James H. Benedix, Jr., Department of Biological Sciences, DePauw University, Greencastle, Indiana 46135, USA. Email: jbenedix@depauw.edu.

Executive Editor: Jeffrey R. Lucas, Department of Biological Sciences, Purdue University, West Lafayette, Indiana 47907-1392, USA (2000-02) Email: jlucas@bilbo.bio.purdue.edu.

Members-at-Large:

Shelley Adamo, Department of Psychology, Dalhousie Univ., Halifax, NS B3H 4J1, Canada E-mail: sadamo@is.dal.ca.

Stephen Nowicki, Department of Zoology, Duke University, Box 90325, Durham, North Carolina 27708-0325 USA. E-mail: snowicki@duke.edu.

Patricia L. Schwagmeyer, University of Oklahoma, Norman, Oklahoma 73019-0001 USA. Email: plsch@ou.edu.

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

2002 MEMBERSHIP RENEWALS

Renewal / Status forms for 2002 will be mailed to all active and lapsed members in early September. If you prefer not to wait, you may use the Application/Renewal form on the back of this newsletter or download a form from the ABS web site: <http://www.animalbehavior.org/ABS/Members/>. You can renew online at the ABS website at: <http://www.animalbehavior.org/ABS/Members/>.

NOTICE!

Issues of the ABS Newsletter are published *first* on the ABS Webpage. Hardcopies of the Newsletter are delivered by mail and may take weeks to arrive. To get ABS news *fast*, point your browser to: <http://www.animalbehavior.org/ABS/Announcements/>

WYNNE-EDWARDS RECEIVES DISTINGUISHED TEACHING AWARD

Congratulations to Dr. **Katherine Wynne-Edwards** as the 2001 recipient of the McGraw-Hill Higher Education Distinguished Teaching Award of the Animal Behavior Society. Peers and students described Dr. Wynne-Edwards as an active, innovative, effective and caring educator. She has received the Alumni Award for Excellence in Teaching, the most prestigious accolade at Queen's University, Ontario, and is a three-time recipient of the Biology Department award for excellence in teaching. Students consistently evaluate her undergraduate course in Animal Behavior as one of the best they have taken. They acknowledge her enthusiasm for the subject matter and for teaching them "how to think." Dr. Wynne-Edwards was also cited for her challenging, yet fair exams, the student group-brainstorming sessions she uses to explore issues, and the various ways she brings animal behavior "to life," including the use of her dog, Amir, to induce psychosomatic behavior in 200 students simultaneously. In large classes and small, in one-on-one sessions as well as in large lectures, Dr. Wynne-Edwards makes connections, inspires participation, and

most of all, inspires learning.

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, N. Collias, E. O. Wilson.

Exemplar Award- major long-term contribution to animal behavior. J.A. Stamps, D. Mock, J. Altmann, J. Alcock, D. Dewsbury, M. Bekoff, J. Endler.

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

Quest Award- outstanding seminal contribution. K. Sullivan, M. Zuk, J.C. Wingfield, P. A. Gowaty, C.R.B. Boake, D. Westneat.

Exceptional Service Award- sustained service contributions to the Animal Behavior Society. L. C. Drickamer, H. J. Brockmann, M. West.

McGraw-Hill Animal Behavior Teaching Award- distinguished contributions in teaching animal behavior to undergraduates. D. C. Candland, G. C. Michener.

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 (except for the McGraw-Hill Teaching Award; see below) should be sent to ABS Past President, Dr. Patricia Adair Gowaty, Institute of Ecology, University of Georgia, Athens, GA 30602-2602, USA. E-mail: gowaty@ecology.uga.edu. DEADLINE: Feb. 1, 2002.

**NOMINATIONS FOR THE
MCGRAW-HILL HIGHER EDUCATION
DISTINGUISHED TEACHING AWARD**

PLEASE NOMINATE YOUR COLLEAGUES FOR THIS AWARD! The recipient will receive a \$500 personal stipend from McGraw-Hill, a plaque from the Society, and the opportunity to organize an education-related event at the following annual meeting. It is much easier to learn about our colleagues' publication records than it is to know about their teaching expertise. And yet, the impact we have on students is often long-lasting. Please help the Society recognize the excellent teachers within our ranks by nominating members who you feel meet the criteria below.

Nominators and nominees must be current members of the Animal Behavior Society (current officers and committee chairs are not eligible for nomination). Nominees must show evidence of highly 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 nominate an individual for the award must submit a one-page nomination letter and include names, addresses and phone numbers or email addresses of at least two additional peer reviewers and two current or former undergraduate students (department chairs or colleagues may be helpful sources for this information if you are not at the same institution as the person you are nominating). The committee will solicit supporting materials such as course syllabi, student evaluation summaries, additional letters of support, documentation of teaching awards, evidence of teaching innovations, textual or laboratory materials developed by the nominee, and other appropriate indicators of superior undergraduate teaching. If you know of specific materials that would be appropriate for the committee to examine, please mention those in your nominating letter. Selection of the award recipient will be made by the Animal Behavior Society Education Committee and approved by the Executive Council.

The award recipient will be announced at the annual meeting. Nominating letters must be submitted by 31 March 2002. Please submit to Dr. Penny Bernstein, Chair of the Animal Behavior Society Education Committee, Kent State University Stark Campus, 6000 Frank Avenue, Canton, OH 44720 USA, pbernstein@stark.kent.edu.

**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 2002. A letter of application and a signed statement from the student's major professor confirming the student's graduate status should be directed to ABS Treasurer, Nancy G. Solomon, Miami University of Ohio, Department of Zoology, Miami University, Oxford, Ohio 45056 USA. E-mail: solomong@muohio.edu.

**CALL FOR SYMPOSIA
FOR THE 2003 ANNUAL MEETING**

Symposium proposals for the 2003 annual ABS meeting at Boise State University must be submitted to the Junior Program Officer by 1 August, 2002. Information on organizing symposia may be found at the ABS website:

<<http://www.animalbehavior.org/ABS/Program/HostGuide/SympGuide.html>> Symposium proposals may be submitted by email to <stoddard@fiu.edu> or by regular post to: the ABS Junior Program Officer, Philip Stoddard, Dept Biological Sci., Florida Intl. Univ., Miami, FL 33199, USA.

**CALL FOR APPLICATIONS
ABS Student Research Grants**

The ABS Research Grants Committee announces the 2002 competition for funds in support of student research. Only student members of ABS (who must be an active member on the application deadline) enrolled in graduate programs are eligible to apply. Recipients of past research awards are ineligible. A total of \$15,000 (US) will be available to support ten students at a level of no more than \$1000 each and an additional ten students for up to \$500 each.

The DEADLINE for receipt of completed applications is **January 24, 2002**. Late applications will not be accepted. Applications will be reviewed by two or three referees and applicants will be notified of the results by April 1, 2002. The preferred method for receiving and submitting applications is through <http://www.animalbehavior.org/ABS/Grants>.

Information regarding the submission of special files (e.g. figures) is available on that site. For those preferring to submit their application directly electronically or as an electronic attachment contact ABS 1st MAL, Dr. Shelley Adamo, Department of Psychology, Dalhousie Univ., Halifax, NS B3H 4J1, Canada E-mail: sadamo@is.dal.ca.

CALL FOR APPLICATIONS

Developing Nations Research Grant

The Animal Behavior Society announces the fourth annual Developing Nations Research Grant (DNRG) program. 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 (i.e. must be an active member on the application deadline) residing in developing nations are eligible (the following are **not** considered developing nations: United States, Canada, Israel, Japan, Australia, New Zealand, Iceland, Norway, Sweden, Finland, Denmark, Germany, The Netherlands, Belgium, Luxembourg, France, United Kingdom, Ireland, Switzerland, Austria, Italy, Spain, and Portugal). Active student members of the ABS may apply separately for the Student Research Grants Competition, but no one may receive more than one Developing Nations or Student Research Grant in a lifetime. Student DNRG applicants must be enrolled at an institution in a developing nation.

The DEADLINE for receipt of completed applications is 10 JANUARY 2002. 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 2002. The preferred method for acquiring application materials is through <http://www.animalbehavior.org/ABS/Grants/>. Paper versions can be downloaded from this WWW address, or are available upon request from the address below. Applications can be submitted via e-mail to ABS 2nd MAL Stephen Nowicki at snowicki@duke.edu or in paper form to: Dr. Stephen Nowicki, Department of Zoology, Duke University, Box 90325, Durham, North Carolina 27708-0325 USA. Questions about the competition should also be directed to these addresses.

2002 WARDER CLYDE ALLEE COMPETITION

The Warder Clyde Allee Competition for Best Student Paper will take place at the 2002 Annual Meeting at Boise State University in Bloomington, IN 13-17 July 2002. All 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 2001) 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 submission 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 2002 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 ABS 2nd President Elect, Dr. Bennett G. Galef, Jr., ABS Allee Competition Chair, Dept. of Psychology, McMaster University, Hamilton, ON L8S 4K1, Canada. E-mail: galef@mcmaster.ca, 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 Bennett G. Galef, Jr (E-mail: galef@mcmaster.ca).

ABS AUTHORS

If you have written or edited a book pertinent to animal behavior which was published in 2001 or will have a book coming out in 2002, please send the citation and a brief synopsis of its contents to Dr. Jill Marie Mateo, Department of Psychology, Uris Hall, Cornell University, Ithaca, New York 14853-7601 USA, email: jmm52@cornell.edu.

SUMMARIES OF INVITED PAPER SESSIONS
Animal Behavior Society Meeting
Corvallis, OR, July 15-July 20, 2001

**“DETECTING AND MEASURING MATING
PREFERENCES: ADDING THE NEXT LAYER OF
COMPLEXITY.”**

Organized by Molly Morris, Ohio University

The major goal of this symposium was to examine some of the latest insights into the structure and function of mating preferences, as well as how these insights are influencing the methods we use to detect and measure mating preferences and their potential influence on mate choice. It was evident from the papers presented that the question of interest can determine which methods are most appropriate. Thus, examination of the evolution of female mating preferences may or may not require that the preference results in mate choice, while examining the role of female mate choice in the evolution of male traits does. Many of the talks stressed that the next step in understanding the evolutionary implications of mating preferences is to consider the numerous confounding factors can influence both mating preferences and mate choice.

Margaret Ptacek (Clemson University) has included male-female interactions in her mate preference tests, while still examining the relative importance of dorsal fin morphology independently of courtship display rates, by using hybrids of the sailfin and shortfin mollies (*Poecilia*) as stimuli. Bill Wagner (University of Nebraska) stressed the importance of considering not only the models of female search behavior during mate choice, but also shifts in the mean and variance of a male trait. His work with crickets (*Gryllus lineaticeps*) demonstrated that females are assessing males sequentially, and that the response of females to a given call is affected by the attractiveness of previously sampled calls.

Michael Greenfield (University of Kansas) suggested that measuring the genetic basis of preferences will be context dependent, as females are expected to choose different males in different environments. He demonstrated that call characteristics of the lesser wax winged moth had significant plasticity, and that they did not change in the same way in each environment. One of the environmental factors known to influence call characteristics is temperature. Nevertheless, Michael Ritchie (University of St. Andrews) showed that female preferences for call characteristics of *Drosophila montana* influenced by temperature, did not show a correlated response (i.e. no temperature coupling). Instead, he suggested that females may simply demand that males perform the best that they can, regardless of temperature.

Carl Gerhardt (University of Missouri) has been

examining preference functions in gray treefrogs (*Hyla chrysoscelis* and *H. versicolor*) and demonstrated that females from different locations balance their strength of preference for characters under stabilizing versus directional selection in different ways. He also showed that different strategies with regard to the kinds of stimulus variants presented to animals are needed for studies concerned with mechanisms of signal recognition as opposed to studies focusing on adaptive consequences of mate choice. In addition, Alex Basolo (University of Nebraska) presented a comparative study of preferences for swords in male and female poeciliid fishes suggesting that preference functions differ between species, even when they do not differ in origin.

There is an important distinction between validating a measure of mating preference and determining if a mating preference will result in mate choice. Molly Morris (Ohio University) suggested that while comparisons of preference tests and mating tests (in which males and females are allowed to mate) are necessary to validate preference measures, mating tests are not a substitute for preference tests as they confound multiple preferences. To determine if a mating preference will result in mate choice, Mike Webster (Washington State University) stressed that numerous factors in addition to mating preferences can influence mate choice. In his review of the uses of molecular techniques, Webster concluded that without behavioral observations, these techniques can only answer questions concerned with patterns of fertilization, not the role of mating preferences in mate choice.

Steve Shuster (Northern Arizona University) used a theoretical approach to determine the circumstances under which natural selection on females constrains sexual selection on males as well as when the effects of male “quality” is most likely to influence female fitness. In his controversial conclusions, Shuster suggested that natural selection on females constrains sexual selection on males only when sexual selection is weak and that female mate choice affects female fitness most when sexual selection is negligible. In a final talk, Andy Sih (University of Kentucky, now, UC/Davis) presented his work on water striders that illustrates how the predictions of effects of social conditions (e.g., sex ratio) on multiple behavioral mechanisms can be quantified and tested using a blend of experiments and path analyses. In conclusion, the two themes that emerged from the talks were that mate choice might often depend on the choosing individual's condition, or on social or ecological conditions and that mate choice is only one of several behavioral mechanisms influencing sexual selection.

“AGGRESSION AND GROUP ORGANIZATION IN ANIMAL SOCIETIES.”

Co-organized by Robin Foster, University of Puget Sound
and Sean O'Donnell, University of Washington

Many studies have explored how aggression mediates conflicts over access to resources, such as food or reproductive output. We propose that a different perspective on aggression merits increased attention: the role of aggression in organizing group behavior. Intra-group fighting can provide an important mechanism for establishing social structure and regulating division of labor among group members. Bringing together speakers that share interests in social behavior and aggression, and who are familiar with a diverse set of taxa, will encourage the application of new approaches to research on social aggression in diverse animal societies. One interesting possibility is that aggression may be shaped by selection on colonies or other kin groups, such that division of labor and group fitness are optimized. The presentations were as follows.

Jennifer Fewell, of Arizona State University discussed divisions of labor among co-founding ant queens. She suggested that divisions of labor arise spontaneously in societies as a result of variation in group members' intrinsic sensitivity to different tasks. In the laboratory, induced cofoundress association of ant queens (*Pogonomyrmex barbatus*) indicated that strong division of tasks (e.g., egg tending versus foraging) is the rule. Females from a normally solitary-founding population showed division of labor without overt aggression. In contrast, females from a normally cofounding population were dominant when paired with solitary population females. This suggests that social aggression can arise as a means of policing group mates' activities, early in social evolution.

Robin Foster (co-organizer), of the University of Puget Sound discussed reproductive conflict and division of labor in bumble bees (*Bombus*), in which workers frequently lay eggs. His study examined correlations between levels of aggression, worker reproductive condition as measured by ovary maturation, and tasks performed by workers. Dominant workers engage in the most aggressive interactions, and they are also less likely to leave the nest to forage and more likely to construct brood cells and lay eggs. Therefore, while aggression is likely correlated with individual bee's reproductive condition and behavior, it also may also directly affect a colony's social organization by mediating division of labor.

Sean O'Donnell (co-organizer) of the University of Washington discussed evolutionary modification of aggression in the eusocial paperwasp *Mischocyttarus mastigophorus*, in which queens direct their aggression toward female nestmates with high reproductive potential, but workers and males do not. Worker and

male aggression instead appear to be based on competition over food, and may play an important role in regulating task performance. Like their primitively eusocial ancestors, swarm-founding wasp workers frequently engage in biting interactions. Significant individual variation in rates of giving and receiving biting does not correspond to variation in body size or in ovary development in swarm-founding wasps, *Polybia occidentalis*. Social biting in *Polybia* is at least partly independent of direct reproductive conflict, and biting appears to play a role in organizing task performance and division of labor among workers.

Wendy Saltzman of the University of Wisconsin-Madison discussed the role of aggression in reproductive competition among common marmoset monkeys (*Callithrix jacchus*), in which intra-group and extra-group intrasexual agonism contribute to the maintenance of the breeding system. Socially subordinate individuals of both sexes are typically prevented from breeding. Among males, aggressive interference may serve to limit subordinate males' sexual interactions with females. Among females, in contrast, specialized physiological responses to sensory cues may inhibit reproduction in subordinates, even in the absence of overt agonism. However, aggression appears to play a key role in female reproductive competition when reproductive suppression fails: on the rare occasions that subordinate females breed, their infants are usually killed by the dominant female. Thus, aggression mediates reproductive competition and contributes to maintenance of cooperative breeding in this species at numerous levels.

Stanley Schneider and Gloria DeGrandi-Hoffman of the University of North Carolina discussed vibration signals of honey bees and their influence on the outcome of queen rivalry. They suggested that workers may use the signal to circumvent or thwart queen-queen aggression and this may increase the survival of certain queens over others. Vibration signals may be a mechanism of worker control over queen aggression and thus may provide a tool for investigating the role of worker-queen conflict in organizing honey bee society.

DID YOU KNOW?

Purchases via the Amazon.com link on our main web page, <http://www.animalbehavior.org>, contribute 5% of the total to ABS. If you have books to order and would like to contribute to the society's efforts at the same time, please consider this option. The Amazon link is found at the bottom of our main page.

ABSnet
THE ELECTRONIC MAIL NETWORK OF THE
ANIMAL BEHAVIOR SOCIETY

ABSnet provides a fast electronic forum for animal behaviorists, and others interested in the study of animal behavior, in a digest or newsletter form. ABSnet provides job announcements, requests-for-information, computer-related news (eg. virus and bug alerts), appropriate software and hardware reviews, and news of Society activities and business. ABSnet is not an interactive, listserv-type discussion group but rather a moderated forum for the exchange of information of interest to animal behaviorists. The digest or newsletter does not replace the official Society hardcopy newsletter sent to all Society members via regular mail. Questions? Let me know! James C. Ha, University of Washington jcha@u.washington.edu. To SUBSCRIBE to ABSnet go to:

<http://www.animalbehavior.org/ABS/Announcements/> click on the Subscribe/Unsubscribe link under ABSNet and fill out the web based form. Links to Post an article or view the archives are also available.

MEETINGS

ANIMAL BEHAVIOR SOCIETY ANNUAL MEETINGS

2002: 13-17 July at Indiana University, Bloomington, IN (see announcement below).

2003: 19-23 July at Boise State University in Boise, ID

Watch the ABS website for details.

CALL FOR PRESENTATIONS: WORKSHOP ON ANIMAL BEHAVIOR LABS for 2002 ABS meeting. A hands-on workshop for ABS members and invited teachers is planned for the 2002 meeting, featuring laboratory exercises in animal behavior for undergraduate and high school students. The Education Committee is seeking presenters for the workshop. Exercises can be for a laboratory or field setting. If you are interested in demonstrating your lab at the 2002 workshop, or helping in other ways, please contact Tom Sproat at Northern Kentucky University, Biology Department, Highland Heights, KY 41099, sproatt@nku.edu or Becky Talyn at Denison University, talynb@denison.edu.

AMERICAN INSTITUTE OF BIOLOGICAL SCIENCES (AIBS) 53RD ANNUAL MEETING, "EVOLUTION: UNDERSTANDING LIFE ON EARTH," 22-24 March 2002, Key Bridge Marriott Hotel, 1401 Lee Highway, Arlington VA 22209. The 2002 AIBS annual meeting, "Evolution: Understanding Life on Earth," presents an excellent opportunity for biologists to share the latest developments in evolution

research and education. Distinguished plenary speakers will present lectures from the forefront of their fields, then will join those speakers and other equally notable scholars in informal discussion groups. The meeting's program includes a session on online resources for research and education; a session on the central role of organismal biology; contributed posters; a diversity scholars competition; and a presentation by Darwin scholar and stage performer Richard Milner of his popular musical, "Charles Darwin: Live and in Concert." Speakers and discussion leaders include: Francisco Ayala, Rodger Bybee, Joel Cracraft, Niles Eldredge, Douglas Futuyma, Peter and Rosemary Grant, Alison Jolly, John Jungck, Joe Levine, Paula Mabee, Kenneth Miller, Loren Rieseberg, Eugenie Scott. Topics include: evolutionary mechanisms and patterns, replication studies, genomics and development, conservation and population biology, formal education K-16, public education, anti-evolution, public policy and politics, and faith-based issues. Register now at www.aibs.org, or call 703-790-1745; e-mail: admin@aibs.org.

ECOLOGICAL CONSEQUENCES OF ARTIFICIAL NIGHT LIGHTING

Sponsored by The Urban Wildlands Group and the UCLA Institute of the Environment. February 23-24, 2002, at the University of California, Los Angeles. Natural patterns of light and dark are gradually being lost to increased artificial night lighting. What consequences will this have on the ecology of plants, animals, and their natural communities? In this two-day conference leading scientists will report on the state of knowledge in this growing area of inquiry, and practitioners will lead a workshop on the incorporation of the best available science into workable policy proposals to protect and restore the under-appreciated ecology of night. For more information see <http://www.urbanwildlands.org/conference.html>. To register send contact information and check or money order for \$75 (US) per person to: The Urban Wildlands Group, P.O. Box 24020, Los Angeles, CA 90024. Conference fee includes continental breakfast, lunch, wine and cheese on Saturday, brunch on Sunday.

ISBE 2002. The 9th Biennial Congress of the International Society for Behavioral Ecology will take place in Montreal, Quebec, Canada from July 7-12, 2002. The organizers are Luc-Alain Giraldeau and Don Kramer. For more information, go to the conference web site www.isbe2002.uqam.ca or e-mail the organizers at isbe2002@uqam.ca.

Please join us at the 39th Annual Meeting of the
Animal Behavior Society

July 13-17, 2002

<http://www.animalbehavior.org/ABS/Program>



When: The meeting will begin with a welcoming reception on Saturday evening, July 13 and continue through the closing banquet on Wednesday night, July 17, 2002.

Where: The meetings will be held on the Indiana University (IU) campus in Bloomington, Indiana, and most meeting events will take place in the Indiana Memorial Union (IMU). Indiana lies roughly in the center of the United States and is easily accessible from all parts of the country via the Indianapolis International Airport (IND). Bloomington lies about 50 miles south of Indianapolis, and can be reached from the Indianapolis airport via a regular shuttle (<http://www.bloomingtonshuttle.com/airport.html>).

Hosts: Emilia Martins (emartins@indiana.edu) and Meredith West (mewest@indiana.edu) are working with IU conference services to coordinate the meeting. The meeting is being co-hosted by the IU Dept. of Biology, the IU Dept. of Psychology, and the IU Center for the Integrative Study of Animal Behavior (CISAB). Bloomington is also the home of the ABS Central Office.

Registration and Abstract Submission: Early registration and abstracts will be accepted via the ABS web page (<http://www.animalbehavior.org/ABS/Program>) beginning in January, 2002. **Abstracts will be due at midnight on May 3, 2002.**

Housing and Food: Inexpensive housing will be available in IU dormitories. Rooms will also be available in the IMU hotel (<http://www.imu.indiana.edu/hotel.html>), a full-service hotel located in the same building as most of the meeting events. There are a variety of restaurants both in and very near the IMU, so we will not offer a separate meal plan. Housing reservations and other information will be available on the ABS web page beginning in January, 2002 (<http://www.animalbehavior.org/ABS/Program>).

Bringing your family: There are many things for visitors to do in Bloomington, in addition to participating in our meetings. Bloomington boasts its own children's science museum (the Wonderlab) and an excellent public library (Monroe County Public Library), and is only about one hour away from the world-renown Indianapolis Children's Museum and the Indianapolis Zoo. Bloomington is often described as a cultural mecca of the Midwest, due mostly to IU's outstanding music and art programs. Live music performances are common during the summer months, and art may be enjoyed at several downtown galleries as well as at the IU Art Museum. Finally, and contrary to popular misconception, southern Indiana is hilly and forested and includes several State Parks and a National Forest. Brown County State Park (about 30 mins east of Bloomington) is particularly worth a visit.

We are hoping to establish a shared baby-sitting system near where the meeting will be held and operating during evening events as well as during the day. There are also a few Bloomington daycares that will accept drop-ins, and several local baby-sitters who may be available during the meetings. If you are thinking about bringing children to the meetings, please contact Emilia Martins (emartins@indiana.edu) for more information.

SCIENTIFIC PROGRAM

We have an exciting schedule planned including a keynote address by **Dr. Felicity Huntingford** (current president of ASAB) and a special talk by **Dr. E.O. Wilson**, winner of the ABS Distinguished Animal Behaviorist Award. Other aspects of the scientific program will be announced on the web page as they are known.

REGULAR CONTRIBUTED TALKS will be 15 min. in length with 12 min. for presentation and 3 min. for discussion. A single slide projector (standard 2x2), overhead transparency projector, video projector will be available. Computer projection will also be available, but you must follow the formatting instructions (to be posted on the web page in May 2001) precisely.

POSTER PAPERS are highly recommended as they can facilitate discussion, perusal of data and one-to-one exchanges of ideas. Two main awards will be given: The **FOUNDERS AWARD** will be given for the best poster paper at the Annual Meeting. The **GENESIS AWARD** will be given for the best poster paper presented by an undergraduate student. Posters being considered for either award will be on display throughout the meetings.

ALLEE AWARD: The W.C. Allee Award will be presented for outstanding student paper at the Meeting, and is judged on the basis of a 30 min. talk and a written manuscript. Any independent research that is largely unpublished by the submission deadline is eligible for this award, provided that the student has not competed before and has not completed the final defense of a doctoral dissertation before June 2001. Each paper must have a single author. To compete, you must register and submit an abstract and a pdf version of your manuscript via the WWW **no later than 3 May, 2002**. Questions? Contact Dr. Bennett G. Galef (Galef@McMaster.CA).

**CANDIDATES FOR THE 2000
ELECTION OF ABS OFFICERS**

The order in which candidates are listed may influence voting. Please avoid this bias in making your choices. This year, the candidates are listed in reverse alphabetical order.

SECOND PRESIDENT ELECT

Ken Yasukawa

Education: B.S. Biology, 1971, SUNY Stony Brook; 1972, Computer Science, SUNY Binghamton; M.A. Zoology, 1975; Ph.D. Zoology, 1977, Indiana University.

Current Position: Professor, Beloit College, Department of Biology.

Research Interests: Anti-predator behavior, parental care and nestling behavior of Red-winged Blackbirds; sexual selection in monogamous birds; extra-pair copulations, intraspecific nest parasitism and reproductive strategies of birds.

ABS and Related Activities: *Animal Behaviour* Editorial Board 1988-91; ABS Education Committee 1991-94; ABS Symposium on Teaching Animal Behavior, Seattle, WA, 1994; ABS Executive Committee Member-at-Large 1996-99; Editor, *Journal of Field Ornithology* 1990-95; Advisory Panel for Animal Learning and Behavior, NSF 1992-95; Advisory Panel for Special Emphasis in Biological Sciences, NSF

1996; Advisory Editor, *Behavioral Ecology and Sociobiology*; Member, Editorial Board, *Current Ornithology*; Editor, with Rebecca Brooks, *Laboratory Exercises in Animal Behavior* (<http://www.animalbehavior.org/ABS/Education/Labs/index.phtml>) Editor, with Bonnie Ploger, *Exploring Animal Behavior in Laboratory and Field*; *Teaching Animal Behavior in Laboratory and Field*, Academic Press (expected 2002).

Judy Stamps

Education: BA, 1969, University of California, Berkeley, MA, 1971, UC Berkeley, Ph.D. 1974, UC Berkeley.

Current Position: Professor of Biology, University of California, Davis.

Research interests: territorial behavior, habitat selection.

ABS and related activities: Editorial Boards: *Animal Behaviour*, *American Naturalist*, *Behavioral Ecology and Sociobiology*, service on NSF panels (including Animal Behavior), member and chair of USIEC committee.

SECRETARY

Molly R. Morris

Education: B.A., 1978. Earlham College Ph.D., 1987. Indiana University.

Current Position: Assistant Professor, Ohio University, Athens, OH.

Research Interests: Sexual selection in swordtail fishes, evolution of female preferences, evolution of animal communication in aggressive interactions, and the role of female choice in speciation.

ABS and Related Activities: Judge for Founders Award Poster Session, Allee Award Judge, Education Committee, Organizer of Symposia for 2001 meetings, Reviewer for *Animal Behaviour*.

Note: Nominee for Secretary, Linda S. Rayor has withdrawn from this election.

MEMBER-AT-LARGE

Geoffrey Hill

Education: B.S. 1983, Indiana University; M.S. 1986, University of New Mexico; Ph.D. 1991, University of Michigan.

Current Position: Associate Professor, Auburn University.

Research Interests: The evolution of vocal and visual signaling systems in birds.

ABS and related activities: Participant in ABS Sexual Selection Symposium 1997; ABS meeting attendance 1988-present; four articles published in *Animal Behaviour*; reviewer since 1985.

Hugh Drummond

Education: LL.B., 1967, Bristol University; P.D.E.S.L., 1970, Leeds University; PH.D., 1980, University of Tennessee.

Current Position: Investigador Titular, Departamento de Ecología Evolutiva, Universidad Nacional Autónoma de México, México D.F., México.

Research Interests: Sibling conflict, dominance-subordination, mating systems, sex ratio evolution.

ABS and related activities: ABS Fellow 1997; Member ABS Policy Committee 1991-96; Member Latin American Affairs Committee, 1998 – current; ABS Fellows Lecture 2000; Reviewer for *Animal Behaviour*, attended Executive Committee meeting 2001, prospective host for ABS meeting 2004.

**END OF ELECTION INFORMATION. BALLOT
ON PAGE 17**

OPPORTUNITIES

The Secretary reminds you that a time lag exists between my receipt of advertisements and the publication of the Newsletter. Positions listed here may already be filled. Please contact those offering opportunities before applying.

UNIVERSITY OF MINNESOTA, ECOLOGY, EVOLUTION AND BEHAVIOR ASSISTANT PROFESSORSHIP. Continuing a several-year recruiting campaign for eleven faculty lines in ecology, evolution and behavior, we invite applications for the following tenure-track position. We seek an experimental **behavioral ecologist** who will complement our existing strengths in social behavior, foraging, and evolutionary studies of behavior. We especially encourage applications from those whose research utilizes mechanistic or physiological approaches to behavioral ecology. The successful candidate will be expected to develop and maintain a vigorous research program and to contribute to quality undergraduate and graduate teaching. They will join a respected department that will increase to ca. 32 faculty members, a third of whom will be recent hires. Information about the department is available at <http://www.cbs.umn.edu/eeb>. To apply, send curriculum vita, statements of teaching and research interests, copies of five publications, and names and addresses of three references to Chair, Behavioral Ecology Search Committee, Ecology, Evolution and Behavior, University of Minnesota, 100 Ecology, 1987 Upper Buford Circle, St. Paul, MN 55108. Application review will begin on December 1, 2001. The University of Minnesota is committed to the policy that all persons shall have equal access to its programs, facilities and employment without regard to race, color, creed, religion, national origin, sex, age, marital status, disability, public assistance status, veteran status, or sexual orientation.

BEHAVIORAL ECOLOGY, TUFTS UNIVERSITY

The Department of Biology invites applications for a tenure-track **Assistant Professor** position in Behavioral Ecology to begin in Fall 2002. We especially encourage applicants whose research program integrates field research with the use of molecular and/or other laboratory techniques. Applicants' research may be in aquatic or terrestrial systems. Teaching responsibilities include an intermediate lecture course in animal behavior, participation in a team-taught introductory or laboratory course, and an upper level seminar. The successful candidate is expected to develop an active, externally funded research program involving graduate and undergraduate students. Doctoral degree and a record of research productivity required, postdoctoral

experience preferred. Applicants should submit a curriculum vitae, three recent publications, separate statements of (1) research interests & plans and (2) teaching experience & plans, and have three letters of reference sent to: Chair, Behavioral Ecology Search Committee, Department of Biology, Tufts University, Medford, MA 02155. Review of applications begins December 17 and will continue until the position is filled. Additional information about the department is at <http://ase.tufts.edu/biology/>. Tufts University is an Affirmative Action/Equal Opportunity employer. We are committed to increasing the diversity of our faculty, and members of underrepresented groups are strongly encouraged to apply.

WILDLIFE OR CONSERVATION BIOLOGY, UNIVERSITY OF TORONTO AT SCARBOROUGH

The Division of Life Sciences at the University of Toronto at Scarborough seeks a candidate for a new position in Wildlife or Conservation Biology. This is a tenure-stream position at the level of Assistant Professor. Applicants must have a Ph.D. (or equivalent), and preferably some postdoctoral experience. The successful candidate will be provided with significant start-up funds, and will be expected to secure external research support and to establish an active research laboratory. Teaching responsibilities will comprise a standard load of 1.5 full course equivalents per year in courses that contribute to proposed new co-op and non-co-op programmes in Conservation Biology and to the major and specialist programmes in Biological Sciences. Preference will be given to those whose work integrates ecology, behaviour, or evolution with conservation biology. For information on research and teaching strengths in the Division, please consult the Divisional website: <http://www.uts.utoronto.ca/~lifesci/index.html>.

Interested applicants should submit a complete curriculum vitae (that should include individual statements of research and teaching interests) and a copy of recent reprints, and arrange to have three letters of recommendation (including comments on teaching ability, publications and research potential) sent from the referees. All materials should be addressed to: Professor John H. Youson, Chair, Division of Life Sciences, University of Toronto at Scarborough, 1265 Military Trail, Scarborough, Ontario, M1C 1A4. Closing date for applications is January 15, 2002. Salary will be commensurate with qualifications. The position will be effective July 1, 2002. The University of Toronto is strongly committed to diversity within its community and especially welcomes applications from visible minority group members, women, Aboriginal persons, persons with disabilities, members of sexual minority groups, and others who may contribute to the further diversification of ideas.

PH.D. AND POSTDOC OPPORTUNITY IN AVIAN SOCIAL LEARNING. We study the mechanisms and functions of social learning and use keas (*Nestor notabilis*) as model species. These birds show a unique combination of important preconditions for social learning, such as complex sociality, opportunistic generalism, group foraging, extreme behavioural flexibility, unusual exploratory/curiosity behaviour, extended association with their parents, and a long potential life-span. In this project we combine laboratory experiments in Vienna with observations in the field on the South Island of New Zealand in order to integrate functional, cognitive and developmental issues. The key questions are: What is the role of social learning in the evolution of sociality in keas? What is the function of social learning in group exploration and object play? What is the adaptive significance of social learning in keas? What social learning mechanisms do these birds use in different circumstances? When and how do the respective mechanisms develop? Do keas imitate? This project is funded by the Austrian Science Foundation (FWF) and will continue for a minimum period of two years. Salaries are competitive. There is one PhD and one Post-Doc position available. The PhD student will be supervised by Prof. Ludwig Huber at the University of Vienna, Institute of Zoology, Austria. Both applicants will be based at Vienna with a total of up to 6 months fieldwork being conducted in the southern alps of New Zealand. Expected starting date is January 2002. Candidates should have an MSc/PhD in Biology or Psychology. Prior experience with handling animals, with fieldwork and some competence in video analysis and statistics is desirable. Good health and physical condition is essential, because the field work must be carried out in difficult conditions (cool and humid climate) with limited social contact in remote mountain areas. Candidates must be able to work independently but as an integrative part of a team in order to integrate the program into the other current research projects on social learning in the department. Reasonable skills in English language are mandatory. Letters of application including a picture, CV, publication list and a statement of research interests should be sent as soon as possible to Dr. Ludwig Huber, from whom further details are available. Postal address: Institute of Zoology, University of Vienna, Althanstrasse 14, A-1090 Vienna, Austria. Applications by electronic mail are welcome (ludwig.huber@univie.ac.at). Further details of the project and our department can be found at: <http://www.univie.ac.at/zoology/theo/>.

BAT CONSERVATION INTERNATIONAL - Student Scholarship Program. Approximately 15 grants ranging from \$500 to \$2,500 will be made in 2002, to support research that helps document bats' roosting and feeding habitat requirements, their ecological or economic roles, or their conservation needs. Students enrolled in any college or university worldwide are eligible to apply. Projects must have bat conservation relevance. The application deadline for 2002 scholarships is 15 December 2001. All application information and forms are available on our web page at <http://www.batcon.org/schol/schol.html> or write to: Bat Conservation International, Student Scholarship Program, P.O. Box 162603, Austin, TX 78716-2603 USA, or email aengland@batcon.org.

THREE POSITIONS FOR A STUDY ON SONG SPARROWS in the Gulf Islands of British Columbia. Researchers include Liana Zanette (U Western Ontario) Jamie Smith (U British Columbia), John Wingfield (U Washington), and Rudy Boonstra (U of Toronto). In accordance with Canadian Immigration requirements, this advertisement is directed to Canadian citizens and permanent residents of Canada. 1. **CREW LEADER.** This job is physically demanding, requires organizational decision making and leadership qualities, and the ability to work independently. You will be responsible for locating and monitoring the nests of song sparrows in the Gulf Islands off the coast of Southern Vancouver Island (near Victoria) and will oversee the activities of the rest of the crew. Experience driving outboard motors and boat and motor maintenance and a thorough knowledge of water safety is essential. The successful candidate will be accomplished at searching for shrub nests using behavioural cues from the parents, be able to read colour bands in the field, and execute banding and DNA extraction. A valid driver's licence is required. The position is from Feb-Aug 2002. The work is intensive with long days and few days off from Apr to Jun. This job entails responsibility as well as work with researchers from several different universities in a stunning environment. Salary \$2000-\$2400/month (Can) commensurate with experience. 2. **RESEARCH ASSISTANT,** at Victoria on Vancouver Island. The successful candidate will be physically fit and energetic. Must work independently though you will be supervised by the crew leader and other researchers. You will keep track of about 40 pairs of song sparrows at different stages of the nesting cycle. Nest searching requires bird savvy, patience and involves using behavioural cues from the parents. Prior experience is an asset. Expect frequent interaction with the public. You may also be required to read bands, capture, band, measure and extract DNA from adults. A valid driver's licence is required. Allergies to grass pollen could be a problem in Victoria in June. This position runs from Feb-Aug

2002. Work is most intensive from Apr-Jun. Salary is \$1400-1800/m (Can) depending on experience. Victoria is a beautiful town and its surrounds have plenty of green space and forested areas, mountains, and ocean. You will be in close contact with the crew leader and will have the opportunity to go out to the Gulf Islands if so desired. 3. BIRD BANDER. A top-notch bird bander is needed for a study on physiological stress in song sparrows. The bander must have a successful record at targeting and capturing specific individuals in mist nests. You must also be able to extract birds from nets, and measure and band them accurately and can extract DNA from the brachial vein. You will also assist in nest searching when necessary. You will work both in Victoria and the Gulf Islands. Grass pollen is heavy in Victoria mainly in June, allergies could be a problem. You must have the ability to co-ordinate your efforts with the crew leader and research assistant who locate and monitor the nests. A valid driver's licence is required. Experience with outboard motors and knowledge of water safety are assets. The position is from Apr-Jul 2002 and the salary ranges from \$1400-1800/m (Can) depending on experience. The deadline for all applications is 5 Dec 2001. Please include a letter of interest that highlights your qualifications. Indicate which of the three jobs you are applying for. Also include your c.v. and the names, addresses, phone and e-mail numbers of three references to be contacted. Indicate your relationship to each of your references. Send your application to Liana Zanette, Dept of Zoology, University of Western Ontario, London, Ontario CANADA N6A 5B7. FAX: e-mail lzanette@uwo.ca. In the subject line put "sosp job".

VOLUNTEER FIELD ASSISTANTS (3) WANTED

for an ongoing study of cooperative display behavior in lance-tailed manakins (*Chiroxiphia lanceolata*) in Panama, February 26 - July 3. Assistants will spend most of their time observing male behavior at display perches, mist-netting and banding birds, and searching for nests. Experience in one or more of these areas is preferred. Strong applicants will also have experience reading color bands and working in close quarters and isolated conditions. The field crew will live and work on an island off of Panama's Pacific coast and share one-room housing. Applicants should be enthusiastic and physically fit: the terrain is steep, the weather is hot and humid, and there's an abundance of biting insects. Expect to work long days, be regularly woken by howler monkeys at 4 am, and see some amazing bird behavior. Send letter of interest, resume, and contact information for three references to: Emily DuVal, Museum of Vertebrate Zoology, UC Berkeley, 3101 VLSB, Berkeley, CA 94720. Applications will be reviewed starting in late November and hiring decisions will be finalized by December 20, 2001.

NOTICE! For additional funding source information see <http://www.animalbehavior.org/ABS/Grants/>

ANNOUNCEMENTS

ABS CONSERVATION WEB PAGE The ABS Conservation Committee web page (click on the conservation icon on the main ABS Web Page: <http://www.animalbehavior.org/ABS/>) is a resource for those interested in applying their animal behavior expertise to conservation problems. The web page has case studies, select literature references, a preliminary list of funding sources, and pertinent internet links. To make suggestions or submissions (we especially need photos and more funding sources), please contact the committee chair, Rich Buchholz (byrb@olemiss.edu).

ABS CERTIFICATION PROGRAM IS ALIVE AND WELL. During the last two years, the ABS Executive Committee with the advice of an ad hoc committee and an attorney, has reviewed the ABS Certification Program for Applied Animal Behaviorists. The main reason for this review was concern about possible legal actions that could be taken against the Society related to certification. Following this review, we are happy to report that the certification program is still strongly endorsed by the officers of the Society and remains largely unchanged. Changes were made in the oversight of the Board of Professional Certification (BPC), in liability insurance requirements for certificants and in the system of appeals of BPC decisions. These changes will protect the Society and the certification program from lawsuits. Requirements for certification remain unchanged except as they relate to liability insurance requirements, appeals of BPC decisions and the schedule of payments for certification and re-certification. Details of these changes can be found in the application forms available at the ABS website, www.animalbehavior.org/applied/ or from the Chair of the BPC, Stephen Zawistowski, Senior Vice President and Science Advisor, ASPCA, 424 East 92nd Street, New York, NY 10128. As Past President Gowaty noted in her comments at the 2001 business meeting, applied animal behavior and the certification program are important and highly visible parts of our Society and will continue to contribute to the missions of the Society for years to come. For additional information about the certification program see the ABS applied website or write to the Chair of the program at the address above.

CALL FOR PUBLICATION OF NEW METHODOLOGIES IN THE STUDY OF ANIMAL BEHAVIOR

The Animal Behavior Society recognizes that there are

many exciting new techniques (e.g., bioinformatics, brain imaging, voice-activated data gathering, robotics) that can potentially broadly affect our field. To facilitate the disbursement of this information we have decided to expand the publication of new methodologies that can be used in any aspect of the study of behavior. I urge all members to share their expertise by publishing a description of cutting-edge techniques in one of two forms: (1) As a paper in *Animal Behaviour*. These contributions would be reviewed (as all are) and, as such, would most likely be accepted if they included a 'novel database' or a truly outstanding new application. We hope to publish 1 to 2 such manuscripts per year. (2) As an announcement in a new section of this newsletter. These contributions would be reviewed by the *Animal Behaviour* executive editor (currently me). The format of the latter contributions would be very short (0.5 to 1 page) communications. At present, we will leave the exact specifications of these manuscripts up to the authors. The rapid advance of computer technology has provided a staggering number of techniques that could well be the backbone of behavioral studies in the future. The need for rapid disbursement of this information was identified as an important goal in a recent summit on the future of the Animal Behavior Society. We are optimistic that our membership will take up this challenge. Manuscripts for *Animal Behaviour* are to be sent to the editorial office (see any issue of *Animal Behaviour* for details). Articles for the newsletter can be sent to Jeffrey R. Lucas, Executive Editor, *Animal Behaviour* Department of Biological Sciences Purdue University West Lafayette, IN 47907-1392 or e-mailed to behavior@bilbo.bio.purdue.edu.

ADDRESS CHANGE: Devra G. Kleiman, Senior Research Scientist, Smithsonian National Zoological Park, Smithsonian Institution, Department of Biological Programs, National Zoological Park, Washington DC 2008-25, has changed her address to: Director, Conservation Planning Support, Field Support Division, Conservation International, 1919 M. Street, NW, Suite 600, Washington DC 20036, d.kleiman@conservation.org, 202-912-1333.

CALL FOR ARTWORK: Do you have any line drawings of your favorite animals behaving? We're looking for some artwork to improve the looks of the ABS Program passed out at the Annual meeting. If you have any black-and-white line drawings you would like to donate, please send them (preferably via email) to the ABS Program Officer, Jim Ha, jcha@u.washington.edu.

ANIMAL BEHAVIOR MEDIA LIBRARY: The Education Committee of the Animal Behavior Society has established a Media Library for use in teaching animal behavior. We are now soliciting submission of high-quality photographs, line drawings, and data graphs illustrating important principles in animal behavior for use in teaching about animal behavior, and for which the submitter can grant copyright to ABS. To submit an image for the library, send the following: 1. Publication-quality photograph, line drawing, or data graph, or a digital file in some standard format (i.e., GIF or JPEG); 2. A statement saying that you are the owner of the image, and that you grant its copyright to ABS; 3. A descriptive caption, identifying the relevant species, principle, and appropriate teaching use(s) of the image; 4. Reference to one published source (e.g., article or book) providing more information about the topic addressed in the image; 5. How to give credit to the person(s) who provided the materials. To submit materials electronically, contact Penny Bernstein for instructions, via pbernstein@stark.kent.edu. Materials may also be submitted by regular mail to: Penny L. Bernstein Chair, ABS Education Committee, 8910 Indian Hill Circle Canal Fulton, Ohio 44614 USA

ANIMAL BEHAVIOR SOCIETY GRADUATE PROGRAM BULLETIN

The Guide to Graduate Programs in Animal Behavior is undergoing a major revision this year, beginning with a request for program updates in late 2000. Additionally, we will add undergraduate and associated programs to the listings and re-title the work as the Guide to Programs in Animal Behavior in North America.

The current version remains available online at: <http://www.animalbehavior.org/> (Careers/Guides link). Hardcopies may be ordered via the ABS Office (see Direction of Correspondence).

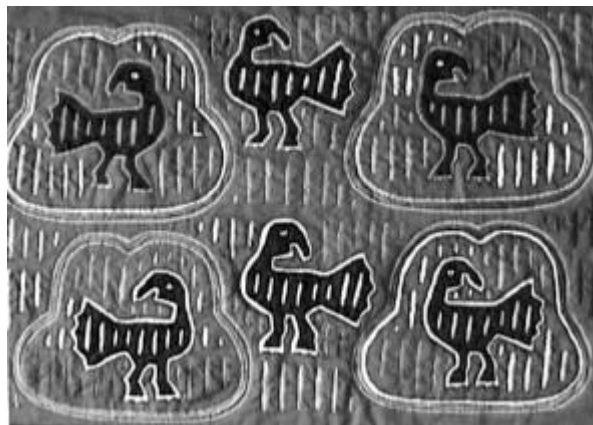
NEWS FROM THE AIBS PUBLIC POLICY OFFICE. Distributed broadly by email every two weeks to AIBS membership leaders and contacts, including President, President-Elect, Secretary, Treasurer, Executive Director, AIBS Council Representative, Journal Editor, Newsletter Editor, Public Policy Committee Chair, Education Committee Chair, and Public Policy Representative. All material from these reports may be reproduced or forwarded. Please mention AIBS as the source; office staff appreciate receiving copies of materials used. If you have questions, comments, or suggestions, please contact Ellen Paul, AIBS Senior Public Policy Representative, at epaul@aibs.org; 202-628-1500 x 250. Any interested party may self-subscribe to receive these free reports by email. Go to www.aibs.org and click on PUBLIC POLICY NEWS AND REPORTS on the opening page, then follow the text links to complete the subscription form. The public policy section of the

AIBS website also contains the AIBS Legislative Information Center, the AIBS Media Directory, and back issues of these reports.

(from AIBS Policy Office, 2 November 2001. Volume 2, No.20).

WHITE HOUSE OFFICE OF SCIENCE AND TECHNOLOGY POLICY TO HAVE ASSOCIATE DIRECTOR FOR TECHNOLOGY

- President Bush announced 27 October 2001 that he intends to nominate Richard M. Russell to be Associate Director of the Office of Science and Technology Policy. Russell has served as Chief of Staff in the Office of Science and Technology Policy since January. From 1995 to 2001, he served with the U.S. House of Representatives Committee on Science, first as professional staff for the Subcommittee on Energy and Environment, then Staff Director for the Subcommittee on technology and finally as Deputy Chief of Staff for the Science Committee. Russell was a professional staff member for the U.S. House of Representatives Committee on Merchant Marine and Fisheries Subcommittee on Oceanography, Gulf of Mexico and Outer Continental Shelf from 1993 to 1994. Russell has a bachelor's degree in biology from Yale University. Russell may be part of a slimmed-down senior staff split between science and technology. Sources say that White House planners may eliminate two existing senior posts, overseeing the environment and national security-international affairs (from AIBS Policy Office, 2 November 2001. Volume 2, No.20).



NSF INITIATES MASSIVE EFFORT TO REBUILD TEACHING LEADERSHIP IN SCIENCE AND MATHEMATICS

- NSF has launched a \$100 million initiative to regenerate leadership in teaching and research in mathematics, science and technology by establishing Centers for Learning and Teaching throughout the country. The centers will encourage the development of new faculty and new materials to boost learning in kindergarten through 12th grade as well as prepare graduate students in areas of critical national need to eventually assume leadership roles. The new Centers for Learning and Teaching will help encourage undergraduates to go into research and teaching in sciences and mathematics and create a new cadre of faculty with fresh ideas and talents. In order to address the needs, NSF is funding five new centers for \$10 million each over a five-year period. NSF funded two prototype centers in the past fiscal year and intends to fund three more, bringing the total funding to \$100 million. NSF officials pointed to the lack of math and science teachers who have majored or minored in those disciplines in college, as well as the pending retirements of large numbers of university faculty who train teachers. The programs will emphasize a diverse approach to teaching in recognition of the need to reach diverse student bodies, students in urban schools, or other challenges of teaching affairs

BALLOT: 2001 GENERAL ELECTION OF THE ANIMAL BEHAVIOR SOCIETY

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

STEPHEN M. SHUSTER, ABS SECRETARY, DEPARTMENT OF BIOLOGICAL SCIENCES, NORTHERN ARIZONA UNIVERSITY, FLAGSTAFF, AZ 86011-5640, USA

BALLOTS POSTMARKED AFTER JANUARY 15, 2002, CANNOT BE COUNTED

You may cast write-in votes. We are electing five officers (terms begin July 1, 2002). All ABS members (regular members), student members, joint members and active Fellows) may vote. Results will be announced in the February Newsletter. All ballots will be destroyed after they are verified and counted.

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:

Ken Yasukawa _____

Judy Stamps _____

Write-in _____

FOR SECRETARY:

Molly R. Morris _____

Write-in _____

FOR MEMBER-AT-LARGE:

Geoffrey Hill _____

Hugh Drummond _____

Write-in _____

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

PLEASE RETURN THIS BALLOT NO LATER THAN 15 JANUARY 2002
