



NEWSLETTER

Animal Behavior

Society

Vol. 39, No. 2
May, 1994

A quarterly publication

Susan A. Foster, ABS Secretary

Harleigh E. Willmott, Assoc. Editor

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ABS RESEARCH AWARDS

Congratulations to the following persons who have received ABS Research Awards for 1994.

Colleen Barber, Queen's University, \$800.

Todd M. Freeberg, Indiana University, \$500.

Susan W. Margulis, University of Chicago, \$875.

Daniela S. Monk, Indiana University, \$750.

Diane L. Neudorf, York University, \$825.

Alexander Olvido, University of South Carolina, \$875.

Sheryl L. Soukup, Illinois State University, \$825.

Timothy Sparkes, University of Kentucky, \$875.

Lori Wollerman, University of North Carolina, \$675.

MESSAGE FROM THE PRESIDENT ZULEYMA TANG-MARTINEZ

The ABS functions effectively only because of the willingness of so many of its members to volunteer their time and energy for the benefit of the society. Much of the business of ABS is done by committees whose work is crucial to the well-being of the society. Although I had been aware of the many committees that exist within ABS, prior to becoming President I had not fully appreciated the extent of the contributions and the dedication of so many of our committee members and chairs. In addition to the standing committees, ABS has *ad hoc* committees that, because of their temporary nature, often do not get the recognition and visibility that they deserve. On behalf of the ABS, I thank all our committees for their generous service to the society.

I also encourage those of you not currently active in ABS to volunteer for service on committees. Each year, the incoming President appoints new members to replace committee members whose terms have expired. This means that only a small number of replacements are possible each year and if you volunteer you may not get appointed immediately. Nonetheless, be assured that volunteer names are forwarded to the incoming presidents for their consideration. It is also very helpful if you indicate which committee(s) you are most interested in.

The ABS is proud of its reputation for being an egalitarian society which encourages participation by all of its members. I strongly believe that the involvement of students and new members is particularly critical if we are to remain a vital and energetic society. I invite all new and student members to introduce yourselves to the elected officers and committee chairs, and let us know how you would like to be involved. We enjoy meeting new members and welcome the opportunity to get to know you better. In fact, the one thing that I have not enjoyed about being President is that I am usually so busy at meetings that I don't have as much time to meet people and discuss mutual interests!

ABS NOMINATIONS FOR 1994 ELECTION OF OFFICERS

Elections will be held this year for the following ABS offices: Second President Elect, Program Officer, Parliamentarian, and Member-at-Large. The slate of nominees provided by the ABS Nominating Committee will appear in the August Newsletter. The election ballot will be published in the November Newsletter. Additional nominations may be made by letter to the Nominating Committee Chair Gail Michener, Biological Sciences, University of Lethbridge, Lethbridge, AB, Canada T1K 3M4. Nominations must be signed by five or more ABS members in good standing (ABS Constitution, Article 8, Section 1) and must be received by July 8, 1994.

ABS OFFICERS

It is also critically important that all our members keep us informed about ways that the society can serve them better. We may not always be able to do what you would like but you can be sure that we will listen and take your concerns seriously. Suggestions for special workshops or panels are also welcome.

Over the years the ABS has grown into a large and complex society. Only the continued and active participation of all its members can insure that it will remain a society that is open to new ideas and that retains its friendly, egalitarian and supportive atmosphere.

DESPERATELY SEEKING MEETING SITES

Sites for the ABS annual meetings are needed for **1996, 1998, and 1999**. Anyone wishing to host one of our meetings should contact Zuleyma Tang-Martinez to discuss requirements and receive further information. We are particularly interested in receiving, as soon as possible, offers and/or suggestions for the 1996 meeting.

ANIMAL BEHAVIOR SOCIETY DIRECTION OF CORRESPONDENCE

ABS Newsletter and general correspondence concerning the Society: Susan Foster, Dept. of Biological Sciences, University of Arkansas, Fayetteville, AR, 72701, USA. Deadlines are the 15th of the month preceding each Newsletter. Next deadline is April 15, 1994.

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 Behaviour: manuscripts and editorial matters: Meredith West, Dept of Biology, Indiana University, Bloomington, IN 47005, USA.

Change of Address: missing or defective issues of *Animal Behaviour*: Robert W. Matthews, Dept. of Entomology, University of Georgia, Athens, GA, 30602, USA.

- + **President:** Zuleyma Tang-Martinez, Dept. of Biology, University of Missouri, St. Louis, MO, 63121, USA. E-mail: szthalp@umslvma.
- + **First President-elect:** Hugh Dingle, Dept. of Entomology, University of California, Davis, CA, 95616, USA. E-mail: rdhdingle@ucdavis.edu.
- + **Second President elect:** Lee Drickamer, Dept. of Zoology, Southern Illinois University, Carbondale, IL, 62901, USA. E-mail: ga3687@siucvmb.
- + **Past President:** Gail Michener, Dept. of Biol. Science, University of Lethbridge, Lethbridge, Alberta, T1K 3M4, CANADA. E-mail: biology@hg.uleth.ca.
- + **Treasurer:** Robert Matthews, Dept. of Entomology, University of Georgia, Athens, GA, 30602, USA. E-mail: matthews@athena.cs.uga.edu.
- + **Secretary:** Susan Foster, Dept. of Biological Sciences, University of Arkansas, Fayetteville, AR, 72701, USA. E-mail: sfoster@uafsysb.uark.edu.
- + **Program Officer:** John Byers, Dept. of Biological Sciences, University of Idaho, Moscow, ID, 83843, USA. E-mail: jbyers@idui1.csru.uidaho.edu.
- + **Interim Program Officer** (1994 meeting): Lee Drickamer (see Second President-elect).
- + **Parliamentarian:** George Waring, Dept. of Zoology, Southern Illinois University, Carbondale, IL, 62901, USA. E-mail: ga3609@siucvmb.
- + **Editor:** Meredith West, Dept. of Psychology, Indiana University, Bloomington, IN, 47405, USA. E-mail: journal@indiana.edu.
- + **Members-at-Large:** Bennett Galef, Dept. of Psychology, McMaster University, Hamilton, Ontario, L8S 4K1, CANADA. E-mail: galef@mcmaster.ca.
- + **Patricia Gowaty**, Dept. of Zoology, University of Georgia, Athens, GA, 30602, USA. E-mail: gowaty@zookeeper.zoo.uga.edu.
- + **Christine Boake**, Dept. of Zoology, University of Tennessee, Knoxville, TN, 37996-0810, USA. E-mail: pa122548@utkvm1.
- + **Historian:** Donald Dewsbury, Dept. of Psychology, University of Florida, Gainesville, FL, 32611, USA. E-mail: dewsbury@webb.psych.ufl.edu.

ABS Officers-elect: The following officers will take office at the end of the 1994 annual meeting:

- + **Susan Riechert**, Second President-elect. Dept. of Zoology, University of Tennessee, Knoxville, TN 37996-0810.
- + **Randall Breitwich**, Treasurer. Dept. of Biology, University of Dayton, Dayton, OH 45469.
- + **Michael Beecher**, Dept. of Psychology NI-25, University of Washington, Seattle, WA 98195.
- + **Katherine Wynne-Edwards**, Member-at-Large, Dept. of Biology, Queen's University, Kingston, CANADA, K7L 3N6.

ABS COMMITTEES

Following is a list of ABS committee chairs and members with the dates their appointments end. If you are interested in serving on an ABS committee contact ABS President Zuleyma Tang-Martinez.

Membership

- Diane Chepko-Sade (1996), Chair.
- Laurie Hiestand (1994)
- Eduardo Fernandez-Duque (1996)
- Penny Bernstein (1996)
- Roy Scudder-Davis (1996)
- Nancy Pratt (1996)
- Steve Kolmes (1996)

Policy

- David Duvall, (1994), Chair
- Gail Michener (PP)
- Lee Drickamer (PE2)
- George Waring (PLM)
- John Van Wetering (1994)
- Con Slobodchikoff (1994)
- Laurene Ratcliffe (1995)
- Bill Cooper (1995)
- Michael Renner (1996)
- Hugh Drummond (1996)

Education

- Ted Burk (1996), Chair
- Gail Michener (PP)
- Lee Drickamer (PE2)
- Michelle Scott (1994)
- Ken Yasukawa (1994)
- Allison Alberts (1994)
- Bonnie Ploger (1994)
- George Uetz (1995)
- Tom Sproat (1995)
- Sylvia Halkin (1996)
- Anson Gong (1996)

Organization and Bylaws

- George Waring (PLM), Chair
- Linda Rayor (1994)
- Jennifer Mather (1995)
- Joseph Benz (1996)

Nomination

- Gail Michener (PP), Chair
- Chuck Snowdon (1994)
- Jane Brockmann (1995)

Animal Care

- Joy Mench (1996), Chair
- Scott Line (1994)
- Heidi Shaw (1994)
- Paul Young (1995)
- Martin Kavaliers (1995)
- Abby Schwarz (1996)
- Anne Marie de Pasille (1996)
- Sylvia Taylor (1996)
- Dan Salden (1996)

Public Affairs

- Irene Pepperberg (1996), Chair
- Jack Demarest (1994)
- Joanne Oliva-Purdy (1994)
- Linden Higgens (1995)
- Sue Carter (1995)
- Amy Galloway (1995)
- David Fraser (1995)
- Jim Ha (1996)
- Matthew Novak (1996)

Film

- Tom Rambo (1994), Chair
- Kim Sawrey (1994)
- Kim Phillips (1994)
- Lucy Jacobs (1995)
- Blaine Ferrell (1995)
- Neil Mercado (1996)
- Kaci Thompson (1996)

Research Grants

- Jeff Galef (ML1), Chair
- Patty Gowaty (ML2)
- Chris Boake (ML3)
- Randall Kyes (1994)
- Betty McGuire (1994)
- Astrid Kodric-Brown (1994)
- Jan Murie (1995)
- Ron Mumme (1995)
- Rob Longair (1995)
- W. John Smith (1996)
- Anne Bekoff (1996)
- Mike Baker (1996)
- Kay Holekamp (1996)

Ethics

- Stuart Altmann (1996), Chair
- Neil Greenberg (1994)
- Randall Breitwisch (1994)
- Devra Kleiman (1995)
- Charlie Blaich (1995)
- Emilia Martins (1996)
- Janis Driscoll (1996)
- Deborah Gordon (1996)

Applied Animal Behavior

- Ben Hart (1996), Chair
- Sue Boinski (1994)
- Len Freed (1994)
- Carlos Ruiz-Miranda (1995)
- Patricia McConnell (1996)

Board of Professional Certification

- John Wright (1994), Chair
- Hugh Dingle (PE1)
- Dan Estep (1994)
- Peter Borchelt (1996)
- Debra Forthman (1996)
- Suzanne Hetts (1994)

Career Awards

- Gail Michener (PP), Chair
- Jeff Galef (ML1)
- Patty Gowaty (ML2)
- Chris Boake (ML3)

Kim Sullivan (1994)
Peter Smallwood (1995)
Anne Hedrick (1996)

Endowments

→ Chair Nancy Solomon (1994)
Dave Dunham (1994)
Will Gergits (1995)
Vic DeGhett (1995)
Nancy Solomon (1995)
Carolyn Ristau (1995)
Janice Moore (1996)
Carey Yeager (1996)

Liasons

ASZ: Dave Duvall (1996)
AAAS (Sec.G): Jerry Hirsch (1996)
AIBS: Carlos Ruiz-Miranda (1994)
APA: Donald Dewsbury (1995)
APS: Michael Renner (1995)

Ethnic Diversity Fund (*ad hoc*)

Patty Gowaty, (Chair)
Cynthia Annett
Godfrey Bourne
Ron Hoy

ABS REPRESENTED AT AAAS INITIATIVE

ABS member Sue Carter attended a February 28th meeting sponsored by the AAAS to discuss the formation of a "Coalition on Public Understanding of Science". Society presidents were invited to attend and Dr. Carter, who serves on the ABS Public Affairs Committee, graciously agreed to represent Dr. Tang-Martinez and the ABS. Dr. Carter's report of this meeting follows.

The impetus for this meeting was the perceived need to "bridge the gap between science and society." There is widespread concern that the American public is "scientifically illiterate". The purpose of this meeting was to organize a "Coalition" which would represent various scientific organizations and the approximately three million scientists in the United States. The activities of this Coalition would focus on "raising the level of scientific knowledge" within this country through various outreach and educational programs targeting both children and adults. The Coalition would be housed within the structure of the AAAS and would initially consist of a small staff. Details regarding the goals and governance of the Coalition remain to be specified and the question of whether such a coalition is necessary generated debate. Representatives of some of the larger societies such as the Society for Neurosciences and American Chemical Society have begun to establish their own mechanisms for dealing with these problems, and were concerned that their memberships would be

reluctant to support the "duplication" of existing efforts. In spite of issues related to what should be done, there was consensus that problems exist. Areas of some agreement are articulated below.

Secretary O'Leary's presentation dealt with barriers to communication among three major groups: the public, policy makers and scientists. At present there is very little interaction among these groups. Among the barriers to interaction are: the absence of (a) shared language, (b) shared visions, and (c) trust. Scientists have failed to appreciate the importance of publicly communicating their results and are often perceived as intellectually arrogant and disinterested in the concerns of the public. For policy makers, scientists have become "just another special interest group" competing for federal resources. O'Leary suggests a model in which "process reform" is combined with "strategic alliances" to produce "informed consensus". In this model strategic alliances are defined as groups that do not normally come together, but which may form long-term alliances aimed at solving common problems. The intent of this model is to catalyze dialogue, enhance mutual education and promote science and technology. Among the potential benefits from the successful application of the model are: scientific advancement, informed and effective policy, scientific and technological advances which could be an impetus to the national economy and an enhanced quality of life.

Dr. Woolley currently directs an organization that seeks to communicate Biomedical Research to the public. Based on her experience, she suggests that we focus on "reinventing the partnership" between Science and Society. Rather than a "missionary approach" in which scientists educate the public, Woolley proposes a "Peace Corp model" in which science meets the public on their own turf. She suggests that we ask the public to identify their problems and tell us how they feel that science might fit their needs. Woolley reminds us that scientists are perceived as "powerful" due to their specialized knowledge. They are also perceived as wanting control over public resources, without providing accountability to the public. Scientists may deliberately distance themselves from the public and refuse to speak in layman's terms.

Among visions of the public that are held by the scientific community are the following: empty vessels to be filled, "warped" minds in need of straightening out, citizens with whom we wish to enter a dialogue, taxpayers to be convinced of the value of research, and consumers to be served. Regardless of their view of the public understanding, most scientists and many scientific organizations do not have a plan for communicating with the public. Individuals or groups may be "deputized" to provide leadership and facilitate this communication.

In addition, small "break-out" groups were formed from the participants to address these issues. Many of the discussions centered around barriers to communicating the value of science to non scientists and specific suggestions for facilitating communication. Among the comments made were the following. Scientists need to make a "paradigm shift" in which they recognize the necessity of asking what the public wants and the value of communicating their findings. In general scientists are not trained to deal with the media or communicate their findings to individuals with different backgrounds. Existing newsletters and conferences can provide a forum for educating scientists. Rewards for public communication are rare and the motives of scientists who do communicate may be suspect. Efforts in public communication should be rewarded by scientific organizations. Outreach activities are currently being encouraged by "criterion #4" in the NSF review process, which allows educational activities to be considered in funding decisions. This is a trend which is expected to increase.

ANIMAL CARE TESTIMONY PRESENTED TO ILAR

On February 4, ABS president Zuleyma Tang-Martinez presented testimony on behalf of ABS's Animal Care Committee, to the Institute of Animal Laboratory Resources (ILAR). ILAR, which is in the process of revising their Guide for the Care and Use of Laboratory Animals, held a public hearing in St. Louis, Missouri. Dr. Tang-Martinez' testimony dealt with three major topics:

- (1) The need to consider the species-specific needs of non-traditional species used in research. Examples were provided of problems faced by animal behavior researchers when IACUCs failed to recognize that the guidelines for the treatment of traditional laboratory species are not always relevant (and in some cases even are detrimental) to wild-caught species.
- (2) The need to consider behavioral aspects of the environment. It was emphasized that human assumptions about what might and might not be stressful to animals may not always be correct. Regulations based on such human assumptions may have little to do with the actual needs and preferences of animals. Examples used included the preference of burrowing rodents for tight, dark spaces and the importance of odors in the social and reproductive behaviors of many species. Recent studies on human-animal bonding and the importance of interactions between animals and their caretakers were also discussed.

(3) It was suggested the the new Guide emphasize explicitly and unequivocally that the regulations are intended as **recommendations** to the IACUCs and that the IACUCs should use discretion and common sense when dealing with non-traditional species. This plea was included because, in some reported cases, IACUCs have been unwilling to deviate even slightly from what they consider to be absolute guidelines.

The testimony appeared to be well-received. Anyone wishing to receive the complete text of the testimony presented should contact Zuleyma Tang-Martinez. Also of interest to our society is that ABS member John Vandenberg, serves on the ILAR Committee to Revise the Guide.

PROFESSIONAL ETHICS 3. THE PROBLEM OF MULTIPLE AUTHORSHIP

by Stuart Altmann
Chair, ABS Ethics Committee

Who is entitled to authorship on a scientific publication, and if several authors are involved, how should the order of authorship be determined? Every scientist that has been involved in a collaborative research project has faced this issue. Its resolution is not always mutually satisfactory.

The dissatisfaction stems from two aspects of science publishing. Authorship is the way that credit for research is allocated. Yet, curiously, science has not yet evolved uniform criteria for determining whose names should appear as authors, and in what order. Indeed, in many labs, criteria of authorship are only implicit or even *ad hoc*. Even when explicit, the criteria may differ from field to field, and even from lab to lab within a field. For example, in our laboratory, the order of authorship indicates the relative magnitudes of people's contributions to the project, whereas in many biomedical laboratories, the last position is second only to the first in terms of implied credit, and is the position usually taken by the lab director.

Even if the express policy of a lab is that the order of authors represents their relative contributions, how should contributions of different types be weighed? Should the first author be the person highest in administrative rank, the one who has done most of the research, the one who wrote the first draft of the manuscript, the one who furnished the original idea, or the one with the unique technical skills or thoughts? If one person develops a model and a collaborator gathers the data to test the model, which made the greater contribution?

Before we arrive at the ordering of authors, we must decide who is entitled to be listed. "Probably most scientists would agree that mere general

administrative supervision of a project or even the suggestion of the original idea for the project is insufficient for an authorship. Certainly no one should be granted authorship of any type merely because he has seniority or is in charge of a laboratory" (Pigman & Carmichael 1993).

There is, I believe, a growing consensus that authorship signifies--and so, is earned by--those whose scientific contributions to a project go beyond adequate performance of routine methods. Conversely, the ordinary contributions of secretaries and research technicians do not, by this criterion, warrant coauthorship, the former because they are not scientific contributions (though they are welcome contributions to science), the latter if they are the products of routine tasks selected by others. By this criterion, administrators, financial supporters, electricians, and janitors are like secretaries in that ordinarily they contribute to science but they do not make scientific contributions, and so they merit our thanks but not coauthorship.

Different criteria are used by other scientists. I know of one lab in which each manuscript is passed around to everyone in the lab for comments, and if anyone thinks they have made a significant contribution to that project, they can add their name to the list of authors. No questions asked.

Particularly sensitive and complex are decisions about authorship when the participants are mentors and their trainees, respectively, such as faculty members with their affiliated graduate students and postdoctoral fellows. When the essence of a research collaboration is that one partner is teaching the other how to do research, perhaps also providing a major portion of the ideas and facilities, questions of authorship are different than when two colleagues collaborate, each contributing their special skills. Because of the inevitable power imbalance between mentors and trainees, the responsibility for establishing mutually agreeable policies falls primarily on mentors.

Several attempts at establishing criteria for authorship have been published (references in (2), especially in Chs. 11, 12, 14). While a uniform set of criteria for scientific authorship may eventually evolve, much more important is that laboratory directors, faculty members, and anyone else involved in collaborative research discuss their authorship policy with their potential collaborators, and that they do so at the onset of the collaboration. Most conflicts over authorship stem from different but unexpressed assumptions about what policies will prevail in a collaboration. If all participants have agreed on a policy from the beginning, many misunderstandings will be avoided.

Authorship of scientific papers will be the subject of a workshop at this year's meeting of the Animal Behavior Society. After introductory

comments from members of the ABS Ethics Committee and from our journal editor, Meredith West, we will have an open forum. See you there?

References (1) Pigman & Carmichael, in Bulger et al. 1993. (2) Bulger, R.E., et al, eds. 1993. *The Ethical Dimensions of the Biological Sciences*. Cambridge Univ. Press.

Acknowledgments: My thanks to the following people, who provided helpful comments on a draft of this article: Jeanne Altmann, Janis Driscoll, Deborah Gordon, and Emilia Martins.

This is the third in a series of columns devoted to issues of professional ethics that affect members of the Animal Behavior Society. Your comments and questions about these issues are welcome, and will be answered. Address them to Stuart Altmann, University of Chicago, 1507 E. 56 St., Chicago IL 60637; tel. 312-702-8919; fax 312-702-0988; e-mail alts@midway.uchicago.edu.

NSF UPDATE

A new Grant Proposal Guide (GPG, NSF 94-2) has replaced Grants for Research and Education in Science and Engineering (GRESE) as the main publication giving guidelines and forms for proposals to the National Science Foundation. Copies of the GPG should be available from the research office at most institutions, or directly from NSF. An electronic version may be obtained by sending the message "get nsf942" to stisserv@nsf.gov, or printed copies may be requested from NSF's Forms and Publications Unit (pubs@nsf.gov), Room P-15, 4201 Wilson Boulevard, Arlington, VA 22230. The GPG contains new forms that must be used for all proposals to NSF. The forms are also available separately in a Proposal Forms Kit (NSF94-3), which is available by similar means. For an electronic set of the forms in PostScript printer format, send the message "get nsf943.zip" to stisserv@nsf.gov. A new program of Faculty Early Career Development grants will replace several NSF programs, including Young Investigator awards and Minority Research Initiation grants. Guidelines for several other NSF competitions are being revised, including grants for improvement of doctoral-dissertation research, postdoctoral and mid-career fellowships in environmental biology, and the special competition for basic research in conservation and restoration biology. New announcements will be issued in the next few months; for additional information, see Fred Stollnitz at the Seattle ABS meeting or watch for further updates in this newsletter or the NSF Bulletin. June 15 is the next target date

for submission of proposals for research and related activities (equipment, conferences, workshops, and symposia) to the following programs: Animal Behavior, Ecological and Evolutionary Physiology, Ecology, Integrative Animal Biology, Integrative Plant Biology, Population Biology, Systematic Biology. July 15 is the next target date for the Neuroscience programs.

MEETINGS

XXIV International Ethological Conference

The 24th IEC will be held in Honolulu HI, August 10-17, 1995. The conference is open to all who are interested in Ethology and allied fields and is sponsored by the University of Hawaii. The Local Organizing Committee Co-Chaired by George Losey and Ernst Reese is responsible for the scientific content of the conference. Travel, hotel and logistic arrangements are made by Travel Planners Inc. There will be five days of plenary sessions, contributed oral, video, and poster papers and films interrupted by a free day for excursions. The scientific committee welcomes suggestions from participants as to plenary sessions and symposia topics. For information contact Ernst Reese or George S. Losey, Department of Zoology, University of Hawaii, 96822, USA. E-mail: IEC@ZOOGATE.ZOO.HAWAII.EDU

American Institute of Biological Sciences (AIBS) will hold its 45th Annual Meeting of Scientific Societies August 7-11, 1994, in Knoxville, Tennessee at the Holiday Inn World's Fair and Knoxville Convention/Exhibition Center. The meeting theme is "Science and Public Policy". This international meeting will bring together the Botanical and Ecological Societies of America, the American Bryological and Lichenological Society, the American Fern Society, the American Society of Plant Taxonomists, the International Society for Ecological Modelling, the Association of Ecosystem Research Centers, and the National Marine Educators Association. Four days of symposia, paper and poster sessions, workshops, special lectures, field trips, and banquets are planned. For information, or to receive a registration brochure, contact: Meetings Department, AIBS, 730 11th St., NW, Washington, D.C. 20001-4521, (202) 628-1500; ext. 506.

Human Behavior and Evolution Society, 6th Annual Meeting will be held at the University of Michigan, Ann Arbor, MI, June 16-19, 1994. For meeting information contact Nancy Thornhill, HBES, Dept. of Communication, 2020 Frieze Building, Univ. of Michigan, Ann Arbor, MI 48109-1285. Phone (313) 763-7346. E-mail: Nancy W. Thornhill@um.cc.umich.edu.

1994 Northeast Regional Animal Behavior Meetings will be held at the University of New Hampshire on November 11-13. Announcements will be sent to ABS members in the northeast. For information, anyone outside the northeast should contact Michelle Scott, Department of Zoology, University of New Hampshire, Durham NH 03824-3544; (603) 862-4749; e-mail: mps@christa.unh.edu.

Convocation on Scientific Conduct. The Officers of the National Academy of Sciences (NAS), National Academy of Engineering, and Institute of Medicine are holding a convocation on responsible conduct in science. Participants will examine current efforts of the government, universities, and the scientific community to encourage responsible scientific conduct and will identify strategies to maintain high ethical standards in the future. **The meeting date has been changed to June 6-7, 1994.** Please disregard notices with a May date. The meeting will be held, free of charge, in the NAS auditorium. The tentative schedule is 6 June, 8 am to 5:30 pm and 7 June, 8 am to 12 pm. To attend, mail or fax (202-334-1687) your name, address, affiliation, phone and fax number to Scott Spaulding, Room NAS 352, National Academy of Sciences, 2101 Constitution Avenue, NW, Washington, DC, 20418, before May 27, 1994. For more information, call 202-334-2233 or email SSPAULDI@NAS.EDU.

Social Learning and Tradition in Animals Workshop, sponsored by The Human Frontier Science Program (HFSP), will be held at Madingley Hall, outside Cambridge, UK, from August 21 to August 26, 1994. In accord with HFSP guidelines, those holding a PhD (or equivalent research experience) are invited to apply to attend the workshop by sending two copies of a letter indicating the relationship of their research interests to the workshop topic and a curriculum vita to Dr. Bennett G. Galef, Jr., Dept. of Psychology, McMaster University, Hamilton, Ontario, Canada L8S 4K1. Financial support available.

Chemical Signals in Vertebrates VII. Symposium will be held July 18-22 1994, at the University of Tübingen, Germany. Multidisciplinary study of chemical signals (olfaction and taste) in all vertebrates including man. A diversity of topics and approaches will be covered. Contact Prof. Dr. R. Apfelbach, Univ of Tübingen, Dept. of Zoology, Auf der Morgenstelle 28, 72076 Tübingen, Germany. Ph: 49-7071-292624; Fax 49-7071-294634

American Psychological Association Scientific Conference: Changing Ecological Approaches to Development: Organism-Environment Mutualities. Storrs, CT, USA, Sept. 29-Oct. 2, 1994. The goal of the conference is to contrast ecological approaches to development that have emerged independently in the areas of direct perception and knowing, epigenetic systems and dynamic systems. **Ten graduate student travel awards** of \$300 available. Deadline June 30. Dr. Patricia Zukow-Goldring, School of Social Ecology, Univ. of California, Irvine CA 92717. (818) 905-6293. e-mail: zukow@psych.sscnet.ucla.edu.

ANNOUNCEMENTS

E-mail bulletin board for ISAE members and others interested in topics related to applied ethology has been started by Jeff Rushen and Joe Stookey. To subscribe, send a message to: applied-ethology-request@sask.usask.ca. In the text of the message, type : subscribe applied-ethology username @node (the latter is your e-mail address). If you have questions contact Joe Stookey at stookey@sask.usask.ca.

Farm Animal Welfare: Ethical, Scientific, Technological and Socio-Political Perspectives (J. Agricultural and Environmental Ethics 6 [suppl. 1-2]), the proceedings of an international conference hosted by the University of Maryland, has been published and is available for purchase (\$25). Checks or money orders should be made to the University of Maryland Foundation and sent to International Conference on Farm Animal Welfare, Animal Sciences Center, Univ. of Maryland, College Park, MD 20742-2311.

International Society for Applied Ethology (ISAE) and Elsevier Scientific Publishers are pleased to announce that personal subscriptions to **Applied Animal Behaviour Science** are now being made available to ISAE members only; the rate is approximately one-sixth that of the current library rate. For information: Joy Mench, Dept. of Poultry Science, Univ. of Maryland, College Park, MD 20742. (301) 405-5783; Fax: (301) 314-9557; E-mail: jm59@umail.umd.edu.

American Society of Primatologists' Conservation Committee announces the Third Annual Silent Auction to raise funds for primate conservation. The auction will be held during the 1994 annual meeting. Auction items can be anything but artwork from primate host countries or primate-related objects are preferred. Because this year's meeting overlaps with the ABS meeting we would like to welcome ABS members to bid on- as well as

make donations to- the silent auction. Please bring your donations to the meeting or mail them in advance to: Dr. Carolyn Crockett, Primate Center, SJ-50, University of Washington, Seattle, WA 98195. If you mail the item please include such information as donor, place of origin, purpose etc. For questions: Dr. Janette Wallis (405) 271-4229, e-mail: janette-wallis@uokhsc.edu.

Primate Humor. A booklet on the topic is being prepared by the American Society of Primatologists' Conservation Committee. We are seeking jokes, short stories, original cartoons, re-written song lyrics, etc. Proceeds will go to the Conservation Committee's small grants fund, conservation awards, and journal subscriptions for researchers in third world countries. All submissions will be properly cited, unless you choose to remain anonymous. Dr. Janette Wallis, Dept. OBGYN, Univ. of Oklahoma Health Sciences Center, Box 26901, Oklahoma City, OK, 73190 (phone and email above).

Real-time animal tracking with Macintosh Computer: April update: A system composed of an Apple Macintosh Quadra 660AV, a video camera, and software that tracks an animal on a heterogeneous background has now been validated using cockroaches, flea larvae and small predaceous mites. Arena size may be up to 80 times the body length of the tracked specimen. The path is recorded as a series of Cartesian coordinates. The system produces real-time readout of speed and turning rate at up to 7.5 frames/sec. Run time is limited only by hard disk size. Files hold series of observations, each with 6 elements (frame number, elapsed time, X, Y, speed and turning readings). Replay of a file gives mean speed in pixels/second and rotation in degrees/second, and "standard deviation" of each, as well as a graphic trace of the path. (The program also runs on a Quadra 840AV, but not on the Power PC). For additional information see Advanced Imaging, Jan. 1994, pp 44-46 or contact James B. Hoy, USDA-ARS-MAVERL, P.O. Box 14565, Gainesville, FL 32604. Phone (904) 374-5991. Fax (904) 374-5818.

Computer programs for genetic relatedness, paternity, and maternity analysis. We plan to write two user-friendly computer programs for people doing molecular studies of kinship. If you have any interest in these, we would like to hear from you because (1) we need input about features you would like to see, (2) our chances to get funding will be enhanced if we can document the need in the research community, (3) we can notify you when programs are available. A version of program 1 is already available at no charge; send a Macintosh diskette; (current users- have you registered?).

Program 1. Relatedness: The current version of the program calculates relatedness based on codominant single-locus genetic data (e.g. allozymes, microsatellites, single-locus minisatellites, RFLP's) in either diploid or haplodiploid systems. It allows the user to estimate relatedness within sets of putative relatives defined by up to six variables (deme, group, sex, and 3 user-defined sub-group variables). Relatedness estimates can be obtained for the whole data set or for specific groups, with standard errors estimated by jackknifing. F-statistics can also be calculated. The program was originally designed for allozyme work in social insects, but we plan a major upgrade to meet broader needs. To take advantage of new molecular markers, we need to allow for much larger numbers of loci and alleles and to add code for dominant markers (e.g. RAPD's, fingerprints). In addition, many researchers need a less colony-structured program, including the ability to estimate pairwise relatedness throughout the data set, not just within colonies.

Program 2. Paternity and maternity analysis. This program will use genetic data to exclude putative parents, to assign parentage among finite sets of putative parents, and to calculate maximum likelihood estimates of paternity or maternity for specified offspring-putative parent sets. It will work for diploid and haplodiploid genetic systems, and will take either codominant or dominant genetic data. It will accommodate a number of kinds of prior information, including (1) mothers known, fathers not (or vice versa) (2) both parents unknown, but both scored (3) both parents unknown, one type not scored (e.g. fathers absent), (4) both parents unknown, but mating pairs are known, (5) maternal and paternal offspring alleles distinguishable (e.g. if the maternal gametophyte is scored in gymnosperms). We also plan a statistical power feature; you input the kind of information you have (genetic and social) and the program estimates the probability of exclusion or assignment. This would be useful in both forecasting (is it worth doing the study? How many loci will I need?) and in interpreting negative results (did I really have a chance to get a positive result?). If you have any interest in either of these programs, please let us know. Answer as many of the following as you like.

1. Which program(s) are you interested in?
2. Would you like to be notified when we write it?
3. What is your name, address, e-mail address?
4. What organisms do you work on?
5. What kinds of genetic markers do you use or plan to use?
6. Are you currently using a computer program to do your analysis? If so, what program? Is it adequate?
7. Are there any special features you would like implemented?
8. Have you used earlier versions of Relatedness? Liked it? Published results from it?

Any other comments are welcome. Pass this on to a colleague.

David Queller (Queller@pop.rice.edu) and Keith Goodnight (Keithg@whittaker.rice.edu). Dept. of Ecology and Evolutionary Biology, Rice University, P.O. Box 1892, Houston, Texas 77251 U.S.A. phone: 713-285-5220; fax: 713-285-5232.

If you would share your tapes or study sites... I am doing a comparative study on the begging behavior of passerines, focusing on the relationship between predation pressure and the begging behavior of nestlings. If you are studying a population of passerines and will generously allow me to video tape and/or observe some of your nests (two hours for each nest only) from a good distance, with minimum disturbance during 1994 and/or 1995, please contact me. I would like to know: species name, population size, number of nests I could record, your field season, the time range in which you prefer I come. I am also searching for existing video and audio tapes, if you have audio or video TAPE recordings of any passerine nestlings, please contact me. I would like to use them first to see if this species holds potential for my species comparisons. I will get your permission and send you a detailed plan for analysis before I actually analyze data from the tapes you loan me. Tapes that are not duplicates will be promptly returned when I am finished. All of your generous help will be acknowledged in publication. E-mail: bb09921@bingvmb.cc.binghamton.edu. Regular mail: Wen-Hsiu Lee, Department of Biology, SUNY, Binghamton, NY 13902-6000. Phone: (607) 777-6228 (Anne B. Clark's phone, please leave message).

Summer field course in tropical ecology and conservation will be jointly offered by the University of Florida and the Makerere University of Uganda. The six-week course will be held in June and July in the Kibale Forest of western Uganda at the Makerere University Biological Field Station. Topics covered include fish ecology, wetlands ecology, primate ecology, limnology, chimpanzee behaviour, rodent ecology, forest regeneration, tropical botany and conservation ecology. Students will have the opportunity to conduct research projects of their own design. For applications: Overseas Studies, 123 Tigert Hall, Univ. of Florida, Gainesville, FL 32611. Phone (904) 392-5206. For detailed information, Colin or Lauren Chapman, Dept. of Zoology, Univ. of Florida, Gainesville FL 32611. (904) 392-1196. E-mail: cachapman or ljchapman@zoo.ufl.edu.

OPPORTUNITIES

EDITOR'S NOTE: Opportunities are published in the issue of the Newsletter after receipt. Sometimes a position is filled between the time the Editor receives the advertisement and the time of the next issue of the Newsletter. The Editor apologizes for inconvenience this may cause and recommends that interested persons call to determine if a position is still available before making a formal application.

Two field assistants may be needed from September 1994 through February 1995 for a study of mating systems, parental care and territoriality in Tasmanian native hens at Maria Island, off the east coast of Tasmania, Australia. Research involves some trapping and handling of native hens but primarily behavioral and ecological data collection using binoculars, spotting scopes and video cameras. Applicants must have prior field experience, the ability to work independently, and the necessary temperament for living and working for a long period at an isolated field site. Transportation from the U.S., housing and food will be provided, plus possibly a small monthly stipend. For more information, contact Dr. Anne Goldizen, Department of Zoology, University of Queensland, Brisbane QLD 4072, Australia (telephone: 61-7-365-4824; fax: 61-7-365-1655).

New Zealand Frog Genetics: Research position to study behavioural ecology and population genetics of native New Zealand frogs is available. We are studying behaviour (e.g. parental brood care) and ecology (e.g. dispersal) of these unique frogs. A major portion of the work involves analyses of genetic variation within and among populations using PCR-based methodologies. Applications to conservation biology with respect to threatened New Zealand fauna will be stressed. Applicants should have experience in methods of DNA purification and analyses. Knowledge of techniques for constructing and screening genomic libraries would be an advantage. Opportunities for both fieldwork and laboratory analyses will be available. Funding is initially available for one year, with possibilities of extension. Appointment may be made as a Research Assistant, Research Scientist or Post-doctoral Fellow, depending on applicant's qualifications and final budget allocation. Send letter of application detailing previous molecular experience, c.v. and letters of reference to: Bruce Waldman, Department of Zoology, University of Canterbury, Christchurch, New Zealand. Phone: 64-3-364-2066; fax: 64-3-364-2024; email: bw@gnu.ai.mit.edu.

Ph.D. assistantships (2) in Animal Behavior, Depts. of Biology and Biomedical Sciences, Creighton University, Omaha, NE. Assistantships for research leading to the degree of Ph.D. in Biomedical Sciences are available for students with interests in the Neuroethological basis of Behavior. Ongoing Faculty research projects include the neuroethology of acoustic behavior in amphibians and insects, insect sexual selection, neuroanatomical correlates of vertebrate reproductive morphology and behavior, plus the research of a neuroethologist to arrive in Fall 1994. Course work and research will be conducted in association with the faculty of the Nebraska Behavioral Biology Group, a cooperative effort among the NSF, State of Nebraska, Creighton University departments of Biology and Biomedical Sciences and the Universities of Nebraska at Lincoln and Omaha to promote the study of animal behavior. Stipend \$12,000 per year with tuition paid. Send letter of interest, C.V., official transcripts, GRE scores, and the names and phone numbers of three references to Dr. Ted Burk, Dept. of Biology, Univ. of Nebraska, Omaha, NE 68178-0103.

Field Assistant needed mid April-early August for an ongoing study of the mating system of the white-throated sparrow. Research will be conducted at the Cranberry Lake Biological Station in the Adirondack Mountains of New York. Work will include mist-netting, banding, sampling blood for hormonal assays and DNA fingerprinting, and behavioral observations. Previous experience desirable but not necessary; only prerequisites are patience and persistence. Expenses at the field station will be paid. For further information or to apply, contact Dr. Elaine M. Tuttle, Department of Biology, Jordan Hall 142, Indiana University, Bloomington IN 47405; tel: 812-855-5895; e-mail: etuttle@ucs.indiana.edu.

Avian Biologist, waterfowl. University of California, Davis. Assistant Professor, tenure-track. Ph.D. in behavior, ecology, physiology, or related field required, post-doctoral experience preferred. Research, graduate education and courses on wild birds and waterfowl. Send c.v., statement of background/interests and 3 references to: Louis W. Botsford, Dept. of Wildlife and Fisheries Biology, Univ. of California, Davis, CA 95616, before 30 June, 1994. THE UNIVERSITY OF CALIFORNIA IS AN AFFIRMATIVE ACTION/EQUAL OPPORTUNITY EMPLOYER.

Research Opportunities at the Caribbean Primate Research Center (CPRC). Three research facilities are operated by CRPC for behavioral, biomedical and anthropological studies and dissertation research. **Cayo Santiago** is an island colony of approximately 1000 provisioned, free

ranging rhesus macaques ideal for both short- and long-term observation research. An annual capture facilitates non-invasive biomedical investigations on a limited basis. Computerized demographic data are available on over 12 macaque generations. These include individual identifications, matriline, group affiliation, reproductive history, birth and death dates.

Sabana Seca is a field station housing approximately 900 macaques, many derived from Cayo Santiago, in outdoor corrals, pens and individual cages primarily for biomedical studies, breeding and behavioral research which require frequent handling of animals. **CPRC Skeletal Collection** is a curated collection of over 2500 complete or nearly-complete skeletons of six species of nonhuman primates, mostly rhesus macaques and patas monkeys. The collection is ideal for studies of spontaneous and acquired joint and bone diseases, physical anthropology, growth and development and bone remodeling. Supporting data include basic demographic information, medical records and thoracic radiographs, a selection of cephalometric radiographs and reproductive history. Research is generally limited to non-destructive studies but limited destructive sampling is permissible given sufficient justification. **For information:** Dr. Matt J. Kessler, Caribbean Primate Research Center, University of Puerto Rico, Medical Sciences Campus, P.O. Box 1053, Sabana Seca, PR 00952-1053 USA. Fax 809-795-6700.

Volunteers: Approximately 20 volunteer positions are open in 1994 at the American Museum of Natural History's Southwestern Research Station in Portal, Arizona. The volunteer program is run annually and offers students in biological sciences outstanding opportunities to observe and become involved with scientists doing field research. Food and lodging are provided to volunteers in exchange for twenty-four hours per week routine chores, with the remaining time available for research activities. The program is open to undergraduate and graduate students; the latter may pursue their own research projects. Faculty knowing of promising students should alert them to this opportunity for professional experience toward their career goals. Volunteers are needed between March 15 and November 1. Appointments are for part of this period, with a minimum appointment of six weeks. Applicants for spring positions (March-May) should submit applications by February 15, summer volunteers (June-August) by April 1 and fall volunteers (September-November) may apply any time. Contact: Dr. Wade C. Sherbrooke, Director, Southwestern Research Station, American Museum of Natural History, Portal, AZ 85632 USA. (602) 558-2396.

Three Field Assistants needed for research on ground squirrel dispersal in the Sierra Nevada Mountains of California. Duties include live-trapping, ear tagging, dye marking and monitoring body condition of Belding's ground squirrels. The research also entails provisioning squirrels, treating juveniles with hormones and possibly tracking squirrels with radio telemetry. Assistants are needed from mid-May through early August or from late June through mid-September. Living conditions are primitive, and the high altitude climate can be harsh. Basics (food, tent) are provided. Stipend is provided after two week training period, or course credits are possible through MSU Department of Zoology. Applicants should send letter of interest, resume and three reference letters to Scott Nunes, Dept. of Zoology, Michigan State University, East Lansing, MI 48824, USA.

International Zoological Expeditions is presently seeking capable, responsible individuals to assist with the management of our rain forest field station, cabins and clientele in the Toledo district of southern Belize. This field site consists of 200 acres of primary rainforest with a cave and river system. The site also operates a canopy walkway. Successful candidates will have a background in biology and a genuine understanding of tropical ecology. They will work well with people and have excellent management skills. In exchange for services, International Zoological Expeditions will provide room, board, transportation and a small stipend. Responsibilities include: maintaining the field station, cabins and grounds, providing for clientele, monitoring grounds and wildlife preserve surrounding the site, monitoring and maintaining the canopy walkway, and guiding IZE participants. Contact: Dr. Fred Dodd, International Zoological Expeditions, 210 Washington St., Sherborn, MA 01770. (508) 655-1461.

SUBMISSION OF NEWSLETTER ITEMS

The secretary deeply appreciates submissions of long newsletter items on disk in any major DOS or MacIntosh wordprocessor format. Disks will be returned if requested. ASCII files transmitted by e-mail are next in preference, and are fine for short items

. Hard copy and fax submissions of short items will still be accepted but are least convenient. See list of officers for the Secretary's e-mail and snail-mail addresses. Thanks for your help, this can save a lot of time.

APPLICATION FOR MEMBERSHIP: ANIMAL BEHAVIOR SOCIETY

Name in Full _____ Degrees _____

Address _____

Phone _____ E-Mail _____

Position _____ Institution _____

_____ Member - \$36 (US) Receive Animal Behaviour and Newsletter

_____ Student Member - \$18 (US) Receive Animal Behaviour and Newsletter

_____ Joint Member - \$23 (US) Receive Newsletter

My student membership is endorsed by (Dept. Head, ABS Member or Fellow)

Name _____ Signature _____

This application should be send with remittance (make check payable to Animal Behavior Society) or include your

Mastercard # _____ or VISA # _____

Expiration Date _____ Card Holder's Signature _____

**Send the application to: Robert W. Matthews, ABS Treasurer
Dept. of Entomology
University of Georgia
Athens, GA 30602**

Animal Behavior Society
S. Foster, Secretary
Dept. of Biol. Sci.
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