



NEWSLETTER

Animal Behavior Society

Vol. 37, No. 2
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A quarterly publication

Janis W. Driscoll, ABS Secretary

Michael J. Owren, Assoc. Editor

Dept. of Psychology, University of Colorado at Denver, Denver, CO 80217-3364

ADDITIONAL HIGHLIGHTS OF THE 1991 ABS ANNUAL MEETING

The 1991 meeting will be held at the University of North Carolina at Wilmington, 1-6 June. Local host: John Williams, Dept. of Psychology, University of North Carolina at Wilmington, Wilmington, NC 28403-3297. Phone: 919-395-3371. See February Newsletter for registration form and meeting highlights.

Gender and women's issues in animal behavior: An informal evening get-together will be scheduled at the annual meeting in Wilmington, NC (June 1-6, 1991) for those interested in gender-related issues in behavioral biology, women in science and animal behavior, history of women in ABS, or related areas. Because a growing number of people in ABS are now teaching or have research interests in these areas, this session is intended to provide an opportunity to share bibliographies, course outlines, and like. All are welcome! Exact time and place will appear in the meeting program. For more information, contact Donna Holmes, Savannah River Ecology Laboratory, Drawer E, Aiken, SC 29802. Phone: 803-725-2472.

JOURNAL EDITORSHIP CHANGES

All mail sent to the *Animal Behaviour* Editorial Office after **June 5, 1991** should go to: **Dr. Meredith West, Department of Psychology, Indiana University, Bloomington, IN 47005.**

ABS NOMINATIONS FOR 1991 ELECTION OF OFFICERS

The following persons have been nominated for offices that begin immediately following the annual meeting in 1992:

Second President Elect:

Hugh Dingle	University of California, Davis
Janet Randall	San Francisco State University

Program Officer

Daniel Q. Estep	University of Georgia
Bedford Vestal	University of Oklahoma

Parliamentarian

Anne Clark	SUNY, Binghamton
Victor de Ghett	SUNY, Potsdam

Member-at-large

Patricia Adair Gowaty	Clemson University
Thomas Rambo	Northern Kentucky University

Additional nominations may be made by letter to the Nominating Committee Chair Patrick Colgan, Biology Dept., Queens University, Kingston, Ontario, Canada K7L3N6. Nominations must be signed by five or more ABS members in good standing (Constitution Article 8, Section 1), and must be received by 15 June, 1991. The ballot and brief resumes of the candidates will appear in the August 1991 Newsletter.

CONGRATULATIONS

to **ABS President Charles T. Snowdon**
who has been awarded the John T. Emlen Chaired
Professorship by the Graduate School of the University of
Wisconsin at Madison

ABS RESEARCH GRANT AWARDS ANNOUNCED

The ABS Research Grants Awards Committee is pleased to announce the winners of this year's awards. The Committee reviewed 26 proposals that requested a total of \$20,389. Curiously, this was the smallest group of applicants in the history of the awards, yet this year, the Committee had a record \$6000 to award. All winners are expected to file (within one year) a complete financial statement to next year's Awards Chair, Steven Austad, regarding expenditures of awarded funds. Further, publications and paper presentations that have arisen in whole or in part from ABS Grant Awards must cite the award, and forthcoming reprints are to be sent to the senior Member-at-Large at that time.

The nine winners to be congratulated are:

Anne P. Brooke, University of Tennessee (\$450) "Social organization and cooperative foraging in the fishing bat *Noctilio leporinus*".

Anson Gong, UCLA (\$222) "The effects of female mate choice in *Poecilia reticulata*".

Roland A. Knapp, University of California, Santa Barbara (\$900) "Mating decisions of female bicolor damselfish: the importance of olfactory cues".

Jeffrey S. McKinnon, Harvard University (\$672) "The evolution of female mating preferences and male nuptial coloration in the threespine stickleback".

Susan B. McRae, University of Cambridge (\$1000) "The evolution of intraspecific brood parasitism in the moorhen *Gallinula chloropus*".

Tom F. Norris, California State University, Moss Landing Marine Laboratory (\$600) "Phrase repetition in the song of the humpback whale *Megaptera novaengliae*".

Nancy L. Reagan, University of Chicago (\$526.50) "Evolution of reproductive isolation in salamanders of the genus *Plethodon*".

Denise L. Zielinski, Purdue University (\$710) "Differences in fat versus food storage among grey squirrels: Is there a fitness trade-off?".

The Review Committee consisted of the three ABS members-at-large (George Barthalamus, Chair; Steven Austad; Martin Daly) and the appointed reviewers Gary McCracken (University of Tennessee), Randall Kyes (Wake Forest University), Douglas Mock (University of Oklahoma), Steven Vessey (Bowling Green University), and Donna Holmes (Harvard University). The Committee thanks the 25 outside reviewers who offered their time over the Christmas holiday.

ANIMAL BEHAVIOUR ADDS SOFTWARE REVIEWS

An increasing amount of specialized and relatively user-friendly software is becoming available, some of which is specifically intended for behavioral research. The Editors of *Animal Behaviour* have agreed that the journal could usefully include reviews of relevant software as a service analogous to the provision of book reviews.

At present, we feel the journal should only consider reviews of specialized software packages that have a specific application in the collection or analysis of behavioral data. For example, we might consider for review a package that turns a desktop PC into a data logger, or one aimed at analysis of radio-tracking data. Review of general statistical or word processing packages would not be suitable for inclusion.

The conditions of acceptance of a software review would be comparable to those of a book review: no fee would be paid but the reviewer would be allowed to keep the software for his or her own use. If anyone knows of a software package that they think would interest readers of *Animal Behaviour*, they should let the Editor know.

NEWSLETTER TRIES RAGGED RIGHT

Experts now say that right justified text is more difficult to read, especially for those of us with aging eyes, than text with the right margin ragged. Therefore, we are trying ragged right for this issue. If you have an opinion on this, the Secretary or Associate Editor would like to hear it.

ANIMAL BEHAVIOR SOCIETY DIRECTION OF CORRESPONDENCE

ABS Newsletter and general correspondence concerning the Society: Janis Driscoll, Dept. of Psychology, Campus Box 173, University of Colorado at Denver, P.O. Box 173364, Denver, CO 80217-3364, USA. Deadlines are the 15th of the month preceding each Newsletter. Next deadline is July 15, 1991. (FAX 303-556-4861)

Animal Behaviour - manuscripts and editorial matters: Lee Drickamer, Dept. of Zoology, Southern Illinois University, Carbondale, IL 62901, USA. After June 5, 1991, Meredith West, Dept. of Psychology, Indiana University, Bloomington, IN 47005.

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

ABS OFFICERS

President: Charles T. Snowdon, Dept. of Psychology, University of Wisconsin, Madison, WI 53706, USA

1st President-elect: H. Jane Brockmann, Dept. of Zoology, University of Florida, Gainesville, FL 32611, USA

2nd President-elect: Gail Michener, Dept. of Biological Sciences, University of Lethbridge, Lethbridge, Alberta, T1K 3M4, Canada

Past President: Patrick Colgan, Dept. of Biology, Queen's University, Kingston, Ontario, K7L 3N6, Canada

Secretary: Janis Driscoll, Dept. of Psychology, University of Colorado at Denver, Denver, CO 80217-3364, USA

Treasurer: Robert Matthews, Dept. of Entomology, University of Georgia, Athens, GA, 30602, USA

Program Officer: Lynne Houck, Dept. of Ecology and Evolution, University of Chicago, Chicago, IL 60637, USA

Parliamentarian: George Waring, Dept. of Zoology, Southern Illinois University, Carbondale, IL 62901, USA

Editor: Lee Drickamer, Dept. of Zoology, Southern Illinois University, Carbondale, IL 62901, USA

Members-at-large: George Barthalamus, Dept. of Zoology, North Carolina State University, Raleigh, NC 27650, USA

Steven Austad, Dept. of Biology, Harvard University, Cambridge, MA 02138, USA

Martin Daly, Dept. of Psychology, McMaster University, Hamilton, Ontario, L8S 4K1, Canada

Historian: Donald Dewsbury, Dept. of Psychology, University of Florida, Gainesville, FL 32611, USA

ABS COMMITTEES

First president-elect Jane Brockmann will be making appointments to ABS committees next month. If you are interested in serving on a committee, please contact her at the Dept. of Zoology, University of Florida, Gainesville, FL 32611 by June 1, 1991. E-mail (BITNET): HJB@NERUM. ABS Committees members with ending dates of terms of office are listed below. Terms are for three years.

Animal Care: Joy Mench, Chair (1993)

Lynette Hart (1993)

Harold Herzog (1992)

Craig Kinsley (1992)

Scott Line (1991)

Gail Michener (1991)

Melinda Novak (1991)

Steve Zawiskowski (1993)

Career Awards: Patrick Colgan, Chair (1991)

George Barthalamus (1991)

Steve Austad (1992)

Martin Daly (1993)

Scott R. Robinson (1992)

Linda Sorenson (1992)

Kim Sullivan (1992)

Education: Larry Williams, Chair (1991)

Kate Bruce (1991)

Jerry Eberhart (1992)

Peter Judge (1991)

Jerry Lee (1993)

Carol Saunders (1992)

Gail Michener (ex officio)

Patrick Colgan (ex officio)

Ethics: Edward H. Burt, Jr., Chair (1993)

Michael Beecher (1992)

Bedford Vestal (1991)

Mary Ann Sydlik (1993)

Emilia Martins (1993)

Film: Jack Demarest, Chair (1991)

Dorothy Fragaszy (1992)

Nancy Klepper-Kilgore (1993)

Neil A. Mercado (1993)

Desmond Maynard (1993)

Tom Rambo (1992)

Issues in Applied Animal Behavior:

Benjamin H. Hart, Chair (1993)

Patricia B. McConnell (1991)

Sue McDonnell (1991)

Edward Price (1993)

Tina M. Widowski (1992)

Margaret Young (1992)

Membership: Ira Perelle, Chair (1993)

Jill Mellen (1991)

Nancy Munkenbeck (1993)

Bob Wolf (1993)

Nominations: Past President (Patrick Colgan)

Past Past President (John Fentress)

Past Past Past President (Sid Gauthreaux)

Organization and Bylaws: George Waring, Chair (1992)

Edward H. Burt, Jr. (1992)

Jeffrey R. Lucas (1991)

Joseph Benz (1993)

Policy and Planning: Charles Blaich, Chair (1991)

David Duvall (1992)

Mandy Medvin (1992)

Christopher Evans (1992)

George Waring (ex officio)

Patrick Colgan (ex officio)

Gail Michener (ex officio)

Public Affairs: Irene Pepperberg, Chair (1992)

Cheryl Asa (1991)

Victor de Ghatt (1991)

Jim Ha (1993)

Jennifer Nielsen (1993)

Meredith West (1992)

Research Grants: George Barthalamus, Chair (1991)

Steve Austad (1992)

Martin Daly (1993)

Randall Kyes (1992)

Doug Mock (1991)

Patricia Schwagmeyer (1992)

Steve Vessey (1992)

Gary McCracken (1993)

Endowments: David Dunham, Chair (1993)

Will Gergits (1992)

Lee Drickamer (1993)

Sid Gauthreaux (1992)

Carey Yeager (1993)

Board of Professional Certification:

John Wright, Chair (1994)

Peter Borchelt (1993)

Dan Estep (1991)

Katherine Houpt (1992)

Phil Lehner (1993)

H. Jane Brockmann (ex officio)

PRESIDENT'S MESSAGE

Charles T. Snowdon

National Science Foundation

Since my last report I have learned of several promising developments at the National Science Foundation with respect to Animal Behavior. In fiscal 1991, the overall increase of the NSF research budget was 6.4%. However, the funds for the Division of Behavioral and Neural Sciences increased by 8% and the funding for Animal Learning and Behavior increased by 10%. While a 10% increase in funding for Animal Behavior is very good news, the base level was low to begin with, \$2.8 million, and the new level \$3.1 million, still will not support many research grants. Furthermore, in the budget currently before Congress for fiscal 1992, the Division of Behavioral and Neural Sciences is being proposed for lower rate of increase than the Foundation as a whole. Thus, despite some accomplishments, we will need to continue to actively make a case to NSF for the value of our research.

The Task Force evaluating the structure of the Biological, Behavioral and Social Sciences Directorate at NSF has issued preliminary summaries of their discussions. It is clear that where to fit animal behavior within the structure of NSF has been a major concern of the Task Force. One very promising recommendation is to develop a Division of Organismic and Integrative Biology. There has not been an explicit recognition of organismic biology in the NSF structure until now.

Human Capital Initiative

In late January, Michael Renner of Memphis State University and I attended a Summit meeting of psychological, behavioral and cognitive science societies organized by the American Psychological Society. The Summit is developing a Human Capital Initiative document to focus attention on six major social issues: Drugs, Alcohol and Behavior; Aging Society; Violence in America; Schooling and Literacy; Productivity and the Workplace; and Health and Behavior. The hope is to focus attention of Congress on how psychological and behavioral research can help to provide solutions to these problems. While the draft of the Initiative had a role for animal models, the role was mainly in the context of neuroscience research. Michael and I distributed the document on the Significance of Animal Behavior Research. Many of the other people attending picked up on several of the examples and used them in subsequent discussion. We have provided the writers of the final Human Capital Initiative document with examples of significant animal behavior research for as many topics as possible.

Future Directions for the Animal Behavior Society

During the last year, I have become quite aware of the competitiveness that exists among different scientists and scientific groups for research funds in the United States. As

a society and as individual researchers, we cannot sit back and expect someone else to look out for our best interests. Now and for the future, we must take an active role in presenting the significance of our science to a wide constituency: our colleagues, college and university administrators, science administrators, legislators and the general public.

Each of us must take responsibility for helping. Neither the President nor the Executive Committee of the Animal Behavior Society will have enough energy or influence to do all that needs to be done. During the past year, I have been disappointed by how few people have responded with ideas and specific suggestions when I have asked for help. I hope that individual members will be more responsive to Jane Brockmann's requests for help when she is President. Let me finish with a few suggestions on how each of us can work to improve the status of our profession.

1. Participate in the workshop at the meeting in Wilmington on future directions of research in Animal Behavior. We need all of the good ideas you can generate so that we can create a clear statement of what we hope to do in the next decade. With a clear research agenda, we can be convincing with science administrators. Please plan to participate in the workshop.
2. Every time you hear someone disparage animal behavior research, be prepared to counter them with specific examples of how our science has contributed to human health and welfare, to environmental concerns and to resource management. When someone disparages our methods as being "soft" or "simple", be prepared to tell them how sophisticated behavioral research methods are and what pitfalls those who think behavioral methods are simple fall into. Don't let a slur go unanswered.
3. Don't let our research be ignored. When you receive a solicitation to support the National Institutes on the Environment, ask them why they do not mention the word "behavior" in any of their literature. If you are a psychologist, ask the leaders of your professional societies why animal behavior is so often neglected. Be prepared to volunteer for committees, task forces, advisory boards, etc. at both local and professional levels where you can advance the cause of animal behavior.
4. Proselytize our field to anyone who will listen. High school and undergraduate students are fascinated by animal behavior research. Take time to nurture this fascination. Involve high school and undergraduate students in your research. Volunteer to talk to civic and other local organizations about animal behavior research. Reporters are constantly seeking interesting stories. We can help them by suggesting interesting topics for newspaper and TV coverage.

If we are going to thrive as a scientific field, we need to take pride in our accomplishments and not be diffident; we need to be proactive and not reactive; we need to show the same professionalism that our colleagues in neurosciences,

molecular biology or cognitive sciences show; we must take ourselves and the significance of our work seriously. If we can do this, animal behavior will have a very promising future.

SIGNIFICANCE OF ANIMAL BEHAVIOR RESEARCH

prepared by Charles T. Snowdon, President
Animal Behavior Society

Animal behavior is the bridge between the molecular and physiological aspects of biology and the ecological. Behavior is the link between organisms and environment and between the nervous system and the ecosystem. Behavior is one of the most important properties of animal life. Behavior plays a critical role in biological adaptations. Behavior is how we humans define our own lives. Behavior is that part of an organism by which it interacts with its environment. Behavior is as much a part of an organism as its coat, wings, etc. The beauty of an animal includes its behavioral attributes.

For the same reasons that we study the universe and subatomic particles, there is intrinsic interest in the study of animals. In view of the amount of time that television devotes to animal films and the amount of money that people spend on nature books, there is much more public interest in animal behavior than in neutrons or neurons. If human curiosity drives research, then animal behavior should be near the top of our priorities.

Research on animal behavior and behavioral ecology has been burgeoning in recent years despite below-inflation increases (and often decreases) in research funding. Two of our journals *Animal Behaviour* and *Behavior Ecology and Sociobiology* rank in the top six behavioral science AND zoological journals in terms of impact as measured in the Science Citation Index. From 1985 to 1990, *Animal Behaviour* has grown from quarterly to monthly publication and its page budget has more than doubled. Many related journals have increased their size and frequency of publication in the same period. Ours is an active and vital field.

While the study of animal behavior is important as a scientific field on its own, our science has made important contributions to other disciplines with applications to the study of human behavior, to the neurosciences, to the environment and resource management, to the study of animal welfare and to the education of future generations of scientists.

A. Animal Behavior and Human Society

1. Many problems in human society are often related to the interaction of environment and behavior or genetics and behavior. The fields of socioecology and animal behavior deal with the issue of environment-behavioral interactions, both at an evolutionary level and a proximate level. Increasingly, social scientists are turning to animal behavior as a framework in which to interpret human society and to

understand possible causes of societal problems (e.g., Daly and Wilson's book on human homicide is based on an evolutionary analysis from animal research. Many studies on child abuse utilize theory and data from studies of infanticide in animals.)

2. Research by deWaal on chimpanzees and monkeys has illustrated the importance of cooperation and reconciliation in social groups. This work provides new perspectives by which to view and ameliorate aggressive behavior among human beings.

3. The methodology applied to study animal behavior has had a tremendous impact in psychology and the social sciences. Jean Piaget began his career with the study of snails, and he extended the use of careful behavioral observations and descriptions to his landmark studies on human cognitive development. J.B. Watson began his study of behavior by observing gulls. Aspects of experimental design, observation techniques, attention to nonverbal communication signals were often developed in animal behavior studies before their application to studies of human behavior. The behavioral study of humans would be much diminished today without the influence of animal research.

4. Charles Darwin's work on emotional expression in animals has had an important influence on many psychologists, such as Paul Ekman, who study human emotional behavior.

5. Harry Harlow's work on social development in rhesus monkeys has been of major importance to theories of child development and to psychiatry. The work of Overmier, Maier and Seligman on learned helplessness has had a similar effect on child development and psychiatry.

6. The comparative study of behavior over a wide range of species can provide insights into influences affecting human behavior. For example, the woolly spider monkey in Brazil displays no overt aggressive behavior among group members. We might learn how to minimize human aggression if we understood how this species of monkey avoids aggression. If we want to have human fathers be more involved in infant care, we can study the conditions under which paternal care has appeared in other species like the California mouse or in marmosets and tamarins. Studies of various models of the ontogeny of communication in birds and mammals have had direct influence on the development of theories and the research directions in the study of child language. The richness of developmental processes in behavior, including multiple sources and the consequences of experience are significant in understanding processes of human development.

7. Understanding the differences in adaptability between species that can live in a variety of habitats versus those that are restricted to limited habitats can lead to an understanding of how we might improve human adaptability as our environments change.

8. Research by animal behaviorists on animal sensory systems has led to practical applications for extending human sensory systems. Griffin's demonstrations on how bats use sonar to locate objects has led directly to the use of sonar techniques in a wide array of applications from the military to fetal diagnostics.

9. Studies of chimpanzees using language analogues have led to new technology (computer keyboards using arbitrary

symbols) that have been applied successfully to teaching language to disadvantaged human populations.

10. Basic research on circadian and other endogenous rhythms in animals has led to research relevant to human factors and productivity in areas such as coping with jet lag or changing from one shift to another.

11. Research on animals has developed many of the important concepts relating to coping with stress, for example, studies of the importance of prediction and control on coping behavior.

B. Animal Behavior and Neurobiology

1. Sir Charles Sherrington, an early Nobel Prize winner, developed a model for the structure and function of the nervous system based only on close behavior observation and deduction. Seventy years of subsequent neurobiological research has completely supported the inferences Sherrington made from behavioral observation.

2. Neuroethology, the integration of animal behavior and the neurosciences, provides important frameworks for hypothesizing neural mechanisms. Careful behavioral data allow neurobiologists to narrow the scope of their studies and to focus on relevant input stimuli and attend to relevant responses. In many cases, the use of species-specific natural stimuli has led to new insights about neural structure and function that contrast with results obtained using non-relevant stimuli.

3. Recent work in animal behavior has demonstrated a downward influence of behavior and social organization on physiological and cellular processes. Variations in social environment can inhibit or stimulate ovulation, produce menstrual synchrony, induce miscarriages, and so on. Other animal studies show that the quality of the social and behavioral environment has a direct effect on immune system functioning. Researchers in physiology and immunology need to be guided by these behavioral and social influences to properly control their own studies.

C. Animal Behavior and the Environment, Conservation and Resource Management

1. The behavior of animals often provides the first clues or early warning signs of environmental degradation. Changes in sexual and other behaviors occur much sooner and at lower levels of environmental disruption than changes in reproductive outcomes and population size. If we wait to see if numbers of animal populations are declining, it may be too late to take measures to save the environment. Studies of natural behavior in the field are vital to provide baseline data for future environmental monitoring. For example, the Environmental Protection Agency uses disruptions in swimming behavior of minnows as an index of possible pesticide pollution.

2. Basic research on how salmon migrate back to their home streams more than 40 years ago by Arthur Hasler has taught us much about the mechanisms of migration. This information has also been valuable in preserving the salmon industry in the Pacific Northwest, and applications of Hasler's results have led to the development of a salmon fishing industry in the Great Lakes. Basic animal behavior

research can have important economic implications.

3. Animal behaviorists have described variables involved in insect reproduction and host plant location leading to the development of non-toxic pheromones for insect pest control that avoid the need for toxic pesticides. Understanding of predator-prey relationships can lead to the introduction of natural predators on prey species.

4. Knowledge of honeybee foraging behavior can be applied to mechanisms of pollination which in turn are important for plant breeding and propagation.

5. An understanding of foraging behavior in animals can lead to an understanding of forest regeneration. Many animals serve as seed dispersers and are thus essential for the propagation of tree species and essential for habitat preservation.

6. The conservation of endangered species requires that we know enough about natural behavior (migratory patterns, home range size, interactions with other groups, foraging demands, reproductive behavior, communication, etc.) in order to develop effective reserves and effective protection measures. Relocation or reintroduction of animals (such as the golden lion tamarin) is not possible without detailed knowledge of a species' natural history. With the increasing importance of environmental programs and human management of populations of rare species, both in captivity and in the natural habitat, animal behavior research becomes increasingly important. Many of the world's leading conservationists have a background in animal behavior or behavioral ecology.

7. Basic behavioral studies of reproductive behavior have led to improved captive breeding methods for whooping cranes, golden lion tamarins, cotton-top tamarins, and many other endangered species. Captive breeders who were ignorant of the species' natural reproductive behavior were generally unsuccessful.

D. Animal Behavior and Animal Welfare

1. Our society has placed increased emphasis on the welfare of research and exhibit animals. US law now requires attending to exercise requirements for dogs and the psychological well-being of nonhuman primates. Animal welfare without knowledge is impossible. Animal behavior researchers look at the behavior and well-being of animals in lab and field. We have provided expert testimony to bring about reasonable and effective standards for the care and well-being of research animals.

2. Further developments in animal welfare will require input from animal behavior specialists. Improved conditions for farm animals, breeding of endangered species, proper care of companion animals all require a strong behavioral data base.

E. Animal Behavior and Science Education

1. Many in our society are concerned with scientific illiteracy, the lack of interest that students have in science, and the fact that women and minority groups are under-represented in science. Courses in animal behavior and behavioral ecology serve as hooks to interest students in behavioral biology. At the University of Wisconsin, Madison, more than 700 students a year take courses in

animal behavior and behavioral ecology in the Departments of Anthropology, Psychology and Zoology, yet none of these courses serve as required courses for majors. Cornell University enrolls nearly 400 students in an Introduction to Behavior course that is required of only 60-70 students. Enrollment has grown by 30% in the last three years. At the University of Stirling, Scotland, 75% of graduates in Psychology enroll in the elective, non-required animal behavior course. At the University of Washington, Seattle, more than 300 students enroll each quarter in a basic animal behavior class. Similar results can be found on many other campuses.

2. For many students, especially females, these courses are their first introduction to behavioral biology. Many female undergraduates approach us to discuss graduate school and research careers after taking these courses. 75% or more of our graduate applicants are female. A good proportion of students enrolled in animal behavior courses become motivated for research careers, but there is little hope to offer them that they will actually be able to become practicing scientists when they finish due to severe limitations on research funding.

THE 1991 AIBS COUNCIL AND BOARD MEETING

Report from Edward M. Barrows, AIBS Representative

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BITNET BARROWS@GUVAX or
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I am again pleased to report that I attended another highly educational, excellently planned meeting of the AIBS Council this year on Thursday and Friday, 21 and 22 February 1991.

On Thursday, President Paul R. Ehrlich (population biologist, Stanford University) called us to order. New President Paul G. Risser (ecologist, University of New Mexico) took the gavel and introduced new delegates to AIBS and its new affiliate Societies. Other business included information on the Meeting of the Board of Directors and Interim Council Meeting (1990), and the reports of our past President and committees. The President-elect is Thomas E. Lovejoy (ecologist, Smithsonian Institution).

We heard many other reports, including

- AIBS Special Sciences Programs, Donald R. Beem and C. Herb Ward.

Career Program for Minorities, Daniel E. Blockstein (former Congressional Science Fellow of the AIBS and ASZ).

- Committee for the National Institutes for the Environment, Blockstein.

- Peer Registry of Women, Minorities, and Disabled, Charles M. Chambers.

- *BioScience*, Julie A. Miller, Editor.

- AIBS Annual Scientific Meeting in Houston, Louise Salmon.

- AIBS crystallization of Mission, Goals, and Objectives, Risser.

- AIBS finances, Paul A. Opler.

- Biology education, Roy H. and Barbara W. Saigo.

- Future AIBS meetings, Ralph E. Good.

- A national registry of biologists, Helen C. Cecil.

- AIBS publications, Chambers (for Laurence D. Moore).

- Federal funding for biology, John D. Helmfield (Study Director, Science Policy Task Force, House Committee on Science, Space, and Technology) and John C. Crowley, Vice President, Association of American Universities.

Task groups and our whole assembly re-examined AIBS programs and priorities. **What do you think that AIBS should be doing for biology, the Animal Behavior Society, and you? Please write to me and let me know. I would like to send your responses to the AIBS Board of Directors.**

PROFESSIONAL CERTIFICATION

Application forms for ABS certification of applied animal behaviorists are available. The certificate program is set up to recognize the professional training of applied animal behaviorists by establishing specific standards and criteria for certification. Those studying companion animal behavior, farm animal behavior, behavior of animals in zoos, and others who apply animal behavior principles to solutions of animal behavior problems may wish to inquire. For an application form and pamphlet describing the objectives, requirements, and two levels of professional certification, write to **John C. Wright, Chair, Board of Professional Certification, Dept. of Psychology, Mercer University, Macon, GA 31207.**

GUIDELINES FOR ANIMAL BEHAVIOR SOCIETY ARCHIVES

by Donald Dewsbury, Historian

Location: The Archives of the ABS are maintained at the Smithsonian Institution Archives, 900 Jefferson Drive SW, Washington, DC 20560. The current responsible official is William A. Deiss (202-357-1420).

ABS Liaison. The liaison from the ABS to the Smithsonian is the ABS Historian. Currently, this is Donald A. Dewsbury, Dept. of Psychology, University of Florida, Gainesville, FL 32611. Phone: 904-392-0596 (messages 904-392-0601). E-mail address DEWSBURY@WEBB.PSYCH.UFL.EDU.

Purpose: The purpose of the Archives is to maintain records of the Society so that they may be available for examination by future members or officers and by qualified scholars interested in the ABS, its activities, and its members.

Contents: The Archives will include all official documents of the ABS including minutes and accounts of all meetings, fiscal records, substantive correspondence, and other materials related to the activities and history of the Society. Note that material related to the journal Animal Behaviour is maintained in a separate archives at the Archives of the

History of American Psychology, Akron, Ohio.

Procedure for Deposition: All officers and committee chairs are responsible for forwarding requisite materials to the Historian at an appropriate time after leaving office. The Historian will make an annual deposition to the Smithsonian. The Historian should remind departing officers and committee chairs of their responsibilities for deposition of ABS documents. It may be appropriate for those leaving office to forward the documents of the office to his/her successor for use during the subsequent term. The two should reach some agreement as to the procedure for the eventual deposition to the Archives and inform the Historian of this agreement.

Sensitive Materials: Should there be sensitive materials concerning individuals, an arrangement should be made with the Historian concerning the handling of these items. If necessary, access can be restricted to certain people or papers can be sealed for specific periods of time.

Duplicate Files: The Historian will maintain copies of such materials as the current Constitution, By-Laws, Policy Summary, recent Newsletters, recent committee reports and other materials. Such materials should thus be submitted in duplicate -- one copy for the Archives and one for the Historian.

Materials for Inclusion: 1. ABS Constitution, By-Laws and Policy Summary. All versions of the Constitution, By-Laws, and Policy Summary should be preserved. Upon making any changes in these documents, the Parliamentarian should forward two copies to the Historian.

2. Annual reports of all officers and committees. Copies of these materials should be forwarded to the Historian when submitted.

3. Minutes of all meetings, including the annual business meeting, the executive committee meeting, the meetings of both standing and adhoc committees.

4. Fiscal records. Copies of the annual audited Treasurer's report and other financial materials.

5. Annual membership lists and copies of membership directories.

6. Programs and abstracts from each meeting. The meeting host should reserve one copy of the program and abstracts for the Archives.

7. Significant correspondence. All officers should forward significant correspondence concerning their functions as officers. This will include correspondence among officers, with outside individuals, and related materials. It is not necessary to preserve such materials as routine requests for information, such as those often directed to the Secretary, dues payment forms collected by the Treasurer, ballots collected in elections and other material that can be summarized, with the summary to be preserved.

8. Records of awards decisions. Chairs of the committees to make the Allee Award, the Film Awards, and Research Support Awards should provide lists of nominees or contestants and the results of their decisions.

9. Newsletters and other publications of the Society.

10. Programs, abstracts and related materials concerning regional meetings of the ABS.

11. Photographic record. All officers are asked to donate photographs of themselves for inclusion. Other photos of

activities at annual meetings and elsewhere are solicited, as they document the flavor of ABS activities.

MEETINGS

1992 ABS MEETING. The Animal Behavior Society will hold its 29th Annual Meeting at Queen's University, Kingston, Canada from 13-18 June 1992. Address inquiries to L. Ratcliffe or P. Colgan, Dept. of Biology, Queen's University, Kingston, Ontario K7L 3N6, Canada.

THE HIGHLANDS CONFERENCE ON PLETHODONTID SALAMANDERS will be held in early June 1992 at the Highlands Biological Station in Highlands, North Carolina. This meeting will follow the tradition of the First (1972) and the Second (1982) Conferences in exploring new directions on plethodontid research. The Conference features invited papers, an evening poster session, and a symposium. All interested are encouraged to participate. Future announcements concerning conferences dates, a call for papers, and registration information will be sent only to those on our mailing list. To receive these announcements, please send your name, address and phone number to **Dr. Robert Jaeger, Dept. of Biology, University of Southwestern Louisiana, Lafayette, LA 70504-2451; Phone 318-231-5235; FAX 318-231-5834.**

SOCIETY FOR THE ADVANCEMENT OF SOCIO-ECONOMICS (SASE) announces a call for papers for its fourth annual conference March 27-29, 1992, at the University of California at Irvine. If you wish to prepare a session, write to us with your proposal. Others interested in participating must contact session chairpersons directly. Please contact SASE for a list of chairpersons. SASE is a non-partisan organization seeking to advance an encompassing understanding of economic behavior, and more generally, choice behavior. For more information on the Irvine Conference or SASE in general, contact **SASE, 714H Gelman Library, 2130 H Street NW, Washington, DC 20052. Phone: 202-994-8167.**

CHEMICAL SIGNALS IN VERTEBRATES VI will be held June 16-22, 1991 at the University of Pennsylvania, Philadelphia, PA. Contact **Conference Management Associates, Inc. 127 Brook Hollow, Hanover, NH 03755.**

1991 ASZ MEETING. The American Society of Zoologists will hold its annual meeting in conjunction with the American Microscopical Society, Animal Behavior Society, The Crustacean Society, and The International Association of Astacology in Atlanta, GA from 27-30 December, 1991. The Division of Animal Behavior will sponsor a symposium entitled, Basic Animal Behavior Research in Zoos: A Link with the Wild, which will take place all day December 30. Speakers and topics include: Jeanne Altmann, Biology of small populations: Captivity to the wild and back again; Leslie Saul, The natural history and reproductive biology of the Costa Rican predaceous katydid; David Chiszar, Zoo and laboratory experiments on the

predatory behavior of pit vipers; Keith Bildstein, Feeding ecology, aggression and the conservation biology of American flamingos: Integrating free-ranging and captive studies; Cathleen Cox, Pair formation in captive condors; Deborah Forthman, Social development of young and parental investment in bongo; Jill Mellen, Comparative analysis of scent-marking and reproductive behavior in 20 species of small cats; Cheryl Asa, Relative contributions of urine and anal-sac secretions in scent-marks in large felids; Patricia McDaniel, Reproductive and social dynamics of spider monkeys; Donald Lindburg, Aspects of social interactions in lion-tailed macaques; Frans DeWaal, Social strategies of nonhuman primates; and Joan Lockard, A long-term study of the ontogeny of the western lowland gorilla. For further information, contact **Mary Adams Wiley, American Society of Zoologists, 104 Sirius Circle, Thousand Oaks, CA 91360** or **Cheryl Asa, St. Louis Zoo, Forest Park, St. Louis, MO 63110**.

NORTHEAST REGIONAL ANIMAL BEHAVIOR SOCIETY MEETINGS, Amherst, Massachusetts, 1-3 November 1991. Co-hosted by the 5-College Behavioral Ecology Group and the Neuroscience and Behavior Program. Details will be mailed to "Northeast" members of the ABS. Address inquiries to: **NERABS, c/o Don Kroodsmas, Dept. of Zoology, University of Massachusetts, Amherst, MA 01003-0027**.

1991 HUMAN BEHAVIOR AND EVOLUTION SOCIETY. August 22-25, 1991, 3rd annual meeting, McMaster University, Hamilton, Ontario, CANADA. For meeting information contact: **Margo Wilson or Martin Daly, Dept. of Psychology, McMaster University, Hamilton, Ontario, CANADA L8S 4K1. Phone: 416-525-9140, ext. 3033. FAX: 416-529-6225. E-mail: DALY@MCMASTER.CA**.

SCAW CONFERENCES: The Scientists Center for Animal Welfare will sponsor the following conferences.

Selected Issues on the Well-being of Animals Used in Research, Testing and Education. Philadelphia, PA, June 2, 1991.

Workshop "U.S. Regulations and Canadian Guidelines for Research Animal Welfare" to be held at the 25th Annual Meeting of the Society of Research Administrators (SRA). October 19-23, 1991 in Vancouver, B.C., CANADA.

Conference on Humane Aspects of Primate Models of Neurological Disorders will be held at the Hyatt Regency Hotel, Bethesda, Maryland, October 11, 1991.

For information on any of these meetings, contact: **Conferences, SCAW, 4805 St. Elmo Ave., Bethesda, MD 20814. Phone: 301-654-6390. FAX: 301-907-3993**.

UNDERSTANDING CHIMPANZEES: DIVERSITY AND SURVIVAL. Jane Goodall and The Chicago Academy of Sciences announce the second international chimpanzee symposium to be held at the Academy on December 11-15, 1991. For a preliminary program or registration form, contact: **Linda Marquardt, The Chicago Academy of Sciences, 2001 North Clark Street, Chicago, IL 60614. Phone: 312-943-6969**.

12TH ANNUAL MIDWEST CONFERENCE ON POPULATION BIOLOGY will be held 15-17 October 1991 at Northern Illinois University in DeKalb, Illinois. This conference provides faculty and graduate students at institutions throughout the Midwest with an opportunity to interact. There will be 13 invited speakers describing their research in evolution, ecology, and behavior, and a contributed poster session. Dr. May Berenbaum will speak at the banquet. For further information, contact one of the co-coordinators: **Bethia King: Phone 805-753-8460, BITNET t80bhk1@niu; Dr. Richard King: Phone 805-753-3205, BITNET t80rbk1@niu; or Dr. Sam Scheiner, Phone 805-753-7847, BITNET t80sms1@niu; Dept. of Biological Sciences**.

SIXTH BIENNIAL CONFERENCE-INTERNATIONAL SOCIETY FOR COMPARATIVE PSYCHOLOGY will be held 19-24 July, 1991, in Brussels, Belgium in conjunction with the XXV Congress of Psychology. For information, contact any member of the program committee: **Roger Thompson, Franklin and Marshall College, Lancaster, PA 17604, USA; Ethel Tobach, The American Museum of Natural History, Central Park West at 79th St., New York, NY 10024, USA; or Barbara Zoeker, University of Wurzburg, Ludwigstrasse 6, 8700 Wurzburg, Germany**.

THE HUMAN-ANIMAL BOND ASSOCIATION OF CANADA will hold its annual conference 31 May - 2 June, 1991 at the Delta Bessborough Hotel, Saskatoon, Canada. For information, contact **Taylor and Associates, 676 Shefford Court, Gloucester, Ontario, CANADA. Phone: 613-747-0262; FAX: 613-745-1846**. These individuals can also provide information on the **Sixth International Conference on Human-Animal Interactions** which will be held in Montreal, Quebec, from 21-25 July, 1992.

OPPORTUNITIES

EDITOR'S NOTE: Opportunities and announcements are published in the next issue of the Newsletter after they are received. However, because of the timing of the Newsletter, it sometimes happens that a position is filled between the time that the Editor receives the advertisement and the time of the next issue of the Newsletter. The Editor apologizes for any inconvenience this may cause, and recommends that interested persons call to determine if a position is still available before making a formal application.

VOLUNTEER ASSISTANTS NEEDED - Two assistants are needed 25 May - 25 June for an ongoing study of pronghorn behavioral ecology. Duties include radio-tracking females, catching and marking fawns, and monitoring fawn survival. The study area is a high-elevation sagebrush habitat in the Colorado Rockies. Room and board are provided in nearby town of Kremmling. Send resume and two letters of recommendation to **W. Sue Fairbanks, Dept. Systematics & Ecology, Univ. of Kansas, Lawrence, KS 66045.**

FIELD ASSISTANTS NEEDED for an ongoing study on the reproductive strategies of South Polar Skuas on Ross Island, Antarctica. Main duties will be to record behavioral observations of skuas on their territories. This means long hours in blinds in difficult field conditions. Duties will also include catching and marking skuas, finding and monitoring nests, measuring distances between nests, entering data, as well as taking an equal share of cooking and camp maintenance. Applicants must have prior experience conducting field research. Applicants with prior experience in Antarctica and/or with seabirds are preferred. Assistants must stay the entire field season (25 October-10 February) and be available for orientation in September. Salary will be about \$850 per month for five months plus all expenses. Project suitable for graduate degrees. Send CV, cover letter indicating your interests, and the names addresses and phone numbers of two references by July 1, 1991 to: **Gary Miller, Biology Dept., University of New Mexico, Albuquerque, NM 87131. Phone: 505-277-2311. FAX: 505-277-0304.**

FIELD RESEARCH ASSISTANT IN HERPETOLOGY needed January through June, 1992 and 1993 for biodiversity studies in the Philippines. Preference will be given to applicants who are either in or accepted to a graduate program and who will use the research experience for their dissertation. Applicants should have extensive field experience and be able to thrive for months in the field. All travel and living expenses will be provided with the applicant's university providing support between field seasons. The position will be awarded in August, 1991. Send inquiries or a letter of application, resume and three letters of recommendation to **Dr. John W. Ferner, Cincinnati Museum of Natural History, 1720 Gilbert Avenue, Cincinnati, OH 45202. Phone: 606-344-3374 or 513-621-3890.**

VOLUNTEER FIELD ASSISTANTS needed from June 13 to August 31 to work with a doctoral student on an underwater study of fish social and mating systems on the southern Caribbean island of Bonaire. Applicants should have a biology major, field research experience and an interest in tropical fish behavioral ecology. Volunteers must be certified SCUBA divers with their own gear. Tanks and weights will be provided as will use of a car on the island. The heavy research schedule which involves 4-6 hours of SCUBA diving per day (most less than 30 ft. deep) requires workers to be in top physical condition with energy, stamina and good spirits. These volunteer positions pay no stipend but will reward the successful applicant with rich

experiences in tropical fish behavioral research. Room and board (about \$75/wk) and airfare are the responsibility of the volunteer but may be partially reimbursed depending on funding. Preference will be given to applicants who can commit themselves for the entire length of the project. To apply, send a letter detailing your qualifications and experience (including diving history), and a letter of recommendation to **Simon Nemptzov, Dept. of Ecology and Evolution, State University of New York, Stony Brook, NY 11794-5245.** Application deadline is May 29, 1991. For more information, call **516-781-1556, 7-11PM EDT**, or write on BITNET to **NEMTZOV@SBBIOVM.**

VOLUNTEER FIELD ASSISTANTS wanted to aid doctoral student studying reproductive isolation and speciation in a group of acoustic insects. Field work will involve traveling through Alabama, Mississippi, and Louisiana collecting meadow katydids (for live transport back north) and recording their songs. I am looking for someone who will enthusiastically and cheerfully endure long days in the car and in the field, deep South summer heat (it's really not too bad), and much tramping about in roadside ditches and assorted freshwater habitats in quest of these sometimes elusive but always delightful beasts. Knowledge of and interest in insects is helpful. Benefits include an unusual view of the deep South, grits whenever you want them, occasional catfish dinners, and an intensive field experience. Contingent on funding, I may be able to cover a good part of your living expenses. Exact dates are flexible, but the approximate time period is three or four weeks in mid-late July/early August. To apply, send a letter by June 10 detailing your field/research experience and why you are interested in this position, along with one letter of recommendation, to **Leo Shapiro, Dept. of Ecology and Evolution, State University of New York, Stony Brook, NY 11794-5245.**

RESEARCH ASSISTANTS are needed for a field study of Bowerbirds in Australia and Papua New Guinea. These birds are unique in that males build bowers, structures that are important only for attracting mates. Males provide no assistance to females in rearing young. The focus of this research is to determine why the bower-building habit evolved and to use this peculiar behavior to experimentally test important models for the evolution of mate choice. Several species will be studied at different sites with the New Guinea studies beginning in mid-August and Australia studies beginning in early October. Field assistants receive no salary and must pay for their own transportation to field sites. We will provide food and housing at the field site. The field work is demanding and requires long hours of observation and daily walks up steep trails. Assistants are expected to be mature, congenial, in good health, and have a strong interest in animal behavior. Credit can be arranged through the University of Maryland. If interested, please contact **Dr. Gerald Borgia, Dept. of Zoology, University of Maryland, College Park, MD 20742. Phone: 301-405-694**

GRADUATE RESEARCH ASSISTANTSHIP: A research assistantship will become available October 1, 1991 to support research on the behavioral ecology of yellowjackets (*Vespula spp.*), leading to the MS or PhD. Project includes comparative study of foraging strategies, social facilitation, and communication. Four years of support at an anticipated initial stipend of \$15,000 per year plus fee remission and benefits. Contact **Robert Jeanne, Dept. of Entomology, University of Wisconsin, Madison, WI 53706. Phone: 608-262-0899.**

RESEARCH FELLOWSHIP. Available to support qualified graduate student pursuing MS or PhD. Field research involves continuation of a 33-year study on California gulls. Research interests can be any combination of behavioral ecology, population biology, evolution, or conservation biology. Send letter of interest including summary of experience and professional objectives, resume and names and addresses of three references to: **Bruce H. Pugsek, US Fish and Wildlife Service, National Wetlands Research Center, 1010 Gause Blvd., Slidell, LA 70458. Phone: 504-646-7395.**

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NUGGETS

Editor's Note: This continues the practice of reporting "lost" behavioral phenomena which was begun by the previous ABS Secretary, David Chiszar. Professor Chiszar has agreed to continue editing the *Nuggets*. The rules for submitting *Nuggets* follow:

Our literature is filled with accounts, some anecdotal, others rather rigorously documented, of behavioral phenomena that have been neglected, forgotten, and/or never noticed by persons who could use them in one way or another. The purpose of this feature is to provide a forum where we would remind each other of such phenomena. Contributions from ABS members and non-members are welcome and the following guidelines should be followed: (1) The "lost" phenomenon you describe must have been reported in the literature; no new observations can appear in the Newsletter (i.e., the Newsletter cannot compete with *Animal Behaviour*); (2) you must include the full reference to the original publication(s); (3) your account should be 250 words or less.

The *Nuggets* editor reserves the right to accept or decline submissions and to make minor adjustments in the text. Send submissions (as many as you wish) to **D. Chiszar, Dept. Psych., Campus Box 345, Univ. of Colo., Boulder, CO 80309-0345.**

If any readers incorporate a *Nugget* into their lectures or if any research articles are inspired as a consequence of this feature, our goals will have been met. *Nuggets* 1 through 5 were published in previous Newsletters.

NUGGET 6 - Isopod Tongues

Submitted by D. Chiszar, Univ. of Colorado, Boulder

The females of a parasitic isopod (*Cymothoa exigua*) attach to the floor of the mouth of host fish (spotted rose snappers, *Lutjanus guttatus*) causing degeneration of the host's tongue. A single isopod replaces the tongue and apparently serves the function of the tongue while growing to brooding size (Brusca & Gilligan, 1983). Although various parasites are known to mimic host functions, this is the first case (in animals) of functional replacement of a host structure. The original article contains two photographs guaranteed to raise goose bumps.

Brusca and Gilligan speculate about the evolution of this phenomenon, and some emphasis was placed on the feeding behavior of the hosts, as inferred from their health condition. As far as I know, needed behavioral observations of both the fish and the isopod tongue have yet to be made. For example, it would be fascinating to compare normal fish, tongueless fish, and tongueless fish containing isopod replacements.

REFERENCE

Brusca, R.C. & Gilligan, M.R. 1983. Tongue replacement in a marine fish (*Lutjanus guttatus*) by a parasitic isopod (Crustacea: Isopoda). *Copeia* 1983 (3):813-816.

NUGGET 7 - Primates in the Looking Glass: An Historical Note

Translated from the Dutch and submitted by
Adriaan Kortlandt

88 Woodstock Road, Oxford OX2 7ND, England

"A monkey does not advance beyond initially looking into a mirror with great interest, followed by curiously searching for the image behind it, apparently without recognizing itself in it, after which the mirror is thrown away or, worse, chewed to pieces and stored in the cheek pouches. With regard to the orangutan Nico, however, we see that Nico attentively looks firstly at his mirror image, but then also at his behind and his crust of bread in a mirror....obviously understanding the use of a mirror."

REFERENCE

Translated from A.F.J. Portielje, Animal Inspector of the Amsterdam Zoo, originally published in *Handelsblad* (a Dutch daily newspaper), November 4, 1922.

APPLICATION FOR MEMBERSHIP: ANIMAL BEHAVIOR SOCIETY

Name in Full _____ Degrees _____

Address _____

Phone _____

Position _____ Institution _____

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

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

_____ Spouse Member - \$15 (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**

J. Driscoll, Secretary
ABS Secretary
2550 W. 43rd Avenue
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