

NEWSLETTER

Animal Behavior Society

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A quarterly publication

Terry Christenson, ABS Secretary
Jay Hansche, Associate Editor, ABS Newsletter
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ABS NATIONAL CONVENTION

To be held at Williams College in Williamstown MA, 21-26 June. Keynote speakers: Mimi Halpern (Downstate Medical Center, Brooklyn) and Linda Partridge (Dept of Zoology, University of Edinburgh). Banquet speech by Susan Abrams of Sinauer Press entitled 'Scientific Publication: A Behavioral-Ecological Analysis'. Carolyn Ristau and Peter Marler have arranged a session on 'Animal Cognition' and Steven Stringham a session on 'Adult Male Mammals: Non-parental Social and Demographic Roles'. The registration and abstract forms, published in the November 1986 Newsletter, are due by 14 Feb. John Fentress must receive the Allee texts by 1 March.

ABS MIDWEST REGIONAL MEETING

The Midwest Regional Meeting will be held 10-12 April 1987 at Eastern Illinois University in conjunction with the Illinois State Academy of Sciences. The Academy's theme is concerned with endangered species. Keynote speaker will be Robert L. Smith of the Univ of Arizona. A flyer has just been sent to ABS members located in the Midwest. Others may contact the host, Kipp Kruse, Dept Zoology, Eastern Illinois Univ, Charleston IL 61920. Deadline for abstracts is 6 March.

1986 VIEWS ON THE AMERICAN INSTITUTE OF BIOLOGICAL SCIENCES

After sitting through about 12 hours of the AIBS Council Meeting and associated activities in November and having other interactions with the AIBS in 1986, I would like to bring a few points to the attention of ABS members:

1. The bottom line is that I think that the ABS should continue supporting the AIBS with its membership. Delegates from the other some 30 supporting societies generally feel that same way. If one wants to be a productive biologist, she or he will no doubt be on a strict time-energy budget, not being able to use appreciable personal resources to influence politicians who make significant decisions concerning biological matters. In view of this constraint, the AIBS performs a critical service for busy biologists by representing them on Capitol Hill. Politicians are now more frequently seeking biological advice from the AIBS which refers them to appropriate biologists. If the AIBS were not present, unqualified persons who are only too happy to consult on biological matters would do even more consulting.
2. If at all possible, you should support the AIBS by becoming an individual member (if you are not already one). Politicians count heads when they consider suggestions, or requests, from biologists. Of the some 110,000 biologists in the US, only 6% are individual AIBS members. This meager representation does not give biologists the political clout that we need, compared to the larger or the better-financed groups. Fortunately, the AIBS,

through its society memberships, does represent 70,000 biologists, but financial support of more individual members is certainly needed as well.

3. The AIBS has a "hotline" for the latest information on biologically-related legislation and AIBS legislation initiatives. Please call Nancy Bell or Amanda Spitler at the number below. If you would like to be on the mailing list concerning these matters, contact Ms. Bell or Spitler.

4. The AIBS would like partial financial support from the ABS to support a third biology congressional fellow on Capitol Hill. A fellow serves as a biological consultant for a senator, or congressman; he, or she, is expected to function as a biologist, not representing any particular area of biology. Most legislators make biology-related decisions without much, if any, input from biologists. Fellows help legislators to make more informed decisions. Child Development already supports seven fellows.

5. Since the establishment of its new constitution in 1983, the AIBS has had strong leadership dedicated to the entire field of biology. I feel that the AIBS has been gaining more strength and focus since its reorganization.

For the sake of brevity, I have left out many details that you might wish to know. For more information contact AIBS, 730 11th St. NW, Washington, DC 20001; Tel: (202) 628-1500.

---Submitted by Edward M. Barrows, ABS Delegate to AIBS

MEMBERSHIP FLYER

On pages 5 and 6 of this Newsletter you will find the new ABS membership flyer. Copies are available from the ABS Secretary or the Chair of the Membership Committee, Ira Perelle, Mercy College, Dobbs Ferry NY 10522.

CAREERS BROCHURE

On pages 7 and 8 of this Newsletter you will find the Careers in Animal Behavior brochure. Copies are available from the ABS Secretary or the Chair of the Education Committee, Dan Estep, Dept of Psychology, Univ of Georgia, Athens GA 30602.

ABS AWARDS COMMITTEE

An ad hoc committee to consider additional ABS awards for various achievements has been established. Suggestions are welcome and should be sent to the Committee Chair, George Barlow, Dept Zoology, Univ of California, Berkeley CA 94720.

CONTRIBUTIONS TO NEWSLETTER WELCOME

We would be pleased to receive materials for the May ABS Newsletter and the ASZ Spring Divisional Newsletter by 1 April. Send to ABS Secretary, Terry Christenson, Dept of Psychology, Tulane Univ, New Orleans LA 70118.

THE INTRODUCTION OF RESOLUTIONS AT THE ANNUAL BUSINESS MEETING OF ABS

1. Resolutions deal with timely and substantive political and social issues and are transmitted by the ABS to external agencies, organizations, or the general public.
2. Written resolutions should be submitted to the Chair of the Public Affairs Committee 60 days prior to the annual business meeting. Each resolution should provide direction to the President so that it can be acted upon promptly.
3. Timely issues may be submitted up to 24 hours prior to the annual business meeting for evaluation by the Public Affairs Committee.
4. The Public Affairs Committee, as one of its responsibilities, will receive, evaluate, and if necessary, edit submitted resolutions. In the event that editing is necessary, or if the Public Affairs Committee deems the resolution to be inappropriate to the aims of ABS, this decision shall be transmitted to the submitter(s) no later than 15 days prior to the start of the meeting during which the annual business meeting is convened. The initiator(s) of the resolution may appeal, in writing, to the Executive Committee. Final decisions regarding resolutions reached by the Executive Committee during its annual meeting will not be subject to appeal during the interval between the meeting of the Executive Committee and the annual business meeting. The Executive Committee should reach a decision on the appeal within 2 months following the annual meeting.
5. Approved versions of resolutions will be made available to the members during the course of the meeting by being posed on available bulletin boards; hard or projected copies of resolutions will be available for distribution or viewing at the annual business meeting.
6. Approval by a simple majority of members voting at the annual business meeting is required for passage of a resolution.
7. Regardless of the fate of a resolution at the business meeting, a simple majority of those present can approve a mail ballot for consideration of a resolution by means of the NEWSLETTER.
8. Approval of a resolution at the business meeting or by mail ballot will be followed by prompt action by the President of ABS as directed in the resolution.
9. Approved resolutions will be published in the NEWSLETTER. ---Submitted by Geo. H. Waring, Chair, ABS Public Affairs Committee, Dept of Zoology, Southern Illinois University, Carbondale IL 62901.

ANNOUNCEMENTS

EDITOR SEARCH- The Publications and Communications Board of the APA is seeking nominations for a new editor of the *Journal of Comparative Psychology*. The term will run from 1989 to 1994. Jerry Hirsch is the incumbent editor. Candidates must be members of APA and should be available to start receiving manuscripts in January of 1988 to prepare for issues published in 1989. Each nomination should be accompanied by a supporting statement of one page or less and should be submitted by 15 Feb, 1987 to the Chair of the search committee. Women and ethnic minority men and women are encouraged to apply. Nominations should be submitted to Martha Storandt, Dept of Psychology, Washington Univ, St. Louis MO 63130.

NEW JOURNAL- Plenum Press announces a new publication, the *Journal of Insect Behavior*. The journal should start in 1987, so manuscripts are now being solicited. Manuscripts (3

copies), in the format of the *Journal of Chemical Ecology*, should be submitted to Bill Bell, Dept. of Entomology, Univ of Kansas, Lawrence KS 66045; (913) 864-4578.

WOODLAND PARK ZOOLOGICAL GARDENS TO HOST SECOND WORKSHOP ON "APPLYING BEHAVIORAL RESEARCH TO ZOO ANIMAL MANAGEMENT"- The workshop will be held 18-25 July, 1987, and is especially directed at curatorial, veterinary, and keeper staff from zoos, aquaria, and related facilities. Through lectures, discussions, and actual short research projects, participants will learn skills to conduct their own behavioral studies and to apply the results to specific management problems (e.g., enclosure design, feeding procedures, breeding programs, and veterinary care). Contact: William Karesh, Animal Health Dept, Woodland Park Zoo, 5500 Phinney Ave. N., Seattle WA 98103.

AWARDS

JORDAN ENDOWMENT RESEARCH GRANTS-IN-AID
Established in 1985 by the American Cichlid Association to honor the memory of its late co-founder by supporting student or faculty cichlid-related research. Individual awards are limited to a maximum of \$500.00. The recipient must present a summary of research results to the members of the A.C.A. by presenting a talk at the A.C.A.'s annual convention or submitting an article for publication in the organization's journal. Interested parties should submit a concise description of their proposed research and a current curriculum vitae to Paul V. Loiselle, Guy D. Jordan Endowment Grant Committee, 134 Bentley Ave., Jersey City NJ 07304. Student members should include the name and address of their major professor and two other references, as well as a statement detailing other sources of financial support. Proposals must be in by 15 March 1987; awards will be announced by 15 May.

IOWA LAKESIDE LABORATORY FELLOWSHIPS
Announcing the Founder's Fellowships in field studies for pre-doctoral students- a summer at the Iowa Lakeside Laboratory. The stipend is \$ 2000 tuition free; fellows pay modest fees for room/board and lab space. The fellowship is in honor of the founder, Thomas Macbride. Applicants should be doctoral candidates whose work has a field component for which a summer at the Iowa Station would be especially profitable. The Station is in northwestern Iowa on recent glacial terrain, with adjacent lakes, wetlands, virgin prairie, prairie rivers, pockets of forest, and manipulable grassland. Contact Richard Bovbjerg, Dept Biology, University of Iowa, Iowa City IA 52242.

ABS DIRECTION OF CORRESPONDENCE

ABS NEWSLETTER & general correspondence to the Society:
Terry Christenson, Dept of Psychology
Tulane University, New Orleans LA 70118

ANIMAL BEHAVIOUR--Manuscripts and editorial matters:
Charles Snowdon, Dept of Psychology,
Univ of Wisconsin, Madison WI 53706

ANIMAL BEHAVIOUR--Missing issues; change of address:
H. Jane Brockmann, Dept of Zoology,
Univ of Florida, Gainesville FL 32611

OPPORTUNITIES

EMINENT SCHOLAR IN APPLIED ECOSYSTEM ECOLOGY

The Dept of Zoology of Miami University seeks applications and nominations for a tenured, endowed professorship. Appointee is expected to conduct research at the ecosystem level or higher and interact with state and federal agencies in developing public policy on environmental issues and the wise management of natural resources. An application consisting of a curriculum vitae, three letters of recommendation, and a brief description of activities for the next 5 to 10 years should be sent to R.G. Sherman, Dept of Zoology, Miami University, Oxford OH 45056; (513) 529-3100. The search committee will begin to review applications 2 Feb 1987.

QUANTITATIVE GENETICIST Tenure-track position at the assistant professor level starting 1 Sept 1987. Candidates must be engaged in application of quantitative genetic techniques, in particular those related to behavioral genetics. Postdoctoral experience expected. Submit a curriculum vitae, description of research activities, and have at least three letters of references sent by 15 Feb 1987 to Gary R. McCracken, Dept of Zoology, Univ of Tennessee, Knoxville TN 379961.

FIELD RESEARCH ASSISTANT Radio-telemetric study of puma behavior in Big Bend National Park for 16 months, beginning 1 May 1987 (or possibly Sept 1987). Project will form basis of masters thesis in zoology at Texas Tech University, and applicant should be competitively qualified for a teaching assistantship in the Dept of Biol Sci following field work. Salary plus fringe benefits about \$600/month for 16 months. Housing provided. Contact Kent Rylander, Dept Biol. Sci. Texas Tech Univ, Lubbock TX 79409; (806) 742-2727.

FIELD INTERNSHIPS will be available this summer (May - Aug) for students desiring 10-12 weeks of field experience on behavioral and physiological ecology of white ibises. Work will involve observations of the feeding and breeding of free-ranging adult ibises using radio-telemetry. Experience is not necessary, but a serious interest in avian ecology is essential. The study site is a pristine 3000 hectare salt marsh on the historic Hobcaw Barony near Georgetown SC. A stipend of \$1000 will be provided. Send letter of interest along with a resume and the names of two references to Keith L. Bildstein, Dept. Biology, Winthrop College, Rock Hill SC 29733; (803) 323-2111.

GRADUATE OPENINGS Several openings (with half-time stipend) for entering graduate students in animal behavior portion of Experimental Psychology Ph.D. program. Opportunities to work in behavioral primatology (especially behavioral development, learning, and motor skills) with tufted capuchin monkeys (with D. Fragaszy), and in learning in rodents and birds with J. Hinson and F. McSweeney. Contact D. Fragaszy, Dept of Psychology, Washington State Univ, Pullman WA 99164; (509) 335-9635.

GRADUATE STUDY Rent-free living accommodations are available to graduate students interested in field studies on the mechanisms mediating attachments in mallard ducks and the giant Canada goose. Must meet the requirements of the Faculty of Graduate Studies at the Univ of Manitoba and must be accepted into the Graduate Programme in Psychology. Contact L. James Shapiro, Avian Behaviour Laboratory, Dept of Psychology, Univ of Manitoba, Winnipeg, Manitoba, Canada

R3T 2N2. To apply to the Graduate Programme contact Robert Tait, Graduate Programme, Dept of Psychology, Univ of Manitoba.

FIELD ASSISTANTS are needed for a study of time and energy budgets in yellow-eyed juncos in the Chiricahua Mountains of Arizona. One assistant is needed from 1 May to 1 July and three from 1 July to 10 September. Responsibilities include searching for nests, mistnetting and banding, conducting weekly censuses, and collecting behavioral data. Room and board will be provided. Assistants should be interested in behavior, ecology, or ornithology and it is preferable that they have some experience with a field study or handling wild birds. If interested send a curriculum vitae, names and addresses of two references and a letter describing background and interest in the project to Kim Sullivan, Dept. of Biological Sciences, SUNY, Albany NY 12222.

VOLUNTEER POSITIONS are available at the Southwestern Research Station of the American Museum of Natural History in Portal AZ. The volunteer program offers students in the biological sciences opportunities to become involved with scientists doing field research. Food and lodging at the Station are provided to volunteers in exchange for four hours/day of work chores, leaving other time free for research activities. Contact Resident Director, Southwestern Research Station of AMNH, Portal AZ 85632; (602) 558-2396.

VOLUNTEER POSITIONS May to August in northern Colorado to assist with behavioral ecology study of white-tailed prairie dogs. Behavioral observations, trapping, ear tagging, dye marking, and blood and vegetation sampling. Room and board provided. Send resume, letter of application, and two letters of recommendation to Lynn Cooke, Dept of Systematics and Ecology, Univ of Kansas, Lawrence KS 66045.

VOLUNTEER POSITIONS June- August 1987 for research into breeding biology and ecology of the Bahama Amazon on Abaco, Bahamas. Responsibilities include finding and monitoring nest and recording behavior. Some experience with vegetation surveys and small mammal trapping desirable. Must have strong interest in conservation and a willingness to convey these interests to local residents. Room and board will be provided. Send cover letter, resume, and names of two references to Rosemarie Gnam, Bird Dept, American Museum of Natural History, Central Park West at 79th St, NY NY 10024.

FOUNDATION FOR FIELD RESEARCH Financial support for researchers is available for projects that can be funded and assisted by volunteer teams. The project must consist of basic field research. Proposals must be submitted at least a year in advance of the project dates, and should follow the requirements available upon request from the Foundation. For information call (619) 445-9264 or write to Foundation for Field Research, 787 South Grade Rd., Alpine CA 92001.

ENVIRONMENTAL OPPORTUNITIES

This is an interesting publication which "serves environmental job interests throughout the United States". It contains a detailed listing of available jobs related to the environment in a broad sense. Contact Sanford Berry, Box 670, Walpole NH 03608.

MEETINGS

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE ANNUAL MEETING- 14-18 February, Hyatt Regency, Chicago IL.

AVIAN SEXUAL SELECTION: A SECOND CENTURY OF CONTROVERSY- 27 March, Ohio Wesleyan Univ. Contact Edward H. Burt Jr., Dept of Biological Sciences, Ohio Wesleyan Univ, Delaware OH 43015.

INTERNATIONAL SOCIETY FOR RESEARCH ON AGGRESSION EUROPEAN CONFERENCE- 20-24 April, Seville, Spain. Contact Martin Ramirez, GEDECO, Antonia Diaz, 8 Acc, 41001 Seville, Spain.

ASSOCIATION OF FIELD ORNITHOLOGISTS ANNUAL MEETING- 1-3 May, Cornell University, Ithaca NY. The theme will be Monitoring Bird Populations. Featured speakers will be Steve and Evelyn Kress, and Charles Walcott. Contact Scott Sutcliffe, Laboratory of Ornithology, Cornell Univ, 159 Sapaucker Woods Rd., Ithaca NY 14850; (607) 255-4288.

THE DOG IN THE SERVICE OF HUMANITY program- 7-10 May, Geilo, Norway. Contact Dog in Service of Humanity, Postboks 76, 3581 Geilo, Norway.

1987 SIXTH BIENNIAL CONFERENCE ON THE ECOLOGICAL AND EVOLUTIONARY ETHOLOGY OF FISHES- 17-20 May, Lamar Univ. Contact David L. Bechler, Dept of Biology, Box 10037, Lamar Univ, Beaumont TX 77710.

CONFERENCE ON LABORATORY ANIMALS- 4-5 June, Chicago IL, "Animal pain: Its recognition, alleviation, and avoidance". Sponsored by the Scientists Center for Animal Welfare and The University of Chicago. Contact F. Barbara Orlans, 4805 St. Elmo Ave., Bethesda MD 20814.

JEMEZ SPRINGS SYMPOSIUM- 29 June to 3 July, "Adult human sexual behavior with children and adolescents". Contact Jay Feierman, Dept of Research and Education, Vista Sandia Hospital, 501 Alameda Blvd, NE, Albuquerque NM 87113.

AMERICAN ARACHNOLOGICAL SOCIETY- annual meeting 16-18 June at Harvard. Contact Herb Levi, Museum of Comparative Zoology, Harvard Univ, Cambridge MA 02138.

1987 ABS MEETINGS- 21-26 June, Williams College, Williamstown MA 01267.

INTERNATIONAL CONFERENCE ON WILDLIFE CONSERVATION IN CHINA- 14-19 July, Beijing, China. Contact Sino Films, Suite 708-9, Block B, Watson's Estate, North Point, Hong Kong.

SOCIETY FOR STUDY OF AMPHIBIANS AND REPTILES/HERPETOLOGISTS LEAGUE 9-15 August, Veracruz, Mexico. Contact Richard Vogt, Estacion de Biologica Tropical "Los Ruxtlós", Univ. Nacional Autonoma de Mexico, Apart. Post. 94, San Andres Tuxtla, Veracruz, Mexico.

BIO-ETHICS '87, AN INTERNATIONAL SYMPOSIUM ON BIO-ETHICS AND APPLIED ANIMAL ETHOLOGY- 14-16 August, Montreal, Canada. To explore the welfare implications

of future technical developments in animal husbandry. Sponsored by Tufts Univ School of Vet. Med. and the Animal Husbandry Welfare Foundation of Canada. Contact Tarjei Tennessen, Dept. of Animal Science, N.S.A.C., Truro, N.S. Canada B2N 5E3.

1987 XXTH INTERNATIONAL ETHOLOGICAL CONFERENCE 7-16 August, Madison WI. Contact Charles Snowdon, Dept of Psych, Univ of Wisconsin, Madison WI 53706.

AAZPA annual meeting, 20-24 Sept. Contact Jane Hartline, Washington Park Zoo, 4001 S.E. Canyon Rd, Portland OR 97221.

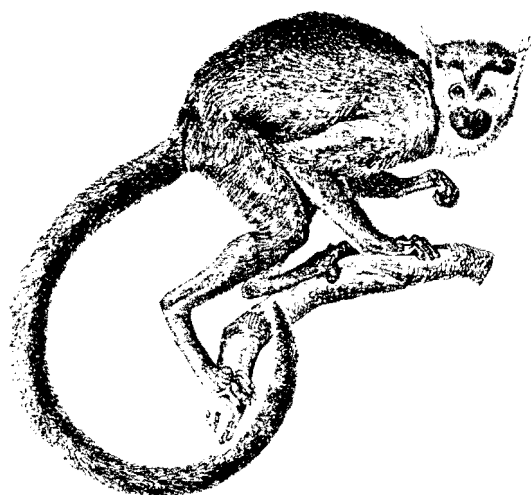
INTERNATIONAL CONFERENCE ON COMPARATIVE REPRODUCTION IN MAMMALS AND MAN- 23-26 Nov, Kenya. Contact R. Eley, Institute of Primate Research, PO Box 24481, Karen, Nairobi, Kenya.

AAAS 1988 MEETING- 11-16 February, Boston, MA.

SYMPOSIUM OF ASIAN PACIFIC MAMMALOLOGY- 26-30 July, 1988, Kunming, Yunnan Province, China. Sponsored by the American Society of Mammalogists and the Mammalogical Society of China. Focus will be on the mammalogy of eastern Asia and the Pacific basin. Further details will be published in the Journal of Mammalogy or write Andrew T. Smith, Dept. of Zoology, Arizona State Univ., Tempe AZ 85287. Outside of U.S.A., contact Professor Wang Sung, The Mammalogical Society of China, 7 Zhongguancun Lu, Haidian, Beijing, People's Republic of China.

SYMPOSIUM PROPOSALS WANTED

If you are interested in organizing a symposium or invited paper session for an upcoming ABS meeting, contact the ABS Program Officer, Susan Riechert, Dept of Zoology, Univ of Tennessee, Knoxville TN 37916; (615) 974-6187. To organize a symposium for the 1988 San Francisco ASZ meetings, contact Mary Adams-Wiley, PO Box 2739, California Lutheran College, Thousand Oaks CA 91360.



FROM:

ANIMAL BEHAVIOR SOCIETY

TO:

ANIMAL BEHAVIOR SOCIETY

Application for Membership

Name _____

Mailing Address _____

State/Province/Country _____

Zip/Postal Code _____

Business Telephone _____
(for membership directory)

Institution _____

Department _____

Degrees _____

Specific Areas of Interest _____

Class of membership desired _____

Student membership endorsed by
(ABS member or Department Chairman)

Name - print _____ signature _____

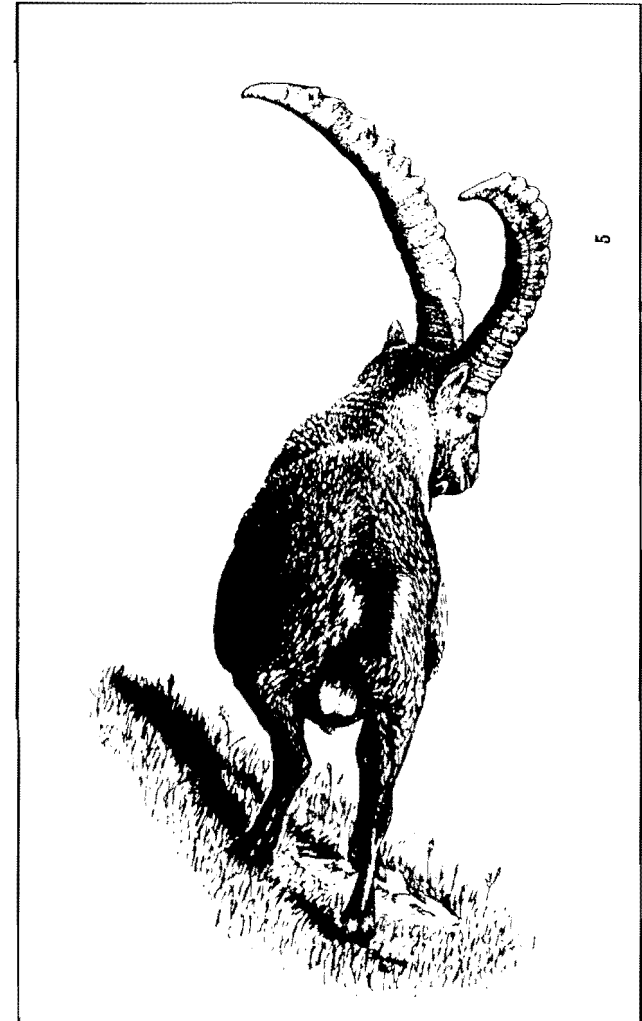
I enclose dues in the amount of \$(US) _____
for the calendar year 19_____.

Please charge my dues to my
_____ Master Card _____ VISA Card

Card # _____

Expiration Date _____

Signature _____



5

WHAT IS IT?

The Animal Behavior Society was founded in 1964 to promote the study of animal behavior in the broadest sense, including studies using descriptive and experimental methods under natural and controlled conditions.

Membership is open to persons engaged in the scientific study of animal behavior, or interested in advancing such study. Current members' research activities span the invertebrates and vertebrates, both in the field and in the laboratory, and include experimental psychology, behavioral ecology, neuroscience, zoology, biology, applied ethology, and human ethology as well as many other specialized areas.

WHY JOIN?

Some of the advantages of membership are:

1. Subscription to ANIMAL BEHAVIOUR, an international bimonthly publication and a leading journal in the field with over 1800 pages a year. ANIMAL BEHAVIOUR contains articles, short communications, and book reviews.

2. A quarterly Newsletter with information about:
 - jobs, fellowships, and research grants in animal behavior,
 - meetings of ABS and other societies with related interests, and the biennial International Ethological Conference,
 - laboratory exercises for teachers of animal behavior, and
 - animal care guidelines.
3. A regularly updated listing of graduate programs in animal behavior.
4. A directory with names and addresses of all members.
5. A regularly updated book list of textbooks and other volumes of interest to members of the Animal Behavior Society.
6. A regularly updated film list of topics of interest to members of the Animal Behavior Society (nominal charge for postage and handling for this item).
7. A brochure describing careers for individuals interested in animal behavior (on request).
8. The opportunity to attend annual and regional meetings of the Animal Behavior Society at reduced rates, and present papers at these meetings.



CLASSES OF MEMBERSHIP AND ANNUAL DUES

MEMBER	\$(US) 32.00
STUDENT MEMBER	\$(US) 18.00
EMERITUS MEMBER	\$(US) 18.00
SPOUSE MEMBER*	\$(US) 14.00

*receive Newsletter only

Either write to the Treasurer for a membership application **OR** complete the reverse side.

Mail your check (payable to Animal Behavior Society) or credit card number and expiration date to:

H. Jane Brockmann, Treasurer
Animal Behavior Society
Department of Zoology
University of Florida
Gainesville, FL 32611
USA

Careers in Animal Behavior

What is Animal Behavior ?

Animal behavior is the scientific study of everything animals do, whether the animals are single-celled organisms, insects, birds, mammals, fish, or humans. However, human behavior is more often studied by psychologists, anthropologists, human ethologists, or other social scientists.

The field of animal behavior is concerned with understanding the causes, functions, development, and evolution of behavior. The causes of behavior include all of the stimuli that affect behavior, whether external (for example food or predators) or internal (for example hormones or nervous system changes). The functions of behavior include both the immediate effects of behavior on an animal (such as avoiding a predator) or on other animals (such as attracting a mate), and the adaptive significance of the behavior in a particular environment (such as huddling together in cold weather). The development of behavior is concerned with the ways in which behavior changes over the lifetime of an animal. The evolution of behavior is concerned with origins of behavior patterns and how these change over many generations of animals.

What education and/or training is needed for a career in animal behavior?

Most scientists directly involved in animal behavior are found within two disciplines: ethology and comparative psychology. These disciplines overlap greatly in their goals, interests, and methods. Ethologists usually are trained in departments of biology, zoology, entomology, wildlife, or other animal sciences, whereas most comparative psychologists are trained in psychology departments.

Some jobs in animal behavior require only a Bachelor of Arts (B.A.) or a Bachelor of Science (B.S.) degree. However, most careers in animal behavior require advanced degrees, sometimes a Master of Arts or of Science (M.A., M.S.) but usually a Doctor of Philosophy (Ph.D.) or Doctor of Veterinary Medicine (D.V.M.). Earning such advanced degrees requires a very good undergraduate background, good grades, high motivation, hard work, and intelligence.

Many colleges and universities in North America offer graduate training programs in animal behavior. A book describing these training programs is available from the Animal Behavior Society at the address given at the end of this brochure.

What career opportunities are available in animal behavior?

College Teaching and Research -- Most animal behaviorists teach and/or do research at colleges or universities. Many have academic appointments in biology, zoology, or psychology

departments. A smaller number are found in departments of anthropology, sociology, entomology, animal and poultry science, wildlife biology, ecology, or in medical or veterinary colleges.

Careers in college teaching and research usually require the Ph.D. degree; a very few junior colleges require only a master's degree. Most animal behavior jobs exist within larger academic departments such as zoology or psychology, and animal behaviorists usually teach in related disciplines such as physiology, ecology, and herpetology. Students who obtain the Ph.D. degree in programs offering broad training in one or more of the behavioral or biological sciences will be more competitive in the job market. Although animal behavior is a growing discipline, competition for jobs in teaching and research is very keen, and job opportunities in colleges and universities are not expected to expand greatly in the foreseeable future.

Government and Private Research Institutions -- Very few animal behaviorists now work in government laboratories or in private business and industry, but according to a recent survey, the greatest prospect for new Ph.D.-level animal behavior jobs in the next 5 to 10 years may be in this area. Most of these jobs will involve research in health-related areas. For example, drug companies or government laboratories may hire animal behaviorists to conduct research on the behavioral effects of new drugs or chemicals. Other laboratories may hire behaviorists to examine the links between behavior and disease states, such as heart disease.

For such jobs, breadth of training will be essential. Training in the biological sciences relevant to health, such as physiology, biochemistry, or pharmacology, will be particularly helpful.

Zoos and Museums -- Zoos and museums occasionally hire animal behaviorists as curators or researchers. Curators are responsible for acquiring, maintaining, and displaying collections of particular animals or specimens. Researchers are responsible for the scientific study of the animals or specimens.

Curators and researchers usually have Ph.D. or D.V.M. degrees and also have broad training in other disciplines of biology such as animal husbandry, systematics, ornithology, or anatomy.

Applied Animal Behavior -- A small but growing number of animal behaviorists are being hired to apply behavioral knowledge to the production, management, conservation, and/or care of wild and domestic animals. Most are researchers in colleges, universities, or government research facilities. Many are employed by academic departments such as animal science, wildlife, or entomology, for research aimed at areas such as improving livestock production, managing wildlife

populations, or controlling pests. Most of these researchers have a Ph.D. in animal behavior or in some allied field of biology with advanced training in animal behavior.

Other applied animal behaviorists are concerned with treating the behavioral problems of pets or other domestic animals. These individuals usually work in schools of veterinary medicine within colleges or universities, in veterinary hospitals, or for private consulting firms. Some have a Ph.D. from an animal behavior program specializing in such training, while others have a D.V.M. with additional training in behavior.

Research Assistants -- Paid research assistants often are hired by universities, zoos, museums, and government and private facilities to help conduct ongoing animal behavior research. Here they work under the direction of faculty or staff researchers and help to design, perform, and analyze the results of animal behavior studies. Research assistants may work in laboratories or in the field, depending upon the nature of the research project. These jobs may be full-time or part-time.

Full-time research assistants usually have either a B.S. or M.S. degree. The usual requirement for a B.S. assistant is a major in the biological or behavioral sciences with some course work in animal behavior. Part-time assistants need not have a bachelor's degree, but usually they have had some course work in behavior. Often, part-time assistants are students working toward a college degree. As was true for college teaching and research, competition for research assistant jobs is keen. Breadth of training in allied fields (such as ecology, physiology, psychology, or chemistry) and/or possession of particular practical skills (such as statistical analysis, computer programming, or electronics) can be helpful.

Zoo or Museum Assistants -- Some zoos and museums hire research assistants or educators. Educational requirements and job-related duties are similar to those discussed in the previous section. Educators help to prepare educational displays, lead tours, and/or give lectures to tour groups. Educators may have a B.S. or M.S. degree in the biological or behavioral sciences. Usually some specialized training or experience in secondary or adult education is also preferred.

Animal Trainers -- Some behaviorists train animals for public performance for zoos, circuses, stage, or television; others train pets, as in obedience training, guard dog training, seeing-eye dogs, or retrieving. Currently, in most states and provinces, animal trainers are not required to have any specialized training in animal behavior. However, many have been through a certification training program or have apprenticed to another professional animal trainer.

Other Jobs Working with Animals -- Many other jobs that involve working with animals also involve some knowledge of animal behavior. These include employment as veterinary assistants, as animal caretakers at zoos, universities, and research institutions, as pet store workers, and as animal control officers. Some of these require specialized or advanced training; others do not. To find out more about these careers, write for the brochures listed at the end of this pamphlet.

Where Can I Get More Information?

For more information about the science of animal behavior, begin at your local public or college library. Many books on animal behavior have been published in recent years. A librarian can help you locate them, or you may request a list of books on animal behavior from the Animal Behavior Society Education Committee by writing to: Dr. D.Q. Estep, Department of Psychology, The University of Georgia, Athens, GA 30602 U.S.A.

Many scientific journals also report research on animal behavior, particularly Animal Behaviour, Behaviour, Journal of Ethology, and The Journal of Comparative Psychology. Journals devoted to particular taxonomic groups also frequently report behavioral research.

For more information about the Animal Behavior Society, write to its Secretary: (until June 26, 1987) Dr. Terry Christenson, Department of Psychology, Tulane University, New Orleans, LA 70118 U.S.A. After June 26, 1987 write to: Dr. David Chiszar, Department of Psychology, University of Colorado, Boulder, CO 80309 U.S.A.

To request the Society's excellent cross-referenced guide to advanced training in animal behavior across North America, send \$8.00 (make check payable to ABS) for the book, Graduate Programs in Animal Behavior 1985 to : Dr. R.W. Matthews, Department of Entomology, The University of Georgia, Athens, GA 30602 U.S.A.

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Index

Cognition/Memory/Learning

25, 35, 38, 53, 57, 64, 67, 69, 88, 90, 108(Symp), 122, 136, 138, 149

Communication/Pheromones

24, 32, 33, 34, 41, 44, 52, 62, 65, 77, 91, 118, 123, 137

Development/Parental Behavior

8, 16, 25, 50, 105, 111, 115

Domestic Animals

20, 22(Symp), 27, 30(Symp), 31, 58, 68(Symp), 132, 133

Ecology

5, 10, 40, 60, 72, 73, 76, 96, 102, 135, 136, 145, 150

Evolution/Sociobiology

5, 9, 12, 13, 14, 51, 66, 69, 72, 80, 86, 92, 96, 106, 107, 135, 112, 114, 119, 139, 148

General Behavior

1, 3, 5, 11, 15, 18, 23, 28, 40, 42, 43, 44, 45, 46, 47, 59, 60, 61, 66, 71, 72, 76, 78, 79, 80, 81, 83, 84, 85, 87, 89, 90, 92, 94, 97, 98, 101, 102, 103, 104, 106, 107, 109, 110, 111, 113, 114, 115, 116, 117, 120, 121, 124, 125, 127, 128, 129, 131, 139, 140, 141, 142, 143, 144, 145, 156, 148, 150, 151, 152, 153, 154, 155

Genetics

2(Symp), 19, 25, 93, 134

History/Biography

75, 82, 126

Hormones/Behavior

4, 39(Symp), 54, 55

Imprinting

26

Migration

71, 74b, 99, 147

Neuroethology/Neuropsychology

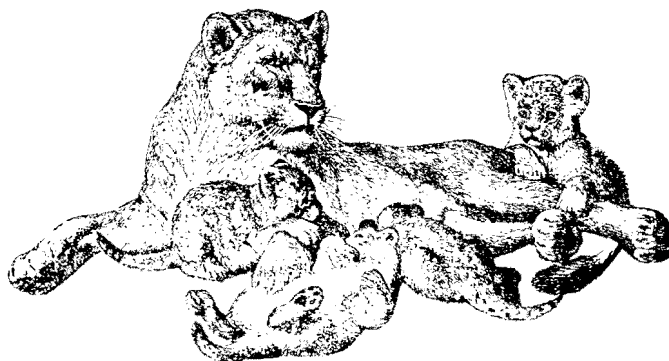
6, 13, 17(Symp), 29, 43, 67, 70, 78, 95, 100(Symp), 130, 144

Reproduction/Mating

7, 12, 21, 49, 56, 74a, 83, 98, 112, 113, 128

Sleep

36, 37, 63



ANNOTATED LIST OF SOURCES OF LABORATORY EXERCISES IN ANIMAL BEHAVIOR

Anonymous. 1976. Investigating Behavior. A product of the Minicourse Development Project, Biological Sciences Curriculum Study and Purdue Univ. W. B. Saunders Co., Philadelphia. 94 pp.

Organized in five sections or minicourses: 1. Observing behavioral patterns, 2. Analyzing behavioral patterns, 3. A behavioral study of guppies, 4. Communication through odors, and 5. Communication through sound. Study guide and teacher's manual published separately. Very detailed and thorough introduction to lab investigation of behavior. Aimed at high school but also valuable as introduction for college level course. (no price available)

DeCoursey, P. 1980. Laboratory Studies in Animal Behavior. An Ecological Approach. Spiral bound. University of South Carolina Bookstore, Columbia, SC. 163 pp.

Includes 23 experiments ranging from zoo ethograms to tool-using by animals. A brief statistical appendix treats student's t -test as applied to behavioral data. (\$9.95)

Hansell, M. H. and J. J. Aitken. 1977. Experimental Animal Behaviour. A Selection of Laboratory Exercises. Blackie & Son, Ltd., Glasgow, 186 pp.

Includes a wide range of carefully tested exercises presented in a sourcebook rather than cookbook format. The 26 activities sample a many different animal phyla and are adaptable to a variety of levels of instruction. A special feature is a section on experimental design and procedures, data analysis, presentation of results, and preparation of laboratory reports. (\$29.75)

Matthews, J. R. and R. W. Matthews (eds.) 1982. Insect Behavior. A Sourcebook of Laboratory and Field Exercises. Westview Publ. Co., Boulder, CO, 324 pp.

Intended as an instructor's source, the 34 exercises use insects to illustrate fundamental ideas of contemporary behavioral study. Each exercise is presented in a standardized format and concludes with suggestions for additional study. Appendices include aids to the instructor, sources of materials, pre-lab preparation and an introduction to commonly used nonparametric statistics. (\$22.00)

Oakley, B. and R. Schafer. 1978. Experimental Neurobiology. A Laboratory Manual. University of Michigan Press, Ann Arbor, 367 pp. Chapter 8 is titled "Behavior" and includes 7 exercises ranging from locomotion to sexual behavior. Excellent introduction to electrophysiology techniques. (\$12.95)

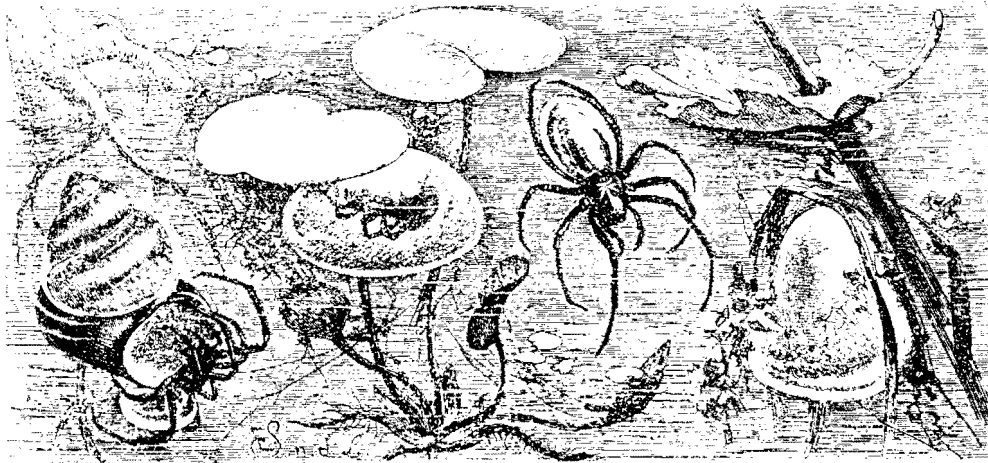
Price, E. O. and A. W. Stokes (eds.) 1975. Animal Behavior in Laboratory and Field. 2nd ed. W. H. Freeman Co., San Francisco, 130 pp.

A diverse collection of 38 well tested exercises adaptable to both lab and field, easily modified to suit individual preferences. (\$7.95)

Silberman, P. 1976. Animal Behaviour in the Laboratory. Pica Press, New York. 403pp.

Mostly a text on the philosophy of animal behavior; no laboratory investigations in the traditional sense, but useful as background information. (no price available)

Compiled by R. W. Matthews, Entomology Dept., Univ. of Georgia for ABS Education Committee, 1986.



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ENDANGERED SPECIES

In October, the Fish and Wildlife Service listed the Nashville crayfish (*Orconectes shoupi*) as endangered. It is threatened by siltation, stream alterations, and general deterioration of water quality.

The previous Congress did not reauthorize the Endangered Species Act. However, money was appropriated so the programs could continue. The Act must be reauthorized in 1987; Congress cannot continue to appropriate funds if the law is not reauthorized.

BITNET

Wanted: Computer-mail addresses of equine ethologists on the NORTHNET/BITNET system to exchange news, commentary, and publication notices. Contact S.E. Cregier, Univ of P.E.I., Charlottetown, P.E.I., Canada C1A 4P3 or at this computer-mail address: CREGIER@UPEI.BITNET.

PRIMATE LIBRARY REPORT

A publication by the Wisconsin Regional Primate Research Center. It lists recent audiovisual acquisitions of the center's library. Send inquiries, contributions, and requests for loan of materials to Larry Jacobsen, Primate Center Library, WRPRC, 1223 Capitol Court, Madison WI 53717.

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