

MEETINGS and ANNOUNCEMENTS



FORTHCOMING MEETINGS

The Foundation of Thanatology: Veterinary Medical Practice: Pet Loss and Human Emotion, March 27-29, 1981, Alumni Auditorium, Black Building, Columbia-Presbyterian Medical Center, New York, NY. Contact Dr. Austin H. Kutscher, Foundation of Thanatology, 630 West 168th St., New York, NY 10032, USA.

Hungarian Society of Agricultural Sciences: International Conference of Ethology, August 24-27, 1981, Agricultural University of Godollo, Godollo, Hungary. Topics include "The Role of Ethology in Large Scale Animal Breeding," and "Developing the Technical-Biological Unit of Industrial Animal Breeding with Help of Ethological Research." Contact Prof. Dr. J. Czako, Organizing Committee for Congress of Applied Animal Ethology, Agricultural University, Godollo, H2103, Hungary.

Wildlife Disease Association (Australasian Section): Fourth International

Wildlife Diseases Conference, August 24-28, 1981, Sydney, Australia. Contact Dr. E.P. Finnie, Program Chairman, Toranga Park Zoo, Mosman, NSW 2088, Australia, or Dr. M.E. Fowler, Dept. of Medicine, School of Veterinary Medicine, University of California at Davis, Davis, CA 95616, USA.

MEETING REPORTS

American Society of Animal Science

The 72nd annual meeting of the American Society of Animal Science (July 28, Cornell University, Ithaca, NY) included a half-day symposium on the role of animal behavior in food animal agriculture. Speakers discussed behavior as it relates to welfare requirements and appropriate management and housing systems. Synopses of each paper are presented below:

Roger Ewbank (University of Liverpool, Universities Federation for Animal Welfare): *Behavior and behavior-related problems in farm animals.* Behavior can be the symptom of an abnormal condition, a component of that condition, or synonymous with the condition itself. Tailbiting in intensively-raised pigs is an example of this third type of behavior, believed to be elicited by a breakdown in social order resulting from overcrowding. Research revealed that a high stocking rate produced tailbiting, increased fighting, and poor production figures, while a low stocking rate which enabled pigs to sort themselves into a rank order showed the opposite effect on productivity. Abnormal environments as well as incorrect social conditions can produce abnormal behavior, as in the case of bar-mouthing in stall-confined sows. Although this behavior does not indicate disease or injury, or even reduced productivity, it does indicate deprivation, which is a subtler and more pervasive aspect of

poor management than outright abuse or neglect.

Edwin Banks (University of Illinois): *Behavioral research to answer questions about animal welfare.* Domestic animals have been selectively bred and genetically manipulated to the point where natural selection no longer determines their behavioral adaptedness to an environment. It is therefore necessary to gather ethological profiles (ethograms) of farm animals to discover whether common intensive management practices conform to species-specific behavioral needs. Once the ethogram is established and recognized, various factors can be manipulated to improve animal welfare. These include physical adjustment of rearing systems, social restructuring (e.g., stocking rate, sex/age ratios) and genetic modifications through selective breeding. The spectre of legislation looms over producers unless they begin to pay more attention to and cooperate with applied ethologists in the design of rearing and housing systems and the management of large numbers of animals under intensive conditions.

Thomas Hartsock (University of Maryland): *Ethological approach to farm animal behavior research.* Despite the relatively recent modifying influences of selective breeding, the modern farm animal evolved in an environment quite different from the one in which it is now living. Behavior which is sometimes labelled 'abnormal' may in fact be normal from an evolutionary point of view, but inappropriate due to the presentation of inappropriate stimuli by an unnatural environment. For example, early weaned (12 h) piglets sometimes choose to lie against a wall near a heat lamp rather than directly under the heat lamp. Far from being an aberrant avoidance of the heat source, this behavior is actually the piglet's

attempt to make contact with an object in the environment as it would seek contact with the mother sow. Mistaken interpretations of farm animal behavior could be alleviated by the animal scientist, the veterinarian and the producer taking an ethological approach and familiarizing themselves with species-specific behavior patterns in both wild and artificial environments.

Stanley Curtis (University of Illinois): *Status of farm animal behavioral research in North America.* A survey was made of major agricultural journals and USDA information services to determine the extent and types of animal agriculture research devoted to behavior. The highest percentage of reported research dealt with feeding and reproduction, and the investigations tended to be confirmatory rather than novel. By contrast, the least frequent (7%) and most novel experiments and research projects were in the areas of social behavior and animal welfare. Dairy cattle and poultry were the primary animals studied.

Michael W. Fox (Institute for the Study of Animal Problems, Washington, DC) *Discussant.* Ethology is a powerful tool for assessing animal welfare, but it should not be the only method used. An integrated approach incorporating physiology, behavior and productivity is ideal. Whatever the approach, however, it should be emphasized that the abolition of suffering is *not* the goal of farm animal welfare research. The elimination of suffering could probably be achieved through the use of drugs and psychosurgery, but such measures can severely alter or even obliterate the essential nature of the animal. Instead, the needs, behavior, physical and social environment of the animal should be studied in order to create and implement management systems which maximize the animal's oppor-

tunity to be itself. Enough welfare research has been done in the U.S. to set up minimal codes of practice similar to those established in the U.K. The livestock industry should be persuaded to support the formation of codes, if not for humane reasons, then out of the practical consideration that in the absence of voluntary codes, legislation will eventually be imposed on producers through the efforts of animal welfare advocates.

International Whaling Commission

The 32nd annual meeting of the International Whaling Commission (July 21-26, Brighton, England) could be characterized from the conservationists' point of view as anything from a limited success to a major disaster. However, despite varying opinions on the degree of progress made at the meeting, conservationists agreed that the gains for whale protection fell far below their expectations. Many had been confident that the Commission would approve a total ban on commercial whaling. Instead, measures to institute either an immediate or a two year phased-in moratorium were defeated when they failed to obtain the necessary three quarters majority needed for adoption in the plenary session. Canada and South Africa, both nonwhaling nations, voted with the whaling bloc to prevent imposition of the moratorium.

Despite the failure of the moratorium vote, the overall quotas set for the 1981 whale kill were significantly lower than for the previous year, continuing a seven year trend. Next year, 13,851 whales are scheduled to die, compared to 15,656 this year and 45,673 in 1973.

Conservationists were also disappointed by the failure of the IWC to ban the taking of sperm whales. Both votes, one for an immediate moratorium and one for a one year phase-in, lost the majority by one, with Canada casting the deciding

ballot. Another dispute arose over setting the quota for the North Pacific stock of sperm whales. Japan demanded no fewer than 1,350, while the scientific committee argued that the only biologically acceptable quota was zero. A compromise of 890 was finally reached, despite scientific evidence indicating that the sperm whale stock will continue to decline with even a zero take.

Conservationists fared no better on the small cetacean question. Heated arguments took place during the entire meeting concerning the IWC's jurisdiction over smaller whales, many of whom live in coastal waters. Conservationists asserted that the IWC has the power to regulate the take of all whales, regardless of size or habitat. Many of the whaling nations, however, as well as Canada, argued that they have jurisdiction over any small whales inside their exclusive economic zones, which they claim extend 200 miles from the coast. The U.S. maintained that the only time a coastal state has the right not to follow IWC regulations is when it wants to institute stricter guidelines. Canada, bent on keeping complete control over its annual take of narwhal and beluga whales (at numbers which the IWC scientific committee considers dangerously high) argued that it alone has jurisdiction within coastal waters. A resolution was finally passed mandating that coastal states continue to send catch information to the IWC scientific committee for review.

One significant victory for the conservationists came when a schedule change was adopted banning the use of the cold harpoon for certain whales. The cold harpoon carries no explosives, and a struck whale does not die immediately, but may suffer for minutes or even hours. An exemption was provided for minke, the whales most often taken with cold harpoons. However, a resolution to consider adding minke to the ban

was also passed, putting the question on next year's agenda.

Perhaps the most time-consuming question, at least for the U.S. delegation, concerned the bowhead whale. New scientific evidence indicates that the species is in such bad shape that it will probably decline even if there is no take this year. The Alaskan Eskimos, however, argued that the IWC should not even set quotas for their aboriginal take. A resolution stating their demand for a minimum quota of 26 struck and 18 landed was soundly defeated. The scientific committee recommendation was for a zero quota. A resolution to that effect failed as well. Finally, faced with the possibility of coming away with no quota at all, the commissioners emerged from a closed session with a compromise: a three year block quota of 45 landed and 65 struck, with no more than 17 landed in any one year. Not only will this scheme provide a built-in reduction over the three years, it will also temporarily remove the issue from the agenda, which conservationists hope will allow the commission to devote more energy to putting an end to commercial whaling.

ANNOUNCEMENTS

Felix Wankel Award

The 1979 Felix Wankel prize for research in animal protection (see *Int J Stud Anim Prob* 1(1):63-65, 1980), amounting to \$11,500, has been awarded to Dr. Hilary Koprowski, Director of the Wistar Institute of Anatomy and Biology (Philadelphia, PA), for his work on the production of monoclonal antibodies in tissue culture.

Dr. Koprowski has had a distinguished career in medical research since leaving his native Poland in 1939. After spending four years in Brazil with the Rockefeller Foundation's Yellow Fever Research Service,

he joined Lederle Laboratories, a division of American Cyanamid (Pearl River, NY) in 1944 and became one of the leading figures in the search for a polio vaccine. Dr. Koprowski has been with the Wistar Institute since 1957.

The production of monoclonal antibodies from somatic cell hybrids ("hybridomas," composed in this case of mouse myeloma cells and splenocytes of immunized mice) is a relatively new field which shows enormous potential for human carcinoma diagnosis and therapy. Antibodies produced naturally by an organism's immune system in response to an antigen have a wide range of binding specificities and affinities. Therefore, the use of antibody sera in diagnosis and in tests such as the radioimmunoassay are fraught with problems of cross reaction. As Koprowski *et al.* state: "...[P]olyspecific antisera in general are unable to discriminate among small antigenic differences on an otherwise identical background or small antigenic similarities on a different background" (*Proc Natl Acad Sci USA* 75(7):3405-3409, 1978). The production of homogeneous antibody solutions in which all the molecules have the same binding specificity and affinity would be a considerable advance. Koprowski and his team recently studied 19 antibodies secreted by hybridomas and found that 15 were specific for the surface antigens of human colorectal carcinoma cells (*Somatic Cell Genetics* 5(6):957-972, 1979).

The application of Dr. Koprowski's work to the concept of alternatives lies not in the aims of the research, *i.e.*, to find a way to study the antigenic structure of human tumor cells, but in the technique used to produce the monoclonal antibodies. Instead of producing vaccines and antibody sera in the whole animal by means of inoculation and immunization, antibodies can be cloned from a cell line maintained in

tissue culture. Although live animals would still be used to start the cell lines, their overall numbers would be considerably reduced. According to the Felix Wankel prize judges, "The production of antibodies in cell culture represents a genuine alternative with possibilities that we cannot even envision at present."

North American Applied Animal Ethology Newsletter

A quarterly newsletter to promote the exchange of information among people interested in applied animal ethology and related fields is being initiated. We are soliciting items for the first and subsequent issues relevant to agricultural, companion and zoo animals (including game farms) that may be of interest to your colleagues, *e.g.*, announcements and brief summaries of meetings, research/employment opportunities, letters to the editor.

The results of a survey of applied animal ethology/behavior programs in North America will be a supplement to the first issue. Survey forms have been mailed by Dr. Ray Stricklin (University of Maryland) to all animal, dairy, poultry and veterinary science departments and colleges in North America.

Subscriptions cost \$2.00 (U.S.); make checks payable to "AAENL." Address correspondence to Dr. Ted Friend, Editor, Applied Animal Ethology Newsletter, Animal Science Department, Texas A&M University, College Station, TX 77843, USA.