EDITORIAL

Animal Care and Iatrogenic Animal Disease
Lloyd C. Faulkner, Editorial Advisory Board

Iatrogenic diseases are caused by the healer, or are associated with therapy. Ivan Illich's *Medical Nemesis* illuminated this problem in humans. Although veterinary care is not the focus of concern, the animal health problems addressed in Ruth Harrison's *Animal Machines* are the result of animal care technologies.

Adverse drug reactions are a real but relatively small iatrogenic risk for animal species. Inappropriate drugs, or improper mixtures or combinations of drugs are animal health hazards that are not adequately appreciated. Cosmetic surgery is more widely acknowledged as a cause of iatrogenic disease, particularly in pets and show animals.

Most care-associated animal diseases result from the inappropriate application of technology coupled with a contributory apathy or nescience toward the sensibilities of food animals. These afflictions became common as socio-economic conditions placed demands on more efficient meat production.

Animal scientists and veterinarians have been content with intensive management systems that neglect animal sensibilities and may compromise public health. These production systems are commonly linked intimately with the use of drugs that compensate, at least partially, for the animal health damage that would otherwise result. Antibiotics in animal feed is a prime example of such a linkage and its resultant potential for compromising human health.

The concerns of animal husbandmen, veterinarians, and companion animal owners have been centered on human gain or benefit to the exclusion of alternative solutions which posit animal sensibilities, microbial resistance, and public health as coequal concerns. We have abandoned the arts of predecessors who were forced to use disease-preventing managerial skills because their drugs and devices were so limited. We have relinquished our roles as good shepherds to the wonders of chemotherapeutics, antibiotics, and bioengineering.

We have been freed of the constraints of technologies that limited animal care to health-promoting systems, and healing has enjoyed greater demand than prevention. Armed with new knowledge, new drugs, new devices and skills, veterinarians have come to be highly regarded as healers. We have attempted to make medicine compensate for poor livestock management and irresponsible pet husbandry. We have been able to perform medical and surgical wonders for owners who refused the responsibilities of humane stewardship.

The technologies that lure us from the responsibilities of proper concern for animals can also erode our humanistic regard for the value of life itself. Drugs and devices properly developed with the aim of lessening pain and lending more dignity to death make it 'easier' to take life and to make death decisions. Many decisions to euthanize are made with animal welfare as the foremost concern. Yet, 'good death' drugs and devices often facilitate these decisions for the convenience of people, leaving the question of animal welfare aside.

The advent of the *International Journal for the Study of Animal Problems* is a healthy sign that there is a body of veterinarians, animal scientists, and others who care about animal sensibilities. As an educator, I am encouraged by the knowledge that veterinary students, animal science students, and other scholars are increasingly sensitive to the problems of animals. Veterinarians and animal scientists, encouraged by a caring public, can develop technologies that accommodate animal sensibilities and also meet human needs.

The Importance of National and International Zoo Cooperation
Jeremy J.C. Mallinson, Editorial Advisory Board

The more one is aware of the problems facing the animal kingdom both in the wild and in captivity, the more one appreciates that the long-term future of captive populations relies heavily on national as well as international cooperation, the sorting out of responsibilities and the willingness of people who are specializing in the breeding of threatened and endangered species to 'farm' the stocks available in the best interest of the species concerned. However, it is recognized that these goals can only be achieved if zoo directors move toward adopting the policies carried out by good livestock farmers by pooling their animal resources, sharing their husbandry techniques and creating data banks that will help to guide and look after the long term.

The chief objective of the Jersey Wildlife Preservation Trust is to establish under controlled conditions self-sustaining breeding populations of rare and endangered species. During the comparatively short life of the Trust, it has become the custodian of one of the rarest zoological collections in the world.

The development of the conservation breeding programs can be summarized in three stages:

(A) The setting up of a breeding group of a species in the collection until it represents a self-sustaining population.

(B) The distribution of the progeny such that viable breeding populations can materialize elsewhere.

(C) Once a captive reservoir has been firmly established, returning surplus animals either to their native environment (if such a reintroduction is considered possible) or to another suitable habitat where the species can be studied, providing that such an introduction does not cause any imbalance in nature.

The animals in the Trust's collection represent a good cross section of endangered species. In some cases, these have been loaned to the Trust by various governments. For example, the pink pigeon, Rodrigues fruit bat and fody, the Round Island's Guenther's gecko, Telfair's skink and boa are all on loan from the Mauritius government; St. Lucia parrots from the St. Lucia government; and the pigmy hog from the government of Assam. In other cases, the Trust acts as an extension or as one of the extensions to other organizations' breeding programs, e.g., Hawaiian goose and white-winged wood duck from the Wildfowl Trust, Edwards' pheasant from the World Pheasant Association, the Congo peacock from the Royal Antwerp Zoological Society, Sumatran orangutan from the Zoological Society of London and the golden lion tamarin from the National Zoological Park, Washington, D.C.

In the absence of further importations of rare animals from the wild, zoos will undoubtedly have to pool their animal resources, for with the majority of species, no one zoo or even small group of zoos can in the long run hope to guarantee the type of reservoir and viable gene pool that is necessary to repre...
sent a self-sustaining population. The Jersey Trust is doing everything possible to create extensions to its conservation breeding programs. To date, cooperative agreements involving breeding loans of the following species have been entered into with the corresponding organizations:

Jamaican hutia: Frankfurt Zoo and West Berlin Zoo, Federal Republic of Germany; London Zoo, UK; Philadelphia Zoo, USA.

Lowland gorilla: Twycross Zoo, UK.

Meller’s duck: The Wildfowl Trust, UK.

Pigmy hog: Gauhati Zoo, Assam, Zurich Zoo, Switzerland.

Spectacled bear: Chicago Zoo (Brookfield) and National Zoo, Washington, USA; Moscow Zoo, USSR; Zurich Zoo, Switzerland.

Waldrapp ibis: Altreu National Park, Switzerland; Helsinki Zoo, Finland; Norfolk Wildlife Park, UK; Philadelphia Zoo, USA.

White-eared pheasant: Antwerp Zoo, Belgium; Cleres, France; The Pheasant Trust, UK; The Seattle Zoo, USA.

At present, the Trust has over eighty animals belonging to ten species on breeding loan to eighteen different collections and is seeking to include species such as the Guenther’s gecko, the Telfair’s skink and the Jamaican boa in other breeding agreements. Animals are sent on loan to other organizations without any financial transaction, for it is considered that the disposal of endangered species for specific conservation breeding programs should in no way be handicapped by financial factors. In all cases, the chief priority must be to place the animals as advantageously as possible for the entire species.

In November 1976, those of us responsible for the welfare of gorillas in the British Isles and Ireland staged a meeting, the first of its kind, to organize for the long-term management and breeding of the then fifty-seven gorillas in our twelve collections. This meeting developed into what is now known as the Anthropoid Ape Advisory Panel which has subsequently held two meetings. Panel members and their respective fields of expertise include: Mr. Roger Wheeler, Director of Edinburgh Zoo (Chairman of the Coordinating Committee); Mr. Geoffrey Greed, Director of Bristol Zoo (orangutans); Miss Molly Badham, Director of Twycross Zoo (chimpanzees and gibbons); and Mr. Jeremy Mallinson, Zoological Director of the Jersey Trust (gorillas). National studbooks have been published, and scientific advisors appointed. We are optimistic that this sort of national cooperation and coordination will aid these species in the long term. Likewise, the Conservation and Breeding subcommittee of the British Zoo Federation, under the chairmanship of Dr. Janet Kear, does as much as possible to promote and guide the animal breeding programs carried out in British zoos.

As the general public becomes more aware of the need to conserve wildlife, zoos will be judged more and more on their ‘track record’ for contributing to the welfare of animals represented in their collections. I believe that the future of animals in zoos will depend increasingly on national and international cooperation and coordination. Much of this will, in turn, depend on the integrity and good will of the people in charge of the collections concerned. In the final analysis, real success will come only if zoo directors, conservationists, academics and those genuinely interested in the welfare of the animal kingdom cooperate wholeheartedly with others working in their respective fields.

COMPANION ANIMALS

Barn Cat Care
Barn cats are often thought to represent the pinnacle of domestic feline independence, but in truth, the barn cat fares no better than any other domestic cat in coping with hunger, disease and physical injury. The domestication process has created an animal which, while retaining many wild characteristics, cannot be considered truly self-sufficient. Inadequate shelter, mice in short supply, farm accidents and increased susceptibility to disease contribute to the high mortality rate among barn cats. The public may also compound the problem by foisting unwanted kittens on farmers who neither need them nor have the resources to care for them. The Humane Society of Harford County, Maryland recently published an article which contained several suggestions to farmers and the general public for upgrading the care of barn cats (J. Townsend, Humane News, Fall 1979, p.4).

1. Supplement the cats’ diet with commercial cat food. Hungry cats do not hunt any more intensively (and thus do not make better mousers) than well-fed cats.

2. Alter barn cats. No firm correlation exists between large numbers of cats and better rodent control on a given farm.

3. Attempt to socialize the cats by cultivating a small colony of gentle, friendly cats that will accept handling by a veterinarian or other humans.

4. Vaccinate cats against distemper and rabies.

5. Do not leave kittens on farms as they are even less equipped to deal with the stresses of barn life.

6. Seek other methods of rodent control.

In essence, the care of barn cats should duplicate the care given by any responsible companion animal owner. The barn cat may be ‘wild’ in the sense of being less habituated to contact with people, but its basic welfare needs are no different from those of the most docile house cat.

LABORATORY ANIMALS

Alternative Carcinogen Detection
The Felix-Wankel Awards are given for research in animal welfare or in the development of alternatives to laboratory animals (see Int / Stud Anim Prob 1:63, 1980). Professor Hans Marquardt (University of Hamburg) and Professor Bruce Ames (University of California, Berkeley) received awards in 1977 for their research into the development of in vitro tests for detecting potential carcinogens. Professor Marquardt’s work employs mammalian cell culture systems, while Professor Ames has concentrated on using a bacterial (Salomonella) test, now commonly known as the Ames test.

Much of the impetus for developing short-term in vitro carcinogenicity screening procedures stems from consumer and regulatory pressures to test all chemicals which are currently in widespread use or which are about to be introduced into the environ-