NEWS and REVIEW

COMpanion ANIMALS

Progress in Sheltering and Control

The Humane Society News (261):4-6, 1981 reported the following examples of progress in animal sheltering and control, measured by a reduction of the reported number of homeless animals turned into shelters in various communities.

The Humane Society of Huron Valley (Ann Arbor, Michigan) handled almost 19,000 animals in 1975, and reduced that amount to 12,000 in 1979. The number of animals euthanized annually was cut almost in half, dropping from 12,573 to 6,986. The society credits four surrounding counties which started programs in public education and enforcement opened a spay-neuter clinic in 1975. The clinic performed 4,200 surgeries in 1979.

The Tarrant County Humane Society (Fort Worth, Texas) opened a spay clinic in a low-income neighborhood in October 1978 and has sterilized more than 6,000 animals there. The number of puppies and kittens coming into the shelter has been reduced by 50%.

At the Peninsula Humane Society (San Mateo, California), the number of dogs handled dropped from 21,000 in 1974 to 12,000 in 1979; the number of cats decreased from 15,000 to 9,000. The society’s self-supporting spay/neuter clinic sterilized 20,000 animals between 1973 and 1979.

The Vancouver Regional Branch of the British Columbia SPCA euthanized 21,000 animals in 1979 compared to 80,000 in 1976. Again, a program of sterilization and education seems to have made the difference since nearby municipalities without such a program reported an increase in animals euthanized in the same time period.

The number of animals sheltered annually by the Western Pennsylvania Humane Society (Pittsburgh) decreased by 2,288 dogs and 4,234 cats between 1970-71 and 1978-79. The society credits the decrease to more adoptions, better education programs, improved shelter facilities and a neutering program through which 21,000 animals have been sterilized since 1966.

Only two states have laws making sterilization of animals adopted from shelters mandatory. California requires all adopted cats to be neutered, while Florida extends the requirements to all animals adopted from shelters.

LAB ANIMALS

AAALAC Chairman Deplores Lack of Controls on Animal Research

Professor Harold Feinberg of the University of Illinois School of Basic Medicine called for an end to cosmetics testing and all painful research on animals at a conference held at the Anti-Cruelty Society in Chicago in November 1980. Feinberg, who is also the current chairman of the American Association for the Accreditation of Laboratory Animal Care (AAALAC), declared that "there must be rules [governing animal experimentation]." One of the things that is not permissible is to inflict 'pain.'

Since AAALAC is one of the major pro-
fessional groups which have been set up to provide some self-regulation of biomedical research. Feinberg's comments are particularly startling.

While he stressed that he is a physiologist who kills dogs in order to study cardiac function, he also stated that he does not consider the pursuit of knowledge in and of itself a necessarily acceptable goal of research: "[T]he knowledge must relate to the alleviation of pain and suffering in humans and animals," and the research should never inflict pain on the animal subjects. At present, under the federal Animal Welfare Act, the care of laboratory animals is regulated by federal authorities, but there is no limit as to what is permissible for an experimenter to do with an animal once it leaves the holding facility.

As to the function of AAALAC, Feinberg noted: "We worry about is cage space, cleanliness, training of animal caretakers and nutrition. The organization cannot say anything about what the animals are used for, so it is like being a good concentration camp guard." If AAALAC were to comment on the protocols and procedures used, then they "must be allowed to exist." Dr. Feinberg was particularly hard on cosmetic testing, stating that it was a "frivolous use of animals" which he would "like to see outlawed."

While Feinberg was the outstanding central figure at the conference, not so much because of what he said, but because he was saying it, there were a number of other noteworthy contributions. Philosophers Tom Regan (North Carolina State University) and Dale Jamieson (University of Colorado) discussed their "modified innocence principle" which states that it is wrong to harm an innocent unless one can show that by doing so, one will save or significantly ameliorate the lot of a greater number of innocents. They rejected the premise that we are justified in doing uninhibited experimentation as well as the premise that it is always wrong to harm an innocent animal. However, they argued that most of the harmful experiments done on animals "are not morally permissible because the scientific community has not made a conscientious effort to search for alternatives."

Robert Brown, Executive Director of the Anti-Cruelty Society, noted that the positions expressed by Feinberg, Jamieson and Regan are "tantamount to a cease and desist order on a large proportion of the current world-wide use of some two hundred million laboratory animals." Brown also explained that the conference resulted from a year of active dialogue between the Anti-Cruelty Society and Chicago's biomedical community. It serves to illustrate that scientists and animal welfare professionals can work together to achieve common goals and could, perhaps, form the nucleus of Feinberg's suggested "groups of people who should sit in judgment of what we do in laboratories."

**Revlon Funds Draize Test Initiative**

On December 23, 1980 Revlon announced that it was giving a grant of up to $750,000 to Rockefeller University to fund a research effort aimed initially at finding an alternative to the Draize rabbit eye-irritancy test. "We don't have to worry about the Draize test anymore," Michel Bergerac, chief executive of the multi-billion dollar corporation, also called upon other major cosmetic and toiletry companies to help determine the safety of chemicals in the human eye is without any redeeming merit. (MSU News, 8 May 1980). Most cell scientists, however, would contest this view. Professor David Snyder, a biologist at the University of Sydney and a defender of the need to do research on animals, has stated: "[T]here does seem to be a good case for a major attempt to find an alternative to the Draize test since this is a "serious ethical problem involving only the epibehal cover of the eye and the underlying cornea." (Alternatives to Animal Experiments, Scolar Press, London, UK, 1978). Obviously, Revlon and Rockefeller University agreed with Professor Snyder. The project funded by Revlon should, at the very least, a much better idea of the feasibility of using cell culture as a screen for eye irritancy.

**FARM ANIMALS**

**Biotin and Farm Animal Welfare**

Recent research has shown that bio-
tin deficiency may increase animals' susceptibility to stress-related disease. R.L. Hood (Feedstuffs, 29 Dec. 1980, pp. 13-15) reports that low concentrations of the vitamin biotin in the diet of parent poultry stock, in their eggs, and in the diet of their offspring is believed to be the major factor contributing to fatty liver and kidney syndrome (FLKS) which
fessional groups which have been set up to provide some self-regulation of biomedicine. Feinberg's comments are particularly startling.

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The Draize test has been the focus of a campaign to urge industry and government to develop a nonanimal alternative for irritancy testing. A coalition of over four hundred animal welfare organizations has been applying pressure to both the cosmetic industry and the government to abolish the test on the grounds that it does not make it more humane. Several groups have focused specifically on Revlon, starting with a full-page advertisement in the New York Times (15 April 1980) captioned "How many rabbits does Revlon blind for beauty's sake?" The Cosmetic, Toiletry and Fragrance Association (CTFA) has also been a target of consumer pressure, but Revlon has been perceived as the "sacrificial lamb" by Donald Davis, editor of the trade publication, Drug and Cosmetic Industry. In a June 1980 editorial he commented: "A Draize test on Revlon's plight has engendered more sympathy in the industry... than any other single happening since the founding of the company," but that "there has been a distinct lack of 'volunteers' among industry leaders to help take the head off Revlon."

However, according to Michel Bergerac, Revlon's initiative "clearly confirmed and extends their past interest in and research on potential alternatives. Whatever the background to the decision to award the grant, Henry Spira, co-ordinator of the coalition, welcomes this constructive approach by Revlon and hopes that similar initiatives will be taken by other major cosmetic and toiletry companies. The principal investigator for the project at Rockefeller University will be Dr. Dennis Stark, Director of the Laboratory Animal Research Center. Dr. Stark has a research background which includes the study of inflammatory responses. He plans to employ one or two cell scientists to help determine the feasibility of developing a cell culture alternative to the Draize test. There have been mixed results from earlier exploratory studies on cell culture systems in the UK, but the Hazleton Research Laboratories gave promising results, but Unilever has decided that cell cultures are not reliable for irritant screening, according to Anthony Johnson, a scientist in the company's Environmental Safety Division.

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Recent research has shown that biotin deficiency may increase animals' susceptibility to stress and disease. R.L. Hood (Feedstuffs, 29 Dec. 1980, pp. 13-15) reports that low concentrations of the vitamin biotin in the diet of parent poultry stock, in their eggs, and in the diet of their offspring is believed to be the major factor contributing to fatty liver and kidney syndrome (FLKS) which
or 'heart attack.' Some feedstuffs, such as oats, barley and wheat, have low bioavailability of vitamin. Availability of this essential vitamin may also be reduced by antagonists, biotin-binding proteins, antibiotics, sulfanilamides and other antimicrobials.

Excessive noise, as from a thunderstorm, or sudden changes in temperature can trigger the disorder; ironically, these are natural stressors to which all poultry were once well adapted. Apparently, when birds are stressed, they break down glycogen into glucose and glucose into lactic acid. With biotin deficiency (which affects biotin-dependent enzymes), gluconeogenesis is impaired, blood lactate levels increase and birds die from hypoglycemic coma. It is possible that the standard recommended daily requirement of biotin may be much higher than normal for birds in modern intensive systems: The many husbandry stresses, species-atypical diet and chronic intake of antimicrobial and other drugs could be resulting in faster utilization of and greater demand for the vitamin.

Adding biotin to the diet may help to prevent not only 'flip-over', but also foot pad dermatitis and breast blisters in broilers (See Feedstuffs, 25 Aug. 1980). Pigs are also known to be affected by biotin levels in their diet. R.H.C. Penny et al. (Vet Rec 107: 350-351, 1980) report that although sows in a herd with a high frequency of foot lesions and lameness failed to benefit from a dietary supplement of biotin, replacement gilts with minimal foot lesions on entry to the herd did benefit from biotin supplementation and showed less 'confinement floor' heel erosion, heel bruising and 'corn.'

U.K. Report on Transport and Slaughter The following is excerpted from a press release issued 5 November 1980 by Botsford Press Relations Ltd., London. Major proposals for improvement of animal welfare on-farm and during transport, marketing, lairing, pre-slaughter handling, stunning and slaughter were made in the Ammerdown Group Report, published 5 November 1980. What makes the report unique is that its recommendations are made by leaders of the meat industry as well as those professionally involved with animal behavior and welfare. The aim of the seminar held by the independent Ammerdown Group, which took its name from the meeting place near Bath, was "...to identify the key problems and to seek practical solutions for a more humane and efficient transport and slaughtering system."

The report states that its strength "...lies in the degree of unanimity amongst the participants on the need to improve the welfare of animals before slaughter and, in so doing, raise the quality of the carcasses produced... Although it was recognized by the Group that some changes could be expensive, it was also strongly felt that there were many areas which could be modified at low cost." The report has been endorsed by the Animal Welfare Committee of the British Veterinary Association.

The major problems identified in the report include: overly vigorous treatment on-farm in feeding animals into dark vehicles; badly designed vehicles and loading ramps; harassments and disturbances in markets; out-of-date meat plants with poorly designed pens and passageways; stress in pre-slaughter handling; ineffective stunning, with animals being stuck while still conscious; poor poultry crate design; lack of job motivation, training and understanding in some large meat plants; insufficient communication between the various sectors involved in the industry because of their diverse natures; and supervision which is often cursory or lacking altogether because the day-to-day responsibility for the welfare of animals destined for slaughter is divided among a number of different authorities.

The two key recommendations of the group are:

1. A small, independent coordinating center should be established as soon as possible to act as a focal point for all those concerned with the transport and slaughter of farm animals. It would act as a link between all the various groups involved, including welfare organizations, research and development, equipment manufacturers and the industry itself. The center would encourage the implementation of methods that would be both cost-effective and improve the welfare of the animals themselves.

2. The government should be urged to create a unified and independent inspection service under the control of the Animal Health Division of the Ministry of Agriculture, which would be responsible for ensuring the humane transport and handling of livestock between farm and slaughter, and for meat inspection. In this way, control would be coordinated and problems that occurred at any stage quickly traced. Furthermore, a consistent standard could be established throughout the country.

Copies of the report, "The Transport and Slaughter of Farm Animals" (CJA & HSA, 1980) are available for £1 each from the Council of Justice to Animals and Humane Slaughter Association, 34 Blanche Lane, Potters Bar, Herts, UK.

WILDLIFE Scoline and Culling Operations The culling of animals in national parks is a controversial subject. However, once the decision to cull has been made, employment of a humane and efficient killing technique should assume top priority.

The South African Federation of Societies for the Prevention of Cruelty to Animals, in response to public concern over the use of the neuromuscular blocking agent, succinylcholine chloride (Scoline), for immobilization of wild animals (See Int J Stud Anim Prob 7(4):218, 1980), conducted an independent investigation of culling operations in the Kruger National Park in which Scoline was used on elephant and buffalo. The International Society for the Protection of Animals (ISPA) assisted the investigation by providing a veterinary ethologist and a veterinarian to join a team which spent 5 days at the Park in the eastern Transvaal in November 1979.

According to Park officials, periodic droughts necessitate the culling of elephant, buffalo, and possibly in the future, kudu. The carcasses of culled animals are removed and processed for consumption, a practice that has an economic as well as hygienic purpose, as the sale of these carcasses creates revenue for the Park. However, Park authorities assured the team that culling quotas were determined by ecological surveys and not by economic considerations.

The decision to use Scoline in the Kruger Park was influenced by the high degree of tameness exhibited by the animals living there. Alternative agents, such as Etorphine (M-99), were rejected on the grounds that their slower killing action would result in dazed animals scattering and attracting the attention of and arousing fear in other animals. Ian Douglas-Hamilton (USAHA) has reported an interesting case of cultural transmission in this regard: descendants of once fairly tame survivors of a brutal culling operation in a South African park in 1919 show fear of man although they them...
in the U.S. is known as ‘flip-over disease’ or ‘heart attack.’ Some feedstuffs, such as oats, barley and wheat, have low bioavailability of biotin. Availability of this essential vitamin may also be reduced by antagonists, biotin-binding proteins, antibiotics, sulfanilamides and other antimicrobials.

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USAHA Wants Welfare Research

At its 1980 annual meeting in Louisville, Kentucky, the U.S. Animal Health Association (USAHA) passed a resolution supporting the idea of federally funded research related to animal welfare and intensified management practices. As stated in the USAHA Newsletter (73(2), 1980), resolutions passed by the membership “...become a major part of the policies of the Association for the coming year.”

WILDLIFE

Scoline and Culling Operations

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turbed (Among the Elephants, Viking,
New York, 1975)].

Although the usual procedure in
culling elephants is to dart, shoot and
remove entire family units, and thus
only minimally disturb the social struc­
ture of the herd, the culling witnessed by
the Federation-ISPA team involved two
bachelor bulls. Normal culling opera­
tions had been completed by the time of
the team’s visit, and these two animals
were essentially sacrificed in order to
demonstrate the effects of Scoline.

Both animals collapsed two min­
utes after being darted. According to Dr.
J. E. Cooper, the veterinarian sent under
the auspices of ISPA, the elephants were
still breathing when they were shot min­
utes after collapsing. A large herd of
giraffe on the open savannah where the
killing took place appeared to be only
slightly affected by the event.

In contrast, the culling of 30 buf­
falo occurred on rough, scrubby terrain.
Observing from a helicopter, Colin Platt,
ISPA’s veterinary ethologist, noted that the
animals galloped about in a frenzied
manner and showed marked evidence of
respiratory distress after being darted.

The team concluded that the use of
Scoline to immobilize elephants was
“not unacceptable provided that the
animals are reached before respiration
ceases and are then immediately killed
by shooting.” The evidence for buffalo,
however, is equivocal. On one hand, the
animals observed by the Federation-
ISPA team died of respiratory paralysis,
thus reinforcing the concern that
Scoline can cause death by suffocation.
On the other hand, tests done at another
time on captive buffalo by senior Park
veterinarian B. de Vos indicated that the
animals’ hearts stopped before their
respiration failed.

The team also concluded that the
stress experienced by both the elephants
and the buffalo could not be avoided,
but could be (and was) localized and of
short duration.

The South African Federation of
Societies for the Prevention of Cruelty to
Animals does not intend the results of
this investigation to be taken as a
blanket endorsement of the use of Scoline in elephant culling operations.
The particular circumstances in the
Kruger National Park, combined with the
generous amount of skill, efficiency
and compassion toward the animals displayed by the Park staff were major fac­
tors in the team’s overall evaluation.

Badgers Coveny by MAFF Report

Anyone who has read Kenneth Gra­
hame’s classic tale, The Wind in the Wil­
lows, knows that Badger, more than any
of the other animals, cared little for
the Wide World. In light of a recent decision
by the British Ministry of Agriculture,
Fisheries and Food (MAFF), English bad­
gers would have done well to follow their
literary counterpart’s example and stay
depth within the Wild Wood instead of es­
establishing setts on land where cattle are
farmed. After a suspension of operations
lasting more than a year, the MAFF has
decided to resume the gassing of badgers
in areas where they are believed to be in­
festing cattle with bovine tuberculosis.

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eradication of local badger populations
is an “unfortunate necessity.” The Beast
claims that the MAFF is continuing to
operate on an assumption rather than on
conclusive scientific evidence.

According to an independent inves­
tigation conducted by the Beast, the lab­
oratory studies done to establish trans­
missibility of tuberculosis between
badgers and cattle were not successful
in the laboratory, forcing healthy animals of one species
to feed from the same floor where dis­
 ease animals of the other species had
excreted. The Beast further points out that the successful program to eradicate
bovine TB from the national dairy herd
in the 1950’s did not implicate badgers.
Therefore, why weren’t the badgers vag­
aged by the 30% incidence of bovine TB
at that time, and if they did have the dis­
eease, why did they not infect the herd
during the 50’s?

The Beast suggests that there could
be other factors contributing to bovine
TB outbreak in cattle besides that of
badgers acting as vectors, such as infect­
ed soil, intensive housing systems in
which cattle are closely confined,
wounds sustained through de-horning,
disease transmission by humans.

Public criticism of both the badger
control policy and the methods of eradi­
cation provoked the suspension in Octo­
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til an investigation of the problem, head­
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evaluate the current policy, could be
completed. The report of the investiga­
tion, “Badgers, Cattle and Tuberculosis”
(MAFF, 1980, £5.20) concludes not only
that gassing operations should be re­
sumed in areas of bovine TB outbreak
(primarily southwestern England), but al­
so that sampling procedures, i.e., catch­
ing, killing and autopsying badgers to
discover diseased individuals, should be
extended to contiguous counties.

The Veterinary Record, Britain’s pro­
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report for its thoroughness and objecti­

ty (107:453, 1980). The Beast, a U.K.
magazine devoted to issues of the envi­
ronment and animal rights, calls the rep­
port “whitewash” (No. 8, pp. 1-3, 1981).

The treatment of badgers by the
MAFF raises questions not only about
the humaneness and efficacy of the kill­
ing, but also about how the whole prob­
lem is perceived. To the MAFF, whose
primary responsibility is to the farmers,
outbreaks of bovine TB in cattle can mean
economic disaster. Such pressures
lead to searches for immediately effec­
tive, short-term solutions. Considera­
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ed by Lord Zuckerman and designed to
evaluate the current policy, could be completed. The report of the investiga­
tion, “Badgers, Cattle and Tuberculosis” (MAFF, 1980, £5.20) concludes not only that gassing operations should be re­
sumed in areas of bovine TB outbreak (primarily southwestern England), but al­
so that sampling procedures, i.e., catch­
ing, killing and autopsying badgers to
discover diseased individuals, should be extended to contiguous counties.

The Veterinary Record, Britain’s pro­
fessional veterinary journal, lauds the report for its thoroughness and objecti­

vity (107:433, 1980). The Beast, a U.K.
magazine devoted to issues of the envi­
rnen and animal rights, calls the report “whitewash” (No. 8, pp. 1-3, 1981).

The treatment of badgers by the MAFF raises questions not only about the humaneness and efficacy of the kill­

ing, but also about how the whole prob­
lem is perceived. To the MAFF, whose primary responsibility is to the farmers, outbreaks of bovine TB in cattle can mean economic disaster. Such pressures lead to searches for immediately effec­
tive, short-term solutions. Considera­
tions of long-term effects on the envi­
rnen, or acknowledgment that the root of the problem may lie in modern intensive management practices, simply do not fit into the program.