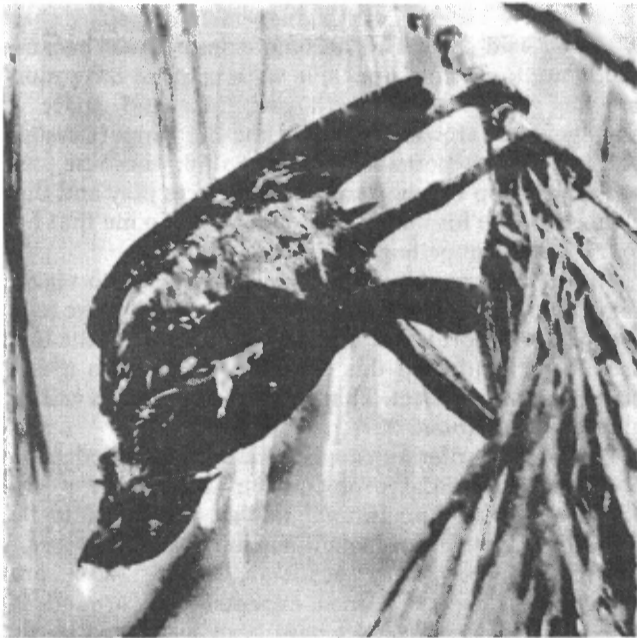


BLACKBIRD MASSACRE Letters of Protest Needed

The United States Army, flouting advice from eminent wildlife authorities, is pushing forward with plans to kill up to 13 million blackbirds unnecessarily and inhumanely. In the first attack, February 20th, the Army killed half a million grackles, red-winged blackbirds, cowbirds and starlings at Fort Campbell, Kentucky. The starlings, however, appear to be more resistant than the native American birds and were observed flying off in large numbers the following day, having suffered but survived what had been designed as a major massacre of millions of the four species in the roost.

The Army's battle plan against the birds calls for repeated night aerial spraying of the compound Tergitol during or just prior to a cold rainfall. Protective oil insulation on the birds' feathers is removed making it impossible for them to fly or to maintain their body heat. At Fort Campbell, however, the weather turned so cold February 20th that some of the birds were covered with a sheath of ice, and those strong enough to endure were protected from the effects of the Tergitol by the ice that formed after fire trucks doused them with water.

The stress these small insectivorous birds were forced to undergo is exemplified in the UPI photo of a frozen blackbird still clinging in death to its icicle-covered pine bough.



"This approach to blackbirds is the opposite of humaneness," charged wildlife specialist and blackbird expert Dr. George W. Cornwell of Gainesville, Florida, in an affidavit presented in Federal Court February 7th. Noting that Tergitol, manufactured by Union Carbide, is known as a "stressing agent," Dr. Cornwell stated, "Tergitol, in concert with cold temperatures and rain, stresses these warm-blooded, highly organized creatures unto death by chilling." Further, he observed, "Sometimes birds take more than a week to die."

Dr. Cornwell was Associate Professor of Wildlife Ecology at the University of Florida School of Forest Resources and Conservation, Assistant Professor and Wildlife Extension Specialist at Virginia Polytechnic Institute, and teaching assistant at the University of Michigan where he obtained his doctorate in wildlife biology. He is now president of EcoImpact, an environmental consultant firm.

The long, drawn-out death that Tergitol is capable of inflicting was also emphasized by one of the world's foremost authorities on blackbirds, Dr. Melvin Ivon Dyer

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U.S. GOVERNMENT CHALLENGED IN COURT ON DOLPHIN DECIMATION

In a last-ditch effort to save the dolphins from death in the tuna purse seines, a group of conservation and humane organizations have filed suit against the Secretary of Commerce and the National Marine Fisheries Service, charging that a number of provisions of the Marine Mammal Protection Act of 1973 have been disregarded in the promulgation of regulations and the issuing of a general permit allowing the continued taking of tens of thousands of dolphins in the course of seining for yellow fin tuna.

Richard Gutting, attorney for the Environmental Defense Fund, is representing the Animal Welfare Institute, National Parks and Conservation Association, American Littoral Society, Animal Protection Institute, Defenders of Wildlife, Friends of the Earth, Environmental Policy Center, Fund for Animals, International Fund for Animal Welfare, U.S.A., Alix Jay, and the Connecticut Cetacean Society.

The suit states in part under Count 5:

"Defendants are required under sections 101 and 103 of the Marine Mammal Protection Act to prescribe regulations which restrict the manner in which marine mammals are taken so as to insure that any authorized method of taking will involve the least possible degree of pain and suffering practicable to the mammal involved and will otherwise be accomplished in a humane manner.

"Defendants breached the aforesaid sections by prescribing regulations providing for the taking of marine mammals in an inhumane manner.

"Defendants will not promulgate sufficient regulations for the protection of marine mammals from the inhumane activities of commercial fishermen and will

[Continued on page 5]

SCHWEITZER CENTENARY MEDAL CEREMONY

On the hundredth anniversary of the birth of Albert Schweitzer, Lee Talbot received the Schweitzer medal from the hands of Russell Train. The Great Hall of the Smithsonian Institution's original building, generally known as The Castle, was filled with adherents of the Schweitzer philosophy and admirers of the Talbot activism in his role as Senior Scientist in the President's Council on Environmental Quality (CEQ).

Now Administrator of the Environmental Protection Agency, Russell Train was the first Chairman of CEQ and his expression of sincere admiration for the medallist whose work he knows so well, made this ceremony especially memorable.

Dr. Talbot's acceptance speech is reprinted in full below, as requested by many of those in the audience who believe it deserves serious study by government and private sector ecologists and humanitarians alike.

Address by Lee Merriam Talbot, Senior Scientist, Council on Environmental Quality

I am deeply honored to receive this award, and deeply grateful. It is particularly meaningful to me because wildlife conservation has been such an important factor in my life, and also, of course, because the award is coming on this, the centennial of Dr. Schweitzer's birth.

I must also admit to a certain amount of gratification as well as surprise when I was notified. Gratification, of course, because wildlife conservation is a goal to which I have devoted many of my efforts and on which I have strong personal convictions; surprise, because unless one is in a particularly prominent position, his endeavors are rarely known, much less recognized. At least at my level

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of Government, most work is behind the scenes. Often, the most effective way to proceed is to convey an idea to others sufficiently convincingly that they adopt the idea as their own. This may be the stuff of success, but it is hardly the stuff of recognition. Hence, the surprise.

My appreciation, however, is tempered by the acute awareness that such an honor should not belong to me alone. If I am honest with myself, I must admit four dimensions to this recognition.

First, there are others certainly equally or more deserving of such an honor. Mrs. Christine Stevens is an outstanding example. The moving force behind the Animal Welfare Institute and the Schweitzer awards, she is an effective and tireless worker for welfare of animals, both domestic and wild. I can think of no one who would be more deserving of this honor and recognition than she.

The second dimension is recognition that even in terms of a specific accomplishment, credit rarely is due solely to one person. Many contribute. Whale conservation provides a case in point. Mrs. Stevens, Scott McVay, Buff Bohlen, Robert White, and William Aron have all played absolutely essential roles in our efforts to conserve whales. There are many others around this hall who also should be mentioned prominently. But the point is that in virtually no action does the credit belong solely to one individual. Virtually, any action in conservation represents the culmination of the efforts of many in and out of government.

The third dimension is a recognition that an individual's ethics and accomplishments at any one time owe much to that individual's past associations with parents, teachers, and others. He does not stand alone, but is the product of the efforts -- intentional and otherwise -- of many. In this respect, I am particularly rich in my debts. My grandfather, C. Hart Merriam, founded and was first director of the Bureau of Biological Survey which is now the Fish and Wildlife Service. He was a true Renaissance man, a master of many fields. Among other things, he was an important early ecologist, and one who was greatly concerned about wildlife conservation in both an ethical and scientific sense.

His daughter, my mother, was his field assistant for many years and is a knowledgeable biologist and ethologist deeply concerned with conservation. My father was one of the pioneers in range management and wildlife conservation. A close friend and colleague of Aldo Leopold, the two collaborated on establishing America's first wilderness area, and later my father was a founding member of the Wilderness Society. He had a broad comprehension of the role of wild things and wild lands, and a gentle depth of feeling for conservation that touched all that knew him. My own conservation activities clearly are deeply in debt to the very great privilege of growing up with and learning from such a family.

Of course, there are others beyond immediate family to whom I am indebted either for contributions to the development of a conservation ethic, or the opportunity to practice it. There are teachers or professors. Starker Leopold was one. As was Carl Sauer, the most inspiring man I have ever known with his incisive philosophy of conservation and human ecology. I owe much to Harold Coolidge, "Mr. Conservation" in much of the world. A real pioneer in international conservation whose single minded, dogged and effective dedication to endangered species and their habitats, and whose support and encouragement of other conservationists has probably made a greater contribution to the development of worldwide conservation than any other man. I have also had the privilege of learning from Frank Fraser Darling, gentle, preceptive, intuitive ecologist and conservationist; and from Ray Fosberg, encyclopedic in his ecological knowledge and unyielding in his conservation convictions. There are, of course, many others, and I hope I continue to have the chance to learn from them.

There is one other special group to whom I owe a particular debt. Respected friends, mentors, and colleagues in conservation here and abroad, these include our host here at the Smithsonian, Dillon Ripley, Russell Train, and Russell Peterson, who have all

employed me here in Washington under some pretext or other, but have allowed me to practice conservation.

The fourth dimension involves my roommate. One cannot pursue a conservation career in the field or in Government without at least passive acceptance by one's roommate. In my case I have been extremely fortunate -- my story is that it was simply good planning -- in that Marty not only accepts conservation but has at least as aggressive a commitment to it as I. In the nearly 16 years that we have been living together, she has spent over half of the time working with me in the field in Africa, Asia, and elsewhere. While resident in Washington, she puts up with my long hours and frequent trips, and between her own considerable conservation activities, she assists me in my work. The award really goes in part to her.

In Dr. Schweitzer's words, cast on this beautiful medal, "We need a boundless ethics which will include the animals also". Aldo Leopold also called for such a comprehensive ethic, but noted that our educational and economic systems are a serious obstacle impeding the ethic's development. This has certainly been my experience. I grew up with a conservation ethic, a deep gut feeling of the importance of the land, the wildlife and natural systems. But in the process of receiving a higher education this ethic was almost educated out. I was taught that a gut feeling wasn't "scientific". Conservation wasn't academically acceptable. Neither was ecology. "There wasn't any future in it." In retrospect, I almost lost something of far greater significance than the knowledge I gained.

On the other hand, knowledge of the scientific significance and the accepted economic values of wildlife is essential to effective implementation of a conservation ethic. Perhaps the most compelling scientific argument for wildlife conservation is the role wildlife plays in our life support system. Each wild species plays a role in maintaining the health and stability of the ecosystem of which it is a part. Our welfare, indeed our survival, depends upon maintaining intact and healthy the ecosystems on which we rely. The survival of any of the wildlife components of these systems must be of some significance to us. Accordingly, I can relate conservation of endangered species with management of a space ship. Allowing wild species to become exterminated because we do not know for sure their value and we have more pressing things to do with our time and space is analagous to throwing pieces of the life support system out of the hypothetical space ship, because the passengers don't know what role the pieces play and they want the space for more immediate uses. To me that has long been a compelling argument.

In recent years, however, I have also come to realize that even if those species which are lost do not prove to be of any life support value, I will be the poorer for the loss, as will mankind; and this consideration itself is reason enough to care and act. That is what Schweitzer's call for an ethic is all about.

One of my earlier aims was to become knowledgeable about environmental problems throughout the world. Again there was "no future" in this, according to the prevailing academic wisdom in my university. However, I willfully ignored that academic advice also and subsequently have obtained experience in around 90 countries. In the process I have been impressed by the similarity of problems from country to country and region to region. Of course there are local variations, but to a remarkable degree conservation problems throughout the world are variations on a common theme.

There is an ecological succession of such problems, the stage along that succession that each country has reached being dependent upon the density of human population and degree of industrialization and urbanization. The physical dimensions of the problems involved and the patterns of human response to them are so similar, that I have frequently been struck by a feeling of *déjà vu*. The conservation sessions at the UN Conference at Stockholm in 1972 could have been replays of tapes from the Biosphere Conference in 1968, the Bangkok Conservation Conference of 1965, or the Conservation Conference in Arusha, Tanganyika in 1961.

The reiterated pattern of wildlife problems has several common components; intentional extermination or reduction, overharvest, and above all, habitat change. I would like to address these components briefly in the

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perspective of their significance to the major wildlife problems we face here today.

The first recorded extermination of a mammal was the European lion in 80 A.D., and over half the mammals exterminated in Africa, Asia, Europe, the Antarctic, and North America have been lions, bears, wolves and foxes. This is no accident. Throughout history larger predators have represented a direct threat or competition to man, and he has reacted accordingly. Eighty years ago, my grandfather wrote gloomily about the relationship of man to these animals, which he said, "In the long run is everywhere the same, the relation of the destroyer to the destroyed." Yet predators play a key ecological role, and they have proved to be of extraordinary human interest. Unfortunately, some still have the frontier ethic that "the only good predator is a dead one." This along with legitimate concern about livestock, and Parkinson's law operating in the bureaucracy, led to a multi-million dollar Federal-State predator control program based on prophylactic control -- i.e., total elimination or reduction of whole populations of predators. It has done so effectively, putting species such as the Northern Rocky Mountain wolf, red wolf, eastern timber wolf, kit fox and eastern cougar on the Endangered Species List. In its later years the program was augmented by the widespread use of persistent poisons.

In 1948, as a State Biologist in California, I studied the impact of predator poisons. That experience along with subsequent studies and other exposure to the programs convinced me that there are certainly situations where control of predators is necessary to protect livestock or wildlife, but that, in general, prophylactic control and the widespread routine use of persistent, selective poisons, particularly on public lands, was not justifiable, indeed that it was a gross abuse of public lands and the public trust.

The Advisory Committee called by the Department of the Interior and the CEQ came to the same conclusion, and on their recommendations, in 1972 the routine use of poisons on public lands was stopped. Data on predators and predator losses have never been good, but those available do not indicate very significant consistent changes in predator numbers or predation since the poisons were stopped; they are up in some areas and down in others. The sheep industry continues to decline, as much in the 31 states where coyotes are not a problem as in the western 17 where they are. The sheep industry is deeply worried, but it seems clear to me that coyotes are -- at most -- only one part of the industry's much larger set of problems, and I am totally unconvinced that return to poisons would really help, even if it was acceptable on other grounds -- which it is not. We clearly need more information on the whole situation, particularly on the factors really affecting viability of the sheep industry as a whole.

Wild animals usually are regarded as a common property resource; in most cases they are not the property of the persons doing the harvesting for commerce or sport. Consequently, the principle in Garrett Hardin's "Tragedy of the Commons" usually prevails. While this has occurred with terrestrial mammals and some birds, nowhere is it more glaringly apparent than with the world's living resources of the seas. Species after species of marine mammal and fish have been driven at least to economic extinction through overharvesting.

The ecological impacts of this irresponsible waste are not clear yet, but the impact on world food needs may become painfully clear soon. With constantly growing fleets and ever more efficient fishing technology, the world's harvest of table fish increased from 21 million tons in 1950 to 70 million tons by 1970. Then the catch began to decline and by last year it dropped to 65 million tons. If this represents the over-harvest that I believe it does, there is only one way for the harvest to go -- down.

Part of the problem is institutional; we must have effective mechanisms to regulate fishing by all nations. Present Law of the Sea negotiations are addressing part of this problem.

The other part of the problem, however, is the scientific basis for the management that does exist.

Virtually all harvest of aquatic and terrestrial wildlife is based on maximum sustainable yield (MSY). MSY is the concept of management of a single species intended to achieve the highest sustained annual harvest. Ecologically speaking, MSY cannot work because it does not consider the many factors affecting the species itself, nor the interrelationships between that species and its ecosystem. In practice, I believe it does not work. There are few if any examples of the long term, successful application of MSY to any species, and there is an abundance of examples where its use has led to long term reduction or loss of the resource.

I have long been concerned with this problem and on several fronts have sought to change the basis of management away from MSY. Two examples, at least partially the result of this effort, are the Marine Mammal Protection Act and a recent action of the International Whaling Commission (IWC). The Marine Mammal Act is the world's first legislation which states that the objective of management is to insure that the species survives in adequate numbers to play its role in maintaining the health and stability of the ecosystem; and that harvest may occur only where consistent with that primary objective. I believe it is hard to overestimate the importance of this precedent. And a concept of Optimum Yield, involving similar ecosystem considerations, was adopted to replace MSY in the 1974 IWC meeting.

Another endeavor to improve the basis of management involves a program of workshops this spring, which will bring many of the world's authorities on harvest research and management to provide a critical review of MSY and seek to develop a better alternative.

There is an allied and increasingly critical problem facing terrestrial wildlife management. In large part, wildlife management developed in response to the needs of hunters; and the hunters provide the major constituency and most funding for wildlife. Now, however, the situation has changed dramatically. Hunters represent a small proportion of our population -- a population which has become increasingly more aware of wildlife values and more critical of its management. Non-game users of wildlife are vastly more significant now than hunting; yet the current Federal Fish and Wildlife Service budget only devotes around 4% of its total to clearly non-game wildlife users, including endangered species; and this figure appears to reflect the balance of funding from non-Federal sources also. There must be a change in the Federal funding and policy, in the responsive state activities, and above all, in the wildlife profession.

While direct killing is a problem for some species, particularly predators and those commercially harvested, habitat modification is by far the greatest single problem facing wildlife in this country and throughout the world. Land use planning which takes cognizance of wildlife needs is one key to the problem. Land use decisions determine the options we will have in the future, including the retention or loss of the irreplaceable living species and unique ecosystems. Consequently, I regard development of effective nationwide land use planning to be one of our highest present needs.

But this requires a land ethic of the kind envisioned by Aldo Leopold, one which embodies appreciation for the land itself, the natural systems it supports, and the living components of those systems. It requires criteria beyond the simplistic short-term dollars-and-cents cost-benefit that we deal with all too often.

The third of the nation that comprises our public lands is an important consideration here. In earlier days our operating philosophy for public lands was to facilitate quick exploitation of their immediate economic resources -- timber, grazing and minerals. Now, however, there is greatly increasing environmental awareness of the public as a whole and growing recognition of the significance of public lands. A new philosophy for public lands is needed; indeed, it is being developed, but all too slowly.

In my view, these lands are held in trust for all Americans. Their use by any individual is a privilege, not a right. Any use which impacts other uses -- and particularly one which forecloses other options -- must be balanced very carefully against the other public interests, not simply against the old economic yardstick. Predator

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control and clearcutting are clearly such issues. Off-road vehicles is another.

When off-road vehicles are misused, their potential for destruction of fragile habitats, damage to wildlife interests, and disturbance to other land uses is enormous, out of all proportion to the numbers of people or machines involved. One trail bike can destroy the wilderness experience for a hundred hikers in a wild area. Yet the message of this public land philosophy has not gotten through to enough of our public land managers. I was shocked -- and angered -- recently to hear representatives of three of the Federal agencies which control large parts of our public lands question why off-road vehicles should be singled out for more regulation than hikers.

What I am really calling for is a holistic approach to management of our lands. However, adequate ecological information, effectively applied, is necessary to implement such management, as it is to implement virtually any part of a conservation ethic. This requires a scientific approach which is also holistic and interdisciplinary. However, as a few of my earlier comments may have implied, I do not regard our traditional academic system as the best route to achieve such an approach; I regard it as a powerful obstacle. The traditional university is divided into water-tight departments. The system of academic awards is based on this fragmented foundation. While many universities have established interdisciplinary or interdepartmental programs, frequently little has changed but the name. The result is the continuing production of narrow specialists, rather than well trained, broader experts with an appreciation for the holistic nature of life and with the capabilities to deal with it.

The other area where our traditional scientific training fails to meet current environmental needs is in the application of scientific expertise to current needs. The decision maker and the scientist speak different languages; the decision maker thinks in terms of black and white and places a premium on quick decision making; the scientist's training is almost precisely the reverse.

I am convinced that if the nation is to obtain the necessary scientific foundations for implementation of a true conservation ethic, there must be some fundamental alterations in academic attitude and approach.

The last point I wish to make involves the role of the citizen in relation to Government. In my opening comments I noted that virtually any conservation action represented the culmination of actions of those in and out of Government. I did not always believe that. One of my first contacts with the Federal Government was with a Federal predator control officer who ran his trap and poison lines on private lands, including those of my family and some neighbors, all of whom valued the existing natural conditions, including the predators, and deeply resented this Governmental invasion of our right. There were no livestock within miles, and this was a gratuitous attempt by this man to increase his take. Eventually, I caught him and during a vigorous discussion informed him that the land owners had decided that if he or his lines were found on any of our properties again we would "control" him. He was never seen in the area again. I suppose that constituted effective citizen action, but it was not the constructive cooperation I now have in mind.

During the subsequent few years my main exposure to the Federal Government was through a series of public hearings conducted by members of Congress in various western states on a variety of grazing, forestry and wilderness issues. In all of these hearings the conservationists were harangued by the Congressman or his aide; we were allowed to sit through hours of testimony by timbermen, stockmen, and others, and somewhat grudgingly given a few minutes at the end of the day to express our views, usually as the conveners were packing their brief cases. I was not impressed with the Legislative Branch of Government.

However, when I got to Washington, my view of the Government changed. I believe my first appearance before a Congressional hearing here was before Mr. Dingell's subcommittee. I don't remember the subject;

it's not important; what I remember is that here were Congressmen who listened to what I had to say, asked courteous but perceptive questions, and followed up later. My view of the Legislative Branch of Government changed radically.

Before coming to Washington I totally discounted the value of citizens' letters to the President, Federal Officers, and Congress. Now, in cases such as the Hickel confirmation, the marine mammal issue, and predator control, I have seen how tremendously effective such letters are, and I realize they are one of the most effective ways the public can make their views known to their Government.

Before coming here my view of the Federal bureaucracy was that it was a group of Parkinsonian Bureaucrats intent upon maintaining the status quo and totally insulated from conservationists; now I know that such creatures exist; they are not an endangered species; but there are also many fine, capable, dedicated Federal employees, holding a conservation ethic, ready to implement it and willing and, indeed, anxious to work with citizen groups.

The whale issue dramatizes the citizens' role and the healthy, vigorous, constructive relationship that can exist between citizen groups, Congress and the Executive Branch. The citizen groups -- first the conservation organizations but later labor unions and a variety of other bodies -- educated and focused public opinion. Citizens wrote to Congress and the President. Congress passed Resolutions and the President appointed Russell Train as his special representative to the IWC. The Federal agencies sought the cooperation of citizen groups in developing a Federal position; included their representatives in the IWC meetings; and maintained close liaison with them throughout. By being part of the process, the citizens came to recognize the very real problems facing Government in this issue, and ultimately, they decided to exert economic and diplomatic influence which the Government could not, through the citizens' boycott. At last year's IWC meeting some of the Japanese informed us of their very real diplomatic and economic concern about the boycott and the citizens' actions. While a moratorium on whaling has not been achieved, the improvements in the whale management in the past four years have been nothing short of phenomenal. Government has done its best, but I am convinced that without the citizens' actions, whaling today would be little changed from what it was four years ago.

The voice of the citizen in environmental affairs is important, and I believe it is becoming more so. In spite of energy, economic, and other problems, environment remains a solid, continuing concern of the American public as the recent elections and opinion polls testify. I am convinced that we are closer than we ever have been to achieving the Schweitzer ethic, and I am proud to be part of this noble effort.

LETTERS NEEDED IN SUPPORT OF THE POISON BAN

The Executive Order which ended the poisoning of predators on the public lands is again under attack by the National Woolgrowers Association which has asked all its state organizations to write President Ford urging him to overturn the ban.

Before the Executive Order was promulgated, millions of dollars were spent yearly by the federal government spreading thallium, 1080, strychnine and cyanide over the public lands in the west. The first three poisons are extremely painful; their effects are long drawn out, and a second animal, eating the victim of the first poison bait, may also die in agony. Cyanide, which is a quick-acting poison, is being used on an experimental basis outside the public lands without violating the provisions of the Executive Order, but the woolgrowers don't want to wait for the data.

Please write to President Ford and to Secretary of the Interior Rogers C.B. Morton strongly urging that they stand firm in maintaining the Executive Order, a major forward step in the protection of wildlife and the environment.

Blackbird Massacre
[continued]

of Colorado State University. He told the Court that after observing experimental use of the compound, he has seen birds last for days, fluttering their wings, trying to fly, falling on roads and fields, finally dying of exposure and starvation. At the Fort Campbell spraying where the piercing distress calls of the birds being doused by Army aircraft horrified onlookers, Dr. Dyer told *The New Times*, "It's an evolutionary call. It's a defense against predators. It means simply, 'Help. I'm in trouble.'"

Dr. Dyer has spent most of his professional life since 1961 studying blackbirds, and most of his 53 publications are on blackbirds. He was director of the Blackbird Research Program at the Department of Zoology, University of Guelph, Ontario. He spent four years as a supervisory biologist for blackbird research at the Patuxent Wildlife Research Center at Sandusky, Ohio.

Danger of insect and rodent population explosions resulting from mass killing of blackbirds was cited not only by Drs. Dyer and Cornwell, but also by the Environmental Protection Agency. It stated in a comment on the Army's proposal, "The absence of predation (by the blackbirds) on tons of insects...could have a significant effect on the success of commercial crops in states to which the birds migrate and could require compensating increases in the use of insecticides." Dr. Cornwell estimated that 10 million blackbirds consume about 110,000 tons of weed seeds and insects in a year.

Further, EPA and the two blackbird experts forecast an increase in the rat, mouse and mole populations, who would have less competition from the blackbirds in feeding on waste seeds and grains.

Dr. Cornwell and Dr. Dyer expressed the belief that regardless of how many birds might be killed this year, most likely redwing blackbirds, grackles, starlings and cowbirds will pick the Milan and Fort Campbell roosts again next year unless alternative means to make them leave the roosts are used. They suggested use of noise makers and more effective thinning of trees. This approach was successfully used at Graceham, Md., last year in routing nearly two million blackbirds. "Roosts have been moved hundreds of times without a mass killing," Dr. Cornwell stated.

The United States Department of Interior also ran up a warning flag against mass killing of the birds in its comments on the Army's preliminary environmental impact statement. Interior's comment was omitted from the Army's final impact statement. Interior stated, "...we believe the benefits of tree thinning have been underrated. Most important, the Army has not presented an overall long range plan for either the Fort Campbell or Milan areas."

A preliminary injunction, sought by the Society for Animal Rights, was denied February 8, by Judge William B. Bryant of the U.S. District Court of D.C. The plaintiffs filed an appeal, but it too was denied.

It is up to environmentalists and humanitarians to protect the birds not only from the Army but from misguided local governments who have become "Tergitol-happy." Since Tergitol cannot be used without permission from the U.S. Department of Interior, letters calling for an immediate halt in its use should be sent to the following two members of the Cabinet:

Secretary Rogers C.B. Morton
U.S. Department of the Interior
Washington, D.C. 20240

Secretary James R. Schlesinger
Department of Defense
The Pentagon
Washington, D.C. 20301

It is important that Secretary Morton and Secretary Schlesinger realize that 1) alternatives to cruel killing are available, 2) the public wants them used, leaving the blackbirds alive to take their part in their spring migration and to perform their valuable insect and weed seed eating role this spring and summer, and 3) that the dehumanizing massacre of these small defenseless birds is a blot on our civilization deeply resented by large numbers of citizens.

Dolphin Decimation
[continued]

allow the inhumane taking of marine mammals by commercial fishermen unless and until the relief requested by plaintiffs is granted by this court."

It further states:

"Section 102 (2) of National Environmental Protection Act requires that before defendants promulgate the Regulations they prepare and consider a final environmental impact statement which adequately describes:

- (i) the environmental impact of the proposed action;
- (ii) any adverse environmental effects which cannot be avoided should the proposal be implemented;
- (iii) alternatives to the proposed action;
- (iv) the relationship between local short-term users of man's environment and the maintenance and enhancement of long-term productivity, and
- (v) any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.

"The EIS fails to describe, and demonstrates defendants' failure to study and assess, the danger to the continued existence of the species and population stocks of the marine mammals concerned by the Regulations and the alternatives thereto.

"Defendants promulgated the Regulations and will proceed with implementation of said Regulations without complying with Sections 101 and 102 of NEPA unless and until relief requested by plaintiffs is granted by this Court.

"WHEREFORE, having no adequate remedy at law, plaintiffs respectfully request that this Court grant the following relief:

"A. A declaratory judgement that defendants have acted unlawfully and contrary to their duty as stated in Sections 2, 101, 102, 103, and 104 of the MMPA, 16 U.S.C. SS1361-63, and Section 101 and 102 of NEPA, 42 U.S.C. SS4331-32, by:

1. failing to publish findings and information adequate to support the Regulations;
2. failing to base the Regulations upon the best scientific evidence available;
3. failing to consult with Marine Mammal Commission prior to prescribing the Regulations;
4. failing to insure that the killing and injuring of mammals authorized by the Regulations will not deplete the species and population stocks concerned below their optimum sustainable levels;
5. failing to insure that the killing and injuring of mammals authorized by the Regulations will not be to the disadvantage of the species and population stocks concerned;
6. failing to limit the number and kind of mammals which are authorized to be taken;
7. failing to establish a reasonable fee for the permits issued under the Regulations;
8. failing to prescribe the procedures necessary to issue, maintain and review permits under the Regulations;
9. failing to prescribe regulations necessary to insure that marine mammals will be taken in a humane manner;
10. failing to prepare an adequate final environmental impact statement on the Regulations;
11. failing to consider environmental concerns adequately, prior to the promulgation of the Regulations; and
12. failing to take steps reasonably calculated to insure that 'the incidental kill or incidental serious injury of mammals permitted in the course of commercial fishing be reduced to insignificant levels approaching zero mortality and serious injury rate.'

"B. An order directing defendants to prescribe and issue regulations and an EIS which satisfy the requirements of MMPA and NEPA within a reasonable period of time; and, in the event defendants fail to comply with such order, issue an injunction forbidding defendants to allow any taking of marine mammals by commercial fishermen unless and until defendants comply with the aforesaid requirements of MMPA and NEPA;

"C. Any and all further relief that this Court may deem just and proper including costs and reasonable attorney's fees."

"C. Any and all further relief that this Court may deem just and proper including costs and reasonable attorney's fees."

[Continued on page 6]

**Observer Report Samples
Submitted by Alix Jay**

A vivid picture of the suffering inflicted on dolphins in the yellow fin tuna purse-seine fishery is given in excerpts from the reports of observers employed by the National Marine Fisheries Service. Alix Jay, a young former fisherman, travelled to La Jolla in order to read the stacks of reports, several feet thick, which have been collected at the South West Fisheries Center. He presented the notes he made when he testified at hearings on the proposed regulations. Some of these are given below. Mr. Jay explains:

"The excerpts I have included strike me as being typical of my own experiences as a tuna fisherman. Quotation marks indicate a direct quote, a lack of them means that I paraphrased what was said. The sets are mostly in chronological order, and are labelled according to National Marine Fisheries Service cruise number, set number and year."

- 18-11-72 Caught school of 3,000, too big for net that size. 130 tons of tuna, 505 mortalities. Radio tracker placed on porpoise.
- 18-12-72 Same school as yesterday - doesn't look as big. About 2,000 porpoises in net. 90 tons of tuna, 326 mortalities.
- 18-13-72 Same school again: 600 to 700 porpoises.
- 14-1-72 "I'm amazed that even when trapped the porpoises swim in 2's, 3's and 4's as though synchronized as a ballet team, slowly and gracefully arching in and out of the water. Ballet teams seem to be of the same species."
- 14-5-72 Describes many porpoises caught down low where they can't be counted or seen.
- 15-27-72 1,041 porpoises killed in single set of the net - about half of school. Mentions sharks feeding on corpses. 15 tons of fish and porpoises dumped because of full wells.
- 16-19-72 Cites baby, waiting outside net for his mother, being run over by a speedboat.
- 16-21-72 "I see an animal with what looks like a worn out dorsal fin. Maybe a veteran of this war. The animals are squeaking and clicking all the time."
- 16-33-72 Set on same school two days in a row.
- 16-34-72 Set at dark: 49 dead.
- 17-17-72 160 dead. Observer made no comment at all about cause of mortality!
- 17-18-72 770 dead: snouts caught trying to get out.
- 17-19-72 177 more dead: snouts caught in mesh.
- 18-11-72 Too many animals for a net that size; crowding was main problem. Porpoises panicked and ran into net. 505 dead.
- 19-19-72 "The porpoises weren't leaving, which led the captain to wish them to perdition, whereupon he ordered the crew into the net. 5 minutes later he ordered them out again. "We're wasting time." Some unusual things I noticed were: 1) a porpoise circled a dead porpoise for about five minutes; 2) a porpoise completely jumped over the corks."
- 20-4-72 "Net collapsed in 2 places trapping all porpoises and rolling them in net. Much blood, and 9 minutes later; we end hauling net. A few porpoises still alive. Begin sacking up. 14 minutes later; some porpoises still alive, though I have watched them struggling for over 20 minutes. They have an amazing ability to grab just a breath of air and then remain submerged for 1, 2, or 3 minutes. They must have a high CO₂ tolerance since they are constantly struggling against the net, other porpoises, fish and the boat to reach the surface. 10 minutes later: still porpoises breathing. Final count: 187 caught, 124 dead." Hauling in of net is slow because of a pocket of dead porpoises next to the boat, which is entangled in the webbing. Much blood in water."
- 20-10-72 Non-releasing bunchline caused collapse of net.
- 24-23-72 "One baby that had just been born (still soft and wrinkled) came up in net. Had part of the umbilical cord still attached."
- 31-3-73 "Dumped fuel from well to put fish in. Fuel all over water and porpoises. Probably pretty bad for them. Porpoises going through powerblock." 300 killed.
- 32-18-73 "Net collapsed because bow thruster messed up. Wind and current opposite." 63 dead.
- 29-18-73 "dead miscarriage; umbilical cord still attached."
- 31-5-73 "sharks hassling porpoises in net."
- 31-5-73 "Lactating and dead." One of the dead cows obviously had an infant.
- 32-2-73 Heavy chop added to mortality.
- 38-21-73 Net collapsed during backdown. 170 dead.
- 39-9-73 Porpoises shaken down from net and injured.
- 39-31-73 Porpoises go through powerblock both before and after backdown.
- 48-52-73 Fuel dumped out of well all over porpoises and fish.
- 44-2-73 Control handle broke - caused premature backdown. 435 whitebelly mortality. Describes a little lost baby swimming around outside net.
- 44-3-73 Third bunchline caught. 500 dead.
- 48-25-73 **It's April: many pregnant females.** Lots of porpoises tangled up in bunchlines.
- 48-54-73 "Had to dump fuel out of well to put fish in"
- 50-1-73 Current wraps net around boat.
- 53-5-73 Shark attacks live porpoises outside net. Porpoise fishing probably makes many porpoises vulnerable to shark attacks that otherwise wouldn't be.
- 54-20-74 New strategy: chased them until all tired out.
- 54-?-74 "This school has been set on five times today and nobody has caught them."
- 57-3-74 High wind causes problems. Skiff won't keep boat out of net.
- 57-50-74 "Captain says he won't back down because he wants to get another school before dark."
- 59-29-74 "Some animals have holes in their sides; possibly from sailfish or marlin that was in the net."
- 59-29-74 Bad roll-up. Bunchlines stick. Spotters would not go over corks. Fear of net? 137 dead.
- 63-3-74 Porpoise hit by speedboat.
- 63-36-74 "It seems there are at least a few mother/young pairs in the net. I wonder if they were caught because the young ones got tired of running and mothers wouldn't abandon them?"
- 64-6-74 Everything went wrong! Strong current, roll-up, net collapse, many deaths.
- 65-28-74 "Mother got left pectoral caught in net on one of her dives. Baby son kept diving down with no rest until exhausted and drowned."
- 68-59-74 "No fish in net; it's possible that this school has been set on four or five times today."
- 76-6-74 Disaster due to roll-up; 509 dead.
- 78-1-74 Steering has gone out, caused collapse. There's nobody in a skiff or speedboat over there to untangle the porpoises.
- 78-3-74 Skipper loses some of his fish during backdown.

ANIMAL WELFARE INSTITUTE

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SCIENTIST EXPLAINS WHY WHALERS CAN MAKE MORE MONEY BY KILLING WHALES TO EXTINCTION

In the modern world it *does* pay to kill the goose that laid the golden egg. Dr. Colin W. Clark, University of British Columbia mathematician, explained to a scientific conference held at Airlie in early April the basic facts behind the destruction of the great whales.

An article by John H. Douglas in the April 19, 1975, issue of *Science News* states in part: "...the argument that diminishing returns will halt overexploitation before the point of extinction is reached is incorrect, he [Clark] says; and he derives a formula to predict when extinction will be economically profitable. The results fit the case of presently endangered whale species with foreboding accuracy.

"At the heart of Clark's arguments is the fact that fishermen (or hunters or foresters) must invest large amounts of money, at high risk, into equipment, in hopes of large profit, rather than socking it away more securely in a bank, and settling for a smaller rate of return. The index a commercial fisherman would use to make this judgment is called the 'discount rate' - simply the rate of return his boat must give him each year in order to have paid for itself by the time it wears out, while yielding more profit than would have been gained by investing the money elsewhere. Since fishing is a risky business (the boat may sink before it wears out), discount rates of 20 percent a year are not unreasonable.

"Expressed in these terms, the higher the discount rate, the more fish a man has to take to stay solvent; and

(Continued on page 2)

NATIONAL ACADEMY OF SCIENCES TACKLES THORNY ISSUE

A Review of Research Methods Involving Animals, Tissue Cultures, Computer Simulation and Other Alternatives

A Symposium on the Future of Animals, Cells, Models and Systems in Research, Development, Education, and Testing is scheduled to take place October 22 and 23, 1975, in the auditorium of the National Academy of Sciences in Washington, D.C.

Speakers at the symposium will address matters of major importance regarding experimental animals, their treatment, and the use of alternative research methods.

The meeting is open to the public, free of charge. Registration may be done at the door; however, pre-registration is now being accepted by the Institute of Laboratory Animal Resources, 2101 Constitution Avenue, Washington, D.C. 20418. Those who pre-register will receive an advance copy of the program when it is published.

Topics to be addressed include Humane Perspectives; Experimental Systems, Advantages and Disadvantages; Animal Models; Computer Simulation; A Review of the Validity of Presently Accepted Scientific Standards; Past, Present, and Future of *in vitro* Systems; Use of *in vitro* Systems in Basic Biomedical Research; Applications of *in vitro* Systems to Public Health; The Ethics of Biomedical Experimentation; Ecological Considerations in Animal Usage; The Legal Aspects of Biomedical Experimentation; and A Legislator's View on Animal Legislation Affecting Biomedical Research.

The program will run from nine to five on each of the two days with half hour presentations followed by fifteen minute discussion periods in which those attending may participate.

U.S. PUBLIC HEALTH SERVICE PROPOSES BAN ON IMPORTATION OF PRIMATES FOR PET TRADE

The U.S. Public Health Service published proposed regulations in *The Federal Register*, March 14, 1975, banning importation of primates for the pet industry and regulating importation for scientific institutions and zoos.

Prohibition of pet imports of monkeys and apes is based on the fact that they are subject to essentially the same diseases as man. Infections spread by nonhuman to human primates are cited. "In the United States, human infections documented as being acquired from nonhuman primates include hepatitis, tuberculosis, Monkey B virus infections, shigellosis, salmonellosis, Yaba-like disease, superficial mycoses, and parasitic infections. In addition to the above conditions, infections

(Continued on page 2)

NEW DIRECTIVES FOR RESEARCH FACILITY ANNUAL REPORTS ON USE OF PAIN-RELIEVING DRUGS

The Animal and Plant Health Inspection Service (APHIS) of the U.S. Department of Agriculture issued a new directive January 3, 1975, to provide guidelines to each research institution registered under the Federal Animal Welfare Act for use in preparing their annual reports on the treatment of experimental animals.

The Act requires, as noted in the new directive, that "professionally acceptable standards governing care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs during experimentation are being followed by the research facility during actual research or experimentation."

APHIS advises its veterinary inspectors as follows, "Section Veterinarians should determine during the periodic inspections whether the attending veterinarian has the necessary delegated authority and support of the responsible officials of the registered facilities to assure the appropriate use of pain-relieving drugs during actual research or experimentation."

Under the heading "Research Facility Responsibility," the question of authority of the attending veterinarian is pursued. "The regulations place a great deal of responsibility on the Doctor of Veterinary Medicine for assuring the appropriate use of the pain-relieving drugs. The regulations assign such veterinarians this responsibility without the liability (which is the institution's) for the proper use of such drugs. If the institution has not given the attending veterinarian the necessary authority to carry out his responsibilities under the required regulations, the attending veterinarian may wish to attach a statement to the annual report form listing such lack of authority or any restriction or limitation placed upon him by the responsible officials of the registered facility."

Emphasis is placed on the necessity for relieving pain at all times. The directive states: "The research facility may wish to establish an internal reporting procedure for the purpose of this report. It should require certification by the principal investigator stating that the appropriate pain-relieving drugs have been used, as necessary, throughout the entire study. The attending veterinarian must have assurance that such drugs were not used just as a one shot procedure but that pain and distress were relieved throughout the entire experiment, including post-operative and post-procedural care."

New reporting forms were issued to registered research facilities "to obtain more uniform, accurate and complete reports in fulfilling the requirements of the Act."

THE DOLPHINS AND THE LONG-DISTANCE SWIMMER

Dolphins were given credit for helping Lynne Cox, the 18-year old California high school senior, succeed in swimming across dangerous Cook Strait in New Zealand. An article in *Sports Illustrated*, February 17th by Sam Moses describes this first crossing by a woman swimmer, the fourth ever successfully completed in nearly twenty attempts. Lynne Cox's swim took twelve hours and three minutes. The Strait's powerful and unpredictable tides make it one of the most difficult places in the world to swim across, according to Moses, who detailed the tremendous difficulties she encountered. Twice, she almost gave up and a third time "thoughts of quitting were controlling her mind again. Then from nowhere came the dolphins, a dozen or more, swimming in pairs, trios and foursomes, squeaking cheerfully as they danced and dived in circles around Lynne - once even over her - so close she could have reached out and touched them. For the final four hours they never let her out of their sight...The final crisis came just 400 yards out. A reconnoitering fishing boat discovered a new current pushing away from Perano Head." Lynne "had to swim an extra 1½ miles and run the risk of getting caught in an even stronger outward current - this time from Tory Channel, a body of water that rushes into the Strait as if shot from a giant fire hose. But the detour was Lynne's only hope.

"Half an hour from the finish, when she was safely clear of Tory Channel, and the outgoing tide from Perano Head, a stillness came. The wind suddenly died. The dolphins, who had taken Lynne's mind off the pain and protected her from sharks, disappeared. A new tide tugged Lynne gently into the bay...She slept only two hours that night and ate almost nothing the next day as she slowly unwound. But she talked a little, of maybe trying to swim the Irish Sea next. And of the dolphins."

FISHERMEN HELP DOLPHINS

MOSCOW - March 6 - In an incident in the Black Sea, a school of dolphins sought aid from fishermen to save the life of a baby dolphin, the newspaper *Trud* said today.

It said dolphins surrounded the fishermen's boat then began swimming in a specific direction. The fishermen followed until they reached a marker buoy and found a young dolphin entangled in a fishing net.

The fishermen freed the dolphin and the school accompanied the boat back to its former spot, apparently as a gesture of gratitude, the newspaper said.

The newspaper said Soviet scientists have recorded several similar instances of dolphins seeking to make contact with humans. - UPI

Killing Whales to Extinction [continued]

if he is in competition with many other fishermen who feel the same way, overfishing eventually results. But what happens when this overfishing causes a decline in the fish population? So long as one can make more money from sale of a fish than it cost to catch it, economic considerations alone offer no reason to slow down the fishing effort. Indeed, even if one owned all the fish, faced no competition, and could take them at leisure, Clark has derived a theorem that says overfishing to the point of extinction remains profitable so long as the discount rate is more than twice the annual reproduction rate of the species in question.

"Thus, a whale herd, which has a reproduction rate of about 10 percent a year, will be placed in jeopardy of extinction whenever the discount rate rises above 20 percent -- which explains why all eight of the world's great whales are now on the endangered species list. Similar arguments can be used to explain why several terrestrial animals are in danger of extinction and why foresters continue to clear-cut vast stretches of virgin jungle without concern over whether it can ever be regenerated."

A Louis XIV mentality survives in the attitudes of international businessmen who profit from the destruction of whales and of forests. "After us, the deluge" would seem to be their motto.

Ban on Importation of Primates [continued]

acquired from nonhuman primates in other countries include but are not limited to Marburg disease, Kyasanur Forest disease, monkeypox, yellow fever, rabies and malaria. Many of the reported infections have been clinically severe, and a number have resulted in death or long-term disability.

"Data indicate that the rate of tuberculin conversion from negative to positive is 27 times higher for laboratory workers exposed to monkeys than for the general population and that viral hepatitis attack rates are similarly different."

Despite these unpleasant facts, the monkey trade is currently booming. As stated in *The Federal Register*, "Each year, approximately 75,000 to 100,000 nonhuman primates are imported into the United States. It is estimated that half of these animals are imported for scientific purposes, about half for sale as pets, and a few for exhibition."

Some states as well as some foreign countries have begun to take action as follows: "Recognizing the human health hazard posed by nonhuman primates, the State of California has implemented a quarantine program for nonhuman primates entering the State, and Colorado has banned the sale of pet nonhuman primates. The State of Georgia is expected to restrict the sale of nonhuman primates for use as pets in the near future under provisions of a recently passed law. England and Germany have stringent quarantine measures for imported nonhuman primates that have in effect banned the importation of nonhuman primates for sale as pets."

Recommendations by the Animal Welfare Institute included banning importation for menageries and shopping center shows, specific standards for other exhibition, requirements for humane methods of destruction of sick animals that must be killed, and requirements that government laboratories using imported monkeys and apes demonstrate to the Public Health Service that they are meeting the standards promulgated under the Animal Welfare Act with respect to primates.

The deadline for comments on the proposed regulations was April 14th. The final regulations become effective 60 days after publication. Violations will be punished by fines up to \$1,000 and/or imprisonment up to one year as provided in section 368 of the Public Health Service Act (42 U.S.C. 271).

All importation of primates involves great suffering. These regulations should cut the volume of suffering in half by cutting imports by 50%. However, import figures should be carefully scrutinized since animal dealers will undoubtedly attempt to sell more monkeys to laboratories to make up for losses in income from the pet industry. Scientific institutions should firmly resist animal dealer pressure.

BEHAVIOR STUDY TO PREVENT WILDLIFE ACCIDENTS ON ROADS

The embankments of many Austrian highways today show on both sides of the road a new installation: game-warning reflectors which are designed to divert beams from car headlamps into the adjoining countryside. The basic idea for the installation of the reflectors has been derived from the studies of the Institute of Comparative Behavior Research in the Austrian Academy of Sciences, which concentrated on the effect on animals of "eyes" and "eye dummies". It was established in these studies most animals are deterred by the sight of "eyes" as they believe that they are looked upon and, consequently, feel threatened. On the other hand it turned out that the color "red" has an alarming effect as it is actually the most widely used "signal color" among animals. It was therefore concluded that the combined presentation of both effects, the threatening eye-effect and the alarming signal-effect, by the addition of two impulses should cause game to shrink back from any approach immediately, thus stopping it on the roadside and preventing it from crossing the highway in front of traveling cars.

An optical concern made practical use of these findings and constructed red reflectors which, installed on

wooden poles on both sides of highways, divert incident headlamp light into the adjoining countryside and thus cause the impression of flashing-up red eyes. As always several reflectors are exposed to headlamp light-beams at the same time, a traveling car at night will make a series of such "eyes" flash up simultaneously, so that the series of warning eyes will have practically the effect of a "barrage" fence. Even the first experimental installation of red-eye reflectors confirmed the usefulness of the device and proved the correctness of the Institute's conclusions. On the test-road sections surveyed it was possible immediately to attain an average reduction of nightly wildlife accidents by about 80 per cent. Similar successes were meanwhile registered on all Austrian highways equipped with game-warning reflector systems. In view of the low cost of the device and its installation it is expected that more and more roads in Austria will be made "safe" in future, and the model of the Austrian roads may in due course also influence practice elsewhere.

BOOK REVIEW

AMONG THE ELEPHANTS

by Iain and Oria Douglas-Hamilton
(Collins & Harvill Press, London, 1975)

For four and a half years, Iain Douglas-Hamilton lived close to the elephants of Lake Manyara in Tanzania. He was able to recognize large numbers of them personally and record their relationships to one another. Nobel laureate Niko Tinbergen was one of his academic supervisors, and in a foreword to the book wrote: "He rightly draws the inference, even though he cannot prove it, that the long years of dependence of the calves and their association with their experienced elders must teach them a great deal. One of his remarkable discoveries is that adults and sub-adults give the youngsters so much help and guidance. The elephants emerge, even more clearly than in the famous book *Elephant Bill*, as highly intelligent and highly co-operative animals, on a par with, for instance, whales and dolphins. How vital the association with the family unit is to the young becomes clear when one reads for example the story of the orphaned calf that was killed by a lion. The work described in this book and documented in detail in his thesis will take its rightful place among the growing number of large-mammal studies that have been published in the last ten years, and it provides a firm basis for further work. The authors also show us how important it is to combine the purely intellectual curiosity of the scientific observer with an emotional, personal involvement. 'I profoundly disagreed with Parker's view that sentiment can have no place in the policy of the National Parks,' Iain writes; and further on when he describes the behavior of one cow (whom he aptly named Boadicea and who consistently met him with a mixture of hostility and fear) he muses: 'I often wondered what terrible experience Boadicea must have suffered at the hands of man for her to hate and fear us so much.' It is worth emphasizing that without the emotional involvement revealed by such remarks no man could have had the perseverance to carry out this type of study."

Dr. Tinbergen concludes with these words: "Finally this foreword would not be complete without a serious word of warning. There is real danger in making public the evidence of the authors' astonishing friendly relations with some of the wild elephants. The touching pictures showing how trustingly they introduced their own child to Virgo should on no account give the impression that anyone can approach wild elephants anywhere without serious risk of life and limb. The warning in South Africa's Kruger Park 'Pas op! - olifante is gevaarlik' (caution! - elephants are dangerous) remains as necessary as ever. The very fact that this warning is required drives home the extraordinary achievement of the Douglas-Hamiltons: to have patiently won the confidence of the world's largest land animal, and through this to have discovered so many details of the way they really live - a way so much more dignified than the rather pathetic, almost humiliating way in which we see them, or at any rate their Asian relatives, perform in circuses, and even on occasion in zoos. May this book succeed in alerting

readers all over the world to the need to give active support to the attempts at carrying out the intentions laid down in President Nyerere's Arusha Manifesto, which has so clearly inspired the Douglas-Hamiltons in their work and in writing this evocative account."

In the chapter entitled, "The Indestructible Family," Dr. Douglas-Hamilton writes: "The largest kinship group was Boadicea's, which I observed on 314 separate days in the years 1966 to 1970 - and which numbered nearly fifty before I left. For the group to reach this size the kinship ties had probably lasted over a hundred years and possibly for much longer."

In one of the last chapters, "Keys to Survival" this passage appears: "We had become absorbed in the problems and delights of living and moving amongst the wild animals without disturbing them; of becoming harmless spectators of everything they did and, in Virgo's case, of eventually being accepted by her.

"I had changed a lot in that time. I had arrived alone and as a scientist, but after Oria joined me, I saw things increasingly through eyes opened to the importance of individual and family relationships. Perhaps I was made most aware of these changes by a vivid experience I had during these last weeks.

"One day, short of equipment, with only one dart left in my gun,* I tried to retrieve a defunct collar from a young bull in Sarah's family unit. I anticipated no difficulty, but an effective defensive circle soon shielded him away from any approach, his mother tried to lift him, and the cross-tusked Sarah kept us at bay. Before long I realized I must inject the antidote by hand if he were to survive.

"I drove in closer towards the elephants and all dispersed but for Sarah, who was probably the young bull's grandmother and who stood over him with one of her forefeet resting on his body. Nevertheless I took a risk, drove up and leant over to give the injection. The needle went home, but at the same instant so did Sarah's crossed tusks, into the radiator. First she gave a little exploratory shove at the metal, and then with greater confidence dug her tusks well in and pushed. I let the brake out and we rolled backwards, like a pram being wheeled by a nurse. Mhoja fired a shot in the air, then we hit a tree and Sarah's tusks slid across the top of the bonnet straight at the cameraman on my left who was filming the operation. She swung across at me and I edged out of the door to keep beyond her range. Her tusks crashed against the steering wheel and then she swivelled round and went off.

"It was the third time that my car had been struck by an elephant and I hated the whole business. It was not that I felt alarmed by Sarah, who was normally gentle and inoffensive, but I was loathe to cause her distress. At first I had found immobilizations enthralling, because they were exciting and showed me a touching side of an elephant's character, but I later became disenchanted with the undeniable anguish of the elephants struggling to save their loved ones. I did not like to think that they might visualize me as an attempted murderer, yet surprisingly they proved very forgiving. None of the elephants we drugged tried to charge us once they had recovered.

"This co-ordinated group defence has been one of the elephants' keys to survival, effective for hundreds of thousands of years against a multitude of predators, but it is now obsolete. Conditions have changed. Man with a gun is a predator that can easily wipe them out, and the keys to the elephant's survival are now in the hands of man."

The book concludes with a "Postscript" which provides a far happier ending than could have been hoped for. The Douglas-Hamiltons returned in 1972. "I was especially curious to see whether Virgo would remember us. When I found her I got out and called to her. She stopped and turned toward me then slowly she came forward, extending her trunk to touch my hand and letting out her breath in a long whoosh. It was impossible not to be moved by her trust after our two years' absence. Our children who had been conditioned from the earliest age to think of elephants as kind and gentle beasts, were longing to meet Virgo, so both were brought up to her to be introduced and sniffed at.

*[Editor's note: a device designed to immobilize the elephant temporarily for the attachment of radio equipment]

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"Losing their fear of man had, however, almost certainly brought disaster to some of the other elephants. When we came to check the family unit of the great matriarch, Boadicea, I was dismayed to find that four of the leading cows were missing. Boadicea herself was there, still standing suspicious and watchful, head and shoulders above the rest, but Giselle, who had been her closest associate, was gone, leaving her two young calves to Boadicea's uncertain care. Isabelle also was missing but I found her daughter Laila. She was now looking after not only her own calf, Bottlebrush, but Isabelle's calf as well. She allowed them to suck in turns; both had been born in 1969.

"Leonora's family was in an even sadder state; both she and her daughter, Slender Tusks, had disappeared. The survivors were leaderless and the young teenager, Two Holes, was trying to take on the roles of both mother and aunt. I watched her mill around in hopeless confusion at some minor alarm that she was unable to assess, trumpeting loudly to her little adopted siblings and cousins. The orphaned N'Dume stuck to her like a leech.

"The only solution for Two Holes was to attach herself to Boadicea's family and this is what she did, but, although she followed the older cows closely, she did not seem able to establish any close rapport with them. Still, she was able to shelter behind the threat charges which Boadicea made for the benefit of the whole kinship group.

"The great matriarch's large, amalgamated group was something I had never seen before: an elephant social unit formed by a process of integration. This example completed the cycle. Now I realized that families, when enlarged by many births, would split up into independent family units, but when such family units were reduced by death, they would integrate once more into a co-ordinated group."

Piles of ivory and rhino horn were found stacked in secret hiding places by the Manyara Rangers and the army. Dr. Douglas-Hamilton writes, "Unofficial slaughter of elephants is probably now worse in East Africa than it has been since the turn of the century." However a new road has opened the hitherto inaccessible southern boundary to Ranger patrols and with the help of Professor Bernhard Grzimek and the Frankfurt Zoological Society, together with Anglia Television, the farms belonging to Europeans can be bought providing a corridor to the Marang Forest which has already been promised to the Park. If all goes well, Dr. Douglas-Hamilton concludes, "the elephants will be able to return to much of the ranges that they enjoyed a hundred years ago."

"SAVING" THE TIGER

Following is an example of the extreme abuse endangered species are subjected to by commercial interests who claim to be preventing their extinction. The article is reprinted in full from *The Hackensack Record*, March 2, 1975.

Zoo deaths may spur U.S. suit

By Donald E. Veraska
The Washington Bureau

WASHINGTON — The Interior Department's Office of Endangered Species is considering criminal or civil action against Great Adventure Inc., the \$35-million New Jersey safari park, in connection with the death of six Bengal tigers.

Four tigers—a male and three females—died in a fight last June 26, shortly after they were shipped into the 1,500-acre facility. Two others, a male and a female, died in separate fights July 9 and Aug. 30. The park opened in July.

"The tigers are a compatible group, and so there should be no difficulty in (their) establishment," Great

Adventure officials told the Office of Endangered Species in applications last spring for importation permits for 13 Bengal tigers and 11 Siberian tigers.

Inquiry on leopards

Great Adventure already is under investigation by the U.S. Attorney's office in Newark for failure to obtain permits for 11 leopards it shipped into the park last spring.

The Office of Endangered Species issued permits last June for the importation of 24 tigers—the world's most endangered large cat—into the park in Ocean County's Jackson Township, despite a new federal law designed to stop exploitation of threatened or endangered animals.

The permit was approved largely on the basis of Great Adventure's claim that the move would enhance the propagation of the species of which only about 5,000 survive.

The only stipulations in the two-page permit, approved last June 19, were that Great Adventure submit a written report within 48 hours of the death of any tiger and an autopsy report on any such death within 30 days.

Autopsies neglected

Autopsy reports have not been submitted by Great Adventure on any of the six animals.

Rodney M. Dring, the park's animal director, wrote to the office last November that Dr. Martin Dinnes, a veterinarian, had examined the six dead tigers.

"He advised us that individual identification of the animals (except as to sex) and the performance of a post mortem examination was impossible due to the condition of the remains of each animal," Dring wrote.

The bodies of the six tigers are being held, under refrigeration, at Great Adventure. Under the Endangered Species Act of 1973, the remains must be donated to a scientific institution, but the Office of Endangered Species is awaiting autopsy reports before authorizing the animals' shipment to the Smithsonian Institution of Washington.

Fines of up to \$1,000 for each violation of the Endangered Species Act could be levied under civil provisions of the Act, while possible criminal penalties for each violation could mean fines of up to \$20,000, a year in prison, or both.

If found guilty of failure to obtain permits for the leopards, Great Adventure officials could be fined \$20,000, receive a year in prison, or both, for each violation.

An agent at the Office of Endangered Species regional office in New York says his office will file a civil suit against Great Adventure in connection with the leopards if the Justice Department does not bring criminal charges.

The maximum civil penalty for each violation is a fine of \$5,000.

Following the death of the first five tigers last summer, but before filing its written reports, Great Adventure applied to the Office of Endangered Species for permits for four more Bengal tigers.

"Great Adventure wishes to purchase this group of tigers to add to our existing group of Bengal tigers in order to increase the potential for reproduction," said the park's application, dated last Aug. 21. It made no mention of any tiger deaths.

Ronald O. Skoog, chief of the Office of Endangered Species, gave initial approval to the application Oct. 4, saying that the office had no scientific objection, since all four animals involved were born in captivity and thus the wild tiger population would not be affected.

At the time of this initial approval, the Office of Endangered Species had been informed by telephone of the death of the six tigers.

Great Adventure officials have since told the Office of Endangered Species that they plan to withdraw the application for the additional Bengal tigers.

ANIMAL WELFARE INSTITUTE

Scientific Committee

Marjorie Anchel, Ph.D.
Bennett Derby, M.D.
Lee R. Dice, Ph.D.

Paul Kiernan, M.D.
F. Barbara Orlans, Ph.D.

Samuel Peacock, M.D.
John Walsh, M.D.

International Committee

T.G. Antikatzides, D.V.M.—Greece

David Ricardo—Canada

N. E. Wernberg—Denmark

Major C. W. Hume, O.B.E., M.C., B.Sc., M.I. Biol.—United Kingdom

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Kristina Harper, Administrative Assistant
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EXECUTIVE ORDER ON PREDATOR POISONING MODIFIED BY FORD

Can Sheep Be Protected By Cyanide Collars and Shepherds?

On July 18, 1975, President Ford issued amendments to Executive Order 11643 of February 8, 1972, strengthening the policy statements against the poisoning of any individual animals not responsible for damage, but creating a one-year period for increased experimental testing of sodium cyanide with particular emphasis on specially designed collars to protect sheep.

Russell Peterson, Chairman of the Council on Environmental Quality, stated, "The amendment will permit the immediate field testing of a toxic collar, the device for selective control of coyotes which I believe offers the best opportunity for truly effective, yet environmentally sound predator control. This device is a collar around the neck of a sheep, consisting of plastic pouches which are filled with sodium cyanide. When a coyote tries to bite the sheep by the throat, its teeth puncture the pouches and the coyote receives a squirt of the poison." Sodium cyanide is a fast-acting drug which kills by preventing oxygen from reaching the brain.

Before the 1972 Executive Order was promulgated, millions of dollars were spent annually by the Federal Government spreading poisons over the public lands in a so-called "prophylactic" attempt to kill all carnivorous animals who might attack a sheep. Thallium, 1080 and strychnine were widely used "secondary" poisons. They are so persistent that when a scavenger animal eats an animal poisoned by one of these drugs, he, too, is likely to succumb. Great numbers of wild creatures that had never even seen a sheep, much less thought of attacking one, were dying long-drawn-out painful deaths as a result of this wholly unjustifiable federal policy. President Nixon's action, which brought an end to the federal poison program against predators on the public lands, was widely acclaimed by conservation and humane groups. The woolgrowers strongly opposed it and have campaigned for three years to have it rescinded.

Chairman Peterson in his statement to the press on July 18th said, "The sheep industry has been in a virtually steady decline since the 1940's, both in the western 17 states where coyotes are a significant problem, and in the eastern 31 states where they are not. In such a situation, losses from any source assume great importance, and accordingly, the western sheep raisers have appealed for greater protection from predation. Efforts at predator control have never been successful in eliminating predator losses to sheep. Even during the periods of greatest availability and use of poisons for predator control, predation losses continued. One of the factors contributing to this situation has been the relatively unselective nature of most predator control efforts. Only a relatively small percentage of coyotes are sheep killers. While widespread poisoning, trapping and shooting kills ten to hundreds of thousands of coyotes annually, it does not necessarily get the ones which are causing the damage." Speaking of the collar, he said, "The advantage to this method is that it only affects those coyotes which actually attack sheep. It does not involve spreading dangerous devices or baits around which may represent a threat to children, pets, non-target wildlife and coyotes which are not causing damage."

There has never been a serious effort before to conduct careful trials or even to develop the collar fully. Meantime, the massive killing campaigns have continued, and even the cruel secondary poisons have been set out by individuals, as recently brought to light through the finding of poisoned eagles.

(continued on page 3)

HUMANE TREATMENT, REDUCTION IN NUMBERS OF TEST ANIMALS REPEATEDLY RAISED AT I.C.L.A. SYMPOSIUM

At the triennial symposium of the International Committee on Laboratory Animals held July 7-12, 1975, in Thessaloniki, Greece, a series of speakers raised issues relating to humane treatment of the animals, the use of alternatives, reduction of numbers of animals used and refinement of techniques to spare suffering.

Dr. T.G. Antikatzides of Athens University, representative for Greece on the AWI's International Committee, emphasized the need for careful planning. He said the design of experiments has a humanitarian aspect. "Empirical methods are wasteful. Ethics demand that the experimenter not be content with empiricism." Dr. Antikatzides pointed out that a well-planned experiment uses a minimum number of animals. He cited the work of Piaget in the '50's which showed that the empirical approach is characteristic of age 8-12 while those 13-15 use insightful approach. "Greece is a child not more than eight years old in laboratory animal medicine," he said, "but it should not be empirical, nor should other developing countries."

(continued on page 2)

MIKI DODGES PRESS CLUB QUESTION ON WHALES

Japanese Whaling Fleets will Not Be Scaled Down

Twenty-seven conservation, environmental and humane groups presented a petition to Prime Minister Takeo Miki of Japan August fourth, calling for an end to whaling by Japan and requesting assurance that excess whaling ships not be sold or transferred for further whaling. The tragic history of whales has seen transfer of whaling vessels and equipment from country to country. In the past the Japanese whaling industry has entered into joint ventures with other countries and currently operates such subsidiaries in Peru, Chile and Brazil and supports whaling operations in Iceland and Korea through technical assistance and purchase of whale products.

At the National Press Club Luncheon in Washington where Miki spoke August sixth, Club President William Broom noted that the largest numbers of questions received were on the subject of whales. Stating that he would condense the questions, he noted that the world catch of whales was declining, inquired about a possible end to whaling and asked specifically about the fleet which *The Japan Times* had reported would be dropped from this year's antarctic voyage: "What are the plans for disposition of the fleet? Will it be converted or sold to other countries for continued whaling?"

The Prime Minister did not address these questions at all. Instead he said the Japanese government would abide by, without any reservations, the conclusions reached by the International Whaling Commission in June in London (a fact already disseminated to the press a week before by the Japan Whaling Information Center). The Prime Minister added that "we are going to abide by any responsible scientific research findings." He did not mention, of course, that the recommendations of the Scientific Committee of the International Whaling Commission (IWC) were repeatedly, strongly, and sometimes successfully opposed by the Japanese Commissioner at the IWC meeting.

A particularly outrageous example occurred with regard to sei whales in one of the antarctic areas when

(continued on page 2)

Question on Whales

[continued]

the commissioners acceded to the quota demanded by Japan rather than following the recommendation of the Scientific Committee for a quota of zero. In this area, 540 sei whales are now scheduled for slaughter. In another area 110 additional seis will be available for harpooning. At an estimated \$7,000 per sei whale, that amounts to \$4,550,000. The head of one of the "big three" Japanese whaling companies, who regularly attends the IWC meetings, confirmed the estimate of value per sei whale.

Conservationists are asking whether it is these additional millions going into Japanese whaling industry pockets that make it possible to send all four whaling fleets to the antarctic again this year, contrary to the previous reports. Before the IWC meeting *The Japan Times*, June 17, 1975, stated that either one or two of the fleets would be dropped from the coming season's voyage "depending on catch quotas to be decided by the IWC, based on the new whaling control method." Now, however, *The Japan Economic Journal*, August 5, 1975, reports: "Three Japanese whaling companies have decided to maintain the past scale of operations in the forthcoming Antarctic whaling season, starting next October, despite the International Whaling Commission's vote to cut sharply Japan's catch quota.* They are Taiyo Fishery Co, Nippon Suisan Kaisha, Ltd. and Kyokuyo Co.

"The companies will send four whaling fleets, of which one is specialized in catching minke whales."

Meanwhile a significant footnote has been added to the April 19th *San Diego Tribune* report "Japan Firm Seeks Baja Whaling Rights" which stated in part: "Japanese whaling interests are checking into the possibility of commercially harvesting gray whale off the Baja California coast...The proposal to harvest gray whales off the Mexican coast was made by the Los Angeles office of Y.M. Pacific company, a Japanese firm representing the Taiyo Company of Japan, that country's leading whaling firm. Under the proposal, Japanese whaling ships and processing vessels would establish offshore stations to harvest whales on a regular basis.

"Motosuki Yuri, of the Y.M. Pacific Co., said he is aware that whaling is a very sensitive issue, and that it will not be easy to get permission from the Mexican government."

The new report indicates that the proposal was accompanied by an offer to "invest millions" if the necessary permits could be obtained. Taiyo has denied that they were trying to get permission to kill gray whales in the Mexican whale sanctuary, but the memory lingers on since Mitsubishi, a giant Japanese conglomerate, has a salt producing operation at Guerrero Negro in Scammon's Lagoon, where the whales congregate each year.

Mitsubishi also owns a substantial part of Ballenera del Kinkai in Peru, a whaling operation noteworthy for its total disregard for conservation principles. After Peru's leading wildlife protector, Felipe Benavides, finally succeeded in having this whaling station inspected, it was found that half the whales the inspector saw were undersized. The inspector wrote that everyone "Seemed to have his lips hermetically sealed." Peru refuses to join or adhere to quotas set by the IWC, thus Japanese whaling in Peru "doesn't count" in IWC catch limits. Approximately 2,000 whales are killed off Peruvian shores each year.

Will excess catcher boats from Japan's antarctic fleets be transferred to Peru or other coastal nations to increase the total whale catch even further? *The Japan Economic Journal* report referred to earlier states that "the three fishing companies are expected to decrease the number of catcher boats and crew members" going to the antarctic even though all four fleets will sail as usual.

George Small's *The Blue Whale*, winner of the 1972 National Book Award for Science, describes earlier Japanese government policy on whaling outside the IWC as follows:

"In October, 1967, Japan granted licenses to 2 companies to engage in whaling off the coast of Chile in 1968. It made no stipulation against the killing of blue whales although it had the power to do so as a member of the International Whaling Commission. Under the Chilean flag they could kill blue whales, ship the whale products to Japan, and remain exempt from any of the regulations of the Whaling Commission."

*Note: This year's IWC quotas total 32,578 whales, a reduction of approximately 8,500 from last year.

Humane Treatment

[continued]

Speaking of the ratio between time spent thinking and experimenting he reminded his listeners of the famous story about Archimedes meditating in his bath when the hydrostatic principle came to him, and he ran home naked shouting, "Eureka!"

Addressing himself to the problems of developing countries, Dr. Antikatzides discouraged the idea of beginning with large numbers of experimental animals. "There are computers in Greece and in all developing countries," he said. "Since we are starting now, why not catch up with a problem which I see coming in the near future...a laboratory animal population explosion."

Dr. Cluff E. Hopla, University of Oklahoma, began by suggesting that his listeners "think just briefly about invertebrates, for example, the sea hare, a most interesting model for neurobiology." He spoke of a barnacle in the Pacific northwest which has the largest striated nerve fibres of any animal known. "There is still a place for the systematist in nuclear biology," he said. Citing the Nobel Prize won for the work on the Giant Squid, he mentioned that the National Institutes of Health has awarded two contracts on aplegia and that one is about to be awarded using squid. There are bigger axons, he said, in the Giant Squid than in a non-human primate.

Two speakers from developing countries stressed humane treatment of test animals. Dr. Ayodele Tella, University of Lagos, Nigeria, discussing the training of animal technicians, said, "They must be warmhearted toward these animals."

Dr. Muangtong Khemanni, Chulalongkorn University, Thailand, said they should "practice with sincere humane feelings." Dr. Khemanni presented an analysis which he called "The Seven P's: Problem, Purpose, Personnel, Program, Procedure, Planning and Place. He emphasized that the lives of laboratory animals are very valuable, and referred to the well-known "Three R's:" Replacement, Reduction and Refinement in the use of animals in laboratories.

Dr. B.J. Cohen, University of Michigan, in the lead paper, preparation of which was aided by grants from Animal Resources Branch Division of Research Resources, National Institutes of Health, said, "There is, I believe, international acceptance of the concept that humane standards must govern the care, treatment and use of animals."

Dr. M.J. Dobbelaar, Bilthoven, the Netherlands, will be in charge of implementing the new Dutch law on experimental animals. Training will be given by the Institute of Veterinary Science at the University of Utrecht. Ethics will be treated on. Veterinarians will play an important role. Training courses will be provided not only for animal technicians at different levels, and for inspectors under the law, but also for research scientists. In response to a question, Dr. Dobbelaar replied that the course for scientists would be obligatory and would probably be fourteen days long.

Mrs. Phyllis M. Ray, Assistant Director of the Universities Federation For Animal Welfare, emphasized that all personnel involved with laboratory animals should be adequately trained. Citing the views expressed by the Research Defence Society and the British Council of Churches in the government's "Littlewood Report," (1965), Mrs. Ray said, "No one should be allowed to carry out experiments on animals unless they are licensed by their government, and the place should be licensed."

Dr. K. Gärtner, Hannover, Federal Republic of Germany, spoke of problems of applied biology which impair results of experiments. He discussed the way in which experiments may be adversely affected when animals under stress from other causes are used. For example, blood sampling alters the circulation, endocrine function, microcirculation, acid base balance and muscle metabolism. Dr. Gärtner supplied well-documented evidence to show that heart puncture under anesthesia is the most successful method.

Dr. W.M. Newton, University of Illinois at Urbana, speaking of animal technical training, said that England recognized the problem much earlier and had a great influence on the United States in the 1950's. He cited the need now, for training of investigators.

Dr. O. Hänninen, speaking for Dr. W.J.I. van der Gulden, University of Nijmegen, Holland, outlined training for both junior and senior animal technicians and for laboratory animal technologists. His analysis

concluded with the heading "Recognizing Dead Animals." The technician should be able to report the following criteria: immobility, flaccidity, lack of respiration, lack of pulse waves, coldness, rigor mortis, signs of decomposition, to decide whether the animal is dead. He pointed out that this is important from the point of view of ethics.

Christine Stevens, President of the Animal Welfare Institute, spoke on "Benefits and Shortcomings of the U.S. Animal Welfare Act" pointing to improvements in the welfare of laboratory animals resulting from the Act but indicating that enforcement is severely hindered by inadequate funding. The need for developing and using substitutes for test animals in routine procedures that cause suffering was stressed.

HUMANE SUBSTITUTE FOR BRANDING

For many years Dr. R. Keith Farrell of U.S.D.A.'s Agricultural Research Service in Pullman, Washington has worked to develop a universal marking system which can be painlessly applied to many different species of animals.

Agricultural Research, February, 1975, carried an article which states in part: "A struggling animal's pain-filled shrieks, burnt flesh's acrid smell, and the terrible sight of an iron branding rod, glowing red from the heat, should hopefully soon be shunted into history, thanks to the technique called 'freeze-marking.'

"Branding as a means of identification dates back to early civilization when people were branded as slaves or thieves. Despite popular notions of branding and the 'Old West,' people have been reluctant to brand animals. Besides inflicting extreme pain, hot branding damages the animal's hide, and leaves open wounds that are susceptible to insect infestation and infection.

"Noting that these drawbacks - coupled with fire branding's blurred, runny, and general poor quality - make for a sorry identification technique, Dr. Farrell proposed freeze-marking as a desirable alternative.

"Called freeze-marking to escape painful associations with the term 'branding,' the technique utilizes heavy copper stamps, or marking rods, chilled in either liquid nitrogen or dry ice, and 95% alcohol wetting solution to aid in conducting the intense cold and to withdraw body heat.

"Placing the copper stamp against the animal's body for 10 to 20 seconds destroys pigment producing cells (melanocytes) to produce a pigment-free skin area. Hairs growing back in this area will be white. Longer application times result in more balding, a condition necessary for producing legible marks on white or light-colored animals.

"A freeze-mark that produces white hair, causes only minimal changes in the hide and does not seriously impair leather properties. Freeze-marks that produce baldness cause some permanent scarring and hide damage. Severe freeze-mark damage, however, is minimal compared to fire brand damage.

"Freeze-marking is more legible than fire branding. Marks are much more distinct, and last just as long. No open wound is produced, which cuts out disease and insect infestations, and freeze-marking is relatively painless. Once, to demonstrate the painlessness of the operation, Dr. Farrell freeze-marked himself!"

The article further describes laser-beam marking of fish. It gives an account of the Angle System on which the universal markings are based and concludes: "The Angle System, along with fast and efficient marking techniques such as freeze-marking and lasers, will vastly improve recordkeeping and registration of animals and fish. This in turn will improve disease prevention by enabling veterinarians to trace disease origins. Eliminating variations in state and national identification procedures will cut out costly and time-consuming efforts to coordinate such different registrations. Animal theft will become less profitable, for the chances of a stolen animal being identified and returned to its owner will be far greater if a universal identification system is adopted."

LAW ENFORCEMENT BY USDA'S ANIMAL CARE STAFF

A July release by the Animal and Plant Health Inspection Service includes reports on the Service's enforcement of the Animal Welfare Act as follows:

"The Animal Welfare Act Has Made a Difference for Exhibit Animals

"A recent APHIS review of enforcement by field offices showed that about 160 roadside zoos made improvements in the care and comfort of exhibit animals to attain compliance for licensing or registration since the start of the program in December 1971. Another estimated 100 roadside exhibits ceased operation because they couldn't, or wouldn't, meet APHIS standards, and about 650 pet stores stopped handling wild animals.

To meet licensing or registration requirements, about 120 larger zoos made improvements, about 10 percent of them major improvements or a complete rebuilding program. Extensive improvements covered new buildings, additional fencing, more and better trained animal handlers, improved veterinary care, better sanitation, and new equipment for food storage, preparation and handling."

Executive Order
[continued]

Sheep Need Shepherds

Throughout the debate between the sheepmen and environmentalists, the need for shepherds has been a sore question, the woolgrowers arguing that shepherds are a dying breed, conservationists urging that more efforts to obtain them should be made. In the July 23 issue of *Newsweek* an article, "Back to the Fold," reports on the surge of popularity for shepherding in France: "In a scene that is being re-created in shepherding schools all over Western Europe this summer, young people are suddenly flocking to the flocks. The new rage for shepherding is somewhat puzzling, especially in France, where traditional loathing of sheep has made tending them the usual chore of the village dunce. Still, the popular rejection of the urban rat race and the romance of life in the meadows has turned shepherding into one of the most sought-after occupations in the country. At the shepherds' school in Montmorillon, founded in 1970, there were 250 applications this year for 50 places. The world-famous Bergerie Nationale in Rambouillet is booked solid through 1977.

"The fantasy of shepherding, however, vanishes rapidly in down-to-earth reality. During the lambing season, from February to May, a shepherd can put in a fourteen-hour day starting with the 5 a.m. milking of the ewes, followed by feeding them, hoisting hay and spreading grain, and ending with the 5 p.m. milking, a two-hour process. At night, he or she is often routed from bed to assist in lambing. A first-year shepherd receives only \$350 per month plus food and usually rude lodgings, and the salary rises to only \$650 at the end of three years. Starting one's own flock (a 350-ewe herd is considered the best size for one person) requires at least \$75,000 in stock, acreage and equipment, and even then sheep are a chancy lot - susceptible to parasites and diseases that can wipe out an entire herd in one season. 'The sheep herder in 1975 must be a technician and a manager,' says Francois de Fombelle, director of the Alliance Pastorale, which sponsors the school at Montmorillon, 'not just a sitter for his flock.'

"Not surprisingly, shepherding has caught the aimless fancy of many 'lost sheep' - hippies and dropouts who 'try' tending sheep for a while before drifting on. To slow the drift, the Montmorillon school insists that applicants apprentice for a year on a farm before applying for enrollment. The school offers a rigorous curriculum of accounting, pathology, artificial feeding methods and midwifery, but those who succeed, half of whom are from the city and half from the country, all seem to love it. 'I find now that when I go back to Paris more and more people tell me, 'You were right,' says 21-year-old Alain Zeigler. 'Life in the city just is no giggles these days.' Tending the flock is just as appealing to country-bred students. 'I didn't agree with my family that I should go to work in a factory or something,' said Jocelyene Baziere, a sun-burned farm girl from Normandy. 'I just love sheep.'"

Plans for the training of shepherds should be made in this country so that sheep can be given proper protection and care.

NEW HUMANE RULES FOR CANADIAN SCIENCE FAIRS

Regional Representatives of the Canada-Wide Science Fair approved new regulations May 23, 1975 which eliminate the use of vertebrate animals for science fair projects unless these projects are purely observations of normal living patterns of animals in the wild or in zoos or of normal activities of pets or other domestic animals.

The decision followed several years' attempts to control cruel experiments for science fairs by rules against those which caused harm to living vertebrates. Despite such rules, some students continued to conduct projects that caused animal suffering. The Regional Representatives, therefore, drew up the following regulations which are now in effect in Canada.

Regulation for Animal Experimentation in Science Fairs

1. Biological experimentation is essential for an understanding of living processes. Such studies should lead to a respect for all living things. Capable students, anxious to pursue a career in biological sciences must receive the necessary encouragement and direction. It is important that all aspects of the project be within the comprehension, and capabilities of the student undertaking the study.
2. If experiments are to be conducted on living subjects for Science Fair projects then only lower orders of life may be used. Lower orders such as bacteria, fungi, protozoa and insects can reveal much basic biological information.
3. Vertebrate animals are not to be used in experiments for projects for Science Fairs, with the following exceptions:
 - a) Observations of normal living patterns of wild animals, in the free living state, or in zoological parks, gardens or aquaria.
 - b) Observations of normal living patterns of pets, fish, or domestic animals.
4. No living vertebrate animal shall be displayed in exhibits in Science Fairs.
5. Cells such as red blood cells, other tissue cells, plasma or serum or anatomical specimens such as organs, tissues or skeletons purchased or acquired from biological supply houses or research facilities may be used in Science Fair projects.
6. Observational type studies, on only chicken egg embryos, may be used in Science Fair projects. If normal egg embryos are to be hatched, satisfactory humane considerations must be made for disposal of chicks. If such arrangements cannot be made then the chicken embryos must be destroyed on the 19th day of incubation. No eggs capable of hatching may be exhibited in Science Fairs.
7. Experiments involving the human animal shall conform with these regulations as they apply to other animals. Normal physiological and behavioural studies may be carried out. Projects must be carefully selected so that neither physiological nor psychological harm can result from the study.
8. All experiments shall be carried out under the supervision of a competent science teacher. It shall be the responsibility of the qualified science teacher to ensure the student has the necessary comprehension for the study to be undertaken. Whenever possible, specifically qualified experts in the field should be consulted.

National Whale Symposium, November 8-12, '75, University of Indiana at Bloomington.

Symposium on the Future of Animals, Cells, Models and Systems in Research, Development, Education and Testing, October 22, 23, '75. National Academy of Sciences, Washington, D.C.

For details, write Animal Welfare Institute.

POSITION OPEN FOR BIOLOGIST IN INTERNATIONAL WHALING COMMISSION

Before September 30, 1975, all applications for the new position of Secretary to the International Whaling Commission must have been received at its office in London. In a letter attached to the announcement, Dr. William Aron, Director, Office of Ecology and Environmental Conservation of the National Oceanic and Atmospheric Administration (NOAA) wrote, "The stress is on professional excellence. There are no restrictions regarding nationality or sex...It is a true challenge for a professional concerned with international conservation."

The announcement states: "A senior biological scientist with administrative ability is required to fill the post of full-time Secretary for the International Whaling Commission. The Commission's offices will be at Cambridge, England.

"The Secretary will be responsible for the administration of the Commission's work and for the promotion of scientific programmes relating to its responsibilities. He will encourage and help to co-ordinate scientific studies and investigation of cetaceans, particularly the large whales, by member nations and by other nations and agencies. In particular the Secretary will assemble and assist in the assessment of scientific and statistical data and will work closely with the Scientific Committee of the Commission. He will edit scientific reports for publication and will represent the Commission at international meetings.

"The administrative duties of the Secretary will include the preparation of the annual budget, the drafting of the annual report and of the regulations made by the Commission under the International Whaling Convention, and arranging all meetings of the Commission and its Committees. He will be assisted by a small staff including an executive officer. Candidates must hold a degree in a biological science and have experience and proven ability in administration. Knowledge and preferably practice in the acquisition, storage and retrieval of biological data would be an advantage, as would experience in other fisheries, ecological and wildlife research. A good knowledge of English is essential. Salary will be within the range £10,000 to £12,000 about (\$25,000) per annum after taxes.

Further information may be obtained from:

Dr. William Aron
Director, Office of Environment and Ecology, NOAA
Department of Commerce
Washington, D.C. 20230
Telephone: 202-967-5181

Applications containing full details of qualifications and experience and the names and addresses of two references should be sent to:

Mr. R. Stacey
International Whaling Commission
Great Westminster House, Room 276
Horseferry Road
London SW1P 2AE, England

ENDANGERED SPECIES SALESMAN SENTENCED TO THREE YEARS IN JAIL

U.S. District court Judge Bernard Moynahan, Jr. of Lexington, Kentucky sentenced Harry Raymond Kepler III, 26, of Richmond, Indiana to three years in prison for selling a leopard and a cougar to undercover agents of the U.S. Fish and Wildlife Service. In handing down the sentence, July 31, 1975, Judge Moynahan cited the need to preserve endangered species. This is the first time a jail term has been imposed under the 1973 Endangered Species Act.

ANIMAL WELFARE INSTITUTE

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Persecution of Dolphins
[continued]

Protection Act provides for penalties up to \$20,000 fine and a year in prison for wilful violations.

The regulations require tunaboat captains to "take every possible step to minimize the incidental mortality and serious injury of marine mammals." Conditions of wind, sea and visibility are specifically mentioned. Yet observer reports include:

- "The captain backed down in complete darkness." (60 killed)

- "The usual panicking after dark coupled with poor visibility and sharks contributed to large mortality." (123 killed)

- "Sun was almost down when set began. Lots of spinners. I was surprised the set was even made." (16 killed)

- "The primary cause of mortality was definitely the extremely strong current. The net collapsed and many porpoise were trapped in canopies." (64 killed)

The regulations also specify that the purse seine should not be set when the number of dolphins or tuna are likely to cause mortality. Yet observers noted:

- "Most of the porpoise not caught in the net are packed tightly together." (120 killed)

- "Backdown after disaster. Too many porpoise - several deaths before backdown, entanglement in 2" and 4" webbing - mass entrapment - just too many porpoise. They were packed like sardines." (133 killed)

- "Porpoise set more than I ever thought possible. About one mile long by 1/2 mile - solid...Now that they are caught it looks unreal. Where do they come from? They almost fill up the net completely. Skipper says at least 150 tons of tuna...Wind is gusty at 20 knots. It's getting rough and a frightening rip current. The rip current is making this set a disaster." (738 killed)

The regulations require that "backdown and other release procedures be continued until all live animals have been released from the net." But observers report:

- "Skipper reluctant to prolong backdown to extradite those unfortunate remaining spotted porpoise." (12 killed)

- "There was no backdown; contents of net (9 porpoise) was sacked and dumped out."

- "When backdown was terminated I counted at least 50 porpoise alive in the net." (66 killed)

- "Skipper ended backdown when there was still a good number in net and cork tenders didn't reach them in time." (5 killed)

- "During backdown 30 left in net. Captain said ——— and ended backdown. All died being sacked up except one went through powerblock alive."

The regulations specify: "During and after backing down operation at least two men shall remain at the corkline in a boat suitable to extricate live entangled porpoises, where possible, and release them over the corkline." Yet observers report:

- "I went out there believing that the fishermen would do anything, even risk their life, to save porpoise. This was a complete fallacy on my boat. First of all, there was only one rescuer at corks (I assumed that there would be 2 or more). Secondly, he not only did not risk his life for porpoise, he did very little to help them at all, and thirdly, I was surprised when I saw him using a big gaff (which he used throughout the entire trip) to remove live porpoise from the backdown area. Also, the net tender in this boat stayed tied to the side of the backdown area during backdowns, not going to help porpoise until backdown was almost completed."

- "No fish in net, just porpoise. Tender watched porpoise die - no effort was made to reach them until too late. If you are not going to try to release porpoise, why have a man in the backdown area?"

- "One of the tagged ones was injured seriously; he thrashed around on deck like he had internal injuries, bleeding out of the mouth. Once released, he found it difficult to swim and disappeared. I think he probably died." (15 killed)

- "About 30% of these porpoise were babies, some of them aborted." (40 killed)

- "One newborn went through the powerblock and was dumped dead."

- "Because net collapsed and malfunctions occurred, mass mortality occurred. Large number of porpoise caught in folds of net suffocated." (183 killed)

- "One problem occurred when the skipper had me removed from deck during a set because I would not say that I would falsify my tally sheets (number porpoise killed)."

Reports like these stand in stark contrast to the promises made by the tuna industry during hearings held prior to the enactment of the Marine Mammal Protection Act. Back in 1971 the Congress and the public were assured that the industry had the problem "licked." Captain Joe Medina stated, "One point I am trying to make, the fishermen will do anything to save the porpoise. We always have and always will, but I think this new net has been the salvation for us and I think we have the problem licked...in a year the whole fleet will convert over and everybody will have the new net...we have the problem licked. I say this is one thing fishermen always try to do is save the porpoise caught because without them we would not be in business."

So much for the gratitude of the tuna industry. Hundreds of thousands of dolphins have died in the purse seines or been mangled in the powerblocks since the 1971 hearings, but the Tuna Research Foundation has just created a new film intended to convince viewers that crewmen constantly risk their lives jumping into shark-infested waters to help the dolphins out of the net! The film was shown to key members of Congress to gain their support in the industry's successful campaign to weaken proposed regulations.

Public protest against the cruelty and against the misrepresentation, which is designed to cover up the cruelty, may move a greedy industry, deaf to the pleas of conservation and humane groups. We suggest you express your views to the presidents of the following major tuna canners. Van Camp has just had three huge new purse seiners, costing approximately five million dollars each, built for it. The larger the vessel the more dolphins it kills.

Del Monte Corp.
215 Fremont St.
P.O. Box 3575
San Francisco, CA 94119

Van Camp Sea Food Co.
P.O. Box 82568
San Diego, CA 92138

Bumble Bee Seafoods
50 California Street
San Francisco, CA 94111

Star-Kist Foods, Inc.
582 Tuna Street
Terminal Island, CA 90731

Ralston-Purina
Checkerboard Square
St. Louis, MO 63188

H. J. Heinz Co.
P.O. Box 57
Pittsburgh, PA 15230

Painful Traps
[continued]

Under questioning, a spokesman for the Department of the Interior, Mr. Ross, admitted that they do not pad the leghold traps they use on the public lands "except when we're trying to take an animal to be given to a zoo." Interior does use offset traps made specially for the Fish and Wildlife Service by the Woodstream Corporation. Mr. Ross stated that offset traps are "more humane. Others tend to break the leg and allow them to twist off more easily. With offset jaws the chances of breaking the bone are less." The Department of the Interior has 20,000 such traps in use. It inspects them only every three days. Otherwise, Mr. Ross opined, "We'd have to pull all our traps on Friday." Thus do government hours translate into seventy-two hours of torture for the animal unlucky enough to step into one of those 20,000 traps soon after it is set. Asked about the catching of non-target species, Mr. Ross said that 25-30% of the badgers caught in leghold traps are in good enough condition to release. Those whose legs are twisted are killed. Chairman Leggett noted that "two-thirds of non-target animals are put away." Mr. Ross replied, "Some animals fight harder than others." When the Chairman asked how many of the more than 100,000 animals trapped by the Department of Interior personnel are found dead in their traps, he was informed that Interior had no records on this. He then asked, "Do you have a practice where you strangle them?" Mr. Ross replied in the negative. Interior personnel shoot or kill the animals with a sharp blow to the head. The question was not an idle one since Congressman Don Young (R., Alaska) had described for the record that he does not shoot animals on his trapline since that would puncture the fur. He said he uses "a snare on lynx and hang on to his neck long enough so he strangles." Congressman Young was testifying with a leghold trap on his fingers

CELL CULTURES AND COMPUTERS CAN REDUCE NUMBERS OF TEST ANIMALS

Animal experimenters and animal welfare workers rubbed shoulders October 22nd and 23rd at the National Academy of Sciences Symposium descriptively titled "Symposium on the Future of Animals, Cells, Models and Systems in Research, Development, Education and Testing."

Good news was brought by Dr. Carol Newton of the University of California School of Medicine, a physicist-biologist whose creative understanding of computers has enabled her to develop methods whereby reductions of up to 40% can be made in the use of test animals for some purposes. In addition she suggests the possibility of obtaining the information sought through the traditional LD50 test in a new manner which would not require painful killing of half the test animals.

Dr. Sergey Federoff, of the University of Saskatchewan, gave a comprehensive review of the possibilities of tissue culture and indicated that drastic reductions in the use of animals could be achieved in some areas. He emphasized the potential of plant tissue culture which has not been fully recognized and which he believes will affect human life in a great variety of ways in the future.

Addressing the ethics of animal experimentation, Dr. Harry Rowsell of the University of Guelph, spoke of human "responsibility for establishing the rights of animals, and the means to ensure that those rights are understood by all involved in animal use or care. If man does not accept this responsibility he must be regarded as a parasite with all the shame that state implies."

On the second day, Dr. Stanley Kurtz, Director of the Department of Toxicology of Parke-Davis in Ann Arbor, Michigan, presided over the morning session at which Congressman Thomas Foley, Chairman of the House Agriculture Committee and author of the Animal Welfare Act made the opening address. Mr. Foley observed that the appropriations for enforcement of the Act "and the animal welfare laws has been, in my judgement, pitifully small." Responding to a question about a pending Concurrent Resolution to encourage development of new research methods alternative to the use of experimental animals, he characterized this form of action as equivalent to "a Christmas card from the Congress...saying 'This is how we feel at this particular season of opinion.'" Dr. Kurtz made a practical suggestion that Congress adopt a Concurrent Resolution to encourage the use of in vitro models over live models by the Food and Drug Administration and Environmental Protection Agency where such models are useful or predictive or capable of substituting for live models. Chairman Foley indicated that such an approach was one that would find support in the Congress.

Dr. Tao-Chiuh Hsu of the University of Texas described the many uses of cell cultures as distinct from tissue cultures pointing out that human cytogenetics, for example, could not have been started without cell culture. He also discussed the use of two-day-old chick embryos for teratology, mutagenicity and other tests.

Dr. Mary Dawson of the University of Strathclyde in Glasgow listed seven applications of tissue culture to biomedical research, drawing attention both to advantages and disadvantages as compared with animals. For example, using human cells avoids errors due to species difference.

Dr. John C. Petricciani of the Food and Drug Administration pointed to the conversion from the use of primary cell cultures to the use of cell lines, wherever possible, as a means of conserving animals. He suggested that this well established method is not being taken full advantage of by suppliers.

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PAINFUL TRAPS ON TRIAL

On November 17th and 18th, the first hearings ever held by the U.S. Congress on bills to discourage the use of painful traps was presided over by Congressman Robert Leggett (D., Ca.) Chairman of the Subcommittee on Fisheries and Wildlife Conservation and the Environment. Congressman Glenn Anderson (D., Ca.) introduced H.R. 66 and has been joined by over one hundred co-sponsors.

The hearing room was packed with hostile trappers who clapped loudly for their spokesmen. Not a few had travelled from Pennsylvania, home of the world's biggest trap manufacturer - an outfit formerly known bluntly as the Animal Trap Company, but now romantically renamed The Woodstream Corporation, as part of an intensifying public relations effort mounted to defuse public outrage over extreme agonies inflicted on trapped animals by the corporation's products.

Mary Tyler Moore, an outspoken opponent of the leghold trap, drew a standing-room-only crowd on the first day of the hearings. Congressional co-sponsors strongly advocated enactment of H.R. 66. Administration witnesses were divided in their comments on the bill. Dr. Lee Talbot, Senior Scientist of the President's Council on Environmental Quality, said trapping is a major wildlife issue not yet addressed by federal regulation. He decried unnecessary suffering and pointed to legislation in other nations to prevent such suffering. He said the Chairman of CEQ would be pleased to act to appoint an advisory committee as proposed in H.R. 66.

Frank Taylor speaking for the Department of Justice analyzed the legislation and suggested that it "would be useful to provide specific enforcement powers" for the Department of the Interior "including authority to conduct investigations, power to arrest, and the like, similar to the enforcement provisions of the Endangered Species Act of 1973." He also suggested "consideration of the forfeiture procedures set out in the Bald and Golden Eagle Act." The Justice Department, however, deferred to the Department of the Interior on the merits of the bill. Both Interior and Agriculture opposed it.

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PERSECUTION OF DOLPHINS BY THE TUNA INDUSTRY TO CONTINUE

Final regulations promulgated December 2nd by the Secretary of Commerce reverse the strong proposed regulations published in the *Federal Register* in September to reduce the numbers of dolphins* killed by the tuna industry when it pursues the playful mammals and encircles them in its gigantic purse seines in order to capture the schools of tuna fish that swim beneath the dolphins.

The following excerpts from 1975 government observer reports, copied by representatives of the Environmental Defense Fund under the Freedom of Information Act, exemplify the flouting of the modest National Marine Fisheries Service regulations, in effect during the past fishing season, to protect dolphins. The regulations have yet to be enforced, although the Marine Mammal

*Editor's Note: For all practical purposes, the words "dolphin" and "porpoise" are interchangeable. "Dolphin" is derived from the Greek. The ancient Greeks admired and cooperated with the dolphins and never killed them, but rather rewarded them for their assistance in fishing. The word "porpoise" derives from the Latin "porcus" (pig) "piscis" (fish), a derogatory description by sailors who killed these beautiful intelligent creatures for their oil. The AWI prefers to use the word "dolphin," but in quotations the word "porpoise" will be found since it is the term adopted by the National Marine Fisheries Service and the tuna industry.

[continued on page 2]

but asked at this point whether the Chairman wanted him to keep it on. (He removed it). He commented that "Recreational trapping is good for the young people."

Some questions were raised as to the meaning of "recreational trapping." Beating and stamping on the victim may seem a strange form of recreation to the average reader (Webster's Dictionary defines recreation as "diversion for the sake of refreshment or relaxation,") but the phrase was reiterated throughout the hearings. For example, Ronald A. Howard, Jr. identified himself as a recreational trapper "because my trapping activities are not the major source of my income." He told the Subcommittee, "I am a member of the Natural Resources Youth Development program in New York State with primary responsibility for 4-H program development and implementation in the natural resources area." Mr. Howard, listed on the official witness list distributed by the Subcommittee as "Prof. Ronald Howard, Cornell Univ. Dept. of Natural Resources" was heard to say privately that he had sold 70 pelts on the Friday preceding the hearings, and was not a professor but was often listed as one. He did nothing, however, to disabuse Members of Congress concerning his status. According to Cornell's Personnel Office he is writing a dissertation and is not a Professor. He appended to his testimony galley proof for a brochure to be distributed to "young people" (he started trapping at the age of 12). This brochure informs the child who reads it: "The major emotional argument against trapping has been its reported cruelty. Much of that 'cruelty' has been the invention of anti-trapping groups. Most of the remainder is the result of irresponsibility on the part of a very small number of trappers."

Such a view, however, is not shared by Robert Lopez, D.V.M., who flew down to testify at the hearings at his own expense because of the sufferings of animals he has observed in his own private practice. On the day he testified no less than five dogs and cats injured in leghold traps were under treatment in his hospital. One of them had to undergo amputation to prevent death by gangrene. Dr. Lopez urged development of traps using such drugs as procaine and acepromazine to ease the pain. He spoke of the continued intensity of the pain, and said animals may die of shock owing to loss of blood and intense pain making them vulnerable to cold. He pointed out that the arteries and the veins are on the top of the animals' paws resulting in intense pain all the time.

A seeming paranoia was exemplified in statements characterizing support of H.R. 66 as "the soft underbelly" of an effort to stop hunting and fishing. Dr. Frank A. Hayes of the University of Georgia flatly asserted in his prepared statement: "In summary, the proposed legislation is ultimately aimed at abolishing all effective methods of wild animal control." In a highly emotional presentation he spoke of "famine, diseases, parasites" that would strike. "It is with deep sincerity that my statement was prepared," he told the Subcommittee. "I choose trapping in lieu of disease and pestilence."

A more reasoned analysis of this issue appears in the 27-page report of the Subcommittee on Rabies, Committee on Animal Health, Agricultural Board, National Research Council. The report published by the National Academy of Sciences under the title, "Control of Rabies," concludes with a series of sixteen recommendations. Recommendation Number 10 states: "Persistent trapping or poisoning campaigns as a means to rabies control should be abolished. There is no evidence that these costly and politically attractive programs reduce either wildlife reservoirs or rabies incidence. The money can be better spent on research, vaccination, compensation to stockmen for losses, education, or public warning systems."

Mr. C.J. Ireland, Chairman of the International Sportsmen's Committee spoke out strongly in favor of H.R. 66. Mr. Ireland, a long-time foe of painful trapping, was featured in the October, 1975 issue of *The Hunter's Horn* with a picture of him and his foxhound, Sam, on the cover, and a series of tributes to him and his service to his sport as the leading feature.

Tom Garrett, Director of Conservation for Friends of the Earth, emphasized the moderate nature of H.R. 66 and effectively rebuffed an attack by an opponent of the bill who had failed to grasp its provisions.

Strong feelings surfaced more than once during the hearings. For example, while being questioned by

Congressman Young of Alaska, Cleveland Amory accused the Congressman of having a vested interest in trapping at which Mr. Young abruptly left the hearing room, slamming the door.

Testimony submitted by Dr. Harry Lillie who photographed the classic documentary film, "Traplines," described his experiences in following Canadian trappers across the continent. Following are excerpts:

"A rare Great Gray Owl in a squirrel trap...This one had tried to fly up with the trap and chain, clawing the spruce foliage with his free foot and battering his wings until the trap and chain dragged him down to lie gathering strength for another attempt. How many dawns had he seen from that trap before hunger and exhaustion ended it? I found him wings still stretched across the snow, his eyes wide open but frozen white..."

"Another bush plane took me south to another trapline still in Saskatchewan at Meadowlake. With trapper John Evans, our first casualty was a skunk fallen foul of a mink trap. Day after day he had been dragging at the trap and chewing the smashed leg. He was shivering, with his head resting on the trap and his eyes closed when I lifted him up with the trap. He was quiet as I got the mangled leg free and layed him on the snow. He dragged himself down the bank of a stream of running cold water close by, through the water and disappeared under an overhang on the far side. Nature would take care of him. He would die in the den she had prepared for him. Or he would recover to be able to forage on three legs with a slow healing stump that might still be of use.

"Next morning we found a beaver that had a hind leg into a heavy trap set where the ice was thin at a feed bed. A young beastie and there had been no easy drowning. He was only half submerged, dead and stiff. Exposure, shock and fatigue through a bitter night. The bank snow, willow feed sticks and ice were churned to porridge. The others of his family in their house must have heard it all and gone through almost as much misery.

"In the days ahead, out in the more open country, coyotes were found dead after they had dragged traps attached to heavy anchor poles up to a mile or more. Searches ended so often with a whole paw in the jaws. Or they would be tangled completely in a wire snare, after having chewed every bit of tree bark around as they gradually strangled. They too then froze stiff.

"A vicious wolf snare had cut into the neck of one. When close to suffocation the wire had perforated the windpipe. The rush of air into the lungs had brought a fresh burst of struggling that forced the wire right through the windpipe to the backbone, when a sudden bursting of a neck artery had ended the torture.

"And this was just one trapline. One corner of a tremendous continent from the Atlantic to the Pacific that throbbed with long drawn out agonies night and day for months.

"John was quiet that night. 'Doc, it's a shocking business. It never hit me so badly before.' He sat with his head in his hands looking at the floor of the hut.

"Next day was the last before leaving Meadowlake. A Magpie was the first casualty, dead with both legs in a squirrel trap. Where the forest had been part clear felled John had set a coyote trap close to an old derelict homestead. There was nothing there and the trap gone. Snow was falling for the first time since Primrose Lake.

"For half an hour we searched in widening circles until John shouted. What had been a beautiful happy creature who with his friends had sung us to sleep in the cabin was now an emaciated twisted body. He had dragged the trap with its heavy anchor pole until the chain had snarled on a fallen tree. His smashed leg and paw was stripped to the splintered bone in the trap jaws. One single chewed sinew alone had held him from getting away on three legs. He had no strength left to sever the sinew. Had he escaped he could no longer have caught even a mouse to help him keep alive...The little wasted body was lifted on to our sledge. The remaining sinew parted..."

The record of the hearings remains open until February 18th.

IN PRAISE OF WHALES

The National Whale Symposium held at the University of Indiana in Bloomington, November 9-12, drew great audiences including save the whale activists, marine biologists, artists, teachers and students from across the country and even across the Atlantic and Pacific Oceans. Envisioned by John Jay Goodman, an undergraduate who spent a year planning and organizing it, the series of musical, artistic, scientific, and political events, many of them taking place simultaneously in numerous auditoria and halls of the University, surpassed all expectations.

A huge sculpture by Larry Foster on a level green lawn gave the impression of a whale surfacing. It was constantly surrounded by fascinated children. The children's own exhibition arranged by Tamar Griggs who edited *There's A Sound in the Sea* (The Scrimshaw Press, 1975) consisted of the original drawings and paintings, poems and statements she selected from thousands of youthful expressions on whales. Eight foot long paper sculptures made by children of the major whale species floated above the heads of the viewers.

The New York Camerata played two new musical compositions commissioned for the event. Roger Payne's "Songs of the Humpback Whale" were beautifully interwoven in "Elegy for a Whale". Dr. Payne himself took an active part in the symposium as did Dr. Sidney Holt of the United Nations Food and Agriculture Organization who has brought his scientific expertise to bear in efforts to control whaling nations.

Dr. Edward Mitchell of the Fisheries Research Board of Canada gave his audience a glimpse at the unscientific methods of the International Whaling Commission's Scientific Committee where papers may be submitted, used as arguments with respect to the state of whale stocks and permissible quotas, then withdrawn and never published. Dr. Mitchell's scholarly reporting on the small whales, whose capture is not even subject to weak IWC controls, raised great concern about the future of these creatures being killed in large numbers for their oil and meat.

Felipe Benavides, Peru's leading conservationist, concluded the conference with a ringing call to protect the whales. Resolutions adopted at the close of the symposium included support of a consumer boycott of all products from the Soviet Union and Japan until a ten-year moratorium on whaling is achieved, support of Congressional bills calling for an embargo on products of commercial whaling companies, establishment of a killer whale sanctuary in Puget Sound, and establishment of a limit on the number of dolphins that may be killed by the tuna industry in the coming fishing season.

"EMPEROR HIROHITO PLEASE SAVE THE WHALES"

Demonstrations pleading with Emperor Hirohito to use his influence to end commercial whaling by Japan took place in most of the cities that the Emperor visited, October 2nd to 13th.

A report in *The Washington Star*, October 3, 1975, headed "Terribly, Terribly Polite...But a Whale of a Protest" by Lee Flor read in part, "The lawn was rain lush green and the sun pushing through overcast skies as Hirohito, the 124th emperor of Japan and the first of his line to visit the continental United States, alighted from his limousine at the White House South Portico and President Ford walked forward to shake hands. Suddenly a loud buzz pierced the decorous calm and a tiny plane trailing a 100-foot long banner flew through the northern sky. 'Emperor Hirohito Please Save the Whales' said the banner.

"The message from the Animal Welfare Institute, a leader in the fight to preserve the world's dwindling whale population, was one of a surprisingly few unanticipated events to challenge security forces during

the Emperor's first day in Washington...The tiny plane never flew closer than three blocks north of the White House and did not violate its air space according to the Federal Aviation Administration."

Reports on the flight appeared world wide - even in China and received front page notice in *The New York Times*, *The Wall Street Journal* and *The Washington Post*. The United Press reported on the demonstration at Woods Hole, Massachusetts, organized by Carol Koury, where a thirty foot banner stretched between two boats reading "Your Imperial Majesty, The Whole World Looks To You As Emperor Of A Great Maritime Nation And As A Distinguished Marine Biologist To End The Commercial Killing Of Whales."

In Tokyo, *The Yomiuri Shimbun*, October 4, 1975, headlined its report "Direct Appeal Using Cessna Airplane - Demonstrations for Protection of Whale Will Be Still Continued," and began, "Associations for the Protection of the Whale waited for the Emperor and Empress, preparing a big placard on which Fuji-Yama mountain was drawn just like 'Fugakuzu' by Hokusai." (The print by Katusushika Hokusai (1760-1849) is one of the most famous of the Ukiyoe school. Fuji-Yama appears in the distance behind an enormous curved ocean wave.)

The demonstrations were carried on Japanese television via satellite to Japan.

Current Status of Japanese and Russian Whaling

According to press reports, the minke whale fleet was dropped from Japan's antarctic whaling expedition this year, and a further cut-back is anticipated in March when consolidation of the whaling companies is expected to be worked out. However, no final report is available yet.

The Novosti Press Agency of Moscow reported, November 3, 1975, "It is not merely in words but also in deeds that the Soviet Union is considerably reducing whaling in the antarctic," Mr. Vladimir Tverjanovich, chief specialist of the USSR Ministry of Fisheries, said in a Soviet press interview in connection with the forthcoming whaling season. "The Soviet Union would not be sending this year one of its three fleets, the Yuri Dolgoruki, which is based in the Baltic, and had reduced the total number of its whaling vessels."

Cell Cultures and Computers [continued]

Discussing "Ecological Considerations in Animal Usage," Dr. Lee Talbot, Senior Scientist of the President's Council on Environmental Quality, said, "Capture for the biomedical trade has been a major factor in the gross depletion of primates through much of the world." Dr. Talbot noted "...high losses at all stages in the capture, handling and shipping of primates have been well documented." He also referred to the "exotics problem" stemming from escape of primates from dealers who supply both pet trade and laboratory trade. Squirrel monkeys are now established in Florida.

Dr. George Harrell, Vice President emeritus for Medical Sciences, the Milton S. Hershey Medical Center, Pennsylvania State University, was Chairman of the Organizing Committee for the Symposium. He opened and closed the two-day session, and though the broad series of questions he asked on the first morning were not by any means fully answered, he laid a ground work by expressing them for future efforts. Among his questions were these: "Are we using too many animals? Could we do with fewer if experiments were properly designed? Would a better analysis of data give us more dependable data and reduce our dependence on large numbers of animals? Can we substitute for whole animal experiments in vitro techniques which require fewer animals because we now do have techniques by which cells, tissues, and organs even can be cultured?"

ANIMAL WELFARE INSTITUTE

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