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We must protect this endangered Act

The Endangered Species Act comes up for renewal this year. The struggle to get a strong and properly funded bill through both Houses of Congress and on to the presidential desk for signature before 1 October is likely to be hard. There are those even within the agencies supposedly in the business of guarding our wildlife heritage who are seeking to emasculate the Act.

The required bill will be drafted by the Senate Environmental Pollution Subcommittee. It has already signalled its unequivocal commitment to the protection of endangered species. At the preliminary hearings in December to take expert opinion before drafting begins, the chairman, Senator Chafee (R, RI) said: "The concern of this committee goes far beyond spectacular

Unless the erosion of nature is halted, much of what is now unknown will disappear before it is known.

**Thomas Eisner, Professor
of Biology, Cornell**

mammals—right down the chain of life and the whole ecosystem."

First to testify at the hearings were representatives of the National Oceanic and Atmospheric Administration, Fish and Wildlife Service and Department of Justice. They made no immediate recommendations but said, rather ominously, that they would be proposing substantial changes later.

A primary question was: Does the Act as it now stands work? In one important respect it seems it does. The environmental Defense Fund (EDF) testified that in the eight years of the Act's life, well under 2% of "consultations" between industry and the guardians of the Act, the Fish and Wildlife Service, have



A young bobcat at water's edge

led to a requirement that industry modify its development plans. And most modifications have been neither time-

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Monkey trial— the verdict is guilty!

On November 23rd, Judge Stanley Klavan found Dr Edward Taub, Director of the Institute for Behavioral Research (IBR), guilty on six counts of cruelty to animals. The six counts corresponded with six monkeys denied veterinary care despite their extreme need for treatment.

Montgomery County Prosecutor, Roger Galvin, documented in detail the condition of each animal with photographs and x-rays. He pointed out that all the experts testified that the missing digits and purulent wounds were portals for the introduction of infection and that such infection was not confined to the limbs which had been subject to surgical deafferentation. Dr Taub's research involved the study of monkeys after they had been deprived of sensory nerve conduction in one or two limbs. Constant self-mutilation of these limbs was a most serious problem (see photographs in the Winter 1981 AWI Quarterly).

On the final day of the trial, the judge raised the question of lack of sensation in the deafferented limb, and the prosecutor pointed out that in some of the monkeys there were missing digits on the "normal" limbs also. Mr Galvin described in his summation the condition of all the monkeys. Those named by the judge as individual counts of cruelty were: Nero, Big Boy, Paul, Domitian, Titus and Billy.

Nero suffered from osteomyelitis, with a draining lesion on the palm of his hand. Paul showed massive scar tissue, with his left wrist twice the normal size and the fingers of his left hand reduced to stubs. The x-rays showed the loss of architecture of the bones—an absence of wrist bones. Billy, both of whose arms had been deafferented, showed bandage trauma with four digits dissolving from infection and a fracture which had not been reduced. The National Institutes of Health, which is holding the monkeys pending a decision on their final disposition, was compelled to amputate Paul's arm in order to save his life.

The NIH report which found the housing

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Photo: Hope Ryden

Endangered Act—continued

consuming nor expensive. "Not a single project has been permanently halted" said Michael Bean of the EDF. The further point was made that such few delays as have occurred have seldom if ever been the sole "fault" of the Endangered Species Act. Other factors were also involved.

However in the important area of listing species recently found to be endangered, the Act's administration has

Fully 40% of all prescriptions written in the United States contain as their chief ingredients compounds derived from plants.

Thomas Eisner, Professor of Biology, Cornell

slowed to a snail's pace. Senator Mitchell (D, ME), a member of the Subcommittee, commenting on this dismal record said: "Priorities for listing are academic if there is no listing."

Another bone of contention is funding. As part of the overall cutback the Administration would like to axe the Fish and Wildlife Service's Endangered Species Program budget—from the \$24 million requested by the Service down to \$14 million. Congress has proposed funding at last year's level of around \$20 million. Senator Chafee, with studied understatement, pointed out that in a

We are still too ignorant of ultimate consequences to understand in full the urgent need to protect even the most inconspicuous forms of life so that we do not diminish the rich variety of biological resources that continue to exist.

James Buckley, Under Secretary of State for Security Assistance, Science and Technology.

total federal budget of \$700 billion, the money being requested for protecting tomorrow's inheritance and options is "very modest."

Scientists' contribution

A most notable contribution to the hearings was the testimony of certain well-known scientists. Professor E.O. Wilson of Harvard University, author of

the landmark *Sociobiology*, pleaded for a deeper conservation ethic: "A species is like a magic well; the more you draw from it, the more there is to

The extermination of a million or more plants in the coming few decades could lose forever the medicines and food sources we need to cure the diseases and hunger that plague mankind.

Peter Raven, Director Missouri Botanical Garden

draw...possessing its own biology, mysteries and still untested uses for mankind. Only a tiny fraction of the millions of species, less than 0.01%, have been studied in any detail; most have not even been given a scientific name...The loss of genetic and species diversity by the destruction of natural habitats is the folly our descendants are least likely to forgive."

The potential value of these unstudied and untapped resources was

Who can speak to the potential economic importance of the millions of species of plants and animals that coexist with us now, and who is wise enough to decree that any of them should be consigned to extinction?

Peter Raven, Director Missouri Botanical Garden

highlighted by Thomas Eisner, Division of Biological Sciences, Cornell: "In our own laboratory in the last few years, working as a relatively modest group of 5 to 7 researchers, we have isolated (1) potential heart drugs from fireflies, (2) a cockroach repellent from a millipede, (3) a nerve drug from another millipede and (4) shark repellents from a marine mollusk."

Peter Raven, Director of the Missouri Botanical Garden, supplemented this testimony with a cautionary tale from the world of plants. The humble evening primrose has suddenly been taken up in a big way by giant chemical concerns. It has been found to contain gamma-linolenic acid (the only other known natural source is human milk), the most active of all essential fatty acids in correcting deficiencies which seem to lead to many hard-to-cure diseases. "In other words," said Raven, "oil derived

from the seeds of these wildflowers may prove to play an essential role in helping us to avoid coronary heart disease and to cure such complaints as eczema and arthritis that afflict millions of people in the US."

Now comes the cautionary part. A listed plant in California is the chemically unknown Antioch Dunes evening prim-

In pushing other species to extinction, humanity is busily sawing off the limb on which it is perched.

Paul Ehrlich, Professor of Population Studies, Stanford

rose. But, says Raven, its listing was "primarily because it happened to occur in a locality where there were two species of endangered butterflies." So thanks to these two species of butterflies a natural drug store of quite unexpected potential richness survives to be explored. But how easily it could have been otherwise!

Protecting endangered species means protecting their habitats. Industry and the federal agencies are calling for a

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600 million Chinese will plant trees

Worried by widespread deforestation China has launched a nationwide campaign to reverse the trend. All citizens over the age of 11 are being urged to plant from three to five trees a year. At present 12.7% of the country is wooded. The goal is 20%.

A former Minister of Forestry, Mr. Luo, now an adviser to the government, has said: "About 600 million Chinese will be able to join the tree-planting drive. This should mean two to three billion trees added each year."

The newspaper, *People's Daily*, asserts that although some 250 million acres have in theory been reforested in the last 30 years, nearly three-quarters of this acreage have no new trees. Inferior seedlings and poor management are blamed.

During the Cultural Revolution trees were felled with no thought of replanting, in order to exceed work quotas. And with peasants still tearing off bark and branches for firewood, the land around Peking has become a desert. Dust storms plague the city.

Floods too have been a problem. In 1981 they did great damage in Sichuan and Shaanxi provinces. The cause? Careless tree-felling.

Spain to end whaling

The Spanish government has decided to support the moratorium on commercial whaling at the next meeting of the International Whaling Commission and to end Spanish whaling. A news report in *El Pais* 18 December 1981 states in part: "The Commission of Agriculture of the National Assembly approved yesterday, with the sole opposition of the Union of Central Democrats, a motion that the delegation of the Spanish administration before the IWC will vote in favour of the moratorium on the fishing of whales. With this resolution, Spain incorporates herself with the conservationist block at the IWC, and abandons the sector headed by Japan and the USSR which until now has impeded, with only a third of their votes, an end to the commercial capture of the whales."

The decision was a result of a motion formalized by the Spanish Parliament on 21 July 1981 consisting of five points including the absorption of whaling industry workers into fishing activities, refusal of the government to permit an increase in the whaling fleet, and inclusion of assistance from associations for the defense of nature in the Spanish Delegation to the

IWC as well as the above-mentioned moratorium vote and the ending of Spanish whaling. The vote on the motion, first taken November 5th, was a tie. On 16 December the motion was approved by 16 votes to 10. At the time of the debate, the Minister for Agriculture was Lamo de Spinosa who is now Spokesman for the Parliamentary Group of the Union of Central Democrats. This democratic decision to protect whales represents the greatest victory since Australia went out of whaling in 1978.

It is interesting to note that the Spanish Parliamentary motion on whale protection states that Japan is Spain's exclusive buyer of whale products and that Spain joined the IWC after Japan passed a law prohibiting importation of whale products from countries that were not members of the IWC. Japan was compelled to pass this law because of the international outcry against pirate whalers.

Thus, the pirate whaler "Sierra," whose misdeeds brought about IWC action against commerce by IWC members with nonmember countries, led to this major reversal of policy.

Japan, USSR, Iceland, Norway "object" to IWC decisions

An end to sperm whaling and a ban on the use of the cold (non-explosive) harpoon were the two chief gains at last summer's meeting of the International Whaling Commission in Brighton, England. Now both these decisions—the one arrived at by an overwhelming majority (25-1), the other by consensus—are being challenged.

Japan has filed an objection to the new embargo on sperm whaling in the western North Pacific (elsewhere sperm whales were already protected) even before a further meeting of the IWC on this issue in March. Japan has also objected, along with the Soviet Union, Norway and Iceland, to the cold harpoon ban on the grounds that a humane alternative may not have been developed in time for the 1982/83 season. And if not, so these nations are saying, the small minke whale must continue to die a slow, agonizing death.

Japan is potentially vulnerable to the Pelly Amendment and to the Packwood-Magnuson Amendment. Taken together, these Acts of Congress declare that any nation contravening the regulations of the IWC may be forbidden the U.S. market for its fish products and shall have its fishing allocation within the U.S. 200-mile zone cut by at least 50% and perhaps 100%.

Five Congressmen have already taken up this point with Secretary of State, Alexander Haig. In a letter dated 3 December they say: "We urge you to advise Japan of the preponderant concern with which Congress views their actions and to make it clear that these objections (to IWC decisions) will have a bearing on fisheries allocations as is clearly permitted by the so-called 'basket clause' of Section 201(e) of the Magnuson Fishery Conservation and Management Act."

Save the Whales Sweatshirts

Keep warm this winter in AWI Save the Whales hooded sweatshirts. Available in three sizes: medium, large and extra large and three colors: navy blue, gunmetal grey and red; \$15 each.



King Juan Carlos and Queen Sofia accept John Perry's sculptured fin whale from AWI president.

Wildlife trade

Included in the latest IUCN *Traffic Bulletin* is a very thorough 13-page report by Tim Inskipp on the Indian Trade in Reptile Skins. Other subjects covered are the Japanese Trade in Himalayan Musk and the Coral Trade in the Philippines. Write to: Conservation Monitoring Centre, 219c Huntingdon Road, Cambridge, England.

Environmental shirts

Short of shirts? Well, no matter even if your wardrobe is stuffed with them, there's always room for another one. Especially in a good cause. Environmental shirts, to your own design or from present stock, come pretty and pretty inexpensive from: Share the Earth, Jim Morris, P.O. Box 2308, Boulder, Colorado 80306.

Endangered Act—continued

“balanced approach” in designating these habitats. This may sound perfectly sensible. But industry and agencies are asking that in doubtful cases the Act should err on the side of the developer. Our biological ignorance is very great, so there will be many doubtful cases. “What is the habitat of a grizzly bear?”

A spoonful of Virginia soil provides greater opportunities for scientific advance than the entire surface of Jupiter.

Edward O. Wilson, Professor of Science, Harvard

asked Senator Chafee rhetorically, “We have heard from experts who have split 2 and 2 or 1 and 1 and 1 on this type of question.”

Bobcat threat

Second only to the controversy about critical habitat is that relating to a single species—the bobcat. With most spotted cats on Appendix I of CITES* and so no longer tradeable, and with the rage for spotted cats continuing unabated, the United States’ own bobcat now inhabits a highly prized skin, fetching as

The United States should provide world leadership in promoting a more enduring conservation ethic reflected in the protecting of all of its endangered species.

Edward O. Wilson, Professor of Science, Harvard

much as \$650. The species is on Appendix II of CITES and so may be traded at a level which does not imperil survival.

This level, though, can only be determined by reliable biological data. And for the bobcat these data are not complete (see box).

Yet, as Christine Stevens pointed out in her testimony, “State fish and game agencies, egged on by trappers and fur exporters, are trying to divest both the Endangered Species Act and CITES of their vigor, singling out for special attack the requirement of a federal judge for

Bobcat exports forbidden

The American bobcat has won another round in its fight for life. On 15 December the U.S. District of Columbia court denied the government’s motion and ruled for the plaintiff *Defenders of Wildlife*, stating that the government (U.S. CITES Scientific Authority) was in breach of CITES* in permitting the export of 90,000 bobcat pelts. The ruling upheld the Court of Appeals’ decision of the previous July.

Bobcats are now on Appendix II of CITES. This means that exports are permitted only where the country of origin determines, from scientific data, that trade “will not be detrimental to the survival of the species.”

The Court of Appeals had ruled that a valid no-detriment finding requires “(1) a reliable estimate of the number of bobcats and (2) information concerning the number of animals to be killed in the particular season.” And these data were less than adequate.

Undeterred, the *International Association of Fish and Wildlife Agencies* and the *Fur Conservation Institute of America* then requested the Supreme Court to review the decision. The request was denied. Now the government’s request to the District Court to have the ban on bobcat exports lifted has also been turned down.

reliable population estimates of bobcats in the different states.”

If the attack succeeds, not only will the bobcat suffer (already it is extinct in Ohio, Indiana and Iowa) but the international consequences could be grave.

To a flattering extent many countries look to the U.S. as their model on conservation matters. An enfeebled Act would thus weaken the hand of those seeking tougher protection for endangered species in other lands—particularly in third world countries where most endangered species live.

Rates of extinction worldwide are accelerating—as habitats shrink before the surge of human numbers and the rainforests tumble ever faster. Well-grounded predictions state that between now and the year 2000 the world may lose a million species—or 20% of its present stock. What we do within our own borders can help to stem this appalling tide of destruction.

Lacey Act given more bite

Throughout two congressional sessions conservationists battled hard to stiffen the Lacey Act, one of the nation’s oldest (1900) wildlife protection laws. Finally they triumphed. Fines have been doubled and other penalties stepped up.

The structure of the Act was closely followed by the drafters of the 1972 Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). The Lacey Act makes it illegal to transport in interstate or foreign commerce any wildlife that is taken, possessed, bought or sold in violation of the laws of the states or of other countries.

Under the new amendments, signed into law last November, offenders face possible felony charges with maximum fines of \$20,000 and jail sentences of up to five years. Conviction on misdemeanor charges can now mean a \$10,000 fine and one year in jail. The new legislation combines a similar measure protecting fish, the Black Bass Act of 1926, and extends its coverage for the first time to coral and to certain plants.

A still strong weapon

Conservationists have come to regard the 1972 Marine Mammal Protection Act as one of the strongest weapons in their armory. That it has emerged from the reauthorization process without major weakening and in some ways strengthened is therefore good news—doubly welcome at a time when good news is hard to come by.

A bill, signed into law by President Reagan in October, renews the Act for a further three years and contains three main amendments:

—It equips the government with powers to regulate the incidental take or disturbance of marine mammals during off-shore activities (e.g. energy development).

—It clarifies the requirement that the tuna industry use the best techniques and equipment to save the lives of dolphins.

—It removes the exemption granted to Alaskan Eskimos from laws governing the hunting of marine mammals—and in so doing prescribes legal procedures for the transfer of marine mammal management from the federal government to the state.

At the same time, in the words of Senator Packwood, long-time friend of marine mammals and strong supporter of the new measures: “The bill leaves intact the basic protective philosophy upon which the Act was founded.”

* Convention on International Trade in Endangered Species of Wild Fauna and Flora.

Monitor awards: unsung heroes and heroines

The second annual "Monitor Awards for Outstanding Achievement in Wildlife Conservation" were presented at a reception December 12, in Washington, D.C., to ten dedicated government employees by the heads of their respective agencies:

Clark Bavin, Chief, Division of Law Enforcement, Department of Interior; Martin White, Director, Office of Investigations, U.S. Customs Service; and John Ford, Deputy Assistant Secretary, Marketing and Transportation Services, Department of Agriculture. Sculptor John Perry donated the handsomely mounted sperm whale figures to Monitor, USA, the conservation, environmental and animal welfare consortium. The honorees and the successful programs for which they were singled out are listed below.

Joseph Hopkins, Deputy Chief of Law Enforcement, U.S. Fish and Wildlife Service. An agent for 27 years, he has played a

major role in shaping the Service's law enforcement division to deal with the growing sophistication of wildlife crime. One of his major triumphs in the field was the busting of an international fur-smuggling ring—the Vesely-Forte case involving over 30 furriers and nations worldwide.

David Hall, Special Agent, U.S. Fish and Wildlife Service. A long-term advocate of undercover methods, he has masterminded several operations which have led to successful prosecutions, including that of the major conspirators trading in alligator hides, walrus ivory and marine mammal products.

Walter Soroka, Special Agent, U.S. Fish and Wildlife Service. Transferred to Alaska in June 1980, he posed for many months as a buyer of walrus ivory, so infiltrating and finally exposing an entire network of dealers in marine mammal products. They are currently on trial.

Maureen Mathews, Special Agent, U.S. Fish and Wildlife Service. She was part of an inter-agency team that stopped the importation of diseased birds to a major

Miami wildlife dealer. Last winter she was also one of a team sent to Alaska to execute search warrants culminating in many arrests and the seizure of huge quantities of walrus ivory.

John Shirley, Special Agent, U.S. Department of Agriculture. He was recently involved in an 18-month investigation into the importation of diseased birds which led to the successful prosecution of a major Miami wildlife dealer.

Patricia Fettmann, U.S. Department of Agriculture. She was successful in getting a conviction of an unlicensed Pennsylvania dog dealer who had been selling to laboratory animal dealers for 10 years. The sentence included a \$500 fine and a cease and desist order until operating conditions are improved.

Michael O'Riordan, Special Agent, U.S. Customs Service. An undercover operator, his investigations led in 1980 to the seizure of 55 illegally imported

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Racing News



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You can really feel for the tethered hogs in close confinement when you read about the gay abandon and madcap enthusiasm of the pigs who love to race at the Farm Progress Show in Brimfield, Illinois. According to *The Wall Street Journal*, over 2,000 devotees (and bettors) flock to "Heinhold Downs," a specially set up tent, for each of the 25 races.

When the gates open, five young pigs tear around the track so fast that the entire race is over in four or five seconds. It doesn't give you much time to focus your binoculars.

Last year's champion was Belly Bust who never lost a race. Her record time of 75 feet in 3.51 seconds still stands. The winner's trophy is an oreo cookie. Once Belly Bust not only outpaced her porcine competitors, but outsmarted some tricky "handicappers". The scoundrels dropped an oreo in front of her when the starting bell rang, hoping to put her off her stride. Pausing only long enough to seize the cookie in her jaws, she streaked across the finish line (at 12 m.p.h.) to grab the winner's cookie as well. Two vanilla oreos for one super champ!

Maltreated U.S. Horses Feed Canada's Slaughterhouses



Photo: Ontario Humane Society, Ontario, Canada

Thin and weary with grossly overgrown feet, this mare limps off truck to slaughterhouse.

Since 1970 Canada has witnessed a booming trade in horsemeat. Both the home market in Ontario and Quebec and the overseas market in Belgium, France, Holland, Germany and Japan have greatly expanded. The U.S. directly feeds this trade by exporting to Canada some 30,000 horses every year.

A report from the Ontario Humane Society (acting in concert with the Humane Society of the United States) documents the cruelty involved in the transporting of these animals. Between 21 May and 30 June last year 281 horses were inspected on arrival at the Baron Feeders plant, Owen Sound, Ontario—one of many slaughterhouses operated by the Univex Company whose headquarters are in Belgium.

The horses all came from Plains, Wisconsin. The report states that for reasons of previous neglect or injury no fewer than 95 of them were unfit to travel and "if detected in the possession of Canadians would have been seized or destroyed with a high possibility of prosecution." Some had grossly overgrown hooves or severely infected legs. And "several were shipped with their mouths tied shut with wire or binder twine." The Canadian horses arriving at Barton Feeders during this period were in notably better shape.

Under the Ontario SPCA Act the Ontario Humane Society has issued an order to the importers "not to accept any animal which has obviously suffered in transit." The main fault, though, lies with the horse dealers in the U.S. Horses are being shipped not just to Canada but also to the many slaughterhouses in the U.S. which have sprung up in order to cash in on the European and Japanese craving for horsemeat. (The last decade has seen a 500% increase in the number of horses being killed every year.)

The condition at the slaughterhouses is regulated by the U.S. Department of Agriculture. Not so the transportation of animals en route there. Senator Melcher (D, MT) has introduced legislation that could cure this situation. His bill, an amendment of the federal Meat Inspection Act, deserves support.

“JUST IMAGINE . . .”

The following is a speech given by Dallas Pratt, M.D. on 15 October when accepting the 1981 Albert Schweitzer Medal from the hands of Senator Mark Hatfield (R,OR), Chairman of the Senate Appropriations Committee, whose distinguished career makes his deep concern about animals and the way in which they are treated especially significant. The medal is awarded annually by the AWI for an Outstanding Contribution to Animal Welfare.

Autumn in the Hudson Highlands, where I do my writing, is heralded by the honking of geese flying south. Just the other day I saw several of their great “V’s” floating overhead. The fall has also brought the red leaves, the red hunters, and into my house, in defiance of screens, a horde of ravenous flies. I have to swat them. So the hunters, whose activities I detest, are hunting deer in the woods, but I am hunting flies in the house.

Roger Ulrich is a research psychologist who a few years ago repudiated and expressed regret for the painful experiments on monkeys for which he was well-known. When I wrote to him about it, he replied: “Do you take or prescribe drugs? If you do, be damn careful what you say about anyone else harming animals because the moment you engage in either of these two behaviors you become part of the problem of animal painful experimentation.” I have to admit that at about the time Dr. Ulrich was abandoning his painful experiments I was undergoing surgery without questioning the possible use of animals in the testing of drugs, surgical techniques and radiation from which I benefited, and without which I might not be here today receiving the Schweitzer Award.

But *ought* I to be here, a beneficiary, in a surgical crisis, of animal experimentation; a confessed swatter of flies; a doctor who, in

“Do you take or prescribe drugs? If you do, be damn careful what you say about anyone else harming animals because the moment you engage in either of these two behaviors you become part of the problem.”

medical school, studied wound-healing in dogs? How about “reverence for life,” or the “ethical man” who, according to Schweitzer, “shatters no ice crystal that sparkles in the sun, tears no leaf from the tree, breaks off no flower, and is careful not to crush any insect as he walks”?¹

Well, I doubt if Schweitzer the philosopher expected fallible humans to be quite as perfect as this quotation suggests. Reverence for life is set before us as an ideal, but as a practical man and physician the good Doctor used drugs which he must have known had been produced at the ex-

pense of animals, and he didn’t scruple to inject the victims of sleeping sickness with chemicals which would kill the invading trypanosomes. In a crisis situation, a choice had to be made, and the “will-to-live” of the parasites had to be sacrificed in favor of the “will-to-live” of the patient. But a very significant insight is expressed by Schweitzer when he adds that it was not

“A thinking being feels a compulsion to give to every will-to-live the same reverence for life that he gives to his own. He experiences that other life as his own.”

without concern that he looked at the trypanosomes through the microscope and thought about his decision to end their striving for existence.

Note this emphasis on *thinking* about what you are doing, especially when a will-to-live, even an apparently insignificant one, is at stake. “Thinking” is a theme which Schweitzer emphasizes (and perhaps the word “imagination” is closer to his real meaning) as much as he does the better known precept of “reverence for life.” He deplores a tendency in his contemporaries to give up thinking for themselves and instead to rely on truths spoon-fed by authority and propaganda. He calls it “a declaration of spiritual bankruptcy.” But the man who has truly “become a thinking being feels a compulsion to give to every will-to-live the same reverence for life that he gives to his own. He experiences that other life as his own.”²

The experience of identifying with the will-to-live of another, and that other an animal, was expressed with great imagination and charm, four centuries ago, by the French essayist Montaigne. “When I play with my cat,” he wrote, “who knows whether I do not make her more sport than she makes me? We mutually divert one another with our monkey tricks: if I have my hour to begin or to refuse, she also has hers.”³ This wisest Frenchman of the Renaissance becomes so vehement about the moral superiority of many animals over humans that even in our time of animal rights and liberation he would rank as a radical.

At this stage in my life I don’t know how

imaginative I can pretend to be. With hindsight, and knowledge of the cruel confinement suffered by so many dogs in medical or veterinary schools, I certainly give much more thought than I did as a brainwashed medical student to the distress of dogs subject to repeated experimental or “practice” surgery. I have a desire to make others think about it too, and that’s why in my first book I noted that my alma mater, Columbia, reported the use in one year (1973) of no less than 1660 dogs in the William Black Research Laboratory.

My accepting drugs in a surgical crisis without scrupling to think at the time of the probable cost to experimental animals has indeed, following Dr. Ulrich’s blunt warning, made me humble, in fact “damn careful”, in preaching animal rights, especially to others who many have experienced similar life-threatening situations. But reflection has helped me to see that successfully weathering such a crisis may tempt one, as Andrew Linzey wrote, to imagine a “continuous crisis situation in which we have constantly to choose in favor of our own species.”⁴ Reinforced by propaganda from the research establishment, the continuous crisis theory has spawned much old-fashioned animal experimentation and retarded the development and substitution of non-sentient technology.

Let’s leave that for the moment and go back to the flies—which are still buzzing in-

We still have 60 to 100 million animals under experiment in the United States. I think of those 60 million animals. A sad, almost hopeless feeling comes over me. Then I think of 80 million. I feel just the same. 100 million. The same. Try it, and you will see that when enormous numbers are involved, 20 million animals, more or less, become meaningless. But it’s different when the imagination focuses on that one individual animal alone with its pain in the laboratory.

side my head. I cannot exactly reverence them, but I stand in awe of their will-to-live, much as Robert Frost did in a confrontation with an almost microscopic insect, a mite which crawled so purposefully to and fro on his manuscript that he was moved to address it in verse:

“ . . . With inclination it could call its own
It paused as with suspicion of my pen,
And then came racing wildly on again . . .
Plainly with an intelligence I dealt . . . ”

This is just an excerpt, but in his octogenarian years I heard the poet read the whole poem, titled “A Considerable Speck”,⁵



Photo: Ann Cottrell Free

Senator Hatfield presents the Schweitzer Medal to Dr. Dallas Pratt.

with great sensitivity and humor.

In spite of the ability of philosophers and poets to imagine the feelings of insects, it might be better to concentrate on animals with whom we can identify more easily. I freely admit that one of the take-off places in my own developing concern for animals was when the circumstances of my life first made it possible for me to acquire a dog, a Scotty named Maud who was born in my house in 1966 and still lives there today, teaching me now about old age as she did about infancy, adolescence, maternity and much else (including driving a car smoothly, without abrupt stops which can tumble a dozing Scotty onto the floor!). And if, like Montaigne and his cat, I could glimpse the world through her innocent eyes, I imagine it would seem a lovely place filled with very kind people.

Another milestone in my progress through a "humane education" was in 1973 when a colleague and I found an unintended, dying little brown dog—a female—with a gaping undressed throat wound in a laboratory at New York University Medical Center. I have described in my book how we telephoned the surgeon who had operated on the dog. He said that his experiment on the heart vessels had not been successful, and the dog should just be "allowed to die." When nobody would help us at the hospital—it was Friday night, the beginning of the weekend, and the attendants had vanished—we smuggled the dog out of the building and took her to the Animal Medical Center. There she was gently eased out of a world which, in contrast to Maud's, must have seemed both ugly and unkind. We had stolen hospital "property" and disrupted a scientific experiment; nevertheless I learned a lot that night about callous institutional attitudes and something about myself. I think what we did was wrong in principle, but right for that dog, at that time, in that place.

The telling of this pathetic tale is not typical of the way experiments are described in my books. Most of them are told matter-of-factly in the investigators' own words; the reader's imagination must supply the rest. In *Alternatives to Pain in Experiments on Animals*,⁶ I have tried to match each of the

experiments with one or more alternative methods which spare the animals by substituting sophisticated technology, cell or organ culture, human material (as from operating room or autopsy), epidemiological analysis and the like.

An important parenthesis here, however, is that there should be more standardization of these *in vitro* tests, the development of which has been very haphazard. The effect of known cancer-causing standardized against "reference"

cell cultures, so that these and similar tests would be reproducible anywhere. In Britain, the organization FRAME has a committee of leading toxicologists which hopes to start a research program of this kind, using five coordinated laboratories. Several years ago Professor Nardone at Catholic

If some experiments cannot be performed at all without unrelieved pain and distress, then the humanitarian position is that they should be abandoned. This would eliminate a lot of scientific trash—like "learned helplessness" and "pits of despair" experiments—and be a challenge to human ingenuity to find the necessary alternatives.

University in Washington suggested a program for the United States; I hope it is being or will be implemented.

Unfortunately, the replacement of animals in experimental work, including the development and testing of chemical substances, is likely to be a slow process, in spite of the concern of poets, philosophers, lawyers and humanitarians, the declarations of animal rights, the legislative efforts here and abroad, and the funds contributed for the development of alternatives. We still have between 60 and 100 million animals under experiment in the United States.

I think of those 60 million animals. A sad, almost hopeless feeling comes over me. Then I think of 80 million. I feel just the same. 100 million. The same. Try it, and you will see that when enormous numbers are involved, 20 million animals more or less become meaningless—just cold statistics. But it's different when the imagination focuses on that one individual animal alone with its pain in the laboratory. I am still haunted by the image of that badly wounded little brown dog which we found on a Friday evening at NYU Medical Center, and which was to be "allowed to die" at some unspecified and unattended moment during the long weekend. Can

one imagine anything lonelier than an animal abandoned in such pain? And yet, although pain is an exclusively individual and virtually incommunicable experience, paradoxically it is the one thing which all sentient animals, including the human animal, have in common. So the famous question which Jeremy Bentham asked about animals, which was not, Can they reason? nor Can they talk? but Can they suffer? must be answered "Yes—just as we do."

Which leads to the second question: how much should they be asked to suffer? This might be answered, as it was many years ago by C.W. Hume, in this way: If animals are to be experimented on by man, then they should not be forced to accept suffering greater than man himself would accept.

A corollary follows: If some experiments cannot be performed at all without unrelieved pain and distress, then the humanitarian position is that these should be abandoned. If this last suggestion were acted on, it would eliminate a lot of scientific trash—like "learned helplessness" and "pits of despair" experiments—and be a challenge to human ingenuity to find the necessary alternatives.

A final question. Can we ever extricate ourselves from the moral dilemma of not wanting to cause distress to animals, and yet often being forced by the necessities of our lives into benefiting from their sacrifice? I think we are powerless to reject the knowledge which the past relentlessly thrusts upon us, including those discoveries which have come by a long, dark and ghastly route. But perhaps it is possible to atone, at least in part, for that murky past, if with will and imagination we mould the future, and put to work the technology which can replace the myriad of suffering rats, mice, guinea pigs, monkeys, cats—and little brown dogs.

Just imagine . . .

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Monkey Trial—continued

of the monkeys at IBR inadequate and "grossly unsanitary" was not included as evidence in the trial because it was written subsequent to the seizure of the monkeys by Montgomery Police September 11th.

In a two-page article by Constance Holden, *Science* magazine pointed to key issues:

"The monkey trial has already earned a prominent place in the history of the animal welfare movement and drawn support from animal lovers across the country. The affair has set at least two precedents: it is believed to be the first time that local law enforcement officials have seized animals from a research laboratory, and it is the first time the National Institutes of Health (NIH) has suspended a grant because of questions relating to the treatment of experimental animals...

"Central to the defense's case was the argument that people who have not worked with deafferented monkeys—including the veterinarians who testified for the prosecution—are not qualified to assess their problems. Monkeys are messy creatures, the defense added, and can mess up their quarters and dirty their bandages within moments after they have been cleaned. Shown photographs of the lesions on the monkeys' arms, the defense expressed the belief that IBR operated within respectable limits. Two experts from the University of Pennsylvania found it difficult to defend the dirty cages and piles of feces shown in the photographs.

"But another Pennsylvania expert, neuroscientist Michael Goldberger, who worked with Taub on his last grant application, was unperturbed by conditions in the laboratory, which he said should be judged by whether the animals are healthy. 'I saw nothing I wouldn't expect to see if I went around the country looking at primate colonies,' he said. Psychologist Solomon Steiner from the City University of New York, who is on the board of directors of IBR, was also satisfied. He last visited the laboratory on 5 June and said he saw only 'very good specimens of deafferented monkeys.'"

Taub, too, takes the position that his animals received as good care as those in other laboratories. He told *Science*, "I suspect that there is almost no primate or animal facility in this country that you could not go through and find five violations." At the trial, he singled out Walter Reed Army Medical Center for keeping monkeys in monkey chairs for long periods, a practice he said he has never used because of its cruelty. Regulations under the Animal Welfare Act prohibit use of monkey chairs as permanent housing; however, any scientist can keep a monkey in a chair for its entire lifetime if he designates this as part of the experimental protocol because the Act as now

Editorial from *New Scientist*, Vol. 93, No. 1282, 3 December 1981

The unacceptable side of animal research

Edward Taub, a behavioural psychologist, has been found guilty of providing inadequate veterinary care for his research subjects, monkeys of various species (see page 672). Taub raised the spectre of academic freedom in his defence, saying that "what is on trial is the future of research in America". This simply will not do. Academic freedom does not encompass the freedom to neglect animals. Researchers like Taub may have reasons for doing what they do to animals. Some of those reasons may even be justified. But there can be no justification for the ill treatment and neglect suffered by Taub's monkeys.

The growing public awareness of, and interest in, the use of animals in laboratories raises many thorny issues. One is the question of scientific expertise and judgement. Taub, who, like his assistant, enjoys no formal training in veterinary science as such, denigrated his accusers as unable to understand the true state of his monkeys. The same can be said of many who support the anti-vivisectionists, but it doesn't take a degree in veterinary medicine to recognise truly awful conditions—a point made at Taub's trial. There can surely be no positive reason to keep monkeys, or any other animal, in conditions like those Taub imposed; and those who use animals have a duty to ensure that their subjects enjoy the best possible conditions. Only when that is so will scientists be able to debate the necessity of animal research with an honest heart.

written totally exempts the design of experiments from its minimum standards.

No action on the IBR case has been taken by the US Department of Agriculture which administers the Animal Welfare Act. When defense attorney Edward Brenner sought to exonerate his client on the theory that he had corrected all the deficiencies noted by USDA inspector Dr Arthur Perry, Judge Klavan dismissed this move with little ado, remarking, "I was not impressed with Dr Perry... I thought he was even embarrassed."

As we go to press, the fate of the monkeys has not yet been decided. After their seizure by Montgomery County Police, under the direction of Sergeant Richard Swain, they were housed in the half-basement of a private home which had been prepared for proper primate housing under the direction of primatologist Dr Geza Teleki. Dr Taub went to court seeking the return of the monkeys and when it appeared they would go back to IBR, unidentified animal activists carried them off. Sergeant Swain succeeded in obtaining their return five days later, and Judge David L. Cahoon ruled that they must go back to IBR.

Prudence might have dictated that during the monkeys' absence, their cages be given the thorough cleaning that their condition cried out for. But other matters apparently occupied the minds of IBR officials, so it was not till after the monkeys' return that IBR decided to steam clean the cages. There is no drain in the animal room floor. The cages were bound together by the system used for delivering water to them. Cleaning was thus no easy matter and steam cleaning doubly difficult. However, it was undertaken

one night and the monkeys shuffled around to allow live steam to be sprayed upon the wire cage floors. The result of this poorly planned maneuver was a fight between two monkeys which left the defeated Charlie with wounds that required stitching. The surgery had not been used for two years and no veterinarian was available. It is reported, however, that Charlie was sedated and sewn up by John Kunz, Dr Taub's assistant and co-defendant. The following morning Dr James Stunkard, a veterinarian formerly employed by IBR and authorized by Judge Cahoon in the custody trial to treat the monkeys, decided to sedate Charlie again in order to improve on Mr Kunz's repair of the wounds. Shortly after he had recovered from the second intervention, Charlie reportedly collapsed and then died.

Following this debacle, Judge Cahoon directed the National Institutes of Health to house and care for the monkeys pending the outcome of the criminal trial. Animal welfare groups have joined together to offer life-time maintenance of the remaining 16 monkeys at a haven for primates in south Texas should Judge Klavan decide to rule against their return to Dr Taub.

A decisive No

The October 1981 issue of *Glamour* magazine put the following question to its readers: Should we continue to conduct tests on animals to aid in the development of safe cosmetics? 84% said No.

"Ritual mass execution of animals"

In the splendid Swedish city of Uppsala eminent specialists, summoned from near and far, assembled for two days in September to give that notorious body of toxicity tests, known as the LD₅₀, a thorough going over. They pronounced it bloated and prescribed surgery to cut it down to size.

The test "uses" millions of animals a year world-wide. Regulatory agencies demand it and companies uncomplainingly comply. Yet the strange thing is that today LD₅₀ stands condemned by scientists and animal campaigners alike for bringing scant protection to man at a huge cost in death and suffering to other creatures.

Why then does it linger on? Not because of active defenders (it has many enemies and all its friends dislike it) but because it is hedged around by a thick wall of resistance to change. Question: What quantity of a new chemical added to drug, food, cosmetic, pollutant or pesticide can we swallow, inhale or otherwise take aboard without keeling over? Answer: Do an LD₅₀ on rats or mice or rabbits or dogs or even monkeys because the resulting nice round figure will make for the happiness of tidy-minded bureaucrats and lawyers.

But the toxicologists say (and they should know) that the question is often the wrong question and the answers are often wrong too, and that, all in all, the nice round figures are usually quite meaningless. In Uppsala they paraded their evidence. The occasion was billed as a seminar but was more of a forthright attack.

The attack was on a broad front. Some concentrated their fire on the near uselessness of LD₅₀ findings as predictors of toxicity in man. A lethal dose for a rat may (after due allowance for differences in body weight) have no effect on people. Conversely, and rather more worryingly, a harmless dose for a rat may be lethal for us. A rat is not a person.

Indeed a rat is not even another rat. Differences in age, sex, strain and other variables make for surprisingly large LD₅₀ variations. (In a sense, then, rats, though not people, are like people. For they too are individually different.)

To make confusion worse it seems that even where all known variables are eliminated (including easily overlooked ones like room temperature and whether the animals are housed singly or in groups), different labs will produce wildly different figures. In a tightly controlled experiment 100 labs in 13 countries conducted identical LD₅₀ tests on five chemicals. In theory, results should have been

identical. But far from it! Differences ranged from 150% to over 700%.

Perhaps differences between labs are the consequence of human error and are therefore curable. Perhaps differences *within* species are experimentally controllable. Perhaps. But nothing can be done to erase differences *between* species. Which means that nothing can be done to make the standard LD₅₀ test of real value to human beings. Unless, of course, they themselves are the testees. (This is not a course of action which normally commends itself to prudent researchers, however dedicated. But there are exceptions—see box!)

Obscene wastage

A second main line of attack was on the obscene wastage of animals required by LD₅₀ protocols. The justification is that more animals means greater precision. But the precision is likely to be spurious (for reasons already given) and in any case is usually

unwanted. Anthony Dayan of the Wellcome Research Laboratory in England neatly summed up the matter: "The precision aimed at should be related to real needs. Large numbers of animals are generally not called for—it simply gives needless super-verification to three or four decimal points."

For most new chemicals all that is required is the degree of toxicity—very toxic, fairly toxic, mildly toxic—and this can be found using far fewer animals than at present. Andrew Rowan of the Institute for the Study of Animal Problems, Washington DC, said that LD₅₀s on only 6-10 animals give results within 25% of those obtained by the standard test which uses 60 animals or more. Here is a huge potential saving!

A third line of attack was on the idea that the only thing that needs to be known about a new compound is the lethal dosage. It is not the only thing and very often it is not even the most important thing.

Possible alternatives?

One way and another the experts gave the LD₅₀ test a rare hammering. But what to put in its place? Could computer modelling and tissue culture—the non-animal alternatives on which so many hopes are pinned—now take over?

Computer modelling has the tremendous advantage of being cheap once developed, yet it is greatly under-used. Svante Wold of Umea University, Sweden, said that while making a compound costs \$2000, computing its effect costs just \$50. Based on the principle that like substances react similarly and that similar changes in structure produce similar changes in reactivity, computer modelling can be applied in a limited way to biological activities. But there are many mathematical hazards.

Tissue culture (a term which includes cell culture and organ culture) would seem to be more promising. It is regarded as having an "exciting future"—given the funding (for a start, why not a slice of the tens of millions a year which the US spends on primate research, suggested Andrew Rowan). But here too there are snags.

Present understanding of the laws of biochemistry do not permit the major organs of higher animals to be examined *in vitro*. In other words, organic reac-

tions can only be fully tested on living bodies.

For the time being, then, most "alternatives" will still be using animals. There is no scientific reason, though, for what Swiss toxicologist, G. Zbinden, has called "the ritual mass execution of animals." But this appalling slaughter will continue until governments can be persuaded to change their laws. If countries were to alter their regulations from a bald demand (often without further embellishment) for standard LD₅₀ tests to the more flexible requirement that "acute toxicity tests" be performed, then responsible scientists would be able to save animals whilst being encouraged to extract from their tests more than just the lethal dosage.

What are the prospects? Robert Osterberg of the US Food and Drug Administration foresaw a rocky road ahead. "Bureaucrats," he said, "need an atom bomb to move them. They are large turtles in a very large shell. However—one mustard seed can move mountains."

Man takes LD₅₀ test

When testing *Chlorfenvinphos* (a new compound for killing ectoparasites on dogs), Vernon Brown of the Shell Toxicology Lab in England found the LD₅₀ differences between species to be enormous. For rats the LD₅₀ value was 12 mg (per kg of ordinary food), for mice 100-200 mg, while dogs proved indestructible at 12,000 mg.

Since vets would be handling the substance it was necessary to know whether man was a rat, a mouse, a dog or none of these. Believing he was probably more dog than rat, our intrepid researcher swallowed some of the dread compound. Unpleasant reactions persuaded him that he had been wrong. Man, or at any rate one man, was in this instance more rat than dog!

It could be said, though, that millions of people unwittingly act like Vernon Brown every day. Birgitta Werner of the Poison Information Center in Stockholm produced LD₅₀ figures on nicotine. For dogs the value is 9.2 mg/kg, for rats 53 mg/kg, for pigeons 75 mg/kg. But for man a lethal dose of nicotine can apparently be as low as 0.9 mg/kg. This huge difference between species is not one that favors the cigarette smoker!

Biographical note

LD₅₀ = Lethal Dose 50% = the amount of a toxic substance which will, in a single dose, kill half the animals receiving it.

LD₅₀ was born in 1927 for the testing of potentially dangerous drugs. For this limited purpose precision is essential—and may require the sacrifice of large numbers of animals. Now in middle age LD₅₀ has spread into areas wholly outside its competence, killing and maiming on a horrendous scale to no defensible purpose.

The test is now frequently performed with the kind of compounds (pharmacologically inert food additives, for example) for which it was not designed and about which it can tell us nothing useful. For instance, what is the cumulative effect on the human body of a daily bombardment by more and more chemicals? Nobody knows. But whatever the answer, it is unlikely to be bad news for morticians.

Proposed rule changes

In all guidelines and regulations for toxicological studies it must be stated specifically that the concept of acute toxicity testing (harmful effects of single doses) is not identical with the performance of a classical LD₅₀ test.

In all guidelines and regulations for toxicological studies the classical LD₅₀ test carried out with large animals, such as dogs, monkeys, pigs, etc., must be prohibited.

In all guidelines and regulations for toxicological studies it must be pointed out that the classical LD₅₀ test with small rodents using large numbers of animals is only permissible if the reason for the desired high precision is clearly stated and scientifically justified.

In all guidelines and regulations for toxicological studies it must be stated that no LD₅₀ test should be done with pharmacologically inert substances.

The requirement to conduct an LD₅₀ test in newborn animals must be eliminated from all guidelines and regulations.

Proposals for changes of regulatory requirements pertaining to the LD₅₀ test. G. Zbinden and M. Flury-Roversi, Arch Toxicol (1981) 47:77-99.

Dr. Thelestam sums up

Monica Thelestam, of the Karolinska Institute in Stockholm and one of the main organizers of the Uppsala symposium, puts a post-symposium viewpoint.

In Sweden animal experiments first came under sustained attack during the 1970s with the growth of the animal welfare movement. The scientists, compelled at last to stand back and really look at what they were doing, conceded the main thrust of the animal campaigners' case: excessive numbers of animals were being made to suffer—and suffer excessively—often for no good reason at all.

This new thinking led to new laws enshrining "the rights of laboratory animals." At the same time the whole issue of animal testing came under scrutiny. In 1979 the National Board for Laboratory Animals was created with a budget of one million kronor (around \$200,000) to stimulate the development of alternative methods and to question the rationale for traditional animal tests.

The most questionable of these tests is surely the LD₅₀. It uses huge numbers of animals and a great many scientists consider it valueless. We therefore decided to make the LD₅₀ our first target. Hence the symposium.

Was it useful? I think so. While it would have been nice to have come up with concrete recommendations, these were implicit. Remember we were all, including the many toxicologists from leading pharmaceutical firms who attended, in complete agreement that the test is a bad one and should be replaced.

The main obstacle, I believe, is the regulatory agencies. We must now press them hard to change their rules so that fewer animals are used. We have not yet reached the stage where we can cease using animals entirely. Tissue culture can help towards this goal—and research efforts should be stepped up—but it does not allow for full-bodied organic effects to be studied.

Of course one simple way of greatly reducing the number of animals we use is to stop the endless testing and marketing of new but trivial products. Cosmetics, for instance. We surely now have enough for our needs. And I speak as a woman!

We hope to publish the proceedings of the symposium within the next six months. A more long-term aim is a book on various aspects of animal experiments and alternatives. In the meantime let us keep up the pressure on all fronts.

Charles Hume



Courtesy Universities Federation for Animal Welfare

Charles Hume, OBE, MC, BSc, MIBiol, a giant among leaders of animal protection who pioneered the extension into academia of the animal welfare movement in England, has died at the age of 95. In 1939 he founded the Universities Federation for Animal Welfare (UFAW). This meant that every English university now had its group of academics and scientists with a shared concern for the wellbeing of animals. For a great many years he also served on the International Committee of AWI.

Author of "Man and Beast" and "The

Status of Animals in the Christian Religion," he sought always to combine ethics and science in his life-long battle for animal welfare. Indeed his ideas and carefully reasoned standpoint became the rock upon which later writers and activists have built. The greatest single blessing he bestowed on animals came from his successful fight to outlaw the steel jaw leghold trap in Britain (1956).

A Charles Hume Memorial Fund has been established in order to sponsor an annual lecture furthering the aims of UFAW and its founder. The lectures will deal with man's use and abuse of animals in specific fields. They will be given by distinguished speakers, will be open to the public and will be published.

The series will begin in 1982. Donations are requested and should be sent to: UFAW, 8 Hamilton Close, South Mimms, Potters Bar, Herts, England.

Dorothy Dyce Walenczak

Dorothy Dyce Walenczak, formerly Laboratory Animal Consultant of the Animal Welfare Institute, recently died at her home in Lexington, Michigan.

Her intrepid pursuit of justice for animals sometimes led her into difficult and dangerous situations. Once in the Tennessee backwoods she went to inspect a



Photo: Stan Wayman

Dorothy Dyce Walenczak bought this starving dog from a laboratory dog dealer and placed him in a good home

major laboratory dog dealer's operation but found no one on the ramshackle premises, only dozens of starving dogs so thirsty they fought one another to get to the hose she turned on for them. Mrs. Walenczak went back to town and bought big sacks of dog food which she was feeding them when the two dog dealers returned with another truckload of dogs. They forced her to beat a temporary retreat, but their cruelty did not go unpunished. Mrs. Walenczak presented a well-documented case to the prosecutor; the jury found the dealers guilty and the judge fined them and sentenced them to spend a month in jail.

continued on page 12

Monitor awards—continued

cockatoos (now in Jacksonville Zoo) and in 1981 to the conviction of a major Miami wildlife dealer. He was also commended for his undercover work in Chicago that led to the seizure of 782 items of whales' teeth, walrus ivory and tiger claws.

Carl Sundstrom, Special Agent, U.S. Customs Service. Stationed in San Diego, he has in recent years devoted nearly all his time to tracking down smugglers of wildlife (particularly parrots, 80% of which die on the journey) entering from Mexico. His efforts have brought many arrests and convictions.

William Grimes, Supervisory Customs Inspector, **Jay Erdman**, Customs Inspector, **John Morley**, Customs Inspector—and others. Prompt action by customs officers at the San Ysidro border station, California, on 30 November 1980 resulted in the arrest and conviction of seven U.S. citizens in possession of dogs with appalling injuries sustained at an organized dog fight in Mexico. Fines ranged from \$1000 to \$3000 and jail sentences from 10 to 30 days.

Barry Groveman, Los Angeles City Attorney. He led the undercover investigations which resulted in the seizure of 300 ivory carvings, valued at \$1 million, at the Stanley Masry Gallery in Los Angeles.

From the dry summary of achievements listed above, it might appear that the job of the wildlife law enforcer, while clearly essential to the success of any conservation or animal welfare measure, is nothing very exceptional. If so, appearances deceive.

Increasingly, enforcement relies on the undercover agent. And a federal undercover agent plays a lone and perilous hand. For if his (or her) cover is blown, or even if suspicions are aroused, there are those in the wildlife underworld who would not scruple to see that the agent is rendered permanently incapable of parting them from their plunder—in short, is murdered.

Today's traffickers in wildlife are not in it to make a bit on the side. Their cruel and disgusting trade is immensely lucrative. The battle to deny them this stolen wealth is no fringe affair. It is the battle to safeguard the Earth's living riches—for all people for all time. The Monitor awards honored some of the front-line troops.

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Watch "Skeezzer" on NBC



Courtesy Ira Rosenberg - Detroit

On two consecutive Sundays, March 14 and 21, 1982, "Skeezzer, a Dog with a Mission" will air at 7:00 PM. The two-hour long show is based on the moving book by Elizabeth Yates McGreal about a

mongrel dog bought from a dog pound for medical research but turned over to the Children's Psychiatric Hospital at the University of Michigan to see if she could help the disturbed youngsters. She proved to be a magnificent friend and helper, visiting the most critical cases to comfort and calm them. She rode the elevator to the floor she wanted, simply waiting for someone to press the right button. She would then head for the child she knew needed her benign presence.

The book on which the television drama is based was written after the author read an article in the *AWI Information Report* about Skeezzer.

Now NBC is considering a whole series! "Skeezzer" is the pilot and if NBC decides it can sustain audience interest the series may replace Disney, which played for over 20 years on NBC on Sundays at 7:00 PM.

All friends of animals should make a point to watch and to write to:

Mr. Brandon Tartikoff, President
NBC Entertainment
3000 W. Alameda Ave.
Burbank, CA 91505

Dorothy Walenczak — continued

Dorothy Dyce Walenczak's remarkable powers of observation bordered on a sixth sense as in the case of a post-operative dog whose license tag caught her eye during a laboratory inspection. She took the number, checked it out and found the family who had been hunting for their pet for weeks. The Veterans Administration hospital returned the dog to the tearful mother and children.

During the course of her career Mrs. Walenczak visited hundreds of laboratory animal rooms and suppliers' premises. The photographs she obtained led Henry Luce to produce "Concentration Camps for Dogs," an 8-page picture story in the February 4, 1966 issue of *Life* magazine. The following year Congress enacted the Federal Laboratory Animal Welfare Act, the first time the nation's lawmakers had acted on this subject.

Animal Welfare Institute
P.O. Box 3650
Washington, D.C. 20007

Life on Earth

David Attenborough's *Life on Earth* is now being shown on U.S. television. Even if you have missed out on the early films (they are showing weekly on PBS, beginning 12 January) in the series, you can still take in most of the 13 hour-long spectacles—a captivating journey through time and the development of Earth's myriad life forms.

Attenborough is that rare being, a truly knowledgeable enthusiast who can *communicate*. And the story he has to tell is nothing less than the most exciting story in the world, the story of how we all, animals and plants of every kind, have got where we are.

Life on Earth is not intended as a conservationist tract. But the theme is one which cannot help highlighting the crucial question of our era: Where do we go from here? Is the life-enhancing process, a process of ever-increasing diversity and richness, to continue? Or is it to be put into sharp and tragic reverse? For the first time in the Earth's history, one species, our own, has the power to decide.

Periodical Pleasures

by John Gleiber

I am aware of no daily newspaper (and certainly no international one) which presents as much information on animals as does *The Christian Science Monitor*. Day in, day out, week in, week out, one can find articles on animal protection, animal care, animal personality and animal exploitation. Occasionally, there are features covering such pressing issues as use of animals in laboratory research. They are always typical *Monitor* articles written with balance and objectivity and rigidly rule out sensationalism and sentimentality. Blessedly, they are concise with a great deal of information packed into short, well-

written articles. For anyone who wants a broad overview of just what is happening to wild and domestic animals all over the world, the *Monitor* is invaluable.

A charming note is the frequent use of a photograph, tucked somewhere on the front page. They are seldom connected with a news story, but are only a light touch, a pleasant break amid the heaviness of what constitutes front page news today, even in *The Christian Science Monitor*.

Three-month or yearly subscriptions can be ordered by writing to 125 Astor Station, Boston, MA 02123.

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Life in a hog factory

What's it like in a hog factory? Ought we call them hog factories given the sensitivities of some promoters of ever-more-intensive livestock raising to a term which some consider derogatory? Let's take a look at the February, 1982 issue of *Hog Farm Management* in an attempt to get it straight from the industry's mouth.

First, as to the word "factory," on page 58 Dr Dave Bache, listed as "ag economist, Purdue University," talks about records: "Daily we record sows bred, sows farrowed, and pigs born. Greatest emphasis is on sows bred; we must breed 34 per week to keep our factory full." With 8½ pages of *Hog Farm Management* devoted to his economic advice, it would seem his phraseology is accepted.

Bache's casual referral to gestation crates, an area so small that the sow can't even turn around in it, though she is forced to remain there for the four months of her gestation, also makes plain that this too, unfortunately, is accepted. He refers to a producer who writes a 3"×5" card for each

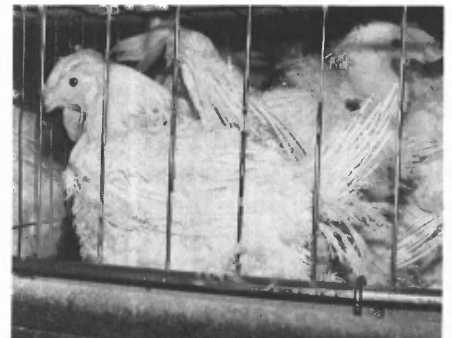
sow. "This card moves with her through the building complex until her next litter is weaned. Her card hangs above her gestation crate and is fastened to a wire line by a spring clothes pin." (page 62)

Sows in gestation crates are subject to fits of "bar biting" in which they attack the imprisoning bars in front of them. Photographs of sows biting the bars even appear sometimes in *Hog Farm Management* where they are ap-

parently accepted as part of "factory" life. This stereotyped behavior, like the frequently documented side-to-side rocking of chimpanzees in cramped cages, is the sickly outlet which intelligent animals are forced into by extreme confinement.

Those who hawk their wares in *Hog Farm Management* are aware of the stress placed on the animals. To quote a full-page ad by the pharmaceutical firm, Hoffman-LaRoche, "STRESSES from confinement or adverse environmental conditions may increase vitamin needs in swine."

continued on page 6



Close-ups of battery hens



Veal calf in the narrow stall to which it is confined for life. (See pages 9 & 10.)

Life in an egg factory

What's it like in an egg factory? When the hens are first put into the battery cages in which they are destined to spend the rest of their lives, they are well feathered, good looking birds; but by the end of their single year of life, many feathers have been reduced to mere quills because the birds are so closely packed in the small cages that they rub the feathers away. In addition, frustrated cage mates peck them or actually stand on them for lack of space so that their backs may become entirely bare – and this despite the fact that they have been "debeaked," that is, the upper mandible has been burnt off. Sometimes the aberrant behavior fostered by the extreme overcrowding progresses to actual cannibalism. At the end of their ordeal, the surviving hens are sold for canned chicken soup.

continued on page 8

THE SHADOW OF DOOM

An excellent article by Eiji Fujiwara in the Japanese magazine Asahi Shimbun Science demonstrated in scientific terms the danger of continued commercial whaling. With charts comparing the destruction of a number of endangered species from rhinoceroses to orangutans, Professor Fujiwara showed the parallel with whales and pointed to the whaling industry's self-defeating justifications.

Eiji Fujiwara is Professor of Animal Behavior at Tsukuba University, Ibaragi, Japan. Edited excerpts from a translation of his article follow.

In my opinion commercial whaling should be discontinued entirely for some time. Many Japanese readers will be outraged by this statement. But in recent years Japanese reaction to the whaling issue, instead of being one of calm consideration, has taken on a tone of nationalism, fueled by a feeling that Japan has been victimized on the world stage.

The arguments put forward are nothing more than a struggle to defend the whaling industry, and this has to be recognized clearly from the outset. Facing bankruptcy the industry is fighting to survive, using every possible means. Scientists are mobilized, government organizations are called in to assist, the mass media are used to manipulate public opinion. Behind all this, though, lies hidden the key to the problem. It is provided by nature herself.

Industrial activities are extremely important and it is quite natural to struggle against bankruptcy. However industries dealing with wildlife require strict self-

Japan, long a target of conservationists who charge it has hunted some species to the brink of extinction, has resisted pressure to abandon the once-thriving industry. However it acknowledges that anti-whaling movements, rising costs and international restrictions on catch are exacting their toll.

discipline. From olden times innumerable species have been driven into or close to extinction. Pursue the cause and most of the time you will find that in the chase for profit, industries have never slackened the pace of killing.

Invariably industries dealing with wildlife so conduct their business that sooner or later the rate of profit based on investment exceeds the rate of production of wildlife resources. Characteristically the process then continues until the resource is exhausted. The pattern has been likened (by Colin Clark) to a fatal disease which takes the following course: 1) Warning signs that the animals are becoming fewer are ignored—"We are the ones who know best" or "We have investigated and found them numerous." 2) Warning signs become stronger; so too does their rejection. 3)

Warning signs become too strong to ignore. Now the ace in the pack is played—the right to a livelihood. By this stage you can be sure that the shadow of doom lies dark upon both animal and industry.

Preventing extinction has priority

But when industrial activity has finally ceased—killed off by the crash in the animal population—it may be too late. The species may be irreversibly on the way to

Faced with massive layoffs and plummeting profits the six Japanese whaling concerns merged in 1976 under one roof, Nippon Kyodo Hoge, in a battle for survival.

extinction. And no amount of money or brainpower will bring back a lifeform that has been lost. Here is the fundamental difference between commercial death and the death of a species.

To regard wildlife as a resource that may be utilized like livestock is permissible. But here too there is a fundamental difference. Livestock are counted individually and we have wide knowledge of their reproduction rates, ailments, life histories and so on. There can be no danger of extermination. On the other hand we have no such precise knowledge of most wildlife. Ironically we have had all too many examples of populations only becoming known when the species is on the brink of extinction.

The Japanese whaling industry's decline is perhaps best illustrated in the coastal town of Taiji. Whaling there dates back 700 years. In the late 19th century it was the world's largest fishery base. Now it is trying to develop a tourist industry with a museum and other attractions to promote its image as a "whaling town".

Here is the most important point in the whaling debate: cultural arguments and the "rights" of the industry pay no attention to extinction of species.

Because scientific methods of counting

wildlife populations are at best "estimates", all hunting quotas are gambles with the life of the species. The data which the whaling industry acclaims for its reliability is based on very simple research started in 1978 and on earlier whaling statistics. Almost

In 1980, the last year for which figures are available, Japanese whalers took 19,000 tons of whalemeat. In addition Japan imported 25,000 tons from the Soviet Union, Iceland, Spain, Peru, Chile, Brazil, Norway and South Korea. The entire Soviet and Icelandic catches were bought by Japan. A breakdown on imports from other countries is not available.

nothing can be established from this kind of imperfect data. Dispute within the International Whaling Commission is inevitable, given our scientific immaturity in this field.

But we cannot leave it at that. In establishing models and parameters there is a basic difference between the side seeking to protect a species from extinction and the side seeking to defend an industry. The former tries to assure safety by taking a minimum number of animals; the latter pushes for a large enough quota to keep the industry going. Here in a nutshell is the history of the IWC.

Commercial extinction

Scientists employed by the whaling industry like to state: "There has been no species of large whale driven to extinction

Contrary to assertions that whalemeat is an "indispensable part of the Japanese diet," annual per capita consumption is only a meager 700 grams (under 2 lbs).

by whaling." But what they have been driven to is commercial extinction as distinct from biological extinction. And once this occurs, restoration takes at least 20 to 30 years and sometimes (as in the case of the California grey whale) 50 to 100 years.

Scientists engaged in the study of endangered species have submitted a new standard to prevent extinctions. They say: Industries based on the slaughter of wildlife, when confronted by data suggesting that the species concerned is facing extinction, should cease all further killing until the facts are clarified—even if the data are fragmentary and causality cannot be proved. By this criterion a total ban on commercial whaling, as Europe and America advocate, is justified.

N.B. All insets in bold type are taken from an article in *Asahi Evening News*, 13 March 1982.

STALEMATE AT IWC

At the special March meeting of the International Whaling Commission, held at Japan's insistence, no action was taken on setting a quota on sperm whales that Japanese whalers want to kill. Twenty-four nations each wasted thousands of dollars sending representatives to Brighton, England following the Scientific Committee meeting in Cambridge. Before any substantive discussion could be held on the report of the Scientific Committee, Japan unexpectedly brought the special session to a close by saying that any decision on this issue should be postponed until the regular meeting of the IWC in July. Taken completely by surprise, the Commission consented to the Japanese request.

The number of IWC-member countries opposed to a continuation of commercial whaling has grown to a near-three quarters majority, while the number of whales over which the handful of whaling nations continue to haggle continues to decline. This summer's IWC meeting could be pivotal.

Please write to President Ronald Reagan expressing your appreciation of the forceful letter he wrote last year to the International Whaling Commission and urging him to send a message again to the July IWC meeting. Ask him, too, to enforce the Pelly and Packwood-Magnuson amendments against whaling nations who file objections to IWC decisions.

Your letters should be addressed:

The President
The White House
Washington, D.C. 20500

CITES guidelines

Guidelines for the transport of wild species—with particular emphasis on those covered by the Convention on International Trade in Endangered Species (CITES)—have been published. The guidelines apply to all wild animals and plants and cover all forms of transport. They include 18 sets of illustrated *Packer's Guidelines* with drawings showing the type of containers and labeling required for different species. The price is \$13.00 from: Unipub, 345 Park Avenue South, New York, NY 10010.

Long live whales and the scrimshaw artist!

The ancient art of scrimshawing on the tooth of a sperm whale is gaining a new lease of life—and a respectable one, for no sperm whale need be killed before the artist goes to work! Polymer ivory carves like ivory, feels like ivory and looks like ivory. But it is not ivory; it is a man-made plastic with a durability even greater than ivory.

So sperm whales no longer have to die for the scrimshaw artist to live. And the artist's finished work, though almost indistinguishable from the real thing, costs a whole lot less. For details send to: Harbourscrafts Company, 41 Bridge St., Fairhaven, MA 02719.

Pirate whaler sighted

A pirate whaler has been sighted in the vicinity of the Hawaiian humpback's migration route. On 22 December the captain of the fishing vessel *Driftwood* sailing from San Diego to Honolulu sighted a whaling vessel near 150 W 30 N. The captain of the *Driftwood*, Mr Tom Pfister, said the vessel had a bow-to-bridge catwalk and a mounted harpoon and was unmistakably a whaling ship.

All pelagic whaling in the North Pacific was banned by the IWC in 1979. The pirate left the area very quickly after being sighted and conservation organizations in Hawaii have offered a reward for information on its whereabouts.

A NEW APPOINTMENT

The Animal Welfare Institute is proud to announce that Simon Muchiru has joined its International Committee. A native of Kenya, Mr. Muchiru is the Assistant National Organizer of The Wildlife Clubs of Kenya. Almost solely through his work as a traveling lecturer to university age groups throughout the continent, Wildlife Clubs have been established in nine other countries, and they are expected to proliferate during the next few years. His role as an exponent of environmental protection in a world where every form of exploitation is burgeoning is a critical one. In the face of such challenges, Simon Muchiru remains quietly optimistic and obviously effective.

U.S. Threat to Bobcat Continues

Furious that bobcats are still protected by their listing on the Convention on International Trade in Endangered Species of Wild Flora and Fauna, *Fur Age Weekly* carried banner headlines on its April 26th, 1982 lead story,

"Acting CITES Head Rules Against U.S. on Bobcat Delisting

"On March 22, 1982 the Acting Secretariat of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) forwarded to the 77 Party nations the recommendation of the United States that the bobcat be delisted from Appendix II. Accompanying the information, however, was a recommendation from the Acting Secretariat that the U.S. request not be approved."

The U.S. claimed, despite strong representation to the contrary by conservationists, that delisting the bobcat will have no adverse effect on the survival of the species or on the effectiveness of CITES in controlling international trade in other cat species. (All *Felidae* are at present listed in either Appendix I or II.)

The Gambia and Malaysia have objected to the U.S. bobcat recommendation; therefore the proposal must now be put to a postal vote. At least half of the parties must cast a vote on the proposed amendment within 60 days of notification and two thirds of the votes must be in favor, if the amendment is to come into force. If the mail ballot fails, which is most likely, the issue will be considered at the meeting of the Parties in 1983.

Coyote—poison restrictions lifted

Restrictions on the use of poisons for the control of coyotes and other predators on federal lands now rest entirely with the Environmental Protection Agency which are holding formal hearings on the matter. President Nixon's Executive Order, which has been in force since 1972 with minor modifications by Presidents Ford and Carter, was revoked on 27 January this year.

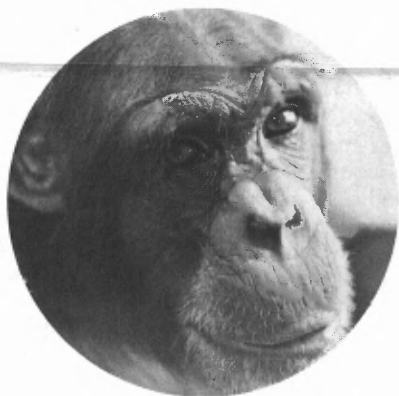
Help for endangered turtle

In a decree published 7 January, President Carazo of Costa Rica established Ostional beach in the province of Guanacaste as a protected breeding ground for the Olive Ridley. Ostional is the world's second most important breeding area for this endangered marine turtle.

A Visit to Washoe and Her Friends

by Christine Stevens

On the third floor of the Psychology Building at Central Washington University the stately Washoe, the first chimpanzee to learn to communicate by American Sign Language, gently rules her adopted son Loulis, and the leading artist among the genus *Pan*, Moja, creator of the first representational drawing made by a chimpanzee. Across the hall live Dar and Tatu, well known to TV audiences in the state of



Moja

Washington as the bartender and sipper of Rainier Beer on the commercial frequently aired by that company.

The learned chimps pay their board in this way as well as through sales of their paintings—non-toxic acrylic on canvas.

Roger Fouts, one of the pioneers of communication with chimpanzees, brought together the five signing chimps at the Ellensberg campus two years ago. Washoe, who is now sixteen

years old and uses 260 different signs, is an old friend who learned many of her signs from Professor Fouts when he was a student of the Drs. Gardner at the University of Nevada where American Sign Language (ASL) was first introduced to a non-human—Washoe. The Time-Life documentary film "The First Signs of Washoe" tells the story up to 1974.

Since then Washoe became a mother, but her baby died. Loulis, a three-year-old, one of the infants who were subjects in a leukemia experiment at Yerkes Primate Center in Atlanta, Georgia, was brought first to Oklahoma where Washoe, after some initial failures, succeeded in taking him to her capacious bosom with a "come hug" sign. She has taught him 31 signs in all.

Moja startled students of the mental capacities of chimpanzees by her drawing, reproduced in *The Sunday Times* of London, July 25, 1976, of a bird. Said *The Times*:

Usually, chimpanzee paintings are a series of haphazard squiggles and streaks. In April, however, Moja suddenly made a quite different drawing, a copy of which is shown here. She was asked to paint some more but replied—in sign—that she was "finished." She was then given another piece of paper and carried on with squiggles and streaks. It seemed, then, that she wasn't tired but meant that she had finished a particular effort. The teacher therefore asked her by signs what it was. Without any apparent bother or surprise, Moja signalled the answer. 'Bird.'

Moja enjoys drawing and painting—her favorite colors are the violet and purple tones—and on occasion she has iden-



Washoe

tified other drawings she has made as an apple or a strawberry. I asked Professor Fouts if I might draw with Moja and was delighted to find her very interested as I roughly sketched a banana, a bunch of grapes, and her face. She eagerly accepted both drawings and the pencil and lay down on the floor immediately to add to what I had done. She worked assiduously until Washoe entered through the overhead passageway that connects the areas they share. Moja promptly retired with her pencil and paper, and, when finished, reluctantly gave up the drawing to her student supervisor. It is reproduced below. Asked what it was, she quickly signed back "bird." She had transformed my outline of a banana in-



Dar

to her view of a bird by adding two wings. They are in the same position as in her original bird drawings.

Many student volunteers join Professor and Mrs. Fouts in studying, caring for, signing and otherwise interacting with the chimpanzees, and the result is remarkable for its peaceful, friendly atmosphere where mutual respect reigns between *Homo sapiens* and *Pan troglodytes* and where new information is constantly being garnered and regularly recorded on video tape.

To keep abreast of the activities of



The wings with their delicate pointed tips are drawn by Moja. She used my representation of a banana for the body of her conception of a bird in flight.

the signing chimps, you can subscribe to "Friends of Washoe" and receive the newsletter, generously illustrated with photographs of the protagonists. While informing and entertaining yourself, you'll be helping to make up for the recent loss of the National Science Foundation grant which formerly covered the cost of care, food, and medical expenses for the chimpanzees.

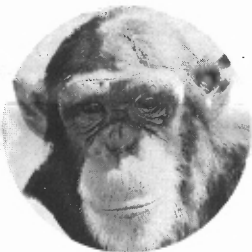
Seeing Washoe climb to her platform, recline in an attitude reminiscent



Loulis

of an ancient Roman at a banquet, holding a bunch of grapes I brought her over her head, and leisurely plucking one after another, it is apparent how much these knowledgeable primates enjoy a treat—and if there were any question, Washoe resolved it after eating the last one by signing a request for more grapes.

Fouts' studies of the signing chimpanzees are pushing basic psychological knowledge forward in a way undreamt of only a short time ago. And the subjects enjoy their role. What a contrast with primates and other animals in psychology laboratories in



Tatu

many other places where electric shocks are the favored method of eliciting information!

If you want to encourage research which is completely humane—research which should set the pace for psychological research in the United States—contribute to "Friends of Washoe," Central Washington University, Department of Psychology, Ellensburg, WA. 98926

Europe bans seal imports—Canadian prices tumble

In early March the European Parliament of the Common Market voted overwhelmingly, 160 to 10, to ban the import of seal products. This was a stunning blow to Canada which relies on western Europe to take 70% of the pelts of harp and hood seals killed in huge numbers each spring.

The effect of the EEC ban was felt almost immediately, even before a single member had implemented it. Sealing vessels returning to port in mid-March were offered 40% less for their pelts than last year. "Customers are scared because of the vote in the European Parliament; we're afraid we may lose our shirts," said Mr Bernard Nygarrrd whose Carino company buys two-thirds of all pelts in eastern Canada.

Ironically the harp-seal quota this year is, at 186,000, up 16,000 on last year. However weather conditions make it unlikely that this figure will be reached. In the prevailing political climate this can hardly hurt the trade (what's left of it). And it *will* help the seals.

Small is beautiful

From tiny Delaware comes the welcome news that Senate Bill 133 has been passed by the state legislature. The bill empowers the courts to decide on ownership rights to animals seized because of cruel mistreatment or neglect. Under certain circumstances the new law also grants immediate relief for suffering animals. Under the old law the animals could go right back to the abuser.

This is a good, important law. We should all be just as grateful as the animals in Delaware to Mary Watford and her Delaware Animal League for their effective lobbying after State Senator Jake Zimmerman introduced the bill.

Mammal Red Data Book

Part I of IUCN's new Mammal Red Data Book has been published. Updated from 1978 it covers 145 taxa in the Americas, Australia, New Zealand and New Guinea. The volume has been compiled by Jane Thornback and Martin Jenkins, and costs \$20 from: *Conservation Monitoring Centre, 219c Huntingdon Road, Cambridge, England.*

Kangaroo—imports stay permitted

The contentious federal ruling of 29 April permitting the import of kangaroo products from Australia has been confirmed by the Interior Department. Considering the cruelty routinely employed in the killing of kangaroos (see AWI Quarterly, Summer 1981) and considering the scandal involving the substitution of kangaroo meat for export beef and considering the fact that all three species of Australia's kangaroos are listed as threatened under the Endangered Species Act and that no imports were allowed between 1974 and 1981—considering all these matters, Interior's decision is, to put it mildly, depressing.

The Department justifies its ruling by saying that the Australians have now developed a sound "sustained yield program" for kangaroos which exempts them from the trade prohibition which the US normally applies to threatened species.

Reaching out to Eastern Europe

AWI is making friends and (we hope) influencing people in east Europe. At a symposium in Zagreb, Yugoslavia, last winter two AWI publications were on display: *The Bird Business* and *Comfortable Quarters for Laboratory Animals*.

Warn wildlife ultrasonically!

An ultrasonic warning device fitted to your car can reduce the risks of your hitting an animal while driving. The device *Sav-a-Life* consists of a pair of 2-inch sound tubes. At over 30 mph air passing through them emits a high whistle audible to animals but not to humans.

Developed in Austria and tested in Vienna and Finland, *Sav-a-Life* is marketed in the United States from New York (a state in which more than 20,000 deer are killed by cars every year). For information write to Marcla Sales, Inc., PO Box 1226, Cathedral Station, New York, NY 10025.

Another Austrian device, red reflectors, is gaining increasing acceptance in this country and in Canada. Called the *Swareflex*, it consists of a series of steel posts which bounce headlight beams at sharp angles to the highway. Unseen by the motorist, these flashes apparently alert the deer that danger is near. Significant reductions in deer/auto collisions have been noted where the *Swareflex* is in use. You can obtain details from the Strieter Corporation, 2100 18th Avenue, Rock Island, IL 61201.

Hog Factory — continued from page 1

Among those "adverse environmental conditions" in a hog factory are varying levels of air pollution from the sort that rots heating units and has driven the magazine's editor to another form of employment, right up to immediately lethal levels of hydrogen sulfide that kill hogs and hog farmers alike. A few quotes from the February issue show what's involved. "Maintenance Tips for Gas Heaters" (p. 14) gets to the point in its first paragraph: "Heating units installed in confinement hog buildings are subject to an extremely undesirable atmosphere for this type of equipment. The air inside a hog house is quite corrosive and also quite dusty . . . During the coldest part of the winter when the heat is needed the most, the ventilation rates are also lowest. This results in less air exchange and a greater accumulation of dust."

How does that corrosion and dust affect mammalian lungs? Here's a quote from John Byrnes, "a six-year veteran of *Hog Farm Management*," who is shifting to a different job because, as he put it, "I don't smoke, but I picked up a smoker's hack. The hack stayed with me as long as I was near hog buildings. It is ironic that after writing about hog respiratory problems I ended up with one of my own." A pity the hogs have no choice about moving out of the dusty, corrosive air.

Nor can they leave when the hydrogen sulfide levels peak. "Manure Gas A Clear & Present Danger" (page 39) begins with these words: "Denny Roesler knew something wasn't quite right. The ventilated pit gases from his nursery unit carried a foul, offensive odor . . . not like hog manure at all. And from inside he could hear the screams of pigs in trouble . . . 'When I looked in, I didn't like what I saw.' What he saw were dead and dying baby pigs at the far end of the nursery . . . 'In about a minute or two I was feeling myself starting to faint.'" This was the second time 45 pigs died on this farm from the poison gas, and the article states, "Others have lost a great deal more."

"According to University of Nebraska Associate Professor of Livestock Housing, Dr Gerald Bodman, hydrogen sulfide levels of 2 to 5 ppm are common in hog confinement units

. . . Inhaling air with 20 ppm for more than 20 minutes is considered dangerous for humans. At this level, pigs exposed continuously to the air will develop fear of light, loss of appetite and nervousness. Continuous exposure to higher levels will cause vomiting and diarrhea. Levels of 800 ppm or above may produce unconsciousness and death in pigs and humans." The article notes that incidents similar to Roesler's "are being reported with alarming frequency."

On page 44 a statement entitled "Toxic gases: an occupational hazard" says: "Livestock production practices during the past 10 years in the US have been evolving toward an indus-



Gestating Sow encased for 4 months.

trial approach. The livestock confinement systems approach has been the major technology behind this trend. Liquid manure storage is a common component of confinement systems for swine, beef, dairy and veal operations." Reference is made to an article in the *Journal of Occupational Medicine* that reports results of investigation of six incidents of exposure to hydrogen sulfide from liquid manure that resulted in eight deaths and three illnesses. "The trend indicates future increased human exposure to liquid manure storage." Obviously, this trend will affect huge numbers of pigs trapped in their cramped stalls.

Is this extreme total confinement so beneficial from the standpoint of economics that it is worth running such extraordinary risks? Not according to a carefully documented study from the University of Missouri-Columbia College of Agriculture, Agricultural Ex-

periment Station. In a paper entitled "An Economic Evaluation of Total Confinement, Partial Confinement, and Pasture Swine Production Systems," by James B. Kliebenstein and James R. Sleper, *Research Bulletin* 1034, February, 1980, the following statements appear: "During relatively low input costs-output prices the pasture system provided the highest return above all costs per sow."

Each year thousands of family farmers are forced off the land by a form of competition which deprives the animals involved of their most basic enjoyments. Indeed, the deprivations are so severe in the case of the sows as to cause grotesquely abnormal behavior. It is time for family farmers and consumers to join with humanitarians to prevent still further industrialization of livestock raising. Animals are not machines, and those who want to treat them as if they were must be prevented from expanding their ill-founded schemes.

A recent survey by *Hog Farm Management* indicated that 25% of its readers plan new construction this year. Given the above trends, it is all too likely that most of this construction will be hog factories. The analysis by the scientists at the University of Missouri-Columbia seems to have fallen on deaf ears.

Commenting on a number of tables, the paper states: "For example, using 16 pigs weaned per sow per year and \$.44 per pound market hogs, the partial confinement and pasture system provided the highest profit. Alternatively, fewer pigs per sow per year were needed to break-even with these two systems." Following further statistics, the article notes: "The pasture system requires the lowest level of feed efficiency to break even." And later: "The pasture system provided the highest income above variable costs per sow for the feeder pig production phase for all swine prices and feed cost levels studied." It also provided "the highest return above all costs per sow for all swine price and feed cost levels involved."

Again referring to statistics, the paper notes: ". . . the total confinement line had the greatest degree of slope (steepness), thus the highest risk. To compensate for this risk, total confinement provided the highest per

continued on page 7

Wild Pigs Point the Way

Hog farmers keen to improve the welfare of their animals without sacrificing income will wish to study the findings of a 3-year project at the East of Scotland College of Agriculture, Penicuik, near Edinburgh. The project is to evaluate behavior in relation to the pigs' environment. It is now nearing completion and the data that has emerged bears directly on welfare.

Last September the British magazine *Pig Farming* reported on results to date. The article that follows is based on this report.

"By allowing domesticated pigs to live as their wild ancestors used to, we have been able to compare their behavior patterns with those known to occur in wild pig populations," says project director Professor Wood-Gush. "It is remarkable that we have found very little difference between the two types."

But what about differences between pigs in "the wild" (a large semi-natural enclosure in the College known as Pig Park) and pigs in cramped intensive rearing units? One crucial difference here relates to the sow's behavior after giving birth. In the wild the sow "talks" to her pigs to assemble them at one side of her nest. If she wishes to lie down she moves about one meter away, taking great pains not to lie on the piglets. Some overlaying does still occur but maternal care sees to it that piglets are rarely crushed.

Another difference is that the frequency of suckling is about half that seen in more intensive systems. (In bad weather the piglets burrow into the nest wall rather than going to the udder to keep warm.) This means that the sows come on heat earlier than in intensive systems where constant suckling retards oestrus.

In the wild the sows lactate up to 90 days after farrowing; weaning then occurs in a mutual process between sow and piglets. "The bonds of kinship remain within the group, even after the sow produces her next litter," says Dr. Alex Stolba, a research fellow from Zurich and responsible for the day-to-day running of the project.

Findings from the Pig Park have been used to construct within the College grounds an "enriched environment" pen beneath a south-facing roof. There are four separate but inter-linked pens for several sows and their young. The design has taken into account the various behavior patterns seen in the wild, especially the distances between feeding (in the Park aggression during feeding is eliminated

by the pigs spacing themselves out), nesting and dunging areas.

Sows in the wild choose a nesting site that is sheltered by bushes on at least two sides. Branches to give extra protection are built into the nest which is usually 2-3 meters in diameter. During this period and when having their pigs the sows also tend to stay apart from the rest of the group. "The same thing happens in the new pen layout," says Alex Stolba. "Few contacts take place between the sow and her litter and the rest of the group for up to 10 days."

Once the 10 days are up, though, the sow begins to encourage her piglets to mingle with other pigs in the group. This socializing is seen as an important part of the pigs' behavioral development.

In the pen solid walls around the nesting area mimic outdoor nesting conditions and rubbing posts for scratching. Deep straw in the nesting area helps to cushion a piglet if it does get lain on by the sow. Special levering bars enable the penned sows to mimic such "wild" activities as chewing bark and pulling branches towards the nest.

Says Dr. Stolba: "Very few frustrations appear to build up when pigs are kept in this way. One can easily walk through the pen without upsetting the group, even when a boar is present or the piglets are small." And overall space requirements in this "enriched" system are no greater than the space needs of an intensive system.

Investigations continue but the project directors believe that the study may help overcome many of the welfare worries of intensive rearing. "The system definitely meets the needs of animal welfare," asserts Dr. Stolba. Also it has been shown to measure up in terms of production—a potential from each sow of 9.5 pigs reared to baconweight (the fastest in around 144 days) and more than 2.3 litters a year.

Pig welfare code

At the request of the Agricultural Minister the UK's Farm Animal Welfare Council has drawn up a draft code for the humane rearing of pigs. Main points are:

- A ban on weaning before three weeks old except in the case of sickly or exhausted piglets.
- The provision of a bedded area (with adequate space for dunging and exercise) and a ban on cage rearing which causes injuries to the feet and legs and triggers behavioral abnormalities.
- Improved piglet protection in farrowing pens, with an escape area at least 30 cm deep where a suitable temperature is maintained for piglet comfort and well-being.

Hog Factory— continued from page 6

man returns during high price levels. On the other hand, the pasture system provided more stable returns, thus a lesser amount of risk." Following a further table, the authors state: "Break-even feed efficiency for the pasture system was higher than for the other two systems." And again, "Return above all costs was highest for the pasture system . . ."

The conclusion must be then that large-scale swine producers are gamblers at heart and hope to make profits by volume. The paper states: "Fixed costs for some swine production systems are high, and to recoup these costs the system needs to be utilized continuously." Apparently this leads to the excessive pressure on the animals and the dangerous conditions for workers in the hog factories which were noted above.

Ill-conceived tax benefits also tend to encourage the construction of these factories. For example, a total confinement building can be wholly deducted as "equipment," but if a farmer uses an existing building for his swine and provides humanely for them, he will not be able to deduct as "equipment" the improvements he makes in the building. Big city investors, who never even see the pigs or the hog factories, can, if they are in a high enough tax bracket, make profits denied to the family farmer. Readers who are interested in further details on these financial matters can obtain information from the Center for Rural Affairs, Walthill, Nebraska, 68067.

Swiss eggs-pertise

The Swiss housewife shopping for eggs has a choice: battery cage or deep litter. Deep-litter eggs are "humane" eggs and carry the trademark of the *Schweizer Tierschutzverband*, the Swiss Animal Protection League. But the price is a little higher and how can Madame (or the shopkeeper) be sure she is really getting what she is paying for?

Science has come up with the answer. An egg laid by a battery hen rolls on wire netting to the floor. In the process the delicate membrane enveloping the egg is scarred. Invisible to the naked eye the ring-like marks show up clearly under ultraviolet inspection.

On the other hand deep-litter eggs, gently laid into a nest, reveal nothing. But that nothing is something which a lot of Swiss people are very willing to pay for.



normal hen feather



battery hen feather after confinement



Only quills are left in the tails of these battery hens. The feathers have been rubbed off against the cage wires or pecked off by cage mates. Note hens standing on top of one another for lack of space on the cage floor.



Discarded —▲

Overall view of the egg factory with an escaped hen —▶

Eggs, anyone? A candid view of a U.S. egg factory

continued from page 1

The industry frequently asserts that the birds would not produce large numbers of eggs if they were suffering. They assert that egg production has risen as a result of the battery system. Again, however, we should turn to scientific studies to test the accuracy of these assertions.

For example, the University of California's Division of Agricultural Sciences conducted experiments which show that crowding chickens in cages reduces profits. "It is difficult," they state, "for most poultrymen to visualize 3,000 hens making more money than 4,000. Many firmly believe that chickens must be crowded

the hog factory, that he can get larger returns from the increased volume of production no matter how severely his hens are stressed.

In Leaflet 2652, the University of California shows a photograph of a debeaked hen, a strange looking creature whose lower beak juts out twice as far as her upper one. This is intended to reduce cannibalism. A study by J. Peterson reported in *The Laying Hen and Its Environment* (1980) showed that in cages housing six hens, the frequency of cannibalism is approximately double that of cages holding three or four.

Battery cages with more and more hens forced into them have swept this and other countries. However, it is not universal. For example, P. Rannou, winner of a prize from the French organization *Oeuvre d'Assistance pour les Bêtes d'Abattoirs*, reports that his system, the result of 25 years of research, is highly successful. Both interior and exterior photographs of his large operation in Quimper are shown. As can be seen, the hens are able to roost, to go into nest boxes, to scratch in litter with daylight the full length of their buildings, and to forage for grain in the straw. The collection of the eggs is automatic, and the eggs are very clean because of the special nest boxes. As may be seen in the photograph, the hens' feathers are in excellent condition, and they are not debeaked. Mr Rannou offers to furnish to an American firm wishing to follow this fully tested example, a complete study on this totally automated raising of uncaged hens which combines minimum use of energy with maximum efficiency and security.

Beak trimming should be forbidden by Regulation except under veterinary supervision as a last resort when it is clear that more suffering would be caused if it were not done. From the 1981 Report of the House of Commons Agriculture Committee.

to improve labor efficiency and reduce costs per layer for housing and equipment. The point they do not recognize is that higher bird density leads to cannibalism and other social stresses that depress the rate of laying." These authorities state, "It is a well accepted principle that as the number of chickens in a given cage is increased, the mortality rate also increases and egg production decreases."

Why then, the uninitiated reader may ask, would a poultryman crowd his chickens to the very limit? Because he is gambling, like his counterpart in



Straw yards for veal production

The following is an extract from a lecture given by Philip Paxman, who initiated group housing for English veal calves, to the Universities Federation for Animal Welfare symposium at Wye College, England, on 15 July last year.

Veal production in the UK is tiny—only some 30,000 calves produced for veal in 1980, against some 7 million on the continent. The value of UK production was £7.5 million (\$14 million), compared with £2 billion (\$3.7 billion) abroad. Britain employs some 240 people in veal farming and the ancillary industries. On the continent there are around 60,000 people directly involved in veal production. On the other hand Britain exports some 300,000 calves a year whereas the continent are net importers. There are movements from France to Italy but no movements of live calves out of continental Europe.

It is clear, therefore, that there is a huge vested interest in the veal industry in Europe with concomitant conservatism and great resistance to change. Veal should rightly be regarded as a dairy product. It is a combination of two dairy bi-products—surplus calves from the dairy herd and surplus skim milk. In value it rates

second only to the liquid milk market, exceeding butter, cheese, cream and the processed milks.

In the continental system calves are housed in individual wooden pens, measuring 5'6" by 2' with slatted floors. Typically there will be 30 such crates inside one controlled-environment room. The calves are fed milk by bucket twice daily and do not receive roughage.

In the Quantock system calves are housed in groups, bedded on straw, in natural environment buildings. At the heart of the system lies the calf feeder. This acts like a cafeteria, mixing milk powder and water on demand to provide warm fresh feed through rubber teats.

Calves are bought when around one week old and weighing around 90 lbs. We aim for weight out of 375 lbs and a carcass weight of 225 lbs. Milk consumption is 470 lbs of solid feed, and the food conversion ratio is 1.65 with a production cycle of 105 days.

After arrival the calves are rested for 8-12 hours. Each calf is then individually brought to the feeder and given a rationed drink of two litres of warm milk at 8% concentration. This procedure is repeated twice a day for the following two days, and then the calves are allowed free access to the feeder. After 10 days the strength is



Hard slats without straw to lie on. Note that calf cannot even stretch out its legs when lying down.

progressively increased.

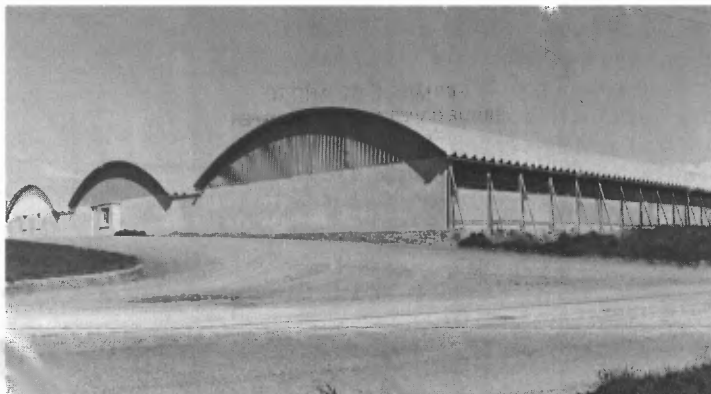
Bedding is a daily task and an onerous one. On the other hand there are none of the insults normally associated with rearing calves for beef and dairy herds—there is no de-horning and no castration.

Health inspection with loose-housed calves is at a premium, and we have found it necessary to walk through each batch of calves twice a day and physically inspect each calf. I do not mean to actually lay hands on it but to make a point of looking. We find that prominent ear-tagging assists this, as does keeping group sizes small. While the feeder accommodates 40 calves, we like to sub-divide them into two groups of 20. We look specifically for evidence of scour, nasal discharge, empty stomach and general listlessness.

We are concerned only with two major disease categories—enteritis and pneumonia. Enteritis, frankly, is not a problem at all, which we ascribe to our prophylactic medication on entry, and food quality. Pneumonia on the other hand is quite a major problem from five weeks onwards. Post mortem examination at the

continued on page 10

Straw-yard veal swept the board to win all the veal classes last summer at Smithfield Show and to win the Supreme Championship. "What particularly pleased us," said Terry Keysell, Managing Director of Quantock Veal, "was that we won in face of the strongest international competition for years, proving that British 'welfare veal' is far superior to the cruel foreign product."



Modern French Building for Laying Hens.



Hens can roost, scratch in litter, lay eggs in nests and enjoy natural sunlight.

Marguerite Yourcenar on animal rights

One of the most distinguished writers in the world today, Marguerite Yourcenar is a humanist whose recent election to the Academie Française has been widely acclaimed as a tribute to her and as a breakthrough: that most sacrosanct of all French institutions has never before admitted a woman to membership.

She now lives in the United States for the greater part of every year. The author of *Memoirs of Hadrian* is, in the truest sense, a citizen of the world and of the world of letters.

The following is a translation of part of her statement to the 1981 annual meeting in Paris of the Oeuvre d'Assistance aux Bêtes d'Abattoirs, the leading French organization seeking to reform factory farms and slaughter houses.

One may wonder whether there is any point in making a declaration of animal rights. I would welcome such a declaration with joy. But already I am sure many wiser heads are saying: "It has been more than 200 years since the declaration of the rights of man, and what has been the result? No age has been more repressive, more inclined to the large scale destruction of human lives, more driven to degrade, even in its victims, the very idea of humanity. Is it right to promulgate a manifesto for the rights of animals when—because human nature has not changed—it may be as ineffective as the old declaration of the rights of man?"

I think it is right. I think it is always right to reaffirm the true commandments, which though they may continue to be broken, will still remind transgressors that what they have done is not right. "Thou shalt not kill." All of our history, of which we are so proud, is one long violation of this commandment. "Thou shalt

not commit cruelty to animals." Or at least, thou shalt not make them suffer more than can be avoided: they have their rights and their dignity just as we do. This is certainly a very modest admonition, but in the present climate of opinion, it is, alas, almost subversive.

Let us be subversive! Let us start a revolution against ignorance, indifference and cruelty—vices that have the more often been turned against the human race because they had already been practiced on animals. Let us remember, if we are concerned with human rights, that there would be less child abuse if there were fewer abused animals, fewer "cattle cars" transporting the victims of fascism to their deaths, if we had not accepted a system of transportation of livestock where animals suffer without food and water while awaiting their deaths. And in whatever small measure is possible, let us resolve to try to change the circumstances of the lives of the animals we live with."

Straw Yards

continued from page 9

abattoir indicates that about 30% of the calves have pneumonic lesions.

Quantock's first commercial unit near Cambridge has been operating since 1977. Every calf dying there has been inspected at the Cambridge Veterinary Investigation Laboratory, and a very accurate health picture has been built up. The mortality rate is now down to under 2%.

Turning to the all-important question of economics the main costs are those of farming, feed and calf input. Compared with the crate system labour costs are certainly lower; one full-time man can deal with 400 animals on the new system, as

opposed to about 250 for crate-reared calves.

There is a straw cost and a feeder cost, neither of which occurs in crates. But because there is no heating, energy costs are lower. Also repair costs are much lower and depreciation is infinitely lower. Overall there is a saving of about £10 (\$18) a calf on the Quantock system.

I am quite confident that in Britain no more veal crates will be put in, but how about the future in continental Europe? The pressure behind the continental veal industry lies with those whose main concern is to convert milk powder into meat, which they can liquidate. The veal calf

Veal Calves "Sporty" New Chain Division

What is it like in a veal factory? The best answer to this can be found on the industry's own words taken from *The Vealer*, the spokespiece for the "special-fed veal industry," a euphemism for intensive livestock rearing.

The January-February 1982 issue advises, "Calves with bronchial pneumonia often have a headache so bad that they do not want to lower their head. In summer, calves bordering on heat stroke will not lower their heads, but will drink if you lift the bucket." This comes from a veterinarian employed by one of the big Dutch feed companies who manufacture the "milk replacer" the calves subsist on.

Besides their confinement to stalls so narrow that they cannot stretch their legs out when they lie down, veal calves are frequently chained. In the November-December 1981 issue, *The Vealer* shows a calf with the following caption: "The sporty new stainless steel neck chain insures that the calf will not be chewing on oxidized iron links that might turn the meat red."

Even *The Vealer* (September-October 1981) recognized that chaining has its drawbacks. In a box (page 33) it emphasizes: "NECK CHAINS AND STRAPS SHOULD NOT BE TORTURE. CHECK YOUR CALVES!"

The Vealer is equally frank about the strained relations between veal factories and veterinarians. In an article by George W. Crossmen III, we read:

Besides waiting too long to call veterinarians for a really sick calf, vets do not look favorably on relations with veal growers because they have long defied accepted agricultural methods. The feeding of long hay to livestock, in order to maintain a proper digestive system has been considered a sound practice for years. As long as the veal industry feeds only milk formula, which can ob-

(which consumes 10 times as much milk as ordinary beef and dairy calves) is simply a means of turning surplus milk into liquid cash.

The Europeans are short of calves, and the large traffic of calves from the UK to the continent is a source of major concern. It would be logical to reverse the flow, and for people like me to have my feed requirements manufactured in France and in return to send them veal produced by the British farming industry on the straw-yard system. It may, I hope, be a forerunner of what is to come that I recently struck just such a reciprocal deal with a French organization.

viously cause metabolic upsets down the road, it is understandable that veterinarians are not attuned to veal health. At the same time, veal growers have to maintain the realization that when they purchase auction calves they are playing with fire and they can't expect a vet to save every calf treated only a few hours from death.

The same article refers to "disease accumulated at the auction" and "cases of shipping fever which are inevitable after trucking, especially at such a young susceptible age."

Lest the reader suppose that illness is rare in special-fed veal calves, a look at the current issue (March-April 1982) of *The Vealer* shows the routine medication given by veal farmers the magazine surveyed:

Bender: We feed calves according to bag schedule the first week. We also use a preventive medication program. We usually vaccinate calves the first week. We watch calves real close and try to prevent problems before they occur. We also implant with Ralgro.

Beitzel: Day 1 we give a round of Veal Lac Paste and put calves on Neo Ter powder in mixer or Chloratet depending on condition of calves, we might use Nitrofurazone for 3 days in mixer. We also Ralgro calves at 2-3 weeks.

Yoder: 3 feedings of Nitrofurazone, then 3 weeks of Neo Ter Soluble powder in the mixer. 2nd day we give I.B.R.-P1 3 Vaccine also 1st days we gave 2cc BO-SE. 4th days 2cc P.B.#2. We also use a lot of vitamins in milk. This has worked good for us and we have been using this on recommendation after we had a bad group with I.B.R. I also use Ralgro plus Agri-Serum in the milk.

Finally, it has long been known that there is no rational reason for depriving calves of a normal amount of iron. Studies by Dr. Robert Gardner, Professor of Animal Science, have shown over ten years ago that a taste panel was unable to

Periodical Pleasures

by John Gleiber

There is, I hope, nothing in the world more universal than love for animals and the desire to protect them from needless hurt and mindless brutality. A spirited defender of animals, Madame Jacqueline Gilardoni, founded Oeuvre d'Assistance aux Bêtes d'Abattoirs to attempt to protect animals in slaughter houses from unnecessary pain and suffering and it has grown to cover animals in factory farms. It operates "sous le haut patronage du Ministère de L'Agriculture." (Why does everything sound so much better in French?) The O.A.A.B.A. Bulletin #32 is the twentieth anniversary issue. VIVE MADAME GILARDONI! It describes the Annual Meeting held on May 24, 1981.

During the proceedings an interesting idea was propounded by Nobel Laureate M. le Professeur A. Kastler. He feels the time has come to work for a law requiring all meat and eggs to be labeled to indicate whether they have come to market from battery cages and cruelly cramped stalls, or from more humane environments. This would allow the consumer, the ultimate judge, to make an informed choice. M. Kastler said "I think we should be able to achieve such a law rather soon" followed by, according to the Bulletin, "Applaudissements."

Four pages are devoted to the presentations of Diplômes D'Honneur from the O.A.A.B.A. and Diplômes accompanied

by medailles from the Department of Agriculture. These awards are similar to the Monitor Awards described in our last Quarterly and are given to government employees who have introduced humane treatment and principles into some work situation. The photographs of the justly proud honorees range from beaming young and bearded to middle-aged and staid, but all have done something meritorious for animals.

It's fun to read as well as instructive. Madame Gilardoni writes about the founding of the Society and the events leading up to it. There is an account of legal action (Gallic, so probably awesome) taken over the year. There is a wonderfully dramatic account of the rescue of a fallen heifer in the Haute Savoie by a helicopter owner who volunteered his equipment. Academician Marguerite Yourcenar (see page 10) writes movingly about animal rights. And, everywhere there are photographs reflecting the spirit of this strong, active Society.

It would be too much to urge you to learn French in order to read this, but if you can rustily squeak through, you'll find a lovely, across-the-sea affirmation of the supranationalism of our common goal.

Inquiries may be addressed to O.A.A.B.A., Siège Social, Maison des Vétérinaires, 10 Place Léon-Blum, 75011, Paris, France.

differentiate between normal veal and so-called "white" veal. "The public demands a calf that is white which is borderline anemic," according to Richard G. Warner, Professor of Animal Nutrition at Cornell University. "Since iron is needed by man, red meat is better than pale, but the veal companies feel no pressure to change." (*New York magazine*, November 5, 1979)

Sad disappearance

Maziwi Island, off north Tanzania, which was the main nesting place for sea turtles along the East African coast, has vanished beneath the sea, reports the *Tanzanian Daily News*. Two researchers could find no trace or it nor of the turtles.

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The leopard's downlisting could be its downfall

The African leopard has been down-listed from endangered to threatened. This change of status means that Interior believes that while the leopard may become endangered in the foreseeable future, right now it is not.

On paper this is a subtle distinction; but on the ground it is all-important. For it allows American sport hunters to bring home leopard trophies from Africa. And this despite the fact that the species is in Appendix I of CITES.

The decision was prompted by a report on the status of the leopard in Kenya. Compiled by Dr P.H. Hamilton it was highly critical of a previous "desk investigation" by Randall Eaton which had "grossly inflated" the leopard population of Kenya. Nevertheless Hamilton recommended the step which Interior has taken, arguing that the leopard is now "only" threatened and that revenues from sport hunting would improve conservation of the species by tying it to a cash value.

Overwhelmingly conservationists have taken issue with this line of argument. In a lengthy and carefully documented counter-report, *Defenders of Wildlife* goes along with a great deal of what Hamilton says but arrive at a quite opposite conclusion. Hamilton paints a bleak picture of the leopard's likely future—its dwindling forest habitat and its vulnerability to traps, snares and guns.

He concedes, too, that his population estimates are "heavily dependent upon subjective data and assumptions". This is commendably honest but does nothing to bolster confidence in the estimates he produces. (He also insists that any extrapolations to countries outside Kenya must be "subjective to an extreme".)

Before a species may be downlisted, the Endangered Species Act stipulates criteria which must be met—one of them being that the species is showing clear signs of recovery. On the best available evidence (including Hamilton's) the leopard is still declining in most of its range.

The chairman of the Cat Specialist Group of IUCN's Species Survival Commission, Norman Myers, has also strongly opposed the reclassification. Myers makes three main points:

- The 42 African countries which make up the leopard's range are too large and diverse a region to be treated as one.
- The proposition that wildlife management in the region will be able to keep sport hunting firmly within its legally laid-down bounds is not readily supportable.
- The belief that local people will benefit from sport-hunting revenues and thus be given an incentive to become conservationists rather than poachers is largely a myth.

Calling all AWI members!

Have you chosen your free AWI book? Here is the current selection list.

Whales versus Whalers—a series of articles, 1971-1982, on the campaign to Save the Whale. Illustrated.

Facts about Furs—a history of the fur trade by Greta Nilsson. Capture methods; banning of the steel-jaw trap by 48 nations; trapping laws in all 50 states. Illustrated.

The Bird Business, A Study of the Cage Bird Trade—a fully documented study by Greta Nilsson, with a foreword by S. Dillon Ripley of The Smithsonian Institution and a chapter by Tim Inskipp. Illustrated plus 8 pages of color photographs.

First Aid and Care of Small Animals—advice on helping wild creatures in trouble by Ernest Walker, former assistant Director of the National Zoo. Illustrated.

If you have not yet applied for one of these, write to the Institute identifying yourself as a member and specify which title you would like to have shipped to you.

Traveling Dogs

Off on vacation soon and planning to take Fido with you? Good—but what are the regulations on immunization, health certificates, quarantine and so on? The answers are all in a new booklet, *Traveling With Your Pet*, put out by the ASPCA, 441 East 92nd St., New York, NY 10028.

The downlisting of a species ought to be a success story—the story of how an animal has come back from the brink. But when a still endangered species is downlisted, it then stands in even greater danger than before.

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COMMERCIAL WHALING BANNED

IWC Votes 25 to 7 to Stop Killing Whales Within 3 Years

At the biggest meeting yet held by the International Whaling Commission, July 19-24 in Brighton, England, the 39 member nations approved a carefully worded resolution of the Seychelles to move all catch limits for the killing of whales for commercial purposes to zero by the 1985-86 season. Seconded by Sweden, St. Lucia, Australia, New Zealand and Oman, the motion, strongly opposed though it was by Japan, Norway, Iceland, Peru, Brazil, the USSR, and Korea, won 25 "yes" votes. Five nations abstained.

Representatives of international groups attending the meeting greeted the unexpectedly large vote with vociferous enthusiasm. The result of an eleven-year-long campaign that began with Congressional resolutions calling for a 10-year moratorium on commercial whaling and embraced confrontations with whalers on the high seas, exposés of pirate whaling, a variety of demonstrations and persistent worldwide lobbying, the IWC decision was the culmination of a struggle which involved increasing numbers of

conservation and humane groups throughout the world. The most sweeping victory that any group of animals has won internationally, it presages further inter-group efforts for other animals in need of protection from cruelty and from the threat of extinction.

The work for whales is not yet done, however. The whaling nations fought hard for quotas for the coming year and succeeded in obtaining a total of 12,371 whales for 1982/83, including 10,867 Minke Whales, 711 Brydes,



ya no resuena nuestro canto en el mar
¡¡ NOS EXTINGUIMOS !!

Spanish Save the Whales poster features Guernica.

(Continued on page 2)

Draize Amendment passes Senate

Senator Dave Durenberger (R, MN), author of Senate Resolution 65 calling for a substitute for the Draize eye irritation test, presented an amendment to the Supplemental Appropriations Act of 1982 incorporating the substance of the Resolution into the Act.

Senator Daniel Patrick Moynihan (D, NY) co-sponsored the amendment which was moved by Senator Mark Hatfield (R, OR) and passed by voice vote in the Senate.

(Continued on page 4)

Laboratory Animals Bill Approved by House Science and Technology Committee

Congressman Doug Walgren's (D, PA) bill to encourage development of alternatives to laboratory animals, and reduce pain infliction on those that continue to be used, cleared a major hurdle August third when it was approved by voice vote after an intense debate on a "sunset" provision by members of the Science and Technology Committee chaired by Don Fuqua (D, FL).

George Brown (D, CA) was successful in amending a surprise amendment offered by Barry Goldwater, Jr. (R, CA) for a five-year "sunset" clause. Brown's move changed the period to ten years, thus synchronizing mandatory congressional review of the legislation with the period allowed institutions to achieve full accreditation—a much less damaging com-

(Continued on page 3)

Commercial Whaling

Continued from page 1

100 Sei, 293 Fin, and 400 Sperm Whales. These quotas, down only about 2,500 from this year, must be greatly reduced next year as the phase-out moves to completion.

VOTE ON WHALING MORATORIUM

For (25)	Sweden
Antigua	United Kingdom
Argentina	United States of America
Australia	Uruguay
Belize	Against (7)
Costa Rica	Brazil
Denmark	Iceland
Egypt	Japan
France	Norway
Germany, F.R.	Peru
India	South Korea
Kenya	U.S.S.R.
Mexico	
Monaco	Abstain (5)
Netherlands	Chile
New Zealand	China
Oman	Philippines
St. Lucia	South Africa
St. Vincent and the Grenadines	Switzerland
Senegal	Absent (2)
Seychelles	Dominica
Spain	Jamaica

Although Tokyo newspapers reacted strongly to the 25-7 vote, calling on the government to file an objection to the IWC decision, the matter is under consideration with differing views reportedly held by different major departments of government.

A prime consideration for Japan is the possible loss of access to the U.S. 200-mile fishery zone if it fails to honor IWC decisions. The United States holds two powerful economic "sticks": the Packwood-Magnuson Amendment to the Fishery Conservation and Management Act and the Pelly Amendment to the Fisherman's Protective Act. The Packwood-Magnuson Amendment provides for the automatic reduction of 50% of the fishing allocations in the U.S. 200-mile zone of those countries which are certified by the Secretary of Commerce as acting in violation of whale conservation programs. If defiance of IWC decisions continues, fishing is automatically terminated altogether. The Japanese fishing industry, which took \$425,572,000 worth of fish from our 200-mile zone in 1981, is particularly vulnerable to this law.

The Pelly Amendment is discretionary. If a country acts "to diminish the effectiveness of an international fishery conservation program," such as the IWC, and is so certified by the Secretary of Commerce, the President

of the United States may "prohibit . . . importation into the United States of fish products of the offending country for such duration as he considers appropriate." The importance of the U.S. market to these whaling nations is demonstrated by the following: Japan exported \$321,662,000 worth of fish products to the United States in 1981. In the same year Iceland, Brazil, Korea, Norway, and Peru exported \$176,000,000; \$105,336,000; \$91,659,000; \$70,800,000; and \$30,648,000 respectively.

Readers who would like to have current information on how to join in efforts to prevent objections from being filed to the commercial whaling phase-out are invited to write to Whale Campaign Coordinator, Animal Welfare Institute, PO Box 3650, Washington, D.C. 20007.

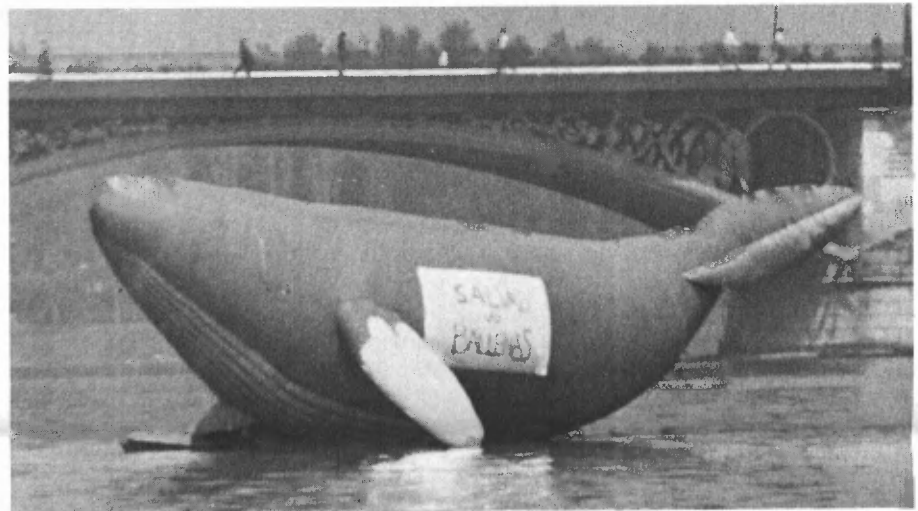
Seeking alternatives to animal tests

Canadian government support

The Natural Sciences and Engineering Research Council of Canada (NSERC), briefed by the Canadian Society for the Prevention of Cruelty to Animals (SPCA), has agreed to support research into non-animal testing. The SPCA is delighted with this response and says it is probably the first time that a government-funded body has acted in such a positive manner. According to NSERC, "Many researchers holding NSERC grants already use alternative methods in their research projects, but few are actually working on research aimed at improving existing non-animal testing models, at developing new models, or at validating the usefulness of such models." It is now up to Canadian scientists to apply for grant money for 'alternative' research projects.

Continued next page

FLO fights for whales in Spain



Peter Millington

Stop Whaling, Peace to the Whales is the message which balloon whale FLO and her guardian Peter Millington took to Spain immediately after the 1981 IWC Conference. Surfacing in all sorts of different spots, the tireless pair, accompanied at times by FLO's offspring LITTLE FLO, kept campaigning throughout the winter and spring, attracting plaudits in plenty from the press and a warm welcome from tens of thousands of Spaniards who formerly supported, or else knew nothing about, their country's whaling activities.



Peter Millington

Indeed FLO can claim to have influenced the crucial Parliamentary debate which ended with a decisive vote in favor of ending Spanish whaling forthwith.

'Alternatives' research funded in UK

The quest for alternatives to animal testing has taken a big step forward in Britain, reports the Fund for the Replacement of Animals in Medical Experiments (FRAME) from its new head office in Nottingham. Thanks to donations and pledges from cosmetic, chemical and pharmaceutical companies—well known names include Avon Products, Bristol-Myers, Hoechst UK, Pfizer, Rimmel International—FRAME's £250,000 (\$450,000) research program got underway in June. Individual FRAME supporters have also contributed.

"A very successful meeting. . . ."

Last April the Humane Research Trust, whose headquarters are in England, held a
(Continued on page 10)

Laboratory Animals Bill *Continued from page 1*

promise. The Act will have to be reapproved by the Congress at the end of ten years.

The bill has undergone lengthy examination, discussion and modification by both scientific and animal welfare organizations reaching what the American Physiological Society



Congressman Doug Walgren

(APS) characterized in a letter to the Congressional Committee as "an unexpected level of acceptability." In a field where physiologists and animal protection organizations have been at loggerheads for years, the possibility of approaching consensus seemed remote until a series of meetings organized by Tom Lantos (D, CA) and chaired by Constance Kagan of his staff brought together representatives of APS, American Association of Medical Colleges, American Psychological Association, National Society for Medical Research, Society

Charles River Labs Admit Faulty Genetic Population Control

"In Wake of Mouse Mix-up, Studies Are Left in Ruin" is the title of an article by Philip M. Boffey in *The New York Times* of July 27, 1982. This is not a scare headline. The world's biggest commercial supplier of laboratory animals, the Charles River Breeding Laboratories, center of a multi-million dollar international trade, have acknowledged that for at least 15 months they filled many orders for BALB/c, an inbred strain of mice, with shipments which contained some mice of different genetic backgrounds.

Mr. Boffey writes:

At The University of Wisconsin, a cancer researcher reports that nine

months of painstaking work were "shot" because the laboratory mice she was using were not the genetically pure strain she had ordered. At the National Institutes of Health in suburban Washington, a virologist says he had to repeat four months of work for the same reason. And at a major cancer center, a young investigator complains that his grant was not renewed and he will have to seek a new job because mislabeled mice caused his experiments to fail, leaving him with no valid findings to publish.

Dr. Brenda Kahan, the Wisconsin scientist mentioned above, reported on this genetic contamination in the July 26, 1982, issue of *Science*. Months of intricate experimentation proved worthless when it became apparent that all were not the BALB/c, thus skewing the experiment. "The seriousness of our findings cannot be overemphasized," she wrote.

Harold Hoffman, the chief of genetic monitoring for National Institutes of Health animals, warns that as many as 1000 experiments may be affected. He calls this damage estimate conservative.

In any painful experiment that goes down the drain because the wrong animals were inadvertently used, a serious ethical problem is raised. The animals suffered to no possible purpose. If the experiment is repeated, twice as many will suffer. The result is the very opposite of current efforts to develop alternative methods of experimentation and testing in order to reduce the number of animals used.

Not all the experiments in which these particular "wrong" mice took part were painful; however huge numbers of mice produced by Charles River are used in testing which involves severe, long-lasting pain. Clearly the current mass production of small animals needs a great deal more thought than is now being given it. Otherwise, disruption of scientific research through confused results—detected or undetected—will undermine essential parts of the scientific edifice, and totally unnecessary and hence unjustifiable pain will be inflicted on large numbers of animals in the process.

Major provisions of the bill include:

1. Development of substitutes for painful tests and experimentation.
2. Establishment of an Animal Studies Committee in every laboratory including at least one member not employed by the institution who is "primarily responsible for representing community concerns regarding the welfare of the animal subjects."
3. Committee requirement to inspect the animals regularly to see that animal pain and distress are minimized and to report on its findings to the granting agency.
4. Provision of job protection for employees who report on mistreatment of animals.
5. Limitation on using an animal in more than one major operative procedure.

6. Provision for exercise for laboratory dogs and other animals.
7. Provision for suspending or revoking grants for violation of the law.

The number of the new Committee bill is H.R. 6928.

Draize

Continued from page 1



Senator Dave Durenberger

The full text of the amendment reads as follows:

Since Federal regulations require the Draize rabbit eye irritancy test for predicting human ophthalmic response in pesticides and household products; and

Since the development of this painful test over thirty-five years ago there has been enormous scientific innovation while the Draize test remains basically unchanged; and

Since the reliability of the Draize test has been called into question:

Bears are being slain for their paws and claws

The California black bear is under siege. Hundreds, maybe as many as a thousand, have been killed by poachers operating throughout the bear country of California and other western states, and the population is clearly suffering. This shocking slaughter is spurred, it seems, by Asian American dealers in Los Angeles. The bear's paws, claws and gall bladder are highly prized.

Many Oriental people consider the paws a delicacy, value the claws as jewelry and believe the gall bladder is a sure cure for any number of ailments ranging from hepatitis to toothache. Agents of California's Fish and Game Department suspect that exports are finding their way to the Far East where a bear gall bladder can fetch as much as \$3000.

The fear is that growing prosperity

Great Pyrenees come to Texas—coyotes depart

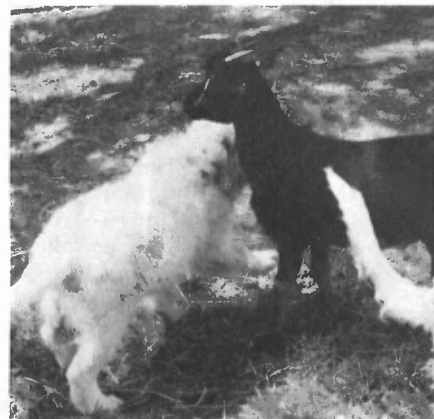
Once upon a time in the rocky, broken terrain of central Texas, stockman Durwood Kelly had a problem: coyotes were gobbling up so many of his sheep and goats that he was near to bankruptcy. But no longer. Today his animals grow sleek and fat, protected every moment of the day and night (especially night) by "huge white brutes with the head of a bear, the heart of a tiger and the disposition of a doting grandpa."

These remarkable guardians are Great Pyrenees dogs. Though docile and playful around humans they live with the sheep and goats 365 days a year. Even a meal break is not regarded as time off. If their charges move away they simply pick up their dinner pails (they are fed from buckets) and follow.

It was desperation rather than confidence which in 1979 led Kelly to acquiring a pair of Great Pyrenees puppies. He says of the breed: "They have a natural instinct

Now, therefore,

It is the sense of the Senate that the Consumer Product Safety Commission, the Environmental Protection Agency, and the Food and Drug Administration set aside research time and funding to develop and validate an alternative nonanimal testing procedure.



Ston and Nance Redding

for guarding. There's no training involved. You just raise the puppies in a pen with sheep or goats, and when they're 10 months to a year old put them out with the flocks."

Coyotes around Kelly's ranch—and neighboring ranches which have followed suit—now give livestock a wide berth. The attacks have ceased. The flocks multiply. In this part of Texas the coyotes are back to catching rabbits.

Citizens against poaching

Idaho is the latest western state, following Wyoming and New Mexico, to form a vigilante group to counter poaching. *Citizens Against Poaching* has a tollfree hotline staffed by state enforcement officers. Rewards of up to \$500 go to callers whose tip-offs result in arrests. The program began in May 1981. In under a year some 450 calls were received and about \$24,000 reward money paid.

California advertises its \$500 reward and gives its poaching hotline number on every piece of mail it sends out.

It was Wyoming which demonstrated the importance of rewards. In the early days of the state's hotline (it has been going three years) calls were few. But when rewards were introduced calls—and arrests—shot up.

The earliest program of this kind belongs to New Mexico. It was begun in 1977 when the state discovered it was losing 34,000 head of fish and game every year. Called *Operation Game Thief* it has strong citizen backing.

Poachers, it is recognized, kill not for food but for profit. Licensed hunters are therefore vehemently opposed to them. For large-scale poaching has meant fewer animals and shorter hunting seasons.

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Language, science and the abuse of farm animals

The following is a shortened version of a talk given by Brian Klug in Urbana, Illinois, last March. The occasion was a symposium entitled *Controversies Over the Raising of Food-Animals in Close Confinement*, under the auspices of the *Organization for the Promotion of Animal Welfare*, University of Illinois. Brian Klug, who teaches in the Department of Philosophy at De Paul University in Chicago, contends that a recent widely disseminated report on the welfare of farm animals is "fundamentally misconceived and completely misses the point—deliberately."

Raising farm animals is a serious business. It is a source of food. It is a way of life for small farmers. It is big business for those industrial corporations and conglomerates that have substantial investments in American agriculture—and also for those companies which manufacture and market the kind of capital-intensive equipment that is used on the modern farm. It is the focus of research, development and training for agricultural engineers, animal scientists and vets. It is the subject of such trade publications as *Feedstuffs*, *Hog Farm Management* and *Broiler Industry*. Last and surely not least it is no laughing matter for the one billion poultry, 115 million cattle, 60 million pigs, 12 million sheep, not to mention unspecified numbers of rabbits, raised for food on American farms.

Increasingly, these animals have been raised in conditions of close confinement. This can take the form either of isolating individual animals from each other, or of crowding animals together, normally indoors. Close confinement systems are now a major feature of modern farms in America. Nearly all table eggs come from hens housed indoors in cages, each containing from 3 to 6 birds. Broiler chickens (chickens raised for their flesh rather than

their eggs) are characteristically grown in indoor floor systems with a space allowance of 0.7 to 0.8 square feet per bird. Most dairy cows are kept in confinement rather than grazed on pasture. Dairy calves are separated from their mothers 1 to 3 days following birth; they are housed in various types of structures, including individual pens. The shift to fewer and larger swine enterprises has been rapid, and there is a trend toward controlled environments in the raising of pigs.

My source for these facts is a report published in November 1981 by the Council for Agricultural Science and Technology (CAST). This 54-page document, prepared by 24 scientists, is entitled *Scientific Aspects of the Welfare of Food Animals*. The CAST Report was distributed to members of Congress, the US Department of Agriculture, the media and institutional members of CAST. The latter include such venerable bodies as the American Society of Animal Science, the American College of Veterinary Toxicologists, the American Society of Agricultural Engineers, the Institute of Food Technologists, and so on. Thus it is no will-o'-the-wisp. It is a substantial attempt to defend close confinement systems, and it is intended to be influential. However, I consider that it is fundamentally misconceived and completely misses the point—deliberately.

Over the last 30 years or so, there have been radical changes taking place at every level in American farming. You might say that the industrial revolution has at last hit the countryside. At any rate no one today would blush at the statement that producing food, like producing automobiles, is an industry. Food is a product. And the raw material, be it corn or livestock, is seen as simply a factor of production. In this sense alone, quite apart from the conditions in which the animals are kept, the modern farm is like a factory: it exists to transform input into output, raw material into product, with maximum efficiency.

I quote from the CAST Report: "The development of environmental controls and practices followed in modern swine-production operations has been guided largely by production and clinical criteria and economics". Note that language: it is industrial through and through. Instead of referring to pig-farming the report talks



Too close for comfort.

about "modern swine-production operations": in other words, a factory where swine meat is produced.

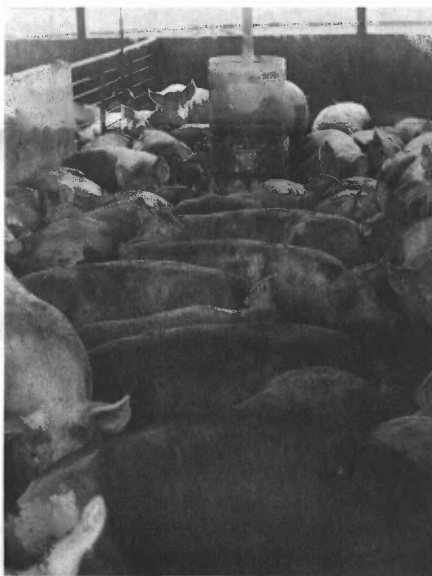
But does the reference to "clinical criteria" signify a departure from a purely industrial perspective? Not so. The efficiency with which a factory operates is a function of numerous factors, including the quality of the stock. In effect, clinical criteria are criteria of management and control in the quality of the stock—in this case, *livestock*.

Invisible hand or sleight of hand?

The authors of the CAST Report explain that it is the profit motive which has led to the adoption of the new technology of close confinement. However, they do not consider that the welfare of farm animals has been sacrificed on the altar of industry. For they affirm, as a central article of faith, that "the goal of maximum profitability pursued by animal producers (and others) leads automatically to improved welfare of both animals and humans". Even Adam Smith in his grave might raise an eyebrow at the idea of an "invisible hand" that miraculously promotes the welfare of *all* living creatures—not just human creatures—via the motive of private gain. However, a careful reading of the report reveals that what we have here is not so much an *invisible hand* as a *sleight of hand*.

The trick works as follows. In the first place, the CAST Report explains that the goal of maximum profitability has led to the development of close confinement systems. These systems have been designed so that the animals should be in the sort of physical condition which results in efficient 'performance', thus promoting the profitability of the enterprise. In the language of the report, the design of modern "food-

Continued next page



Pigs bought at auction for fattening, they remain in this overcrowded pen till slaughter weeks later.

animal production operations" has been guided largely by "production and clinical criteria".

In the second place, at the end of the section *Scientific Evaluation of Animal Welfare* we read: "The principal scientific basis available for understanding and decision-making regarding the welfare of domestic farm animals is the extensive body of data on the integrated responses of animals to their environment provided by traditional production and clinical criteria".

So that's how it comes about that the goal of maximum profitability automatically improves the welfare of farm animals! Profitability is furthered by confinement systems whose design is guided by "production and clinical criteria". These same criteria are said to be the "principal scientific basis available" for evaluating farm animal

the former. Nonetheless, there is normally some trade-off between the combination of conditions that leads to the maximum welfare of the individual animals (as indicated by their production as individuals) and the combination of conditions that leads to the maximum economic profitability of the overall operation involving many animals (toward which the producer directs his management decisions)". (emphasis added)

In other words, what matters to the producer is overall profits—not the productivity of each animal taken separately. Notice that the text says specifically that the pursuit of maximum profit does not maximize the welfare of farm animals "as indicated by their production as individuals". The suggestion here is that the more you get out of a farm animal the better off it is! Needless to say, those of us

"TIME WAS. . . ."

From front page article *Wall Street Journal*, 18 December 1981.

State Center, Iowa.—Time was when picture-perfect farms dotted this rolling countryside. Spacious red barns opened onto breezy pastures. Chickens chased one another round barnyards, stirring up dust devils. And sows lolled in mud on hot summer days, their piglets close by.

Not anymore. Stark metal sheds are gradually replacing barns here and across rural America. Inside some of them, laying hens are packed wing to wing in wire cages, stacked like crates one above the other. In others, rows of sows chained at the neck lie on their side while newborn piglets clamber over them. Veal calves spend all their short lives in two-foot wide stalls, unable to turn around. And many former barnyard denizens never see daylight or walk on the ground.

or sodium in the diet may dramatically increase egg production (reproductive performance), but this does not necessarily represent an improvement in the welfare of the hen that produces the eggs". And again: "In the absence of appropriate management, high productivity may lead to production-related diseases . . . of high-yielding dairy cows and fast-growing pigs and broilers and, hence, may actually decrease the welfare of the animals affected by such diseases". I suppose we should be thankful for these concessions to the obvious.

Furthermore, as Dawkins argues (*Animal Suffering: The Science of Animal Welfare*), "although physical health is an important component of any animal's welfare . . . it is not sufficient by itself". Even clinical criteria are an inadequate guide to an animal's welfare. A physically healthy animal can experience what Dawkins calls "mental suffering". Now it is just possible that the authors of the CAST Report are conscious of this dimension of animal welfare. On page 18 they concede that production and clinical criteria "do not necessarily reflect all aspects of animal welfare . . ." I find this intriguing. It seems to throw the barn doors wide open. But unfortunately the text does not expand on this thought, and we are left guessing as to what the authors have in mind.

The discussion on pain (curiously included in the section *Human Perceptions of Animal Welfare* rather than under *Scientific Evaluation of Animal Welfare*) concludes by quoting a veterinarian (who is also an ethologist) to the effect that "animals can suffer in other ways, possibly more intensely and for a longer time, from fear, anxiety, frustration, deprivation, and social stresses". But in a five-page discussion on stress, later in the report, fear and anxiety and deprivation are not mentioned at all; frustration gets two mentions.

Complacency and evasiveness

Many observers point out that animals closely confined are often bored, frustrated, neurotic, obsessive, and so on. This is the kind of thing that leads people to say that such animals are under 'undue stress'. And it seems to me that these are serious issues for anyone genuinely concerned about farm animal welfare. Yet when we examine the way in which the CAST Report handles the subject of stress, what we find is a combination of complacency and evasiveness.

First the complacency: "The overall effects of stress upon animal production are reflected in values obtained for the traditional production and clinical criteria". Next the evasiveness. The authors say that until much more research is done, "the utility of ethology as a scientific basis for guiding animal production practices is limited. Much the same may be said of physiology". And that is all the CAST Report has to say about the countless animals kept in close confinement whose behavior is obviously disturbed.

They must wait, and we must wait, until all this preliminary research in ethology and physiology has been done and published and verified and re-verified. And in the meantime? In the meantime we are to discount the evidence of our eyes.

So we end where we started: the CAST Report places its seal of approval on the conventional approach to farm animal welfare—which happens to dovetail so well with the pursuit of maximum profitability. This is hardly surprising, given the provenance of this report.

What does it mean to talk about the welfare or well-being of an animal? On page 19 we read: "Animal welfare is a broad concept that as yet cannot be measured objectively and expressed numerically. Further research is needed to develop appropriate measurements for the currently non-quantifiable aspects of welfare". I find these sentences slightly mad. Would the authors say the same about human welfare? Do they dream of a day when a number can be assigned



Overcrowding so severe pigs must climb over each other to reach water.

welfare. So of course the results correlate. The argument is as circular as a slice of bologna.

Moreover this logic would enable us to draw the curious but convenient conclusion that the higher the profit, the better the welfare of the animals. But to give credit where it is due, the authors of the CAST Report do recognize one issue which, so to speak, slips through the fingers of the invisible hand (or sleight of hand) that we have been examining. They say: "The physical well-being of the animals in food-animal production operations is an essential element in economic profitability. The latter cannot be achieved without careful attention to

who protest against the keeping of animals in close confinement are not urging producers to forsake the goal of maximizing overall profits in order to aim instead at squeezing as much as they can out of each animal individually.

In short, it is silly to equate productivity with welfare. For one thing, the productivity of an animal can be measured in many different ways, which might or might not yield similar values. For another thing, the vaunted production and clinical criteria can diverge. Even the CAST Report acknowledges that a productive animal is not necessarily a healthy animal. For example: "An increase in illumination or an increase in calcium



Piglets suckling their crated mother. Despite use of these cruelly restrictive crates newborn pig deaths are about the same as 25 years ago.

to everything of value in our lives? What about love, fulfillment, happiness? Would they say that these too are 'broad concepts' that as yet cannot be measured objectively and expressed numerically?

It's the "as yet" that gets me—as if in time there is nothing that cannot, and will not, submit to the ruler and compass and the other instruments of calibration which are the stock-in-trade of science. But is it science to use, in one realm of knowledge, the terms and methods that pertain to another? To know and understand—as far as we can—the lives that are led by creatures other than ourselves is a very different matter from doing physics or even physiology. It is an abuse of human beings to treat them as if they were merely factors of production. It is no less an abuse to treat animals this way. It is an abuse of what they are.



Veal calves crated for life in their narrow stalls.

In order to grasp what is meant by 'having a life of one's own' you do not need to have a Ph.D. or a degree in animal science. Anyone who has watched a bird alight on the bough of a tree, sit there for a minute or two, preen itself, look around, and take to the wing for no apparent reason—no reason apparent to us—knows what it means for a bird to have its own life, to go its own way. Knows what it means, by contrast, for a chicken to be crammed in a small cage with three or four other hens, inside a building with no windows, kept there for the whole of her abbreviated life, unable even to stretch her wings.

By the same token, what sort of expertise is needed to judge whether the life of a sow, confined in a bare narrow stall, is impoverished? The facts here are evident to anyone whose judgment has not been cal-

loused by over-education or by vested interest. Quite simply, a bare narrow stall is not an environment which provides sufficient scope for an animal like a sow to live her life. That is the plain truth, for those who have eyes to see it.

However, the authors of the CAST Report seem to think that we are misled by the evidence of our eyes. In particular, they maintain that there is no scientific proof that pigs need to touch each other, except perhaps to keep warm. Here is how they put it: "Their requirement for physical contact, apart from the presumed temperature-regulatory function, has not been established". But has it been established that pigs do not need physical contact? Hitherto they have roamed and romped together. So why not give them the benefit of the doubt?

This is not science

We are told again and again throughout the report that further research is called for, that additional information is needed. Yet there are significant exceptions. No doubts are expressed about continuing the practice of keeping hens in battery cages. Instead, the report maintains that cages protect the birds from the manifold hazards of life in a floor system. Similarly, no qualms are expressed about raising veal calves in individual stalls so narrow that they cannot turn around.

The CAST Report claims to be scientific. Genuine science is disinterested, detached, impartial. In the light of the criticisms made here, I ask you: Is the CAST Report science? Or is it propaganda, parading as science (Continued on page 10)

Mass killing of Europe's migratory birds still continues

An EEC Directive, adopted back in December 1978, sought to end a long and shameful tradition: the twice yearly mass slaughter of migratory birds, mostly small song birds, by cohorts of European Mediterranean hunters. The Directive did not come in force until spring 1981 in order to give the nations concerned—principally Italy and France (Greece was not then an EEC member and Spain is still not)—time to pass new laws.

The Directive was hailed as a great victory for bird protection. Sad to report, though, the birds have not felt the benefit. The chances of reaching journey's end for those in transit through Italian and French airspace are not better, and perhaps worse, than before. That is to say they are still welcomed in the age-old way—with shot, snares, nets and lime. Only these days the guns are more numerous and the various other murderous devices more sophisticated. The motive is not food. Nor even profit. It is—fun.

1981 came and went without either Italy or France doing anything whatever to stop 'the fun'. Belatedly, May this year, Italian law has come into line with the EEC Directive. But there is not a lot of confidence that Italian hunters will quickly abandon the habits of a lifetime. Or be made to.

The year 1982 has also seen some movement from France—but in the opposite of the required direction. Under pressure from the hunting lobby the Mitterand government has extended the killing season for all thrush species and now allows the spring shooting of turtle doves.

The European section of the International Council for Bird Preservation has put in an 'official complaint' to the EEC Commission, asking them to remonstrate with the French government for their shocking disregard of the Directive (to which, of course,

France is a signatory) and requesting them to take whatever action may be required, including legal action, to compel compliance.

The carnage is not, of course, confined to Italy and France. Prominent among the guilty are also Spain, Portugal, Malta, Cyprus and, outside Europe, Lebanon. But how many birds are slaughtered every year? And are breeding populations in northern Europe suffering? The following article—a shortened version of a paper written by Siegfried Woldhek on behalf of the International Council for Bird Preservation—attempts to answer these and other key questions.

How many birds are being killed annually in Mediterranean countries? Posing the question is easier than answering it. Making estimates is a very tricky matter indeed in the vast and relatively understudied Mediterranean region. There are numerous places where only a few local trappers and shooters know how many birds are killed.

The figure varies from year to year. The number shot and trapped depends on the number wintering and that is related to breeding success: the more young, the more birds wintering south. Nevertheless a tentative estimate has been made. The best available data leads to the conclusion that several hundred million migratory birds are being killed every year in the Mediterranean countries!

Does this killing have a detrimental effect on bird populations? To answer this question one needs to know the total number of birds available to Mediterranean hunters: is it 500 million, a billion, 10 billion or perhaps 100 billion? Using Moreau's very rough approximations I come to a total of two or three billion birds migrating through or wintering in the Mediterranean annually. Out of this total several hundred million—or 10-15% are deliberately killed.

This percentage, though, is an average of all species lumped together. Shooters and trappers prefer species



Courtesy of Ardennes Ecologie

Though protected by law in northern Europe, 50,000-80,000 thrushes are killed by trapping in the Ardennes every year.

such as ducks, waders, turtle doves, quails and raptors. Also some traps work selectively. Near Tangier, for example, traps are placed in the top of bushes so that they catch only birds which habitually come there, such as the woodchat shrike. For some species the toll is therefore much higher than 10-15%. Species which were shot or trapped in great numbers some decades ago hardly migrate through these places anymore; for example, the skylark on Malta, the quail on Egypt's coastline, the turtle dove in the Nile Delta and the bee eater on Cyprus.

Everywhere in the Mediterranean guns, air-rifles, traps, lime-sticks, nets and snares are ready to take a bird's life. The passion to kill, though, the shooting at anything that moves, the large-scale netting, trapping and liming, and the consumption of little birds, is rare outside Europe. This doesn't mean that the Middle East is a paradise for migratory birds; far from it. But shooting and catching are much less common there.

Spring hunt deadlier

Most birds are killed in early autumn, especially during the weekends. The slaughter is less in spring because of the toll taken by the autumn hunt plus natural causes. But birds killed in spring are those which have proven strong enough to survive; spring shooting directly operates on the breeding stocks.

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The shooting pressure is increasing: more and more hunters can afford a car—which enables them to travel quickly to the best places—and more and more guns are being sold. In some parts trapping is becoming less popular. Usually the catcher leaves a certain number of traps in the field and returns when it suits him. Nets range from small to large, from simple to complicated, depending on place and species.

Snares are not common but bird-lime is widely used. This glue, which is made from honey and berries of the Assyrian plum tree, is applied to sticks which are then placed in bushes. A perching bird has no chance of escape. In northern Italy complete fake trees are constructed from such lime-sticks.

What to do

Imagine the gruesome scenes caused by these hunting methods: shot birds, wounded but not killed; birds with legs broken in traps; birds hanging from lime-sticks and succumbing to hunger or thirst before being collected. And innumerable similar horrors.

What can be done? Better laws and better law enforcement must be obtained; nature reserves must be created; information about birds must be disseminated. In a great many Mediterranean countries no bird books in the national language exist at all! In most countries the number of bird watchers is negligible.

The European Committee for the Prevention of Mass Destruction of Migratory Birds is made up of the various national committees. With funds collected in northern Europe it supports active bird protection where it is most needed. So far over 50 projects have been financed in Italy, France, Spain, Malta, Tunisia, Crete, Cyprus and Turkey. Experience has shown that by supporting the small groups of bird protectionists in every possible way, important headway can be made.

For further information, or if you wish to contribute to the protection of Mediterranean migratory birds, write to: European Committee for the Prevention of Mass Destruction of Migratory Birds, International Council of Bird Preservation, 219c Huntingdon Road, Cambridge, England.



Songbird hunters at lunch.

Royal Society for the Protection of Birds

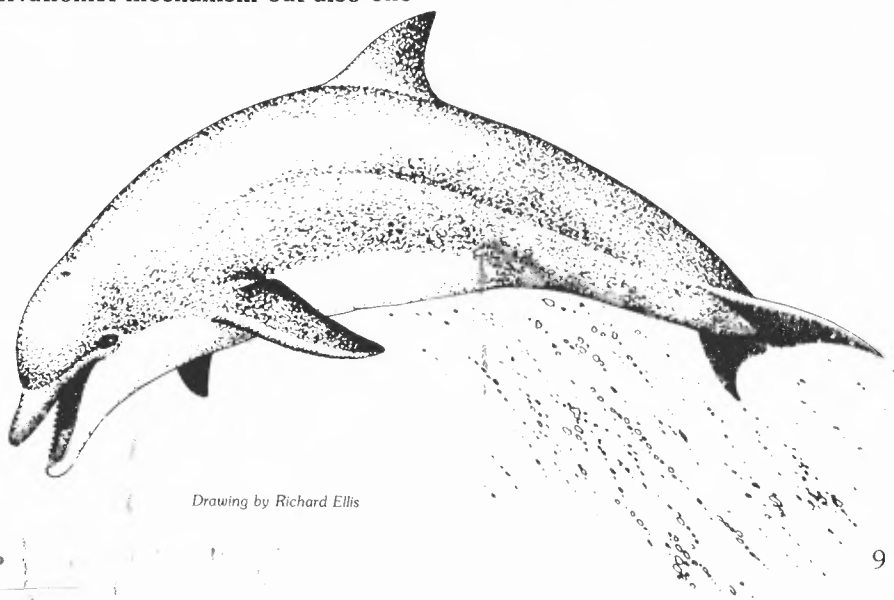
Help Brazil's sea mammals

Wildlife protection laws in Brazil do not at present cover marine mammals. So when, as happens quite frequently, one of these animals beaches itself somewhere along Brazil's extended coastline, it is more likely to be stoned or even shot by ignorant bystanders than helped back into the sea.

This state of affairs has prompted José Truda Palazzo Jr of the Wildlife Protection Service to draft a bill, modelled to some extent on the US Marine Mammal Protection Act. He says: "If the bill is approved Brazil would not only be the sole Latin American country to have such a conservationist mechanism but also one

of the very few countries in the world to acknowledge officially the importance of preventing cruelty to marine mammals."

In Parliament the bill has the backing of some Brazilian deputies but more are needed if it is to become law. Letters supporting the bill can be invaluable and should be sent to: *Deputado Marcello Cerqueira, Câmara de Deputados, Anexo IV, Gabinete 629, 70160-Brasília, DF Brazil.* Should you wish for further information, write to: *Señor Jose Truda Palazzo Jr, Wildlife Protection Service, 24 de outubro 1000/2301, Porto Alegre-RS 90000, Brazil.*



Drawing by Richard Ellis

Abuse of Farm Animals

Continued from page 7

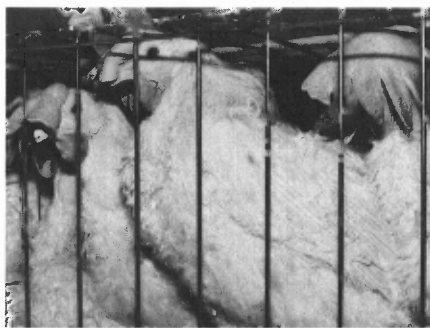
so as to mislead us and mystify us?

The value of research depends on our purpose. If it is our purpose to promote the welfare of farm animals, then we must know what we are doing. We will need, so far as possible, a proper understanding of what it means for a given kind of animal to pursue a life of its own. This calls for intelligent, sensitive and sympathetic observation; and it might require appropriate research.

In this connection I refer you to some of the work on pigs being done in England at the Institute of Animal Physiology at Babraham, Cambridge, and in Scotland at the Edinburgh School of Agriculture. The work at Babraham contains a timely warning against the kind of research which seeks to isolate discrete 'needs' and test for them under controlled conditions in the laboratory. I quote from a long article on current research in the British trade journal *Farmers Weekly* (March 13 1981): "The animal's inquisitive interest in its surroundings invariably overrides its precisely defined need for heat. Adult stock and temperature-sensitive younger pigs will happily root in soil and watch a tractor ploughing in the next paddock, when the wind is blowing and outside temperatures are as low as 5°C (40°F), which is way below their experimentally defined 'comfort zone'".

The kind of research I am criticizing, and the language in which it is conducted, tends to have a subtly corrupting influence. We come to see an animal as a mere collocation of 'behaviors' and 'functions'. If, when we describe animals, we constantly use phrases like 'oral activity' (rather than eating or grunting), 'olfactory communication' (rather than sniffing or smelling each other), or 'temperature-regulatory function' (rather than huddling together to keep warm), we are liable to lose the capacity for seeing animals as *animals*. Concomitantly, we will no longer be capable of understanding what it means to *abuse* an animal. It no longer looks like an abuse when animals are perceived as mere assemblages of moving parts. With this kind of jargon animals as *animals* recede from view: we are *blinded* with science.

So I conclude: The need for more research, such as it is, is not as basic as the need to recover the English language—whether of the American or British variety. This is the language from which we set out and to which, with all our scientific research, we must return. Otherwise we will not be able to recognize that the world in which we live contains people and animals with lives to lead—not mere 'behaviors' and 'functions' to be counted.



Because hens' heads hit cage top they can never stand normally.



Battery hen's deformed foot.

Exhausted Battery Hens to be Killed by Prisoners

"Spent hens" are the unfortunate creatures that have managed to survive for a year in close-packed battery cages so small in many cases that they have to scramble on top of each other because there is not even room for them all to stand on the floor of a cage. The wire floor is so unsuitable to their feet that deformities are common by the end of the year's confinement when the hens are sold for chicken soup and similar products.

Spent hens are capable of being rehabilitated. When a kindly person purchases a few and releases them in a pen, they learn to dust-bathe and lay eggs in nests, forage for insects and seeds as their forebears did. But in the egg industry, no such reprieve is allowed.

A particularly unpleasant proposal has been put forward in Massachusetts where, according to the June 14th issue of *Feedstuffs*, the state has allocated \$50,000 for a feasibility study to have prisoners "process" the spent hens, that is, kill them, defeather and eviscerate them. The governor of Massachusetts is examining proposals from consultants who have asked to do the study. According to a policy analyst for the Massachusetts Energy Department, the study would determine if "a handicapped training center might be better for the plant"; he noted that a minimal correction facility would be selected if the prison route is chosen.

Seeking Alternatives— "successful meeting. . ."

Continued from page 3

3-day meeting at the University of Manchester on *The Role of Animals in Scientific Research*. Nearly 100 people attended, mostly from Great Britain but also from France, Germany, Ireland, Netherlands, Switzerland, USA and Yugoslavia. They represented pharmaceutical companies, universities, hospitals, medical research councils, the Home Office, research institutes and the scientific press.

One of those attending was Dr Mary Dawson, Reader in Pharmacy at the University of Strathclyde. She writes: "It was in my opinion a very successful meeting, organized by a serious, scientific body. I had not previously had much contact with this group but I came away very favorably impressed."

Papers were on such diverse topics as *in vitro* toxicity testing, cell culture in brain research and the use of organ culture models instead of animals in the study of arthritis. A spokesman for the Committee for Safety in Medicine (the government licensing body) outlined the advantages of human material in safety testing.

A press release put out by the Trust, and written by Sir Francis Avery Jones CBE, MD, FRCP, stated: "The clear message emerging from the conference is that alternatives to the use of animals for medical research are being rapidly developed. . . . There is increasing realisation in scientific circles that there are many problems and fallacies in applying information derived from animals to man."

\$500,000 to end lab animal testing

The Millenium Guild is offering \$500,000 incentive awards to speed the day when lab animal tests are displaced by substitute methods. The present death toll—in the USA alone—is estimated at 60-100 million animals a year. This is an extremely large figure, particularly when bearing in mind that many of the tests give great pain.

\$250,000 will go to the scientist or group of scientists who can find non-animal replacements for such notoriously cruel tests as the Draize eye test on rabbits and that "ritual mass execution of animals", the LD₅₀. A further \$250,000 will promote innovation and reward the rapid, measurable reduction of animal tests. It is hoped that this part of the program will immediately lead to fewer animals being used.

President of the Millenium Guild is Pegeen Fitzgerald. Program administrator is Henry Spira. And the address is 40 Central Park South, NYC 10019.

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Putting Antarctica on the map

Save Antarctica is a new citizens' organization with offices in Washington DC, Geneva and Sydney. It will campaign on conservation issues in the Antarctic, coordinating the efforts of the various national and international bodies who wish to break the exclusiveness of the 14-nation Antarctic Treaty "club" and open it up to those poorer nations which may lack the resources to undertake research but which can boast some commitment to conservation.

With fishing interests greedily eyeing the Southern Ocean's shrimp-like krill (some estimates put the potential harvest at 50 million tons a year which is close to the world's total fish catch) and with mineral interests keen to get at the riches locked away under the ice, Antarctica's frigid and (therefore) excessively fragile ecosystems are at great risk. In particular the recovery of the great whales, hunted to near extinction in recent decades, could be gravely jeopardized by any massive take of krill, the whale's staple food.

Save Antarctica is planning some "direct action" for the next Antarctic summer. One proposal is to take an expedition to the unclaimed sector of the continent and claim it for the "world" as a World Park. As an opening shot a vessel would be sent there in January 1983 with journalists, scientists and third world representatives aboard in order to focus attention on the issues and to put Antarctica well and truly "on the map". A follow-up expedition in 1984 would establish a research base.

Those wishing to learn more of *Save Antarctica's* activities should write to the Executive Director, Jim Barnes, at 624 9th St. N.W., Suite 500, Washington, D.C. 20001.

Action on acid rain follows Stockholm meeting

The Swedish government 'celebrated' the tenth anniversary of the UN Stockholm Conference on the Environment by holding a high-level international symposium on acid rain—rain tainted by sulphur dioxide released into the atmosphere by coal-burning industries.

In northern Europe the dominant weather system makes Scandinavia a big net importer of acid rain from the industries of other nations, particularly Britain. Some 20,000 Swedish lakes are now dead. Forests, rivers and crops have also suffered.

As in Europe, so in America, with Canada in the role of chief victim and the US as chief villain—although some of the acid rain in the northeastern states is of Canadian origin.

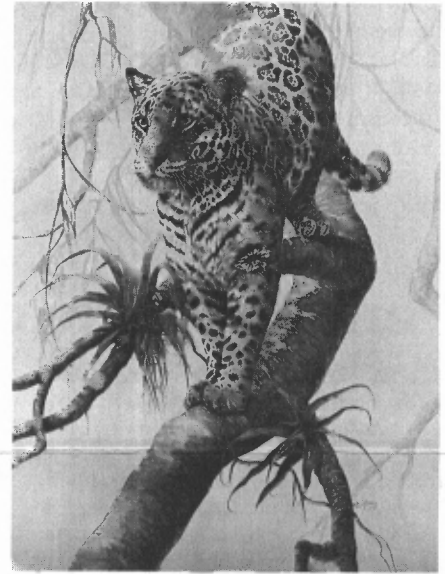
The offending pollutants can travel vast distances. Chemists testing the atmosphere in Barrow, Alaska, and expecting to discover the nearest thing to pure air, found their filters turned a grimy grey.

One immediate result of the Swedish meeting was that Britain reversed a decision to cut the funding of research into the effects of acid rain in Britain. Another result was the promise of sufficient ratifications of the 1979 convention on transboundary air pollution, including a provision for mandatory consultations on request between upwind and downwind countries, to bring it into force.

Born protected

As from May this year all species of game in Norway, as well as eggs, nests, lairs and sets, are protected unless the law says otherwise.

Jaguar prints and posters



Beautiful reproductions of artist Bonnie L. Marris' "Jaguar" painting (pictured above) are available in 18" x 24" full color prints and posters from RARE, Inc., a non-profit volunteer based organization devoted to the protection of endangered plants and animals. Signed and numbered prints, on 100% cotton stock, go to those contributing \$125.00. Posters are given to those who contribute \$15.00. Send your check or money order to RARE, Inc., 950 Third Avenue, New York, NY 10028.

A new car now—in exchange for dog pelts and cat skins!

A Soviet fur factory has advertised immediate car deliveries (normally there is a two-year wait) to those handing in 1,000 dog pelts and 500 cat skins. The advertisement appeared in the newspaper *Luch*. Another Soviet newspaper denounced the offer, saying it had led to the theft of pets.

Animal Welfare Institute

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Endangered species victory

The Endangered Species Act is now secure until October 1985. Congress gave it a further three years' lease of life in early June. By then the scientific argument had been overwhelmingly won by the conservationists and a groundswell of popular support had made the 'right' political course transparently plain. And so it was that bills reauthorizing the Act sped through Congress in no time and with no opposition.

But conservationists cannot now relax. The Administration must be pressured to restore the funds slashed from the budgets of the two agencies responsible for implementing the Act. Otherwise the Act will be inactive.

Periodical Pleasures

by John Gleiber

Today, I'd like to thank *The Clarion Ledger* of Jackson, Mississippi for the article about Jimmy Cupit in the April 5, 1982 edition. Mr. Cupit sent us a copy of the article by Peggy Elam with an accompanying note that "after about two hundred letters I was able to get an article in our state paper." And what an article! And what a man!

Picture, if you can, a "beefy, bearded sporting goods store owner" in Clinton, Mississippi, a tattoo of the Mississippi State flag glinting on his forearm, who spends his Sundays checking roadside parks and garbage dumps to pick up stray and abandoned pets and take them to the Mississippi Animal Rescue League of which he is co-founder. If you can, then you'll have a clear picture of Jimmy Cupit.

He says his worst enemy is the steel jaw, leghold trap. He's been rescuing animals from them for 14 years now and "it turns my stomach every time I go out and get one."

He has been sending petitions, request-

ing that the traps be banned, to every humane society in the state and to most veterinarians. So far, he has about 15,000 signatures and says that 95 percent of the signers are hunters and fishermen. Jimmy thinks big. By fall, he hopes to have half a million to a million signatures. Then they'll go off to William Winter, Governor of Mississippi, and to the State Fish and Game Commission. While he admits that it is going to be hard to stop the use of the steel trap, there's no way he is going to stop trying.

Jimmy will show you a scrap book with photographs of animals taken after he has freed them from traps, photographs "too horrible to be printed in newspapers or shown on television." He wraps it all up, succinctly and movingly. "There is no way they can justify to me that this trap is worth being used."

Even with the steel jaw, leghold trap in it, the world seems to be just a little better place with Jimmy Cupit also in it.



Hope Ryden

Book

Bobcat year

by Hope Ryden

Viking Press, 1981, \$15.95

Hope Ryden has put together an enchanting combination of science and fiction. A masterful story teller, she has collected an impressive amount of behavioral and biological information, and in so doing has captured the essence of the bobcat.

As a reader I have felt that I came to know these animals. I stress this point because there is, at the moment, tremendous pressure on all predator populations. This book makes the argument for understanding one of them. The author is a naturalist and she shows how predator, prey and habitat fit beautifully together. Above all she makes one care about these fascinating animals.

Given the bobcat's secretive nature the photographs are extraordinarily impressive. *Bobcat Year* is in all respects a delight.

Jacque Dean

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Japan warned about whaling stance

TOKYO (AP) — Oregon Sen. Bob Packwood warned Japan's foreign minister yesterday that Japan's resistance to a worldwide whaling ban is fueling U.S. protectionist sentiments, Foreign Ministry officials said.

Packwood, who chairs the influential Senate Commerce, Science and Transportation Committee, told Foreign Minister Yoshio Sakurauchi that Japan's pro-whaling stance has also aroused anti-whaling sentiment in the United States.

Japan recently filed a formal objection to a vote by members of the International Whaling Commission to ban commercial whaling after 1986. Japan claims whale stocks are sufficient to allow certain types of commercial whaling to continue while scientific research goes on.

Packwood, a 50-year-old Republican, arrived here from China Thursday afternoon with a Port of Portland trade group. He told Sakurauchi that Japan's whaling objection may have increased chances that the U.S. Congress will pass domestic content legislation.

Such legislation would require foreign automakers selling more than 100,000 cars in the United States to produce a specific proportion of their U.S.-sold cars at U.S. plants.

Packwood opposes domestic content legislation.

Packwood also met the minister of agriculture, forestry, and fisheries, Kichiro Tazawa. Tazawa asked that the United States not reduce Japan's fishing quotas in U.S. waters in retaliation against Japan's whaling stance. *Seattle Times* 13 November 1982



Japanese people against the objection

A Gallup poll completed in October shows that more than three quarters of the Japanese people disagree with the decision of the Suzuki Government to file an objection to the IWC vote to ban commercial whaling by 1986.

Nippon Research Center Ltd., the Japanese section of the well-known polling organization, questioned 2000 people in different geographical locations in Japan, covering different age groups and economic levels. They found that although 90% had eaten whale meat, it was far from being a dietary staple—only 3% said they ate it as often as once a week, for example.

When asked whether they agreed or disagreed with the IWC decision, only 19% disagreed, whereas 46% agreed and 34% had never heard about it.

On the subsequent question as to what approach Japan should take, 76% said the IWC decision should be accepted. *Mainichi News* headlined this result which caught the lame duck Suzuki Government in an awkward position as it continued to insist it was filing an objection to the insistence of the Japanese people.

It is hoped that when the new government is formed in December, the objection will be rescinded.

Whaling ban rejected

Continued from page 1

promised U.S. assistance. A leading feature of the official press release was the false statement that an objection had to be filed by November 4th. The Japanese government was well aware that this is not the case, because Peru filed in October. Under the terms of the Treaty, if any nation files an objection, all other nations have 90 additional days to make their decisions as to whether or not they, too, will take similar action. Observers believe that the Suzuki government's strong ties to the whal-

ing industry explains the decision to object.

Peru, whose whaling industry is controlled by a Japanese whaling company, was the first to object, allegedly by Japanese request. Norway filed within hours of Japan's filing. Chile also filed a more limited objection relating to a former quota which it claims should still be allowed to be filled. The other major whaling nations, South Korea, Brazil and Iceland, have made no announcement, and it is hoped that they will accept the decision of the International Whaling Commission.

HONGKONG BORNEO SHIPPING CO., LTD

Matsunaga (A Japanese Port)
13-10-82

Dear Mr. Sakurauchi,

I am a Merchant Mariner and of the total sailing experience of 6 years I have spotted the Great Whale only twice and that too in the Indian Ocean only (Once near the Sri Lankan Coast and the Second time near the Seychelles Islands).

Of the Past two years that I've been on the Japanese Coast and the Eastern and South China Seas, I've yet to sight a Single Specimen. To a Mariner it's a Feast for the Eyes to see a Whale Blowing in the Otherwise Empty Expanse of our beautiful Oceans—Our Home. So Stop and think! Wouldn't you let us have these feasts more often.

Yours Pleadingly

Mohan Singh Chabba
IInd Officer, M.V. MUI KIM
HongKong Borneo Shipping Co.
815, International Bldg.
Des Voeux Rd. C.
Hong Kong

United States Senate

COMMITTEE ON COMMERCE, SCIENCE,
AND TRANSPORTATION

August 31, 1982

The Honorable Malcolm Baldrige
Secretary of Commerce
Department of Commerce
Washington, D.C. 20230

Dear Secretary Baldrige:

We wish to extend our congratulations to you and to Dr. Byrne and the U.S. delegation for achieving a 3/4 majority vote in the International Whaling Commission for a cessation of commercial whaling to take effect in 1986.

It has been eleven years since the U.S. Senate and House passed resolutions calling for the U.S. to negotiate a ten-year moratorium on commercial whaling, and ten years since a similar resolution offered by the U.S. was adopted by the United Nations Conference on the Human Environment. In the intervening period the effort to protect the great whales has become a veritable crusade. Last month's victory in the IWC is a source of gratification for many millions of citizens who actively participated in that crusade, both in the United States and around the world.

Our key concern, which we are certain you share, is to insure that this epochal decision by the IWC is honored by the whaling nations. The United States must, during the coming period, undertake every diplomatic means open to it to prevent the whaling nations from filing objections to the moratorium decision.

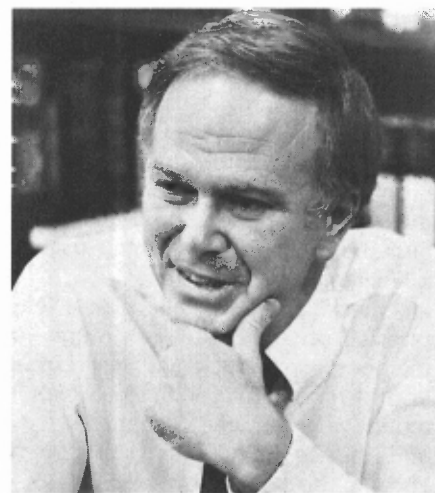
The Pelly Amendment to the Fishermen's Protective Act and the Packwood-Magnuson Amendment to the Fishery Conservation and Management Act represent the best and most credible deterrents available to prevent

nations from subverting the IWC by means of objections, or through leaving the Commission. In order to avoid any thought that the U.S. can be "faced down" on the whaling issue, we should make it absolutely clear now that the United States will invoke these amendments against any nation violating IWC decisions.

In addition to a clear statement on the Pelly and Packwood Amendments, we should assure the whaling nations that other means available to us to reinforce the IWC will not be ignored. For example, the allocation process within FCMA provides ample discretion to adjust allocations (either up or down) in response to a wide spectrum of U.S. objectives and concerns. This means of lending substance to U.S. policy on whaling should certainly be considered. GIFA's under FCMA are, of course, another area subject to review by the Congress.

If we succeed in preventing objections against the IWC cessation decision, we will avoid a period of tension and uncertainty in our relations with whaling nations with respect to fisheries. If no objections are filed, there is no need to fear the possible future use of sanctions to enforce IWC decisions. This will permit U.S. fishermen and processors to conclude fishing agreements which promote the interests of the majority of citizens, including fishermen in both non-whaling and whaling countries. If the IWC decision is accepted, all will benefit.

Names of 66 Senators who signed this letter are shown on page 1.



Senator Bob Packwood

So nearly a senseless slaughter of 960 porpoises

Nearly 1000 Dall porpoises under sentence of death gained a last-minute reprieve—thanks to forceful intervention by Senator Bob Packwood (R-Oregon). The porpoises were scheduled to be killed in the Bering Sea off Alaska by Japanese harpooners acting on the instructions of American scientists aboard the vessel. The project, backed by the Department of Commerce and NOAA (the National Oceanic and Atmospheric Administration), called for the deliberate killing of 960 female and infant porpoises. Why? In order to discover how many porpoises Japanese fishermen should be allowed to continue to kill accidentally ("incidental catch") while netting salmon in U.S. waters.

(Continued on page 4)

Norway's cold harpoon may be illegal

The Norwegian Animal Protection Society is suing their government's Fisheries Department on the grounds that Norwegian whalers' use of the cold (non-explosive) harpoon contravenes the country's laws. Article 2 of the relevant legislation states: "Animals shall be treated well; their instincts and natural behavior shall be taken into account so as not to risk unnecessary suffering."

The plaintiff argues that "unnecessary suffering" is precisely what the cold harpoon inflicts—a point which is heavily underscored by the report of an official "controller" aboard a Norwegian whaler last June. He states: "All whales har-

pooned were observed and recorded. The killing time was lengthy—an average of 27 minutes. The reasons were: 1) Bad luck with the shooting (the captain's opinion). 2) Very thick wire on the winch and thus very slow hauling. 3) The harpooning on two occasions of two whales simultaneously."

At present there is some doubt as to whether the Norwegian Animal Protection Society will be adjudged to have sufficient standing to permit it to take a government department to court. But if that issue is decided in the Society's favor and the case is heard, the Fisheries Department will be sorely embarrassed. Even other govern-

ment departments would seem to think that Fisheries is on shaky ground here—to judge from a letter of 6 October 1981 emanating from the Department of Agriculture. The letter states: "It can hardly be said that whaling with the non-explosive harpoon meets the requirements of the Animal Protection Legislation which demands humane killing."

And behind the dubious legality of Norwegian whaling lies the shameful fact that it flouts a decision taken at the 1981 meeting of the IWC. It was then ruled that the cold harpoon should be outlawed a year hence. Norway along with other whaling nations objected.

Senator Dole introduces bill to protect laboratory animals

On September 23rd Senator Robert Dole (R-KS) introduced S. 2948. He said, "...I am introducing a bill to promote non-animal or alternative methods of research and to insure the humane treatment of animals used in scientific research..."

"Specifically, this bill places emphasis on the development of methods of research and testing that do not require live animals, or would reduce the number of animals used and reduce pain. The Secretary of Health and Human Services is authorized to make awards for such

A Little Kindness Helps

Atherosclerosis, or hardening of the arteries, painfully afflicts large numbers of elderly people. And of course it can trigger heart attacks. Stress has long been known to be harmful. But at the University of Houston research on rabbits by Professor Robert Nerem and colleagues has shown for the first time, and in a most striking manner, the beneficial effects of kindness.

For several weeks the rabbits were handled, stroked, talked to and played with for lengthy periods each day. During this time they were fed a high cholesterol diet—as was a control group which received normal lab care, in other words no petting or affection. Arterial lipid deposition was a dramatic 60% less for the rabbits who received special attention and this is believed to be due to a lessening of stress, i.e. the animals felt more secure.

Whether findings can be applied directly to people is debatable. But they could go some way to explaining a frequent and dangerous phenomenon of animal testing—the widely differing results of different labs (and even the same lab) using apparently identical protocols. In the words of Professor Nerem: "It is not enough to specify that diet, exercise and all other variables are controlled. You must be sensitive to the social-psychological environment as well."

LD₅₀

Continued from page 1

The next step is to see that regulations are changed in the United States and abroad so that the current massive mandatory tests are dropped promptly. There can be no excuse for continuing scientifically unjustifiable painful tests on huge numbers of animals.

alternative methods. An advisory panel appointed by the Secretary will insure consideration is given to such alternative programs and advise him of his responsibilities in this area...

"The bill establishes certain procedures that peer reviewers must look for in research proposals involving the direct use of conscious animals."

S. 2948 is similar in most respects to H.R. 6928, the Walgren bill in the House of Representatives, which has cleared the Science and Technology Committee.

Porpoises

Continued from page 3

As a piece of "scientific research" the project was surely bizarre. Certainly that is how it struck Senator Packwood who on hearing about it said: "What I don't understand and what no one has been able to tell me is why our American scientists can't do their research with the porpoises already being caught and discarded. We are killing porpoises so that we can figure out how many the Japanese can kill while they catch our salmon. I believe our priorities are out of order." The Senator then promptly negotiated a solution which permits the Japanese a further three years' salmon fishing under present arrangements while NOAA officials work out how to get the data they need without killing additional porpoises.

What a cruel, wasteful and wildly irrational slaughter this would have been. And so nearly was! For the Japanese vessel concerned was about to set sail on its death-dealing mission when the order came: Stop. Senator Packwood had acted with great speed but he first learned of the project from an Oregon housewife, Mrs Kathleen Hoyt, who sent him a copy of her letter to Secretary of Commerce Malcolm Baldrige questioning the kill, plus a clipping from an Iowa newspaper which told the story.

There is a moral here for all of us. We must never assume on these sorts of issues that ugly facts which come our way are bound to be known to our policy makers—even when they are powerful friends of the causes we support. So—keep eyes and ears open and make sure that those who should know what you know do know!



R. A. Mittermeier

An endangered Yellow-tailed Woolly Monkey.

AWI Book

Continued from page 1

of the AWI manual *Humane Biology Projects*, the handbook has grown to encyclopedic proportions, and includes not only a historical analysis of nature's retreat (the title of one of the sections) and a substantial projects section for teachers and students, but a never-before-published comparative listing of species appearing in *The Red Data Book* of the International Union for the Conservation of Nature, the Appendix I and II lists of the Convention on International Trade in Endangered Species, the Endangered and Threatened lists of the U.S. Endangered Species Act and of the individual states. State laws on the subject are fully described. One chapter was written by Los Angeles City Attorney Barry Groveman, who was responsible for the successful prosecution of Stanley Masry resulting in the permanent seizure of an estimated million dollars' worth of carved ivory. Questions about the Act are answered by Michael Bean of The Environmental Defense Fund whose expert knowledge of every clause of the U.S. Endangered Species Act is said to have so unnerved industry attorneys who opposed the recent reauthorization and wanted to use it to weaken the Act, that a number of them feared even to appear at the same hearing with him before Congressional Committees. The *Handbook* comprises 244 pages and is profusely illustrated.

Following AWI's tradition of service to educators and their students, single copies of the *Handbook* will be supplied free on request to teachers and librarians. Requests and orders should be addressed to The Animal Welfare Institute, Box 3650, Washington, D.C. 20007. For the interested public, the price is \$5 prepaid.

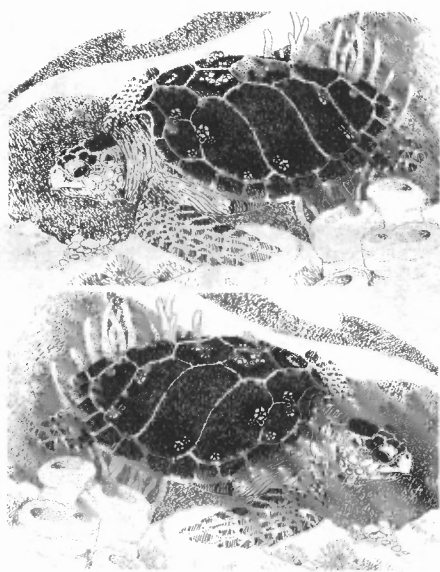
GOOD NEWS FROM AFRICA

Kenya: pink flamingos return to Lake Nakuru

The "greatest bird show on earth" is back. Kenya's pink flamingos which formerly thronged Lake Nakuru, two million at a time, and which then withdrew in a mass gesture of protest when the lake became polluted by chemicals and sewage, are returning. Today there are some half million birds there and "this number is expected to rise in the next two years," says game warden Joseph Ayieko, "because the water situation is now favorable."

Factory pollution is under control, Nakuru now has a modern sewage system (thanks to a West German loan) and the town rubbish dump has been moved from its lakeside site. Also Nakuru National Park has been enlarged to 50,000 acres.

Once again visitors can stand at the lakeside watching flamingos delicately tip-toeing through the shallows just a few yards away. A bit further out and the lake becomes a pink carpet with, here and there, blobs of other colors. For when the flamingos returned they brought back the pelicans, the cormorants and the hornbills. Lake Nakuru is again a living lake!



Greece puts turtles first

In Greece all construction was stopped for three months around the island of Zakynthos, a nesting ground of the loggerhead turtle. This was a ministerial decision adopted to safeguard this endangered species.

Parrots in danger, turtles in the soup

Two endangered parrots were shot by a hunting party led by G. Ray Arnett, the Assistant Secretary for Fish and Wildlife in the U.S. Interior Department, during a trip to the Cayman Islands in September.

The shooting of the Grand Cayman Amazons (*Amazona leucocephala caymanensis*) occurred while Arnett and his companions were hunting doves and pigeons, according to reports. Seeing movement in some trees, they blasted away with their shotguns. Only upon closer examination did they find they had downed the brightly colored parrots. A fellow marksman was Stephen S. Boynton, a

Washington lawyer for fur, trapping and wildlife trade interests.

Arnett was in the Cayman Islands, a tiny archipelago in the Caribbean south of Cuba, at the invitation of the Cayman Islands government and the Cayman Turtle Farm. The privately owned turtle farm wants the U.S. Department of the Interior to lift its ban on imports of green turtle meat produced by the farm. The British government, which administers the foreign policy of the Crown colony, is pressuring the U.S. government to lift the trading ban. Boynton has been hired by the Caymans to lobby in Washington.

Primate Importer Faces Charges

by Fay Brisk

Charles River Research Primates Corp., of Port Washington, N.Y.—this country's major supplier of primates for medical research—has been charged with violating transportation standards of the Animal Welfare Act.

The charges were brought by the U.S. Department of Agriculture's Animal and Plant Health Inspection Service (APHIS), which said that, between July 1979 and November 1981, the firm shipped monkeys and apes in substandard crates to various points in New York, Massachusetts and Iowa.

According to APHIS, some of the shipping crates were either too small or not strong enough to support the animals, or had "protrusions that could hurt the animals." Others reportedly lacked sufficient ventilation and protective rims or handholds, and failed to provide feeding and watering instructions, as well as proper labeling.

In some, APHIS said, "the size of the wire mesh allowed animals to stick their fingers or tails through the cage—a danger to both the animals and cargo handlers."

The firm, formerly known as Primate Imports Corp., is registered with APHIS as a research facility, which, on occasion, has housed as many as 3,500 primates. Its president is Michael A. Nolan, a long-time, worldwide importer of apes and monkeys, who has come under fire from some animal welfare groups for his shipping practices. It was his firm that reportedly supplied the crab-eating macaques to Dr. Edward Taub, of the Institute for Behavioral Research in Silver Spring, Md. (The

scientist was convicted of cruelty to one of the monkeys last summer by a Montgomery County Circuit Court jury.)

If found guilty before an administrative law judge, Charles River Research Primates Corporation faces a civil penalty and an order to "cease and desist" from future violations. No hearing date has been set.

"Traffic" warning for Tokyo

Japan, a recent and vitally important ratifier of the Convention on International Trade in Endangered Species, now has a TRAFFIC office to monitor Japanese wildlife trade and to see that CITES rules are enforced. Mr. Hyosuke Kujiraoka, former Director of Japan's Environmental Protection Agency, is the Honorary Director of TRAFFIC (Japan) and Tom Milliken, a Japanese-speaking American conservationist, is Assistant Director in charge of operations.

Japan, after the U.S., is the world's largest consumer of wildlife and on a per capita basis may be number one. Around one-third of world trade in birds involves Japan. The country is also the world's largest importer of ivory and ranks second only to West Germany as a trader in wild furs.

Milliken, however, believes that the Japanese are undergoing a change of heart. He says: "The nation's acceptance of CITES was a conservation milestone. Strict enforcement presents a formidable challenge but also a clear opportunity for Japan to move into the conservation mainstream."

Black Sea dolphins and porpoises have been brought to the threshold of extinction

“The world’s largest and most destructive kill”

50,000 dolphins and porpoises are killed by Turkish fishermen in the Black Sea every year. It’s a horrific slaughter, carried out with no restrictions. Any dolphin or porpoise, whether pregnant or newly born, may be killed by anyone with a rifle and a boat. No license is required. The hunters admit there is no economic necessity for it. They say they do it to protect fish stocks and to preserve a tradition of dolphin catching.

Last June the Council of Europe’s Convention on the Conservation of European Wildlife came into effect, giving total protection to the Black Sea dolphins and porpoises. Turkey has signed the treaty but not ratified it. Now a campaign by a British conservation group, the People’s Trust for Endangered Species, is bidding to persuade the Turkish authorities to ban hunting while urgent research is undertaken into the population levels of the dolphins. Allan Thornton describes how the world’s largest and most destructive kill was discovered by the People’s Trust.

Dolphin hunting in the Black Sea began in the late 19th century when Russian fishermen caught them for their meat and oil. By the mid 1930’s up to 250,000 dolphins were being killed each year by Turkish, Bulgarian, Romanian and Russian hunters. In 1964 the dolphin populations in the waters off the Soviet Union suffered a collapse and in 1966 the U.S.S.R., Bulgaria and Romania prohibited all dolphin hunting.

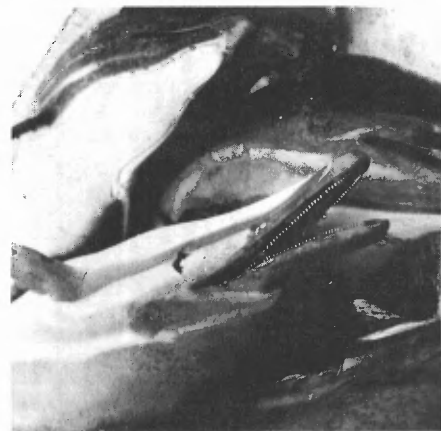
Only Turkey allowed the hunting to continue and its annual kill steadily increased. In 1969 it reached 166,000 and over the past 15 years more than 900,000 dolphins and porpoises have been killed in the Black Sea. Their populations have now been brought to the threshold of extinction. Concern for their survival was expressed in 1976 by one of the world’s most authoritative bodies, the U.N. Food and Agricultural Organization.

Its marine resources committee stated: “It is possible that all three (dolphin and porpoise) species may be undergoing exploitation at such high levels that they will not be able to survive for more than a few years. Action is urgently needed to close the Turkish fishery or substantially reduce its catch.”

The Turkish government ignored the warning and since that time no new information about the number of dolphins being killed or the impact it is having on the populations has been available. However in 1979 Susi Newborn, a British conservationist, began to research the sparse data.

She travelled to the eastern Black Sea area and confirmed that the hunt was continuing. She returned with harrowing stories of a factory filled with dolphin carcasses.

The People’s Trust for Endangered Species agreed to fund a new investigation to determine the extent of the catch and to gather photo documentation if possible. We (Allan Thornton and photographer



Close-up of some of the dead *Delphinus delphis*.

David Higgs) agreed with Bill Jordan, the director of the trust, that we would visit Turkey under the guise of researching a book on fisheries of the world and the birds and marine animals which feed upon them.

At the Foreign Ministry in Ankara we were given a letter to present to the local authorities to obtain their cooperation. We drove 250 miles north to the Black Sea, taking a guide along to interpret for us after being warned that few people spoke English. For his own protection we never told him of our real mission, and he was satisfied with our cover story.

At the coast we turned east, stopping at every port and harbor where there was even a single fishing boat. On the third day we reached Ordu, a small city where the dolphin hunt was supposedly centered. We noticed two boats over in the corner of the harbor and walked towards them. A



Hundreds of dead dolphins piled at Trabzon processing station, Turkey.

Higgs. People's Trust for Endangered Species

Higgs. People's Trust for Endangered Species

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hundred yards away I saw the dark, lifeless shapes of dolphins on the stern deck. We approached the vessels and while our guide spoke to a crew member I made a quick count. One boat contained 78 dolphins and the other 65.

The crew invited us aboard for *chai*, the strong, bitter Turkish tea, and we were introduced to the Com brothers who were friendly and keen to talk about dolphin hunting. Through our interpreter I asked them many questions. Fishermen in the Mediterranean and the Aegean consider it a sin to kill dolphins, so we asked why Turkish fishermen hunted dolphins. Ahmet, in his early 50's and the younger of the brothers, gave most of the answers.

"We have hunted dolphins for many years. My father hunted them before me and his father before him. Our family has caught dolphins since 1919 and we want to preserve the tradition. We have to kill the dolphins because they eat our fish. But there are fewer dolphins each year and they are more difficult to find.

"We hunt from the beginning of October until the end of June, except this year the government ordered the season to close on 20 May. We go between 18 and 100 miles from shore and catch about 2000 dolphins for each boat in a season and sell them to the factory in Trabzon. The oil is used for leather tanning and industrial lubricants and the meat is used for animal feed.

"There used to be another factory, a private one in Istanbul, which paid more for the dolphins, but it has closed. Now there is only the government station in Trabzon. All the hunters complain the price is too low. We cannot make any money catching dolphins." I asked why in that case they didn't catch fish. "We cannot afford to buy the nets" was the reply.

Next morning we drove to Trabzon. The manager there was hospitable and cooperative. He pointed to a long line of barrels on the quay which contained dolphin oil. They were unsold from the 1981 catch, he told us. Prices depended on demand and there was no demand. This year there were about 20 boats hunting dolphins.

We were shown the factory and given permission to take photographs. First we saw the newer section which contained the most modern Canadian and German technology for processing and packing fishmeal. We were then taken to the older part of the station where the stench of decaying dolphin carcasses turned my stomach. As we began to take photos a short man in a suit approached, looking very excited and hostile. While he spoke to our guide in Turkish I urged David Higgs to take his photos quickly and to assume this would be our only opportunity. Our guide informed us that the short man was a biologist who was opposed to us being there.

We climbed some metal stairs and came upon an unbelievable sight. In a room about 150 feet long and 50 feet wide were more than a thousand dolphins, some piled four or five high. At the far end of the room there were hundreds of skinned carcasses and in the middle was a man with a long knife cutting the dolphin's skins and fat from their bodies. He would cut across the head, slice it down the middle, then peel off the outer layer. As we watched he skinned a pregnant female and pulled a perfectly formed fetus from its belly.



Cakes of chicken feed made from dolphin meat.

When we stopped to thank the manager he looked very worried and insisted that we join him for another glass of tea. He was very concerned that stories would appear in the foreign press about the dolphin kill. Tension hung in the air like an unspoken threat and for a few minutes no one spoke. I sensed that he wanted to ask us for the photos we had just taken, but he couldn't summon the courage to do so. He asked to see our letter from the Foreign Ministry, copied it and telephoned his superior. We then left.

Two hours later there was a knock on the door of our hotel room. It was our guide with two men in suits, one of whom held a walkie-talkie. "These are security police," said our guide. "They want to take me for questioning and they want your passports." Before they left, the security police instructed us not to leave the hotel and told our guide, "We will return for the photos."

David and I spent the next hour searching for places to hide the film. We decided to surrender one of the rolls with several dummy rolls if we had to. Our guide returned and said that it was not an unusual thing to happen since the military had taken power.

The police came back the next day and took our guide away for two hours of further questioning. But thankfully the following morning they returned our passports and allowed us to leave—with the photos. We then drove towards the Russian

border, stopping to interview other dolphin hunters we met.

David finally flew home with the photos three days before me. I wanted to try to obtain the catch statistics for the dolphin hunt for the years 1976-81. Although I can't reveal how I did this I was ultimately successful.

Throughout the late 1970's tens of thousands of dolphins were killed annually by Turkish hunters. In 1980 the catch was more than 54,000. In 1981 it dropped to about 10,000, and harbor porpoises, rather than common dolphins, comprised most of the catch. The same pattern had shown up in the Soviet dolphin catch in 1964 when their dolphin population began to collapse. Now the dolphins around Turkish waters are experiencing the same fate.

Extracted from an article by Allan Thornton in a recent issue of the Sunday Express.

UFAW Symposium papers now available

The Universities Federation for Animal Welfare has published the Proceedings of the Symposium it conducted last year on Alternatives to Intensive Husbandry Systems. The 104-page volume contains an excellent paper by Alex Stolba, Ph.D., at the School of Agriculture, Edinburgh University, "A Family System in Enriched Pens as a Novel Method of Pig Housing." Dr. Stolba's study was made up of three parts. "During the first stage of the study large white pigs were put into a genuinely rich, semi-natural enclosure and their behavioural actions studied in detail." In the second stage, they were put into a much smaller but still rich area. In the third, the "recognised clue features" of pig behavior were met in a covered straw-bedded open-front pen of 3 m x 9 m.

"A variety of features are included that were consistently found to be guiding the pigs' behaviour in the outdoor reference environment:

"1. A roofed and an open part of the pen to re-create a forest border habitat.

"2. The provision of the main feeding area away from the nest site, in the activity area.

"3. A nest site sheltered against wind but with open view out of the pen through the front gate.

"4. In the reference environment the nest is generally against two bushes which are permeable, and farrowing rails and pen walls provide these features.

"5. Space for a nest of 2 to 3 m in diameter.

"6. A side for defaecating in the morning, which is provided at a suitable distance at 4.5 to 11 m away from the nest.

"7. A corridor for defaecation during day time which resembles the wide lanes between bushes which the pigs preferred outside.

"8. Suitable materials for digging and wallowing, in this case peat or bark in the rooting area and a levering bar.

"9. A rack for gathering straw sheaves, and a post for comfort and marking behaviour, both in the activity area.

"10. Sufficient individual space while feeding, achieved here by head partitions between small feeding stalls.

"11. A possibility for escape behind the partition wall of the rooting area, to enable animals under social tension to keep apart."

Of "the pig family system," Dr. Stolba writes: "In the enriched pens [it] is based on 4 adult sows, always kept together in 4 pens freely connected through the defaecation corridor. They farrow in these pens and their offspring grow up there without artificial weaning and mixing." Under this system, the sows are never confined to stalls either while gestating or during far-

rowing, and it avoids the early weaning which is so hard on all the pigs.

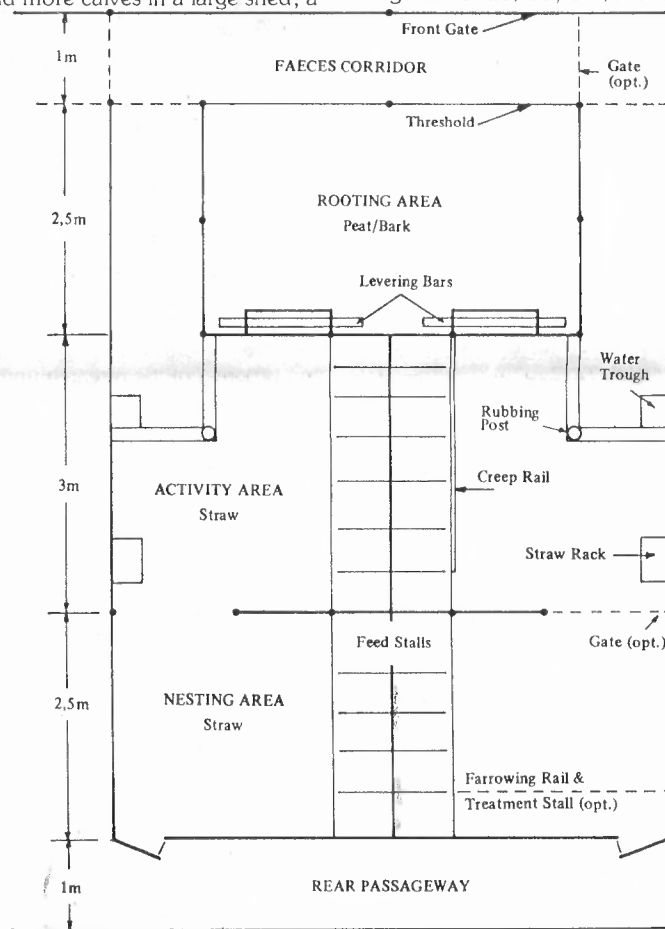
"Free Range Egg Production", a paper presented by Martin Pitt of Levetts Farm, describes his successful method which provides nest boxes for the hens and an opportunity to go into outside runs. Feeding is automated in the aviary houses, the most recent of which has three tiers of slatted floors and some nest boxes 8 feet above floor level. Levetts Farm eggs sell for more than battery eggs. "Two things I am certain of," says Pitt. "The eggs I sell are better than most and the hens I keep are happier than most."

Veal calves were discussed in papers by Professor John Webster of the University of Bristol and Dr. Philip Paxman of Volac Ltd. Dr. Roger Ewbank, Director of UFAW, made the opening statement, followed by Ruth Harrison's discussion of "The Welfare Requirements of Husbandry Systems."

Problems with the British government's experimental aviary system were discussed by Dr. Mandy Hill of Gleadthorpe, while Dr. P.G.C. Dunn gave a paper, "Intensive Farming—The Grand Delusion," in which he criticized, from a veterinarian's viewpoint, the current trend. Under the heading "Energy intensive rather than labour intensive," he states: "The situation now prevails that although one stockperson can husband more calves in a large shed, a

vast army of technicians, factory workers and salesmen are employed by drug firms so that antibiotics may be administered to prevent the consequences of diseases (e.g. calf scour) that are induced by this system of husbandry. . . . Another result of the reduction in labour is the increase in the use of fossil fuel. . . . The labour saving objective of intensive farming means that housing must be designed with ease of cleaning as a high priority, and thus the comfort of the animal becomes a low priority. Hence the absence of bedding—wet and easily hosed-down accommodation is the modern trend. This type of housing predisposes to such conditions as environmental mastitis in cows and leg sores in stalled sows kept without straw. These problems are of course 'solved' by the veterinary profession supplying more drugs. It is my opinion that we are helping the system to 'limp along,' when withdrawing support might have a more useful, long-lasting impact." Under the headings "Increased herd and flock size," "Reduced species diversity," and "Misuse of drugs" he discusses further increased disease.

Other speakers dealt with economic aspects and additional alternative methods. The proceedings of this symposium are well worth reading. Copies may be obtained from UFAW, 8 Hamilton Close, South Mimms, Potters Bar, Hertfordshire, England for £3/65, or \$7.00.



Groundplan of the enriched pen.

The real price of eggs

In Britain the living space we allocate for each of our 50 million battery hens is roughly seven inches by ten. The living space which the Ministry of Agriculture hopes to gain for our battery hens "after a reasonable transitional period" is a massive nine inches by ten. They see this as heralding a new dawn of enlightenment.

But to put it into perspective, it means that these brave new hens will be enjoying a living space of less than a sheet of foolscap paper. They stand for 17 out of each 24 hours on a sloping wire floor, and crouch on the same floor for the remaining seven hours of darkness. And please do not tell me that battery hens are happy because they lay eggs. They really cannot help it. These are the facts, and they are justified solely on the grounds that this method provides marginally cheaper eggs.

Anyone who has studied the social life of birds carefully will know that theirs is a subtle and complex world, where food and water are only a small part of their behavioral needs. The brain of each bird is programmed with a complicated set of drives and responses which set it on the path to a life full of special territorial, nesting, roosting, grooming, parental, aggressive and sexual activities, in addition to the simple feeding behavior. All these other activities are totally denied the battery hens.

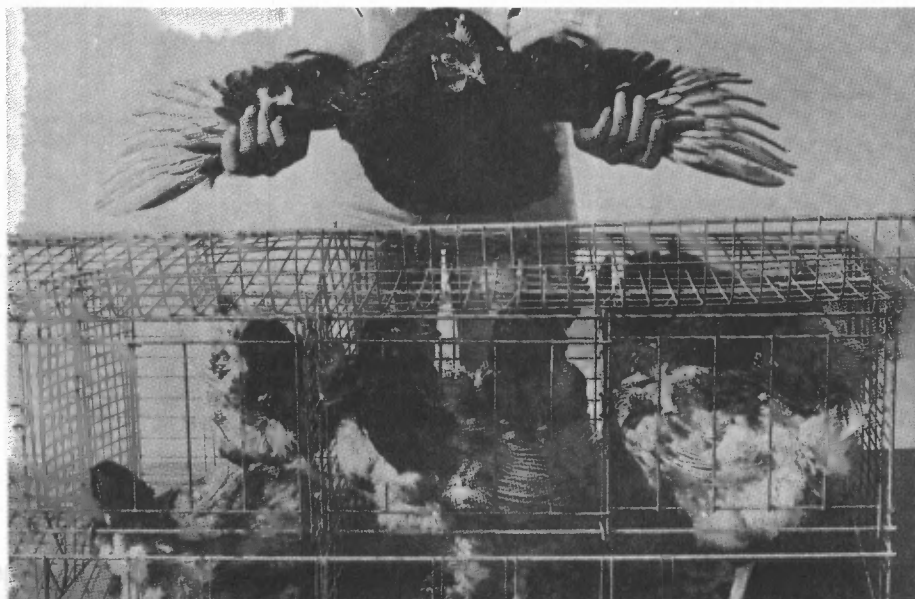
Seeing ourselves today as part of evolution we have at last become concerned about the creatures with which we share this planet. But somewhere along the line those long-suffering servants of ours, the food-producing farm animals, have lost out. Their lot has worsened.

The moral, if you happen to be a bird or a mammal, is not to provide mankind with any valuable form of food. If you merely provide companionship as a pet, or beauty as a wild creature, you will be well treated; but if you give more—if you provide your eggs, or your meat, for human sustenance—your reward will be a life sentence in an animal concentration camp.

Extracted from an article by Desmond Morris in a recent issue of *The Sunday Telegraph*.

Information on farm animals

Food Animal Concerns Trust (FACT), a new organization founded by Robert Brown, issues information on intensive and alternative methods of livestock and poultry rearing. For Subscription information write: Food Animal Concerns Trust (FACT, Inc.) P.O. Box 14599, Chicago, IL 60614.



The measure of cruelty. The wingspan of this chicken covers almost 3 three-bird battery cages, each of which is 12" wide.

Farm Animal Welfare Discussed at Major Veterinary Meeting

Intensive practices in maintaining livestock and poultry were discussed at the annual meeting of the Animal Welfare Committee of the U.S. Animal Health Association in Nashville, Tennessee, 9 November. USAHA is the long-established organization of federal and state regulatory veterinarians which holds a five-day meeting each year.

Government, industry, academic research and animal welfare concerns were represented by Dr. Daryl King of the U.S. Department of Agriculture, James Mallman of Provimi, Dr. Stanley Curtis of the University of Illinois and Diane Halverson of the Animal Welfare Institute. Dr. King reported on progress of the research underway using a \$380,000 USDA grant to study stress produced by different types of intensive methods. Dr. Curtis told of his European trip to interview producers, farm groups, animal welfare activists, government personnel, and scientists about current activities abroad. He noted that his four-week trip was paid for by the American Meat Institute, American Farm Bureau and the National Pork Producers Council. Speaking of farm animal welfare regulations in Switzerland and Sweden, he said, "Many people told us they expected to see things turning back in Sweden."

Diane Halverson's experience in the seven countries she visited over a two-month period was decidedly more positive. She showed slides of mechanized houses for laying hens in Switzerland which do not confine the birds to cages but allow them to choose scratching in litter, roosting on rails,

laying eggs in a nest, stretching and flapping their wings, and similar activities engaged in by hens from time immemorial. She described the development of the pig family unit at the University of Edinburgh (see page 8 of this Quarterly) and its replication financed by the British Ministry of Agriculture. Veal calves on working farms, kept on thick straw bedding in group pens, were shown on the screen as were gestating sows in Sweden free to move about from feeding to resting areas.

Mallman reported on research being conducted at Provimi using ad lib feeding from artificial teats and group pens with straw bedding or slats for veal calves.

Neal Black of Livestock Conservation, Incorporated reported that in response to curriculum guides prepared by the Humane Society of the United States on farm animals, a number of groups in agriculture have produced "a more realistic educational approach" now being distributed to Iowa schools.

Three resolutions were passed by the Animal Welfare Committee commending government agencies for law enforcement and members of Congress for legislative efforts on behalf of laboratory animals and horses being transported to slaughter houses; however, only the fourth resolution was adopted by the full U.S. Animal Health Association: "Be it Resolved that advances in farm animal welfare based on scientific studies and practical application in the United States and abroad be further encouraged by the U.S. Animal Health Association."

Books

America the Poisoned.

Lewis Regenstein. Acropolis Books, Washington, DC 20009, 1982, 414 pages. \$16.95. (Available from Fund for Animals, New York 10019, at wholesale rates.)

The subtitle is: "How deadly chemicals are destroying our environment, our wildlife, ourselves and—how we can survive!" This is a tall order, which Mr. Regenstein has clearly worked diligently to address. His 18 pages of fine-print reference footnotes range from newspaper stories to court cases and governmental hearings and documents, reflecting the essentially case history nature of the text. Interpretation of some fine points may vary, but the overall picture is well shown. Those wishing more detailed information can trace much of the material back to original sources and authorities. For those unfamiliar with these critical problems, this book can be a vivid eye-opener and call to action, mainly to exert pressure on government to enforce the laws we have and to improve them, and to remove from office those who put immediate profits ahead of environmental and human health.

— Shirley A. Briggs



Poisonous chemical being poured into a drum.

Humane Education Materials

The American Humane Association has published a *Directory for Humane Education Materials*. Intended for students and teachers alike, the directory identifies 61 organizations from which materials can be had, is cross-referenced by states, by subject matter and by contributions, and gives guidance on age appropriateness. It can be obtained from: The American Humane Association, 9725 East Hampden Avenue, Denver, Colorado 80231 for \$7.50.

Books



Dr. Schweitzer with a fawn.

Animals, Nature & Albert Schweitzer

Editing and Commentary by Ann Cottrell Free. (Available from the Animal Welfare Institute at \$4.50.)

Most literate people know something about Dr. Schweitzer and "reverence for life." This remarkable book fills in that knowledge by tracing the development and implication of Schweitzer's moral philosophy in a deceptively simple and clear way. The book consists of 81 pages of well-organized quotes from Schweitzer, brief editorial comments and fascinating photographs and, like Schweitzer's life itself, can be appreciated at many levels, depending on one's capacities and experiences. A ten-year-old could enjoy it as much as a philosopher, though for different reasons.

There is, first, the story of a complex, courageous man. By the age of 30, Schweitzer held two doctorates and was an acclaimed organist and theologian. He then studied medicine and at age 38 established a medical mission in French Equatorial Africa where he spent much of the rest of his life. He also lectured widely, gave organ recitals, and wrote books.

These achievements were part of Schweitzer's attempt to work out a coherent philosophy of life. The book traces his struggle with conflicting feelings and confused thoughts as he tries to clearly conceptualize and articulate a unified philosophy. "To think out in

Books

every implication the ethic of love for all creation—this is the difficult task which confronts our age," and Schweitzer took it as the central task of his own life.

This book, which is published by the Animal Welfare Institute, the Humane Society of the United States, the Albert Schweitzer Fellowship, and the Albert Schweitzer Center, is carefully documented and includes a useful bibliography. It is a valuable contribution to everyone who has taken upon himself Schweitzer's task—to think out in every implication the ethic of love for all creation.

— Connie Kagan
November, 1982

Red Data Book

Part I of IUCN's new *Amphibia-Reptilia Red Data Book* has been published. Fully revised, it covers 83 threatened taxa in the orders *Rhynchocephalia*, *Crocodylia* and *Testudines* from all zoogeographic regions. It costs \$21 (including postage) from: Unipub, 345 Park Avenue South, New York, NY 10010. Alternatively it can be ordered direct from: IUCN Conservation Monitoring Unit, 219c Huntingdon Road, Cambridge, England. Part I of the new *Mammal Red Data Book* is also available at the same price.

1080, The Case Against Poisoning Our Wildlife

The facts on poison 1080 are well presented in a 20-page illustrated booklet published by Defenders of Wildlife. Testimony by 19 experts is included together with supporting documentation. The extreme cruelty of 1080 was shown in a scientific film at hearings. Nevertheless, the Administrative Law Judge recommended use of this painful, slow-acting poison which causes victims to run uncontrollably and to die hours later in convulsions. The Environmental Protection Agency has not yet made a final ruling as to whether the existing ban on 1080 for killing predators will remain or be lifted. Citizens wishing to express an opinion can write to Mrs. Ann Gorsuch, Administrator, Environmental Protection Agency, Wasterside, 401 M Street, S.W., Washington, D.C. 20460.

Copies of *1080, the Case Against Poisoning our Wildlife* may be obtained from Defenders of Wildlife, 1244 Nineteenth Street, N.W., Washington, D.C. 20036.

Happy ending to a New Zealand tale of stranded dolphins

It was the terrier who first sounded the alarm. Trotting along beside his master, a New Zealand seaside farmer, in the half-light of a March dawn he suddenly halted with his gaze toward the beach and began barking excitedly. Investigation disclosed an astonishing sight: a herd of dolphins, some on their bellies, some on their sides, stranded by the receding tide and now 800 yards from the haven of the sea.

After scolding them for their folly, the farmer administered some reassuring pats and splashes with water from adjacent pools, then hurried off to summon help. Within 30 minutes neighboring farmers and their wives were arriving with buckets and sacks and, in one case, bed covers. Holes were dug which quickly filled with seepage water; the sacks were immersed and then, when saturated, pulled out to cover the dolphins. By 8:30 a.m. as many as 60 helpers were on the scene including the children from the local school.



Frank D. Robson

Stranded dolphin being rescued by helicopter.

Meanwhile officials had been notified. They came with mesh net-slugs such as are used in New Zealand for rescuing deer. It was not low tide and the sea was further away than ever. So it was decided to call a helicopter. Half of the rescuers took up position waist deep in the sea; the other half loaded the dolphins on to the sling and then hooked the sling to the helicopter. One by one the animals were lifted from the one team to the other. Within an hour all were once more happily swimming in the sea.

Was the helicopter strictly necessary? Probably not. Stress can be a killer for stranded cetacea and helicopters are inevitably noisy and stress-producing. These dolphins were, quite properly, being kept cool and wet and tranquil by their obviously friendly human helpers.

"From 20 years of practical experience in the whale-stranding field," writes Frank Robson who sent this report to AWI, "I have no doubt that in the absence of a helicopter to lift this herd, the abundance of farmer intuition and interspecies communication which was evident at the scene would have assured a successful rescue at high tide. Rescuers should persist in trying and not give up just because a 'chauffeur' is not available at a stranding scene," says Robson, co-author of *Strandings*, a manual on stranded cetacea which is now in press.

For notification of the publication you can write to Nick Carter, P.O. Box 156, Hout Bay 7872, Republic of South Africa. Published by the Scientific Press Ltd., of Johannesburg, the book also will be simultaneously published in the United States and the United Kingdom. The price will be about \$20.

Correction: In error, the Summer 1982 edition of Volume 31 of the Quarterly was marked #3 when it should have been #2. We regret any inconvenience this may have caused our readers.

Wild America

Wild America, a series of 10 half-hour programs, is currently appearing on PBS television each Thursday evening (8:30 P.M. Eastern Time). It is the first TV series to deal exclusively with American wildlife and the material represents 10 years of constant filming by naturalist Marty Stouffer.



SKEEZER, the wonderful story by Elizabeth Yates McGreal about a mongrel dog originally intended for use in a medical research laboratory, who became a therapeutic companion for disturbed youngsters in a children's psychiatric hospital, will be NBC's Monday Night Movie on December 27th. Check your local listings so you don't miss this heartwarming true story about a dog's love and the comfort it brings to children. Skeezer is a true story first reported in *The Ann Arbor News*, then in the *Animal Welfare Institute Information Report* from which Mrs. McGreal learned of this dog's achievements in restoring children to health.

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British Columbia bans steel jaw trap for seven species

From October 13, 1982, live box traps or killing traps must be substituted for steel jaw leghold traps when catching wolverine, martin, fisher, weasel, skunk, squirrel and raccoon in British Columbia. The announcement was made by Minister of the Environment Stephen Rogers who said the new regulations mark important advances toward more humane trapping. He noted that the banned traps were charged with causing "prolonged suffering by injuring and holding an animal rather than killing it outright."

Although steel jaw leghold traps are still allowed for beaver, otter, muskrat and mink, the regulations require a submerging device so that the animal is held under water and drowned.

Coyotes, wolves, bobcat and lynx may still be caught with steel jaw traps on land. The traps must be either padded or offset by $\frac{3}{16}$ of an inch to reduce the impact. This is not an adequate solution, but it gives recognition to the pain and injury caused by this antiquated device.



This Canadian squirrel has dislocated its foreleg in struggling to escape. This cruel trap is now banned for squirrels in British Columbia.

Periodical Pleasures

by John Gleiber

It really is no longer safe to be man's best friend in the U.S.S.R. In the West, there is legislation and increasing pressure for more laws that will permit the elderly to keep pets in rental or subsidized housing. The theory is that they will provide love and warmth and companionship that might otherwise be lacking in a lonely pensioner's quiet existence. But, beware of those elderly, lonely women if you are an unaccompanied dog in a Russian street or even in your family's garden. That sweet-faced babushka heading toward you with a capitalistic glint in her eye might be planning to turn you into a newly fashionable "dog hat." According to *The Current Digest of the Soviet Press* (Vol. XXXIV, No. 11), most of the dealers in dog hats

are persons of retirement age. One old woman apprehended by the law explained, "It supplements my pension." Though it's illegal, the trade in these hats is brisk and the prices inflated. To top it off, in enlightened Russia, if you are caught killing and skinning someone's pet, you'll be prosecuted for theft and not for cruelty.

In another issue, just before a demand that the car rental system be brought back (the revenues are good for the state), there is a spirited request for larger, much larger printings of the upcoming second edition of the *Soviet Red Data Book* which lists endangered and vulnerable wildlife. The 10,000-copy printing of the 1978 edition proved to be insultingly inadequate for all of Mother Russia. A. Berestova

writes in the *Literaturnaya Gazeta*: "There should be a sufficient quantity of these *Red Data Books* in all libraries, including rural libraries. All enterprises and every school should have them. This will permit *activists* to disseminate necessary information and conduct propaganda work." (Italics mine.)

The *Digest* is well worth keeping in mind. We first learned of it when they sent us an issue which printed the Russian Nature Protection Law in its entirety. Since 1949, it has been published weekly by the American Association for the Advancement of Slavic Studies working out of 1314 Kinnear Road, Columbus, OH 43212. A long way from Minsk.

Animal Welfare Institute
P.O. Box 3650
Washington, D.C. 20007