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A return to the bad old days

There was no federal law against cruelty and theft by the animal dealers who sell dogs and cats to laboratories when photographs were taken and published by *Life* magazine, February 4, 1966. Investigations uncovered not only interstate commerce in stolen pets but cruel dog farms where animals awaiting sale died of hunger, cold and disease. This article, initiated by Henry Luce, brought more mail to *Life* magazine than any other article in the magazine's history, according to Stan Wayman, the *Life* photographer assigned to the job.

Congress passed the Laboratory Animal Welfare Act in 1966 to curb such hideous practices, and, in 1970 and 1976, the Act was amended to set standards for animals in research facilities, in transit from dealer's premises, in airports, zoos and circuses, and to make dogfighting a federal crime.

For the past four years, administration of the Act, which is the major U.S. federal animal protective law, has been funded at a level of \$4,865,000. The Reagan administration sought to reduce enforcement funds in previous years, but this year it mounted an all-out attack by recommending *no funds at all* to enforce the Act! This unprecedented action has met with strong protests from both animal welfare and scientific organizations who recognize that the work of the veterinary inspectors is essential in prevent-

Remember this *Life* magazine report?

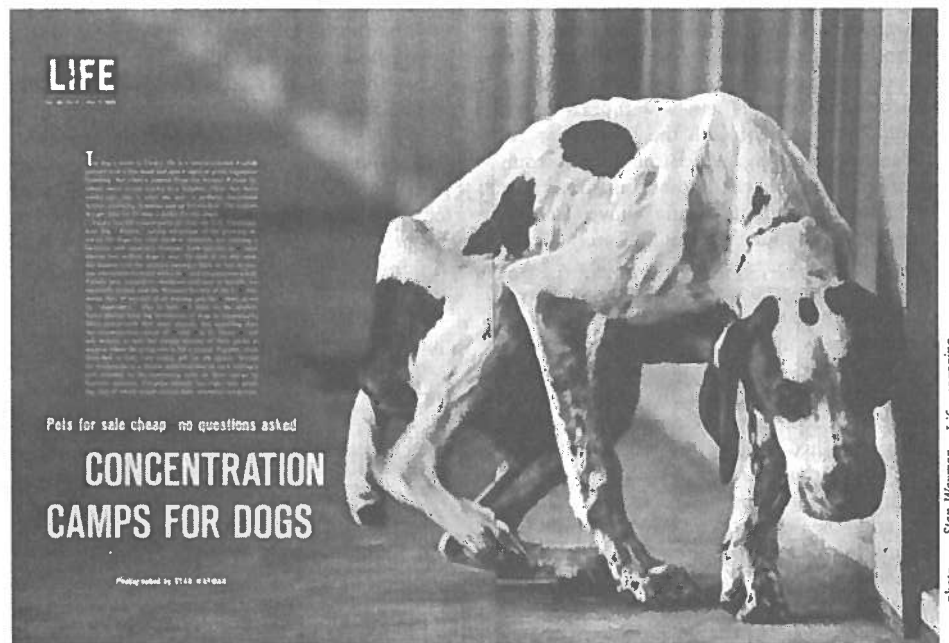


photo — Stan Wayman *Life* magazine

ing abuses such as were documented in the *Life* article.

There are more than 1100 research facilities throughout the 50 states, and some of these have 20 or more individual sites which the inspectors must visit. There are 3,490 animal dealers, 1,367 exhibitors and 346 air-

ports and carriers, all of which USDA's veterinary services are charged with inspecting to ensure that the Act's minimum standards are maintained.

The ghastly abuses uncovered and corrected by Veterinary Services will proliferate unchecked if the funds are not restored.

Lawsuit to save the whales



The lawsuit to save the whales has not yet been ruled on by U.S. District Court Judge Richey, before whom it is pending, but voluminous legal papers continue to be filed on both sides of the case. On January 24th William D. Rogers of Arnold & Porter, on behalf of the nine whale conservation groups including the Animal Welfare Institute, filed memoranda in opposition to defendants' motion and in support of the whale protectors' motion for summary judgment.

continued on page 2

STOP PRESS!

Judge Charles H. Richey ruled March fifth that Japan must be certified for killing protected whales and that its fishing allocations in the US 200-mile zone be cut as required by the Packwood-Magnuson Amendment.

The Judge ordered that Secretary Baldrige and Secretary Shultz be permanently enjoined from failing to certify any whaling activities by Japan that violate IWC quotas.

Further, he denied the government's request for a stay, but this was granted by the Court of Appeals March 19th. Final action is awaited.

whales continued



ment. The memoranda conclude:

"The November 13, 1984 correspondence does not commit Japan ever to stop whaling for any species of whale at any future date. In order to avoid certification through the end of 1987, Japan is required only to comply with certain U.S.-created quotas and to 'withdraw' its 'objections' by December 13, 1984 (in the case of the sperm whaling moratorium) and by April 1, 1985 (in the case of the general whaling cessation) . . . But the withdrawal of objections does not constitute a promise to comply.

"If, on December 31, 1987, Japan were to withdraw as a member of the IWC — as the Convention permits any party to do on December 31 of any year and as Japan repeatedly has threatened to do — Japan could continue whaling indefinitely. The November 13, 1984 understanding would be of no effect. Such action by Japan would be consistent with international law since the Convention permits such withdrawals. It would be consistent with the November 13, 1984 understanding, which contains no commitment whatsoever to the contrary. That understanding then would have accomplished nothing for the United States, for the cause of whale preservation, or for the IWC and the Convention. It would, however, have accomplished a great deal for Japan's commercial whaling industry, by postponing the Packwood-Magnuson sanction until it was drained of any effect. As eloquently explained by Secretary of Commerce Malcolm Baldrige in his January 14, 1985 affidavit:

"The Administration's policy is to encourage the development of domestic fisheries and the export of fisheries products originating in the fishery conservation zone. To the extent this policy is effective, the total allowable level of foreign fishing referred to in section 201 of the Magnuson Act will decrease. Accordingly, the government's leverage under the Packwood-Magnuson Amendment can be expected to decrease as foreign fishermen are displaced by domestic fishermen."

"Because the understanding with Japan entails no commitment to comply with IWC quotas, it conflicts even with Defendants' self-serving reconstruction of past administrative practice.

"The November 13, 1984 exchange of correspondence gives no commitment that Japan will ever comply . . .

"Thus, even if one assumes that the Secretary of Commerce has unfettered discretion to determine what actions 'diminish the effectiveness' of the convention, the November 13, 1984 understanding with Japan is unsupportable — a classic abuse of discretion. It trades a continuation of Japanese whaling — which must on any theory diminish the Convention's effectiveness — for nothing."

Boycott to save the whales

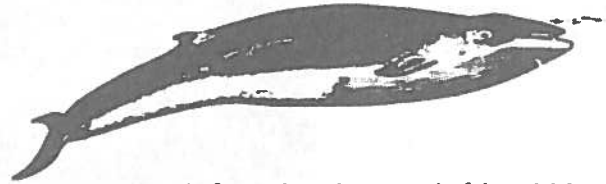
A worldwide boycott against Japan Airlines began in January. Whale conservation organizations throughout the world are joining together in this boycott, which is being coordinated by Greenpeace, to persuade the Government of Japan to end commercial whaling. Japan Airlines was selected because the Government of Japan is its major shareholder. Japan exerts the greatest influence in the world to destroy the commercial whaling moratorium overwhelmingly adopted by the International Whaling Commission (IWC) in 1982 and due to begin at the end of this year. Even now Japanese whalers are killing the great sperm whales in defiance of the IWC.

The Animal Welfare Institute took a centerfold ad December 27th in the big Japanese magazine *Asahi Journal* entitled "Statesmanship. An Open Letter to Prime Minister Nakasone." It said "Statesmanship puts the higher interests of Japan above the vested interests of a few. A ban on sperm whaling has been decided by a 25-1 vote of the International Whaling Commission including four countries who hunted sperm whales. . . . Does it really serve the interests of Japan to be the only country in the world to continue hunting sperm whales in defiance of the INTERNATIONAL CONSENSUS or does it serve the interests of a very few?"

The ad names the coastal whaling companies and their powerful friends and paid lobbyists and continues, "In an atmosphere of growing tension, a coalition of environmental organizations have filed suit in U.S. Federal Court demanding that the U.S.

Commerce and State Departments institute a 50% cut of Japanese fishing rights in the U.S. 200-mile economic zone as required by the Packwood-Magnuson amendment to the Fishery Conservation Act." The ad finished with an appeal to Prime Minister Nakasone to withdraw Japan's objection to the ban on hunting sperm whales during his January meeting with President Reagan, but Japan's objections still stand. The lawsuit is going forward with the Japan Whaling Association joining the legal battle against the friends of whales.

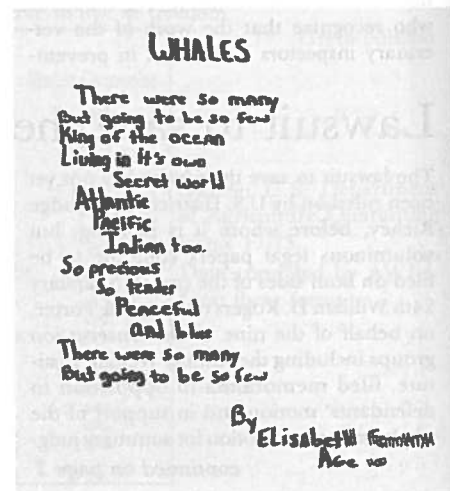
To show the Government of Japan your commitment to ending the commercial whaling that has driven one whale species after another to the brink of extinction, please take an active part in the boycott against Japan Air Lines. Ask travel agents in your area to book clients on airlines other than JAL whenever an alternative is available.



Fin whale from *The Red Data Book of the U.S.S.R.*

A Letter From A Whale brings huge human response

A Letter From A Whale tells how whales and their families live, how very similar they are in certain respects to human families, and pleads for help in silencing the murderous harpoons. The October 1984 issue of *Family Circle* carried a brief mention of this AWI-sponsored letter. As a result more than 60,000 children and their parents have written to ask us for copies. One child, Elisabeth Ferrara age 10, included with her \$5 donation a delightful and touching poem. Here it is.



Oil imperils sea otter

Despite more than 70 years of protection, the California sea otter has never recovered from the brutal attentions of 19th century fur traders. The estimated adult population along its 200-mile range off central California is just 1300 — and probably declining. Drowning in fishing nets, shooting and pollution are taking severe toll.

In 1977 the sea otter was declared a Threatened Species; it was recognized that its small population is highly vulnerable to an oil spill from passing tankers or from the oil ports at either end of its range. At that time offshore oil-drilling was not a hazard. It is now. The

entire sea-otter range is proposed for oil exploration.

Sea otters have no way of dealing with oil spills. Indeed the US Fish and Wildlife Service has predicted 100% mortality for otters contaminated by oil. It will not wash off and the animals' non-stop attempts to lick it off can only result in their swallowing it. And should an oil spill occur, otters escaping direct contamination could well die of starvation, their food supplies destroyed.

Recent years have seen more and more spillages — some of them alarmingly close to the sea-otter range. With today's volume of

tanker traffic, it is only a matter of time before the luck runs out. As for danger from oil rigs, the 3.2 million gallons of oil spewed into the Gulf of Mexico by the blowout on *Ixtoc 1* in 1979 serves as a fearful warning of what can happen.

Oil-drilling should be prohibited within the sea otter's range and tankers required to stay at least 50 miles offshore so that tugboats have time to get to vessels in distress before they run aground. At present they are far too close inshore for their own safety and that of the sea otters.

The conservation film that wasn't

The month-long safari was intended to film wildlife conservation in Botswana, southern Africa. But according to the World Society for the Protection of Animals, it turned into a nauseatingly brutal hunting party. One lioness was run over twice and then shot at point-blank range from the back of a truck. Another was pelted with beer cans to provoke her into charging the camera. When she didn't she was shot twice in the neck and bumped repeatedly with the truck. A brown hyena was chased to exhaustion by dogs and trucks, repeatedly bumped and finally run over and killed. A lion cub was lassoed, prodded and kicked by a heavy-booted hunter, then left in the bush with its two siblings to die of starvation. Its mother had already been slain. A herd of wildebeest was pursued and indiscriminately shot at. Two gemsbok were shot, one of them

a pregnant female whose unborn calf was hacked out of the womb and displayed for the camera.

Heart transplant surgeon Dr. Christiaan

Barnard was on this "conservation safari" for the whole first week finally leaving in disgust. Assistant Camerawoman Carol Hancock filmed the proceedings throughout.

Bobcat issue bobs up again



US conservationists at the 1983 CITES meeting in Botswana fought hard and successfully to prevent the "de-listing" of the American bobcat. The species thus remained on Appendix II of CITES; and Appendix II species — and their parts and products — may not be exported except where it has been scientifically established that such exports will in no way harm the species' survival prospects.

Conservation groups in Nevada believe that the state is now allowing bobcats to be taken without these proper safeguards for the species. The Nevada Humane Society and the Nevada Outdoor Recreation Association have filed suit against Nevada's Board of Wildlife Commissioners to stop the killing of bobcats in the state. The two organizations say that appropriate trapping seasons cannot be determined owing to the lack of "adequate or competent" studies of bobcat populations.

Horse Sense

There can be few animal lovers who are not familiar with the work of Hope Ryden, photographer, author, television producer and film maker. She combines her technical skills with a rare appreciation of and empathy with animals. Her field work is legendary and scientifically valuable. This is all by way of preface to the announcement that her 1972 book, *Mustangs: A Return to the Wild*, first published by Viking Press is now available in a handsome paper back edition, attractively

priced at \$9.95. We cannot do better than quote the *Library Journal*. "The color photographs — 48 pages of them — are stunning. Together with a vivid and skillfully written text, they provide a very special experience for the reader".

If your friendly neighborhood book shop does not have it, you can ask them to get it for you from the Mountain Press Publishing Company, 1600 North Avenue West, Missoula, MT 59806.

John Gleiber



photo — Hope Ryden

Chile sanctions sea lion kill

For the first time in 35 years sea lions may now officially be hunted in Chile. The government has authorized a commercial kill of 30,000 along a 1200-mile stretch of the country's coastline. The move has angered Chilean conservationists. While there has been no overall census, limited surveys suggest that sea lion populations are vulnerable. Furthermore the species mixes freely with certain related species which are certainly depleted. And since there is small likelihood of the hunt being properly controlled, many of these animals are likely to be killed too — with well above the official quota of sea lions.

A giant awaking — or sleep-walking into disaster? BRAZIL: a damming indictment

*Deep in the forest something stirred.
It sounded like neither beast nor bird.
What was that alien noise he heard?*

If the forest in question was Brazil's Amazonian rainforest, then all too probably the "alien noise" came from one of the legion of mechanical monsters now frenziedly uprooting the jungle in the name of progress. Burdened by a \$100 billion debt, Brazil is seeking economic salvation through a crash development program in its own Wild West.

Surrendered in this cause will be one of the last big tracts of virgin rainforest still precariously clinging to planet Earth. Envisaged in its stead are 10 new cities, huge cattle ranches, a deepwater port, an electric railway, a paved 1000-mile highway and, to crown all, the world's largest iron-ore mine (which is expected to make big inroads into the world's largest foreign debt) plus bountiful supplies of cheap electricity, courtesy of the Tucuruí dam which has drowned nearly 800 square miles of forest and forest life.

This at any rate is the dream — and incoming settlers in droves are pinning their hopes to it. But how does the dream shape up to the likely reality?

From bitter experience the aid-funding agencies have learned that development in the thin forest soils of Amazonia, unless stringently controlled, will be a euphemism for destruction that enriches only the land speculator. So this time, on the advice of its staff ecologist, Dr. Robert Goodland, the World Bank's \$440 million loan carries strict conditions: development must be of a kind that protects both the environment and the 20 or so Amerindian tribes living in the region.

On neither count, though, does Brazil seem to be honoring this agreement. In a letter to the president of the World Bank environmental and anthropological groups have urged the bank to "exercise its maximum leverage in this situation." The letter speaks of "accelerated, rampant deforestation, invasion of Indian lands, and destruction of natural areas unsuited for agriculture but

possessing tremendous biological significance."

But it is the Tucuruí dam itself which is exciting the chief wrath of conservationists — both within Brazil and outside. For it exemplifies all that development should not be; it is extravagant, destructive, unnecessary. The now flooded area contains nearly 200 species of trees, 44 of which are commercially very valuable. But the Brazilian company which was to extract this timber went bankrupt soon after starting operations.

So 90% of these doomed trees have not been harvested; instead they have been sprayed with a defoliant so hideously toxic that it is endangering the lives of those still in the vicinity. Indeed many deaths and

spontaneous abortions have already occurred.

The toll in rainforest mammals and birds whose habitat has gone will never be known. One way or another many millions will certainly be destroyed and there will be numerous unrecorded extinctions.

Granted, the dam should give Brazil a huge increase in hydro-electric power which notionally could halve oil imports. But Brazil already has more generating capacity than it can use. And in any case most of this new hydro-power will be sold at the very generous discount rates offered as bait to attract foreign investment.

The multinationals took the bait. It seems they will also take any possible profits. And Brazil will be left to pay the social and ecological costs. These are likely to be heavy.

Log exports down — but so are the trees

Exports to Japan of raw logs from the Philippines, Malaysia and Indonesia have fallen in recent years. This would be good news if it meant that importer and exporter had now seen the light and recognized the need to conserve tropical forests. Unfortunately it means no such thing. The fall-off is due to commercial exhaustion. The accessible forests have mostly gone.

Forests felled, people robbed

A sad story which tells of offences against both man and nature has come to us from the *Asia-Pacific People's Environment Network*. It concerns the people of Gogol in Papua New Guinea and the trees which once nourished their soil, protected their water supplies and succoured their existence.

Now the trees are virtually all gone — torn down by the Japanese timber company *Jant* which regards tropical forests as just unprocessed goods. And all around, the land lies scorched and barren.

The people sold out their timber rights on the understanding that logging would be selective and new trees planted. This has not happened. The trees have been clear-felled and reforestation is minimal. Also far fewer jobs for local people have come from this project than the company predicted.

In how many other parts of south-east Asia are forests and the lives of local peoples being wantonly destroyed in this manner?

No plants — no man

Plants, and only plants, are able to transform the energy ultimately derived from the sun into a form in which it can be used by living organisms. The several million kinds of microorganisms that exist in the world, and make up the biosphere, owe their continued existence to no more than 300,000 kinds of green plants and algae which have the ability to capture the sun's energy.

Since 15 or more kinds of animals and microorganisms exist for every plant, it may be assumed that the extinction of one kind of plant may bring about extinction of a dozen or even many more kinds of animals and microorganisms. We have not even begun to investigate the great majority of plants for any property of potential interest, and the chemicals they contain are just beginning to be explored.

From both these points of view it makes obvious good sense to hold on to the plants we have. In the US about 10% of our 20,000 species of plants should probably be classified as endangered or threatened — including about 50% of Hawaii's 2200 or so plants. During the first eight years in which the Endangered Species Act was in operation, the Fish and Wildlife Service listed 63 plants as endangered or threatened, or about 2% of the total. Many of the remainder will be lost if the process is not accelerated.

Exposing the ugly roots of forest policy

He calls (collect) from some hide-out in Montana to one or other of the national media, announcing himself as "Deep Root — an experienced forestry manager." Refusing further self-identification, he goes on to allege that the timber industry and the U.S. Forest Service are conspiring together to make large tracts of virgin forest ineligible for protection as "Wilderness". How? By building thousands of miles of roads through these areas (for the Wilderness designation can only be made where no roads exist). Once these lands are opened up in this way, the loggers move in and the timber is then sold off to the lumber companies — often at a big net loss to the government (i.e. the taxpayer).

Deep Root claims that the Forest Service intends "a road-building binge" over the next 10 years as a pre-emptive strike against members of Congress who wish to bring a bigger slice of the Rockies under the protective mantle of "Wilderness". All in all the anonymous caller has the Service in a tizzy. For in effect he has clear-felled a highly sensitive area of forestry policy which it had hoped to preserve as densely tangled undergrowth, impenetrable to the public gaze. "There's absolutely no question that the reason for all these roads in virgin areas is to make sure the land can never be included in a Wilderness."

This spring in Washington a House subcommittee will hold hearings on the road-building program in virgin forests. What nasty creatures will be found hiding in the woodwork? And will Deep Root break cover to testify? Watch this space!

Danger! Gun lobby aims to rifle our National Parks

The enlightened policy which has made America's National Parks a haven for wildlife — and by the same token a model to the rest of the world — is under threat. The dark forces of destruction are on the march. The National Rifle Association has filed a lawsuit that could open most of our parks to hunting and trapping.

While the suit is ostensibly concerned with just 11 areas, the NRA has a very much larger target in its sights. That target is nothing less than the principle which has stood for over a century and which gives to wildlife in our parks the unfettered right to live free and unmolested. Any exceptions to this rule have to have Congressional approval.

The NRA would turn this principle on its head. Were it to win its present suit, only a specific act of Congress could prohibit hunting and trapping in a National Park.

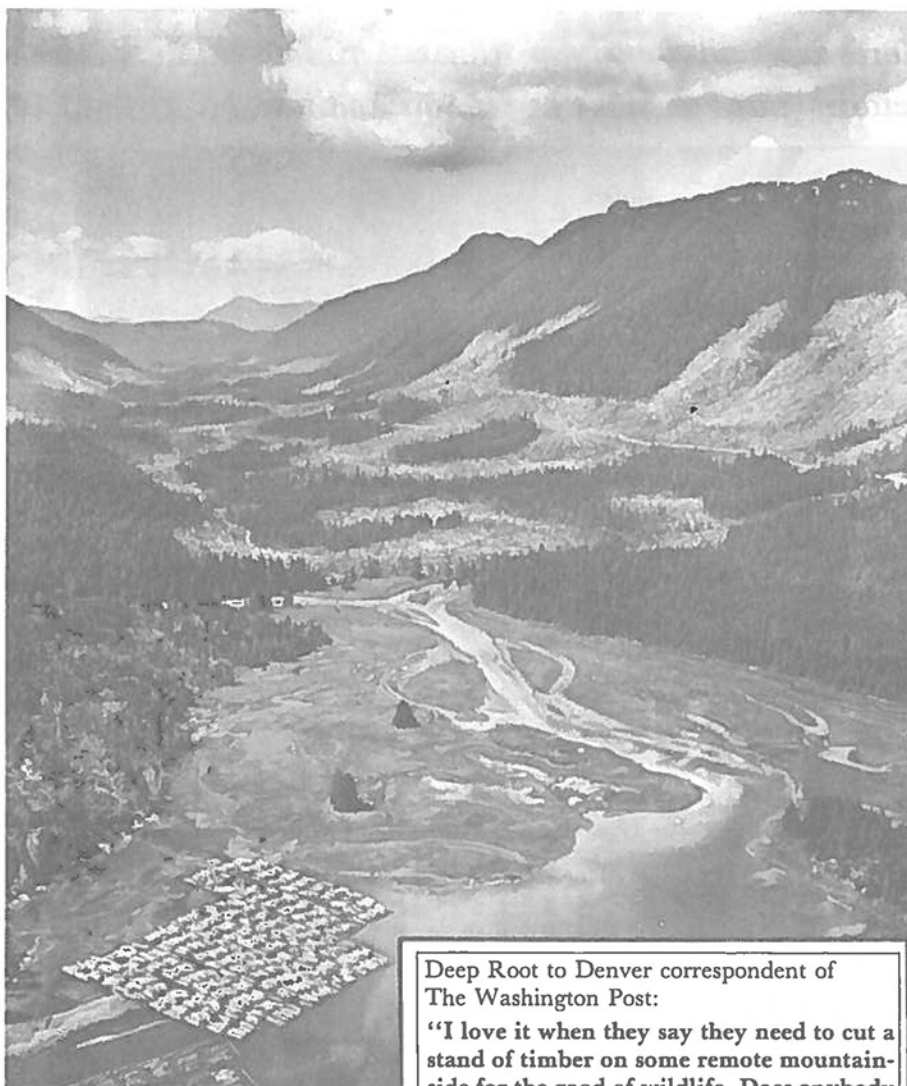


photo: USDA Forest Service

Deep Root to Denver correspondent of The Washington Post:

"I love it when they say they need to cut a stand of timber on some remote mountainside for the good of wildlife. Does anybody mention the wildlife impact of hacking a big road right through the habitat and sending these 30-ton logging rigs back and forth?"



photo USDA Forest Service

516482

YESTERDAY

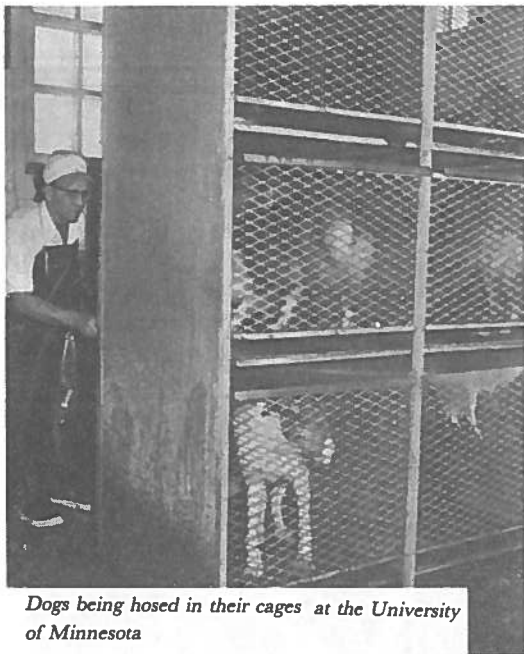
Here are photographs that Animal Welfare Institute photographers took before passage of the 1966 Laboratory Animal Welfare Act.



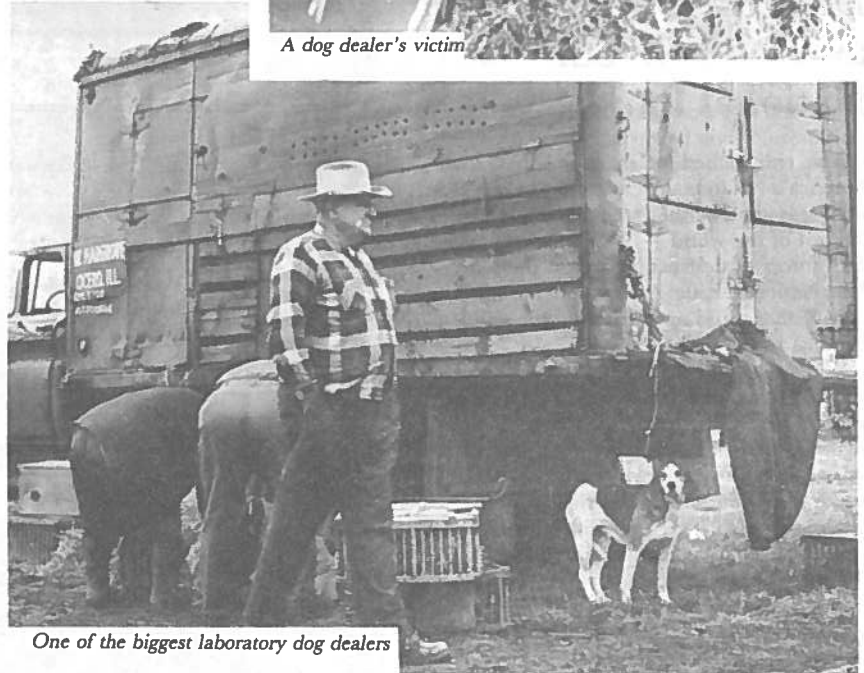
One of the dogs found dead on a dealer's premises. AWI's Laboratory Animal Consultant fed and watered the surviving dogs till the dealer, arriving with another truckload of animals, returned and drove her off.



A dog dealer's victim



Dogs being hosed in their cages at the University of Minnesota



One of the biggest laboratory dog dealers

After passage of the Laboratory Animal Welfare Act many dog dealers went out of business rather than try to meet the Act's humane requirements. But cases of cruelty and criminal neglect still arise — witness the recent Knudsen case.

Life and death inside a California kennel compound

Until November last there was just one kennel operator in California licensed to supply research labs with dogs and cats from animal pounds. Now there is none, following the shocking revelation of life — and death — inside the one-acre kennel compound near Stockton.

The case came to light when the sheriff's office in San Joaquin County received three phone calls within 15 minutes from people complaining of a foul stench coming from the kennel owned by Bud Knudsen who (they added) had not been seen for weeks.

Sheriff's deputies promptly broke in and were met by the howl of starving animals with suppurating sores imprisoned amid piles of feces and the rotting corpses of 18 dogs and 19 cats. By day's end officials had videotaped the grisly scene and traced the missing owner. He was charged on 124 counts of animal abuse.

This horror case has shocked both federal officials and animal welfare workers. The latter, though, are furious that officials failed to act sooner. "They've been asked to pull Knudsen's license for months and have done nothing" stormed Elliott Katz, president of Californians for Responsible Research.

In fact Knudsen had been one of five men arrested in July 1983, four of them for falsely obtaining dogs from people seeking "good homes" for their pets, and Knudsen himself for knowingly acquiring stolen property. While Knudsen was acquitted on this occasion (the others received jail sentences) former employees told law enforcement authorities that he had ordered sick dogs to be shot and sick cats killed with a rubber mallet or drowned. However necropsies failed to substantiate these allegations.

The following editorial is from the *Stockton Record* February 6, 1985

Good start on justice

What happens next to former Lathrop kennel owner Henry "Bud" Knudsen is up to the criminal justice system: a preliminary hearing on the animal cruelty charges he faces opened in Manteca Municipal Court Tuesday.

But much justice in the Knudsen case already has been done.

In a settlement of a civil action brought by the U. S. Department of Agriculture, Knudsen has been:

- Prohibited from ever again entering the animal brokerage business.

- Fined \$124,000 with all but \$10,000 suspended contingent upon Knudsen staying out of the animal business.

The Department of Agriculture took a hard line in the Knudsen case: it went after Knudsen for 124 cases of allegedly mistreated and neglected animals — the 36 dead dogs and cats and the 88 starving animals discovered at Knudsen's kennel on Nov. 1.

District Attorney Richard Eichenberger's office took a different approach, consolidating the 124 criminal charges on which Knudsen was originally arrested into four misdemeanors on grounds that it would be virtually impossible to substantiate all of the original charges.

The Department of Agriculture, thankfully, didn't agree.

If USDA were shackled by zero funding, it could not enforce the law — Knudsen has been put out of the dog dealer business for life.

California animal dealer punished

Henry Knudsen, of Lathrop, Calif., will permanently forfeit his laboratory animal dealer's license and pay a \$10,000 fine, with an additional \$114,000 suspended, after admitting to charges that 124 animals were cruelly neglected at his place of business.

According to Bert W. Hawkins, administrator of the United States Department of Agriculture's Animal and Plant Health Inspection Service, which enforces the Animal Welfare Act, the civil penalties were imposed by a USDA administrative law judge. The fine will be paid from escrow of Knudsen's property sale.

"Knudsen is permanently out of the animal dealer business," Hawkins said. "If he ever again engages in business regulated by the Animal Welfare Act — whether or not a license is required — he would be required to pay the suspended \$114,000 fine."

Eighteen dogs and 19 cats were found starved to death on Knudsen's premises. Animals still alive — 69 dogs and 18 cats — were emaciated and dehydrated. The live animals were taken to local animal shelters for proper care.

Evidence for the charges was acquired Nov. 1, 1984, at Knudsen's facility by local law enforcement officials, animal control authorities and USDA inspectors. Knudsen's federal license as an animal dealer was immediately suspended because of the serious nature of the charges.

Federal law requires animal dealers to provide adequate food and water, needed veterinary care and individual identification tags. Violations of the Animal Welfare Act are punishable by civil penalties up to \$1,000 per count.

Cyprus: the migrants' graveyard

The *Quarterly* has reported previously (Summer, 1982 Vol 31, No 3) on the mass killing of migratory birds by hunters in Cyprus. Sadly the scale of the destruction shows no signs of falling off. On the contrary — the International Council for Bird Preservation (ICBP) states that “the number of migratory birds killed per square mile is higher in Cyprus than in any other Mediterranean country, and the situation is getting worse every year.”

During the migrating seasons much of the island is blanketed in mist nets, each 10 to 12 meters long. Enormous numbers of these are being imported: one recent consignment had a total length of 20 miles. And more hunting licenses are being issued than ever before.

Spurring this slaughter of some 20 million birds a year is the Cypriots' taste for the sparrow-sized blackcap. It is considered a delicacy. But such is the indiscriminate

nature of the destruction that blackcaps form only a small percentage of the total kill which includes many endangered and (in theory) protected birds.

The 1982 Berne Convention on wildlife conservation forbids the use of mist nets. Cyprus has signed the Convention but has not yet ratified. In 1983 it promised the Council of Europe that it would do so “in the very near future.” Since then nothing has happened — except a further easing of the pitifully few restraints on the island's hunters.

Cypriot ornithologists now estimate that (excluding waterfowl) perhaps as many as three out of four migrants flying across Cyprus are killed. Since the island is one of the three main routes for birds crossing the Mediterranean, ICBP is deeply concerned. In order to bring pressure on the government, it has urged travel agents and its four



photo — Friends of the Earth

million members in Europe to boycott tourism there.

Letters are needed to the president of Cyprus protesting the appalling numbers of song birds killed (40 birds for each man, woman and child on the island each year). He may be addressed:
His Excellency
President Spyros Kyprianou
Nicosia, Cyprus.

Important news:

Norway and Denmark have proposed reinstatement of the North American gyrfalcon to Appendix I of the Convention on International Trade in Endangered Species of Wild Fauna and Flora.

Bonn Convention

Back in June 1979 in Bonn, Germany, an international convention was born: the *Convention on the Conservation of Migratory Species of Wild Animals*. Four and a half years later in November 1983 it came of age. Having notched up the required ratifications the Bonn Convention (its short-hand title) is now in force.

The convention seeks to protect migratory species, including birds, marine mammals and fish, which cross national boundaries. Appendix I lists the currently endangered; Appendix II is for species at risk of becoming endangered.

Four and a half years may seem a long time for a convention to begin to work. But

in fact it can take a lot longer. By “conventional” standards the process this time has been quite speedy.

No thanks to the United States, though. Not only has the US not ratified the Bonn Convention, it has not even taken the preliminary step of signing it. (That last sentence has an awful lot of negatives — but then so has US policy on this issue.)

Bonn Convention ratifiers: Cameroon, Chile, Denmark, Egypt, European Economic Community, Hungary, India, Ireland, Israel, Italy, Luxembourg, Netherlands, Niger, Portugal, Sweden.



The bird that doesn't flap when its nest is moved

In Victoria, Australia, the spunwing plover is learning to live with modern agriculture. Farmers temporarily shift nests and eggs out of the path of their massive cultivators, and sitting birds apparently take these peregrinations in their (or rather the farmer's) stride. The practice is proving very helpful in maintaining the small local population.

Egg smugglers caught

Last September in Western Australia wildlife officers caught two US citizens cutting down a tree to get at the eggs of a red-tailed black cockatoo. The two were also found to be in possession of other eggs of other rare species. They were fined \$1200 with costs.

To aid them in the felony the egg robbers had come equipped with a thermostatically-controlled incubator, a temperature probe and sophisticated mountaineering gear. Australian Customs fear that the smuggling of fertile eggs — far more difficult to detect than the smuggling of live birds — may be on the increase.

Ex-mobster turns wildlife smuggler?

A former prominent member of the Mafia who testified against organized crime in the early 1970s has been charged with illegally importing hundreds of endangered animals. Also charged were his wife, his two sons, his daughter and the curator of an Indonesian zoo.

The animals were smuggled into the US from Indonesia, Australia and New Guinea during the period June 1978 to September 1980. They included many exotic birds, mainly of the parrot family, and also an outside lizard, the Komodo dragon, named after the Indonesian island where the few surviving members of this prehistoric species still cling to existence.

Aerial wolf hunts expand in Alaska and British Columbia

A disheartening report on the aerial wolf hunt authorized by the Alaska Board of Game appeared in The Alaska Wildlife Alliance Newsletter for January/February 1985. Excerpts follow: "On Tuesday, December 4, 1984, the Alaska Board of Game voted 4-3 to expand aerial wolf hunting into yet another area of Alaska's interior. The decision was made in spite of overwhelming public opposition as evidenced in thousands of written comments to Governor Bill Sheffield and the Board and also in oral testimony directly to the Board at the public hearing. The new area is Game Management Unit (GMU) 20E and the northern part of GMU 11, more than 5,000 square miles located in the Tok-Fortymile River area of the eastern interior. It is in addition to aerial wolf hunts already authorized and underway in up to another 13,900 square miles in GMU's 20A and 20B. Aerial wolf hunting was begun in the Tok-Fortymile River area of GMU 20E in 1981 but was suspended, along with all other aerial wolf hunting, in 1983 by the lawsuit filed by The Alaska Wildlife Alliance. As reported in the past, that lawsuit was resolved by guideline regulations and required public review adopted by the Alaska Board of Game in April, 1984. So far, these three aerial hunts have been authorized under the guideline regulations with more waiting in the wings. Although public review is now required, the majority public interest is still not being adequately considered.

"In the new area, the Alaska Department of Fish and Game (ADF&G) hopes to kill approximately 100 wolves out of what they think is a total subunit population of around 125 wolves. But some local residents believe the number of wolves is much less. ADF&G has performed no wolf census (actual wolf count) in the area...Even if the current ADF&G wolf population estimate is accurate, they intend to leave no more than 25 wolves in the entire 5,000 square mile area, or one wolf for every 250 square miles! If it is not accurate and ADF&G is anywhere near successful in killing wolves this winter, wolves in 20E may be virtually and effectively eliminated.

"On top of this, as reported in past newsletters, ADF&G's own research in subunit 20E indicates that predation by

Prehistoric wolf wall painting from Les Eyzies de Tayac



grizzly bears on moose calves, the part of the moose population they consider most vulnerable, is *more than six times greater than predation by wolves!* In their study, more moose calves drowned than were killed by wolves! But the predictable ADF&G response is to kill even more wolves to make up the difference. The predation scenario in subunit 20E is much the same as in the Nelchina Basin and Denali National Park. In the Nelchina Basin, attempted "experimental" wolf *eradication* in the mid-70s had no effect on moose numbers. And in Denali National Park, moose and caribou populations are thriving with no sanctioned wolf control at all.

"All citizens should contact Governor Bill Sheffield at Pouch A, Juneau, Alaska 99811 and request that he stop all aerial hunting immediately and appoint to the Board of Game an Alaskan who will fairly represent and consider the views of *all* Alaskans. Ask him to cut all ADF&G aerial wolf hunting funds from the state budget and to consider the effect aerial wolf hunting has on the image of the state and our all-important tourist industry."

British Columbia

Project Wolf is fighting a continuing battle against the aerial killing of wolves in British Columbia, the following are excerpts from their latest newsletter.

"The Ministry of Environment, is continuing a massive extermination program using Fish and Wildlife staff in helicopters to wipe out entire wolf populations in selected areas of northeastern British Columbia.

"There is absolutely no predation on live-

stock from the wolves that are being hunted down and shot from helicopters.

"Although in private hands, public money is being used to fund a slaughter that will benefit financially only a handful of already wealthy men. It is big business. One guide took in 79 hunters in 1982 each of whom paid between \$5,000 and \$10,000 to the company for the opportunity.

"Who opposes this wolf kill?"

"The wolf kill program has been denounced by the Federal Department of the Environment as 'unscientific and dangerous.' In addition the Canadian Society of Zoologists, and the departments of biology at Guelph, and McMasters University have condemned the program. Biologists from the University of B.C. have criticized the government biologist Dr. John Elliott for being unscientific in managing and organizing the program. In addition the kill has been condemned by the World Wildlife Fund, the Sierra Club, The B.C. Association for the Protection of Fur-Bearing Animals and by Project Wolf."

But Minnesota wolves win

On February 9, 1985 Judge Lord's ruling against the proposed sport trapping season on the Eastern Timber Wolf (See AWI Quarterly Vol. 33 No. 1, Winter 1984) was upheld by the Eighth Circuit Court. The decision states in part: "The district court concluded that public hunting of a threatened species such as the Eastern Timber Wolf is prohibited by the Act except in the extraordinary case where population pressures within the animal's ecosystem cannot otherwise be relieved. As the government had made no such showing, a motion for summary judgment that the sport trapping regulations violate the Endangered Species Act was granted. The district court also concluded that the additional regulations expanding the predation control program of the wolf were illegal, as they were made without explanation. It awarded the Sierra Club \$55,369.45 under the attorney fee provision of the Endangered Species Act. We affirm the judgment of the district court as to the sport trapping of the wolf, reverse and remand as to the predation control regulations, and affirm the attorneys' fee award."

Federal Communications Commission helps wolves

The Alaska Department of Fish and Game began fitting wolves with radio collars several years ago in what the Department said was a scientific study of the wolf population. Now science has given way to destruction as wolves wearing radio collars unwittingly lead the Department's airborne gunners to a remote pack of wolves tracked through radio equipment licensed by the Federal Communications Commission. The Commission says the hunt violates that license.

"The use of this equipment to locate the wolves for the purpose of killing them no longer constitutes a research project," said the chief of the FCC's frequency liaison branch, H. Frank Wright.

The FCC ruling will hamper but not end the wolf hunt. To do that, the Governor of Alaska must call a halt.

New technology to reduce animal suffering

The interest of commercial firms in the development and marketing of substitutes for laboratory animals is welcome. American Science and Engineering, Inc. of Cambridge, Massachusetts states: "We believe that the AS&E Small Animal CT represents a breakthrough for the nondestructive evaluation of small animals in areas such as carcinogenesis testing, bioassay, teratology studies, and drug safety evaluation, and will provide an alternative to the serial destruction of laboratory animals."

Reduction of the use of animals in carcinogenesis bioassays can be expected through use of the company's micro-CT scanning instrument. As stated in a paper by Fredrick H. Seguin, Paul Burstein, and Paul J. Bjorkholm, the consumption of time, money, and animals using current bioassays is cited (of order two years and half a million dollars):

"Until the animals die, the only method used to detect tumors is clinical observation (palpation and observation of weight and food consumption). These methods are not very sensitive to early tumor growth. It is possible to make periodic sacrifices of animals for autopsy, but this requires additional animals, and unless very large numbers of animals are used the statistics are poor. Usually animals are allowed to survive until they are seriously ill or until the predetermined endpoint of the study, when careful autopsies and histopathological examinations are performed.

"If noninvasive X-ray CT inspection can be used to detect early tumors, then it would be possible to inspect the internal structures of all animals throughout the course of a bioassay. Statistically significant results would be available at earlier stages of a

study, and a study could be terminated as soon as induced tumors were detected. Thus some bioassays could be completed in shorter time, with fewer animals and lower cost.

"A.2 Chemotherapeutic Trials

"If it were possible to detect early tumor growth and to measure tumor progression, then it would be equally possible to measure tumor regression in serial scans of chem-

otherapeutically treated transplantable tumors. This could be a very important development for laboratory tests of chemotherapeutic agents. . ."

Of special significance is the reduction in animal suffering since small tumors could be accurately observed. Two of the three "Rs" would be assisted: both Reduction and Refinement, since smaller numbers of animals would be used for less painful tests.

A call for anesthesiologists

The Ad Hoc Committee of the New York Academy of Sciences, conducted an all day meeting on January 11, 1985, at the Academy, on: "Anesthesia for the Experimental Animal". This is part of an educational program of the committee, concerning experimental animals. The proceedings will be published by the Academy.

Differences in the pharmacology of anesthetic drugs, among the various species (and even among the breeds and varieties within one species) of experimental animals, were discussed. Problems which were unique to experimental animals were also mentioned. It was brought out, that some of these problems in veterinary anesthesia, have already been dealt with by physician anesthesiologists in the past. A closer liaison between the two, was urged. This should be feasible because in many medical centers

where experimental animals are anesthetized, both veterinary and physician anesthesiologists are available.

One point which was not brought up, is that many research workers, often plan and carry out anesthesia by themselves, without benefit of anesthesiologists. It is these research workers who are expert in many fields of basic or clinical sciences, who should consult with a veterinary or physician anesthesiologist. It is suggested that a specialist in anesthesia, be a member of each institutional animal research committee, to oversee anesthesia, and analgesia, in experimental animals.

The proceedings, when available, can be obtained by writing to Dr. Jeri Sechzer, Chair: Ad Hoc Animal Research Committee, The New York Academy of Sciences, 2 East 63 Street, New York, N.Y., 10021



Horseshoe crab grabs another convert

Not long ago the *Quarterly* sang the praises of *Limulus*, the horseshoe crab which is giving its blood — without harm to itself — to test for fever-producing pyrogens in intravenous drugs. *Limulus* is again in the news. The most recent pharmaceutical company to switch from live rabbits to *Limulus* blood is Mead Johnson. Company scientists say they find it cheaper, faster and more sensitive. Lending emphatic support to this finding is the Food and Drug Administration itself which points out that the new test is 100 times more sensitive than the old and now antiquated rabbit test.



A subject baboon at the University of Pennsylvania Experimental Head Injury Lab.

An experienced anesthesiologist might have prevented much of the pain and suffering these animals underwent.

Animal abuse linked to violent crime

New research confirms the important link between childhood cruelty to animals and aggression later in life. Childhood cruelty, often informally thought to predict violent criminal behavior, has nonetheless been largely ignored by the scientific community. The scarce existing literature is both conflicting and inconclusive.

Steven Kellert, responding to the lack of documentation in this area, released a study which attests to the importance of this relationship and establishes a preliminary classification system of motivations for animal cruelty. Kellert, whose previous work includes a study on attitudes towards animals, is an Associate Professor at the Yale school of Forestry and Environmental Studies.

Kellert interviewed 152 men including, "aggressive criminals," "nonaggressive criminals," and "noncriminals." His findings substantiate the predictive value of childhood cruelty. Many of the prisoners interviewed admitted to various childhood acts of torture to pets, wildlife and livestock; including burning, blinding and exploding animals as well as "skinning a trapped animal alive." Also cited were "harsh acts of punishment during the training of an animal, participating in cock fights and sexual play with an animal." Altogether, the subjects reported committing 373 acts "involving some degree of undue harm, violence, or cruelty towards animals as measured by the various indicators."

The biggest frequency of this abuse occurred among aggressive criminals. "25% reported 5 or more childhood cruelties toward animals, compared to less than 6% of moderate and non-aggressive criminals and no occurrence among noncriminals." Aggressive criminals also rated significantly higher on a scale designed to measure

childhood animal cruelty. Judging from the statistical evidence, Kellert notices "only two groups distinctively emerging on the childhood aggressiveness scale — aggressive criminals and all others."

The most severe cases of animal abuse revealed that, when compared to their nonaggressive counterparts, "abusive aggressive criminals" were more likely to inflict pain on a variety of species in a variety of ways. Virtually all of them had abused dogs and cats, often repeatedly. Remarkable too, is the lack of remorse displayed by the aggressors. Indeed, reflecting upon the act of tossing a cat in front of a moving car, one such prisoner remarked that he "enjoyed it" while another multiple offender explains that his cruelties were for "fun and excitement." Kellert describes one subject who "reported snapping the necks of animals, shooting birds, and exploding a cat in a microwave oven as a youth. When asked to describe his feelings about these behaviors, he remarked it was done 'for kicks, for fun (that he) felt nothing'".

What prompts children, [who often possess an innate affinity towards animals] to commit such atrocities? Kellert cites family violence and alcoholism as contributing factors. Three quarters of the aggressive criminals were subjected to "excessive and repeated child abuse, compared to only 31% of nonaggressive criminals and only 10% among noncriminals" Interestingly, out of the noncriminals who were abused, almost all reported incidents of cruelty to animals. Kellert discusses two types of family situations which he found fostered violent behavior towards animals. In the first, animal abuse represented displaced hostility against the parent, and thereby functioned as a means of venting anger and frustration. Childhood cruelty might also occur when the

child witnesses a parent abuse animals. In this case, the child imitates this behavior and the aggression is learned.

Kellert encountered a number of motivations for animal cruelty during the course of his research and, based on this data, was able to devise a classification system. Most of the men interviewed displayed more than one motivation for their action. Some of the motivations cited include the desire to exert control or retaliate against an animal for perceived wrongdoings. Often the aggressors want to shock, amuse or impress others and some simply derive sadistic pleasure.

Kellert's research should alert those in the social services (and society at large) to take heed when children display aggression towards animals. Such behavior signals the need for intervention to protect the animal and to protect society against violent crime. And, as Kellert concludes, "the evolution of a more gentle and benign relationship in human society might be enhanced by our promotion of a more positive and nurturing ethic between children and animals."

Jessie Despard

Kyoto Cruelty

The Japan Animal Welfare Society (JAWS) is trying to stop cruelty to dogs and cats at local Hokenshos and the Animal Control Center in Kyoto Prefecture. At Hokenshos animals are taken in daily but sent on to the Control Center only once a week and sometimes only once a fortnight. During this waiting period they are neither fed nor watered and thus often die of hunger and thirst or, in winter, freeze to death. At the Center itself, a 3-hour drive away, incoming dogs are not allowed to slake their thirst even in severe summer heat. The stated reason for this is that giving water to the dogs may kill them.

Animal Welfare Institute

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Numbered Days

An appeal from Nick Carter, Consultant, Environmental Investigation Agency.

Kaokoland and Samaraland in Namibia are home for the desert-living elephant, rhino and giraffe. The last relict populations of these animals, uniquely adapted to desert conditions, have been successfully protected from poachers by a handful of dedicated people. The area is vast, their resources pitifully small. Less than 50 rhino, and less than 70 elephants remain. After five years drought, a few calves have been sighted, born following the long awaited rain. The promise of survival!

The people who do the work in this wild, harsh land of unbelievable grandeur and beauty, raise their own funds. They give all of themselves. Recognizing this, the native Damaras have thanked them and want them to continue, and want to cooperate with them. Their work has the heart of the people.

The team has produced a Namib Habitat Calendar for 1985. It contains twelve magnificent photos of the animals and the country and costs \$7.00.

Please support their efforts and buy a calendar or two from them to help save the animals remaining. Given a chance they can recover their numbers. Given a bit of help the Namib Centre can give them that chance. No group anywhere in conservation is more deserving.

The Namib Centre of the South West Africa Wildlife Society, P.O. Box 483, Swakopmund 9000, SWA/Namibia needs your help.

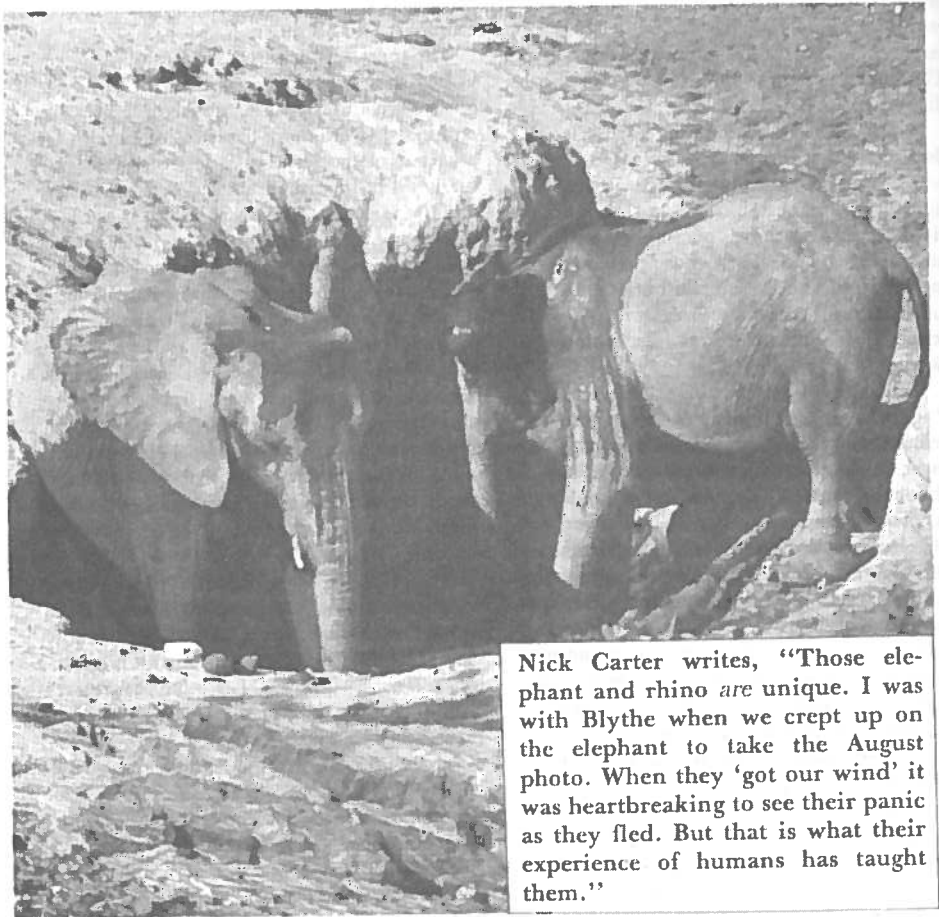


photo — Blythe Louit

Nick Carter writes, "Those elephant and rhino are unique. I was with Blythe when we crept up on the elephant to take the August photo. When they 'got our wind' it was heartbreaking to see their panic as they fled. But that is what their experience of humans has taught them."

The largest journey begins with the first step

Michael Werihke, under the sponsorship of the East African Wildlife Society, is planning a 1,600 kilometer walk through three African countries, Uganda, Kenya and Tanzania, to raise money for and attract attention to the African rhino.

Rhinos are increasingly threatened by drought conditions, and much more severely by sophisticated poachers. Through a previous 500 kilometer walk, Michael Werihke has already raised 280,000 Kenya shillings for the Rhino Fund. Additional money will be used for equipment for much needed mobile anti-poaching patrols.

The previous walk was not a solitary one.

His pet snakes, Kifaru and Mombassa, were draped around his neck for the full 24 days. We assume, having developed a taste for travel, they will join him again.

Any contributions to this most worthy effort may be sent to the World Society for the Protection of Animals, 29 Perkins Street, Boston, MA 02130. Funds so marked will be forwarded to the Save The Rhino Fund.

When not walking for rhinos, Michael Werihke works for a firm called Associated Vehicle Assemblers in Mombassa where he supervises the guard dog section, so he is able to involve himself with animals even while he earns his living.



photo — W.S.F.A.

Michael Werihke

The Evolution of National Wildlife Law by Michael Bean of the Environmental

Defense Fund has been reissued in a revised and expanded version. It covers wildlife law from its beginnings to the present day, examines the conflict between federal and state control, and discusses recent legislative programs for the protection of wildlife. First published in 1977 by the Council on Environmental Quality to wide acclaim, this updated version will be greeted no less warmly. It can be ordered from: Praeger Press, 521 Fifth Avenue, New York, NY 10017. \$12.95 paperbound, \$39.95 clothbound.



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Animal (mis)handlers are getting away with murder

On 7 February three squirrel monkeys died from exposure to extreme cold either before or during a flight from New York to San Francisco. On the same day a pigtail monkey died from exposure to extreme cold either before or during a flight from New York to Michigan. On each occasion the carrier responsible was Emery Worldwide.

From time to time such cases come to light, charges are brought under the Animal Welfare Act and we (and others) report on them. But it is now plain that we (and others) must recast our ideas as to how frequent these "accidents" are. Estimates made on the basis of known cases are almost certainly well below the true figure.

We base this assertion on the facts surrounding this case and on information received from an employee of Emery. He makes two main points. One, Emery is not equipped to handle live animal shipments nor are its personnel trained to ensure the health and safety of animals. Two, animals left unattended on loading docks in sub-zero temperatures are almost certain to die.

Now what our informant says about Emery is doubtless no less true of many other carriers. As to his second point—a city like New York can expect many days of extreme cold in winter and many days of extreme heat in

summer. For cooped up animals, prolonged exposure to either extreme will be fatal.

But what of the other facts surrounding this case? The recipient of the three dead squirrel monkeys, the Animal Care Facility at the University of California, San Francisco, wrote to the shipper requesting replacements. And the shipper wrote to the carrier demanding compensation [but without voicing even the mildest of reproofs for the cruel thoughtlessness that slew the animals]. Neither party saw fit to report what was clearly a flagrant breach of the Animal Welfare Act.

If this apathetic reaction, this conspiracy of silence, is typical—and there is no reason to suppose otherwise—then a great many offences of this kind are occurring. And the offenders are seldom punished because USDA, the agency responsible for enforcing the Animal Welfare Act, is seldom told.



Credit: R. Mittermeier, WWF.

Hopefully this squirrel monkey will never find himself going "air freight" from dealer to laboratory.

That an Animal Care Facility belonging to one of the nation's premier universities should neglect to report such a plain case of maltreatment is shameful. And a little surprising. That the shipper should feel that his duty in the matter has been fully discharged by mailing a claim for compensation is no less shameful. Though in this case, not at all surprising.

For the shipper in question was none other than the world's largest supplier of laboratory animals, Charles River—to whom regular readers of the *Quarterly* will need no further introduction.



Trapped in a steel-jaw leghold. This German Shepherd was not the target species but it got caught just the same. Such "accidents" are not uncommon: see page 5.

This bill would end steel-jaw trapping

A bill to end the use of the steel-jaw leghold trap, HR 1809, was introduced in Congress in March by Tom Lantos (D-CA) with James Scheuer (D-NY) as chief co-sponsor. They are joined by 70 members of the House in a major push to see the proposal enacted into law. With the solid support of the American public and the vigorous encouragement of groups around the nation, the United States could, in this Congressional session, join the more than 60 countries who prohibit use of this device.

A recently published selection of letters addressed to George Whitney, DVM, exemplifies professional opinion on the steel-jaw trap. Excerpts follow:

"It is impossible for me to understand how our civilization and culture can tolerate the use of the leghold trap."

Samuel M. Peacock, Jr., MD
Associate Professor
Jefferson Medical College

"Hopefully the growing awareness of the excruciating pain that this device inflicts upon animals will be accompanied by legislation to outlaw its use."

Leo J. Hickey, Director
Peabody Museum of Natural
History
Yale University

Continued on page 2

The Beluga, Delphinapterus leucas, is unique among cetaceans in being able to turn its neck so freely.

Soviets relieve beleaguered belugas

A dramatic rescue took place last February of a huge herd of belugas trapped in thick ice in northeast Siberia. According to the Soviet newspaper *Izvestia*, the 10-foot-long white whales, known in Russia as polar dolphins, were first spotted in late December by a native Chukchi hunter.

The presumption is that the whales had chased a large shoal of cod inshore and then found their exit blocked by ice whipped into position by an unfriendly wind. Encircled by ice the whales—which perhaps numbered as many as 3000—now had only small and shrinking pools of open water in which to live and breathe. Disaster loomed.

But relief was at hand—though it didn't come immediately. Summoned to rescue the beleaguered belugas, the icebreaker *Moskva* failed to break through on her first attempt. Time was now pressing. The belugas were beginning to die. So guided by spotter planes the *Moskva* once more plunged into the ice, breached the 15-mile-wide wall and reached the whales.

But now the real problem began. How to get the whales to follow the ship back to the open sea before the ice reformed. As *Izvestia* put it: "Nobody could tell the captain how to perform the most responsible

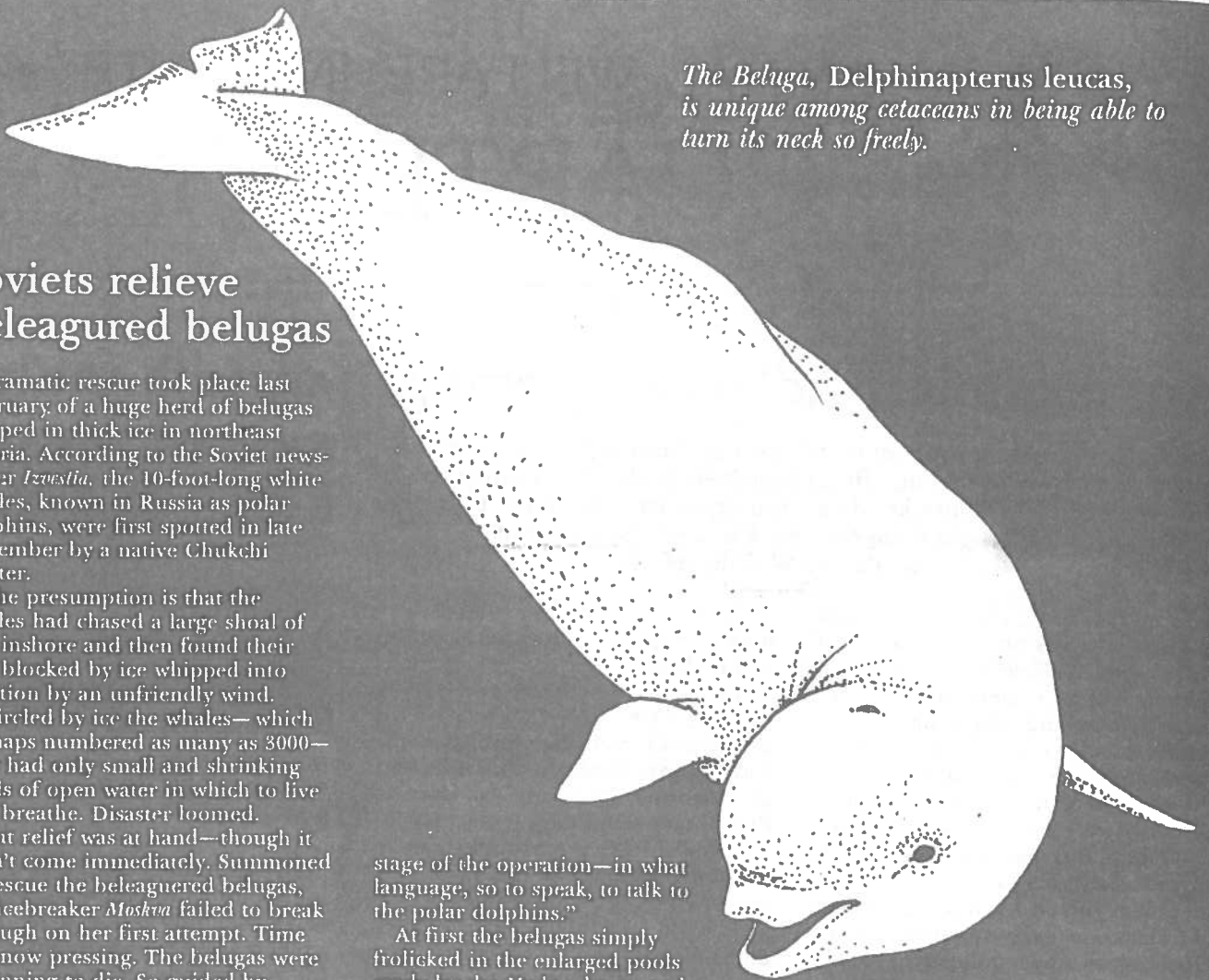
stage of the operation—in what language, so to speak, to talk to the polar dolphins."

At first the belugas simply frolicked in the enlarged pools made by the *Moskva*, happy to have some space in which to feed and swim. After four days they had lost their fear of the ship. But still they would not follow her.

Then, to quote *Izvestia* again, "Someone recalled that dolphins react acutely to music. And so music began to pour off the top deck. Popular, martial, classical. The classical proved most to the taste of

the belugas. The herd began to slowly follow the ship."

Gradually too the whales lost all their inhibitions. Says *Izvestia*: "They hemmed in the ship from all sides. They were happy as children, jumping, spreading out all over the ice field." In late February they finally reached the open sea. Free at last!



Credit: Richard Ellis

Steel jaw continued

"Would like my name included as one who vehemently opposes leg traps. The veterinary oath includes a promise to ease suffering in animals hence I believe the AVMA should actively lobby against such barbarianism."

Dr. Thomas E. Powers
Head, Dept. of Physiology
Ohio State University

"It is our considered opinion that devices such as the leghold trap do not belong in a society where people consider themselves civilized in their behavior towards each other and towards animals."

Louis van der Heide
College of Agriculture and
Natural Resources
University of Connecticut

"There are few devices as brutal as the steel jawed leghold trap. I find it absolutely unbelievable that it is still in common, widespread use. . . . I have seen animals in pain and heard them scream out on the African savanna. Yes, animals feel pain and agony, just as we do."

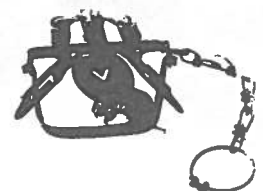
Donald C. Johanson, PhD
Director
Institute of Human Origins
Berkeley, CA

"I am acutely aware of the anxiety and fear wild animals can feel when captured in leghold traps by my fourteen years of experience dealing with over 130 species of mammals."

Emil P. Dolensek, DVM
New York Zoological Society

"That the steel jawed leghold trap is a cruel device goes without saying, and to think of something more inhumane, I cannot. . . . I commend your efforts to outlaw this device. . . ."

A. Bartlett Giamatti
President, Yale University



It's time we were rid of this monstrous device.

Banks freeze loans on Amazonian development

The last *Quarterly* carried an article documenting the crass misdeeds of developers and their international backers in Brazil's Amazonian rainforest. The destruction there, in the state of Rondonia, continues but one piece of good news has now emerged. Last January for the first time ever a multilateral bank refused to endorse a loan intended for Amazonian development—and did so on environmental grounds.

The bank concerned was the Inter-American Development Bank (IDB). Last January environmentalists requested and obtained a meeting with IDB policy makers. The matter at issue was Brazil's development, backed by international funds, of yet another large slice of virgin rainforest without (yet again) any proper environmental safeguards.

Pointing to the heedless despoliation of forest and tribespeople in Rondonia—in contravention of contractual undertakings—the environmentalists voiced well-substantiated fears that development in the neighboring state of Acre could be even more destructive. At the same time the US Treasury (which contributes 35% of IDB's capital) was also briefed on the perils implicit in funding this development.

Later in January came IDB's decision—on instructions from then Secretary of Treasury, Donald Regan—to withhold \$14.5 million from its Fund for Special Operations, so lopping some 20% off the total slated for the loan. Environ-



Credit: P. T. Teuscher, United Nations

Desertification follows destruction of rain forest.

mentalists believe that the decision may reveal a crucial shift in government thinking. In explanation a Treasury spokesman cited "the unsustainable nature of the agricultural development likely to take place on the poor soils in the region and the heavy deforestation expected with road construction."

If the government is showing signs of having seen the light, it is important to ensure that the shutters do not come down again. Pressure must be kept up, indeed stepped up. Last fall the House Banking Subcommittee on International Development Institutions and Finance urged the multilateral banks to give more weight to environmental factors in loan decisions. The Treasury agreed to help promote the Subcommittee's recommendations through the US executive directors of the banks. These recommendations include:

- Assign a full-time environmental staff member to each of the World Bank's six regional offices and establish a central environmental office in IDB.
- Involve nongovernmental conservation organizations and indigenous peoples of developing countries in planning and carrying out projects.
- Actively involve the ministers of environment and health of developing countries in formulating policies.

- Make plans and strategies conform to the World Conservation Strategy.
- Commit staff and money to carrying out the pledges made in the banks' 1980 Declaration of Environmental Policies and Procedures Relating to Economic Development.
- Refuse finance for projects that are unsustainable or that threaten species' extinction or that degrade protected natural areas or the land on which indigenous peoples depend.
- Devote resources to small-scale technologies rather than to extravagant large-scale projects.
- Cease financing roadbuilding and settlement projects in tropical forests.

You can help curb rainforest destruction by urging IDB and the World Bank to implement the recommendations of the House Banking Subcommittee. Please write to:

Antonio Ortiz Mena, President
José Manuel Casanova, US executive director
Inter-American Development Bank
1808 17th Street, NW
Washington, DC 20577

A.W. Clausen, President
James B. Burnham, US executive director
World Bank
1818 H Street, NW
Washington, DC 20433

World Bank now acts too: Under extreme pressure from the international conservation community and the US Congress the World Bank announced in April that it was freezing, on environmental grounds, all further loans for Brazil's rainforest development in Rondonia. The total slated for the loan is \$434 million of which \$178 million has already been drawn. The remaining \$256 million is therefore now frozen. This is the first time ever that the World Bank has withheld a loan on environmental grounds.

Bows and arrows are not the weapon

In New Hampshire there were several arrests last November on charges of illegally killing or selling moose, deer and black bear. The killing of moose is forbidden at all times in the state and it is illegal to sell the flesh of any wild animal killed within state borders, except the black bear. Licensed hunters are allowed to take just one bear a year and sell any part of it.

Since the toenails, gallbladder, hide and teeth of a black bear will fetch around \$500, the state's bear population is coming under severe pressure. Guides are charging up to \$2000 for a bear hunt lasting less than a week—and there are plenty of takers.

One macabre detail is that the reported bow-and-arrow kill of bears is up tremendously. In fact, though, these bears have been shot: virtually all have bullet holes in them. The guide tells the hunter not to buy a license till the animal is killed and then to buy a bow-and-arrow license. This costs just \$24 as against a regular license fee of \$59.

The New Hampshire game department is energetically tracking down bear violations. It is to be hoped that the courts will be equally vigorous in *crack-*ing down on them.

Ethics symposium

Four years ago a symposium entitled *LD₅₀ and possible alternatives* was held in Stockholm, Sweden (the winter 1982 *Quarterly* carried a full report). A follow-up symposium, again under the auspices of Sweden's National Board for Laboratory Animals, will take place in Stockholm 12-14 August this year. The title is *The Ethics of Animal Experimentation*.

The organizers say they "expect to attract specialists from all over the world and hope for an evaluation of the experience of how animal experimentation in different countries is regulated." For details write to: Second CFN Symposium, c/o RESO Congress Service, S-105 24 Stockholm, Sweden. Telephone: International +46822 6020.



SECOND CONFERENCE
THE ETHICS OF ANIMAL EXPERIMENTATION
STOCKHOLM, SWEDEN
AUGUST 12-14, 1986

Stop this wholesale destruction of wildlife

Welcome to the Environmental Investigation Agency! This new organization has produced a most valuable and detailed study of the "legitimate" trade in wildlife. The study focuses on the huge traffic passing through Heathrow Airport in London but the researchers also interviewed a great many people connected with the trade in Africa, south-east Asia and the US.

AWI in association with the Humane Society of the United States is happy to have published a summary of this study, though it certainly does not make for happy reading. For as Sir Peter Scott says in his foreword, the "findings are devastating"—and

this despite most of the trade being conducted by members of CITES which repeatedly, in the text of the treaty, requires the nations who have ratified the treaty and those who catch, handle and sell live animals to "minimize the risk of injury, damage to health or cruel treatment."

The study views the trade from the standpoint of capture, preparation and shipment to eventual purchase and quarantine in the consumer countries. When viewed from this perspective an enormous tragedy comes to light: wholesale deaths of wildlife in quantities hitherto unrealized and involving terror and suffering on an unimaginable scale.

A punishment to fit the crime

It seems that US judges are beginning to treat wildlife offences with the seriousness they have long deserved. In the fall 1984 *Quarterly* we told of the busting of a wildlife smuggling ring by federal undercover agents. The defendants have now been tried.

The ringleader, Loren Ellison of Big Timber, Montana, was found guilty on seven charges of killing and selling protected wildlife and acting as guide on out-of-season hunts. He received a 15-year prison sentence. At last the punishment is beginning to fit the crime.

WARNING
THE ILLEGAL DISPOSAL OF
TOXIC WASTES WILL
RESULT IN JAIL.
WE SHOULD KNOW
WE GOT CAUGHT!

The above was the headline to an unusual advertisement in the *Los Angeles Times* one day last February. The ad explained that the president and vice president of the furniture-equipment company American Caster were now in jail for burying 254 drums of toxic waste and dumping pollutants into Los Angeles sewers. The company also had to pay \$40,000 in fines and cleanup costs—and publicly confess their sins to readers of the *L.A. Times*.

Another Los Angeles firm recently indicted for wrongful toxic-waste disposal also temporarily lost its president—locked away for three months—and had to pay a \$100,000 fine and supply free, bottled, purified water to several customers. Confessional ads are the latest weapon of the Los Angeles Toxic Waste Strike Force whose director, Barry Groveman, says: "An ad like that is worth a million prosecutions."

Fumihiko Togo

We have just received word of the death of Ambassador Fumihiko Togo, a member of the International Committee of the Animal Welfare Institute since 1982. Mr. Togo's distinguished diplomatic career culminated in his representing Japan as Ambassador to Washington from 1976 to 1980. He and his wife, Ise, were outstanding members of the diplomatic community. Their espousal of humane animal issues was highlighted by the benefits they hosted at the showcase embassy residence to support the Washington Humane Society. His retirement was an active one with advisory roles in Japanese business and commercial activities, as well as his interest in the work of the Institute. We have lost a statesman, friend and advocate of animal interests.

Wanted: a national policy for taking animals on our public lands

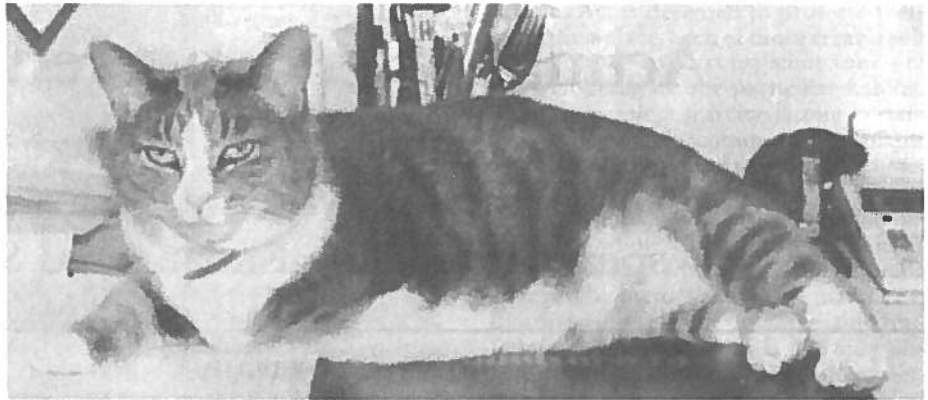
On 26 March Senator Cranston (D-Calif) introduced a joint resolution to establish a national policy for the taking of mammals and birds on public lands. The Senator singled out three critical issues: the need to recognize the interdependency of predator and prey; the need for any national policy on the killing of predators or scavenging animals to take account of this interdependency; the need for clear, statutory procedures.

Expanding on these issues Senator Cranston said that wildlife managers cannot reliably duplicate the effects of natural predation. By and large prey that fall victim to a natural predator are the less healthy specimens. Natural predation unlike human predation therefore exerts a healthy influence on the prey stock.

Tripod the tabby wins through

Each April the Chicago-based Pets Are Wonderful Council (PAW for short) sponsors a Most Wonderful Pet contest to encourage people to provide homes for the thousands and thousands of dogs and cats in animal shelters. One of the contestants this year was Tripod, a tabby who lost a front leg after being caught in a steel-jaw leghold trap.

Tripod was held in the agonizing grip of that trap for a week in freezing weather. When finally found she weighed less than three pounds although she was several months old. Because Tripod's leg had to be amputated her owner decided she didn't want her and asked veterinarian Dr. Donald Fincher to put her to sleep.



Prize-winning Tripod at Dr. Fincher's office.

Fincher declined. He says: "I just couldn't do that. Tripod had fought so hard to live, to get well. I asked the owner if it would be OK to find her another home and I knew where that home would be: with me."

So Tripod won through. And at the Most Wonderful Pet contest she was also a winner; she got the "most congeniality" award.

Pet-owner rights are under threat

New federal regulations are being proposed which would gravely weaken the rights of elderly and disabled pet owners in federal subsidized housing. These rights were enshrined in a 1983 law sponsored by Congressman Mario Biaggi (D-NY). Referring to "a 9-year effort on my part to prevent discrimination against elderly and disabled tenants in federal housing to own pets," Biaggi is hotly challenging many of the new regulations.

In particular he strongly opposes the forced moving of tenants from floor to floor in order to maintain "pet" and "no pet" areas and the proposal to extract a

fee from pet owners, regardless of how well they have cared for their pet or how long they have had it.

He also urges that steps be taken to ensure that all pet owners fully understand any new regulations and that a fair hearing be given to those wishing to appeal an eviction notice or the threatened removal of their pet. He says: "I respect the right of landlords to take steps against unruly pets. However when one considers how important a pet can be for the health and safety of an elderly citizen, federal policies should respect this as well."

From trauma to triumph

Bridget's early life was scarred by near-tragedy. One cold day in December 1981 while doing the rounds of her rural neighborhood in Michigan she ran straight into a steel-jaw leghold trap. Fortunately for this beautiful Bouvier de Flandres, help arrived in time to save both life and leg.

For a while, though, her life still hung in the balance; no one seemed willing to adopt her. But Bridget's warm pleading eyes did the trick, winning the heart of a shelter volunteer who enrolled her on a leader dog course for the blind in Rochester.

In April 1982, just four months after her traumatic experience, Bridget made history by becoming the first Bouvier to graduate as a Leader Dog for the Blind.



From a vicious trap to a happy home

Now she is a leader for Florence Smith from Royal Oak, Mich., and the pair are becoming quite famous. Together they travel across the country speaking on behalf of the Leader Dog Program and visiting patients in nursing homes to bring them a message of hope.

Australians oppose factory farming

A poll published in Australia's *National Farmer* magazine on people's views of factory farming has come up with surprising and very pleasing results. Of women who gave definite answers, 92% opposed battery hen farming and 84% opposed intensive pig farming. The men lagged somewhat but most of them still ended up on the right side. Of those giving definite answers, 68% opposed battery hen farming and 64% opposed intensive pig farming.



Free range pays

In England demand is growing for free-range eggs, even though they cost slightly more than the "normal" battery ones. A Hampshire farmer, Michael Smith, tentatively started a free-range business in 1981 on 40 acres of land. Today, in association with some 30 farmers in the area, he sells 250,000 free-range eggs every week.

Mr. Smith defines free range as green grass within 12 paces of the hen house. This means a maximum of 250 hens to the acre. Living is good for Mr. Smith's hens. And a good living is what they give him in return.



Acting for endangered species:

David Attenborough,
naturalist, writer and film maker,
speaks up for the Endangered Species Act

TESTIMONY OF DAVID ATTENBOROUGH

on

THE ENDANGERED SPECIES ACT

presented to

THE US HOUSE OF REPRESENTATIVES

COMMITTEE ON MERCHANT MARINE AND FISHERIES

SUBCOMMITTEE ON FISHERIES, WILDLIFE CONSERVATION,
AND THE ENVIRONMENT

March 14, 1984

As a citizen of Great Britain and an International Trustee of the World Wildlife Fund, I am honored to appear before you to help, if I can, in your deliberations on the Endangered Species Act.

For the past 30 years, I have had the great good fortune to spend much of my time travelling in the wilder parts of the world, making films about natural history. The latest of them, a series called *The Living Planet*, is at the moment being shown throughout the United States on the Public Broadcasting System. My journeys have taken me to some of the remotest parts of the earth, from the ice of the Antarctic to the jungles of South

grown in the United States belong to only four varieties. All the peas grown here come from just two. Just four varieties of wheat produce three-quarters of all the crop grown on the Canadian prairies, and a single variety takes up more than half of that vast area. These cultivated strains of wheat, peas, and potatoes, however, have to be changed every decade or so to keep them free from disease. If one such disease were to get hold, immense areas could be devastated and many people would face starvation.

To produce new strains, plant breeders need new genetic resources that come from wild species of grasses, potatoes and peas. Only recently, a new species of corn

was discovered in Mexico that is not only resistant to several viral diseases, but is perennial, so it might be the means of producing a new disease-resistant variety of corn that will grow year after year and need less care than those we cultivate at present. So it is essential that wild species related to our food plants should continue to flourish in the wild and that the wildernesses that might harbour them should not be destroyed.

Plants provide us with many products apart from food. We use them for timber in construction and for paper. Until now, that has meant cutting down trees; but recently a wild hibiscus in Kenya called kenaf has been discovered to produce excellent fibre for paper mills in a single season, instead of taking the 15 years or more that pine trees need to reach commercial size. A wild flower from the Mediterranean region called crambe yields chemicals that can perform the difficult job of lubricating jet aircraft engines. And the number of drugs and medicines produced by plants is vast.

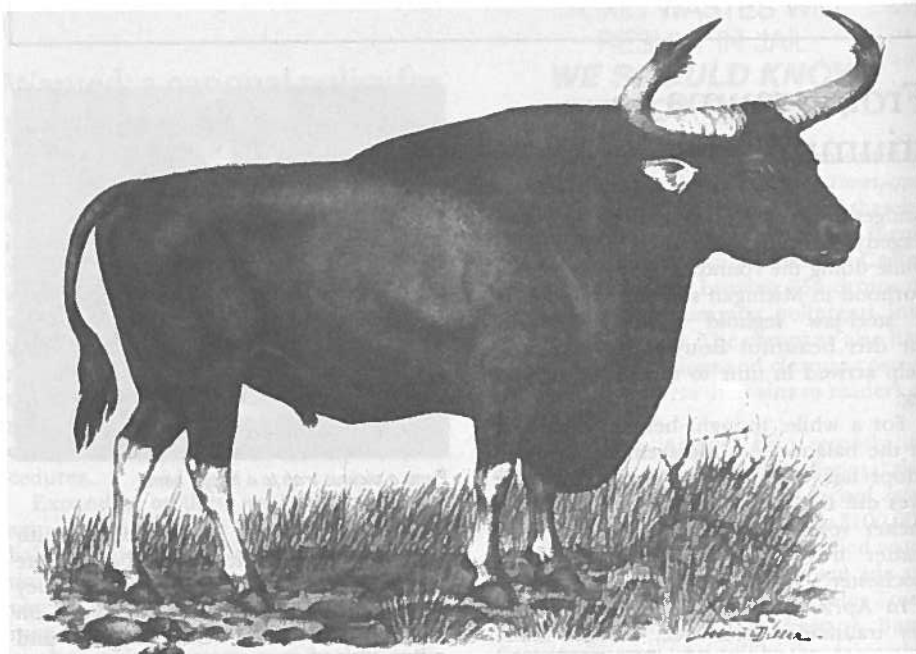
Approximately 40% of the prescriptions dispensed from pharmacies here in the United States are directly based on plant products. A small plant, a periwinkle from Madagascar, is now known to produce one of the best cures we have

Conservation is sometimes represented as being the enemy of development. On the contrary. Without conservation we will have nothing to develop.

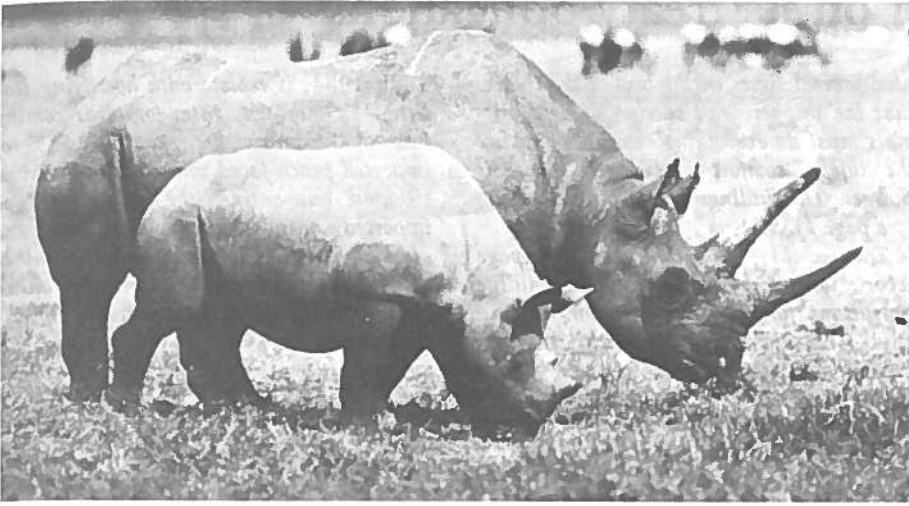
America, from the central Sahara desert to lonely islands in the Pacific. Yet paradoxically the more I travel in little-populated regions, the more plain it is to me how greatly mankind, in the densely-populated parts of the world, depends on the animals and plants of the wilderness.

Of course, we all recognize that without plants human beings would die. Without plants we have nothing to eat. Even when we eat meat we are eating plants at one remove. It is less often realized that our present food plants, unchanged, will not continue to provide the ever-growing population of the world with all it needs.

The particular strains of food plants upon which we depend are extraordinarily few. Seventy-two percent of the potatoes



This kouprey is a wild cow found only in Cambodia—and there only in very small numbers.



Black rhino and calf. In the last two years Africa has lost over 50% of its black rhinos—killed for their horns.

for certain types of cancer. In short, the practical value to be derived from wild plants is truly incalculable. That is literally true. We have made no proper survey of the plant kingdom from the point of view of their use as drugs or food. We have not even discovered or named all the plants in the world. And yet, all over the world, we are destroying wild areas and with them species of plants that grow only there. Conservation is sometimes represented as being the enemy of development. On the contrary. Without conservation, we will have nothing to develop.

Similarly, many wild animals have a value to us that we still do not properly appreciate. We have only recently discovered that a kind of shell-less sea snail living off the coast of California contains a chemical that is capable of reducing blood pressure. We now realize that species of antelope that evolved over millions of years to crop the relatively poor grasslands of parts of Africa or central Asia are more efficient at turning such meagre pasturage into meat than imported domesticated versions of the cattle that evolved in the lush environments of Europe.

The kouprey, a wild cow from the tropical forests of Cambodia, now seems to be one of the few species of cattle to be resistant to one of the most devastating livestock diseases. Today we are beginning to master the techniques of genetic engineering, and it may well be that the vast and still as yet uncatalogued diversity of life will prove to be the most valuable resource that this planet has to offer us.

But it is not simply single species that are so important to the continued welfare of mankind. Animals and plants live in complex, interdependent communities that function as units; and these too are essential for the well-being of life on earth. The tropical rain forest is a crucial element in maintaining the oxygenation of the world's atmosphere and the pattern of regular rainfall. The soils that feed the earth's 4.8 billion people are created and

kept fertile by specialized communities of living organisms. Our water would be a polluted, toxic brew were it not for the countless plants and micro-organisms that, by serving their own needs, turn natural and human-created wastes into harmless and even beneficial substances. Without a cloak of vegetation, the land may be scourged by erosion, the risk of disastrous flooding increases sharply, and droughts become more frequent and damaging.

The terrible drought that has killed and is still killing hundreds of thousands of people in Ethiopia and other parts of the African Sahel is not merely a natural phenomenon. It has struck a land whose people have destroyed more than half the natural vegetation in the last few decades. We mismanage our landscapes at our own peril. We simply cannot do without the ecosystem services provided by life on Earth.

But you may well ask—what has this got to do with the whooping crane, the Florida manatee, the bald eagle and the other animals and plants that the Endangered

Species Act is designed to protect? Well, in the first place, each of those creatures is an indicator—a very conspicuous one—of the well-being of one particular habitat. Their increasing scarcity is one certain sign that a whole community of plants and animals, large and small, is in danger of being lost.

The whooping crane is endangered because the whole character of the aquatic systems along which it lives is being changed by man. The Florida manatee is disappearing because the increasing traffic of small power boats is not only disturbing them but churning up the waterways and altering their whole ecological structure. So if you save these large and dramatic creatures in the wild, you are likely to save whole groups of other species which themselves may have practical value to mankind which we do not, at the moment, even suspect.

But if someone could demonstrate that there was no practical value whatsoever, for food or medicine or anything else, to be gained from such creatures, would that mean that we would be justified in allow-

Millions—and I among them—would argue that these creatures have a value to mankind that far transcends the merely practical. They and the other creatures that live with them, together with the landscape they inhabit, are part of the natural treasures of this great country, part of the birthright of its citizens.

ing them to be shot or letting them from sheer carelessness simply disappear into extinction? Of course not. Millions—and I am among them—would argue that these creatures have a value to mankind
(Continued on page 8)

Going, Going

- *The rainforests are still tumbling. It's goodbye to an area the size of Pennsylvania every year—to make way for (amongst other essentials) fields of coca for turning into cocaine and beef cattle for turning into hamburgers.*
- *Merchant ships dump over 600,000 plastic containers in the sea every day. Fishermen "lose" over 1800 miles of nets in the North Pacific every year. Millions of seabirds, porpoises, turtles and seals get entangled in this debris every year and die.*
- *Elephants continue to fall—to guns and snares and poison. Ivory sales continue to climb—to an all-time high of over 1000 tons in 1983. And as rhino-horn prices soar, rhino numbers plummet. In just the past two years over 50% of Africa's black rhinos have been done to death.*
- *Several hundred million migratory birds are being shot, trapped and netted every year by Mediterranean hunters—with no favors shown to the rare and "protected".*
- *The cage-bird trade takes millions of birds from the wild every year—the US alone taking half a million. Enormous mortality results from the long, stressful journey from forest to cage.*
- *Primates still make subjects for dubious experiments, wild cats still make furs for affluent women, whales still make whale-meat for the already well-nourished—and wildlife smugglers still make huge profits for themselves.*

CITES is falling down on its treaty obligations

The countries that are party to the Convention on International Trade in Endangered Species (CITES) met in Buenos Aires, Argentina, in April. The summer Quarterly will carry a full report. Delegates to the conference received two brand new publications which were sponsored by AWI.

One is titled Injury, Damage to Health and Cruel Treatment and deals with the CITES requirement, reiter-

ated several times in the text of the treaty, that the shippers and carriers of wild animals must do everything possible to ensure the safety, comfort and health of their charges. The findings are deeply depressing (see page 4).

The second publication is a 300-page report, written by Greta Nilsson, wildlife consultant for AWI and author of *The Bird Business*. The report, titled Importation of Birds into the United States

1980-1984, is replete with horrifying statistics on mortality rates for birds coming into this country. For example, 55% of imported peach-faced conures died in transit and quarantine; the death rate for imported orange-chinned parakeets was even higher—80%. Meanwhile the import of wild birds into the US continues on its giddy upward spiral. Last year was an all-time record.

Attenborough testimony, continued

that far transcends the merely practical. They and the other creatures that live with them, together with the landscape they inhabit, are part of the natural treasures of this great country, part of the birthright of its citizens. They are a source of scientific wealth as well of aesthetic delight. To destroy them and to eliminate their habitat is to inflict a major robbery on the people of this country and the generations that follow, a robbery that can never be restored or made good. Once a species is extinct, it is lost forever. How extraordinary it would seem should the citizens and government of this great country decide that every single corner of it must be surrendered to man's use, that no part

How extraordinary it would seem should the citizens and government of this great country decide that every single corner of it must be surrendered to man's use, that no part of it should be allowed to survive as home for creatures which can live nowhere else.

of it should be allowed to survive as home for creatures which can live nowhere else, if men—who can live anywhere and are the most ingenious exploiters the world has seen—should decide to lay a claim.

Every time I visit New York and go to the American Museum of Natural History, I read on the marble walls of the entrance hall, in letters of bronze a foot high, sentences that could have come from the lips of the most ardent and vigorous conservationist alive today: "... The nation behaves well if it treats its natural resources as assets which it must turn over to the next generation increased and not impaired in value. . ."

Those words were, in fact, spoken about a hundred years ago by Theodore Roosevelt. They are a reminder to me that this country, the United States, has always

been a leader in the conservation movement. It was here that the concept of the National Parks was first recognized and here that they were first created. It was here that the ethics of conservation were first formulated. And now, today, it is here that the rest of the world looks for leadership in conservation matters.

The Endangered Species Act is a courageous national statement that Americans care about their magnificent land and its wealth of living resources. And it clearly acknowledges the United States' international standing in these matters. The Act allows experts from US government agencies to give advice and training to conservationists from overseas. As human populations grow and the ecological crisis spreads and intensifies throughout the world, that help and expertise have never been more sorely needed. It makes the United States a party to the Convention on International Trade in Endangered Species of Wild Flora and Fauna—CITES for short—the strongest legal means available to the world community to protect wildlife that is traded internationally.

It also commits this country to the Convention on Nature Protection and Wildlife Preservation in the Western Hemisphere. This convention was set up largely because many animals are no respecters of national boundaries, but migrate from one country to another; it is little use to protect them in Louisiana and North Dakota if their wintering grounds are far to the south in Latin America—and vice-versa.

But the global significance of the Endangered Species Act goes far beyond these international agreements. What the United States, the recognized world leader of conservation does, is carefully watched—and duplicated by many other nations as best they can. If this country were suddenly to lessen its commitment to the welfare and survival of its wildlife, what hope would other less wealthy countries have of persuading their government and their people to conserve and protect, particularly when pressing short-term decisions to spend money and allocate land are

much harder to take there than they are here.

The Act, excellent though it is, has not, however—as I understand it—achieved here what its original supporters hoped it would when it was first adopted. Twelve years of administering it have shown, not surprisingly, that there are some aspects that ought to be improved. Adding spe-

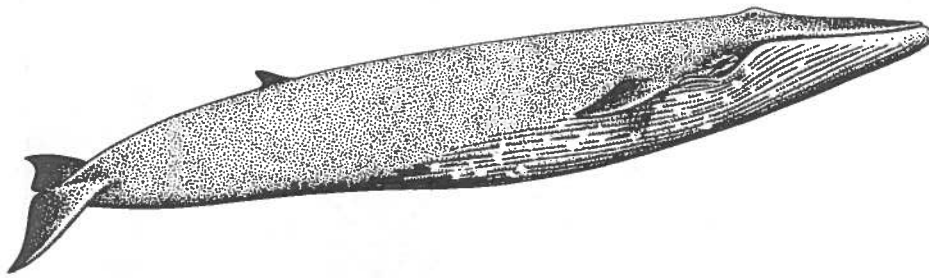
"... The nation behaves well if it treats its natural resources as assets which it must turn over to the next generation increased and not impaired in value. . ."

—Theodore Roosevelt

cies to the list of those protected is taking so long that in some instances species have diminished to danger point or even vanished entirely before they could be given legal protection. Plants, even now, do not get as effective safeguards as animals. Marine species also need more protection.

I do not doubt that someone will demonstrate conclusively that such changes would cost money. I am aware that the United States is struggling with huge budget deficits—though I doubt that the economic climate is as harsh as it is in my country. Everyone knows that your farmers are suffering, that your commercial fishermen are beset with problems, that your poor are dispirited.

Yet as you sort out your spending priorities and your economy regains momentum, you will be able to help such people to regain their economic productivity and independence. But if help and protection is taken away from your endangered wildlife—there could be no recovery. Extinction is a one-way process. I speak for conservationists everywhere in asking you to do everything in your power to renew and strengthen the Act that has been an inspiration to people the world over. All the inhabitants of the living planet will thank you for it.



Sri Lanka protects its whales

President Junius Richard Jayewardene, Sri Lanka's Head of State, is very keen that whales in the Indian Ocean bordering Sri Lanka should be protected. He has issued an order to this effect to our National Aquatic Research Agency.

The order followed the President's visit to the eastern port of Trincomalee—one of the finest natural harbors in the world and 200 miles from Colombo—to see blue whales. He and his party, a team of North American and European naturalists and a Sri Lankan marine biologist, were thrilled when they saw a school of these giant creatures, 60 to 70 feet long, blowing fountains in the sea. The President said he had seen one of the most beautiful sights of his life, nature at its finest.

President Jayewardene later asked his Minister of Fisheries, Mr. Festus Perera, to ensure that no human predators encroached on the preserve of these mammals and that they should be permitted to live and play in Trincomalee waters free from harm.

Commenting on the President's interest in the whales Sri Lanka's leading English language paper *The Daily News* wrote editorially: "Clearly the whales had touched the President's imagination as much as they had that of many of his countrymen and women. That was why he took the first available opportunity to look at them. The whales must surely be

glad that the first citizen of this land is taking a personal interest in ensuring that no whalers and other blubber hunters come here with their harpoons, radar and other lethal weapons."

According to the National Aquatic Research Agency many species of whale are found around Trincomalee. As well as the spectacular blue whales, there are humpbacks, Bryde's and toothed whales, including sperms. Sri Lanka is now thinking of organizing whale-watching expeditions for tourists. Recently a visiting marine biologist observed that the whales of Trincomalee were a potential goldmine.

With its Buddhist tradition of refraining from harming animals, many people in the country favor whale-watching cruises while coming down heavily on the bloody and sinful exercise of whaling. Showing these magnificent creatures to visiting tourists would be one way in which Sri Lanka could help in whale conservation.

It is interesting to note that before the discovery of this rich whale population off Trincomalee, the National Aquatic Research Agency quoted a group of scientists as saying there were whales in Sri Lanka's northern waters off the Gulf of Mannar. However the whale populations at Trincomalee are probably larger and are certainly more accessible.

Joe Segera

. . . . but what about its dolphins?

A World Wildlife Fund research team has reported that Sri Lankan fishermen are slaughtering dolphins. Occasionally the animals may be killed for food but this cannot be the reason for deliberate wholesale drownings in the huge nets used by today's fishermen. Here the killing motive is the removal—as the fishermen see it—of a rival consumer of fish.

The research team seeks government help in tackling this problem but warns that forceful intervention would be likely just to anger the fishermen and so make matters still worse for the dolphins. The team counsels a cooperative approach that enlists the fishermen's aid.

Can sea lions save swimmers in distress?

Two young California sea lions are being trained to see if they will make good rescuers of swimmers in distress. Sea lions can surge through the waves at 30 mph which is a whole lot faster than the fastest human lifeguard. The hope is that they can be taught to tow people to shore or to carry lifebuoys to them.

But at Long Beach, California, chief lifeguard Bruce Baird is skeptical about the scheme. He says: "If you were someone from Ohio and you were in the water having trouble and a sea lion approached you. . . well, it would require a whole lot more public education." But maybe Mr. Baird is just nervous for his job?



Sea lions on the beach.

Credit: WWF

Killer-whale capture permit is cancelled

Back in November 1983 the National Marine Fisheries Service issued *Sea World* wildlife park of San Diego with a permit to capture 100 killer whales along the Alaskan coast. The ostensible purpose was to assess the ecological impact on killer-whale families and food chains. Thereafter 90 of the 100 captives were to be released and 10 retained for display in San Diego and other *Sea World* parks.

However opposition from Alaskan citizens was such that *Sea World* biologists did not attempt to make use of their permit. They were also awaiting the outcome of a lawsuit brought by environmentalists contesting the permit's validity. In January this year the case was heard in Anchorage and a US District Court judge ruled that NMFS had erred in giving permission for the capture because *Sea World* had submitted no proper environmental impact study.

The permit was therefore cancelled. *Sea World*, it seems, will have to make do with the killer whales it caught many years ago in Icelandic waters.

Jane Goodall speaks her mind on animal research

Without question the world's foremost authority on chimpanzees is Jane Goodall. She has spent a quarter of a century and half her life in a remote part of Tanzania studying the loves and hates, the virtues and vices, the triumphs and disasters of chimps in the wild. This is no straightforward task. For "each chimpanzee has as much of a personality as every human."

Last year she was the winner of the Getty Prize—awarded for outstanding services to conservation. At a National Press Club lunch in her honor last fall she answered a host of questions on various issues. Her harshest words were reserved for animal research. . . .

"First and of primary concern we should spend as much money as it takes to try and find substitutes for animals in

scientific and medical research. Second we should try to eliminate more than half of the painful experiments done on captive animals.

"Third, if it is really necessary in studying some aspect of disease that is going to give tremendous alleviation of suffering to many many humans, then it probably is justified to use a chimpanzee. But if we do that, we should spend as much money as it takes to house that creature in really good conditions and give him the best possible life we can while he's serving humanity in this way.

"He hasn't asked to do it. He has no say in it. I have the horrible feeling when looking at some of these laboratories that here we have in essence a concentration camp where creatures



Chimpanzees are among the most intelligent and playful animals.

are shut in with nobody to speak for them. They are subjected to one painful experiment after another. There is no hope for them. No way of escape at all."

Too many chimps die from neglect

Although chimpanzees are our closest living relatives, so close that biochemical analysis shows only the smallest degree of variation between *Pan troglodytes* and *Homo sapiens*, and although there are so few chimps left that the prices they fetch are growing astronomically, still they are dying for lack of adequate supervision of their care and housing. Last December five chimpanzees belonging to an animal trainer succumbed to a fire in an animal shed heated by a kerosene heater which exploded. All 20 chimps were unconscious when firefighters removed them from the building. (The 15 survivors included a 45-year-old female, the original "Cheetah" in Tarzan movies with Johnny Weissmueller.)

But animal trainers are not the only guilty ones. In September 1983 six chimpanzees at the Laboratory for Experimental Medicine and Surgery in Primates (LEMSIP) in Tuxedo, New York, died owing to a faulty heating system. In a permit application to import additional chimps from The Netherlands, the re-

quired description of mortalities during the preceding five years showed 29 deaths, only eight of which were related to experimental studies.

LEMSIP chimps fared even worse in 1979 when the National Institutes of Health approved a low bid for hepatitis research and sent LEMSIP chimps by truck to the Southwest Foundation. On arrival, the weary drivers neglected to inform Southwest Foundation that they had unloaded the chimps, and the animals, already stressed by their long journey, were not

fed or watered over the weekend, resulting in several deaths.

The acquisition of chimpanzees from the wild by an Austrian pharmaceutical firm, *Immuno*, has led to a lawsuit in which the firm is seeking \$3 million in punitive damages from each of three publications: a scientific journal, an activist newsletter and a British scientific news magazine—respectively: *The Journal of Medical Primatology*, *The International Primate Protection League Newsletter*, and *New Scientist*.

Massachusetts set to follow New York

The fine example set by the state of New York in prohibiting the sale of birds caught in the wild could soon be followed by neighboring Massachusetts. Hearings were held there on a state bill which, as in New York, would permit only sales of captive-bred birds.

Bearing in mind the destruction of

wild populations, sometimes to the brink of extinction, caused by the cage-bird trade, the bill deserves speedy passage into law. The sponsors are aiming at 1 January 1986. In view of the ever-rising import of wild birds into the US (see page 7), that will not be a day too soon.

Albert Schweitzer Summer Fellows

Congratulations to the Catholic University of America in Washington, DC—or more specifically to the University's *Center for Advanced Training in Cell and Molecular Biology*. For the Center is responsible for a novel scheme with tremendous potential for the training of biomedical scientists in alternative research technologies.

Each summer two University juniors are selected as Albert Schweitzer Summer Fel-

lows and invited to spend 9-10 weeks at the Center. There they receive intensive grounding in *in vitro* toxicology and tissue culture.

The Center is now emerging as the leading institution for short-term training of this kind. And it is surely a happy touch to attach the Schweitzer name to a venture whose primary aim is to relieve animal suffering. The Albert Schweitzer Fellowship contributed funds for the project.

Royal College fined for cruelty

In February Britain's *Royal College of Surgeons* was found guilty of causing needless suffering to a laboratory monkey, a 10-year-old female macaque. The college was fined £250—about \$300.

The case was brought following a raid last August on the college's research center by animal rights activists. They discovered that poor ventilation had caused temperatures in the cages to rise to as much as 92 degrees. The female macaque was found severely dehydrated.

Flying foxes face extinction, need help

Australia's flying foxes face possible extinction if action is not quickly taken to stop their killing. Despite loud protests from environmentalists, the Australian government has still not issued a moratorium on the slaughter of these endangered bats.

The flying fox population has rapidly declined since last year, when the government of Queensland, under pressure from the fruit growers' lobby, removed four species from the protected fauna list. Often misconstrued as pests who rob orchards of their cultivated fruit, flying foxes actually feed mainly on blossoms. In fact they play such a critical role in the pollination of Australia's forests that their destruction would pose a serious threat to many valuable trees there.

Flying foxes are particularly vulnerable because they prefer to roost in large groups and usually choose conspicuous locations,

making them easy targets for anyone with a gun. Recent persecution has forced them to abandon their traditional sites along tropical coasts and many have wandered inland where they have died of starvation.

These remarkable animals have been the victims of misunderstanding and prejudice for many years. Their removal from the protected list is senseless, especially since under the previous legislation, fruit growers could obtain permission to rid themselves of troublesome bats. Thanks to widespread publicity on their plight, much pressure has been put on the Minister for Parks and Wildlife, who has finally asked for a full report.

Please write, briefly outlining the facts and requesting action, to the Honorable P.R. McKechnie, Minister for Tourism, National Parks, Sport and the Arts, Parliament House, Alice Street, Brisbane 4000 Queensland, Australia.



A fruit bat mother with baby. This species inhabits Gambia.

Credit: Meritt Tuttle

Tigers butchered

One Sunday morning last October more than 1000 people gathered in a small village in Taiwan. They were there to witness the killing of a caged tiger by six butchers. Some of them had also come to buy select portions of the carcass—meat, bone or bottled blood, all much prized for boosting virility and curing all manner of ills.

Nor was this a once-only "performance". At least five other tigers have been similarly despatched by a Taiwan businessman who intends slaughtering still more of the tigers he owns. He claims his tigresses give birth to two cubs each year and that older animals must therefore be butchered to reduce the costs of upkeep.

However, it is plain that the prime reason for the butchery is profit. The owner admits that from each slaughtered tiger he nets NT\$80,000—about US\$2300.

Taiwan has no laws at all protecting wildlife. The government is being pressed by the country's *Ecological Preservation Association* to remedy this deficiency—urged on by, among others, an American couple living in Taiwan who have been outraged by these killings. To gain local backing they hung a large banner from the window of their 5th floor apartment in Taipei. In big bold lettering in both English and Chinese it read: "Save Taiwan Tigers!"

There will be more Bhopals—unless. . . .

The world was shocked by the Bhopal disaster in India last year. But according to the journal *Ecoforum* the villain of the piece was not so much the company immediately responsible (as multinationals go *Union Carbide* has a fairly good record for plant safety) nor even the product that did the damage (methyl isocyanate is no more dangerous than many other chemicals in every-day use) but the excessive and undisciplined recourse to chemicals by third world farmers—egged on, of course, by none-too-scrupulous "first world" salesmen.

As *Ecoforum* puts it: "The real problem is that there is a disproportionate emphasis on the safe handling of such products, disproportionate because the alternatives to this growing over-reliance on, in particular, agrochemicals, are virtually submerged in the

sea of hard sell of commercial chemical pitchmen."

The alternatives referred to are the ecological pest-control methods, employing nature to control nature—as in the use of frogs rather than pesticides to stop insects ravaging the rice crops (see article *All trade in frogs' legs should be banned*, page 12). The US Office of Technology Assessment says that this approach could cut the use of pesticides by up to 75% on some crops and reduce crop losses by 50%.

With 1000 new chemicals coming on the market every year, many of them highly toxic and needing very careful and sophisticated handling, there will assuredly be more Bhopals—unless sense and nature are allowed to prevail.

Animal Welfare Institute

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All trade in frogs' legs should be banned

Gourmets in western countries have a new taste thrill to titillate their jaded palates. Frogs' legs are now the *in* delicacy—in fashion, in quantity, in the supermarkets. And where do all these neatly packaged limbs, torn from the bodies of some 200 million frogs a year, come from? From the damp, low-lying areas of India, Bangladesh and Malaysia where the frog's mighty appetite for insects does much to protect crops from the ravages of pests. Or used to.

In 1959 India exported just 93 tons of frogs' legs. By 1978 this figure had risen to a massive 3570 tons—the equivalent of 10,700 tons of live frogs. Since frogs eat almost their own weight of insects every single day of their lives, the subtraction of such an astronomical number of frogs from the ecological equation has had severe repercussions in the rice paddies and the coconut gardens. Crop pests have multiplied unchecked and harvests have suffered grievously.

The economic equation is thus also badly askew. Just how badly is shown by the fact that while India's revenue from the export of frogs' legs is around \$7 million a year, the annual bill for pesticides imported to do the work of the butchered frogs is about \$17 million. Nor of course are pesticides, at more than twice the cost, half as efficient or as safe as the frogs they replace. Dangerously toxic, unselectively destructive, biologically persistent, pesticides can create more ills than they cure.

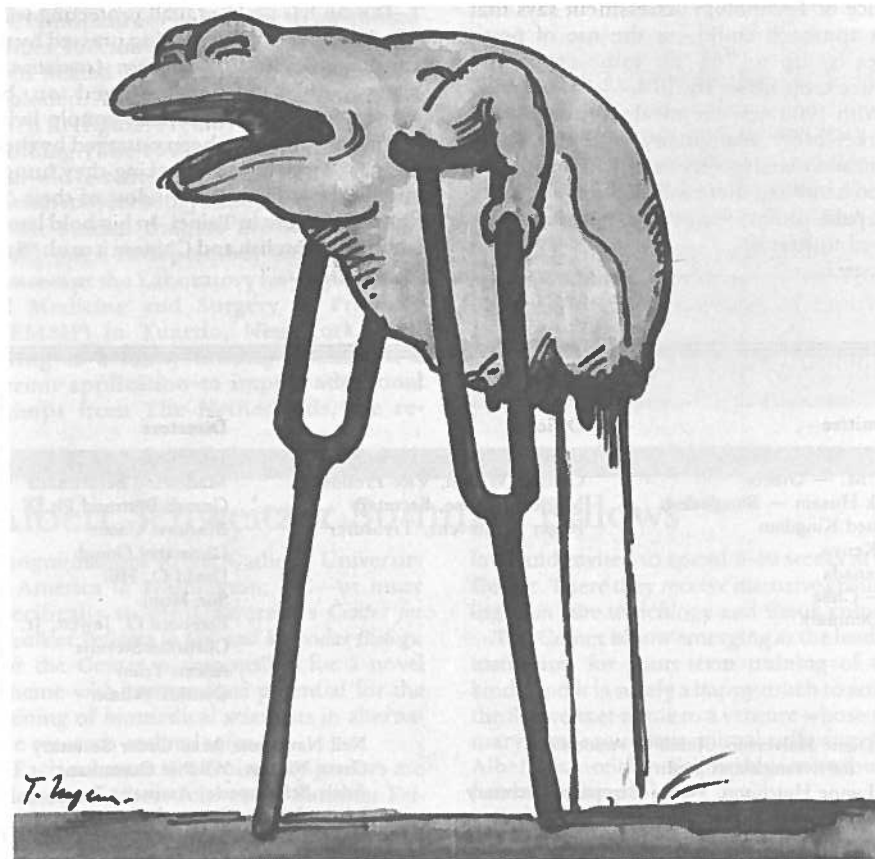
Formerly the world's chief exporter of dismembered frogs, India has now yielded this unlovely position to Bangladesh. For the slaughter in India has been on a scale that even this huge sub-continent has been

unable to sustain. And with the slump in frog populations, both people and cattle have been hit by a devastating increase in malaria, encephalitis and other waterborne diseases carried by insects.

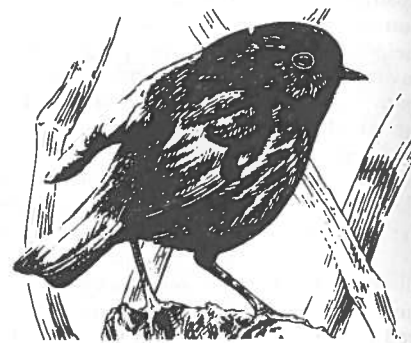
Nor are health hazards confined to the exporting countries. The slaughter process is so unhygienic that the final product, however enticingly packaged, may be quite unfit for human consumption. Indeed the United States temporarily banned the import of frogs' legs after they were found to be the source of salmonella poisoning.

Last but certainly not least is the issue of cruelty. After capture the frogs are dropped into a sack ("gunny-bag") and taken to a collecting center; many die on the journey. Of the survivors, some are skinned alive (the leather makes watchstraps and purses) but the majority are sliced in two by being thrust against a fixed knife. The writhing torsos are then tossed into a heap to die—and amphibians do not die quickly. In theory the frogs are first anaesthetized in a 10% salt solution. In fact, though, salt water is a severe irritant which simply paralyzes the frog.

All in all this is not a pretty story. The trade in frogs' legs should be banned forthwith. And this time permanently.



Unique robin gains unique honor



The black robins' future no longer looks so black—thanks to Old Blue.

An ageing female black robin called *Old Blue* has made history. Her death has been commemorated by a government announcement. No government anywhere has ever before bestowed such an honor on a bird.

Old Blue lived and died in the Chatham Islands, sea-girt pimples of rock and sand which are, you might think, strictly for the birds. Uninhabited by man they are over 500 miles from the parent mainland, New Zealand. Why on earth should the passing of a robin in these remote, unpeopled islands be the occasion of a solemn statement by the New Zealand government to parliament?

The answer is that *Old Blue* devoted her life, singlemindedly and almost singlehandedly, to hauling back from the brink of extinction an entire species. In 1980 the world population of the black robin was confined to just one of the Chatham Islands and numbered in all just five birds—with just one breeding pair amongst them. The female half of this pair was *Old Blue* (so called because of her blue leg-band), already at nine-years-old way past her prime.

At this critical stage, however, *Old Blue* was given a little help by her male friends. The five surviving robins were (with difficulty) caught and taken to a more suitable island where a novel egg-boosting plot was hatched.

Over the next four years, by transferring black robin eggs to the nests of Chatham Island tits and using the latter as foster parents, the robins were persuaded to lay two, and in the case of *Old Blue*, three clutches of eggs each season instead of one. In the 1983-84 season the population more than doubled—from nine to 20.

And during this season—so strengthening a belief that threatened species somehow sense that extraordinary efforts are called for—four 3-egg clutches were recorded (no 3-egg clutch had ever been known before) and one robin defied the rule that females do not mate till their second year by successfully doing so at 11 months.

Sadly *Old Blue* is no more. But of the 19 robins now alive she is mother of six and grandmother of 11. Thanks to her the black robin now lives on two of the Chatham Islands and its future no longer looks black.



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Senate Majority Leader Dole: "Decrease Pain"

Senator Robert Dole (R-KS) and Representative George E. Brown, Jr. (D-CA) have introduced companion bills to amend the federal Animal Welfare Act for the purpose of improving the care and treatment of animals used for experiments and tests.

In introducing the bills, both Senator Dole and Congressman Brown spoke of the desirability of developing alternative methods which do not use animals or which reduce the numbers of animals used and reduce the pain they experience. Senator Dole emphasized the need to ensure that "everything that is reasonably possible is being done to decrease the pain that animals suffer during experimentation and testing."

PROVISIONS OF THE BILLS

The bills establish an institutional Animal Committee in each research facility, including a member not affiliated with the institution responsible for representing society's concerns for the welfare of the animal subjects. The committee is required to conduct semi-annual inspections and notify the institution and federal authorities of violations. If an institution fails to correct violations, federal agencies are directed to suspend or revoke funding. The Veterinary Inspectors of the U.S. Department of Agriculture must inspect at least once a year, with follow-up visits until violations are corrected. Federal agencies using animals will also be inspected by USDA veterinarians.

The bills establish an Information Service at the National Agricultural Library to work in conjunction with the National Library of Medicine to provide information on improved methods of experimentation. This service will focus on reducing or replacing animal use, minimizing pain and distress, and preventing unintentional or otherwise unnecessary duplication of experiments or tests.

Research facilities will be required to provide instruction to all personnel involved with experimental animals.

The bills increase the penalty for a violation from up to \$1,000 to up to \$2,500. Each mistreated animal may count as an individual violation.

The bills require that a veterinarian be consulted in the planning of any experiment which could cause pain; require the use of anesthesia when paralyzing drugs are employed; mandate pre- and post-surgical care and the use of pain-relieving drugs to minimize pain and distress. Such drugs or euthanasia may not be unnecessarily withheld from suffering animals. The bills rule against repeated unrelated operative procedures on a single animal. They provide for exercise for laboratory dogs and require institutions to inform personnel to report violations of the Animal Welfare Act.



Secretary of Transportation, Elizabeth Dole, chose "Leader," a dog in need of a home, to give to her husband, Senator Dole, when he was elected Majority Leader.

Photo: Brad Markel

The wildlife trade war

Parties to the Convention on International Trade in Endangered Species now number 89. The list includes all the major developed countries—overwhelmingly the chief importers of wildlife and wildlife products—plus a majority of those developing countries where the (surviving) populations of commercially sought-after wildlife live. This is good. No international convention can hope to be effective while certain significant nations refuse to take part.

Effectiveness, though, is not simply a matter of numbers. CITES is a trade convention whose primary aim is to prevent international commerce in wildlife and its products from posing a threat to species. It is thus a conservation treaty and one of the most—probably *the* most—important in the conservationist's armory.

In short CITES came into existence to decide whether a species can or cannot be safely traded. And by and large those countries which came into CITES in its early days saw it in this light and did their damndest to promote the treaty's avowed aim.

Since then CITES has come a long way. Increasingly it is now only by belonging to this club that nations can ensure a market for their own CITES-listed wildlife and its products or access to the wildlife and products of other nations. And of course only by belonging can a nation hope to influence the development of the treaty including, crucially, alterations to the Appendices, the lists of species for which either no international trade or else only a strictly monitored trade is allowed.

With this accretion in numerical strength, though, has come a certain dilution of purpose. At the 5th meeting of the Parties which took place in Buenos Aires on 22 April to 3 May, seasoned campaigners detected a much stronger polarization than hitherto between protectors and exploiters, between those members who judged the various issues by the light of the conservation rule-book and those whose uppermost concern was to "legitimize" exploitation.

A case in point was the fierce debate over the North American population of the gyrfalcon. This population, as recent "sings"

continued on page 7

This *in vitro* test is far faster and just as reliable

Infant botulism can be a killer. And diagnosis of the disease—which is caused by poison produced by bacteria—takes from seven to 14 days by the traditional means of time-consuming tests on mice. But now Dr. Dezfulian, a scientist sponsored by the Johns Hopkins Center for Alternatives to Animal Testing (CAAT) has developed an *in vitro* test which can be performed in any hospital lab in just six hours.

This time saving factor could often prove a life-saving factor as well, for it means that treatment can begin much earlier. At the same time, painful deaths for large numbers of mice can now be avoided.

This *in vitro* method is not only a lot faster (and cheaper) than the conventional method, it is every bit as reliable. Indeed it may well be more reliable. For, as Dr. Dezfulian explains, "in the mouse assay other toxins may be present in the test samples that can mask the results."

Several commercial laboratories are showing a keen interest in this newly developed test. It is the first product of CAAT-funded research to reach the threshold of commercial application.

Alternative methods in toxicity

In Vitro methods in toxicology

A four-day intensive course with supplemental laboratory exercises will be held October 29-November 1, 1985 in East Brunswick, NJ.

The Course, designed for toxicologists, microbiologists, regulatory affairs personnel, pharmacists, pharmacologists and chemists, will cover *in vitro* methods of toxicology and developmental biology that have proceeded from the research level to certain stages of validation.

A "hands-on" laboratory at the Gibraltar Institute for Research and Training on the second day includes performance by the participants of 1) the basic Ames mutagenicity test and *e. coli* DNA-repair test, 2) Cell culture (Hep-2 malignant and W-38 human diploid fibroblasts) techniques for cytotoxicity of devices, drugs and cosmetics, 3) chick embryo chorioallantoic dropped membrane technique, and 4) a review workstation in aseptic microbiological technique and virus culture.

Fee for the four days is \$980 made payable to The Center for Professional Advancement, P.O. Box 964, East Brunswick, NJ 08816-0964. Registrations may be made by phone: 201-238-1600.

Britain Now Updating (At Last!) Its 1876 Cruelty to Animals Act

The UK's *Cruelty to Animals Act* dates from 1876. But even in Britain things change in the end. Proposed new legislation, which should become law next year, was published in May and given a qualified welcome by most welfare groups.

The amended Act will introduce a "dual licensing" system. Licences to animal experimenters will be less readily granted and more strictly drawn up; and for the first time individual laboratory projects will also require a Home Office license. Applicants will have to show that their projects make no unnecessary use of animals and are both worthwhile and properly designed.

The new controls will pay greater attention to pain and will increase the penalties for law-breaking. There will also be a new "animal procedures" body to oversee the workings of the Act and to advise the Home Secretary.

The *London Times* editorialized: "The most important changes proposed include a wider controlling concept than that of pain (the

term adopted in 1876 and already broadly interpreted) taking in distress, discomfort, impairment of health or well-being, morbidity and death. The severity of any particular procedure will be judged in that light and graded accordingly.

"To the personal licence and registration of premises already required for scientific experimentation on animals will be added a project licence which will stipulate in each case the degree of severity to be permitted according to the nature and importance of the project and the skills of the licensed experimenter. It is hoped by that means to have in all cases the severity of the treatment of the animals in balance with the worth of the object for which they are being made use of.

"The new project licences mean a practitioner must satisfy the inspectorate as to the what, how and why of his intended experiment. It also provides a mechanism for the discontinuance of particular procedures if they are judged no longer appropriate or necessary. The Draize eye irritancy test and the Lethal Dose₅₀ toxicity test are two routine procedures of dubious status which should now be phased out. The abandonment of other routine procedures involving animals has to await the development of satisfactory alternative non-sentient tests."



By David Seavey, USA TODAY

NIH fails to deliver

The National Institutes of Health is touting its new policy on care and use of laboratory animals by the scientific institutions it funds with billions of dollars of taxpayers' money each year. Lost in this self-congratulatory exercise is the fact that the *proposed* policy, on which public comment was invited a year ago, was more protective of animals than that which has finally emerged. Notable omissions from the final version which were in the proposed policy include:

"The care and use of animals as set forth in applications and proposals must be reviewed at a convened meeting of at least a majority of the full membership of the ARC [the institution's Animal Research Committee] and must be approved by a majority of the full membership whenever a research activity would:

- "1. include the use of non-routine or harmful invasive procedures; or
- "2. include prolonged restraint; or
- "3. require the use of animals that have a serious natural or experimental disease and which would be maintained in that state for an extended period of time; or
- "4. propose methods of euthanasia that differ from those recommended by the American Veterinary Medical Association (AVMA) Panel on Euthanasia; or
- "5. involve any animal procedure or use which is stipulated by the ARC or by OPRR [Office for Protection from Research Risks] as requiring ARC review and approval."

The proposed policy stated, in part: "The scientist in charge of the experiment must be prepared to terminate it whenever he/she believes that its continuation may result in unnecessary injury or suffering to the animals." This provision was watered down in the final version which also omits the requirement for advance approval and eliminates the sentence with which the proposed policy ended: "In any event, such waivers will be granted only in exceptional circumstances." It no longer states that the institution seeking funds must "accept[s] as mandatory the Principles for the Care and Use of Laboratory Animals (Principles)", and the word "approximate" qualifies the requirement to identify the number of animals to be used.

The new policy is more specific with regard to the Institutional Committee than that which it supplants, and no change was made from the proposal. However, it lacks the essential provision contained in the bills proposed by Senator Robert Dole (R-KS) and Congressman George E. Brown, Jr. (D-CA) for the outside member of the Committee to represent society's concerns for the welfare of the animal subjects.

Accreditation by the American Association for the Accreditation of Laboratory Animal Care (AAALAC) remains as the sole requirement for an institution to achieve Category I status: a guarantee against site visits by NIH.

The small improvements in the new policy are overshadowed by failure to come to grips with the basic problems.

STOP PRESS!

Secretary of Health and Human Services Margaret Heckler issued an announcement July 18 stating, in part: "I have been informed that serious concerns have been raised about procedures used by the University of Pennsylvania in the use of primates to study head injury. A National Institutes of Health investigative team has examined the University's procedures and has prepared a preliminary report which I received this morning. The University has been given an opportunity to respond to the findings. In the meantime, until all questions about the use of primates in these head injury experiments have been satisfactorily resolved, I have instructed NIH to suspend the use of federal funds for primate research on head injury at the University of Pennsylvania." [Emphasis supplied.] The announcement was made on the fourth day of a demonstration organized by People for the Ethical Treatment of Animals at NIH. Demonstrators occupied the 8th floor offices of the National Institute of Neurological and Communicative Disorders and Stroke, which has been granting close to a million dollars a year for experimentation on head injury at the University.

Audio-Visual Education on Animals in Research

On behalf of the British Universities Film and Video Council, the Universities Federation for Animal Welfare has prepared a 40-page catalogue of films and video tapes dealing with research on animals. Some are straightforward teaching films, some are records of research and some are films prepared by groups concerned with the welfare of experimental animals.

A paper published by the Home Office, the agency which enforces the British Act regulating animal experiments, states that "filmed material should be used whenever possible" as this "may often permit the further use of animals to be avoided."

The paper further states that teaching demonstrations of painful procedures on living animals should be permitted only "if their objective cannot be achieved by comparably effective audio-visual or any other suitable methods."

The UFAW catalogue includes distributors' addresses and phone numbers and is available from the British Universities Film and Video Council, 55 Greek Street, London W1 or direct from UFAW.

Standards in Laboratory Animal Management

Proceedings of a symposium organized by the Laboratory Animal Science Association (LASA) and the Universities Federation for Animal Welfare (UFAW). Published by UFAW, 1984. 280 pp.

Available from UFAW, 8 Hamilton Close, Potters Bar, Herts EN6 3QD. U.K.

Some of the ideas put forward at the symposium are being investigated. For example, the Home Office is funding UFAW to undertake a project on stocking density in rat cages based partly on Monica Lawlor's paper, some illustrations for which are reproduced here.

The main non-controversial conclusions have been incorporated into the relevant sections of the Royal Society/UFAW Guidelines for the guidance of laboratory animal keepers and users holding licences from the Home Office.

The book is intended to stimulate others to study the needs and preferences of laboratory animals.

Figure 3
Female rat in normal orienting stance
(impossible in cage 14 cm high)

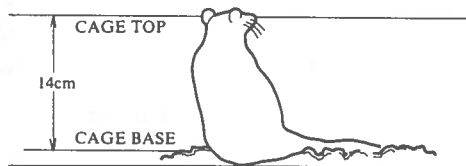


Figure 4
Male rat standing
(impossible in cage 14 cm high)

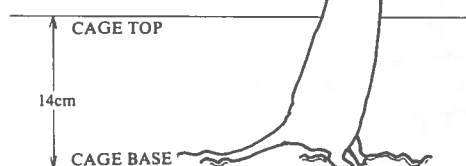
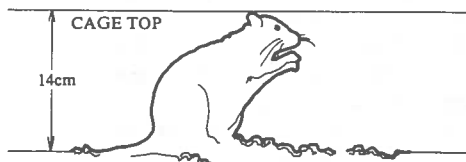
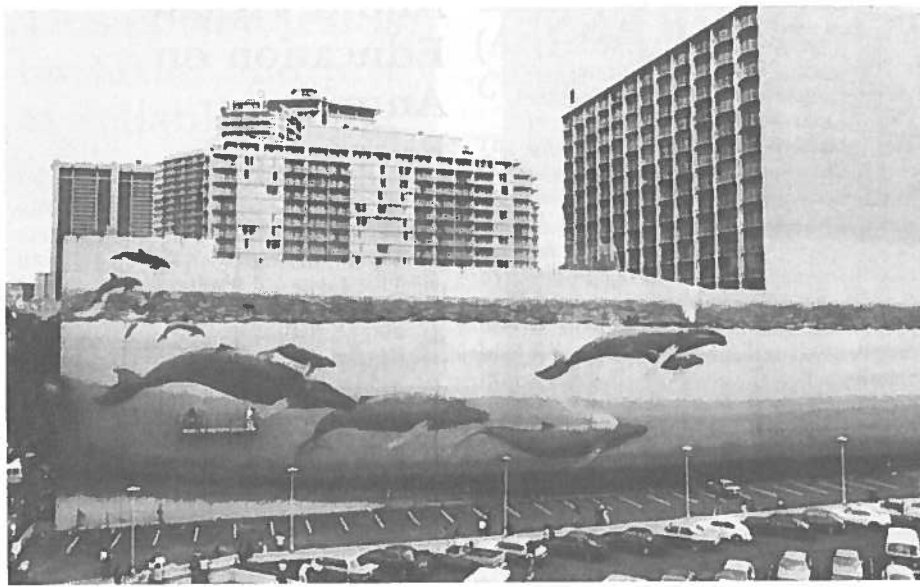


Figure 5
Rat eating
(possible in cage 14 cm high)



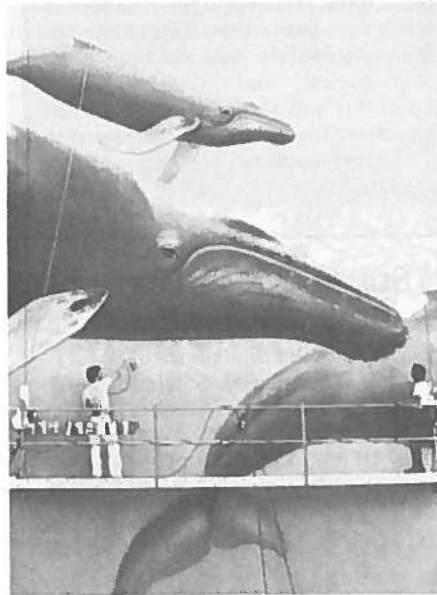


Up the Whaling Wall!

Here is an educational venture with a difference—a big difference! Life-size whale murals painted by marine artist Wyland now adorn large walls in Honolulu, Seattle, California and British Columbia. Known as *Whaling Walls* these “gifts from the heart” are dedicated to the Great Whale. Wyland gives his time for free; commercial sponsors contribute materials.

So far there are six Whaling Walls. The goal is 100. Wyland has teamed up with the International Sea Shepherd Conservation Society and together they hope to find well-wishers in Japan, Norway and Iceland with walls to donate. For in this way, as they say themselves, they can “strike into the heart of the whaling nations with more force than an exploding harpoon.”

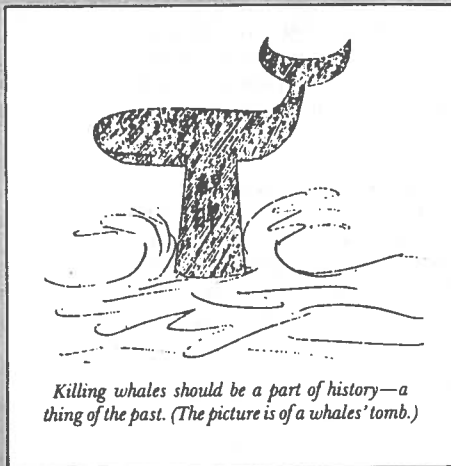
If you have a wall, write Scott Tringham, Sea Shepherd Conservation Society, P.O. Box 70005, Redondo Beach, CA 90277.



Japanese fisherman opposes whaling

Letter from Mr. Harvo Sumida, an 80-year-old fisherman, to the Japanese newspaper *Asahi Shimbun*: an edited extract.

It is time to quit killing whales. A famous proverb says: “If you can’t protect the seeds you can’t continue to farm.” These days nobody cares about protecting fish eggs and as a result fish are becoming scarce. So it is with whales. Hence the extinctions of fish and whale species. The blame lies with irresponsible fishermen and whalers.



Killing whales should be a part of history—a thing of the past. (The picture is of a whales’ tomb.)

This magnetic theory lacks force

A new theory as to why whales beach themselves is now in fashion. It holds that whales navigate along geomagnetic “highways” and that beachings occur where magnetic signals are confusing. One man who hotly disputes this theory, at least with regard to beachings, is New Zealand’s Frank Robson who over many years has established a highly successful technique for rescuing stranded whales.

Robson insists (on the basis of plenty of evidence) that “herd-stranding” is a consequence of the immensely strong social bond that unites the members of a herd. The bond is so powerful that it will even override the survival instinct. The stranding or beaching is likely to be the work of just one member of the herd.

For whatever reason this particular whale becomes set on the act of self-beaching, the others follow—either right on to the beach or else close inshore. They will not leave until all distress calls from the beached whales have ceased.

The solution to the problem—as Robson has demonstrated time and again—is to turn the whales (at high tide) whereupon the great majority will then either join the free-swimming herd or form one if none exists. The initial trouble-maker is likely to insist on staying put and one or two others may now be too weak to swim.

These few whales may have to be humanely put down in order to sever the social bond that keeps the main herd so perilously close to shore. Once this is done the rescue has been completed. The herd swims off into the deep and does not return.

Robson’s theory seems to hold water—for the very good reason that it works. But the magnetic theory, if true, would render all rescue attempts futile. For if magnetic force were the driving force that beaches whales, then however skilled and conscientious their human helpers, the whales would surely persist in their self-destructive actions. Which happily, they don’t.

CORRECTION: F.G. Wood writes: “the beluga is not ‘unique among cetaceans in being able to turn its neck freely.’ The narwhal also has unfused cervical vertebrae and so, too, do . . . five dolphins.” Among them is the boutu, a river dolphin inhabiting the Amazon.



Above: The falcons wait to be loosed on their prey.

Left: A princely party gets ready for the day's kill.

Arab falconers flout the law with impunity

AWI has learned from a traveler just back from Pakistan that the Houbara bustard, after being wiped out in the Arabian peninsula, is now in the process of being hunted to extinction in its last remaining stronghold. Arab princes invariably accompanied by a huge entourage, have moved into the province of Baluchistan to loose their well-trained falcons on the ill-starred bustards. Over 5000 were slain last year; at this rate virtually all will be gone in another two years.

The slaughter is illegal but Pakistan's Foreign Ministry turn a blind eye to it because of the country's dependence on Arab aid. An article in *Arab News*, puts it this way: "The ruler of the United Arab Emirates recently showed his appreciation to Pakistan authorities, who had waived a 5-year ban on hunting bustards for those of sufficient means, by building a \$4 million hospital near Karachi."

Pointing up the contrast of present-day falconry with that of the "old Bedouins who used to rely on the game their falcons caught to supplement their meager diet," the article goes on: "Now Arab princes venture forth in caravans of 60 or 70 four-wheel-drive vehicles, with 100 or more falcons ready to scour the countryside. Huge trucks carry all the comforts of home, mobile kitchens, communications equipment, genera-

tors, air-conditioners, portable guest-houses. . . . Prized falcons—female shakers with perfect plumage and coloring, large breasts, sharp eyes, big nostrils, 22 inches from shoulder to tail—fetch up to \$50,000 with maybe a Toyota thrown in."

Paul Goriup, co-chairman of the International Council for Bird Preservation's specialist group on bustards, says that last year 25 parties or more from Saudi Arabia, Qatar, the United Arab

Emirates and Bahrain were roaming Pakistan in search of bustards. Yet just one year previously, 1983, over 60 conservation experts from 12 countries had met in Pakistan to review the situation and had unanimously called for a 5-year ban on all hunting. The authorities agreed and the ban was imposed. In theory, that is. In practice it would not seem to have made any difference whatever.

Animals as individuals

Professor Alexei Yablokov, a marine biologist at the Koltzov Institute of Developmental Biology of the USSR Academy of Sciences in Moscow, heads an important study of micro evolution. The work of Professor Yablokov and his group is of particular interest to everyone who is concerned with the welfare of individual animals since the careful scientific scrutiny of many individuals has led to the ability to differentiate each one and also to follow relationships among groups.

A map of the entire Soviet Union mounted on one of the walls of the Institute shows the study locations of a lizard common throughout this enormous area. Dr. Yablokov is interested in the tiny but measurable differences and changes in these creatures, and his studies do not require killing. At the

same time, studies of the skulls of dolphins already dead (thousands of these were collected when the massive kill occurred in the purse seine tuna fishery prior to enactment of the Marine Mammal Protection Act) have demonstrated the differences in bone structure of each dolphin's head. This work has been carried on by Yablokov's colleagues through US/Soviet scientific cooperation.

Great progress has been made in identifying family relationships as well as differentiation of each individual. Expression of concern for a whole species while dismissing the individual animal as unimportant has become a contemporary scientific cliché. The work of the Yablokov laboratory is significant in pointing up the importance of the individual and the significance of small populations within a species or subspecies. Gross generalizations may be convenient, but they are not truly scientific, and they militate against needed concern for individual animals.

Savage mistreatment and high mortality in transit

Delegates to the CITES Conference received two publications sponsored by AWI. Injury, Damage to Health and Cruel Treatment is the fruits of a 5-year study by the Environmental Investigation Agency. It catalogues the shocking failure of animal shippers and carriers to ensure, as required by CITES, the humane treatment of their charges while in transit. Importation of Birds into the United States deals with the horrific death rate in transit of birds coming into this country and destined (if they get that far) for the cage bird trade. (Its author is AWI consultant, Greta Nilsson—who also wrote The Bird Business. She attended the CITES meeting in Argentina and here reports on the reaction of the Parties to the grave issues raised by these two documents.

The cruel treatment of wildlife entering the pet and laboratory animal trades was a focus of the recent CITES meeting in Buenos Aires. In the past five years alone, 193,733 birds arrived dead at United States ports. Addressing the Conference on the "intolerable" mortality in the wild animal trade, Nick Carter, Environmental Investigation Agency researcher, said: "Our evidence shows that most problems with shipments originate with the traders, not the airlines. These violations are as common among developed as underdeveloped countries."

Thanks to the forceful and persuasive arguments of Mateo J. Magarnos de Mello, head of the Uruguayan delegation, and Eddie Brewer, eloquent representative of The Gambia, a resolution was passed encouraging Parties to adopt the International Air Transport Association (IATA) guidelines for animal transport and requesting a report for the next CITES Conference on action stemming from the Environmental Investigation Agency conclusions.

Although the EIA researchers found fault with some of the IATA guidelines—which give specific advice on the crating and shipping of wild animals—they had no doubt that compliance by wildlife exporters would save the lives of thousands of animals each year.

IATA has 110 member airlines but few of them require that the guidelines be used in animal shipments. Not being a law-enforcement body, IATA can only encourage countries to adopt the guidelines as a part of their domestic legislation. To date 15 countries have enacted the requisite legislation but only a few of them enforce it. The United Kingdom has the strictest and best enforced law on humane shipment, the *Transit of Animals Order*.

CITES contains mandatory provisions to minimize the risk of "injury, damage to health or cruel treatment", words which inspired the title of the EIA report, but sadly they are rarely heeded. Work continues, however, on the part of EIA, AWI and the CITES Working Group on Transport to improve the conditions under which animals are shipped. An agreement was signed between the CITES Group and EIA to cooperate on producing regulations acceptable both to IATA and hu-

mane interests.

The EIA report, the AWI bird importation study, and other relevant research, may also persuade IATA to include a list of animals which do not survive well in captivity and which therefore should not be traded. A suspension of all wildlife trade due to non-compliance with the terms of CITES was suggested at the Buenos Aires meeting by Nick Carter and will be embodied in a formal proposal at the next Conference of the Parties in 1987.

URGENT NEED FOR CONTROLS

In 1976, at the first CITES meeting, it was resolved that countries be encouraged to gradually restrict export of wild animals for the pet trade with the eventual aim of confining it to captive-bred animals. At that time US bird imports totalled 282,000. But by 1984 this figure had increased to over 913,000. Clearly there has been no "gradual restriction" of the pet trade. Quite the reverse, in fact. The need for controls by both exporting and importing countries has never been greater.

In Buenos Aires a few dents were made in the cage bird trade with the "promotion" of two macaw species to Appendix I which prohibits international trade. The macaws in question are the scarlet and the great green, and the proposal for upgrading them came from Costa Rica, a country with an excellent record in protecting wildlife. The scarlet macaw is one of the most exploited of all parrot species and can be sold in the US for \$2000 or more per bird. Only 350 of these colorful macaws remain in Costa Rica, and in all of Central America and Mexico there may be less than 1000 left in the wild after decades of capture for the cage bird trade.

In South America's tropical forests the scarlet macaw has disappeared from all areas near human habitation and survives only in remote regions. The great green macaw is a very rare species that has also declined throughout its Central and South American range because of habitat destruction and capture for the pet trade. The Appendix I listing may prove crucial to both species, especially to the scarlet macaw which despite nominal protection in most of the lands it inhabits is still subject to widespread capture and export, particularly to the United States.

Bolivian cage bird exporters are at present holding 300,000 wild birds, mostly macaws, and including scarlet macaws in anticipation of the lifting of the country's one-year export ban begun in 1984. Bolivian dealers also reportedly plan to export 10,000 monkeys. The CITES Parties resolved, however, to refuse all shipments from Bolivia for a period of 90 days while that country attempts to deal with the rampant fraud, bribery and illegal exports that have characterized its failure to enforce CITES.

The Conference focused attention on the fact that Argentina is now, with Bolivia's export ban, Latin America's largest bird exporter. From the AWI report on US importation of birds it is plain that Argentina is exporting many of the protected Brazilian birds—which Bolivia exported prior to last year's ban—along with its own over-exploited wildlife. Conservation organizations in Argentina are working to stop these exports but the task is enormous.

One cage bird dealer in Buenos Aires has blatantly advertised protected and endangered birds for sale including pileated and red-tailed parrots (Appendix I species), hyacinth macaws, purple-bellied parrots and golden-capped conures (protected Brazilian birds) and protected Mexican military macaws. This dealer sells his birds in the Netherlands, somehow smuggling them there from Argentina; the Argentine Management Authority for CITES claimed he had never been granted a legal export permit.

A veterinary student from Brazil told of illegal sales of birds there, in open defiance of that country's ban on the sale of its native birds. Brazilian dealers often blind parrots with lighted cigarette ends to tame them. Profits from internal sales and exports are so great that military police were unable to stop sales a few years ago. Bird traders burned cars and incited riots against the police.

Other illegal exports came to light during the Conference. Management Authorities of three countries—India, Panama and Ecuador—said they had not signed export permits for some of the birds listed in the AWI report. AWI will send the data on these apparently bogus CITES shipments to the countries involved.

Falconers in Arab countries, West Germany and elsewhere will find purchase of the most coveted of birds of prey, the gyrfalcon, more difficult following the placing of the North American population on Appendix I. Now the species is protected from commerce throughout its range. Last year's "sting" operation mounted by the US Fish and Wildlife Service brought massive arrests and indictments for illegal capture of gyrfalcons and other raptors (see Summer 1984 *Quarterly*). The financial incentive to would-be smugglers is great; falconers will pay up to \$50,000 for an Arctic gyrfalcon. A Canadian quota system for exports failed



Scarlet Macaw from a hand colored lithograph by Edward Lear (1812-1888) in *The Family of Psittacidae or Parrots*

Brazilian dealers often blind parrots with lighted cigarettes to tame them. Profits from internal sales and exports are so great that military police were unable to stop sales a few years ago. Bird traders burned cars and incited riots against the police.

because the demand worldwide far exceeds nature's supply.

The CITES parties also added two species of bullfrogs from India and Bangladesh to Appendix II. These frogs are captured by the millions for the gourmet food trade in Western Europe, the legs cut off the still living frogs and the bodies thrown in heaps where they may survive for up to an hour.

The attorney for the Pet Industry Joint Advisory Council invited one of the country's largest wildlife importers to the Conference. This importer used the occasion to buy 1800 blue-fronted Amazon parrots from an Argentine exporter and attempted to sell endangered Andean deer to a zoological society.

On a personal note, I traveled after the Conference to northwest Argentina where I was privileged to see the graceful flight of many wild parrots in a magnificent national park. Their calls announced the morning and the twilight as they flew to and from their feeding trees. After a year and a half of chronicling the deaths of these beautiful birds, it was heartening to see some in their natural environment. May the wild bird trade be eliminated before too long for the sake of the birds still flying free.

Wildlife Trade War—

continued from page 1

have revealed, has become a prime target for smugglers acting for Arab falconers. On conservation grounds the case for placing it on Appendix I (so joining all other populations of this bird) was irresistible. And yet it was bitterly resisted by Canada which almost succeeded in gaining the necessary blocking vote (one-third of those cast) to defeat the proposal. The vote went to a recount.

In fact on several issues the margin of victory or defeat was heart-stoppingly close. With Canada in the van a hard core of would-be exploiters, acting on the principle of you-back-me-and-I'll-back-you-and-to-blazes-with-science (shades of the IWC) voted as a bloc on a whole range of quite unconnected matters.

Part of the trouble may lie with the "exploiters' lobby." Representatives of the fur and leather trades and the pet trade have always attended CITES meetings. Their activities appear to be increasing. To expect any gathering of the nations to eschew all politicking is to expect too much. But it would be tragic if politics were to become the dominant factor informing CITES decisions. This has not yet happened but there is a trend in that direction.

Postscript: Following the CITES meeting, Switzerland took a reservation on the scarlet macaw and the Asian bullfrogs. This means that Switzerland will not abide by CITES provisions on these overexploited species.

CITES: OTHER NOTABLE DECISIONS

African ivory: Adopted unanimously was a resolution to establish an ivory export quota system and improved trade controls. Key factors are: all African countries with elephants will set themselves annual export quotas for raw ivory, in numbers of tusks, and inform the CITES Secretariat by 1 December of the previous year, a zero quota applies until the Secretariat notifies otherwise; the Secretariat will establish an ivory unit (some funding has come from the *Ivory Division of the Japan General Merchandise Importer's Association*) to help implement quotas and to maintain a data base on trade in raw ivory; no trade is permitted in improperly marked raw ivory or with non-Party states not fully complying with this resolution; all Parties are to notify the Secretariat what stocks of raw ivory are being held and these must be appropriately marked before export/re-export.

Sea turtles: Various proposals to open up ranching operations to international trade and, in the case of the *Cayman Turtle Farm*, to legalize sale of stockpiles of meat and shell, were rejected.

Leopard: The system of annual export quotas agreed at the previous meeting of CITES for seven African nations was extended for a further two years despite only three of the seven submitting reports to the Conference as required. *Annual reports* are now obligatory. Tanzania, Zambia and Zimbabwe were granted increases in their quotas.

AN EXCHANGE OF LETTERS

Letter to the Editor, *Cage and Aviary Birds*

Dear Sir:

In his Foreword to a recently published and much publicised attack on the international bird trade, Sir Peter Scott makes some serious allegations. He alleges that nations are losing "a substantial part of... wildlife heritage... to make large profits for international animal dealers" and that "Some species of birds have been severely depleted in the wild through excesses of the pet trade."

A man of honour has an obligation to substantiate allegations publicly made, or publicly to withdraw them. A man of science has a duty to produce unbiased and incontrovertible evidence and not to resort to the repetition of unsubstantiated propaganda.

Perhaps then he would care to how how it is that the trade, which is undoubtedly the least significant of man's consumptive interactions with wildlife, is having the effect he alleges, and to justify his claim that the trade has "severely depleted" bird species.

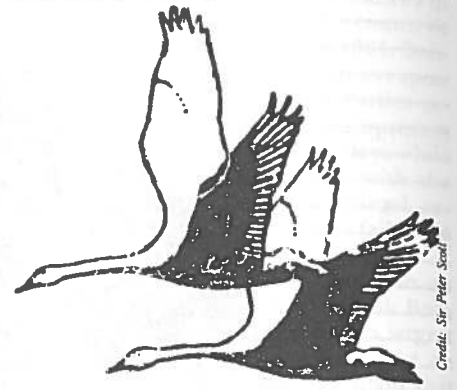
He might also care to consider the consequences of curtailment of the trade, something he appears to favour. How would farmers in the least affluent countries obtain compensation for crop losses? How would trappers and exporters in developing countries find another livelihood that does not depend on development or other activity injurious to the natural environment? How else would a small part of the surpluses produced by bird populations be given a chance of survival? And how is a natural resource made more precious to a poor country by rendering it valueless?

Yours faithfully,
John Fitzgibbon

specify that "any living specimen will be so handled as to minimise the risk of injury, damage to health or cruel treatment," were being enforced.

The report gives details of how CITES guidelines on shipment of live animals, as well as the Live Animal Regulations of the International Air Transport Association (IATA), are rarely enforced. This results in extensive deaths and widespread suffering of animals involved in international trade. In the case of some of the countries investigated, many species (and particularly birds) suffered mortality of 80-90% from the point of capture in the wild to delivery to the ultimate customer. Most of these deaths occurred before the birds left their country of origin, but a further 11% died in transit or in quarantine in the U.K. In the case of the U.S. this figure was nearly 18%.

Mr. Fitzgibbon queries my statement that "some species of birds have been severely depleted in the wild through excesses of the pet trade." Unfortunately, there are only too many well documented examples of these depletions, as I am sure that many of your readers will know. Parrots and macaws in particular have suffered. The list includes the Australian Orange-bellied, Turquoise and Splendid Parakeets, the Golden-shouldered Parrot, the Imperial Parrot of Dominica, the Red-necked, St. Vincent, St. Lucia, Puerto Rican and Bahaman Parrots, the Bolivian Red-fronted Macaw, the Grey-cheeked Parakeet, the Scarlet Macaw, and many more. Most of these species are now listed on CITES Appendix I so that it is no longer possible to import them legally into



this country, but they are only on this list because their numbers have been so depleted in the past by the pet and zoo trade.

Mr. Fitzgibbon also points out that the live bird trade can be of benefit to people in developing countries. This is quite true, but it is only a very short-term benefit if up to 90% of the birds captured die before reaching the customer, and when bird populations are so reduced that legal trade has to be prohibited. The wildlife of the world faces many threats today, mainly resulting from the destruction of its habitat. The additional threat posed by the excessive mortality when wild birds are traded as pets is clearly a terrible waste.

For your readers who wish to know more, the report is available from the E.I.A. at 23b Highbury Crescent, London N5, at a cost of £5.00 including postage.

Yours faithfully,
Peter Scott

To The Editor, *Cage and Aviary Birds*

Dear Sir:

In his letter published on May 4th, Mr. John Fitzgibbon criticizes a foreword that I wrote for a report on the air transport conditions of live animals and birds—"Injury, Damage to Health and Cruel Treatment"—which was produced by the Environmental Investigation Agency.

The report summarizes the findings of a four year study carried out in 1979-83, during which its authors examined shipment records of 1.5 million living specimens of birds, primates and other animals arriving at Heathrow, and spent a full year visiting many of the main wildlife exporting countries in east and west Africa, Asia, Australia, New Zealand and the United States to study the problems associated with the international trade in live fauna.

The study was designed to investigate whether the clauses of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), which

Animal Dealer Poses As Zoo

The Costa Rican Field Office of the World Society for the Protection of Animals provides an aviary for exotic birds confiscated by the Ministry of Agriculture's Wildlife Department in enforcing Costa Rican laws against sale of wildlife. According to a recent WSPA release:

"Seized birds are placed in cages, ridded of parasites, and restored to health. As they get stronger their food is placed on higher branches in the aviary, and eventually they are reintroduced to wild foods. Once rehabilitated, the birds are released into their native habitat.

"A WSPA investigation into the exotic-species traffic that flows from Costa Rica to El Salvador (on false export papers) and then to the United States increased the demand for space to rehabilitate contraband animals, and WSPA provided construction materials for an aviary at one of the national parks.

"Another of Huertas's investigations [Ger-

ardo Huertas is field representative for WSPA in Costa Rica] led him to the Avifauna Zoo in La Garita. Accompanied by John Walsh, he discovered that the zoo, affiliated with several influential Costa Ricans, was actually a front for illegal wildlife sales. 'The owner would show his animals, dealers would come and buy them, and they would be replaced,' reports Huertas, who took a succession of photographs to document the turnover in animals. The zoo was raided. Jaguars and ocelots were confiscated, and birds of several species, including scarlet macaws, parrots, hawks, owls, and four rare Jaribu storks, were rehabilitated in the WSPA aviaries and eventually released."

*According to the *Elsa (Japan) Newsletter* of 25 March 1985, *The Himikawa zoo paid a debt by having 4 Siberian tigers, 1 leopard, 4 Malaysian bears and 2 Himalayan bears killed, stuffed and sold. The animals are "protected" under the Convention on International Trade in Endangered Species of Wild Fauna and Flora.*

The Great Fire of Borneo must not be allowed to recur—anywhere

A hazard to which you might suppose rainforests are more or less immune is fire. Yet in Kalimantan in 1983 fire raged unchecked for weeks, devastating an area of tropical rainforest larger than Massachusetts and Connecticut combined.

Kalimantan, the Indonesian section of the island of Borneo, is an isolated and, by Indonesian standards, sparsely populated region. By the time the severity of the fire had been appreciated, it had taken such hold that all efforts to extinguish it failed. Only when the rains belatedly arrived were the flames finally doused. And only very recently have the various causes been analyzed.

Prolonged drought was the trigger. But Borneo has its dry seasons as well as wet and drought is not unknown even in rainforest regions. Why, then, on this occasion did disaster on such a scale ensue?

The first point is that this was no ordinary drought. It was the worst on record. Over a 10-month period—during the latter part of which the forests and even the very earth crackled and blazed—the area had less than one-third of its normal rainfall.

Some experts regard the record drought in Kalimantan as being the villainous work of El Nino, the South Pacific air-and-sea current whose erratic behavior could be affecting climatic patterns around the globe. For reasons unknown (though maybe connected with increased river silt-loads brought about by deforestation) El Nino's performance in 1983 was singularly turbulent and drought—coincidentally or not—was extensive over many regions of southern Asia.

Other experts see the Kalimantan drought as being directly caused by logging. In their view the rainforests regulate their own climate by drinking in the rains when they fall and between times gently releasing moisture into the atmosphere, so creating the conditions for further rainfall.

Excessive logging breaks the cycle—and the rains fail.

There is dispute as to what caused this record drought (see box) but there is no dispute as to why it proved so deadly. Irresponsible logging operations must bear the main blame. While slash-and-burn cultivators may well

have sparked the conflagration, its progress through this huge region was greatly aided by the mass of flammable litter left behind by the logging companies in the course of their heedless assault on the forest. That present-day selective logging—despite the secondary growth shoots up thereafter—strips the forest of its natural defences against fire is shown by the welcome fact that virgin forest areas often emerged unscathed, havens of green surrounded by charred and lifeless wastes.

The world is losing its rainforests and the species that live there at a horrendous rate through deliberate action. This is criminal enough in all conscience. To step up the pace of destruction through plain negligence is doubly criminal. Logging companies everywhere must be made to behave more responsibly. Rainforest fires will occur again. But they should not be allowed to run riot again.

Coming to grips with the grisly facts of the bear market

Recent issues of the *Quarterly* have drawn attention to the illegal killing of bears in western states to supply an oriental market for bears paws, claws, pelt and—in particular—gall bladder. A report from *Traffic Japan* (published in the April issue of *Traffic Bulletin*, IUCN, Conservation Monitoring Centre, Cambridge, England) sheds new light on this nasty but immensely profitable trade.

The *Traffic* report says: "An increase in bear poaching in the US has been directly linked to the South Korean demand for bear gall bladder." And South Koreans are prepared to pay truly astronomical sums to acquire this magical cure for digestive ailments. In 1983 a 180-gram gall bladder fetched US \$55,000 at public auction—or some \$8000 an ounce.

In the face of such frenetic bidding it is not surprising that even the affluent Japanese find the competition too hot.

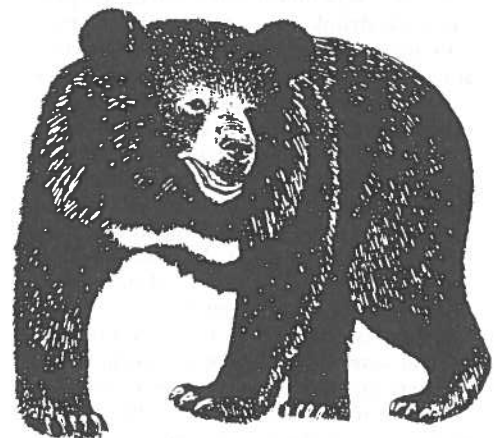
Japan's own bears are being exported live to South Korea—ostensibly to zoos there but in fact to be slain for their gall bladders.

The zoo "cover" is being used because Japan as a member of CITES may not trade in Appendix I species except in genuine cases of captive-bred animals. One of the two types of bear found in Japan is the Appendix I Asiatic black bear, the bear most favored by the gall-bladder market. Without doubt many, maybe all, of these live-bear exports are Asiatic black bear; and without doubt few, maybe none, are genuinely captive-bred.

Does this illicit trade to South Korea mean that Japan's home market for bear gall bladder is going unsatisfied? Far from it—thanks to another CITES-busting operation originating in mainland China. Japan ratified CITES in November 1980, China in April 1981. Yet in the four years 1981-84, maybe as many as 27,000 of China's Asiatic black bears were slain to supply the Japanese gall-bladder market. It is impossible to arrive at any precise figure because of the lack of precision in both Japanese and Chinese customs' data.

At the recent meeting of the parties to CITES, China, in an attempt to justify the continuance of this traffic, had intended to propose that the Asiatic black bear be downlisted to Appendix II—which does permit a limited trade under strict scientific controls. The proposal was withdrawn. The animal remains on Appendix I and may not be internationally traded.

NOTE: In April, following appeals from international conservationists, Japan passed a new law which brings the country's import regulations in line with CITES. So Japanese imports of Appendix I species should now be a thing of the past. For the signs are that, on the issue of wildlife trade, Japan wishes to be seen as a model of rectitude.



Asiatic Black Bear

A Crime Against The World: Memoirs of a Russian Sea Captain by Vladil Lysenko, translated by Michael Glenny. Victor Gollancz, 14 Henrietta Street, London WC2.

This book is a catalogue of horrors. Victor Lysenko was a Russian fishing captain until he defected to Sweden in 1975 and his account of life in the Soviet fishing fleet makes one wonder how he stuck it so long. The answer is that he had to leave his wife and children behind. It is hard to know which to feel more sorry for, Lysenko or the fish he helped to exterminate in such vast quantities. Sea after sea, ocean after ocean, he and the rest of the Murmansk fleet fished indiscriminately, regardless of international agreements, fishing limits, breeding grounds and the condition of the crews.

They destroyed the fish stocks of the Barents Sea. They blocked the mouths of Norwegian fjords with continuous lines of small-mesh nets, dumping two-thirds of their catch back in the sea because they could not freeze it, polluting the seabed with dead fish so that herring have never been found there again. They destroyed the herring, hake and cod on the famous George's Bank off North America, taking fish full of roe, immature fish, anything to fulfill their impossibly high target quotas. Their crimes in the Far East do not bear description.

Nothing stops the Russians except their exhaustion of fish stocks. All their boats are armed and armor plated. They fish in squadrons, defying anyone to try and stop them. Their fishermen have to fulfill their quotas to earn the miserable wage they and their families live on, often ten to a room, in appallingly built bungalows and sheds in Murmansk and Archangel. Appeal against targets, quotas, pay or conditions is impossible because they are set by the same civil servants who "investigate" fleet conditions, behavior and policy.

The only thing that relieves the monotony of horror is incompetence. Like every Soviet fishing vessel, Lysenko's had a KGB officer on board every time it sailed and he was permanently drunk. Soviet captains hardly ever send up distress signals because the loss of a ship has to be deducted from the crew's wages, but ships are always sinking because they go out in dreadful weather and dangerous waters to catch their quotas.

Nobody laughs in this book. Nobody is happy. Nobody likes or believes in what they are doing. But the destruction goes on because nobody inside the Soviet Union knows how to stop it. It would have been interesting to know what Lysenko thinks people outside the Soviet Union could do to try and save what is left of the world's fish. He gives the impression that nothing can be done; it is too late; it is hopeless, like fishing in the wake of the Soviet fleet.

Having read this book my opinion is suddenly clear and I will not hesitate to voice it.

The book is well named and is vital reading for anyone who cares at all about the seas and the life they contain.

Teresa McLean is a journalist and broadcaster on religious affairs. She is also the author of Mediaeval English Gardens and The English at Play, both published by Viking Press.

Dr. Wildlife, the Crusade of a Northwoods Veterinarian by Rory C. Foster, D.V.M. Franklin Watts; New York and London: 1985.

Dr. Foster made it his mission in life to treat sick or injured animals and release them when they were sufficiently well to return to their own environment. Some animals were hit by cars, or injured in other ways, and a common practice was to "put them out of their misery" by killing them without thought of the possibility of treating them. Fortunately there were those who brought them to Dr. Foster.

Here then, we have accounts of Faline,

an injured fawn, who had lost her mother and then been hit by a car and left on the road. Dr. Foster treated her for a fractured femur and some head injuries. She was bottle fed and given vitamins by his wife, Linda. When she was quite well she was released to the wild.

A seagull with a cancerous growth was treated; an owl was treated for some severe injuries—and then flew away of his own accord.

Bald eagles are endangered, their population in Wisconsin being only in the hundreds. One which had been caught in a steel jaw trap was brought to Dr. Foster, who did his best for her, feeding her fish by hand, and when she was strong enough, he arranged for her to be flown to the Raptor Center, where Dr. Duke and Dr. Pat Redig specialize in the care of injured eagles. This had an unusually happy ending, for after six weeks of skilled veterinary treatment, she could be released to the wild.

Rabbits, bears, and an albino deer named Snowflake are other patients: this is a book for all lovers of wildlife.

—Hugh Gough

Nature First

Second Nature is a handsome book, 233 pages long, with photographs, colored reproductions and essays by such writers as John Berger, Ronald Blythe, John Fowles and the book's editor, Richard Mabey. In the broadest sense its theme is ecological: man's relationship to nature. Yet the contributors are writers and artists; people concerned to express in their normal activity (and in the work especially presented for this book) different aspects of the idea that our relationship with the land and with the natural world is a vital part of our imaginative, cultural and social life. It is then an anthology in which forty-two independent writers and artists speak, in words and images, of their personal feelings about nature and the land which for each one of them is both a matter of concern and a subject of their work.

This in itself is deeply refreshing. For if in the past man's place in the natural scheme of things had been a central concern of mainstream writing and painting—think, for example, of Wordsworth, Turner, Gerard Manley Hopkins, Samuel Palmer, and the infinitely rich and varied contribution each made to our perception of 'nature'—today the debate, such as it is, has been commanded by scientists, disastrously narrowing the terms of the argument so that the complex emotional and richly symbolic roles which the countryside and nature still hold for us, belong, more often than not, to the debased territory of 'sentimentality.' Our

affection for place, our sympathy towards other living beings, our respect for our rural history, are now regarded as a devalued currency. And yet, as John Fowles says in his perceptive contribution 'The Blinded Eye,' "science may understand what nature requires of man. Of that, poets like Wordsworth and Keats knew more in the tips of their little fingers than all the biologists in creation." . . .

So *Second Nature* has been published. Its aim: to re-open the traditional *cultural* debate, with a group of writers and artists (who have already demonstrated their concern about these issues) exploring the idea that our relationship with the land and with other organisms, is a vital part of our imaginative and social life.

The visual material, accompanying the text, is no less varied. We have two of John Blackmore's marvellous photographs of wind-tossed trees and others by Richard Long, Paul Hill, James Ravilious and John Hilliard; there are also reproductions of paintings by John Hubbard and of sculpture by Henry Moore who has undoubtedly contributed a new vision to our perception of humankind and nature.

Second Nature is a celebration. It is uneven, quirky, occasionally inspired, continuously stimulating.

Available from Common Ground, 45 Shelton St., London WC2H 9HJ, United Kingdom.

Reprinted from Resurgence, May/June 1985.

Coke leaves a sour taste

Rodeos are not high on the list of favorite sports amongst those who care for animals. Remaining perched on the back of a bucking bronco may call for considerable skill and courage but there are a myriad ways in which a man may test himself without at the same time brutally maltreating an animal.

For the Coca-Cola company to sponsor something called *The Prorodeo Winner's Circle* which last year boosted prizes at no less than 31 rodeos is nothing short of shameful. The vaunted competitive spirit which drives these rodeos is not one that encourages scrupulous regard for the welfare of the animals concerned. On the contrary they have but one of two painful choices: to be tortured until they submit or to be tortured until they can rid themselves of the yanking and tugging cow-puncher astride them. Either way, there is then the next time and the next . . .

Sometimes the animals are injured. Always they are hurt and terrorized. Rodeos



Credit: The Rapid City Journal

"We believe our commitment with sponsored rodeos continues that spirit of competition to which we are committed throughout our business system." — Extract from a letter from Coca-Cola Consumer Information Center.

are brutal in themselves and brutalizing to their audience, among whom are a great many youngsters. Is this the "image" which Coca-Cola wishes to purvey?

To get the answer first hand, try writing to Patricia Martin, Consumer Information Co-

ordinator, Coca-Cola USA, PO Drawer 1784, Atlanta, Georgia 30301. Oh, and don't forget to mark your letter "Spirit of Competition Department."

Who's for a coke? Not me, thank you very much all the same.

Desertification is cruel to animals too

The process by which huge sections of the earth are being turned into deserts is proceeding at ever quickening rates. The horrendous suffering of the peoples of Ethiopia have been brought home to us—though even now the calamity is attributed to an Act of God rather than an act of man.

But animals too are sufferers. Their homes, the food and water they relied on, are wiped out by human over-exploitation of the land whether by cutting down all the trees, putting too many animals out to graze, or over-cultivation. This destruction of the earth increases by leaps and bounds every year.

A fact sheet issued by the United Nations

Environment Programme includes the following:

"Desertification threatens 35% of the earth's land surface and 20% of its population, some 850 million people. 75% of this area and 60% of the population are already affected.

"60% of the world's arid, semi-arid and adjacent sub-humid tropics is already affected, and between a quarter and a half severely so.

"The cost of loss of productivity due to desertification stands at \$26 billion annually."

Desertification is a prime example of inadvertent cruelty to people and animals on a massive scale. Apathy, inertia, greed and ignorance combine to destroy millions of acres of land forever. If enlightened self-interest is incapable of halting the spread of this scourge, perhaps outrage at the suf-

fering inflicted can bring home to governments and multi-national corporations their obligation to act.



Photo: FAO

The Sahel region of Africa is suffering both drought and misdirected foreign aid.

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PILOT WHALING IN THE FAROE ISLANDS

This 30-page report by Jennifer Gibson and Dave Currey provides the first thoroughly documented account of an activity which apparently has been going on since the Vikings landed on the Faroe Islands hundreds of years ago. The records date back to 1584.

The whale meat is distributed free, but the Faroe Islanders have a standard of living which compares favorably with western European nations. Pilot whaling has long ceased to be an aboriginal hunt, yet the report states, "Up to 3,000 whales are indiscriminately killed each year, more than the total number of other whales killed in both the North and South Atlantic combined."

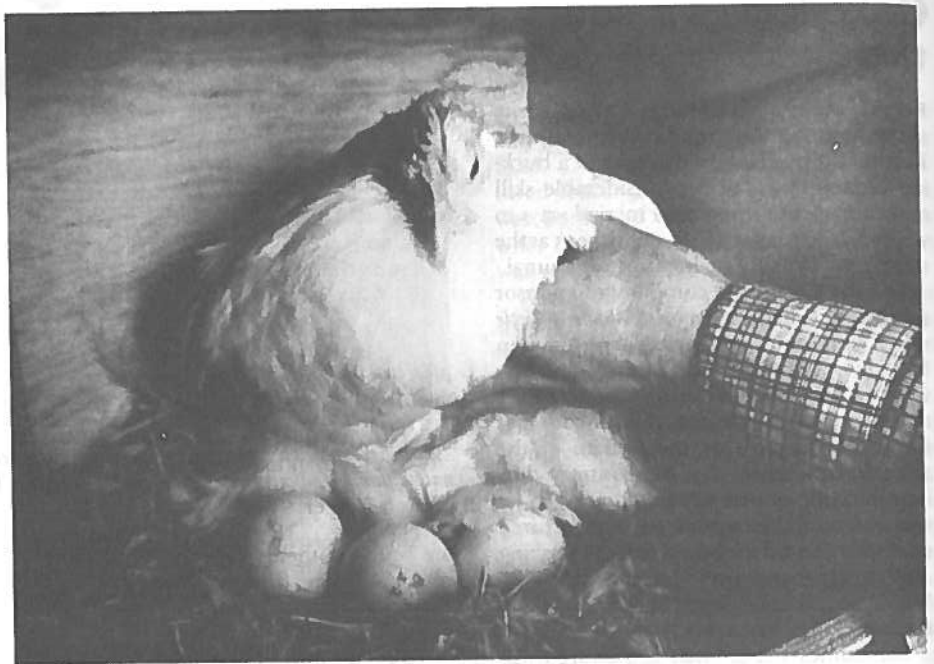
The report describes the kill as follows: "As the whales approach the shore, the animal at the rear of the pod is stabbed behind the dorsal fin with a spear, causing it to swim in its agony through the pod towards the beach. The other whales will follow, beaching themselves in the shallow water. The hooks are then sunk into the whales' heads and used to drag them up the beach by those working from the shore. A cut is made into the whale's spinal marrow through the blubber and flesh, a hands-breadth behind the blowhole with the knife. This cut causes the whale to thrash violently and break its own spinal cord."

In addition to the killing of pilot whales, endangered fin whales are killed by Faroese whalers under a "scientific permit" issued by Denmark. However, the science is so inferior that the Sea Mammal Research Unit in Cambridge, U.K. refused to participate when requested to do so. According to the Environmental Investigation Agency report, "The procedure adopted in the Faroes is a mockery of scientific survey."

Copies of the report may be obtained from the Environmental Investigation Agency, 23b Highbury Crescent, London N5 1RX, England. Price: \$20 postpaid.

Contributions to the Animal Welfare Institute are deductible in computing income tax returns, and donations, large or small, are most gratefully accepted for the general fund or for special purposes. Bequests to the Institute will help guarantee the continuance of its 30 years of work to protect animals. Please remember the Institute in your Will.

The Board of Directors suggests the following language for use in Wills when making a bequest to the Animal Welfare Institute: "I give to the Animal Welfare Institute the sum of _____ dollars" (or if other property, describe the property).



Credit: Du Pont Company

Better than a battery cage

BANTAM HENS HATCH BALD EAGLE EGGS

To increase the number of bald eagle eggs hatched in captivity, scientists at the Patuxent Wildlife Research Center are using bantam chickens to incubate the eggs. Eggs incubated by the hens hatch more often than those placed in

artificial incubators. In 1984 the hens helped produce a record 18 eaglets at the research center. For the third year running the Du Pont company has helped fund the program—this year to the tune of \$50,000.

Europe's spring massacres continue

Greece greets its spring visitors with hail of bullets ran the headline to an article in the Spring 1984 Quarterly, detailing the murderous manner in which some 250,000 Greek "sportsmen" celebrate the return of migratory birds, journeying (so they fondly imagine) to their breeding grounds in northern Europe. Sadly we have to report that the headline could have remained unaltered this year. And what is true of Greece is no less true of France and Italy, those other blood-red offenders against EEC regulations, conservation principles and elementary ethics.

It is four years now since an EEC Directive forbidding the shooting of migratory birds came into force. Theoretically this is binding on all members of the European Economic Community. But in none of the three countries named above has the situation altered except for the worse.

This year Greece openly permitted a hunting season from 13 April to 12 May. In Italy the government continues to plead impotence in the face of regional refusal to comply with the law of

the land (now in line with the EEC ruling). And as if to underline this point, in Sicily and southern Italy, where the carnage is greatest violence is not infrequent against those brave enough to oppose the legions of hunters (the nation "boasts" 1,620,000 of them).

In France the government, under strong pressure from international bodies and after being taken to court by French conservationists last December, belatedly prohibited the spring shooting of turtle doves this year. But it is unlikely this edict did much to silence the guns.

This spring, as every spring, hundreds of millions of migratory birds, most of them small songsters but including huge numbers of rare raptors and other hard-pressed species, will have been butchered for "fun." Meanwhile there is concern in northern Europe that springs are becoming more silent. And there is some anger against the trigger-crazy perpetrators of this seasonal madness and the governments that turn a blind eye to it.



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U.S. Appeals Court upholds sanctions against Japan

The international whaling industry was dealt a series of blows over the summer by U.S. federal courts and by the International Whaling Commission.

In August, the U.S. Court of Appeals for the District of Columbia upheld last winter's U.S. District court ruling that the bilateral deal between the Reagan Administration and Japan was illegal. Heavy economic sanctions against Japan's fishing industry for its violation of the sperm whaling ban are mandatory under the Pelly and Packwood-Magnuson amendments, the appellate court ruled.

"It is imperative to remember that the Legislative Branch, by explicit constitutional provision, has the power to regulate foreign commerce," wrote Judges J. Skelly Wright and Edward A. Tamm in the majority opinion. "And since the judiciary's role is to declare what the law is when Congress has acted, we must perform that duty even in this delicate context."

The Administration and Japanese fishing and whaling interests appealed the adverse ruling to the full Court of Appeals, but the Court refused to hear it. If the appeals drag

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STOP PRESS

The U.S. Senate approved Majority Leader Robert Dole's bill to ensure the proper treatment of laboratory animals on October 28th as an amendment to The Farm Bill.

Science fairs—a sampling of misguided experiments

by F. Barbara Orlans, Ph.D.

A recent survey of science fairs provides new evidence of the widespread improper use of animals in these elementary, junior, and high school competitions. In total, 14 local, regional, and national science fairs were visited either by volunteers or the author during 1984-85. In all 14 fairs, deficiencies in humane standards were found. Some typical examples are reported below.

The International Science and Engineering Fair (ISEF) is the major offender since it sets the standards used by many although not all local and regional fairs. The ISEF is administered by Science Service in Washington, D.C. Approximately 100 projects from the biological sciences were exhibited in the 1985 ISEF. All are prize winners from previous local and regional fairs.

Over the 36 years of its existence, the ISEF has failed to adequately address the issue of inhumane animal projects. Their rules permit infliction of pain, nutrition deprivation, and administration of toxic substances. Highly traumatic procedures on small animals are condoned.

In contrast, other competitions have established strong rules that are no impediment to the young student's enthusiasm, but do control improper animal work. These rules permit observational studies of vertebrate animals but prohibit those that are in any way harmful to the animals. These rules are used nationwide in Canadian science fairs and also in the U.S. in the prestigious Westinghouse Science Talent Search. In my opinion, such rules should be adopted by the ISEF.

36th International Science
and Engineering Fair
Shreveport-Bossier City, Louisiana
May 12-18, 1985

Overall, in the 1985 ISEF, when vertebrate animals were chosen for study, there was a four out of five chance that the animals were harmed in some way. Non-invasive vertebrate projects were not popular. Out of the total of 79 projects involving vertebrate animals, 62 or 78% involved injury, pain, physical or psychological discomfort, or

death. Only 17 or 22% did not harm the animals.

Short shrift is given to humane projects on vertebrates at the ISEF. Four out of a total of 79 projects involving vertebrates, or 5%, had as their purpose the promotion of the welfare of a particular animal species or humans. A good project in this group was conducted by an 18 year old from Black River High School in Sullivan, Ohio, who, during a five-month period, regularly pro-

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U.S. taking action against driftnets destroying fisheries and wildlife

More than 1,600 fishing boats from Japan, Taiwan and South Korea are setting more than 20,000 miles of gillnet each night in the North Pacific to catch salmon, squid, pomfret and billfish such as marlin. These monofilament nets, stretching up to 35 miles also entangle tens of thousands of marine mammals and more than one million seabirds annually.

This fishery, which developed only in the last few years, is devastating marine life in the rich waters north of the Hawaiian Islands chain and the Aleutians. Many of the salmon

runs in Alaska, Canada and the Pacific Northwest are in sharp decline because the fish are intercepted by the high-seas drift-net fishery.

Thousands of Dall's porpoises, North Pacific fur seals and other marine mammals are drowning in the vast nets. U.S. scientists estimate that 9% of the tufted puffins nesting in the Aleutians are dying in the nets each year, as well as 5% of the murrelets and untold hundreds of thousands of short-tailed shearwaters, remarkable birds that migrate all the way from Australia and New Zealand only to

die while trying to feed on the fish trapped in the driftnets.

The foreign fisherman are also leaving a deadly legacy in the sea with hundreds of miles of lost and abandoned driftnets. These fine-mesh nylon webs do not degrade and break up in the cold waters, but sweep through the sea like Grim Reapers, entrapping everything in their way. As many as 50,000 fur seals may die in these "ghost nets" each year.

The nearly 1,700 driftnet ships roaming

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FOR DEER LIFE!

Tests on four sections of a highway in Washington State have convincingly shown the effectiveness of *Swareflex Wildlife Reflectors* in reducing deer-vehicle collision rates. The tests were conducted from mid-October to mid-April, 1981-84.

During this period 58 deer were killed on the four test sections; 52 of these deaths (90%) occurred when the reflectors were covered and just six (10%) during the 50% of the time when the reflectors were not covered—in other words, when they were allowed to do their job. These findings have been broadly confirmed in other parts of the US and in Canada.

Installed at regular intervals on both sides of the road, the *Swareflex* works by reflecting the headlights of an oncoming car so as to give the deer the impression of a moving "optical warning fence." The system is vastly cheaper than fencing and since it is eligible for 90% federal funding the cost to the State is fairly minimal.

Given the scale of the problem in certain areas—high deer mortality, injury to drivers and costly damage to vehicles—the system should commend itself to highway authorities in many States. Details may be had from: *Strieter Corporation, 2100 18th Avenue, Rock Island, Illinois 61201.*

A poisonous decision: 1080 ban lifted

Since 1972 all uses of the notorious poison, Compound 1080, have been forbidden. Until now, that is. Now the curiously named *Environmental Protection Agency* has seen fit to lift the ban and to allow this indiscriminate killer to stalk the range once more.

The 1972 ban was enforced for a number of interlocking reasons: the proven ineffectiveness of 1080 in protecting sheep; the huge toll of non-target species, including many on the protected list; straightforward economics—reimbursing stockmen for losses to coyotes would have been cheaper than (attempted) predator control by poison; the united opposition of environmentalists in alliance with not a few stockmen.

So surely something dramatic must have occurred during the 13 poison-free years to explain this dramatic reversal of policy? Have coyotes, perhaps, been going on the rampage, gorging themselves silly on defenseless flocks? No; in essence nothing has changed. Predation on sheep has shown no marked increase—and indeed more and more stockmen have discovered for themselves that guard dogs made far better defenders of sheep than ever 1080 did.

Admittedly, the lifting of the ban is not total. Carcasses may not be baited with

This land is whose land?

This Land Is Your Land is the somewhat embittered title of a book by a former national park ranger and college professor, Bernard Shanks. Embittered because the public lands of America, as this book depressingly demonstrates, are being steadily and remorselessly degraded by so-called welfare programs.

Whose welfare? Certainly not the public's. Says Shanks: "Under mining and mineral-leasing laws, national mineral resources are transferred into the hands of a few people with negligible benefit to the public.... Water projects obliterate fishing, wildlife habitat, free-flowing rivers and community resources." But he regards the subsidized overgrazing of public lands by domestic animals as "the single most important factor" in the desertification of much of the American West.

A \$4 million study by the Forest Service and Bureau of Land Management determine the "fair market value" of allowing ranchers to graze their cattle on public lands to be \$6.65 per head per month. But the 1985 grazing fee has been set at just \$1.35, only a few cents higher than 20 years ago when beef fetched only half the price it does now and when operating costs on the program were substantially lower.

1080. Its use is limited to lacing the collars of "sacrificial" sheep—a stratagem requiring the coyote to kill its prey by going for the throat, piercing the collar, swallowing the poison and then painfully dying.

But plainly even this limited use is fraught with environmental hazards: eagles and other scavengers will assuredly die from eating poisoned coyotes. The crucial point, though, is that with 1080 back on the market, there can be no real prospect of confining its use to sheep collars as the EPA directs. Stockmen dislike the ruling: the collars are expensive and killing a coyote demands losing a sheep.

Recently in Wyoming three golden eagles were found dead near a dead sheep baited with an outlawed poison. In the wake of this incident a wildlife specialist pertinently asked: "How do they expect to control use of 1080 in toxic collars when they are unable to prevent use of illegal poisons?"

N.B. The collars will contain enough 1080 to kill 185 coyotes or up to six adult men. The Fish and Wildlife Service (the primary applicant for the collar) has estimated that the attacking coyote will swallow just 10% of the poison. Which leaves 90% to be swallowed by other creatures later.

Thanks to this hand-out to the cattle ranchers, the government—or rather the taxpayer—is now making an annual loss on the grazing program of \$33 million. And this sum does not, of course, include the incalculable cost attributable to the despoliation of "your land."

This Japanese forest should not be destroyed—even to house the US military

Green politics are beginning to bloom in Japan. In the city of Zushi on the fringe of the densely populated Tokyo Metropolitan Area, legions of environmental activists have sprung up to defend the Ikego Hills, one of the last remaining forests in the area and by far the richest in variety of wildlife.

The forest owes its distinction not to any deliberate policy of protection but to the US navy's adoption of the site as an ammunition depot. For several decades all intruders have been barred and the forest has recovered much of its pristine glory, becoming the home to many rare species of fauna and flora, including 109 species of birds, many of them theoretically protected by bilateral treaties for the protection of migratory species and their habitat.

This happy state of affairs is now under grave threat, though. The navy has pulled out and the Japanese government plans to convert a sizeable part of the forest into housing for the US military and their families. The citizens of Zushi first learnt of this threat to their prized forest back in October 1982. They straightaway formed the *Citizens' Association for the Protection of Nature and Children* and, shortly afterwards, the *Ikego Green Operation Center*. Petitions were organized and allies sought, both at home and abroad. (Some 46,000 signatures opposing the plan were taken to Washington and presented to the Secretary of Defense. The US authorities said they were not insisting on the Ikego site but merely requesting more housing.

In 1984 things hotted up when the mayor of Zushi, formerly an opponent of the housing plan, switched sides. In the subsequent mayoral election, fought almost entirely on the issue of the forest, victory went to Kiichiro Tomino, founder of the *Green Operation Center*.

In March 1985 the government published its Draft Environmental Impact Report—which drew a withering response from Mayor Tomino and his supporters: "While admitting that the housing plan will involve cutting down thousands of trees, disturbing the wildlife, bulldozing hills, filling valleys and generally upsetting the ecosystem, it fails to recognize the intrinsic value of the natural environment and doesn't consider alternatives."

The battle continues but the mayor has no final right of veto. The heavy guns are, as usual, on the side of the destroyer.



Sea-dumped debris and ghost nets are big killers

Sea creatures the world over are bombarded by a non-stop rain of debris as the oceans continue to be used as a waste bin.

The National Academy of Sciences has estimated that the sea receives 6.4 million tons of litter every year from shipping. And another estimate puts the number of plastic containers dumped overboard by merchant ships at an astronomical four-and-a-half million a week.

For marine life this relentless build-up of non-degradable garbage swilling around in the oceans is a deadly hazard. We are entirely ignorant of the impact on deep-sea animals (which are having to cope with a pile-up of refuse on the ocean floor) but we do know that huge numbers of seabirds, seals and turtles are dying from swallowing plastic objects or from becoming enmeshed in discarded fishing gear.

While it is impossible for obvious reasons to put precise figures on mortality, there are some fairly reliable—and alarming computations. Just one species of seal, the northern fur seal, is losing 50,000 of its kind a year through entanglement in net fragments. Still in the North Pacific a body count in just one half of a free-floating 3500-meter gillnet yielded 99 seabirds, 75 salmon, one ragfish and two salmon sharks. And this net had been adrift (so it was established) for probably not more than a month: its “ghost-fishing” life had only just begun.

Preventive measures

What is being done to remedy this dismal state of affairs? At government level, very little. The Marine Mammal Protection Act and the Endangered Species Act need identification of guilty vessels and proof of mortality before charges can be brought. And there are no federal programs for cleaning up the tons of sea-dumped litter.

However industry is beginning to stir from its long slumber. The Society for the Plastics Industry has established a Plastic Recycling Foundation. Its brief is to pursue ways of making large-scale recycling economic. Its budget is \$5 million. A drop in the ocean, you may think—but at least it shows some awareness and concern.

But while government and industry are (at best) still in the research stage, individual citizens can get *active* straightaway. Some already have. One Saturday last October 2100 people in Oregon



Photo: Foote/Greenpeace

Crew members of Greenpeace vessel Rainbow Warrior rescue sea birds entangled in gill net.

gathered along the length of the state's Pacific coast and filled over 2400 20-gallon garbage sacks with beach litter—most of it styrofoam.

Here's a lead for other people in other coastal states to follow. Perhaps that includes you. But even if you live in an inland state there are plenty of lakes, rivers and ponds, half choked by debris, which are sorely in need of a life-giving spring clean. So seize the time!

Minimum requirements to reduce impact of marine debris

- All fishing gear, whether private or commercial, to be clearly marked with owner's name.
- More foreign and local fishing boats to carry observers
- Payment for retrieved netting and debris
- Rewards for information leading to conviction.

U.S. taking action against driftnets, *continued*

the North Pacific are catching hundreds of thousands of tons of fish. In 1984, more than 390 Japanese boats, each setting a 9-mile net nightly, were in the salmon fleet. Japan's squid fleet totalled about 500 ships, with Taiwan adding 111 ships and South Korea 100 ships in the hunt for squid, which are frozen on board and delivered to the fish markets in the home countries. Japan and Taiwan had about 600 other ships catching billfish, such as marlin and swordfish, in nets stretching 6 to 7 miles long.

At a U.S. Senate hearing on the driftnet problem on 9 October 1985, conservationists joined with fishermen to call for a ban on the use of driftnets in any fisheries in the North Pacific, whether inside or outside the U.S. 200-mile zone.

Senators Ted Stevens and Frank Murkowski of Alaska and Slade Gorton of Washington demanded forceful action by the State Department and Commerce Department to halt driftnet fishing. Senator Stevens, who chaired the hearing, decried the “marauding, murdering nets,” likening them to AIDs in the sea.

Senator Stevens denounced the Japanese fishing industry, whose lobbyist testified that “the Japanese fisheries in the North

Pacific are responsible and well-managed with respect to the conservation of marine resources.” Driftnets are “a reprehensible technology,” he stated, singling out the foreign fleets as “the ones who are bringing calamity and plague to the North Pacific.”

Compounding the effects of driftnets on marine life are gross violations of U.S. and international fishing regulations by the Japanese, Korean and Taiwanese fleets, the senators revealed. In one flagrant case this year, 26 Japanese driftnet ships penetrated far into a banned zone south of the Aleutians. When a U.S. Coast Guard patrol plane spotted the fisher rustlers, it was found that all the Japanese boats had covered their markings in order to avoid identification. Only through skillful sleuthing did U.S. officials discover the miscreants. In another case, an illegal Japanese driftnetter cut loose a 35-mile long net and fled as a Coast Guard ship approached. That net will continue “ghost-fishing” indefinitely.

A high State Department official testified at the hearing that the Japanese Government and fishing industry has rebuffed two attempts by the U.S. to find a solution to the driftnet crisis.

An enriched system that enriches the lives of both people and animals

Rooting for pigs in Mexico

We have received a most encouraging account of an experimental pig-raising project in Mexico. It comes from the project director, Bernd Neugebauer, who for the last seven years has been working as a consultant to GTZ, the German aid program. His special concerns include intensive small-holder farming and small-scale animal production.

Based on the method developed by Alex Stolba in Edinburgh (see winter 1982/83 *Quarterly*) but adapted to a tropical climate and a peasant economy, Neugebauer's system could profitably be applied by rural communities in many parts of the third world.

The system is ethological in concept: that is to say it is built around the *natural* behavior and needs of the pig. In scale it lies between the subsistence farming of the peasant with his handful of free-running free-foraging pigs and the very large units modeled on the intensive operations of Europe and America.

Neugebauer points out that these opposite extremes are alike in one unfortunate respect: for both "scavenging pigs and concrete boxes" disease is a constant hazard. That intensive systems run up against this problem is of course well known and amply documented. But why should free-running pigs be vulnerable?

In a true agrarian society they would be healthy enough. But experience in Bolivia has shown that disease spreads when village communities lose ground—and much else besides—to commercial traffic and urban sprawl. For the pigs must then be tied up or fenced in. This is happening increasingly and the vets now needed by these communities to counter the spread of disease are for the most part no longer there: they have been lured away to the bright lights and brighter prospects of the teeming cities.

While "concrete boxes" can only exacerbate the disease problem, they are nonetheless springing up all over the place—so tempting are the tax advantages of intensive operations (in Mexico units of up to 5000 pigs are tax free) and so meagre the profits of subsistence pig-keeping. But of course even with the no-tax bait, considerable capital is required to set up intensively. And capital is what few peasant farmers possess. So how can they be helped?

The tried-and-tested solution proffered by Neugebauer is a family pen made of local materials which may initially house no more than four

sows—a number well within the means of a small group of pig producers combining together. In Yucatan where Neugebauer operated for an experimental year, the pen consisted of a timber frame with a thatched palm roof and woven hurdle-like walls (see drawing). Water was "on tap" from an elevated water tank while food came primarily from local plants and trees—and not only food, the piglets teethed on the wood so that no udder damage occurred even during the 12 weeks of suckling.

Throughout the year the pigs were being closely observed with a view to improving the system where necessary. For example, the concrete floor laid to facilitate cleaning proved superfluous: pen hygiene was not a problem because the pigs themselves kept the nesting and feeding areas clean, defecating only in the corridors.

It was found that fattening and breeding pigs do not need separating, that the pen required no more space than do conventional pens and that essentials include good drainage, straw for the nests (a problem in Yucatan where the straw is always burnt in the fields), a roof over the rooting area and fresh-cut sods

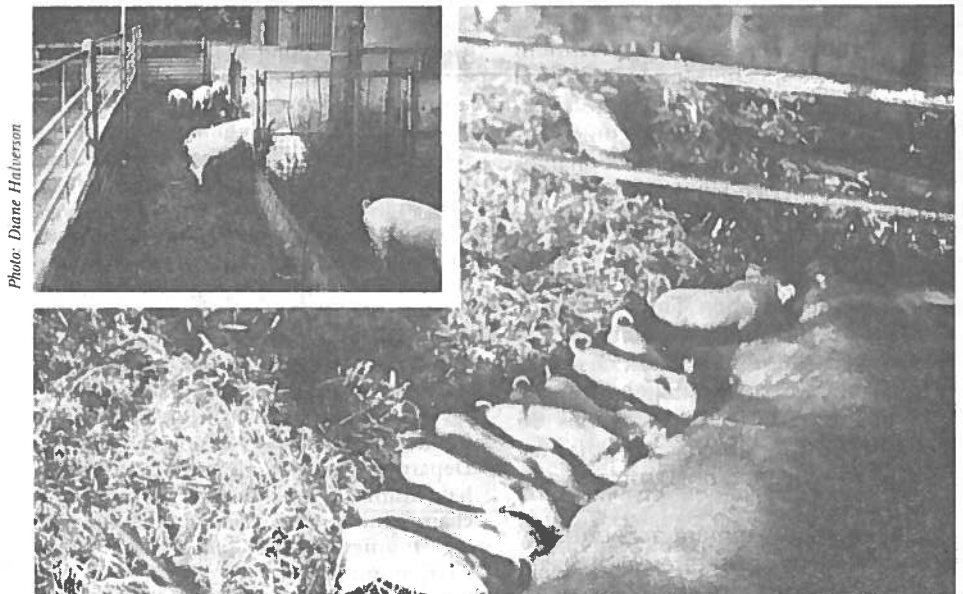
within the areas as food for newborn piglets.

There was one other important finding—or rather a corroboration of a finding by Alex Stolba. The pen sometimes held as many as 45 animals despite pigs being sold young to keep numbers within bounds. The reason for this happy build-up was that the system appears to accelerate the sows' fertility cycle: litters averaged nearly 2.5 per year, were born spontaneously and without complications although a few piglets were crushed to death by the mother sow. This average is very high by conventional standards and is particularly impressive bearing in mind the young age of two of the sows and the limited availability of the boar.

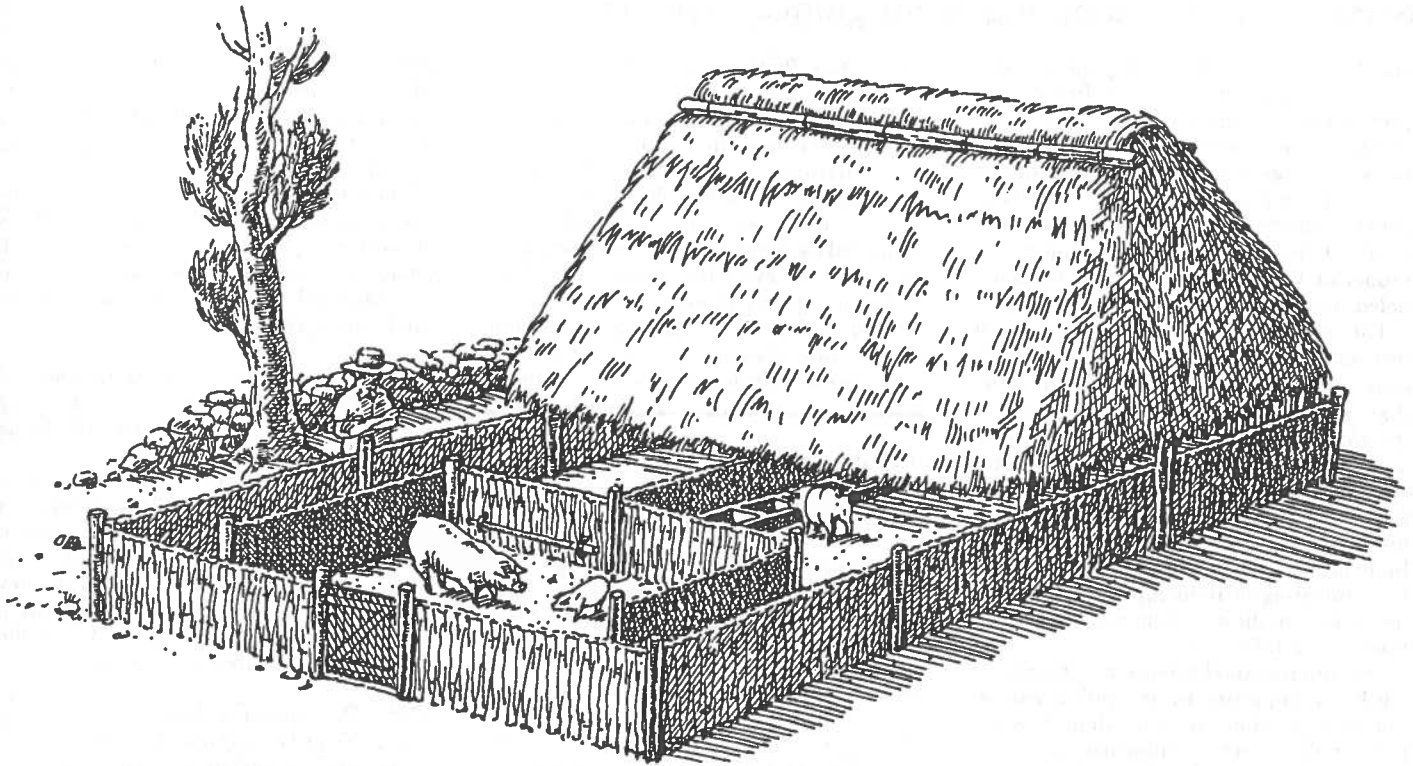
On the all-important issues of cost, the peasant farmers themselves can readily construct the pen while the system compares very favorably with conventional systems on the score of labor—though this is perhaps not a prime consideration in countries where labor is cheap and plentiful.

Sadly this project in Yucatan has been discontinued for the time being because Neugebauer's contract there has terminated. But during its year of operation it abundantly demonstrated its potential as a system which, with regional variations, could enrich peasant societies of the third world without disruption to their way of life and without hurt to the animals concerned.

Development of this kind that is in tune with people's basic needs and in harmony with the workings of nature is true "ecodevelopment". Our world could do with a great deal more of it.



Two views of pig families in a Pig Family Pen at the University of Edinburgh



The pig Family Pen built of locally available materials in Mexico

The results of a lengthy and unique piece of research into rival methods of pig-raising have just been published. They make most gratifying reading. For they go far to confirming what animal welfarists have long contended—that confinement is not just a rotten way of treating animals, it is an inefficient way of making money.

Conducted by the University of Tennessee at its Ames Plantation research center near Grand Junction, and spanning an 8-year period, 1976-83, the research compared, side by side, three farrow-to-finish pork systems—pasture, partial confinement and total confinement. As the accompanying table (see below) makes plain, various production and financial criteria were used to assess the merits and demerits of each.

From the standpoint of capital investment the pasture system (farrow through finish in open fields) naturally emerges a clear-cut winner: around \$40,000 as against \$59,000 for partial confinement (farrow in solid-floor pens, finish outside) and a whopping \$112,000 for total confinement.

On energy costs, too, pasture is way ahead: 36 cents per pig per year as against \$1.44 for partial confinement and \$3.18 for total confinement.

Pasture also comes out best on a number

of other counts: post-weaning losses (6% as against 9% for the other two), freedom from disease (no incidence of TGE unlike the other two) and year-by-year consistency of sow and pig performance.

Going to the other extreme, the total confinement system wins comfortably on the score of feed efficiency. Confinement finishing out-performed pasture finishing by 40 pounds of feed per 100 pounds of gain. This should be balanced, though, against the fact that the pasture system is marginally faster in bringing pigs to a weight of 230 pounds.

One rude surprise for confinement fanciers is that a breeding and gestation unit installed during the research period failed to improve conception rates; the confinement system here remained adrift of the other systems.

Other drawbacks

The research shows that total confinement suffers from other grave drawbacks too. The belief that such systems are labor-saving turns out to be more myth than fact. By the end of the 8-year period all three systems required about 35 man hours per sow per year. The reason for this, in the words of project director Ed Lidvall, is: "When confinement equipment is new it all works great. But in a few years it starts needing

repairs. That eats up more labor than people realize.*

This finding may help to explain another. The total confinement system required a premium market price for its pigs in order to be profitable.

Overall it was the mid-cost partial confinement system that came out top. Although experiencing more than its share of plain bad luck, it nevertheless returned easily the highest net profit per sow.

Lidvall admits climate may favor pasture systems in southern states. However, he contends they do have plenty of cold, damp weather. And the pockets of pasture operations that still prosper in northern states prove low-cost facilities work in cold weather.

And for those wedded to total confinement? This objective and nicely controlled piece of research will give them little comfort. Perhaps, though, it will make them think again.

Age	56	100	140	145	156	Days
Weight	20	50	78	85	95	kg

Table 1: Live weight gain of 156 fattening pigs of 4 cycles in the family pen (acc. Stolba 1983)

* Successful Farming, November, 1984

Science fairs—a sampling of misguided experiments, *continued*

vided ten severely disabled patients (who were not expected to achieve further improvement through any of several types of therapy) with “temporary” pets: some gentle, small dogs and cats. At the end of this study, therapists who worked with those patients reported significant therapeutic gains in all of them. This unusual project is a model of how youngsters could be channeled into a concerned attitude for others.

The concept of “alternatives” has not reached the ISEF. There appears to be little instruction to these youthful competitors that it is preferable to use invertebrates (protozoa, worms, snails, or insects) or non-animal species (plants, fungi, or microscopic organisms) for their projects. Yet these projects are enormously valuable for instructional purposes. Unfortunately, the humane concepts that projects are improved by eliminating or reducing animal harm is not a lesson these bright youngsters will learn at the ISEF.

The International Science and Engineering Fair is supposed to be a public exhibition of high school student talent. It is not really public because information on the projects is not available for public scrutiny and public accountability. A rope surrounds each exhibit so that no one can approach nearer than about 10 feet. Numerous guards patrol the area to check that no one has access to the students’ note books which give methodological details of procedures used. The displays comprise only a brief summary which often is placed so high that it is impossible to read. In many projects described below, it is impossible to ascertain for instance the adequacy of an anesthetic or indeed whether an anesthetic had been given at all for certain exceedingly painful procedures. This heavy security may have negative effects by suggesting to budding scientists that animal experimentation should be done out of public view.

The following examples are selected from the vertebrate projects and are typical of the highly invasive animal projects that are rewarded by this influential fair. The abbreviation H.S. stands for High School.

1073 A Study of Heat Stroke and Its Effects on Blood Chemistry. Altamont School, Birmingham, Alabama.

This high school student’s project was conducted at a university research laboratory. Six rats were anesthetized and each injected with a large, discomforting volume (20 ml) of a drug fluorocarbon into the abdominal cavity. Six control animals did not receive fluorocarbon. It is unclear how long the anesthetic lasted for the injected animals or whether anesthetic was given at all to the control animals. All twelve animals were heated up (by unspecified means), at 43.6°C (approximately 110°F) and then cooled to 34.5°C (approximately 94°F). As a result, all the six control rats died from heat stroke.

1066 Blood Packing. Owosso H.S., Owosso, Michigan

A cat was tranquilized by an injection of 5 mg xylazine and then 50 ml of blood removed from the neck vein. The blood was centrifuged to pack the cells, treated with a solution, the blood cells resuspended and reinjected back into the cat. The experiment was repeated “every few hours,” according to the youngster’s report. The gums of the cat frequently “turned grey,” an indication that the animal went into a state of physiological shock or an acute anaemic condition.

The concept of “alternatives” has not reached the ISEF. There appears to be little instruction to these youthful competitors that it is preferable to use invertebrates . . . for their projects.”

1044 The Evidence that the Size of Myelinated Nerve Fibers is Affected by the Peripheral Tissue they Innervate. Moscow H.S., Moscow, Idaho.

This high school student performed surgical operations on anesthetized rats. The tendon attaching the gastrocnemius muscle of the left leg was severed completely and the right leg was subjected to a “sham” operation. The gastrocnemius is the major muscle of the calf but without a tendon attachment, the animal would not be able to walk properly. In other animals, both the tendon and the major nerve serving the leg was cut. In a third group, the nerve alone was cut. All animals recovered consciousness and were impaired by these procedures. After 4 months, all animals were killed. The poor access to information precludes further information on these traumatic procedures.

1072 The Effects of Bee Toxin (Apis mellifera) on Rheumatoid Arthritis. Fontana H.S., Carolina, Puerto Rico.

This project in pathology was conducted by a 16 year old. One wonders how much normal physiology she had learned before embarking on this highly invasive project. A condition allegedly mimicking human rheumatoid arthritis was induced in rats “as adjuvant disease,” according to the student’s description. The animals were then treated with injection of bee toxin—another painful procedure. The supervising veterinarian checked the animals’ joints and reported that “they felt pain.” As a result of these studies, the animals suffered “acute and recurring arthritis, chronic deformic (sic) arthritis, eye lesions and progressive and destructive joint disease and skin and subcutaneous lesions.” Purportedly, this project was approved by the local Humane Society of Puerto Rico.

226 Toxicological Effects of Six Common Pesticides on Mus musculus. South Brookland H.S., Brookland, Arkansas, and *213 Nephrotoxicity [toxic destruction of the kidney] of Aminoglycosides.* Howard Woodward H.S., Washington, D.C.

These two projects, both involving repetitive demonstrations of the poisoning effects of various chemicals, were listed in the ISEF catalogue. Additional information on them is not available. Severe animal suffering was surely involved.

202 Tetrazine Yellow No. 5 as a possible agent of Cellular Degeneration in the Liver and Kidney of Mus BALB-C. John F. Kennedy H.S. Santa Isabel, Puerto Rico.

This yellow dye was fed to some mice in toxic doses for 37 days and the deleterious effects recorded by this beginning student. Bleeding occurred in the liver and tissue degeneration was observed in both kidney and liver. No new knowledge was acquired. The animals were exceedingly sick, and the toxic effects appeared irreversible.

1035 The Influence of Aging on the Growth of Cancer. Nova H.S., Davie, Florida.

The project was an attempt to demonstrate that the age of bone marrow, not the age of the whole organism, is responsible for the growth rate of cancer. These activities took place in a research institution. Lung cancer was induced in mice. Some of the animals also had their thymus glands removed. A large dose of 1200 R whole-body irradiation followed which completely destroyed the bone marrow. The youngster then attempted to repair the damage by “reconstituting” the animals with new bone marrow. These procedures require considerable skill because they can be very painful. The long bones have to be punctured and new bone marrow injected. No information was available on how the donor animals were treated. The conclusion was that tumors grow slower in young mice carrying “old” bone marrow than in old mice bearing “young” bone marrow.

**Greater Kansas City Science Fair, Missouri
April 11-13, 1984**

Historically speaking, humane standards encountered at the annual Kansas City Science Fairs have been lax. In 1983, after years of protests, this fair finally “upgraded” its rules with regard to elementary school students, grades 4-6, aged (usually) 8-10. These children may no longer enter projects that cause pain or death to vertebrate animals—a ruling that includes the specific directive not to induce cancer, conduct surgery or subject animals to radiation! But for older schoolchildren there are still not such restrictions. Considering that in 1982 the National Academy of Sciences endorsed policies which placed such projects off limits even to high school students, Kansas City’s rules lag a long way behind current humane

standards. Some of the 1984 and 1985 projects judged by science fair officials to be in compliance with their rules are described below.

SBI-6 Effect of Vitamins on Cancer Growth. Shawnee Mission South H.S. Grade: Senior. American Cancer Society Award, Superior Award, and Sigma XI Research Society Award.

Cancer was induced in some hamsters. Others that were not made cancerous served as controls. A total of 44 hamsters were used. All were killed by an injection of the drug T-61.

SBI-26 Study of Cytotoxic and Immunologic Effects of Cimetidine on Mus Musculus. Shawnee Mission West H.S. Grade: Senior. Superior Award.

After suffering what the student describes as "periods of hip and leg paralysis [and] . . . decline in motion range of rear legs," (that is, they could not walk), at least twelve animals died under painful conditions. The project was conducted at school. These adverse effects were caused by injection of the drug cimetidine—a histamine-blocker—into groups of mice to study the effects on the liver. In her poorly-written description, the student variously reports using a total of 24, 26, and 27 animals. The "dosage with lowest relative toxicity would allow 33% survival rate as compared with 0% survival rate for the control group," she said. Furthermore, all animals died in another group that were given a highly toxic dose of cimetidine.

SBI-1 The Effects of Dermal Applied Dimethyl Sulfoxide (DMSO) on Mice. Shawnee Mission West H.S. Grade: Senior. Excellent—First Prize Award.

This project demonstrated the well-known fact that if toxic drugs are given during pregnancy, then the babies suffer. The student's conclusion was that if a 50% DMSO solution is applied at 15-25% g/kg to the skin of pregnant animals, then some offspring will be physically malformed. The project was conducted at school and involved a total of 6 adult females and males and 39 baby animals. The data was judged by the student to be inconclusive because too few animals were used.

SBG-2 The Effects of Prenatal Ethanol Exposure on the Behavior of Mice. Ruskin H.S. Grade: Senior. Excellent Award.

Pregnant animals were made to drink a solution of 10% alcohol. A total of eighteen adult animals were used in this project. Of an indeterminate number of offspring, only one survived. The student's conclusion was that prenatal alcohol does affect the fetus—an already well-established fact.

JB1-48 Raw Goats' Milk versus Pasteurized Cows' Milk for Growth of Chickens. Fort Osage Junior High. Grade: Junior. Excellent, First Place Award.

In a project conducted in the unsatisfactory conditions of a home basement, fifteen

chickens were fed either raw goat or pasteurized cow milk. There was an "outbreak of sickness" according to the student, and the birds became "too weak to stand . . . panting" and many died. Incomprehensibly, the student states in her report, "Since so many chicks died, it was necessary to determine if death gave advantage to any particular group."

**Greater Kansas City Science Fair, Missouri
April 10-12, 1985**

SBI-61 Inhibition of Neovascularization Around Malignant Growths Using Systematically Administered Protamine Sulphate. Shawnee Mission West H.S. Grade: Senior. Second Prize Award.

In a project conducted partly at home, cancer was induced in 24 mice. For several days thereafter, the student injected the animals with a protein called protamine sulphate. Several animals died—apparently from toxic effects since the student reported that for some animals "too large a dose was administered." All surviving animals were killed intentionally with ether by the student after the cancer had developed. The animals were variously referred to by the student as Muss (sic) Musculus, Mus Musculous (sic) and Mus musculus. Supervised by a medical institution professor and the science teacher.

Unfortunately, the humane concepts that projects are improved by eliminating or reducing animal harm is not a lesson these bright youngsters will learn at the ISEF.

SBI-46 Mechanism of Action of Ascorbic Acid and D-a-Tocopherol in Inhibition of Tumor Growth in Mesocricetus Auratus. Shawnee Mission South H.S. Grade: Senior. American Cancer Society Award, and Excellent.

This project with its pretentious title involved inducing cancer in hamsters. The student's report stated that injecting tumor cells was "known to produce tumor regularly at the sight (sic) of injection."

SBI-30 Use of Typewriter Correction Fluid as an Inhalant. Shawnee Mission West H.S. Grade: Senior. Outstanding Award.

Five mice were forced to inhale typewriter correction fluid for 15 minutes each day for several days in order to observe possible toxic effects. As a result, according to the student, the animals' food intake decreased and their behavior changed.

SBI-56 The Growth Retardation and Lethality by Cyclosporine-A in Neonatal Rats. Shawnee Mission Northwest H.S. Grade: Senior. Excellent Award.

Sixty-three animals were killed for this young student's competition entry. Rats were injected with a drug, Cyclosporine-A,

and euthanized two weeks later for tissue analysis. Despite the title of this project the drug caused neither growth retardation nor lethality (death).

**30th Regional Science and
Engineering Fair, Areas 1 & 4
Fairfax, VA—March 17, 1985**

The Effect of Diet on the Behavior of Mice. Robinson Secondary H.S., Fairfax. Grade: 11.

Two groups of mice were fed different diets—either pet food or a diet consisting of bread, milk, and lettuce. Many deaths occurred—16 animals were cannibalized and four died from other causes. Those receiving the pet food diet "were breeding as fast as possible," said the student. Significant overcrowding appears to have occurred. There appeared to be no separation of animals into additional cages as more animals were born. The student's report states, "Of the 24 mice that were born, only 7 remain . . . it was not that there was not anything to eat, it was just not the right things to eat [for pregnant animals]."

Lymphocyte Proliferation Measured by Tritiated Thymidine (³H-TdR) Incorporation in T- & B-Lymphocytes and Their Responses to Methoxychlor. Hayfield Secondary School, Alexandria. Grade: 12.

This pretentiously entitled project involved a poisonous substance, methoxychlor, which was administered daily to 10 animals for several weeks to study possible toxic effects on blood cells. Methoxychlor is an insecticide similar to DDT, but less toxic. The doses caused tremors in the rats but all survived and recovered.

**30th Regional Science and
Engineering Fair, Areas 2 & 3,
Fairfax, VA—March 31, 1985**

11-m-1 Effects of Alcohol on Learning. Southlakes H.S., Reston. Grade: 12.

The purpose of this project was to demonstrate the well-known fact that alcohol has deleterious effects. Six mice were required to drink alcohol for lack of pure drinking water. They were then run through a maze. It appears that one or more animals suffered coma and death. The project was supervised by a physics teacher.

The Effects of Nitrification on the Respiratory Rates of Amphiprion spp. McLean H.S., McLean. Grade: 10.

Damsel fish were exposed to toxic levels of various chemicals and their respiration rate recorded. In summarizing her project, the student states, "From these findings, I conclude that ammonia is very toxic . . . and nitrite is fairly toxic" to fish—already well-established facts.

29th Montgomery County Area
Science Fair, Maryland
March 29-31, 1985
National Bureau of Standards,
Gaithersburg

Six projects were disqualified on animal welfare grounds and refused exhibition. Based on information available it appears that those disqualified were more inhumane than those displayed. The following were judged by fair officials to be more in compliance with the rules and displayed.

J1010 Scurvy in Guinea Pigs. Little Flower School, Bethesda. Grade: 8

The objective of this child's project was to induce scurvy, a very painful pathological condition, in guinea pigs. Scurvy is caused by a deficiency of Vitamin C and is manifest by weakness, anemia, spongy gums, bleeding, painful hardening of the muscles, and finally death. It is a well-known fact that scurvy can be induced readily in guinea pigs because of their inability to synthesize Vitamin C. The project was conducted at home. At the suggestion of a veterinarian, guinea pig food was heated in order to destroy the Vitamin C. This was then fed to three test animals. Three additional control animals were fed a wholesome diet. After two months of inadequate diet, the three test guinea pigs lost hair and failed to grow. Whereas all control animals virtually doubled their body weight, the diseased animals showed only 16%, 25%, and 45% increase in body weight. This project won the local school award and was then exhibited at the county fair.

J1 315 Electric Fish. Little Flower School, Bethesda. Grade: Elementary.

In a project of no apparent scientific purpose, an elementary school student tested the "effect of voltage in water on goldfish." She found that 18 volts of electricity had no effect on the three goldfish used. This project could potentially have harmed both the youngster and the fish.

Connecticut Science Fair
Quinnipiac College, Hamden CT
March 11-16, 1985

In Connecticut, there is a requirement that in grade school and science fair projects, no vertebrate animal shall be subjected to any procedure that causes pain or interferes with its normal health. Nevertheless, the following project was publicly exhibited.

3070 The Effects of Positive "G" Forces on Circulatory System of Rattus Norvegicus. Wolcott H.S., Wolcott. Grade: 12. First Honors Award.

The purpose of this needlessly repetitive project was to document the adverse effects of high gravitational forces. Rats were spun at high speed in a laboratory centrifuge until they became "confused and were in shock," according to this young student's report. Shock is life-threatening, notes the student. A school official and local veterinarian supervised this project.

Two states prohibit painful experiments by high school students

The Florida Legislature has enacted a bill which states: "No surgery or dissection shall be performed on any living mammalian vertebrate or bird. Dissection may be performed on nonliving mammals or birds secured from a recognized source of such specimens and under supervision of qualified instructors. Students may be excused upon written request of a parent or guardian."

The new law further states: "Non-mammalian vertebrates, excluding birds, may be used in biological experiments, provided that physiological harm does not result from such experiments. Anatomical studies shall only be conducted on models which are anatomically correct for the animal being studied or on non-living nonmammalian vertebrates secured and from a recognized source of such

specimens and under the supervision of qualified instructors. Students may be excused from such experiments upon written request of the parent or guardian."

Emily Gleockler played a leading role in obtaining enactment of the legislation. Prevention of painful experiments by untrained youths has long been a goal of the organizations with which she has been associated. The Florida Federation of Humane Societies worked actively for the bill, as did individual organizations throughout the state.

In New Hampshire a similar piece of legislation sponsored by Senator William Riley has been enacted. Important in the passage of the bill was testimony by a young student who refused to do a painful experiment despite pressure from school authorities.

Science Horizons '85, Danbury, CT
March 2, 1985

Western Connecticut State University

83 Hyperactivity in Mice. Brookfield H.S. Grade: Senior. Finalist.

In a project of questionable scientific merit, a high school student administered red dye which he claimed caused addiction and nervousness in the three mice tested. Other mice were given sugar added to their water. One mouse died. No one was listed as a supervisor.

Washington, D.C. Science Fair
March 12-14, 1985

EVS-25 Acid Rain II: The Effects of Acid Rain on Waterlife. Grade: 8.

This project by a 12 year old demonstrated that vinegar kills fish—a well-established fact. Five guppies were placed in water and apple cider vinegar added so that in 30-40 minutes all the fish were dead. "Before this [death] I watched them frantically swimming about in the container," stated the student's report. Judged by fair officials to be in compliance with International Science and Engineering Fair rules.

200-63 How Beer Effects (sic) Gerbils. Grade: 9.

This ninth grade student who stated that he had "always wanted to experiment with animals" deprived four gerbils of drinking water thereby forcing them to drink beer. "I was afraid the females were pregnant," he said. The unsurprising result was that more "drowsiness," and "wildness" was observed in the beer-drinking gerbils.

Arlington, VA City Science Fair
March 31, 1985

This fair is supported and sponsored by the Arlington School Board, and the rules

used are those of the International Science and Engineering Fair.

#8H12 Short Term Effects of Household Drugs on Mice. Williamsburg Intermediate School, Alexandria. Grade: 8.

Various substances were administered to mice over a three and a half week period by this 12 year old youngster working in her home. The student's report states, "I injected three common drugs into the stomach with an intubation needle. The common drugs were vodka 80 proof, caffin (sic) pills, and cough serup (sic). It is necessary to have leather gloves on in case the animal bites, then grab the mouse's head forcing the needle into the mouth . . . I plan to conduct more experiments if I have time. I would like to continue on animals." This project was judged in compliance with the fair's rules on animal welfare. According to the teacher, this student was supervised by her father, a real estate agent.

A Mass Murder—Junk Food? St. Mary's Elementary School, Alexandria. Grade: 7.

The purpose of this home project was to observe the deleterious effects of feeding corn chips, chocolate, and other junk foods to mice: "I had difficulties keeping my mice alive," said this 11 year old in her science fair report. "Either they would be dead in the cage with no marks on their body or they would be torn up in the cage." An unrecorded number of animals died. One "junk food" mouse on display at the fair was in sickly condition. Reportedly supervised by a veterinarian.

Effect of Alcohol on Reaction Time in Trained Mice. O'Connell Jr. High School, Arlington. Grade: 9.

This project was conducted in a home basement and dining room and supervised

by an oral surgeon. Six mice were administered 1, 2, 4, and 6 drops of a mixture containing one-third 90% alcohol and the 9th grader then timed the animals for maze-running. According to the student's report, "Mice would not ingest the alcohol willingly. We had to force it down them." The unsurprising result was that reaction time was slowed.

How Gerbils Adapt to New Environments. Francis C. Hammond H.S., Alexandria, VA. Grade: 9, two students aged 14 and 15 years.

The behavior patterns of four gerbils were observed after they had been taken from one student's home to another. Three animals died during the seven weeks of observation. Two animals escaped from their cage and "probably ate rat poisoning or something," according to the student. A third animal died after being attacked by the sole survivor. The school biology teacher was listed as the supervisor.

**Western Michigan Regional
Science and Engineering Fair,
Wayland, Michigan
April 14, 1984**

A trophy for the best project using Japanese quail as an experimental subject is among the awards offered for junior high school entrants to this fair. Called the "Coturnix Award" (after the scientific name for the bird), this award attracts many youngsters into improper student exercises, since no humane provisions are attached to the award.

Out of the total of eight quail projects exhibited, seven involved administering various substances or treatments to observe the often harmful effects. These projects conducted by children ages 11-13 involved injecting either Depo Provera, estrogen, thyroxine, alcohol, insulin, or exposing the birds to radiation. The purpose of this curious award is open to question.

**The Prince George's, MD Area
37th Annual Science Fair
April 21, 1985**

S119 Of Mice and Mazes. McDonough H.S., Charles County.

Caging conditions were sufficiently overcrowded and unsatisfactory for the 26 small mammals used in this project that six died from fighting and an indeterminate number of new born babies cannibalized.

S904 Cryogenics: Suspended Animation. Northern H.S.

The objective was to see under what conditions fish can be frozen, rethawed, and still live. The youngster slowly froze some fish over a six day period and then defrosted them. Others were frozen more quickly. Five of the six store-purchased goldfish died in this crude home project.

S902 Can Cola Decrease Lead Absorption? Oxon Hill H.S., Oxon Hill. First Place Award.

Sixteen mice were force-fed lead by mouth—a rather traumatic experience. Lead is a well-known lethal poison. The young student was assisted in this task by her science teacher.

**1985 Houston Science and
Engineering Fair
Houston, Texas
March 14-16, 1985**

JBA-J 209 Does Estrogen Affect Physiology? Grade: Junior.

Various doses of hormones or hormone inhibitors were administered by mouth to nine mice. Several animals that had been so treated lost hair and their gums turned pale yellow according to the 13 year old student's report. All untreated control animals suffered or died—seemingly due to bad care. The student recorded the unsavory events in these words, "On Christmas morning two of the control group ate half of the one. Then a

couple of days later, one of the remaining two had no face and the other had half an ear."

NBS-N103 Maternal Behavior in Primed Mice. Grade: 9.

A 13 year old student temporarily removed the mothers of newly born mice and replaced them with virgin mice that had never been exposed to pups. Fighting resulted in which one baby mouse was killed. The scientific justification for this project is not obvious.

NZO-N1019 Are Mice Smarter than Hamsters? Grade: 9.

This crude project of no apparent value was performed by a 13 year old. One mouse and one hamster were deprived of food for 5 days—a long time to be without food. During this period they were provided only vitamins and water and the youngster timed how long it took them to run a maze.

SME-S906 Antidiabetic Agent in Bitter Melon. Grade: Senior.

In the absence of any other food and to avoid starvation, rats were forced to eat a highly unpalatable bitter substance. This was the only food provided for 3 consecutive days. A photograph on display showed an animal's tail had been injured when the study had tried to extract blood for analysis.

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A heavy gaff is about to be sunk into a pilot whale in this photo of the slaughter on the Faroe Islands.

Hunting the hunters up in the Faroes

The Faroe Islands, lying half-way between Scotland and Iceland, enjoy semi-independent status within the Danish federation. Another thing they enjoy (as reported in the last *Quarterly*) is slaughtering huge numbers of pilot whales. What they do not enjoy is "interference by outsiders."

This was made very clear when intrepid anti-whalers from the *Environmental Investigation Agency* visited the islands in July with the intention of coming between the whalers and their whales. Allan Thornton, director of EIA, describes what happened.

On 10 July we arrived in the Faroes with four vehicles and three inflatable boats. Every day for 20 hours a day (in July at this latitude there is almost no darkness) the vehicles patrolled the bays on the two main islands. On 28 July some 40 boats were seen driving 200 pilot whales towards the bay of Vestmanna.

The vans were immediately prepared to launch the three inflatables but whale hunters blocked the road with their cars. So we then carried one of the inflatables to the harbor of Kuivvik. On attempting to launch it the arm of a crane was dropped on to it, almost beheading one of the crew.

The dinghy was being crushed and began to sink. EIA crew ashore tried to help by moving the lift controls of the crane arm. They were assaulted and beaten—as was a girl who went to their aid—but finally the boat struggled free.

It was 10 miles to Vestmanna Bay and progress was slow because the dinghy was now slightly deflated. On arrival we found the boats waiting for us and the whales still imprisoned in the bay. Immediately there were attempts to ram us; two succeeded.

Despite harassment the dinghy was able to get between the whales and the quay where they were being driven to be killed. Twice we were able to turn the whales back towards the open sea by using gas-powered cylinders called "Froghorns" which produce a noise similar to a ship's foghorn.

But now things were getting rough. Boats as well as trying to ram us were now attempting to snare our propeller with ropes, and rather than risk serious injury to the crew at the hands of the enraged hunters, I surrendered the dinghy to the hunt foreman.

Unimpeded, the hunters now again drove the whales back towards the quay. The slaughter began and went on for three-and-a-half hours. We were delivered to the police who took a statement but laid no charges.

Earlier EIA, supported by 24 of the world's largest wildlife and conservation groups, had appealed to the Faroese Prime Minister to restrict the hunting level to 880 whales—the average catch of the 1970s. The appeal was refused. Whalers take as many whales as they wish and the annual kill since 1979 has averaged 2300, an increase of 150% on the previous level. All this at a time when the rest of the world has either ceased whaling altogether or, at the very least (and under great pressure), cut back substantially.

We have also called for the prohibition of hunting in bays like Vestmanna which have no beaches. Killing in the water is inevitably slow and extremely cruel. The Faroese government has recently passed a law which requires "any person wishing to kill an animal to ensure that it is done in the most humane manner." EIA states that the hunt in Vestmanna Bay violated that law.

Before leaving the Faroes we visited a local rubbish dump and quickly uncovered large amounts of whale meat. The islands have a high standard of living. They are in no way reliant on whales for food. The hunt should be phased out.

Whaling, *continued from page 1*

on to the Supreme Court, the sanctions could be delayed for many months.

IWC meeting

In July, the International Whaling Commission (IWC) voted overwhelmingly to change the status of the Northeast Atlantic population of Minke whales to "protection stock," thus forcing Norway to consider halting all of its whaling in spite of its objection to the moratorium. The Norwegian scientists supported reclassification.

The Soviet Union declared at the opening of the IWC meeting that it would "temporarily" halt its commercial whaling in the Southern Ocean in 1988.

The Soviets, however, may get out of whaling much sooner. The U.S. has already invoked the Pelly and Packwood-Magnuson sanctions against them for their violation of the Minke whale quota this year. The Soviets lost half of their fishing allocation in the U.S. 200-mile zone and stand to lose all by next April if they continue whaling.

In addition, the Soviet whaling fleet is literally falling apart. While it was in the Southern Ocean in February, the huge factory ship suffered major breakdowns in its mechanical systems, necessitating a costly, three-week layup in the Falkland Islands (Malvinas) for repairs.

"Research" and "subsistence" loopholes

Several whaling nations have announced they will seek to evade the commercial whaling moratorium by granting themselves "scientific research" permits to whale or by seeking to have their whaling redefined as "subsistence" rather than commercial.

Two proposals for research whaling, by Iceland and South Korea, were roundly criticized by the IWC Scientific Committee. Iceland has refused for decades to carry out basic research on the status of the sperm, fin, sei and Minke whale stocks it has been decimating. It has books full of historical whaling data that have never been analyzed. Yet it now claims that it must kill hundreds of whales each year to do "studies" of the effects of whaling on the whale stocks. Of course, the whalers plan to sell the whale meat derived from the "scientific" whaling to Japan. Estimates are that the Icelanders would earn more than \$30 million from their "non-commercial" whaling over four years. The studies would cost \$1.5 million.

The Icelandic government even announced that it would kill dozens of highly-endangered blue and humpback whales for "research"—with the rationale that they should be killed to study the effects of protection on the species, which have not been hunted for years because of their extreme rarity.

Both Japan and Norway stated that they would be seeking to have their coastal whaling redefined as "subsistence whaling," a new category outside the present commercial and aboriginal whaling recognized by the IWC. It can be expected that proposals will be made for the 1986 meeting, which will be held in June in Malmo, Sweden.