

ORYX

Vol. XV No. 2

November 1979

Notes and News

The terrible reports of wildlife destruction by soldiers in Uganda suggest that, unless it is stopped immediately, irreparable damage will be done to the wildlife and the parks. Since the liberation of Uganda by Tanzanian and UNLF forces in the spring, Tanzanian soldiers and Ugandan poachers have combined in large-scale slaughter and selling of meat, skins and ivory to Ugandans and Zairois. In a report to the **Destruction in Uganda's Parks** Uganda Institute of Ecology, Karl G. Van Orsdol, who has been working in the Ruwenzori National Park since 1977, estimated that 14,000 of the 46,500 large mammals in the park had been killed — Uganda kob, hippo, elephant, buffalo, topi and lion — a 30 per cent loss in 3¼ months. And there was no sign of an end to the killing. In the Semliki Game Reserve it is reported that at least 75 per cent of the 15,000 Uganda kob have been killed. The loss in economic terms is enormous, for tourism cannot be restored without the wildlife, and Uganda's three parks are estimated to earn some \$15m per year. Even before the Tanzanian troops arrived, Amin's troops had decimated wildlife in the parks, and during their retreat there were reports of troops arriving at Kabalega Falls National Park in large convoys, shooting the animals with machine guns, loading the carcasses into their trucks, and making for the Zaire border. Vehicles and equipment were stolen and buildings destroyed. The Survival Service Commission at its September meeting in Cambridge issued a statement urging quick action by Tanzania, whose reputation in the wildlife conservation field has long stood high, and a letter was sent to President Nyerere urging withdrawal of the troops and the restoration of disciplined control so that Ugandan park officials could start the process of rebuilding. The new Ugandan Government has banned all hunting and trophy sales, but it will need much help to restore Uganda's wildlife and the conservation machinery after this disaster.

A new international Convention on the Conservation of Migratory Species of Wild Animals, designed to cover any migratory animal, was signed at a meeting in June, in Bonn, by 22 nations including the UK (of more than 70 nations represented). The Convention, originally promoted by IUCN, requires the signatories to promote, cooperate in or support research on migratory species; to protect endangered migratory species, and to make agreements for conserving and managing species which have 'an unfavourable conservation status' and require international agreement to conserve them. The species in these two categories are listed in two appendices still to be completed; the first draft includes Mediterranean monk seal, vicuña, mountain gorilla, four whales (blue, fin, bowhead and right), snow leopard and addax. Nine nations represented at the conference — Canada, Japan, New Zealand, Poland, South Africa, Uruguay, USA and USSR — wanted to exclude fish, whales, molluscs and other marine animals from the Convention, but the remaining nations voted solidly against this, the African states (other than South Africa) being particularly insistent that a global strategy must cover all species. It is urgently to be hoped that the nations which did not sign — notably USA and Japan — will do so and that 15 will ratify quickly so that the Convention can come into force.

**Protection
for
All Migrants**

Why are otters not increasing in Britain? Recent surveys have shown that far from recovering from the sudden population decrease throughout England and Wales of 1957/58, believed to have been caused, among other things, by the use of dieldrin on farmlands, the decline continues; and say the authors of *Otters 1979*, report of the Joint Otter Group, more effort must be made to halt it or the otter will become extinct in England. There are large areas now, especially in the Midlands, where there are none at all. Several causes are suggested, among them tidy-minded landowners and water authorities clearing what to the otter is cover from the river banks, disturbance from hunts seeking mink or coypu, and, on the coast, oil spills — 14 otters were killed by an oil spill in the Shetlands in December 1978 and a further 18 seen oiled but alive. Otters were given legal protection in England and Wales in January 1978, and the report recommends that this be extended to Scotland, where still, along with Wales, by far the greatest number in Britain are to be found. Elsewhere, protecting the surviving otters and particularly their habitat is a first priority, and the joint FPS/Vincent Trust Otter Haven project was an example of this. So far no attempt has been made to reintroduce otters to their former homes and the report points out some of the difficulties: the choice of release point would have to take into account whether lack of otters was due to a shortage of otters or to new unsuitable conditions, such as cover destroyed, water polluted etc., and our ignorance of what otters require could make this difficult; monitoring (to assess whether the experiment had succeeded) would be essential but very difficult; there is also the risk (and at present illegality) in trapping wild otters in one part

**Decreasing
Otters
In England**

of the country and transporting them to another. Breeding in captivity animals that will take to the wild is difficult, but the Otter Trust in Norfolk is doing this and the Group recommends that potential release sites should be investigated. Clearly there is a lot of hard work still to be done, both in research and practical conservation on the ground, to save the otter in England.

The popularity of whales may now in some places be a contribution to their undoing. In Hawaii, where nearly half the humpbacks in the North Pacific breed (375-500), harassment by tourists is a serious problem. Tourists go out in boats and planes to get as close as possible to the whales — and to get the best pictures. Fines of up to \$10,000 are the penalty for harassment, but enforcement is difficult. Wardens may arrest anyone flying lower than 1000 feet within 300 yards of a whale, or approaching within 100 yards on the surface, travelling faster in a boat than the slowest humpback in a group, separating a cow from a calf, or causing a whale to take evasive action. In Baja California, where whale disturbance by tourists is exacerbated by oil and gas exploration, the gray whales' vital need to use the lagoons as breeding grounds (and not the open sea) has been demonstrated by Professors Kenneth Norris and Bernardo Villa-Ramirez, who have studied their social behaviour. Males and non-parturient females gather at a lagoon's entrance while mothers and calves stay inside, and if disturbance forces a mother too close to the males she will be chased and separated from her calf. Usually they can find each other again within the confines of the lagoon, but in open water there would be no clearly segregated areas — so that mothers might run into males anywhere and a lost calf would probably stay lost. If disturbance should eventually force the gray whales to try to breed at sea, there could be a crash in what is now one of the world's healthiest whale populations. For animals that have been hunted so unmercifully for so long, it is ironic that they could now be threatened by a new-found popularity.

Protecting Whales from Tourists

The very active Threatened Plants Committee of the IUCN Survival Service Commission (SSC) has taken another firm step towards saving the world's 25,000 threatened plant species — some say 30,000, but of course no-one knows — by launching a TPC Botanic Gardens Conservation Co-ordinating Body, to stimulate action and assist botanic gardens with conservation. These gardens already play an important part in the battle, and although there are many pitfalls in keeping stocks of endangered plants in botanic gardens — genetic erosion and human fallibility are two of them — there are several ways in which the gardens can help: for example, by using their stocks of rare plants for educational purposes to publicise the plight of many plants, by providing material for research, and by reducing exploitation of the remaining wild stocks. Cacti, cycads and orchids are under especial threat in this way, as

Saving Threatened Plants

German customs officials at Frankfurt airport recently showed when they confiscated some 3600 Mexican cactus plants (i.e. with roots) brought in in suitcases by plant collectors returning from a special Mexican 'study tour'; the resale value of this one haul was put at over £10,000. The initial aims of the co-ordinating body are to find out which threatened plants, identified by the TPC, are in which botanic garden, and to keep everybody in touch by means of an expanded newsletter. Another important aim is to discourage the inveterate and indiscriminate collector who jealously guards behind locked doors a large collection of often badly documented plants. Secretary of the new body is Dr David Bramwell of Gran Canaria; subscription is US\$20 to the TPC, Herbarium of the Royal Botanic Gardens, Kew, Richmond, Surrey.

The RSPCA certainly proves 'the case for further investigation', which is the sub-title of its report on *Badgers and Bovine Tuberculosis*, based on the findings of its Wild Animals Advisory Committee. For 'the problem has by no means been resolved'. Some of the evidence implicating badgers is circumstantial, some conflicting, and 'there is a deficiency of facts'. Badgers were first proved to be harbouring the bacillus causing bovine tuberculosis on a farm in Gloucestershire where the cattle had bovine TB in 1971.

**Badgers and
TB
Problems**

Careful studies by Ministry of Agriculture scientists, watched by a panel of representatives of interested bodies, on which the FPS is represented, led to the decision to kill all badgers from infected sets. The Report accepts the evidence so far and the action taken, although pointing out that the search for TB among wild animals has concentrated heavily on the badger. Further, in south-west England (where the problem has so far been confined), even when cattle herds had been slaughtered (because of TB) and replaced with new stock this too became infected. At the same time bovine TB has occurred in cattle in places where none could be found in badgers, and vice versa: badgers with TB are known in an area where the cattle are free, and cases occur of two neighbouring farms on the same badger range where the cattle on one are infected and on the other not. How the disease passes from badgers to cattle is still unknown and the possibility of other vectors needs to be investigated further in field studies. Experiments in the Cotswolds, where probably the densest populations of badgers in Britain are to be found, have shown that a reduction in the numbers (as a result of MAFF gassing) was followed by a dramatic drop in the proportion of diseased badgers. Between 1971 and 1975 inclusive, autopsies on infected badgers showed that 75 per cent had signs of disease; in 1976 the figure was 32 per cent, suggesting that the decrease in badger numbers and reduction of population pressure had reduced the severity of the disease. Dr Ernest Neal has described how, where badgers are numerous, as in the Cotswolds, aggression among them increases, so that TB is passed from badger to badger by bites inflicted in territorial fights, and thus may spread more rapidly. The Committee questions whether bovine TB can be completely eradicated in cattle — the best that can be done is to reduce it to a low level. The Ministry's present policy of

gassing all sets where infected badgers are found appears to be reducing it in badgers. It remains to be seen whether the reduction will be reflected in the cattle. But the report stresses that such badgers still only occur in a small area, mainly in south-west England, and that there is no justification for farmers to take the law into their own hands and kill badgers 'just in case' or for whatever reason, as has happened. To kill a badger is illegal (without a licence), and they urge the Ministry to start a publicity campaign to emphasise that the great majority of badgers are healthy and no risk to cattle.

Some grizzly bears in the US's Glacier National Park, in Montana, have become so accustomed to people that they no longer run away from them. Worse, they have found that by attacking humans they may get a reward, such as a hastily dropped rucksack containing food. And attack they do.

Grizzlies and People in a Park

Between the park's creation in 1910 and 1955 only one person was injured by a grizzly, but between 1956 and 1966 ten were hurt; in 1967 two women were killed in separate incidents on the same night, and in both cases it seemed that the animals had been attracted by food and rubbish. Bear-proof garbage cans were installed and other measures taken, but visitor numbers continued to soar, and between 1974 and 1978 nine people were injured and a woman killed when a young grizzly dragged her out of a tent on a popular campground. More stringent measures are being taken and more trails and areas closed, but the problem remains. Similar problems with black bears occur in other US parks, notably Yosemite, but the grizzly is not only much larger and more dangerous, it is also a threatened species. Christopher Cauble, writing about this new behaviour in *National Wildlife*, points out that it could threaten the grizzly's survival in the park, and this is serious because outside Alaska this park is one of the grizzly's last major strongholds.

Only two populations of the mountain gorilla *Gorilla g. beringei* survive — one the well-known one in the Virunga Volcanoes, shared by Rwanda, Uganda and Zaire, with which the FPS Mountain Gorilla Project has been mainly concerned,

Gorillas v Logging

the other in the Bwindi Forest Reserve (the Impenetrable Forest as it is often called — for good reasons) in south-west Uganda. (The mountain gorillas in Zaire's Kahuzi-Biega National Park are of the *graueri* subspecies.) The Virunga population is down to about 250 animals — and struggling — so the Bwindi population is vitally important. This year at the request of the Uganda Game and Forest Department, Dr A.H. Harcourt, the Mountain Gorilla Project co-ordinator, spent nearly two months there in March-May, to find out whether there was a conflict between gorillas and humans in the forest and if so how to resolve it. The primary purpose of the forest reserve is to produce timber, and Dr Harcourt found, as might be expected, that where logging was going on — and it was widely scattered — there were no gorillas at all.

Gorillas also avoided areas where local people went hunting, mainly for antelope and pig, and gold-digging in the streams. As the humans used more than twice the area of the reserve that the gorillas used, there was no doubt that there was a conflict. At least a quarter of the forest reserve is unsuitable for gorillas because the close tree canopy allows little ground vegetation, which the gorillas need for both food and cover. Thus some logging could be beneficial in opening up the canopy and encouraging more vegetation, and Dr Harcourt recommends in his report that logging should be concentrated in certain clearly defined areas and moved round the reserve, instead of the present widespread working which makes for the maximum disturbance. Such a system would also help the Forest Department by making it easier to control illegal logging. He urges that the two small nature reserves inside the forest reserve (1000ha and 300ha respectively) should be properly guarded and protected from poaching (which in one reserve he thought was heavier inside than outside); that the present use of hand-operated pit saws be continued as making the minimum disturbance; and that an area of steep ravines outside, where gorillas were seen, should be included in the reserve (this would also be beneficial from the point of view of water conservation and preventing erosion). He estimated gorilla numbers at between 90 and 130 (which agreed well with the Game Department's estimate of 106), but only one-third were immatures.

The lion-tailed macaque *Macaca silenus* is found only in southern India. A strikingly beautiful monkey, its wild population is estimated at only about 800 by G.U. Kurup, who surveyed the area and studied the monkey over a period of six years, 1971-1975. Because it is entirely confined to the tropical evergreen forests, the sholas of the Western Ghats, the liontail has never been very numerous; its decline is due to these forests being cut down mainly to make way for cardamom and turmeric plantations, with the result that the

**Crops Take
the Liontail's
Habitat**

liontail's habitat is now broken up, and the groups are widely separated and very sparse where they do occur, with the estimated 800 animals spread over 2800 sq km. Kurup points out in a paper in the Bombay Natural History Society's *Journal* that the evergreen shola forests, which occur in a very narrow, now much fragmented band along the western face, contain few commercially valuable species, but are immensely valuable ecologically in preserving the watercourses and preventing erosion. They should, he suggests, be declared inviolable, which would also have the advantage of saving the liontails' habitat. Indeed he urges that their continuity should be restored, if necessary by afforestation. At the same time poaching of the liontails should be stopped and protection enforced. The young animals of this very striking species are taken for sale in the animal markets of the towns — the usual horrible story of killing the mother and taking the baby. Poachers also take the liontails for their supposed aphrodisiac and medicinal properties, for although these beliefs are mainly concerned with the Nilgiri langur *Presbytis johnii* the two are often confused, and in any case for many poachers either species will do.

The size and even the shape of a reserve may be vitally important in protecting a large endangered species such as the tiger, and a major part of the tiger research in Nepal, in the Royal Chitwan National Park, is concerned with finding out about the dispersal behaviour of young tigers so that their needs can be assessed. In a paper to the Tiger Symposium held in New Delhi in February, Hemanta Mishra and James L.D. Smith pointed out how important it is, in planning tiger reserves, to create conditions that will allow tigers to disperse, because this is the only way that a small remnant population (to which the tigers are now reduced) can maintain the genetic diversity that is vital for long-term survival. And of course tigers that wander outside the reserves attack the villagers' cows and buffaloes, and poisoning may be their fate. What is the minimum area needed to hold enough breeding tigers to maintain a genetically sound unit? How does the shape of reserves affect them — e.g. do long narrow parks with bottlenecks or topographical barriers prevent dispersal where a circular or rectangular shape would make it easy? To answer such questions the research team is fitting young tigers with radio collars and their movements are then followed from a plane. Tigers move long distances: of one litter of three, which dispersed when they were 22 months old, one male was first found 35km to the west, after which he went on outside the park and killed or wounded ten cows or buffaloes and then moved to the park's east boundary, 54km from the start; another male went 26km west, doubled back to the east, and then was found 16km from the start, and the female of the litter crossed the park on the east-west axis seven times, covering an average distance of 15.7km each time.

**What Shape
for a
Tiger Reserve?**

In Sumatra all parts of the rhino are used and all fetch high prices, reports Markus Borner, who spent three years on a field study of the Sumatran rhino. So the incentives to poach are very strong, and the ruthless illegal hunting is probably as important a reason for this rhino's decline as loss of habitat. Most of the horn is sold to Chinese, both inside and outside Sumatra, who value it as an aphrodisiac and a fever-reducing medicine. Sumatran people use small pieces as amulets, often mounted on a silver ring; this, it is believed, makes the wearer immune to the evil powers of the black magic that is practised throughout the island, protects him against poisoned food and drink by causing the dish or cup to break, and can extract the venom from a snake-bite. Dried rhino meat is used as a medicine for leprosy, tuberculosis and diarrhoea, and people treat skin diseases with 'rhino oil', made by keeping a rhino skull for some weeks in coconut oil along with other magic ingredients, such as serow horns and strangely formed plants. Rhino shoulder blades are used to make cigarette holders, believed to have magical powers, and the dung is dried, fried in coconut oil or boiled in water and used as medicine. The hunters use three kinds of trap for rhino, the most harmful to the population being the one that drives a spear deep into the rhino's back, because, not only does it very rarely kill the

**What Chance
have
the Rhinos?**

rhino immediately, but local hunters admitted that more than half the speared rhinos were never found. Dr Borner himself found evidence of one rhino that had tried to rub the spear off its back on surrounding trees and must have run several kilometres before it died of internal injuries. We hope to publish extracts from Dr Borner's report in the next issue of *Oryx*.

Bounties (the payment of a fixed sum for every animal killed) have long been discredited as a means of controlling predators, and the story of the puma (cougar or mountain lion) in California is a good example. Pumas were a 'bountied predator' until 1969, when licensed hunting was substituted. But after two years this was stopped by public demand, and since 1973 pumas have been protected. How many pumas were left by then to protect? Dr Carl B. Koford, who has investigated in the field and has also studied the records collected by the California Fish and Game Department, estimates that there were still some 600 resident pumas in the state in addition to what he calls 'floaters' (animals on the move seeking territories). How, he asks, in an article in *Carnivore* 1,1, did pumas survive half a century of bountied killing? The answer he believes is that the kills consisted largely of kittens and floaters and not the basic breeding stock; any lost residents were probably replaced by floaters from nearby regions. (It also suggests that cats are a lot cleverer than hunters and how inefficient bounties are.) The usual justification for bounties is that the predator kills farm stock, but, says Dr Koford, while 100,000 cattle and 75,000 sheep graze on the national forests in California, losses to pumas average only about a dozen a year, and of all the sheep taken by predators in California only about 1.2 per cent are taken by pumas (compared with over 14 per cent by dogs and more by coyotes). Which all shows how senseless the original bounty system was.

Harnessing energy from the sun, wind, waves or the earth's interior may be the 'natural' alternative to oil, coal and uranium, but the environmental repercussions would not necessarily be any more benign. In Britain the Department of Energy is funding a project to build reefs of wave-energy converters along the shores of the Outer Hebrides. A *New Scientist* article points out that this will considerably reduce the size of waves reaching the shore, in effect creating a lagoon hundreds of kilometres long, with an enormous impact on the ecology of islands that are rich in marine, bird and plant life — a prospect at least as worrying as the oil spills now plaguing Sullom Voe in the nearby Shetlands. In the US, officials at Yellowstone National Park are alarmed by proposals to extract geothermal energy in an area just outside the park boundaries; this, they say, might draw off the source of Old Faithful and the other famous Yellowstone geysers and change the character of the park, with unpredictable effects on its wildlife (not to mention the consequences of putting

**Another
Bounty That
Failed**

**How Harmless
is the
'New' Energy?**



One of four female Arabian oryx, sent early this year from Qatar to join the four males in the Shaumari Reserve in Jordan, was pregnant and gave birth to this calf in June.

John Clarke

a massive industrial complex on what is now mainly virgin land and part of the Yellowstone ecosystem). On solar energy, UNESCO reports that, to supply the bulk of electricity where it would be most needed, i.e. in the industrial countries north of the 45th parallel, one per cent of that part of the earth's surface would have to be perpetually shaded by solar collectors, almost certainly in open country away from cities and productive farmland. In the tropics solar collectors are a more practical proposition, but not as practical, apparently, as using the sun to grow forests and then harvesting the wood. This, however, would not be achieved by conserving existing forests, but with plantations of fast-growing exotics like eucalyptus, with all the well-known disadvantages of monoculture. None of this is to suggest that renewable energy *must* be as destructive as non-renewable, but only that, since most of these schemes are still in the design stage, now is the time for the designers to consider their possible environmental impact, and perhaps to remember that it is renewable energy that drives one of the most damaging of all the 'traditional' power plants, i.e. the hydroelectric dam.

Respite for Costa Rica's Green Turtles

To the relief of all conservationists, President Rodrigo Carazo Odio has vetoed the bill passed by the Costa Rican Congress in July to reduce the seaward limits of the Tortuguero National Park from 12 miles to 3. This park holds the only green turtle *Chelonia mydas* nesting beach in the western Caribbean, and the new law would have allowed fishermen to hunt green turtles when they were mating offshore and very easily caught, and also when the females were swimming offshore between visits to the beach to lay. This could have been fatal to the population, which three years ago was already believed to be on the downward trend and was only saved when neighbouring Nicaragua stopped the export of turtles. FPS has congratulated the President for his enlightened action, which is in line with Costa Rica's usual pro-conservation stand.