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Notes and News

In Africa high prices for ivory lead to large-scale elephant poaching in the parks; in Britain high prices for venison have produced a murderous outbreak of deer poaching by well organised motorised gangs. Shotguns are the usual weapons, but some gangs now breed and train special dogs—lurchers or 'long dogs'—to course deer, either by chasing them into snares set the night before, or by straight coursing, the dogs working in pairs.

**How to stop
the
Deer Poachers**

Then, using powerful lights and vehicle headlights, the deer are killed, either by having their necks broken, their throats cut, or, more usually, being beaten to death. This situation was described by John Hotchkis, Vice-Chairman of the British Deer Society, speaking to the Parliamentary Conservation Committee. Another widespread development is that some landowners or tenants now shoot deer illegally on their own land, and he described such a shooting on a 2000-acre farm in southern England, where last January (the close season) 40-gallon drums, holed at the sides, were put out in a field and filled with corn to attract deer. When enough deer were feeding three Land Rovers were driven in, headlights turned full on and 27 deer killed within minutes, male, female and young indiscriminately; the number of wounded animals could not be known. The poaching and illegal killing are going on in 'every area in England, much of Wales, and many parts of Scotland'—in fact, wherever there are deer, and horribly wounded animals are everywhere—Mr Hotchkis showed photographs of a fallow buck starved to death after its jaw had been shot away, and another of a red hind, accompanied by a calf, with an arrow penetrating its left eye—poachers even use bows and arrows. The police find it very difficult to take effective action, and they have to be very lucky to catch poachers red-handed. Mr Hotchkis's suggestions for immediate action included: making it an offence to sell venison except to a licensed game dealer, who must keep records; increasing police powers under the Firearms Act; prohibiting the use of lights for

←LION CUB by *Norman Myers*

taking deer; examination of the question of night shooting—perhaps making it permissible only after prior notice to the police?—and substantially higher fines, with mandatory confiscation of equipment, including vehicles, and revocation of the firearm certificate. As he was talking to members of both Houses of Parliament perhaps some action will result.

In an article on Britain's 'wild' sheep breeds in *Oryx*, December 1970, J. C. Greig and A. Baxter Cooper wrote that one immediate task was to get a stock of the rare Orkney sheep of Ronaldsay and

**Island for
the
Seaweed-eaters**

buy an island to put them on. This has now been done. Following the *Oryx* article FPS paid Baxter Cooper's expenses to search for a suitable island, and Linga Holm, in the Orkneys, was one of several possibilities. The Rare Breeds Survival Trust, formed in 1973, carried on the search and negotiations, and on August 1st this year was able to take possession of the 142-acre Linga Holm. More than a hundred of these interesting sheep have now been taken there. The Orkney sheep are a relic of the flocks kept by crofters throughout Scotland until the 18th century depopulation of the Highlands; they are related to the Scandinavian breed brought by the Vikings, which was probably the breed from which the improved Shetland was developed. Only about a thousand survived on the one Orkney island of North Ronaldsay, where the farmers kept them off their crops by a stone wall encircling the island just above the shoreline. Here the sheep subsisted almost exclusively on seaweed. The islanders have agreed to sell the Trust all the sheep that would have been culled over the next three years, starting with 250 this autumn, about half of which went to Linga Holm; the rest were split up into small breeding groups of seven to ten animals to go to private landowners who had offered to take them, thus increasing the colonies and reducing risks, for example, of disease. The Trust hopes that after a few years the Linga Holm project will become self-supporting; but it needs help now to get it going.

Seaweed-eating
Sheep

A. Baxter Cooper



The 1973 Javan-rhino census in the Ujung Kulon reserve, in Indonesia, showed almost the same numbers as in 1972, despite the fact that some areas could not be properly checked owing to difficult conditions and shortage of personnel. The 1973 figures were between 38 and 46, compared with 1972's 40–48. Considering that in 1967 the comparable figures for this sole surviving population of the species were 21/28 this is a remarkable achievement. It shows what a 'continuing scientific presence' (Dr R. Schenkel and Dr L. Schenkel-Hulliger) backed by funds (from WWF and the Geigy Foundation) can do. There was no poaching in 1973, the main cause of rhino losses before 1967, the guards worked efficiently, and the buildings (provided by WWF) are well maintained. But a new boat is needed.

One of the finest national parks in Africa, Lake Nakuru, has been tripled in size, from 15,000 to over 50,000 acres. With flamingoes by the million—the largest congregation in the world numbering over two million at times—together with over 400 other bird species and some 70 mammals, this is Kenya's most popular park. Aided by a large WWF grant—Prince Bernhard this year handed over a cheque for £K175,000 to President Kenyatta—Kenya National Parks have been able to buy large areas surrounding the lake to make it a viable park, especially for the mammals, which include defassa waterbuck and bohor reedbuck in large numbers, impala, Thomson's gazelle on the lake surround, leopard, black rhino, black-and-white colobus in the forest, and rock hyrax and Chanler's reedbuck on the cliffs. The operation has also been something of a rescue one, for several threats to this superb soda lake could have killed both lake and wildlife. The Nakuru by-pass road is now to pass a mile outside the park (instead of along the shore), and, thanks to the generosity of the West German government, a new sewage works is being built so that untreated sewage from Nakuru town, only two miles away, will no longer go into the lake (which has no outlet); and the town rubbish dump near the lake shore has been removed, the final clean-up being done one Saturday last May by 300 Kenyan young people, organised by the UN International Student Movement—a story that got good press and TV coverage both inside Kenya and over the world. A vital part in the whole operation has been played by the Baharini Research Station, now inside the national park, and its Director (and creator), John Hopcraft. Baharini (the name means 'beside the lake'), which occupies 1300 acres and a 2-mile frontage on the lake, initiated the plans and did much of the spade work. Now there are plans to add an Education Centre, for only with the support of the Kenya people

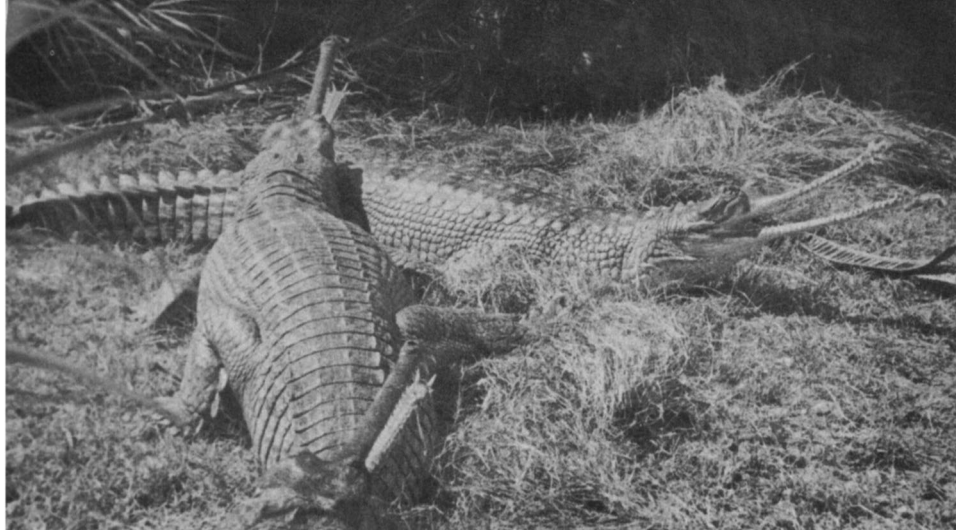
will this important park be safeguarded. A tourist lodge is also planned, profits from which it is hoped will support the Education Centre.

We could be wrong . . . ! Over and over again is this shown to be true in wildlife studies. Dr David Mech, writing in the American journal *Natural History*, points out some of the about-turns in wolf studies. Wolves are generally associated with vast areas of wilderness, coniferous forests and windswept tundra. In the USA today wilderness is where they are mainly found because everywhere else they are persecuted. But in fact coniferous forest is poor wolf habitat because it does not and cannot support large numbers of deer on which they can prey. In Europe, where so few wolves are left, the survivors often live near villages, and even near city suburbs—Rome, for example—wandering through them at night. An American wolf that did this would be trapped or shot. One of the best wolf ranges in the USA is the Superior National Forest in Minnesota, on the Canadian border, with 4200 square miles of undisturbed land. ‘Anti-wolf’ residents on the periphery estimated their numbers as high as 4000; conservationists said there were not more than 200. Dr Mech’s six-year intensive study gives ‘an estimate I am confident is accurate’ of about 400 in early winter reduced to 300 by the spring (in 1973, 270)—the decrease being linked to decline in the deer prey. On Isle Royale in Lake Superior, where previous studies suggested wolves were keeping the moose numbers in balance, it has now been shown that the moose are increasing and the wolves are in fact only cropping part of the surplus. Will they have more effect when the moose begin to outstrip their food supply and weaker ones become easier prey? Only further studies will show. But the continuation of these and similar studies is vital for the conservation and management of endangered species.

The gharial has been described as ‘one of India’s five most endangered animals’, and the description seems all too apt. A survey that covered some 5000 kms of the gharial’s range in northern India last winter saw only six, despite long stays on stretches of river which forty years ago were described as ‘teeming with crocodilians’. The survey was done by Romulus Whitaker, the Director, and the staff of the Madras Snake Park Trust (which is very concerned with the conservation of all India’s reptiles and amphibians). Killing for the skin is the major cause of the decline—a 12ft skin may be worth the equivalent of six months’ wages to a villager. Fishermen spread nets right across the rivers, and some specialise in catching gharials. Gharials are important predator-

**Changing
Ideas about
Wolves**

**India’s
Disappearing
Gharial**



The threatened gharial *Gavialis gangeticus*
Romulus Whitaker

scavengers of Indian rivers and a sign of a river's 'good health', but some state fisheries departments regard them as enemies of fish and advocate their elimination. They are shot at, netted, and prevented from basking in all but the most remote places; today there are very few spots free from commercial fishing and other river activities. The report recommends as urgent the establishment of sanctuaries for gharials in protected areas, and the capture and removal of gharials from populated areas to these reserves; the establishment of a captive or semi-captive breeding stock in a natural habitat; publicity; further investigations to find gharials, and a serious effort to enforce the law. Export of crocodylian skins from India has been illegal since 1958, and the 1972 Wildlife Protection Act gives all crocodiles complete protection—but the killing goes on.

All marine turtles are threatened, but the Atlantic or Kemp's ridley is clearly more vulnerable than most, with a declining world population, now down to between 2500 and 5000 mature females, and only one breeding beach in the world, at Tamaulipas

**Turtles v.
Shrimp Trawls
and Shark Nets**

in Mexico. Because the two ridley turtles (the other is the Pacific one) are the only ones known to nest regularly every year (other species may sometimes do so) it is possible to assess numbers fairly accurately, especially as the nesting females come ashore in a great *arribada*, thousands coming in together. In 1947, 40,000 *Lepidochelys kempfi* nested in one *arribada*; in the last ten years the maximum in any one year was 5000, and in 1970 and 1971 the principal *arribadas* were down to 2000–2500. Describing the situation in an excellent short account published by IUCN, Monograph No. 2, Peter Pritchard and René Márquez write that the Mexican Government provides guard patrols which do a thorough job, and large



Kemp's ridley turtle Peter Pritchard

numbers of eggs are taken each year to a central hatchery where they are protected from predators—human and canine (especially coyote). But the demand for turtle leather is still high, and commercial pressure on the government to relax the protection is therefore considerable—one company did manage to get a contract in 1970 but luckily missed the *arribada*. But the most serious and difficult problem arises from shrimp trawls and shark nets in which the turtles get accidentally caught and drowned. Tagged turtles tell the tale—at least 17 of 285 tagged in 1966 were killed in this way.

'Three nests found . . . all dug up and eggs removed . . . ; hawksbill taken before she could nest . . . ; one of the best turtle islands . . . no nests . . . a large green turtle killed as she was going up the beach had 170 shelled eggs inside her . . . ; eggs and turtles are taken during the entire prohibited period' . . . And so the dreary tale goes on, from one turtle-nesting island to another, in Tonga.

**Turtle
Extermination
in Tonga**

A vanishing resource indeed! After the 1971–72 survey of nesting-beaches the report concluded that Tonga's turtle population would become extinct in 5–10 years without better protection, law enforcement and a rearing project. But nothing was done, and two years later another survey party from the Fisheries division of the Ministry of Agriculture could see the forecast fast becoming reality. 'Old fishermen from Ha'apai talked of all the turtles that once came to nest on the islands surveyed . . . but absolutely no evidence of nesting was found'; human predation on the eggs has continued, killing of turtles has increased, and the law is ignored. The survey party's report urges that the recommendations Dr Harold Hirth made to the Tonga Government for improving turtle protection some years ago should be enacted, very quickly; if not the nesting turtle populations will be extinct in five years.

Support for Professor Owen's account of trade dangers to butterflies (in the June *Oryx*, page 479) comes in an American scientist's account of what he saw in West Malaysia in July 1973. Writing in

**Butterfly
Collecting in
Malaysia**

the *Malayan Nature Journal* for March 1974 of his visit to Cameron Highlands, Dr John Garth says that 'butterfly collecting and the selling of mounted specimens to tourists is a profitable enterprise'. The famous Rajah Brooke butterfly is in such demand that to collect one specimen requires a M\$10-permit from the game warden; tourist shops were displaying so many specimens that at least one other bird-wing species and several swallow-tails should be protected. He suggests that reserves should be created in areas where butterfly collecting is most intensive so that it can be controlled. He also urges a maximum net-diameter to make collecting 'more of a sport and less of a slaughter', and an end to baiting for butterflies with offal. He found several West Malaysian butterflies on sale in gift shops in Bangkok, Taipeh and Hong Kong (along with some from South America), but none with the origin stated, and he suggests that the export of threatened species should be controlled. His final suggestion is that the collecting and mounting of farmed butterflies under control could be a useful 'cottage industry' with an assured market among tourists. But the difficulty with farming of rare species is always how to ensure that it does not permit loopholes for poaching.

Two areas high in the mountains where both mikado and Swinhoe's pheasants could be seen 'with relative ease' were discovered by Sheldon Severinghaus in his investigation of these two very-rare pheasants which occur only in Taiwan (Formosa).

**Reserve for
Taiwan's rare
Pheasants**

Now the Taiwan Forestry Bureau has accepted his recommendation that one 3680-ha area, where both occur and Swinhoe's is particularly common, should be declared a wildlife reserve. The forest consists of virgin hardwoods merging into mixed hardwood-conifer forest higher up, and all undisturbed apart from a road that allows access. The reserve will also protect 'a wealth of other wildlife', including some of the larger mammals. The boundaries were agreed (after a helicopter survey), and plans are being worked out for multiple use—for wildlife protection and management, watershed protection, research, education and 'controlled recreation'. Sheldon Severinghaus suggests that this reserve may prove to be one of the most significant developments for Taiwan's wildlife, and he intends to recommend other areas for similar multiple-use reserves before he leaves. The discovery of the two pheasants in some numbers gave him the chance to make useful observations on their habitat, food and behaviour which will be invaluable for

managing the reserve. *Syrmaticus mikado* can apparently adapt to man-disturbed areas provided, of course that it is protected from hunting; the area in which it was numerous had been logged 25 years ago and is now a combination of secondary hardwood forest, planted conifer monoculture and dense scrub. This Taiwan pheasant project is one FPS assisted with an Oryx 100% Fund grant.

Reef blasting has long been a method of commercial fishing in Malaya, but only on a small scale because it was not very efficient. Only a small proportion of the fish killed floated to the surface and were recoverable. Modern diving equipment has transformed all that. With scuba equipment (much less expensive than large trawl nets) the fishermen can prospect the underwater reefs for the best fishing areas, blast on those, and then return underwater to collect all the dead fish—a much more profitable exercise. The effect on the reefs is total destruction and quite unselective, killing all species, of all sizes and ages—including young and breeding females—and destroying the coral and the reef ecosystem in the process. This new development was described by Richard B. Lulofs in a symposium at Kuala Lumpur now published in the proceedings. (See p. 554). The results can be seen on the reefs of every island off the Malayan coast. In some cases reefs have been totally destroyed, stands of staghorn coral have been reduced to rubble covered with algae—and very few fish remain. The end result, says Richard Lulofs, will inevitably be the decimation of inshore marine life with serious effects for the fishermen's livelihood. However, fish that have been killed by blasting can be identified, and he urges legislation prohibiting the sale of all fish killed in this way.

The Zanzibar red colobus monkey cannot survive at all unless 'all further destruction of the tiny Jozani Forest ceases' is the not unexpected conclusion on the status of this highly endangered monkey by the four young scientists, led by T. J. Kingston, who spent two months on a study there in July–August 1973. Their counts produced a minimum total of 155 monkeys; a previous count suggested 200. Either figure is hopelessly small for the (probably) world population of a social animal in a small remnant of much disturbed forest. A grid of footpaths, each up to 5 metres wide, divides the 484 remaining acres of Jozani Forest to facilitate access for 'an army of foresters' who clear trees and undergrowth. 'Approaches to government departments produced no response', says their report; only a top-level approach from IUCN to the Government, they believe, can hope for any results. Fortunately the numbers of young colobus seemed to be reasonably

Reef Destruction in Malaya

What Hope for Zanzibar's Colobus?

ZANZIBAR COLOBUS
D. M. Harper



good, and the food supply adequate—the monkeys' recorded food plants made up 46 per cent of the forest canopy. The distinctive feature of *Colobus badius kirkii* is a 'halo' of white hairs fringing its black face; otherwise it has black shoulders, reddish back, and white underparts like the Tanzanian and Tana River races—see page 565.

The Iriomote cat, the new species discovered on the small island of that name in northern Japan and so far nowhere else, is not immediately threatened, but its small numbers and restricted known habitat make it certainly vulnerable. The whole

Iriomote Cat
Survey finds
a New Pig

island is only 300 sq. kms. Reporting on the survey made early this year, to which the FPS contributed with an Oryx 100% Fund grant, Dr Paul Leyhausen, chairman of the SSC Cat Group, now estimates the maximum possible numbers at 150. Fortunately the threat of copper mining (see *Oryx* May 1973) has receded—'the companies found the prospects not sufficiently promising'—and the Japanese Government, following representations from IUCN, has declared about half the island a national park. Equally important is the news that the cat project has aroused considerable interest among Japanese people and has received favourable press and radio publicity. The biggest surprise for the survey party was the discovery of another new species. This is a dwarf pig, either a separate species or a subspecies of *Sus scrofa*, and it is in considerable danger. It is being severely hunted, both legally and illegally inside the national park, and often with great cruelty. The hunters now admit they have to go further and further to find the animals. Dr Leyhausen described it as 'in dire need of protection', which, once given, would probably lead to a quick recovery; licensed hunting could then be permitted on a sustained yield basis. The Iriomote cat project has in fact blossomed into something

bigger. The important aim now, with a national park declared, is to ensure the protection of the total animal and plant community of which the cat and the pig are the outstanding mammals. The park needs effective wardening and two more areas should be included, one in the north-east containing the last bit of undisturbed forest on the island, the other a forest that at present splits the park into two unequal parts. The difficulty in both cases is of course the timber. The rights to this were sold many years ago and the price at which they can be bought back is too high for the government. Urgent action is needed here. A National Geographic Society grant of \$10,000 will now pay for a full 2-year scientific study of the island, and it is believed that the Japanese Government will fund the erection and equipping of a permanent research station.

The FPS has written to Dr Kissinger, the US Secretary of State, to express our concern about the US AID (Agency for International Development) programme for controlling vampire bats in Latin

**Vampire
killing must be
Selective**

America. The methods proposed are not specific and could do widespread damage to other bat species, many rare, and even more to birds. In Latin America one species of vampire bat *Desmodus rotundus* is a rabies carrier that causes the deaths of thousands of cattle and some humans every year. Three new methods of killing these bats are being recommended, all using an anticoagulant that is fatal to the bats. One involves injecting cattle with the poison—being much larger animals they can tolerate it—which the bats will suck in from their blood; the second involves catching bats in mist nets round the cattle corrals, releasing the harmless ones and coating the particular vampires with the poison, which, when they return to their roosts, will be licked off by several dozen others (the normal preening in a roost) so that all die; the third involves spraying the roosts. The cattle injection method is selective in that it kills only vampires feeding on cattle, but there are grave doubts (despite assurances) about how long the poison will affect the meat. The other two methods are not selective at all. Vampires that do not feed on cattle would be killed along with those that do, and this could include some very rare species, and workers manning the mist nets would have to be very carefully trained to ensure that only the correct bat species were treated and all others released unharmed—quite apart from the danger of someone being bitten by a rabid bat. Last, but certainly not least, mist nets are a highly dangerous catching technique, which can do immense damage to bird populations, particularly if used by unskilled people—still more by hungry people used to catching birds for the pot. One rumour is that 50,000 mist nets might be supplied

for this programme—a quite appalling prospect. No one disputes that the problem of rabies-carrying bats must be tackled. But we need to be very sure that the cure is not worse than the disease.

The keeping of rare and endangered animal species in zoos can only be justified if zoos breed their own, and many zoos are now working along these lines. Some have successes to record, such as Whipsnade's first second-generation cheetah births (both parents being zoo-born) and Los Angeles's second generation golden lion marmosets—see next page. San Diego is now experimenting with artificial insemination and has set up a tissue and sperm bank, the first in any zoo. Skin and sperm samples are stored in liquid nitrogen, the tissues for chromosome study and the sperm for artificial insemination. This year sperm was taken from the zoo's prolific pygmy chimpanzee and sent to Antwerp Zoo in an attempt to impregnate a female there. The pygmy chimpanzee is an endangered species; there are very few in zoos and fewer still that are reproducing, so that success here could be a real contribution to conservation. What is more, unless zoos can breed their own rare species, once the international convention on trade in endangered species becomes operative—which could happen next year—it will no longer be possible to import endangered species and they will disappear from zoos as the existing captive ones die off.

The death in August of Colonel Charles Lindbergh, who was a member of FPS, was a great loss to wildlife conservation. In a note published in *The Times*, whose obituary of Colonel Lindbergh did not mention his conservation work, the FPS Hon Secretary, Richard Fitter, wrote, 'Those of us who were his colleagues on the Survival Service Commission of the International Union for Conservation of Nature or the board of trustees of the World Wildlife Fund (International) know how much quiet and unpublicised work Charles Lindbergh did to help save the wildlife of the world, about which he felt deeply. To mention only two actions. Single-handed, and almost entirely on his own initiative, he persuaded the Peruvian authorities to stop the killing of blue whales, and in the Philippines, together with Tom Harrisson, he carried out one of the most successful high-level missions to save an individual species. Thanks to their sterling work, the tamaraw and the monkey-eating eagle, both threatened with imminent extinction, were saved, and what is more remain saved. The continued existence of these three animals will serve Lindbergh as a memorial as long as the Spirit of St Louis is remembered, and perhaps longer'.

**Zoo Breeding
of
Rare Species**

**Lindbergh
as
Conservationist**



ZOO ACHIEVEMENTS IN BREEDING RARE SPECIES

Whipsnade Zoo is the first zoo in the world to achieve second-generation births with cheetahs. Both parents of the five cubs seen above with their mother are zoo-born. The baby golden lion marmosets (left) shown with their mother are a similar achievement for the Los Angeles Zoo, although not the first.

Photographs by Michael Lyster, Zoological Society of London, and Los Angeles Zoo and Steve Dierks, Los Angeles Zoo

