

ORYX

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Notes and News

The most remarkable thing about Lord Zuckerman's report to the Minister of Agriculture on *Badgers, Cattle and Tuberculosis* is that the Minister should have called for it at all. The Minister has for several years had an Advisory Council, on which the Fauna and Flora Preservation Society is represented, and Lord Zuckerman recognises that it has done a good job and should be kept in existence. Why, then did the Minister allow himself to be bullied by one of the numerous animal welfare lobbies into showing the lack of confidence in his existing advisers which Lord Zuckerman's appointment indicated? In the event Lord Zuckerman has only been able to approve existing policy, suggest that the gassing of badgers in areas of proved infection, which had been temporarily suspended, should be resumed, and urge a number of minor extensions of the existing policy, most of which had been urged by members of the panel for some years past. Notable among these is the need for better sampling of other wild animals in the affected areas. We know that cattle and badgers are sources of infection; we do not know whether they are not both being infected by some other animal, the brown rat, for example. If the Zuckerman report had done no more than this, all would be well. But the way it has been treated by the media, notably the BBC, means that the Minister has struck a serious blow against the conservation of the badger in Britain. Oversimplified versions of the Zuckerman report on the news bulletins will have given many farmers the impression that they can and even should go out and gas badgers straightaway. No mention was made in news bulletins that badgers are protected and permission is necessary to kill them. The areas where they are known to be infected with TB are still comparatively small and mainly in the south-west. The Minister owes it to the real conservationists, who have hitherto supported him, to rectify this false impression by making a clear statement himself. And the Secretary of State for the Environment could help by extending the two existing small badger protection areas to the whole country outside the TB-affected areas.

Lord Zuckerman's Report is published by HMSO at £5.20.

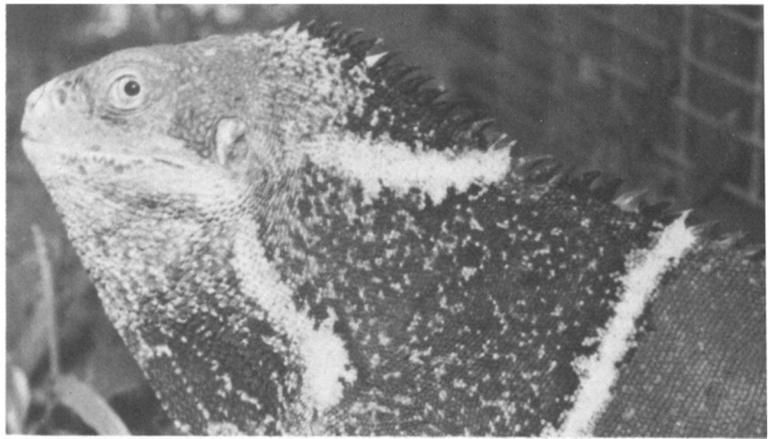
For the past year ffPS and all other British Wildlife ngo's (non-governmental organisations), now organised as Wildlife Link, have been greatly concerned with the Government's proposals for revising wildlife legislation. A Bill was promised for last autumn, then dropped because of pressure of business, and promised again before Christmas. As we go to press we have been given the outline proposals, but do not yet know what will actually be in the Bill. Wildlife Link, in which ffPS takes an active part, is

**Protection
Demanded for
SSSIs**

making its views clear about these proposals. The most important of these relate to habitat protection, with special provisions for limestone pavements. The Department of the Environment, actuated no doubt by the present Government's overriding desire not to spend more money, has put forward proposals which will give full protection to only a comparatively small proportion of the SSSIs (Sites of Special Scientific Interest). At a time when nearly one-third of our native deciduous woods have been destroyed since 1947, and the Dorset heathlands and the brecklands of East Anglia are being eroded equally rapidly, this is not good enough, and Wildlife Link is pressing strongly for the complete protection of all SSSIs, some four per cent of which are known to be destroyed or severely damaged each year. The situation has been made worse by the Government's regressive action, opposed by the National Farmers' Union as well as Wildlife Link, to make it impossible to examine the impact of grant-aided agricultural and horticultural schemes such as drainage relating to land not in SSSIs. This, again, has been done to save money, and makes it all the more important both actually to schedule all sites of special scientific interest and also to improve relations between the county trusts and their local farmers, so that no valuable site is lost by accident. One has to recognise that there will always be a few recalcitrant farmers – or farmers who are friendly but pushed by recalcitrant bank managers – who will destroy, come what may. So the heat is very much on habitat protection through the SSSI system at present, and the wildlife conservation movement is not in a mood to take no for an answer.

In January 1979 a 'new' iguana species was discovered in Fiji by Dr John Gibbons of the University of the South Pacific in Suva. This is the Fijian crested iguana, a *Brachylophus* species unknown to science, and there are believed to be about 300 of them on the 80-hectare volcanic island of Yaduataba. In August 1980 the island was declared a wildlife reserve – the first in Fiji. This was achieved by agreement between the National Trust for Fiji and the Fijian landowners on the island, and funded by WWF/IUCN. Two important points in the agreement are that all goats are to be removed and burning stopped, for only about 20 hectares of the dry forest favoured by the iguanas survives. The iguana is considered an endangered species and is proposed for addition to Appendix I at the next CITES

**A
First for
Fiji**



John Gibbon

conference in February. It was probably not discovered earlier because no scientist had visited the island, for it is easily distinguished from the banded iguana *B. fasciatus*, being much bulkier, with a crest of spines along its back and white bands on a light green body; the green can change to jet black if the animal is aggressive and frightened. Attempts at captive breeding in Suva have had setbacks, but young hatched in January 1980 were still alive in October.

At Canberra, Australia, last May the Antarctic Treaty Powers (a select group, some with and some without claims to territory in Antarctica) agreed on a Convention on the Conservation of Antarctic Living Resources. This is strong

**Protecting
the Antarctic
Ecosystem**

on conservation principles, but weak on the possibility of enforcement. The strength lies in the requirement that for the first time both stocks of the exploited species and the balance of the whole ecosystem should be preserved. Both requirements have been notably lacking in the actions of the chief Southern Ocean exploiters so far, the members of the International Whaling Commission. The weaknesses lie in the restrictive conditions for adherence by other countries to the Convention, which are likely to lead to uncontrolled fishing by non-members, and the need for unanimity on important decisions, which is a recipe for overexploitation. However, insofar as it may be better to have a weak convention than no convention at all, it is hoped that a sufficient number of the signatories will ratify by the end of the year to bring it into force early in 1981; eight are needed. Since the Antarctic whale stocks have already been commercially exterminated in all but a few limited areas, the main interest of the Convention will lie in its impact on the growing fishery for krill, the shrimp-like creature found in great abundance from the South Shetlands east about to the waters around Bouvet Island, and the major food of the baleen whales. In a first class report on the Management of the Southern Ocean, with special reference to krill harvesting, published by the International Institute for Economic Development (to be reviewed in the next *Oryx*) Barbara Mitchell and Richard Sandbrook suggest that there are still immense economic problems in both the catching and the marketing of krill. In fact cattle feed seems more likely as a longterm use than potted krill at Boodle's Club. (See 'Fluoride in Krill', page 439.)

The 20th century now has less than twenty years to run, so that the prospects for the 21st are now well within our forecasting sights. For the environment and all its animal and plant species, not forgetting man himself, they are grim.

**On to the
21st
Century**

This is clear from *Global 2000*, the fruits of a special study by the Council for Environmental Quality, recently presented to the President of the United States. On present trends, at the threshold of the 21st century there will be 6.35 (American) billion (or 6,350 million European style) people in the world, and 90 per cent of this growth will occur in the poorest countries. More food will be available, but the bulk of it will go to the richer countries. Needs for fuel wood in less developed countries will exceed available supplies by some 25 per cent *before* the end of the century, because the supplies are being destroyed now. Water needs will double, but many poorer countries will have less water because they will have cut down all the forests on their mountains, which generate their present water supplies. By 2000 two-fifths of the remaining forest cover in less developed countries will have gone. Soils will continue to deteriorate all over the world, and the spread of deserts will accelerate. Acid rain damage to freshwater fisheries will continue to increase. Extinctions of both animals and plants will increase dramatically. Perhaps as many as one-fifth of all species now on earth will have disappeared for ever by 2000, as their habitats vanish, most especially in the tropical forests. All this will indubitably happen, *if we do nothing about it*. This is the great challenge for the rest of the century. The World Conservation Strategy points the way to arresting and reversing the trends that *Global 2000* so clearly depicts. It's up to us.

The May eruptions of Mount St Helens, according to the Washington State Game Department, destroyed 195 square miles of forest and nearly two million mammals, birds and game fish – including 5250 elk, 6000 deer, 200 bears, 100

**The Volcano
that
Saved Itself**

mountain goats and 15 pumas; 154 miles of trout streams and 26 lakes are now lifeless. Aerial photographs show a landscape resembling a giant ashtray, littered with stripped and broken Douglas firs like used matchsticks. But the Cascade Mountains have a long history of volcanic eruptions, and the forests have always regenerated. The soil does not erode, only the ash, and that enriches soil downriver; by the time the ash is washed away, saplings have established a grip, and in a century or two all is back to normal. This should happen on Mount St Helens – but only by some lucky timing. Shortly before the eruption much of the forest had been sold, in square-mile blocks, to timber companies – even the peak of the mountain was owned by Burlington Northern Inc. Unbelievably, this is permitted in US National Forests. But no felling had started when the volcano erupted. If there had been no eruptions and clear-cutting had been allowed, either the top-soil would have disappeared permanently or the mountain-side would have been

replanted with some fast-growing exotics, leaving in either case a virtual desert. The worst disasters, it would seem, are still the gradual, unspectacular ones created by man, and the forests of Mount St Helens have a more secure, if rather distant, future than some other forests in the region, which the US continues to parcel off to timber interests.

Liberia's wildlife resources are so severely depleted that without action they will soon be exhausted, reports Philip Steele, Conservation Education Officer in the Gambia, after a visit to discuss conservation at the invitation of the newly-formed Wildlife Society of Liberia. The country has no national parks or reserves, and no wildlife legislation. Bushmeat is important to the people, but in many areas, especially near the coast, all game has been shot out. Timber and mining concessions cover most of the country. 'Slash-and-burn' shifting agriculture is widespread – which means one rice crop, possibly followed by a sugar crop and then abandonment to a fast-growing dense scrub. Hunting is universal, and the 'traditional' weapons include rifles, shotguns, carbide and electric lamps, steel traps and mist nets. Philip Steele suggests there is scope for the domestication and breeding of species such as black duiker and cane rat (*Thryonomys*) to meet the demand for bushmeat and ease the pressure on the remaining wildlife. This would be particularly valuable in the area surrounding the five proposed national parks now being planned by the Wildlife Division, for the forests could provide a substantial quantity of meat if properly managed. Liberia's rare mammals include forest elephant and forest buffalo *Loxodonta africana cyclotis* and *Syncerus caffer nanus*, pygmy hippo *Choeropsis liberiensis*, Jentink's and zebra duikers *Cephalophus jentinki* and *zebra*, and royal antelope *Neotragus pygmaeus*. The pygmy hippo is described as 'widespread but uncommon in suitable areas of undisturbed forest'.

Dr Charlie Jarvis, in the article on page 453, mentions the discovery of a new perennial maize species and of its important implications. The maize was discovered because a lecturer at the Mexican University of Guadalajara, Doctora Luz Maria Puga de Villareal, having heard that the only known perennial maize species *Zea perennis* was extinct and listed as such in the IUCN Plant Red Data Book (under the name *Euchlaena perennis*), challenged her students to see if they could find it. One student, Rafael Guzman, armed with a drawing of the plant on a Christmas card, went to the known area in the Sierra de Manantlán and asked local people if they had ever seen it. In less than a year he found not only the original plant, but an entirely new species as well, which proved, when grown from seed, to be a quite unknown perennial with the same number of chromosomes as corn (maize). For plant breeders this was a major discovery: it could provide the clue to the

**Last Chances
in
Liberia**

**The Christmas
Card
That Helped**

evolution of *Zea* (whose origins are unknown), and also be the means of developing a perennial maize. Research has also shown that *Z. diploperennis*, as the new species has been named, is immune to four of the seven major viruses that are serious diseases of sweet corn *Z. mays*. WWF/US is trying to ensure that both plants are protected in the wild. At a meeting on the site early in 1980 the Mexican Under-Secretary of Forestry and Wildlife agreed to make part of the area a *zona protectora*. Unfortunately he resigned before this was done, but WWF is still pressing for it.

At least tens of millions of freshwater fishes die unnecessarily every year through the ornamental fish trade. Rare species are searched for because they command higher prices – six specimens of a cyprinid fish *Eirmotus octozona*, previously known from only two specimens in the Smithsonian Institution in the USA, arrived at an aquarium shop in London. A study in Sri Lanka, where nearly a quarter of the 64 freshwater fish species are endemic, revealed that there were 45 exporters in the island and none of them bred any native fish. Fish are caught by poisoning the streams to bring them to the surface; the wanted ones are put in freshwater tanks to recover, the rest left. Losses between capture and deposit in the exporter's holding tanks range from 20 per cent for hardy species to 40 per cent for delicate ones. In Botswana collectors take *Barbus* from the vast breeding shoals, but for every one they take there may be up to a thousand not wanted and these are tipped out on the bank to produce piles of rotting bodies. The fish are treated with a hormone to induce breeding colours; this also makes them sterile, thus ensuring a continuing demand, although some species would normally breed easily in aquaria. The exporter puts the fish in plastic bags – sometimes up to 4000 per bag – which are sent in polystyrene boxes. Often delays in air transport or customs clearance prove fatal to the fish. Much of this appalling waste could be stopped if the exporting countries were to breed the species that can be easily bred.

**Ornamental
Fish
Trade Waste**

'Informants readily admitted to taking all the eggs they found and killing females', writes Dr James Perran Ross, reporting on his study of the leatherback turtle *Dermochelys coriacea* situation in Dominica, for which he received an Oryx 100% Fund grant. This was on one particular beach, but the same thing was happening on every other beach. At another, 'I found parts of two old carcasses butchered for the meat, and fishermen say they regularly take the eggs'. As the coast is densely populated, it is not surprising that, as he says, 'a very high proportion of the eggs of all turtle species are found and taken'. Villagers mark the nests so that the females can be intercepted when they return and slaughtered, regardless of whether they lay or not. Dr Ross estimates (very tentatively) that about 300 leatherback

**Leatherback
Slaughter
in Dominica**

turtles nest in Dominica every year. Protection legislation is inadequate and unenforced, but in any case the rural people are poor and the meat very desirable. What of course is urgently needed is planned harvesting which will conserve the populations, and this, as Dr Ross points out, calls for a large-scale public relations and education programme. His other main recommendation is that the four most important nesting beaches should be totally protected, and guarded by local *paid* wardens properly equipped, and that the goodwill and co-operation of the beach landowners (they include several US-based companies) should be sought.

How to protect the rare plant from being dug up by gardeners and collectors? One solution suggested by a Yugoslav botanist, Dr Vinko Strgar, is to cultivate it and give away small plants. This he believes is often much more effective

**Rare Plants
and
Collectors**

than straight legal protection. Dr Strgar was describing to a plant conservation meeting at Kew Gardens his efforts to conserve 'one of the rarest and most threatened plants in Europe' *Degenia velebitica*, a silver-leaved alpine with beautiful flowers and fruits, much coveted by gardeners and herbalists. Only two localities for it survive, both at 4000 ft in remote mountains, where legal protection clearly cannot be enforced. Fortunately *Degenia* is not difficult to cultivate, and plants have been grown in a number of countries including England. If it could be listed in nurserymen's catalogues perhaps the plant collectors would leave it alone. More serious than the collectors, however, in threatening *Degenia's* survival are natural changes taking place in its habitat. The plant grows under rock outcrops on small screes. Over the centuries these gradually stabilise, become enriched with humus and overgrown with meadow plants which oust the *Degenia*. The only habitat left for it are small, bare, fragmented, wind-swept screes. The process is a slow one, but still has to be reckoned with. Nobody yet knows how to prevent it.

A Cave Invertebrates Group is among the latest to be formed of the SSC's 60-odd Specialist Groups – the groups of experts that advise on practical conservation projects as well as organising research. Many caves have never

**The Delicate
Life
of a Cave**

been surveyed, and new species of cave animals are continually being discovered. The chairman of the new group, Dr Francis Howarth of Hawaii, points out that much has still to be learned about the requirements of cave animals and the causes of rarity; at the same time cave studies are difficult because man is so clearly an intruder and so easily inflicts damage. The threats are numerous: development, including roads, the alteration of ground water supplies, channeling and straightening of rivers, rubbish dumping, and the introduction of exotics. Even tobacco smoke brought in by humans contains a powerful insecticide and may kill in such a

closed habitat. Dr Howarth has found that the number of species in a cave is correlated with the number of human visitors – more people, fewer species. Many cave species are blind, such as the blind underground tree cricket which feeds on tree roots, and the two forms of the big-eyed hunting spider, called, unbelievably, the small-eyed big-eyed hunting spider and the no-eyed big-eyed hunting spider.

In 1957 a small hairstreak butterfly *Strymonidia iyonis*, related to the British and European black hairstreak *S. pruni*, was discovered on Shikoku, the smallest of Japan's four main islands. It is restricted to virgin forests on limestone, and so far is endemic to Japan. Within four years it was exterminated by overcollecting, chiefly of eggs and larvae. In 1969 a second site was discovered. 'Deadly vipers' fortunately scared collectors away in June and saved the adult insects, but egg collectors exterminated it in the winter except where the food plant, buckthorn, grows on inaccessible precipices. Luckily, enough such precipices exist to ensure the butterfly's survival. The hapless insect was then exterminated by egg collectors at a third site, before a local conservation law could be enacted. By this time specimens were being sold at £20 each. Two more localities have now been found. One is still a closely guarded secret; the other fortunately has precipices. What about a national law protecting the species in Japan? Telling this story in the *Bulletin of the Amateur Entomologists' Society*, S. Kinoshita maintains that very few butterflies have become scarce through collecting. *Strymonidia iyonis* seems to be the exception.

The future of the proboscis monkey is 'grim', writes Sonia Jeffrey, who is studying the species in Kalimantan (Indonesian Borneo). Logging is rapidly destroying their habitat, and there is some danger of their being in demand for zoos and laboratories. Endemic to Borneo, and classified in the Red Data Book as a threatened species, proboscis are only to be found close (less than one km) to large rivers and estuaries, which, because the rivers are the main means of communication, is precisely where human settlement occurs, and also where the timber companies have their base camps and sawmills. In the IPPL *Newsletter* she describes how proboscis, which on some rivers have been hunted right out, are easy to capture because they sleep in trees overhanging the rivers; if they are frightened by men on the bank they drop into the water, where they are easily picked up by men in boats and tied up. Although they are protected by law, so that it is an offence to possess one, enforcement is not effective, even in the ports where they are sold for high prices to the crews of the ships exporting the logs. Research now is aimed at determining the requirements of the proboscis so that adequate sanctuaries can be set up.

**Shame on
the
Collectors**

**Proboscis
Need
Sanctuaries**

Changing of the Guard

With great regret the ffPS Council has accepted the resignation of Sir Peter Scott as our Chairman. Sir Peter has accepted Council's invitation to be a Vice-President of the Society.

Sir Peter's retirement from the chairmanship of the Fauna and Flora Preservation Society and also of the Species Survival Commission (SSC) of IUCN marks a real changing of the guard. Sir Peter has been an outstanding figure in both bodies, and we acknowledge with gratitude his immense services to both, perhaps the greatest of which was the invention of the Red Data Books. He became Chairman of ffPS in 1966, and of the SSC in 1963. Fortunately we have good replacements. Our Vice-Chairman, Lord Craigton, has been appointed to succeed him until the next annual general meeting, and the IUCN Council has appointed another ffPS Council member, Grenville Lucas, to chair the SSC, thus continuing a tradition of thirty years that the SSC Chairman is a member of ffPS Council. Under the same temporary arrangements, ffPS Council has appointed Richard Fitter as Vice-Chairman in place of Lord Craigton, and David Jones to the thus vacated post of Hon. Secretary.

An interesting illustration of the unwitting effect visitors can have on wildlife reserves is described by John Gerhart, of Nairobi, in the July 1979 *Bulletin* of the East African Natural History Society. In the Amboseli National Park his

**What Tourists
did for
the Cheetahs**

group saw two male lions come up to and drive away some lionesses who were eating a freshly killed wildebeest. 'From a respectful distance of about 100 metres', the females and several young lions then watched the males tackle the kill. The tourists moved on, and came on a female cheetah with three young feeding on a Thomson's gazelle; they were in long grass and well out of sight of the lions. The tourists stopped to watch, and within three minutes a white-backed vulture alighted nearby; within ten minutes there were at least 20 vultures. Suddenly the cheetahs left the half-eaten carcass and bolted for the woods; the vultures immediately moved in to feed. Half a minute later the lionesses and cubs appeared running fast, dispersed the vultures and proceeded to finish off the gazelle. John Gerhart's interpretation was that the tourist cars attracted the vultures, which were seen by the lionesses, who came running; the cheetahs heard them coming, or smelled them, and bolted. And the cheetahs lost their meal.

New ffPS Overseas Consultants

The following have accepted invitations to act as ffPS overseas consultants:

Mario Dary	Guatemala
Peter Dickinson	Vanuatu
Mohd. Nordin Hj. Hasan	Malaysia
Francisco Serrano	El Salvador
Dora Weyer	Belize

ffPS now has 126 consultants in 76 countries.

Leslie H. Brown

Leslie H. Brown, who died at home in Karen, Kenya, on August 6 1980, was a practical conservationist of outstanding quality, and one of the most perspicacious natural historians of the century. Born at Coonor in Southern India in 1915 of Morayshire stock, his ties with Scotland were strengthened during his happy student days at St Andrews. The greater part of his life was spent far from his beloved crags and golden eagles, but they remained a principal source of inspiration which he revisited whenever he could. The honorary PhD bestowed on him by his old university 35 years after his graduation therefore gave him particular satisfaction.

A rugged and resourceful individualist, the sharpest barbs of his trenchant wit were reserved for those he deemed responsible for despoiling the beauty and variety of the natural world. His exceptional powers of observation and interpretation of what he saw were always permeated with a sense of excitement. Combined with a prodigious capacity for work, they enabled him to make a success both of his profession as an agriculturist and of his spare-time research and writing, which produced well over 30 major works in as many years, among them his outstanding pioneer study of flamingoes and numerous books on birds of prey, including the classic *Eagles, Hawks and Falcons of the World*, jointly with Dean Amadon, and graphic accounts of African ecosystems. He was for several years chairman of the East African Wildlife Society's Scientific Committee.

After his retirement in 1963 from the post of Chief Agriculturist of Kenya his services were much in demand by the World Bank and FAO. He was a good friend of FPS and a contributor to *Oryx*.

ffPS Annual General Meeting

The President, Lord Zuckerman, was in the chair at the Society's 76th Annual General Meeting, at which members voted to become the Fauna and Flora Preservation Society. Revised rules incorporating plant conservation were adopted, and two botanists elected to the Council. Five officers were re-elected, and the sixth, Acting Treasurer T.A.P. Walker, was elected Hon. Treasurer, succeeding Ian Malcolmson, who retired in 1979. Dr G.B. Corbet, Dr S.K. Eltringham, the Hon. Ivor Montagu and Dr John Owen retired from Council, and Dr David Bellamy, Dr David Chivers, Dr Alison Jolly, G. Ll. Lucas, Dr N.W. Moore and Lord Skelmersdale were elected to fill the vacancies and new seats. The Annual Report and Accounts were approved.

The speaker was the distinguished botanist, Professor V.H. Heywood of the University of Reading, who spoke about the formidable task of plant conservation. Professor Heywood showed why it was important to give priority to saving the flora of the tropics, where the risk to species is greatest and the rate of habitat loss already alarming, and where many species are still to be discovered and others have certainly been exterminated unknown. Extracts from his talk will be published in the next *Oryx*.

The Chairman, Sir Peter Scott, thanked the Zoological Society of London for much help throughout the year and especially for accommodation and services, and ffPS staff were also thanked for their work. After a wine and cheese supper, a film, *The Fig Tree*, was shown, and members were able to participate in a Zoo open evening.