

One thing nearly went wrong during 1976, and that was the British Government's plan to pass a special law on the import of endangered species and their products instead of relying, as they have had to do since January, on existing legislative powers. The Bill fell at first a victim to political machinations – showing once more how irresponsible politicians can be, even when asked to cooperate in passing wholly non-political legislation – but as we go to press it has just received the Royal Assent.

Breeding Endangered Species

Paul Leyhausen

In 1971 FPS proposed a world conference on breeding endangered species in captivity, and the first conference was held under the joint auspices of FPS and the Jersey Wildlife Preservation Trust at Jersey Zoo in 1972 (*Oryx* XI:5, May 1972). This proved highly successful and in response to the worldwide demand for a repeat a second conference was held in July 1976, at the London Zoo, under the joint auspices of FPS and the Zoological Society of London, which this year celebrated its 150th anniversary. In this account Dr Paul Leyhausen, of the Max Planck Institute, who is Chairman of the IUCN Cat Group, and took part in the meetings, sums up their content and importance.

While there were still – as in the first conference – a number of papers dealing with special captive breeding techniques for particular species, ranging from butterflies to manatees, the main emphasis was on the broader aspects of captive breeding, such as keeping reliably reproducing units, genetically viable populations, and their eventual reintroduction into their original habitat, which latter must be the ultimate aim of all captive breeding of species that are seriously endangered, depleted in numbers or even extinct in the wild.

The general drift of the papers dealing with these topics was a sobering-up from the euphoria of years past which considered zoos as the 'modern Noah's Ark', an awakening from the over-confidence that it would be possible to preserve any species in captivity indefinitely until such time as it became possible to reintroduce it, once its biology and habits were sufficiently well studied to enable us to develop and maintain the proper techniques.

It came as a real shock to most of the participants when they learned that the total population of Przewalski's horses in captivity, believed by many to be a triumph of captive breeding, showed a decline in fertility and longevity of individuals, and that some of the physical characteristics of the wild animals seem to be disappearing in the captive stock.

It appears that prevention of such phenomena is not simply a matter of management. Not considering for the moment the herds of wild ungulates in semi-captivity, like the blackbuck in Texas, the first difficulty is that captive breeding groups invariably have to start from comparatively small numbers, making it impossible for the available stock to harbour all the alleles of the original gene pool of natural populations of the species. Thus the genetic potential of the species is inadequately represented from the start. Then the

confined space, feeding conditions and a multitude of other factors unavoidably exert selective influences which differ widely from the selection pressures of the natural habitat. As a result, we do not know to what extent we are selecting against genes in the captive stock that maintain characteristics which are unsuitable or unwanted in captive life but a definite advantage to the species under free-living conditions; and the captive stock will lack the genetic diversity which guarantees the evolutionary flexibility of the species through its wide range of possible gene recombinations.

It follows that at present we are unable to breed any species in captivity indefinitely without seriously decreasing its viability under natural conditions. The first aim of all species conservation must therefore always be to preserve natural habitats of sufficient size and to protect the species there. Where this is impossible, every effort must be made to shorten the duration of exclusive captive breeding and to implement well organised reintroduction. Wherever captive breeding is thought necessary or desirable parallel to remnant natural populations, exchange of individual animals between the captive and the free-living populations should be a regular routine, provided that this can be done without adding to the peril of the free populations. Of course, all this does not mean that there should be no captive breeding for other reasons, especially for scientific studies to complement those of free-living populations.

Why Bother?

It was left to Lord Zuckerman in his closing remarks to put the basic question: Why bother at all? Species have come and gone throughout geological time. If it is characteristic of our age that species diversity has to go to make room for the one species which is outcompeting them all, is this not also a natural process, and is it not going against nature if we try to stem the tide?

But most conservationists are concerned, not because they think that the lesser-spotted whatnot counts more than the fate of the human race, but because they have every reason that the biological and social sciences can provide to think that Man, by outcompeting so many other species, will ultimately outcompete himself, and that he has already come dangerously close to having done so irretrievably. Nature conservation today is first and last self-preservation of mankind as a species. This is another, in fact the overriding, reason why it would be little use to perpetuate a species in captivity even if we could do so: it makes sense only to preserve it in its own habitat together with its entire ecosystem. With this view in mind, the efforts and the funds employed seem pitifully inadequate. The city of Munich alone is spending 30 m. DM to rebuild the Neue Pinacothek solely to exhibit a number of paintings to better advantage. This is about as much money as voluntary organisations can spend worldwide on wildlife conservation projects over a period of ten years. Is this too much of a sacrifice to ensure the existence, not to mention the quality of life, of future human generations?

Brunei Nature Society

The Brunei Nature Society was formed at the end of last year to foster interest in wildlife conservation, and quickly achieved a membership of over 100. The Hon. Secretary is Aziza Bt. Arif, c/o Dept. of Agriculture, Bandar Seri Begawan, Brunei.