

IUCN VIEWPOINT—SAVING ENDANGERED WILDLIFE

In one way or another virtually all wild things have become the wards of man. They depend on what he does—or does not do—for their survival.

As a result, many species are facing extinction. Some are seriously reduced in numbers or their habitats have been decreased or destroyed, leaving them vulnerable to the threat of extinction. Others are so rare that a constant watch must be maintained to guard them from harm.

If there is a hope to save many of the world's threatened species it will be by satisfying their biological requirements within the world's changed and changing environments.

Conservationists, unfortunately, have not always realised this necessity. Too often actions have been guided by the belief that if a species is protected from hunting, and perhaps from other forms of predation, all will be well. It has taken a long while for those who take an interest in wildlife to learn that wildlife habitat must also be protected.

Wildlife managers have slowly accumulated knowledge about cover, food habits and animal diseases. Through the development of the science of ecology information has accumulated on food chains and their place in more complex food webs. It is now known that any species exists as part of an ecosystem in which all parts must function if the species is to survive.

For more than two decades, IUCN has provided a forum for the development of a conservation philosophy which is based on the concept of an integrated environment. It has engaged in broad-range conservation action programmes to preserve unique areas as national parks or as strict nature reserves. These areas contain entire communities of plants and animals, with each unit influencing the survival of the others.

The world's threatened species have a doubtful future unless whole natural areas are preserved where life can flourish in all its complex variety. The need to preserve a wide range of such natural areas as a long-range goal, while taking immediate emergency action to halt the destruction of threatened species of plants and animals and to keep open options for continued diversity in the natural world, is a basic and central idea in the broad IUCN programme.

Based on these premises IUCN, through its Survival Service Commission, has been organising the information necessary for the protection of threatened species. An equally important function has been to organise the known biology of each threatened species so as to determine its conservation needs. Particular attention is given to endangered species whose conservation needs are urgent and to species which have not fully recovered from past depletion or whose numbers may be declining at such a rate they might subsequently be threatened with extinction.

Among the reasons why 132 mammals (listed in the current edition of the IUCN Red Data Book, Vol. 1) are threatened with extinction and an additional 60 are either approaching that situation or have only recently escaped from it, direct reduction by man stands foremost and indirect action which has caused loss or degradation of habitat stands second. The two, however are inter-

related. Loss of habitat exposes a species to direct reduction. Animal species which have been over-exploited or persecuted by man or which depend on relatively undisturbed habitats, whether forests, swamps or savannas, are in difficulty through the world.

The natural associations of a plant and animal community are not a simple collection of separate entities, any one of which can be changed without regard for the others. Rather, they involve many intricate inter-relations in composition, function, and structure. Some animals can thrive in a wide variety of conditions and may be represented in a number of communities. Conversely, others are specialised and may be limited to a single community.

Protection and restoration of species threatened by over-exploitation or reduction campaigns may be a painfully slow process, but it is possible if their habitats have survived, if their niche has not been occupied by a hardier species, and if they have survived persecution in sufficient numbers to sustain genetic viability. Assuming there is intent, financial support, and co-operation between political jurisdictions where they are needed, these species can be saved from extinction. Enforcement of protective regulations and application of wildlife management techniques can be effective if they are vigorously applied.

There is risk, though, in too much reliance on management because it involves a certain amount of meddling with systems that we do not understand completely and where there is a great deal of uncertainty. Most of the endangered species will survive only if the ecosystems in which they live remain intact or if they can adapt to a changed environment. The concept of an ecosystem is a very broad one, based not on size or on the number of interacting parts, but on the functional stability for a given period of time. It is conceived as a dynamic rather than a static situation.

Successful conservation programmes cannot be based on a preoccupation with saving the animal by itself. Its total environment must be preserved. The complexity of this undertaking can be realised as one considers the fragility of some associations and appreciates the amount of tinkering that has occurred with most biotic communities.

Biotic communities are continually lost or changed as agriculture, industry and human habitation puts some areas which are essential to wildlife to other uses. Many of the changes thus brought about are irreversible. Vast areas which were formerly sparsely occupied by peoples who lived with nature have become thickly inhabited by agrarian and industrial societies and turned to exploitive uses. Continued and accelerating occupation seems inevitable for some time in the future.

The effect of these events in changing biotic and environmental factors which govern the distribution and quality of major ecosystems is of paramount concern to IUCN. In view of this concern, IUCN has been asked to take over operations of the Section of Conservation of Terrestrial Biological Communities of the International Biological Programme, which were to end in 1972. Some modifications of the IBP Check Sheet Survey of biotic communities are being studied with a view to

adapting these data more closely to IUCN requirements in relation to endangered species and biotic communities.

Through the work of several of its commissions, IUCN is developing a system for compilation of data based on existing classifications of biotic communities. The compilation of information on threatened species will be increasingly organised on the basis of this classification or subsequent refinements of it. The broad outlines of plant distribution are not precisely those of animal distribution, but form a useful basis for conservation effort. The effect which man has had in changing the ecological boundaries of plant and animal communities makes individual communities sometimes difficult to delineate.

IUCN's goal is to monitor a worldwide range of natural and man-made ecosystems. It will assess the extent to which adequate samples of intact systems are preserved, identify additional areas that should be set aside to insure the safeguarding of essential biotic communities, and call attention to the decline or threatened loss of animal species.

To accomplish this, current and consistent data will be obtained on a series of biotic communities. In addition, particular attention will be paid to endangered species and to vulnerable species whose survival might subsequently be threatened. For other species, the best that can be accomplished is the maintenance of a continuing surveillance of those biotic communities of which they form a part.

This continuing surveillance and review will guide the establishment of priorities for field research and conservation action. It will enable us to maintain a constructive conservation programme based on the best scientific data available.

But IUCN and all those who are working towards the same basic goals will need all possible help of all elements of the world conservation community to make it fully effective.