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Prospects for India's Wildlife

The status of a country's wildlife depends primarily on the government's national policy. Fortunately our government has decided that India will be much the poorer both spiritually and materially if its wildlife is allowed to collapse. So although there is no denying that there is conflict in several areas between the immediate interests of humanity and wild animals, the administration is trying its best to contain it, in the hope that in the long run this policy will be wholly beneficial for the people. The Indian Board for Wildlife, the National Committee on Environmental Planning and Coordination, and the Steering Committee on Project Tiger are all trying to ensure that the interests of wildlife are not disregarded in our development plans.

Let us see how this conflict arises. The larger animals of India, the elephant, the Indian bison, the sambar, and the tiger, to name a few, are essentially dwellers of forests. As a result of human pressure the plains' forests have almost disappeared from our country, and the 20 percent of the land surface which is now under forest cover is mainly in the mountains. In many cases the mountains have within them the catchment areas of rivers which form part of hydroelectric or irrigation projects. These mountains are also well wooded areas and with advance planning and imagination could be retained as wildlife sanctuaries and nature reserves. Because the catchments of these projects must remain well covered with vegetation to prevent soil erosion and siltation of dams lower down, such projects are excellent testing grounds for the principle that conservation and development can proceed hand-in-hand. The areas actually coming under development are not very large in most cases, but the problem has been that once a pristine forest is made accessible by roads and the project staff and laborers are settled in the locality, the fate of animals is sealed unless vigorous protection measures are enforced.

Hydroelectric projects are by their nature sited in forested areas in mountains, and new giant projects are on the anvil. The Kudremukh Iron Ore Company, Limited, financed by Iran, will be the largest open cast mining company in Asia. It is sited in the Western Ghats, and the mining area is surrounded by evergreen forests rich in wildlife. The Western Ghats is a range of mountains extending a thousand miles north to south along the western coast of India. These mountains arrest the movement of rain-laden clouds which travel eastward over the Arabian Sea and are responsible for the country's principal rainfall. Because of the new awareness of the need to protect the environment, the project authorities have decided to take firm steps to ensure that the neighboring forests and their denizens are fully protected.

In the Idukki project in Kerala, an area of seventy square miles has been designated as a wildlife sanctuary and in course of time is likely to become a spectacular reserve. The reservoir created by inundation of the valleys is buttressed by lush evergreen forests, and during a recent visit we saw several herds of elephants grazing peacefully in this secure habitat. We also found cormorants and darters nesting in some of the islands within the magnificent waterspread which covers an area of twenty-three square miles;



The Indian rhinoceros (Rhinoceros unicornus) appears to be doing well in the Kaziranga and Jaldapara sanctuaries. Poachers have been the greatest threat to this huge animal because of the allegedly aphrodisiac qualities of its horn. Photo: Dr. Lee Talbot.

and if proper ecological steps are taken, this sanctuary can demonstrate that with imaginative planning wildlife can be encouraged to prosper even under somewhat artificial conditions.

Though many of the smaller mammals and almost all bird life exist outside our sanctuaries, the case of the larger herbivores and carnivores is quite different. They need protected localities and natural habitats if they are to survive. With the plains almost wholly under agriculture and human use and the mountains being increasingly opened up, wildlife will be secure only in sanctuaries. More than 150 sanctuaries exist today covering a modest 0.5 percent of the land area, and several more are being contemplated. Although essentially meant for wild animals, sanctuaries in India are continuing to be exploited for silvicultural purposes.

There has been considerable discussion about the effects of forestry operations in wildlife habitats. According to some, these operations are very deleterious, for disturbance by humans seriously affects the life cycle of wild animals. Others take the opposite view and point to the fact that in the tourism zone of some of our sanctuaries there is more wildlife to be seen than in the truly wilderness zones. Some naturalists feel that, provided there is adequate territory, nature can be left to find its own balance. Others are more in favor of managing the habitat, recognizing that the best policy is to have well-wooded regions interspersed with open meadows. The edges of such habitats seem to hold a great attraction for wild creatures, apart from the fact that open areas with more sunlight produce a lot more forage for herbivores than comparable areas under tree cover.

Of the 500 mammal species and 1,200 bird species of India, the most endangered ones are those whose habitat requirements are



Future of the Indian bison (*Bos gaurus*), one of India's most striking wild herbivores, is linked to preservation of its forest habitats. Unfortunately, the animal is also susceptible to rinderpest, which is communicated through domestic cattle which may use the same sanctuaries. Photo: © Zafar Futehally.

very special and whose demands for territory are rather large. The elephant, for example, requires almost 250 kilograms of browse and grass per day, so that extensive wild country is necessary to provide it with food and shelter. A recent survey carried out by a team of ecologists of the Indian Institute of Science, Bangalore, led by Professor M. D. Gadgil, estimates the total elephant population of south India (the best habitat in the country for this animal) at 4,000. They say that "more than direct poaching the most serious threat to this population of elephant is the alarmingly rapid and continuing fragmentation of its habitat due to a variety of reasons ranging from deforestation, extension of plantations, agriculture, dams, and other construction activities." The best hope for the elephant rests on the fact that the forests of the Western Ghats are intended to be preserved for their ecological functions; and with the saving of the habitat, this intelligent pachyderm, so closely associated with India's cultural history, is also likely to survive.

Like the elephant, the future of the Indian bison (*Bos gaurus*), in many ways one of the most striking of wild herbivores, is also connected with the preservation of its forest habitat. But these animals are unfortunately very susceptible to diseases, particularly rinderpest, communicated through domestic cattle; and in 1968 one of the finest herds in the sanctuaries of Bandipur and Mudumalai was almost wiped out. Since then domestic cattle passing through these sanctuaries are inoculated against this disease; and although the menace has been checked, recent deaths in the Periyar Sanctuary indicate that constant vigilance is necessary.

Of the other herbivores some like the Kashmir stag (*Cervus elaphus hanglu*) and the hardground barasingha (*Cervus duvauceli branderi*) are slowly building up their numbers under stringent protection and with the aid of management plans for their habitats. The Kashmir stag is a close relation of the European red deer, and because of its dwindling numbers the World Wildlife Fund in association with the State Government of Kashmir has formulated a project for saving this animal in the Dachigam Sanctuary near Srinagar. Although the population of this deer was estimated at around 550 in Dachigam in 1957-1958, it is feared today that the number is nearer 200. This decline has been largely due to poaching, which has now been arrested. Some, like the Manipur brow-

antlered deer (*Cervus eldi*) with only fourteen individuals left, seem almost beyond redemption. In this case protection has not been enough; it is the loss of the very specialized habitat which is the main factor in their decline. The Indian rhinoceros (*Rhinoceros unicornis*) appears to be doing well in the sanctuaries of Kaziranga (Assam) and Jaldapara (West Bengal). The World Wildlife Fund and other international bodies have played a sterling role in saving this animal by providing arms and walkie-talkies to the sanctuary staff to deal with poachers who were the biggest threat to this animal, because of the allegedly aphrodisiac qualities of its horn.

The carnivores, critically placed at the top of the food chain, suffer the most when wildlife populations decrease; so the tiger was seriously endangered until very recently. Being the magnificent animal that it is, its predicament caused worldwide concern, and it was clear that unless some extraordinary steps were taken the population of 2,000 as against the estimated 40,000 in the earlier years of the century would not be able to survive. The World Wildlife Fund and the International Union for Conservation of Nature and Natural Resources must take great credit for having stimulated the government of India to formulate Project Tiger, which got under way in April 1973, principally because of the interest of the Prime Minister, Mrs. Indira Gandhi. Nine tiger reserves comprising the best tiger habitats in the country have been established, and the annual reports of the project indicate that the population has increased. This project will cost approximately 6 million U.S. dollars during its five-year period, and it is rightly acclaimed as the largest conservation effort in the cause of any single species ever undertaken in any country. The added advantage is that large stretches of India's magnificent forests and several other species inhabiting these areas will also be rehabilitated in the course of this undertaking. Under the chairmanship of a cabinet minister, Dr. Karan Singh, the Directorate of Project Tiger has made commendable progress. Every attempt is also being made to involve international expertise in this enterprise. Recently Paul Leyhausen, Chairman of the Cat Group of the Survival Service Commission of the IUCN, was invited to visit the reserves and offer his comments. His report is now before the Steering Committee, and many of his suggestions are being implemented. A course in tranquilizing animals has also been given to selected forest officers and others, and the expertise acquired will be valuable in translocating animals from denuded areas to more promising habitats to ensure their survival. An international symposium on the tiger will be held in New Delhi in April 1977, and this will be a good opportunity for the pooling of all scientific knowledge available about this elusive creature characterized as the "phantom of the forests."

One of the problems of Indian wildlife is that well-trained ecologists are not available for manning the sanctuaries. To remedy this shortcoming it is proposed to introduce university courses in wildlife management at the Ph.D. level. After these students emerge as qualified wildlife ecologists, our sanctuaries will hopefully be managed not by foresters whose principal interests are connected with silviculture, but by people who understand the significance of maintaining wilderness for wild animals. Then will India's wildlife truly come into its own.

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