

The Disappearance of Wild Life in India

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ALTHOUGH much of the wild life of India has disappeared and what has survived is in jeopardy, the Faunthorpe-Vernay Expedition has made possible the perpetuation in the form of lifelike groups of a number of animals that might otherwise to a large extent have passed out of ken. Altogether it obtained 450 specimens, of which 129 are mammals.

It was particularly fortunate that Messrs. Faunthorpe and Vernay when in the field, chose with a rare sense of discretion just the representatives of this magnificent fauna that President Henry Fairfield Osborn was most anxious to have on exhibition in the Museum's new Asiatic hall. Especially noteworthy among these are: Indian elephant (*Elephas maximus*), one-horned rhinoceros (*Rhinoceros unicornis*), gaur (*Bibos gaurus*), chital (*Axis axis*), thamin (*Rucervus eldi*), sambur (*Sambur unicolor*), the swamp deer (*Rucervus duvaucelii*), tiger (*Tigris tigris*).

Other invaluable contributions are a bull and cow tsine (*Bibos banteng*), nilgai (*Boselaphus tragocamelus*), and blackbuck (*Antilope cervicapra*). Among the series of deer we cite the barking deer (*Muntiacus muntjac*), the hog deer (*Hyelaphus porcinus*), and the pygmy musk deer (*Tragulus*). The Artiodactyla also include the Indian gazelle (*Gazella bennettii*) and fine horns of the ibex (*Capra sibirica*). Besides the tiger mentioned above, there are other carnivores, such as the leopard (*Panthera*), hyæna (*Crocuta*), sloth bear (*Melursus ursinus*), wolf (*Lupus pallipes*), jackal (*Thos aureus*), and a number of smaller forms. A few bats, rodents, and Primates bring this collection up to about forty-two species.—HERBERT LANG.

IN a previous article of this issue I stated that within a measurable space of time there will be practically no game left in India, except in preserves maintained by native chiefs and in certain of the more inaccessible tracts of Government Forest Reserves. I believe that this statement is no exaggeration. Causes of the disappearance of wild mammals, and of game and other birds are as follows:

1. The destruction of the jungle in which they live, owing to the expansion of population and the placing of larger areas under cultivation.
2. Disease.
3. The demand for skins and feathers by the fur and plumage trades respectively.
4. Destruction of game by firearms.

I shall deal with these causes *seriatim*.

THE DESTRUCTION OF JUNGLE

In many parts of India the disappearance of game was inevitable as population increased and all the arable land came under the plow. There are now large areas where cul-

tivation is so universal that there is not even enough waste land to provide grazing for the village cattle, which in many heavily populated districts are now stall-fed. This cannot be helped nor, indeed, is it to be regretted: there is plenty of jungle left.

DISEASE

Owing to the fact that the Hindus, who form the majority of the Indian population, consider the cow to be a sacred animal, enormous numbers of feeble and worn-out cattle are kept alive. Foot-and-mouth disease is common; rinderpest occurs less frequently. When fodder and water are scarce, the village cattle are pastured in the jungles, where they would not usually penetrate, and may communicate these diseases to such wild animals as are susceptible to them. In times of famine, the government must necessarily throw open to cattle reserved forests which in normal times are closed to grazing.

In the great famine of 1897, when practically all the drinking water, except in the larger streams, dried up over large areas in the forests of the Central Provinces, as described in Kipling's *Jungle Book*, cattle and wild animals had to use the same drinking places, and the buffalo (*Bubalus bubalis*) and bison (*Bibos gaurus*) were attacked by rinderpest and much reduced in number. In most of the forests of the Central Provinces the bison have recovered, but the mortality among the wild buffalo, a rarer animal, was greater, and even now buffalo exist only in small numbers. In the Biligirirangan Hills in southern India, where the Faunthorpe-Vernay Expedition obtained specimens of bison and elephant for the American Museum, there was considerable mortality among the bison two or three years ago. Cattle infected with foot-and-mouth disease had been pastured in remoter jungles than usual.

I remember, also, local epidemics of foot-and-mouth disease among antelope and swamp deer. The mortality, however, from this disease is not very high. Only a certain proportion of the animals are attacked and it is probable that of these some recover. Disease alone will never exterminate the game of India.

THE FUR AND PLUMAGE TRADE

Few Indian animals have valuable fur, and not so many, therefore, are destroyed by the pelt hunter as in some other countries. Demand, however, creates supply, and if there is a popular desire for the skin or plumage of any animal or bird, the effect soon becomes noticeable. For instance, about ten years ago the skin of the snow leopard (*Uncia uncia*) became fashionable in England as a fur, and

the result of this has undoubtedly been to diminish very largely the number of snow leopards in India and across the border. This animal lives only in the higher hills of the Himalayas, most of which are beyond the British border, but native hunters from Thibet and elsewhere bring skins of the snow leopard to certain markets in British territory. Such a skin is now worth, in the local markets, about four times as much as it was fifteen years ago, and even so it is difficult to buy good skins.

The demand for the white egret's plumage (that of the *Herodias alba*, *intermedia*, and *garzetta*) brought about the almost complete extinction of these beautiful birds. Wandering gangs of plumage hunters used to scour India for them. Their *modus operandi* was to catch one with bird-lime and peg it down on the ground. The other egrets in the colony would then fly around the tethered one and were caught in nets without difficulty and killed. As the plumage develops only in the breeding season, when the young are dependent on the parent, the extermination of the birds was rapid. Legislation was introduced eventually, prohibiting the export of egret feathers, and I am glad to say that in a few places the plumage-bearing egrets are now on the increase. I find, however, that egret plumes, like whiskey, are obtainable in New York.

DESTRUCTION OF GAME BY FIREARMS

The disappearance of game is frequently ascribed to over-shooting by sportsmen, but moderate shooting by sportsmen will never exterminate game, because the sportsman does not kill females or immature males and does not take game in the closed season. When game is exterminated in places where

suitable cover for it remains, it is, as far as my experience goes, invariably due to the ravages of the local pot-hunter. The number of guns in the villages has of late years greatly increased; the use of modern rifles by Indians of the upper and middle classes has become common; and the rules about the closed season, etc., have practically become a dead letter. In the Lucknow Division, the District Officer of Sitapur District told me recently that partridges, both black and gray, formerly abundant, had been almost exterminated. In the Hardoi District of the Lucknow Division, the Indian antelope (*Antilope cervicapra*), formerly abundant, is now very rare. I made careful inquiries last year in several districts where the great Indian bustard (*Choriotis edwardsi*) used to be found, but was unable to come upon anyone who had seen any of these birds recently. The pink-headed duck (*Rhodonessa caryophyllacea*), which is a nonmigratory bird with a very local habitat, is either extinct or very nearly so, and this fate will no doubt overtake other nonmigratory ducks and other edible birds.

In the Nepal Tarai, the low-lying tract of country between the Himalayas and the British border, it is extremely unusual to see any deer at all. These have all been shot out by the Tharu villagers, who, armed with guns, have been accustomed to sit in trees over every game path and drinking place. The Carnivora now live practically entirely on cattle. The swamp deer (*Rucervus duvaucelii*) in some of the best grounds in the Kheri District of the Lucknow Division have similarly suffered from the proximity of Tharu villages, and in the Kheri District it is now only in the preserves of the Rani of Khairigarh that this rare and beauti-

ful animal is found in considerable numbers.

In the Magwe District in the "dry zone" of Burma, where the Faunthorpe-Vernay Expedition went in search of the brow-antlered deer, or thamin (*Rucervus eldi*), we found these beautiful animals very scarce indeed, and in many jungles in which they undoubtedly occurred in large numbers a few years ago, not a single specimen is now to be seen.

In several districts in the United Provinces, the Indian gazelle, or chin-kara (*Gazella bennettii*), has been largely reduced in numbers by netting. This animal lives in ravines. A net is placed across a steep ravine and the gazelles are driven into it. A similar method is employed for antelope, which are first forced or maneuvered into a field of millet, or other high crop, and then driven into a net erected around one corner of the field. The destruction thus wrought is, however, trifling compared to the damage done by firearms. Netting will not exterminate game.

The great Indian one-horned rhinoceros (*Rhinoceros unicornis*), formerly abundant in the swampy country of the Tarai all the way from north Oudh to Assam, now survives in British territory only in a small portion of the Assam province. Its survival in certain tracts of Nepal is due solely to the fact that in that country it is considered royal game and is rigorously preserved. And even in Nepal it is, I believe, rapidly diminishing in numbers. In Burma, where the *Dicero-rhinus sumatrensis* and *Rhinoceros sondaicus* both occur, there is demand for their flesh and, on the part of the Chinese, particularly for their horns, which Mr. Douglas Burden tells me are also in demand in French Indo

China. As a result these mammals have been slaughtered to such an extent that last year the Burmese government prohibited the shooting of rhinoceros altogether. Whether this prohibition will be effective, in view of the difficulty of supervision over the tracts where these interesting animals still survive, remains to be seen. A native forest guard requires a lot of supervision, and a gift of rupees or meat by the poacher naturally appeals to him.

The Governor of Burma, Sir Harcourt Butler, has, however, given special permission to Mr. Arthur S. Vernay, who is now collecting for the American Museum in Burma and Siam, to take specimens for that institution. If Mr. Vernay can get these rhino specimens, he will be lucky.

CONCLUSION

From the above remarks it will be

seen that in places where suitable jungle for animals still remains—and there are many such localities—the only cause which can lead to the extermination of game is the more or less unrestricted use of firearms by the natives. As things stand now, there is very little game in British India (I am not referring to the native states) except in the Government Forest Reserves. These are likely to be provincialized, and who can tell what will then be their fate? Especially as (I quote from a recent report to a Royal Commission) “it is not unlikely that the lawyer will soon dominate the political world in India.” Government Service in India is becoming increasingly unpopular—with the causes for this it is unnecessary to deal in an article of this kind, but the disappearance of wild life in India is one of the reasons why.



The chital (*Axis axis*) one of India's most characteristic animals