

I. INTRODUCTION

Chitawan and neighbouring areas of Nepal have long been famous for their abundance of big game, including the Great Indian One-horned Rhinoceros, *Rhinoceros unicornis*, which is now one of the vanishing species of the world. For many years this part of southern central Nepal was the strictly guarded shooting preserve of the rulers of that country; but with the advent of democracy and unsettled political conditions in 1951, the exact status of the area and of the rhinoceros in it has not been clear to the outside world. Reports were in circulation of alarming slaughter by poachers in recent years, especially in the year 1958-59; but lack of authentic information prompted the Survival Service Commission of the International Union for the Conservation of Nature to ask me to investigate the distribution and status of the Rhinoceros in Nepal, and to suggest measures for the preservation of this species in Nepal.

As it was not possible for me to visit the area concerned until the end of March, 1959, which is the start of the hot weather, when dust, heat, and flies render camping difficult, and as facilities for investigating the problems were somewhat restricted due to the short notice given, the duration of the survey was not extensive. Sufficient time was, however, found to spend two and a half weeks in the Rapti Valley, to traverse almost the whole area, to visit typical localities within the rhinoceros area, both inhabited and uninhabited by rhinoceros and to obtain first-hand information about the administrative and ecological aspects of the problem.

Having had considerable experience of the Great Indian rhinoceros and its preservation in Assam and Bengal, I found it most interesting to study the same animal and its habitat in Nepal—where conditions turned out to be very different from those in India.

II. GENERAL REVIEW AND SUMMARY OF REPORT

The rhinoceros area in Nepal covers approximately 1,250 square miles, comprising the valleys of the Rivers Narayani, Rapti, and Reu. Although it is *dun* * country, it contains most of the sub-tropical vegetation usually associated with *terai* country, and can roughly be divided into (1) riverain, (2) grassland above flood level, and (3) *sal* forest. The hills are almost entirely under *sal* (*Shorea robusta*), a valuable hardwood.

* A glossary of local terms appears on page 85.

During the cold weather months from November to April, the rhinoceros live mostly in the thick tree and scrub forest of the riverain tracts, whereas in the rainy season from June to September, many of them move away from the partly flooded riverain tracts into grassland or forest. Competition between human settlers and wild life for the grassland area has reached a critical stage, in which wild life has retreated further and further into the unexploited parts of the area and into the thick riverain scrub forest.

As the result of many years of being shot both by sportsmen and poachers and of being driven by villagers from cultivated areas, the rhinoceros of Nepal has adopted a mode of existence and a temperament different from those observed in north-east India, where, during the present century rhinoceros have been strictly protected in their natural habitat. In Nepal they have become nervous, frightened of the sight of human beings, and almost entirely nocturnal. A number of years of strict protection and the allocation of "living space" in riverain and grassland tracts are needed to enable them to settle down to a normal and peaceful existence.

Poaching remains a serious problem, although the rhinoceros receive much protection from the thick cover, which is not their real habitat, and from the Rhinoceros Protection Department. But a more serious problem is that of increased and increasing influx of both authorized and unauthorized human settlers from the hilly regions of Nepal into the plains which form the rhinoceros area.

I consider that the position is not nearly so hopeless as recent reports had made it out to be, and that in spite of poaching, the number of rhinoceros is in the region of 300.

The Nepal Government has wisely constituted a national park and has plans for a wild life sanctuary. But unfortunately, the national park in its present form is not an ecological unit in which the animals would have full scope to behave normally, nor is it of sufficient area to include a reasonable amount of rhinoceros habitat and their lines of seasonal and local migration. Apparently the wild life sanctuary now proposed by Government would not enjoy the permanency so necessary for nature conservation. While immediate human needs of land for cultivation and grazing are paramount, the essential long-term need for water and soil preservation and for a specified area to be set apart for the preservation of wild life in its natural habitat, as a wise form of land-use, must not be lost sight of. It is not too late for these very necessary steps to be taken. The area pro-

posed in Section VIII of this Report, to be added to the present national park, contains the greatest possible number of rhinoceros in their natural habitat. At the same time it is almost entirely free from human occupation and consequently there would be a minimum of administrative work.

III. HISTORY OF THE AREA

The present rhinoceros areas of Nepal, in fact the whole of that country, have been up till recent times a closed book to foreigners. Visits by outsiders were discouraged, even forbidden. Perhaps the first foreigner to tour in the Nawalpur, Chitawan, and Reu Valley areas was Mr. E. A. Smythies, who during World War II, was Forest Adviser to the Nepal Government. In the course of his duties Smythies visited almost all the sub-montane tracts along the 500 mile *sal* belts of the Nepal *terai*.

There is some historical evidence that the Rapti Valley, as Chitawan is usually known, was once much more thickly populated than at the beginning of this century, and it is possible that malaria was the chief reason for any subsequent depopulation of the area.

The Rapti Valley has remained closed even to most prospective Nepali settlers, not only because of malaria, but because it was strictly protected as the special shooting preserve of the rulers of Nepal, whose huge camps and elephant beats were known the world over. Up till recent years almost the only people living in the area were simple "Plains Nepalis"—the Tharus, who appear to have become immune to malaria and who incidentally provide practically all the elephant drivers of that country. These people also provided the labour required for making rough cross-country tracks in the dry cold-weather months and for preparing shooting camps.

A special department of armed men has existed for many years to protect the rhinoceros, tiger, and other game. At the time of my visit it consisted of: 1 Commander (Captain), 1 Assistant (Lieutenant), 4 Subedars, 24 Havildars, and 122 Rhino Guards.

Mr. E. A. Smythies in his book, *Big Game Shooting in Nepal* (1942), and his wife Olive, in her *Tiger Lady* (1953) speak in glowing terms of their trips to the Narayani, Rapti, and Reu valleys in the years 1941–1945. They found that, whereas in the rest of the Nepal *terai* there was practically no game left, here was still a sportsman's paradise, with uncounted numbers of rhinoceros and other big game, and comparatively unspoiled habitat.