

Threatened Species of Rhinoceros in Tropical S.E. Asia

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SUMMARY

The author presents the most recent reports on the status of the three species of Asian rhinoceros – Javan, Sumatran, and Great Indian – and reviews the reasons for the decline in their numbers. While the World Wildlife Fund conservationists appreciate the need for urgency in the rhino projects, they have regrettably made little progress thus far, due to lack of funds.

An extensive annex presents illustrations, and a refutation of the belief in the aphrodisiac qualities of the rhino horn.

INTRODUCTION

There are in all five species of rhinoceroses two of which live in Africa and three in Asia. The following report deals only with the latter – the Great Indian rhino (*Rhinoceros unicornis*) the Javan rhino (*Rhinoceros sondaicus*) and the Sumatran rhino (*Dicerorhinus sumatrensis*). (See Annex 1.) Since we know of the actual situation of these rhinoceroses in Asia only by hearsay, part of this paper may be incorrect: we would appreciate any suggestions for improvement.

HISTORY

It should be pointed out that although the African rhinos are relatively young compared with the Asian ones, all rhinoceroses can be traced far back into the Tertiary, the Great Indian and Javan to the Upper Pliocene (approximately 5 to 7 million years B. C.), and the Sumatran rhino, even to the Upper Oligocene (approximately 30 million years B. C.) (In comparison the African rhinos date only to the early Pleistocene - approximately one million years B. C.) There are few other mammals, as far as we know, that can be traced back continuously to such a date. This fact alone justifies all efforts to prevent the extinction of the Asiatic rhinos.

We know so little about the biology of these unique rhinos that we are in no position to say if the population has reached a figure below which we cannot save the species. There is no doubt, however, that it is a seriously threatened species as the following figures of existing Asiatic rhinos deduced from reports show:

Javan rhino	40
Sumatran rhino	150 - 170
Great Indian rhino	675

REASONS FOR DECLINE

There are several reasons for the alarming decline in the numbers of the Asiatic rhinoceroses which has occurred in the last hundred years.

Poaching

Poaching still goes on to a very large extent! There is a tendency for people to think that poaching is an insurmountable problem. It is, of course, nothing of the kind, for good management on the part of conservation personnel together with the encouragement they deserve from higher authorities can bring about an entirely satisfactory level of control, as has been shown in southern Africa.

The most appalling drain on the Asiatic rhino population has come through the wanton killing of the animal for its horn, believed by the Chinese and other Asiatic populations to have powerful aphrodisiac properties. The amount of money received for one horn can be more than a lifetime's normal wages of an ordinary worker. The failure by western conservationists to break down these erroneous beliefs may be because we do not understand the correct way to go about the conversion. It is hoped, therefore, that the proper method of halting these flights of imagination will be put into effect by conservationists who live in the East. In view of the importance that is being attached to the rhino horn, I have considered it necessary to add a short paper on its uses which may help towards a better understanding of the problems involved. (see Annex 2.)

Technical Improvement of Firearms

As recently as 175 years ago the rhinoceros was considered invulnerable and the only mammal without enemies. (See Buffon, 1750 and 1804). The improvement of firearms during the last century has now made the rhinoceros one of the easiest of the big game animals to kill.

Increase in Human Population

The explosive increase in human population results in constant demands for increasing farmland. This in turn leads to a considerable reduction of the natural habitat of the rhinoceros with all its implied consequences. Some pessimists say that the increasing human population and what it entails means the inevitable loss of the species. This of course is plain nonsense and entirely overlooks such vital factors in the development of a country as proper planning for recreation and tourism. Selected areas of natural habitat should be set aside in perpetuity as natural reserves and in these the retention of the rhinos presents no problems. There are many examples in Africa of animals and reserves bringing immense revenues to the countries fortunate enough to possess them.

Insufficient Nature Conservation Control

Control in many wild life sanctuaries at the present time is inadequate, largely because insufficient sympathy, understanding, and encouragement are given to the conservation officers. Control is not difficult when it is in the hands of men dedicated to the protection of wild creatures, and men of that caliber come readily to the fore when a wildlife department is being properly administered. There are some who consider that the considerable sums necessary to maintain a sound conservation organization represent money badly spent. Little thought, or regard to the lessons which can be learned from others, is needed to appreciate that few investments result in such great return, much of it often of a quite imponderable nature. In tourism alone it has to be remembered that those who flock to see wildlife in its natural habitat contribute immense sums to other branches of the country's economy during the course of their stay.

ACTUAL SITUATION OF THE THREE ASIATIC RHINOS

Javan Rhinoceros

Dr. Lee Talbot (1965), in carrying out a survey of the Ujung Kulon Reserve at the request of the Indonesian Government with particular attention to the Javan Rhino, reported that there were still rhino, probably several dozen though the number might well be less, living in the reserve. At the time of the survey no young were found, but since that time one juvenile rhino at least has been seen. What is urgently needed is a distribution and status survey, for it is impossible to develop sound plans for the future without possession of precise facts. There has been some poaching and neglect in the Reserve but all things considered it is still in remarkably good condition.

To assure the survival of the species:

1. reproduction must be assured, and
2. the Reserve must received adequate protection.

Sumatran Rhinoceros

Lord Medway (1965) reported that a small number of Sumatran rhinos survive wild in the hilly regions of north and north central Malaya and in addition a small group, including a juvenile, have lived for five years in the Ulu Bernam Forest Reserve in Selangor. The small population of rhinoceroses is severely threatened and only immediate action can save them.

In the case of this species also, the vital thing is for an early biological survey which happily the Malaysian authorities have already embarked upon.

Great Indian Rhinoceros

Mr. E. P. Gee (1964) reports that there are 185 rhinos in Nepal, 65 in Bengal, and 375 in Assam, a total of 625 (see Annex 3.).

Although the rhinos in India are completely protected, they are constantly under great pressure from a rapidly increasing population. It is encouraging to learn from a report by Mr. Richard Willan, Katmandu, Nepal, with regard to a rhino sanctuary there, that all the villages in the area were moved out, involving a resettlement of some 4000 people so the whole place is free of settlement. There have been no reports of poaching, and rhinos have been seen in some numbers there recently.

It is up to the conservationists to assist the Government in convincing the people that the rhinos alive are a great asset as a tourist attraction and thus can help to increase the country's revenues considerably.

WORLDWIDE CONSERVATION EFFORTS

The dangerous situation which is facing virtually all of the rhinoceros species is well known at IUCN headquarters, and it has been the subject of much discussion at repeated meetings of the SSC. The urgency of the problems associated with the various rhinos has also been conveyed to the WWF, with the result that various projects have been prepared for inclusion in what is known as the Green Book. There are numbers of projects detailed in the Green Book and six are listed in Annex 4.

Although the various rhino projects have for the most part been granted an 'A' priority, because Trustees of the WWF fully appreciate the urgent need for carrying them out, it has regrettably to be reported that they have not yet made much progress. WWF has many commitments and it has so far proved most difficult to obtain those very considerable contributions necessary to fulfill them all. Many organizations have been very helpful and it should be put on record that among them the Fauna Preservation Society has been most positive and generous in its assistance: its Hon. Secretary, Mr. Fitter, has also been most helpful and interested in all problems associated with saving the rhinos.

Acknowledgements:

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THE CLASSIFICATION OF THE RECENT RHINOCEROSES

after G.G. Simpson, publ. 1945

Order PERISSODACTYLA

Suborder CERATOMORPHA

Superfamily RHINOCEROTOIDEA

Family RHINOCEROTIDAE

Subfamily RHINOCEROTINAE

Genus RHINOCEROS Linnaeus

Species *Rhinoceros unicornis* (Linnaeus 1758), Great Indian Rhinoceros

Species *Rhinoceros sondaicus* (Desmarest 1822), Javan Rhinoceros

Subfamily DICERORHININAE

Genus DICERORHINUS Gloger

Species *Dicerorhinus sumatrensis* (Fischer 1814), Sumatran Rhinoceros

Genus CERATOTHERIUM Gray

Species *Ceratotherium simum*

Subspecies *Ceratotherium simum simum* (Burchell 1817), Square-lipped Rhinoceros (South African typical race)

Subspecies *Ceratotherium simum coltoni* (Lydekker 1908), Square-lipped Rhinoceros (Northern subspecies)

Genus DICEROS Gray

Species *Diceros bicornis* (Linnaeus 1758), Black Rhinoceros

THE RHINOCEROS HORN

The horn of the rhinoceros differs considerably from all horns that can be found in other mammals. This can readily be seen from Fig. 1.

The Rhinoceros Horn is actually no horn at all, but is made up similarly to the skinhorns (Cornu Cutaneum) (see Fig. 2) that are found as pathological growths frequently in other mammals including *Homo sapiens*.

This alone is ample proof that it cannot act as an aphrodisiac since the horn is comparable to the epidermis which definitely can never contain sexual hormones such as testosterone. The widely spread belief in the mechanical effects of the ground horn and the very sharp small hairy parts it contains is based on an absolutely false theory. When taken in any form, the ground horn therefore being discharged as urine through the penis, will have been completely dissolved on passing through the stomach into the kidneys and from there into the gall bladder. All hairy parts that may have been contained in the original food will on their long way be chemically dissolved.

The conclusion to be drawn is this – that from all scientific considerations it is clear that the rhinoceros horn cannot act as an aphrodisiac. This holds true for the horns of all rhinoceros species. The known difference in price between the horn of the African and the Asiatic species is without any foundation.

ANNEX 3

ESTIMATE OF NUMBERS OF GREAT INDIAN RHINOCEROS
(from Mr. E. P. Gee, November 29, 1964)

Nepal		185
Bengal Jaldapara	60	
Gorumara	<u>5</u>	65
Assam Kaziranga	275	
Laokhowa	25	
Orang	12	
Manas	15	
Sonarupa	5	
Elsewhere	<u>43</u>	<u>375</u>
Total		625

ANNEX 4

WWF Project Book (Green Book)

C Asian Series

No. 11/1964 (Potential)

Title of Project:

Asiatic Rhinoceros species

A study trip to Assam, Nepal, Sumatra,
Borneo and Java

No. 47/1962 C/I/9 (Full)

Great Indian Rhinoceros

Ecological survey in northeast India

No. 73/1963 C/I/12 (Full)

Sumatran Rhinoceros

Ecological study in Malaya

No. 87/1963 C/II/3 (Full)

Rhinoceros Sanctuary, Chitawan dist., Nepal

Purchase of a jeep and a motorboat

No. 120/1964 C/II/4 (Full)

Ujung Kulon Nature Reserve, Java

Purchase of vehicles and equipment for the
Javan Rhinoceros Conservation Program

No. 145/1964 C/I/15 (Full)

Javan Rhinoceros

Ecological survey of the species and its habitat

No. 173/1965 C/I/18.1

Wildlife of India

Surveys of the Great Indian Rhinoceros, the
Kashmir Stag and the Fauna of the Corbett
National Park, India

The Various Horns

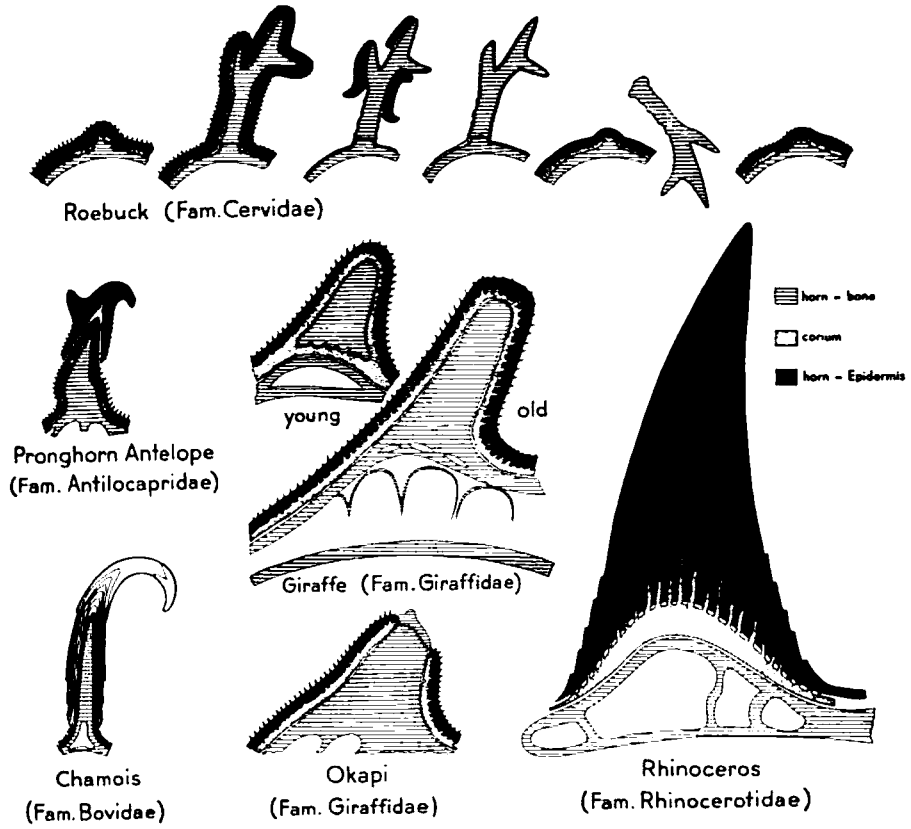


Fig. 8

Cross Section Through Rhinoceros Horn

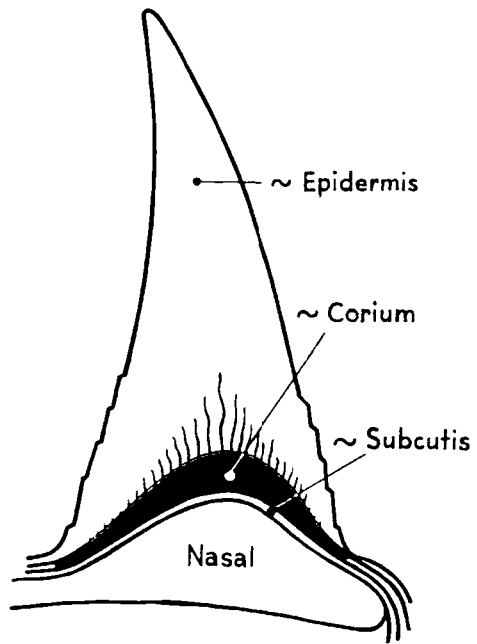


Fig. 9