

## SCIENCE.



## TRAIL OF ASIATIC RHINOCEROS. ON THE By MAURICE BURTON, D.Sc.

In mid-April, an American ecologist, Mr. Lee Merriam Talbot, left Brussels on an itinerary which will take him through Arabia, the Near East, Middle East, Southern Asia and Indonesia. His five-month mission is sponsored by the Survival Service of the International Union for the Protection of Nature. Its purpose is to survey the present status of some of the world's rarest animals. These include the Asiatic rhinoceroses, Arabian oryx, Syrian wild ass and the Asiatic lion. The wild ass may be already extinct, and of the rest, the rhinoceroses may be most nearly on the verge of extinction.

After the elephants, the rhinoceroses are the largest of the land animals. The five existing species, three Asiatic and two African, form a family of those

and is 14 ft. long. Its body appears to be covered with a blackish-grey granular armour-plate, an appearance due largely to the deep folds in the skin. the single horn is relatively short, measuring up to 2 ft. This species used to be widespread, living in dense jungle or long grass, where its retiring and inoffensive habits should have guaranteed a freedom from man's assault. The horn was, however, its undoing. Among Eastern rulers there was a tradition that a cup fashioned of rhinoceros horn would render a poisoned drink harmless. In China, the horn was reputed to have medicinal properties, and powdered it was highly valued. In addition, the flesh of the beast makes excellent meat, and

even its blood and its entrails have their value for some people. But the horn especially was the prize, worth at one time half its weight in gold. So the numbers of the species dwindled, and so did its range, until now its refuge includes only the deep jungles of Nepal and Assam, and possibly still parts of Northern Bengal. There, even while given official protection, it still goes down before the illegal killer, the poacher lying in wait at strategic points on the rhinoceros paths on moonlit nights. There are probably fewer than 300 alive to-day.

The second in size of the Asiatic rhinoceroses is the Javan (R. sondaicus). Up to 5½ ft. at the shoulder, with only the males carrying a horn, the longest known being a mere 5½ ins. As with the Great Indian rhinoceros, every part of the animal is prized by somebody, and the horn itself may fetch

spoken of as the Javan rhinoceros, its range formerly included Bengal, Assam, Burma, Siam, Indo-China, the Malay Peninsula, Java and Sumatra. An estimate made in 1937 was that only sixty-six Javan rhinoceroses survived in the whole of its range. In Burma, where it was officially protected, there were only six. To-day it is said that no more than twenty to forty are left, on a reserve at the western tip of Java. Elsewhere it has been poached out of existence.

The smallest of the three Asiatic species is the Sumatran, or two-horned, rhinoceros (R. sumatrensis): 4½ ft. high, it has a short, hairy coat. It is slightly more numerous than the Javan rhinoceros, but

everywhere it has been decreasing in numbers, and for the same reason as its related species. It is scattered in small groups in Sumatra, Borneo, the Malay Peninsula, Burma and Assam. Although its horn fetches no more than a tenth of that of the Javan rhinoceros, the latest estimate of numbers is fifty survivors.

One purpose of Mr. Talbot's mission is to study ways in which the International Union can co-operate with the Governments of these areas to secure the animals' preservation. There is probably no lack of the will to preserve, but unsettled human conditions are not the best medium in which to attempt the



DIFFERING FROM THE OTHER ASIATIC SPECIES IN BEING DIFFERING FROM THE OTHER ASIATIC SPECIES IN BELING
TWO-HORNED AND HAVING A COAT OF HAIR COVERING THE
BODY: THE SUMATRAN RHINOCEROS, OF WHICH PERHAPS
FIFTY INDIVIDUALS SURVIVE.

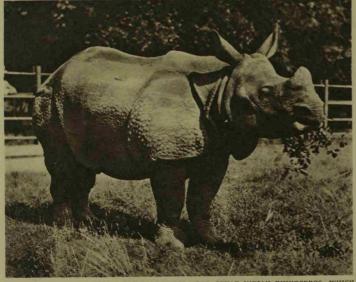
Photograph reproduced by courtesy of the Trustees of the British Museum
(Natural History).

preservation of wild life, especially such highly-valued members of it. The best hope for the future lies in dispelling the firmly-held local beliefs in the efficacy dispelling the firmly-held local beliefs in the efficacy of medicines and drugs made from the various parts of the rhinoceros, and especially the horn. Unfortunately, this ponderous, thick-skinned, unintelligent animal is too large to escape attention and valuable enough for poachers to risk detection in taking it. Even if poaching can be effectively suppressed there is always the darger that with the supplementary. is always the danger that, with the numbers reduced to such a low point, there is little chance of a recovery even under the most rigorous protection. Rhinoceroses breed slowly, having but one young at a birth, with a gestation period believed to be

between sixteen and eighteen

Five months is a short enough period for one man to investigate a half-dozen species of wild animals, even if they are large and spec-tacular. The mission is, never-theless, a welcome venture, and it is possible that, in addition to gaining an assessment of present numbers and formulating suggestions for better methods of protection, Mr. Talbot may return with information on the lives and habits of the beasts themselves. It has happened too often in the past that a species has been exter-minated by human agency, leaving us little more information than can be derived from an occasional dried skin or a few bare bones jealously guarded in museums. Our knowledge of the Asiatic rhinoceroses, and of the other animals Mr. Talbot has gone out to seek, is not so great that we can scorn to increase it, and we can look forward to reading his report

with interest.



THE LARGEST OF THE THREE ASIATIC SPECIES: THE GREAT INDIAN RHINOCEROS, THE LARGEST OF THE THREE ASIATIC SPECIES. THE OFFICEAL TRANSPORT OF THE WHITE RHINO OF AFRICA. IT HAS A SINGLE HORN AND ITS HIDE HAS THE APPEARANCE OF A GRANULAR ARMOUR-PLATE. FORMERLY WIDESPREAD IN SOUTHERN ASIA, THE INDIAN RHINOCEROS IS NOW FOUND IN NEPAL AND ASSAM, ITS SURVIVORS NUMBERING PROBABLY FEWER THAN 300.

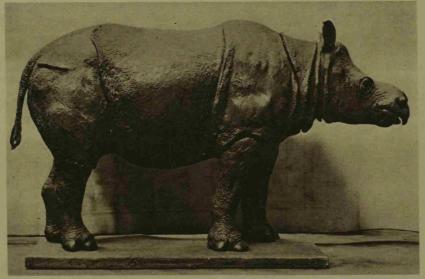
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hoofed animals known as the Perissodactyls, the other two families including horses, asses and zebras, on the one hand, and the tapirs on the other hand. The hoofed animals formerly grouped in a single order, the Ungulata, are now split into several orders, the two largest being the Artiodactyls, or cloven-hoofed animals, and the Perissodactyls, or odd-toed ungulates.

All rhinoceroses have three hoofed toes on each foot. They differ from other members of the order in being armed with the so-called horns on the muzzle. Indeed, their name is derived from the Greek, meaning nose-horn, but this characteristic feature is unlike the horns of the cloven-

hoofed cattle, antelope and deer. It has no connection with the skull, although the nasal bones beneath the base of the horn are thickened and roughened to provide support for it. And it is not horn in the strict sense. Microscopic examination has shown it to be composed of a highly compact, sould mass of hairy tissue, smooth on the outside, but showing what appears to be stout bristle like hair when frayed at the base. Without this horn a rhinoceros would be ill-protected, apart from the weight it can put into a charge. Its teeth are useful only for feeding, and consist of large cheek-teeth with grinding surfaces and a pair of incisors in both upper and lower jaws. There are no canines, and the two African species lack even the incisors.

The largest of the three Asiatic cies, the great Indian rhinoceros (Rhinoceros unicornis) is only slightly smaller than the African white rhinoceros (Ceratotherium simum), the largest of all. It reaches 6 ft. 4 ins. at the shoulder



ANOTHER ASIATIC SPECIES OF WHICH ONLY A SCORE OR SO REMAIN: THE JAVAN RHINOCEROS, WHICH HAS BEEN POACHED ALMOST OUT OF EXISTENCE, MAINLY FOR THE SAKE OF ITS HORN. Copyright photograph Zoological Society of London.