



THE WORLD OF SCIENCE.

FURTHER NOTES ON RHINOCEROS.

By MAURICE BURTON, D.Sc.

IT was on this page on May 7 last that I committed myself to the opinion that without its horn a rhinoceros would be ill-protected, and that its teeth are useful only for feeding. That seemed to me a reasonable enough assumption. In fact, I suppose we may say it is the accepted view that the horn of a rhinoceros is a weapon of some sort, of offence or defence, or both. Such a view is further supported by the absence of canine teeth, which usually furnish the fangs or tusks. Admittedly my acquaintance with rhinoceroses in a belligerent mood is limited to seeing brief camera shots of them charging. However, so far as one out of the five living species is concerned, the truth appears to be that the horn is seldom used in offence or defence. For this information I am indebted to Mr. E. P. Gee, and I am glad to have the opportunity of passing on what seem to me his particularly interesting observations. Mr. Gee, writing from Assam, describes himself as an "amateur" field naturalist who has spent twenty years studying the habits of the rhinoceros, particularly the great Indian rhinoceros (*Rhinoceros unicornis*).

I described the great Indian rhinoceros as living in jungle. My information now is that "it lives almost entirely in grassy, swampy areas." I also described it as on the verge of extinction—again my information was from standard sources—but Mr. Gee tells me that his latest estimate, based on personal observation in Bengal and Assam, and on hearsay for Nepal, is as follows: for Nepal 48 (?), for Bihar (near Nepal) 2, for Bengal 43, for Assam 347, making a total of 440. Moreover, this rhino is very strictly protected by law in Bengal and Assam, wherever it is found, and the State Governments of Bengal

scrap with each other. These cuts are generally on the shoulders, neck, etc., and even the ears are often torn with this biting."

Some of the original reports on which this generalisation is based, as well as many valuable notes on the breeding, life-histories and habits of the



PRECEDED BY HER YOUNGSTER: A FEMALE GREAT INDIAN RHINOCEROS MAKING HER WAY ALONG ONE OF THE RHINO PATHS THROUGH A GRASSY AREA IN ASSAM.

great Indian rhinoceros, are contained in accounts contributed by Mr. Gee to the "Journal" of the Bombay Natural History Society (Vol. 51 (2), p. 341, and Vol. 51 (4)). The first of these, for February 7, 1953, tells of E. R. Dungan taking ciné shots of two rhino, known locally as *Romeo* and *Juliet*. The pair

were playing, courting and chasing one another. With Mr. Dungan were two companions, one of them the Assistant Conservator of Forests. We are not told whether it was a Montague or a Capulet which started the trouble on this occasion, but one of them, *Romeo* or *Juliet*, suddenly started



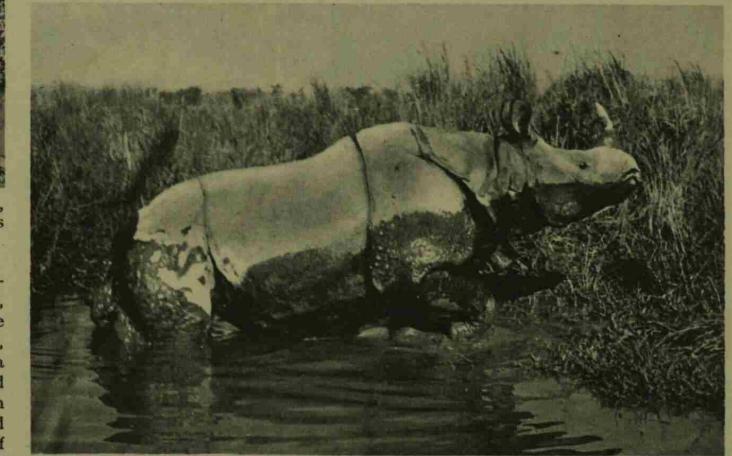
EMERGING FROM A STREAM: THE GREAT INDIAN RHINOCEROS (*RHINOCEROS UNICORNIS*), SHOWING THE ARMoured APPEARANCE WHICH IS SO CHARACTERISTIC A FEATURE OF THIS SPECIES. THIS RHINO IS STRICTLY PROTECTED IN BENGAL AND ASSAM.

and Assam, as well as the Government of India, are very strict in the matter of its preservation. In the Kaziranga Sanctuary of Assam, especially, it is actually increasing, and the latest estimate of its numbers there (included in the total given above) is that these are not less than 250.

The very appearance of a well-developed and well-kept rhinoceros horn is alone sufficient to suggest a deadly weapon. The upper part, especially, is flattened, pointed and sword-like and, in the natural state, is kept beautifully polished. It is this habit of polishing the horn, by rubbing it on any convenient hard surface, that leads presumably to the zoo-kept animals rubbing it down to a mere stump—the excessive use of a natural habit induced by the boredom of captivity, possibly. At all events, Mr. Gee is quite categorical that in offence and defence, the rhinoceroses "use the tusks in the lower jaw which are very sharp (also, to a lesser extent, the tusks in the upper jaw) and do their fighting and attacking, and defence, chiefly by biting. This has been observed several times, and can be seen by the gashes, cuts and tears on the upper parts of the bodies of rhino themselves when they

chasing the Assistant Conservator, a young man, who "ran as fast as he could over the dry ground, but the rhino put on a sudden burst of speed and easily caught up. With the impact of the nose and mouth on the shoulder of the A.C.F., the latter fell headlong and broke his collarbone. The rhino then quietly departed without attempting further pursuit."

Another incident reported is of a villager who had placed some fish-lines in the shallow stream forming the southern boundary of the sanctuary. "One day he was inspecting these fish-lines. While his dug-out boat was being pushed through the thick water hyacinth it actually struck a rhino which was resting unobserved in the water. The rhino rose up, put its foot through the bottom of the boat and



IN ITS NATURAL HABITAT: THE GREAT INDIAN RHINOCEROS LEAVING A FAVOURITE WALLOW IN A GRASSY, SWAMPY AREA.

The natural habitat of the great Indian rhinoceros is the grassy and swampy areas of India and Assam. It is sometimes said that this rhinoceros inhabits jungle, but as Mr. E. P. Gee points out (quoted by Dr. Burton in his article on this page) this is not so. Mr. Gee is a member of the Executive Committee of the Indian Board for Wild Life and Honorary Regional Secretary for the Eastern Region of the Indian Board for Wild Life.

Copyright photographs by E. P. Gee, of Assam.

is that the rhino was galloping alongside and had to turn its head towards the elephant, and so only one tusk came into contact. The head at this oblique angle making only one gash may have led many people to believe formerly that the horn was used, whereas the tusks were used, only one doing the injury."

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inflicted an injury on the man with one of its lower tusks, causing a gash 6 ins. long on the thigh."

Two other instances are also worth recounting. Both were reported by an Assistant Conservator of Forests in the Laokhawa Reserve. The first victim was an Assistant Forester who, in the course of his duties, found himself face to face with a full-grown rhino. ". . . he [the Assistant Forester] was pacing backwards, fixing his eyes on the rhino, which was so long looking at him curiously; and hardly had he paced back about six steps when the rhino rushed forward and pushed at his right knee with his mouth. After two pushes, the Assistant Forester fell down on his buttocks on the thatchy ground. He raised his two legs and kicked at the rhino's mouth and at the same time screamed out. The rhino paused for a moment and then walked back about 15 ft. from the forester. Thinking that the rhino had left, the forester got up instantly to run. But lo, the rhino stopped and looked back when it saw that the fellow had got up and the rhino again rushed him. Surprisingly enough, this time also he knocked the Assistant Forester on the same knee and got him down. . . ."

The second incident, also described in the words of the Assistant Conservator of Forests, tells how, in the same reserve, on another day, two men were cutting thatch.

"A rhino's path in the forest is just like a footpath. You can quite easily go on such a path, even if it is in a very dense, thatchy area. The men were cutting thatch just near a rhino's path. They could hear nothing, as the sickle made a sound with the thatch which could easily submerge other sound. They were engrossed in their work cutting the thatch, leaning forward with their haunches up, when suddenly they got a tremendous knock on the buttocks and both of them fell on their faces. . . ."

In a subsequent letter, dated July 28, 1955, Mr. Gee tells me: "There was recently another case of a rhino using its tusks (and not its horn) in attack. An enraged mother rhino left its small calf and charged one of the elephants which were being ridden by some visitors. It chased one of the elephants and easily caught up. Galloping alongside, it gashed the elephant's flank with one of its tusks, making a wound 1½ ft. long and 2 ins. deep. The incident was observed by several people. The horn was not used at all. The reason for one gash, and not two,