THE MUSEUM OF NATURAL HISTORY.

WITH INTRODUCTORY ESSAY ON

THE NATURAL HISTORY OF THE PRIMEVAL WORLD.

BEING A POPULAR ACCOUNT OF THE
STRUCTURE, HABITS, AND CLASSIFICATION OF THE VARIOUS DEPARTMENTS OF

THE ANIMAL KINGDOM.

QUADRUPEDS, BIRDS, REPTILES, FISHES, SHELLS, AND INSECTS.

INCLUDING THE INSECTS DESTRUCTIVE TO AGRICULTURE.

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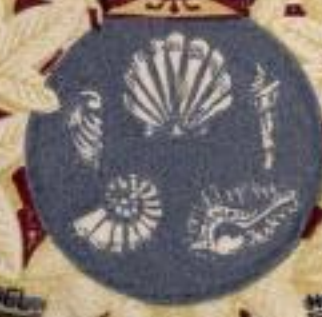

MAMMALIA.

Order Pachydermata.

Genera. Rhinocerus, Hippopotamus, Tapirus.

Families { Rhinocerida.
Hippopotamida.
Tapirida.

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Rhinocerus unicornis.—Indian Rhinoceros.

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probability saved my life, for, at the same instant, the trunk of the enraged animal descended precisely on the spot where I had been previously couched, sweeping away the stones, many of large size, that formed the fore part of my skärm, like so many pebbles. In another moment his broad fore-feet passed directly over my face. I now expected nothing short of being crushed to death; but imagine my relief when, instead of renewing the charge he swerved to the left, and moved off with considerable rapidity—most happily without my having received other injuries than a few bruises, occasioned by the falling of the stones." Notwithstanding all this, Mr. Andersson snatched up another rifle, and, taking aim, pulled the trigger, when the piece missed fire; had this happened in the first instance, nothing could have prevented his immediate destruction!

FAMILY II.—RHINOCERIDÆ.

The Rhinoceroses are at once recognized, not only by their peculiar solitary or double horns, but also by their thick, scabrous, tuberculated skin, which, falling into distinct folds over various regions of the body, resembles an artificial defensive armature. The horns are strictly integumentary, being composed, as it were, of numerous bristles firmly bound and incorporated together. The head is much elongated; the jaws supporting, in young individuals, thirty-six teeth, that is, eight incisors and twenty-eight molars. Of the latter, those in the upper division have subquadrate crowns, surmounted by two transverse ridges; whilst the crowns of the lower series are narrower, more elongated, and marked by curved lines, whose concavity is turned inwards. The superior incisors are much compressed, and directed obliquely forwards; those of the lower jaw being large and pointed. The outer incisors above, and the two inner below, are very small and concealed. Among the principal skeletal peculiarities, we may mention the remarkably thick, rough, elevated, and arched nasal bones, the general massiveness of all the osseous elements, the presence of nineteen pairs of ribs, the complete development of the ulna and fibula, the forked spine of the pelvis, and the existence of only three series of digital phalanges. The digestive canal is about eight times as long as the entire body. Rhinoceroses feed upon coarse herbage, and are natives of the warmer regions of the Eastern hemisphere.

THE INDIAN RHINOCEROS (*Rhinoceros Indicus*) is the species best known—Plate 25, fig. 80—and was formerly termed *R. unicornis*, in contradistinction to *R. bicornis;* but, as Van der Hoeven has very justly remarked, these terms ought no longer to be retained, because we are now acquainted with six or seven distinct species, two of them being furnished with a single horn each, and the others with two horns. The species under consideration enjoys a pretty extensive range in Eastern India, Siam, and Cochin China, being especially abundant on the borders of the Ganges. It is chiefly found in dense jungles and shady forests, far from the haunts of man. It is remarkably savage, and attacks elephants without the slightest compunction; and seems to take a wanton delight in destroying every living creature that comes within its reach. This animal has a singular habit of dunging in one spot; and these high dung-heaps, while they serve the purpose of indicating to other animals that danger is nigh, also afford to the native sportsman a means of guiding him as to the best spot for erecting platforms from which he secures his victim. The skin of the Indian Rhinoceros, when dried, will take a high polish, and as it is more or less capable of resisting the force of a leaden bullet, fetches a high price; the fat is also much used by the native doctors as an unguent.

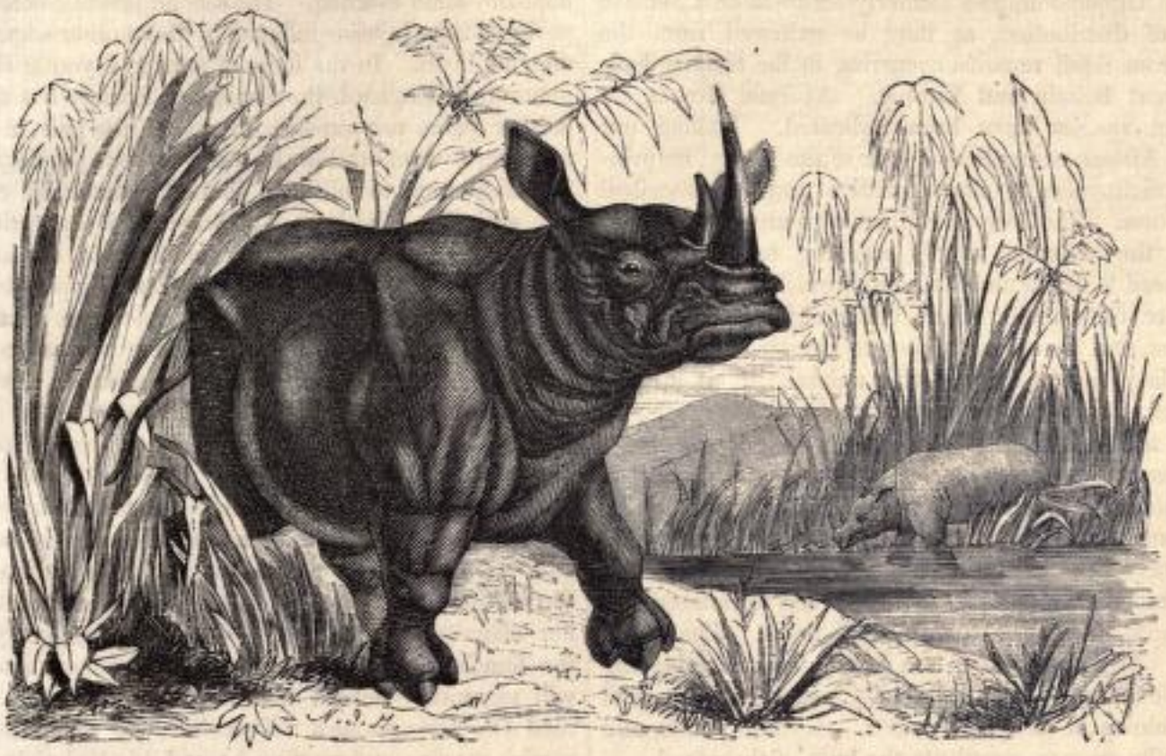
THE JAVANESE RHINOCEROS (*Rhinoceros sondaicus*) also possesses only a single horn. It is distinguished from the preceding, however, by the comparatively slender head, by the proportionally elevated legs, by the character of the dermal armour, consisting of numerous polygonal scutes, whose centres are depressed and give origin to short bristly hairs, the ears being also bordered by long, stiff, and closely-set bristles. The tail is hairy underneath. By the Javanese this animal is also called the *Warak*, and it is sometimes described as *Rhinoceros Javanus*, a title given to it by F. Cuvier; the one here adopted being that employed by Baron Cuvier and Dr. Horsfield. According to the latter, the Warak is gregarious in its habits, and forms deeply excavated retreats along the declivities of mountains and hills. It does not appear to possess the ferocious character of its Indian congener; but at nighttime it frequently causes serious damage to coffee and pepper plantations.

THE SUMATRAN RHINOCEROS (*Rhinoceros Sumatrensis*) possesses two horns, and was formerly confounded with one or other of the African species. The posterior horn is very short, conical, and placed a little before the eyes. The hide is rough and slightly provided with hairs; the foldings of the skin being quite inconspicuous. It is shy in disposition, and is seldom seen near the haunts of men.

BRUCE'S RHINOCEROS (*Rhinoceros Africanus*) is the form most commonly known in Africa, and is more frequently described under the vague titles of the African and the Two-horned Rhinoceros. It is the *Gargatan*, or *Rhinaster* of the Cape Colonists, the *Chukuroo* of the Matabili, and the *Borele* of the Bechuanas. Neither of the horns are of very great length, the posterior one being comparatively short; both have a greenish-brown tint. The hide exhibits a yellowish-brown colour, being fleshy underneath, and not furnished with folds. The tail is about two feet long, and bristly at the tip. The habits of Bruce's Rhinoceros closely resemble those of the Indian species. It is remarkably savage and dangerous to approach when wounded. Mr. Andersson mentions an instance where some Namaquas had shot one of these animals as it was rising from its sleep. One of the party, imagining it to be dead, approached, mounted, and stabbed the carcase. "The beast, however, had only been stunned; and as soon as he felt the cold steel enter his body, he started to his feet and made off at full speed. This action was so instantaneous as to prevent the man from dismounting, whilst the other Namaquas were paralyzed with fear. Fortunately,

however, after the beast had run forty or fifty paces, he suddenly stopped short, and looked round. The favourable opportunity was not lost; for one of the party, more courageous than the rest, instantly fired, and, as good luck would have it, brought the animal to the ground with his terror-stricken rider clinging to

Fig. 70.



Burchell's Rhinoceros (Rhinoceros simus).

his back." The same distinguished traveller remarks, that when the Rhinoceros is shot, it usually falls forward on the knees, and not on its sides—a result which seems explicable from the great breadth of the body combined with shortness of the limbs. The Gargatan feeds on the shoots, roots, and young branches of the wait-a-bit thorn.

SLOAN'S RHINOCEROS (*Rhinoceros Keitloa*) is better known as the Keitloa, and easily distinguished by its horns, which are nearly of equal length; the anterior horn being cylindrical, and curved backwards near the tip; the other compressed and almost straight throughout. The hide exhibits a brownish-yellow colour, pretty closely resembling the above; but there is a black mark on the inside of the thigh. Both these species are commonly termed "black," in contradistinction to the two succeeding white species. The Keitloa is an extremely morose, sulky, and savage beast, and when wounded becomes perfectly maddened with rage. Mr. Andersson nearly lost his life by the repeated attacks of a female, whose leg he had broken by a shot. One of her horns ripped up his right thigh from near the knee to the hip; and having sustained at the same time severe bruises and internal injury, his ultimate recovery was only effected after prolonged and painful suffering. The Keitloa is very swift of foot. Notwithstanding their apparent ungainliness, all the rhinoceroses possess the power of rapid progression to a greater or less extent.

BURCHELL'S RHINOCEROS (*Rhinoceros simus*) is known as the White Rhinoceros, or the *Witte Rhinoceros* of the Cape Colonists; being also termed the *Chicore* by the Matabili and *Monoohoo* by the Bechuanas (fig. 70). It is distinguished from the foregoing, not merely by the pale whitish-brown colour of the hide, but more particularly by the remarkable elongation of the head, which measuring about four feet from the muzzle to the ears, nearly equals one-third of the entire length of the body! It is also further characterized by a much greater bulk and size, as compared with the above; the nose being likewise square-shaped. The full-grown anterior horn is three feet in length, sharp at the point, and curved backwards. The disposition of this species is comparatively mild; and, unlike that of its black congeners, its food consists entirely of grasses.

OSWELL'S RHINOCEROS (*Rhinoceros Oswellii*) was, in the first instance, scientifically indicated as a distinct species by Dr. J. E. Gray of the British Museum. By the Bechuanas it is termed the *Kobaaba*. In point of size and general appearance, this animal closely resembles the foregoing; but, observes Mr. Andersson, "it is with regard to their horns that the two species chiefly differ from each other; for whilst the anterior horn of the monoohoo has an average length of two or three feet, curving backward, that of the Kobaaba not unfrequently exceeds four feet, and is slightly pointed forward, inclining from the snout at an angle of forty-five degrees. This rhinoceros is also the rarer of the two, and is only found in the more interior parts of South Africa." The posterior horn is about a foot long, short, conical, broad at the base, and narrow at the

tip; the extremity of the anterior horn being sharp, and worn away in front by friction on the ground.

FAMILY III.—HIPPOPOTAMIDÆ.

The Hippopotamuses formerly occupied an extensive area of distribution, as may be gathered from the numerous fossil remains occurring in the tertiary beds of Great Britain and Europe. At least five or six distinct species have been indicated. Taking our living African example as a type of the family, its principal distinguishing characteristics may be described as follows. The body is clothed with an almost naked skin; the abdomen nearly reaching to the ground. The head is broad and flat, and furnished with thirty-eight or forty teeth; there being eight incisors, four canines, and from twenty-four to twenty-eight molars, according to the age of the animal. The inferior incisors project horizontally forwards, the central pair being the longer. The worn crowns of the large canines are perfectly smooth and opposed vertically. The posterior molars are large and complicated. The ears are remarkably short; the head terminating anteriorly in a broad, abrupt muzzle, whilst the nostrils are much elevated. The feet are tetradactylous, the digits being armed with small hoofs. The tail is short. Hippopotamuses are heavy, awkward-looking animals on land; but they display a singular agility and gracefulness of motion in water. Aquatic plants, and especially grasses, constitute the bulk of their food.

THE HIPPOPOTAMUS (*Hippopotamus amphibius*)—Plate 25, fig. 81—is an animal which has always been regarded with considerable interest, although its uses to man are not of the highest order. It is familiarly known as the River-horse; and is the *Barnick* of the Nubians, the Sea-cow or *Zee-Koe* of the Cape Colonists, and the *Imfooboo* of the Caffres and Matabili; it is probably also the Behemoth of sacred history. A full-grown male Hippopotamus sometimes attains a length of nearly twelve feet, whilst the girth of its body measures scarcely less. The hide exhibits an inky-brown colour generally, being at the same time more or less tinged with a fleshy redness about the mouth and inferior parts. The latter tint is very marked in young individuals. The habits of this extraordinary creature have been studied from the earliest times, and almost every African traveller of modern date has contributed something to our knowledge of its powers. Burchell, Burckhardt, Harris, Smith, Cumming, Livingstone, Andersson and others, have witnessed its sportive wiles in the reedy streams of its native land; whilst at home naturalists have been amply rewarded by watching the behaviour of the two fine examples preserved in the Zoological Society's Gardens, Regent's Park. The Parisians enjoy a similar advantage at the Jardin des Plantes of the French capital, and they have even witnessed the birth of two young; but on both occasions the jealous mother sacrificed her much admired offspring! The first was born in May 1858, and its death resulted, perhaps, rather from accident than intention; for, we are informed, that after swimming about a while it attempted to get on dry ground; but the descent from the sleeping apartment into the bath not being sloped, it experienced some difficulty in raising itself from the water; and whilst the mother was engaged in assisting it to clamber up the steps, she bruised and otherwise injured the body to such an extent that the poor little creature died the same evening. The second juvenile behemoth perished from injuries inflicted by the mother some days after its birth. In the hope of rearing a young Hippopotamus in England, the Zoological Society has spared neither pains nor expense to render the pair in their menagerie comfortable in each other's society. It is satisfactory to observe that the favoured couple live amicably together; but whether it be owing to the chilling influences of our changeable climate, or to prudential motives resulting from hippopotamine reasonings, or to other circumstances which invalidate the procreative function—we believe we are correct in stating that no reciprocations of affection have yet appeared sufficiently demonstrative to afford a belief that the authorities in question are at present likely to be rewarded for their trouble. In the wild state these animals display extreme solicitude for their young, which they carry on their necks while in the water; and, as the calves cannot remain long submerged, the mother rises more frequently to the surface when her offspring is with her. Whilst tending her young the female cannot be carelessly approached, and she will vigorously defend her offspring. All who have read Dr. Livingstone's "Travels" will remember the partial capsize and wetting he and his Makololo companions sustained from the infuriated rush of a female Hippopotamus, "whose young one had been speared the day before." Mr. Andersson and Captain Owen record similar catastrophes. The former says—"An immense Hippopotamus, with its calf, rushed out from amongst the reeds where she had been concealed, and, passing under our raft, almost immediately afterwards made her appearance on the surface of the water. Upon seeing this, I lost no time in firing; but, though to all appearance mortally wounded, we lost sight of her at the time. A few minutes afterwards, however, on coming to a bend of the river, we fell in with the canoe that had been sent on bottom upwards; and found, to our great consternation, that the wounded beast in going down the stream had caught sight of the canoe, and, instantly attacking it, had with one blow of her head capsized it. The men saved themselves by swimming; but all the loose articles were either lost or spoiled by the water." In the instance mentioned by Captain Owen, the boat was completely smashed, and sank; but, as in Dr. Livingstone's case, being close to the shore, all succeeded in landing safely. The Hippopotamus is nocturnal and gregarious in its habits. Large herds, to the number of thirty or forty and upwards, are frequently seen at one spot, some snoozing on the bank, and others noiselessly gliding through the limpid waters. They love a still reach of the stream, "and prefer to remain by day in a drowsy, yawning state; and though their eyes are open they take little notice of things at a distance." Dr. Livingstone adds, that "the males utter a loud succession of snorting grunts, which may be heard a mile off." Among the various modes of