

ZOOLOGICAL SCIENCE

OR

NATURE IN LIVING FORMS,

ILLUSTRATED BY NUMEROUS PLATES.

ADAPTED TO ELUCIDATE THE

CHART OF THE ANIMAL KINGDOM,

BY A. M. REDFIELD,

AND

"Ask now the beasts, and they shall teach thee ; and the fowls of the air, and they shall tell thee ; or speak to the earth, and it shall teach thee ; and the fishes of the sea shall declare unto thee. Who knoweth not in all these that the hand of the Lord hath wrought this ?" (Job xii. 7.)

E. B. & E. O. KELLOGG, PUBLISHERS.

87 FULTON ST., NEW YORK.

FREDERICK COHOON, COLUMBUS, OHIO.

1858.

passes from the fore part of the neck, obliquely upwards, to meet over the shoulders; is found in Mexico, as well as in the greater part of South America. The food of this species consists of acorns, roots, and earth worms, and similar creatures, bred in moist and marshy places. The Collared Peccary has been domesticated in South America, and some of the West India islands, and in the domestic state is fed upon the same esculents as the common hogs, but its flesh is far inferior to theirs, both in flavor and fatness. "The comparative infertility of the Peccary, which only produces two young at a birth, is a bar to its superseding the domestic pig, which is equally fertile in all climates where it has been introduced." The gland also, presents a strong objection to the Peccary, as a domestic animal, however "neat and trim" it may be in its general habits and appearance. It is said that D'Azara "revelled in its scent, as a perfume," and that others have considered it "agreeable enough," but to most persons it proves extremely offensive. These animals haunt the thickest and largest forests, dwelling in hollow trees, or holes in the earth made by other animals. They go in pairs or small families, laying waste the cultivated fields and plantations of maize or sugar cane, if not driven from them; but they are not common in the vicinity of villages.

D. labiatus, (Lat. lipped.) The WHITE-LIPPED PECCARY.

This is larger, stronger and heavier than the Collared Peccary, often measuring three and a half feet long, and sometimes weighing one hundred pounds, whereas the Collared species seldom exceed three feet in length, or weigh more than fifty pounds. The prevailing color is brown; the lips are white. The White-lipped Peccaries are found in numerous bands, sometimes, as is said, amounting to upwards of a thousand, spreading over a league of ground, and directed, the natives say, by a leader who takes his station in front of the troop. They cross rivers, and ravage plantations on their march. "If they meet with any thing unusual on their way, they make a terrific clattering with their teeth, and stop and examine the object of their alarm. When they have ascertained that there is no danger, they continue their route without further delay."

Rhinoceros, (Gr. $\rho\iota\nu$ or $\rho\iota\varsigma$, *rin* or *ris*, a nose; $\kappa\epsilon\varrho\alpha\varsigma$, *keras*, a horn.)

THE RHINOCEROS.

This large uncouth looking creature is a native of the hotter regions of the Eastern Continent, and next to the Elephant, the most powerful of all quadrupeds. There are several species of

this animal, of which the chief peculiarity is the horn, consisting of fibres matted together like those of whalebone.

R. unicornis, (one-horned,) or *R. Indicus*, the common E. Indian Rhinoceros, is usually about twelve feet long, and seven in height, and the circumference of the body is nearly equal to its length. This species, as the name *unicornis* imports, has but one horn, slightly curved, and sharpened to a point, not far from three feet in length, and used as a most powerful and effective weapon. The upper lip protrudes considerably, and from its extreme pliability, answers the purpose of a small proboscis. The skin is thick and coarse, and has a knotted or granulated surface; it is disposed in several folds, on the neck and shoulders. The legs are very short, strong and thick; and the feet divided into three large hoofs. (Plate VI. fig. 10.) The Rhinoceros of India leads a quiet, indolent life, in the shady forests, or wallowing in the marshy borders of lakes and rivers, in the waters of which it occasionally bathes. Its movements are usually slow, and it carries its head low like the hog, ploughing up the ground with its horn, and forcing its way through jungles. Pennant and others are of the opinion that this is the Unicorn of the Holy Scriptures. The female brings forth one young at a time. The ordinary food of the Indian Rhinoceros consists of herbage, and the branches of trees. The flesh is said to be not unpalatable. One of these animals, which was taken to England, in 1790, ate twenty-eight pounds of clover, the same quantity of ship biscuit, together with a great quantity of greens, each day; and twice or three times a day, five pails of water were given to him. The Asiatic specimen in the Zoological Gardens, London, is fed on clover, straw, rice and bran. The skeleton of this animal approximates to that of the Tapir and the Horse; the stomach is more like that of a man or a hog. It has thirty-six teeth, twenty-one of which are molar, but none of them canines.

R. Javanicus. The Rhinoceros of Java. This has less rough or prominent folds than those of the Indian Rhinoceros; its range extends from the level of the ocean to the summit of mountains which are considerably elevated. Marsden, the Missionary, in his "History of Sumatra," says, that "both the one and the two horned Rhinoceros are natives of the woods;" and he denies the stories which have been told "of the desperate encounters of these two enormous beasts."

R. Sumatrensis, or *Bicornis*, (Lat. two-horned.) The Rhinoceros of Sumatra, has a skin covered with stiff brown hairs, and almost altogether without folds, and it has a second horn behind the ordinary one, in this respect resembling the African animal.

The Rhinoceros is not uncommon in Sumatra, but is very shy, and therefore rarely seen.

R. Africanus. The animals of this species range over a large part of Africa. They were formerly common in the vicinity of Cape Town, but their present limit on the South West coast is the twenty-third degree of latitude. In the interior of the continent, the tribe is still very numerous, but less so than in Asia. This species differs from the Asiatic in having a comparatively smooth hide, while almost all the Asiatic species have a very coarse one, which is covered with large folds, not unlike a coat of mail. Four distinct varieties are said to exist in South Africa, two of a dark, and two of a whitish hue, called the "black" and the "white" Rhinoceros. The common Black Rhinoceros, *Rhinoceros bicornis*, is called by the natives the "Boile;" the other, the "Keitloa," *Rhinoceros keilloa*.

The upper lip in both species of the black Rhinoceros is capable of extension, and is so pliable as to twist round a stick, collect its food, or seize any thing which it would carry to its mouth. These animals are very fierce, and except the Buffalo, perhaps, the most dangerous of all the beasts of South Africa.

Of the white Rhinoceros, the two varieties are *R. simus*, the common white Rhinoceros, called *Monoohoo*, by the natives, and *R. Osswellii*, the *KOBABA*, or long horned White Rhinoceros. The chief difference between these two species, relates to the horns, the front horn of the Monoohoo averages about two feet in length; that of the Kobaabu frequently is more than four feet. The latter variety is least often found, and confined to the more interior portions of Southern Africa.

The White Rhinoceros is of larger size than the black. The head is so prolonged that it is nearly one-third part of the entire length of the body, which is from fourteen to sixteen feet; the nose is square; the anterior horn is longer; the disposition of the animal milder, and the flesh better tasted than that of the black species. Its food is grass. The black species are very sullen and savage in their disposition. Their flesh is lean, and of an acrid taste, given to it by the "Wait-a-bit" thorn bushes, on which they feed, ploughing them up with their short horn.

The body of the *R. Simus*, (between fourteen and sixteen feet long, and ten or twelve round,) is exceeded in size only by that of the Elephant; its belly is large and hangs near the ground; the legs are short, round and very strong; and the hoofs divided into three parts, each pointing forward. The head is large; the ears long and erect; the eyes small and sunken, or deep set in the head. The horns are not affixed to the skull, but attached to

the skin, resting, however, in some degree, on a bony protuberance above the nostrils. They take a high polish, and are worth half as much as Elephant's ivory, being much used for sword-handles, drinking-cups, rifle-ramrods, etc. People of fashion at the Cape, have the cups set in silver and gold. The Barks believe these cups will split asunder and fly into pieces, if poison be put into them! Even the chips and turnings of the horns are carefully preserved, being esteemed of great benefit in convulsions, faintings, and many other illnesses. The Rhinoceros is nocturnal in his habits, commencing his rambles at dusk, and visiting the pools or fountains between the hours of nine and twelve o'clock at night. Having wandered until sunrise, he spends the day in sleep, under the shelter of some rock or tree. All the beasts dread him—the lion avoids him—even the elephant, should they meet, retreats, if possible, without hazarding a combat, and he will also fight his own species. His hearing and smell are acute, but his sight is not good. The Rhinoceros is not gregarious; but yet of a social turn, and usually goes in pairs; sometimes browses and pastures in droves of a dozen.

The best time to shoot these animals is when they go to the pools to quench their thirst and wallow in the mire, which they always do once in twenty-four hours. Occasionally the Rhinoceros, like the Elephant, is taken in pitfalls. The mother is affectionate and guards her offspring with tender care. The young also show strong attachment to the mother, clinging to her for days after she has been killed. The general appearance of the African Rhinoceros is that of an immense hog, with the bristles off, excepting a tuft at the extremity of the ears and tail; it has no hair whatever, and is the "very image of ugliness." The full grown male of the common white species, weighs not less than four or five thousand pounds, or as much as three good sized oxen. The Rhinoceros is long lived, attaining, as is thought, the age of one hundred years. Unwieldy as he appears, he is still swift of foot, at least this is true of the black species. Gordon Cumming, in his "Adventures in Africa," says, "that a horse with a rider, can rarely manage to overtake it." The food of this animal consists of vegetables, grasses, shoots of trees, and all kinds of grain; but it is not a voracious feeder. The statement that the hide of the rhinoceros is "impenetrable to a bullet," is now regarded as pure myth; for "a common leaden ball will find its way through the hide with the greatest facility." In consequence of the solid structure of the head, and the great thickness of the hide in that part, and the smallness of the brain, a shot aimed at the head rarely proves fatal.

The cavity of the brain in this animal holds but one quart, while that of the human skull will contain nearly three pints. However severely wounded, the Rhinoceros seldom bleeds externally; the hide being so thick and elastic and not firmly attached to the body, but constantly moving, the hole made by a bullet almost immediately closes up. Very many of these animals are annually destroyed in South Africa. Anderson, from whom we gathered many of the particulars here given, states, in his "Lake Ngami," that Messrs. Oswell and Vardon killed, in one year, eighty-nine of these animals, and that he himself, "single handed," killed in the same time nearly two-thirds of that number. Cumming, in his "Adventures," states that these animals are attended by what are called "Rhinoceros-birds," which stick their bills in the ear of the Rhinoceros, and uttering a harsh, grating cry, warn him of impending danger. These birds feed upon the ticks and other parasitic insects which swarm upon these animals.

Hippopotamus, (Gr. *ἱππος*, *hippos*, a horse; *ποταμός*, *potamós*, a river.) The RIVER HORSE. (Four-hoofed.)

This gigantic inhabitant of the African rivers is formidable in his strength, and in bulk inferior only to the Elephant. The ancients named him River-Horse, on account of the similarity of his voice to that of a horse. The form of this animal is in the highest degree uncouth; the body being extremely large, fat and round; the legs very short and clumsy. So low, indeed, at times is the animal in the body, that the belly almost brushes the ground. The head is exceedingly large, the mouth of enormous width, and the teeth of vast size and strength. (Plate IV. fig. 6.) The canines or tusks of these animals, of which there are two in each jaw, sometimes measure more than two feet in length, and weigh upwards of six pounds each; so hard and strong are they that they strike fire with steel, which gave rise to the fable of the ancients that the River-Horse vomits fire from his mouth. The tusks of the lower jaw are always the hardest. The hoofs are divided into four parts, unconnected by membranes. The skin, nearly an inch thick, is destitute of covering, except a few scattered hairs on the muzzle, edges of the ears and tail. The color, when on land, is of a purple brown; but when seen at the bottom of a pool, it appears to be of a dark blue, or as described by Dr. Burchell, "of a light hue of Indian ink." As in the Crocodile, the upper mandible is said to be movable. The inside of the mouth has been described by a recent writer, as resembling "a mass of butcher's meat." The eyes, (which have been compared to the garret-windows of a Dutch Cottage,) the nostrils, and the ears are all on nearly the same plane. This gives the use of