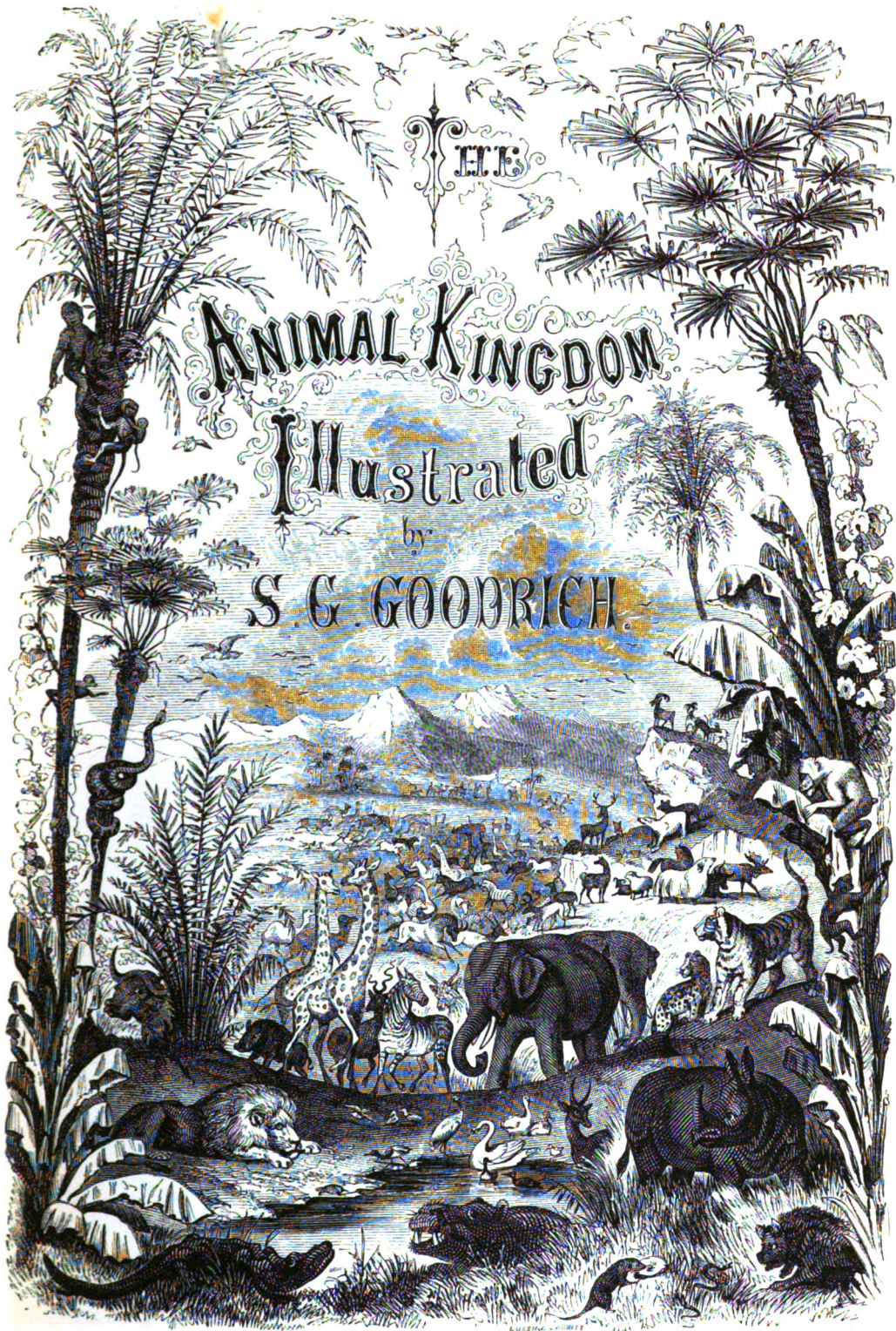


H.B.

ANIMAL KINGDOM
Illustrated
by
S. G. GOODRICH.



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NATURAL HISTORY

OF THE

ANIMAL KINGDOM,

BEING

A Systematic and Popular Description

OF

THE HABITS, STRUCTURE, AND CLASSIFICATION OF ANIMALS

FROM THE HIGHEST TO THE LOWEST FORMS,

WITH THEIR RELATIONS TO

AGRICULTURE, COMMERCE, MANUFACTURES, AND THE ARTS.

BY

S. G. GOODRICH

WITH 1400 ENGRAVINGS.

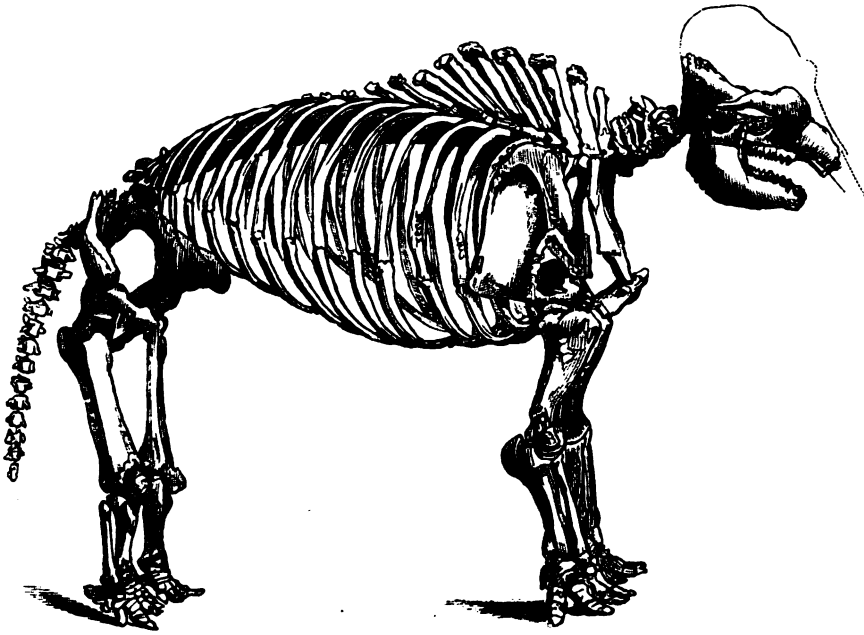
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SKELETON OF A MASTODON.

and a multitude of other animals of various species, which have now ceased to exist. In the United States the bones of an animal resembling the mammoth, but in some respects different, have been discovered in various places, mostly in alluvial deposits, and near the salt-licks of the Western States. This species has received the name of *MASTODON*, *Mastodon maximus*. Several skeletons of this, more or less perfect, exist in the United States. One of the largest and most complete was found in 1845 near Newburg, Orange County, New York, and belonged to the late Dr. John Warren, of Boston. The remains of about a dozen other extinct species of *Mastodon* have been discovered.

THE RHINOCERIDÆ.

The animals of this family are covered with a hard, naked, rough skin, in some cases laid in large folds, seeming like huge bucklers. The head is elongated and triangular, and from the upper surface of the muzzle there springs a single or double horn, composed of a solid mass of horny fibers resembling whalebone, supported upon a broad, bony protuberance of the nose. These horns, which are powerful weapons of defense, and which are also sometimes used to tear away tangled branches and obstructions, are of considerable size, measuring frequently two feet and a half in length, and sometimes much more. They are of an elongated, conical form, and are usually more or less curved backward; but in the British Museum there are two horns which are evidently curved in the opposite direction, and probably belonged to a species of which nothing further is at present known. The same collection contains another horn, which is more slender than usual, and curved backward almost in a semicircle, which probably was a mere peculiarity of one individual. When two horns are present, they are placed one behind the other, and the hinder one is much shorter than the anterior. Only two sorts of teeth, incisors and molars, are found in the jaws, and of these the former sometimes fall out before the animal is full-grown. The canines are entirely wanting. The molars are usually seven in number on each side of each jaw; their surface exhibits projecting lunate ridges. The body is very bulky, and is supported upon short, strong legs; the feet have three toes, which are only indicated externally by the hoofs. The eyes are small; the ears small, pointed, and nearly erect; the thick and hard skin



INDIAN RHINOCEROS.

has only a few hairs, which are stiff and bristly, and mostly confined to the edges of the ears and the end of the tail.

These animals are found in the same regions of the Old World as those inhabited by the elephants; they live like them in the forests, and feed exclusively upon coarse herbage and the leafy twigs of trees and shrubs. They appear, as a general rule, to be peaceable animals, unless irritated; in this case they charge with great fury upon their enemy, holding the head down, so as to present the point of the horn toward him. They are generally hunted merely for the sake of sport, but the natives of the countries inhabited by them kill them for the flesh; walking-sticks of great beauty are cut out of their thick hides, and their horns are worked into boxes and

drinking-cups, to the latter of which the eastern nations attribute the power of indicating the presence of poison in any fluid that may be put into them. Little more than twenty years ago only four living species belonging to this family were known, but the number has since been increased to seven, and Dr. Gray has very recently described the horns of what appear to be two other species, distinct from any of those previously known.

Genus RHINOCEROS: *Rhinoceros*.—Of this, the only genus, there are several species. The most celebrated is the INDIAN RHINOCEROS, *R. unicornis* of Linnæus, *R. Indicus* of F. Cuvier. Of this the head and neck are rather short; the eye is small and lateral, and the animal cannot see in front, more particularly when the horn is full-grown, as it stands in the way of vision. The body is about nine feet long and five feet high; in its structure it is peculiarly massive, heavy, and hog-like, and often weighs six thousand pounds. It has a single horn from two to three feet long. The skin is of an earth-color, hard and thick, and often turns a musket bullet; its surface is rough and mammillated, especially on the croup and down the fore-shoulders; its folds are very distinct, and resemble plate armor. It is almost wholly destitute of hair, except at the tip of the tail and on the margins of the ears. This species inhabits Hindostan, Siam, and Cochin China; shady and marshy places in the neighborhood of rivers being its chosen haunts. It is fond of wallowing in the mire somewhat in the manner of hogs. Its food consists of grass and the branches of trees. The flesh is not unpalatable.

This powerful animal, living amid the tall, rank vegetation of the jungles of India, and especially along the marshy borders of the Ganges, the Burrampooter, and other great rivers, can only be hunted with the aid of elephants. They are usually found in small herds of four to six, led on by the most powerful among the troop. Their first instinct is to fly from such an attack, but if hard pressed they rush upon the elephants and seek to thrust the nose beneath the belly and rip them up by a fierce toss of the horn. The elephants, however, avoid this movement, and turning the back, receive the shock in that quarter, usually with little damage. Often, however, the impetus of the rhinoceros precipitates the elephant in a headlong plunge to the ground, and finding this to succeed, he will repeat the operation several times in succession. Formerly it was found that the hide of the rhinoceros was impenetrable to ordinary musket-balls; they are now easily brought down by larger and harder bullets.

The Indian Rhinoceros is that usually brought to Europe and America, and which we are familiar with in the menageries; it is also that which is best known in history. The Romans became acquainted with it toward the close of the republic, and Pompey introduced it into the circus. It also figured in the triumphal procession of Augustus with Cleopatra—the beautiful Queen of Egypt and the hoggish rhinoceros combining to swell the pomp of the victor! Representations of this animal also appear on various coins of this period, and in the palestinian mosaics of Rome. In the fanciful tales of the Arabian Nights a curious passage tells us that the rhinoceros fought with the elephant, pierced his belly with his horn, and carried him off on his head; but the fat and the blood filled his eyes and rendered him entirely blind, so that he fell prostrate on the earth. In this state of things a huge Roc came and carried them both off to his young ones in his prodigious talons. It is curious to trace the threads of truth even in the wildest popular fiction: the manner of fighting here imputed to the rhinoceros is according to nature, and as to the Roc—a bird as big as a village windmill—late discoveries have shown the bones of extinct species twelve or fourteen feet high, the traditions of which may well have been wrought into this gigantic feathered monster.

The JAVAN RHINOCEROS, *R. Javanus*, formerly confounded with the preceding, greatly resembles it, and has but one horn; it is, however, somewhat smaller, rather more hairy, has a smaller head, with a more sharpened muzzle, and the flexible lip, especially, being more attenuated. The folds are less prominent, and around the neck are nearly obliterated; the tubercles of the skin are smaller and more angular. It is called *Warak* by the Javanese and *Badak* by the Malays. It is a native of Java.

The SUMATRAN RHINOCEROS, *R. Sumatrensis*, is even somewhat smaller than the preceding; it has two horns, the first long and bent backward, the second, placed a little forward of the eyes, smooth and pyramidal. The skin is less rough than in the preceding species, and the folds less

distinctly marked. It is a native of Sumatra, and though found from the sea-coast to the mountains, seems to prefer high situations.

The AFRICAN RHINOCEROS OF GARGATAN, *R. bicornis*, is of a pale yellowish-brown; the horns, which are two, are of unequal length, and of a livid brown color, with tints of green; the few hairs on the tip of the tail and the margins of the ears are black and bristly; the folds of the skin are not so distinct as in the *R. Indicus*; the length is greater, ten to eleven, and even twelve feet. This species is known to the colonists of the Cape under the name of *Rhinaster*; it feeds on brushwood and the branches of small trees, and is found only in wooded districts. It feeds slowly, is a lazy animal, and subsists with a small amount of nourishment.

The KEITLOA RHINOCEROS, or SLOAN'S RHINOCEROS, *R. Keitloa*, is of a pale brownish-yellow, with two horns nearly of equal length; length of the body and head eleven to twelve feet.

The COMMON WHITE RHINOCEROS, or MUCHOCO, or MOHOOHOO, or BURCHELL'S RHINOCEROS, *R. sinus*, is of a pale gray-brown, with a yellowish tinge; the edges of the ears and tip of the tail clothed with black, bristly hairs; the mouth ox-like; the horns two, the anterior one very long, the other very short; the body and head twelve feet long; the height five feet seven inches. There appears to be still another species, the KOBABOA or LONG-HORNED WHITE RHINOCEROS.

The four kinds immediately preceding are all found in Southern Africa, and all have two horns. Thus we are acquainted with seven species of rhinoceros, and there is reason to believe there are in Africa two or three others. It is in this quarter of the world that these animals appear most abundant, and here they have been of late unsparingly pursued by the hunters. Cummings furnishes the following information in respect to them:

"Of the rhinoceros there are four varieties in South Africa, distinguished by the Bechuanas by the names of the '*Borèle*,' or black rhinoceros, the '*Keitloa*,' or two-horned black rhinoceros, the '*Muchoco*,' or common white rhinoceros, and the '*Kobaoba*,' or long-horned white rhinoceros. Both varieties of the black rhinoceros are extremely fierce and dangerous, and rush headlong and unprovoked at any object which attracts their attention. They never attain much fat, and their flesh is tough, and not much esteemed by the Bechuanas. Their food consists almost entirely of the thorny branches of the wait-a-bit thorns. Their horns are much shorter than those of the other varieties, seldom exceeding eighteen inches in length. They are finely polished with constant rubbing against the trees. The skull is remarkably formed, its most striking feature being the tremendous, thick ossification in which it ends above the nostrils. It is on this mass that the horn is supported. The horns are not connected with the skull, being attached merely by the skin, and they may thus be separated from the head by means of a sharp knife. They are hard, and perfectly solid throughout, and are a fine material for various articles, such as drinking-cups, mallets for rifles, handles for turners' tools, &c., &c. The horn is capable of a very high polish. The eyes of the rhinoceros are small and sparkling, but do not readily observe the hunter, provided he keep to leeward of them. The skin is extremely thick, and only to be penetrated by bullets hardened with solder. During the day, the rhinoceros will be found lying asleep, or standing indolently in some retired part of the forest, or under the base of the mountains, sheltered from the power of the sun by some friendly grove of umbrella-topped mimosas. In the evening they commence their nightly ramble, and wander over a great extent of country. They usually visit the fountains between the hours of nine and twelve o'clock at night, and it is on these occasions that they may be most successfully hunted, and with the least danger. The black rhinoceros is subject to paroxysms of unprovoked fury, often plowing up the ground for several yards with its horn, and assaulting large bushes in the most violent manner. On these bushes they work for hours with their horns, at the same time snorting and blowing loudly; nor do they leave them in general until they have broken them into pieces. All the four varieties delight to roll and wallow in mud, with which their rugged hides are generally encrusted. Both varieties of the black rhinoceros are much smaller and more active than the white, and are so swift that a horse with a rider on its back can rarely overtake them. The two varieties of the white rhinoceros are so similar in habits that the description of one will serve for both, the principal difference consisting in the length and set of the anterior horn; that of the common white rhinoceros aver-



HUNTING THE RHINOCEROS.

aging from two to three feet in length, and pointing backward, while the horn of the long-horned white rhinoceros often exceeds four feet in length, and inclines forward from the nose. . . .

"Both these varieties of rhinoceros attain an enormous size, being the animals next in magnitude to the elephant. They feed solely on grass, carry much fat, and their flesh is excellent, being preferable to beef. They are of a much milder and more inoffensive disposition than the black rhinoceros, rarely charging their pursuer. Their speed is very inferior to that of the other varieties, and a person well mounted can overtake and shoot them." The description of the famous rhinoceros birds is very interesting:

"Before I could reach the proper distance to fire, several 'rhinoceros birds' by which he was attended warned him of his impending danger by sticking their bills into his ear, and uttering their harsh, grating cry. Thus aroused, he suddenly sprang to his feet, and crashed away through the jungle at a rapid trot, and I saw no more of him. . . .

"These rhinoceros birds are constant attendants upon the hippopotamus and the four varieties of rhinoceros, their object being to feed upon the ticks and other parasitic insects that swarm upon these animals. They are of a grayish color, and are nearly as large as a common thrush; their voice is very similar to that of a mistletoe thrush. Many a time have these ever-watchful birds disappointed me in my stalk, and tempted me to invoke an anathema upon their devoted heads. They are the best friends the rhinoceros has, and rarely fail to awaken him, even in his soundest nap. 'Chukuroo' perfectly understands their warning, and, springing to his feet, he generally first looks about him in every direction, after which he invariably makes off."

FOSSIL RHINOCERIDÆ.—The remains of several fossil species of rhinoceros, distinct from the existing ones, have been found in Europe and Asia, but none in America or Australia. The following have been recorded: *R. tichorinus*, Cuv.; *R. incisivus*, Cuv.; *R. leptorhinus*, Cuv.; *R. minutus*, Cuv.; *R. elatus*, Croiz. and Job.; *R. pachyrhinus*, Cuv.; *R. hypselorhinus*, Kaup.; *R. Goldfussii*, Kaup.; *R. leptodon*, Kaup. The first and third of these species are British.