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JOHNSON'S

HOUSEHOLD BOOK

NATURE

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ANIMAL KINGDOM

BASED UPON THE WRITINGS OF THE

EMINENT NATURALISTS

AUDUBON, WALLACE, BREHM, WOOD, AND OTHERS

EDITED BY HUGH CRAIG M.A. TRINITY COLLEGE CAMBRIDGE

WITH SIXTY FOUR FULL PAGE ILLUSTRATIONS

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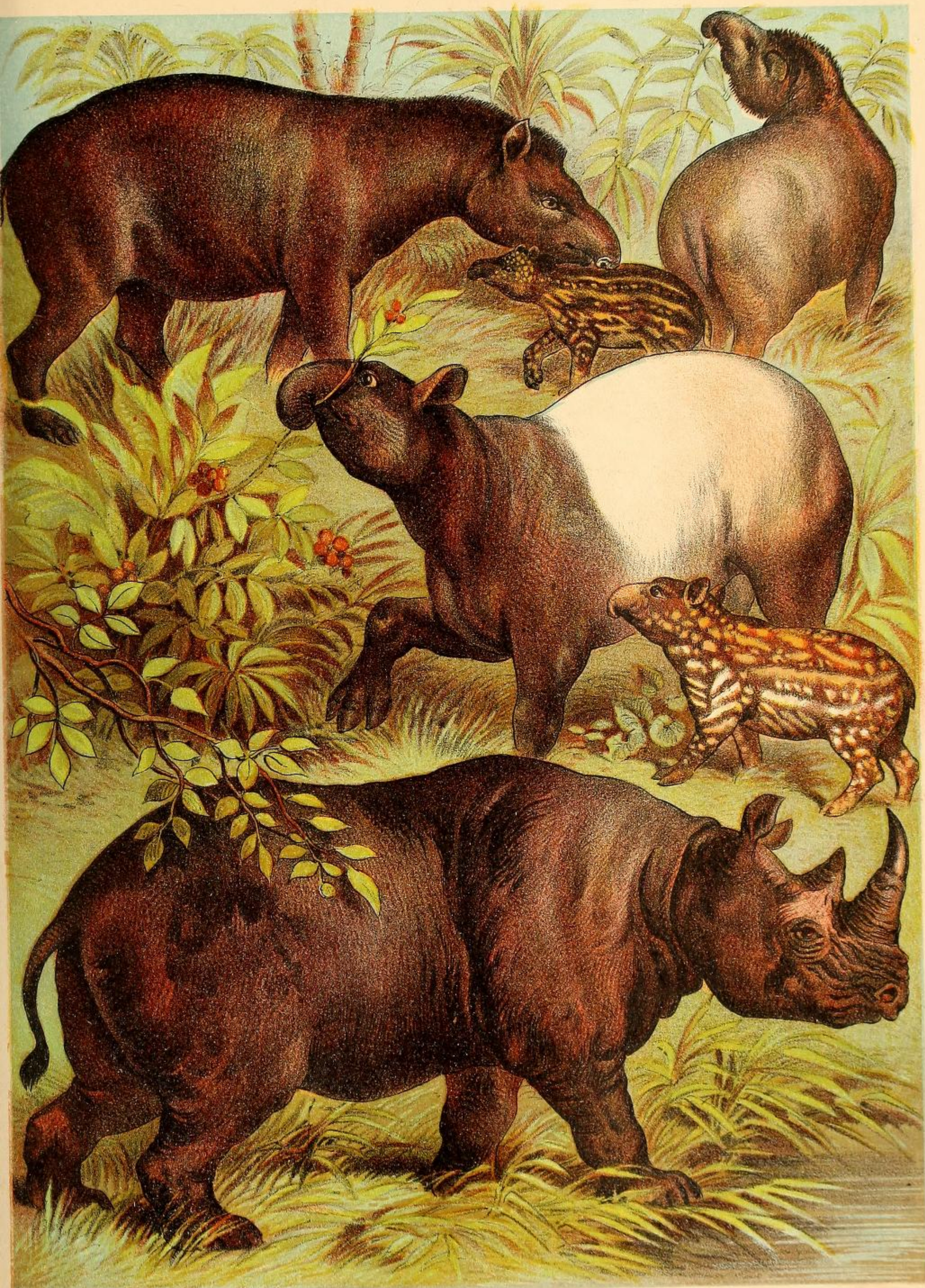
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JOHN KARST SC



SOUTH AMERICAN TAPIR
MALAYAN TAPIR
BLACK RHINOCEROS
PLATE XXXIV UNGULATA

CHAPTER VIII.

THE RHINOCEROS.

THE FAMILY RHINOCEROTIDÆ—GENERAL DESCRIPTION—THE HORN—PECULIAR STRUCTURE OF THE HORN—KNOWN TO THE ANCIENTS—WOOD-CUT BY ALBERT DURER—ARAB SUPERSTITIONS—HAUNTS OF THE RHINOCEROS—A NOCTURNAL ANIMAL—ITS FOOD—ITS HABITS—ITS SENSES—ITS FITS OF RAGE—MATERNAL AFFECTION—ITS FRIENDS THE SMALL BIRDS—CAPTIVE RHINOCEROSES—USES OF ITS HIDE.

THE family RHINOCEROTIDÆ is especially characteristic of Africa and Northern and Malayan India. Four or five species, all two-horned, are found in Africa, where they range over the whole country south of the desert to the Cape of Good Hope. In the east of Asia there are also four or five species which range from the forests at the foot of the Himalayas eastward through Anam and Siam to Sumatra, Borneo, and Java. Three of these Asiatic species are one-horned, the others found in Sumatra and Java are two-horned. All these species are so much alike, that most naturalists do not consider them as forming distinct genera. Gray, however, divides the Asiatic Rhinoceros into two genera, *Rhinoceros* and *Ceratorhinus*, and the African into two, *Rhinaster* and *Ceratotherium*.

The RHINOCEROTIDÆ are all clumsy and unwieldy-looking animals of considerable size, characterized by a remarkably elongated head, the front part of which bears one horn, or two in a line, a short neck, a powerful body, entirely or almost entirely devoid of hair but covered with a thick armor-like hide, a short tail, short stumpy legs, all of which terminate in three toes enveloped in hoofs. The mouth is disproportionately small, the upper lip is developed into a trunk-like process, while the under-lip is square and truncated, the eye is small, the ear rather large. The hide, which is almost impenetrable, is in some species divided by folds of soft and pliant skin into a series of shield-like plates, in others it lies close to the body with only a few slight folds. The few hairs which appear on the animal are confined to

the borders of the ears and the tip of the tail, with occasionally a few bristles on the back. The most peculiar feature of the creature is its horn or horns. This is a very curious structure, and worthy of a brief notice. It is in no way connected with the skull, but is simply a growth from the skin, and may take rank with hairs, spines, or quills, being indeed formed after a similar manner. If a Rhinoceros horn be examined—the species of its owner is quite immaterial—it will be seen to be polished and smooth at the tip, but rough and split into numerous filaments at the base. These filaments, which have a very close resemblance to those which terminate the plates of whalebone, can be stripped upward for some length; and if the substance of the horn be cut across, it will be seen to be composed of a vast number of hairy filaments lying side by side, which, when submitted to the microscope and illuminated by polarized light, glow with all the colors of the rainbow, and bear a strong resemblance to transverse sections of actual hair. At the birth of the young animal, the horn is hardly visible, and its full growth is not attained for several years.

As the horn is employed as a weapon of offence, and is subjected to violent concussions, it is set upon the head in such a manner as to save the brain from the injurious effects which might result from its use in attack or combat. In the first place, the horn has no direct connection with the skull, as it is simply set upon the skin, and can be removed by passing a sharp knife round its base, and separating it from the hide on which it grows. In the second place, the bones of the face are curiously developed, so as to form an arch with one end free, the horn being placed upon the crown of the bony arch in order to diminish the force of the concussion in the best imaginable manner. The substance of the horn is very dense, and even when it is quite dry, it possesses very great weight in proportion to its size. In former days it was supposed to bear an antipathy to poison, and to cause effervescence whenever liquid poison was poured upon it. Goblets were therefore cut from this material, and when gorgeously mounted in gold and precious stones, were employed by Eastern monarchs as a ready means for detecting any attempt to administer a deadly drug.

Although the Rhinoceros is at present confined to the Torrid Zone, we have evidence that it once was more widely spread. The traveler Pallas saw in Siberia the feet of a Rhinoceros which had been found in the banks of a river; they were still covered with skin. The head was

afterward discovered and sent to St. Petersburg. This fossil species was of a yellow color, with a thick hide destitute of folds, covered with stiff hair projecting from a soft woolly undercoat.

The Rhinoceros has long been known. Its figure occurs in the hieroglyphics of Egypt; many pious persons identify it with the "unicorn" of the Bible, forgetting that "unicorn" is merely a conjectural translation of the Hebrew word designating an animal of the bovine family. Pliny tells us that Pompey exhibited a Rhinoceros B. C. 61, in the arena at Rome. "The Rhinoceros," he writes, "is the born foe of the elephant. It whets its horn on a stone, and, when fighting, aims at the belly." He adds, that at the period of his writing, the animal was found at the island of Meroe in the Nile. Strabo saw one in Alexandria. Martial describes a fight between one and a bear. The Rhinoceros, he says, was very sluggish and slow to engage, but finally tossed the bear as a bull tosses a dog. The Arabian writers are the first to distinguish between the African and Asiatic species, and the Rhinoceros plays a conspicuous part in the Arabic tales of magicians. Marco Polo is the first European in modern times to mention the animal, and in 1513 King Emmanuel of Portugal received a living specimen from the East Indies. Albert Durer made a wood-cut representing it; unfortunately he was guided by a very imperfect drawing sent from Lisbon to Germany. For about two hundred years this wood-cut was the only representation of the Rhinoceros. Chardin, at the beginning of the last century, sent a better sketch from Ispahan, and at present accurate representations of most of the species have been published.

Although all the *Rhinocerotidæ* have the same general traits, yet each species has its own peculiarities, some being exceedingly irritable and bad-tempered, others harmless and gentle. They are everywhere more dreaded than the elephant. The Arabs of the Soudan believe that magicians assume the form of the monster, which is accursed from the beginning—"Not the Lord, the all-creating, made them, but the Devil, the all-destroying, and the Faithful must have nothing to do with them. The Mussulman must quietly get out of their road, in order that he may not defile his soul, and be rejected at the day of judgment."

The favorite haunts of the Rhinoceros are well-watered regions, swampy lands, rivers that overflow their banks, and lakes with sedgy and muddy shores, near which grassy plains extend. Before a creature of such weight, and protected with such an armor, the densest jungle opens

its most impenetrable thickets, and the most terrible thorns are powerless. Hence we find them in great numbers in the forest lands, from the shore up to the height of ten thousand feet above the sea. Some species seem to prefer the elevations. The Java Rhinoceros is more numerous in the hills where many grassy pools and swamps are scattered; the African Rhinoceros, which lives in the prickly mimosa thickets of Central Africa, is not rare in West Abyssinia at seven thousand feet above the sea. Water is indispensable; every day the huge animal rolls himself in the mud; for in spite of its thick hide, it is very sensitive to the attacks of insects, against whose stings nothing but a good coating of mud can protect it. Plunging into the soft mud, they lie and grunt for pleasure. When the coating of mud dries and falls off, the Rhinoceros seeks to get temporary relief from his insect pests by rubbing himself against the trunks of the trees.

The Rhinoceroses are more active by night than by day; they dislike great heat, and sleep during the noontide in some shady spot. They sleep very deeply, and are easy to approach when they are thus buried in repose. Gordon Cumming reports that even the little birds, which always accompany the Rhinoceros, and warn him of danger when sleeping, in vain endeavored to awaken one which he was preparing to shoot. Some Hottentots, led by the creature's loud snores to its sleeping-place, put their guns close to his head and fired; the sleeper never stirred; they loaded again, and killed it at the next discharge. About midnight the Rhinoceros takes a mud-bath, and goes to his feeding-grounds, where he lingers for hours. Afterward, he roams wherever he pleases; he passes through the bush and jungle, never changing his course except to avoid the larger trunks, and in India he forms long, straight paths, where all the shrubs at the sides are broken down, and the ground trodden hard; the elephant, on the contrary, pulls up by the roots the brush that stands in his way. These paths always lead to water, and would be very useful to the traveler if he could be sure of not meeting their constructor.

As regards food, the Rhinoceros is to the Elephant what the Ass is to the Horse. He loves hard fodder, thistles, reeds, prairie grass, and the like. In Africa it eats the prickly mimosa, especially a low, bushy variety which, on account of its crooked thorns, has been called the "Wait-a-bit thorn." During the rainy season, the Rhinoceros approaches nearer to the cultivated land, and does incalculable damage to the farmers, for his

appetite is enormous, and even in captivity the animal requires nearly sixty pounds weight of food a day. The Indian species uses its finger-like lip to seize tufts of grass, and to convey them to its mouth. As the throat is enormous, it swallows its food half-masticated. Small trees or shrubs are often dug up by the aid of its horn, which it inserts beneath their roots. But in their food, also, the various species differ. The Indian Rhinoceros prefers twigs; the Sumatran, grass; the African, the branches of the mimosa, which it cuts off "as if with a pair of shears," while it is poisoned by the Euphorbium which the White Rhinoceros eats with impunity.

The Rhinoceroses pass their lives eating or sleeping. Unlike the elephants, they do not live in herds; their troops never exceed ten members. In this society there is little harmony, each lives for itself, and does what it chooses. Between the sexes, however, intimate and permanent friendships are formed, and pairs may be often seen which seem to act in common; and in captivity both sexes display a tender affection for their mates. Usually the Rhinoceros walks slowly, and is awkward in lying down or rolling, but he is not so unwieldy as he looks. He can not turn actively, nor can he climb; but when once in motion on level ground he runs pretty quick at a brisk *trot*, for he does not *pace* like the camel or elephant. He holds his head very low, and when enraged shakes it from side to side, and raises his stumpy tail. He can keep up this trot for a considerable time, and is dangerous even to well-mounted hunters, especially where the jungle is thick, while elephants with a howdah have no chance with him. He swims well, and has been seen to dive to the bottom of pools for the purpose of digging up aquatic plants with his horn.

The Rhinoceros possesses a very acute sense of hearing and of smell. He often pursues his enemy by scent alone, and when enraged, regards neither the number nor quality of his opponents. He charges straight on a line of armed men, or on the most inconsiderable object. Red colors provoke his anger, even when the wearer or bearer of the offensive garment is quite peaceable. His anger knows no limits; he cuts at the bushes near him, or plows long furrows in the ground. A writer, describing the single-horned species, says that "it is a mistake to suppose that the horn is their most formidable weapon. I thought so myself at one time," he adds, "but have long been satisfied that it is merely used in defence, and not as an instrument of offence. It is with their

cutting-teeth" (lower canines) "that they wound so desperately. I killed a large male," this writer asserts, "which was cut and slashed all over its body with fighting; the wounds were all fresh, and as cleanly made as if they had been done with a razor—the horn could not have been used here." Another one he had wounded halted and, out of pure rage, cut at the jungle right and left, exactly as a boar uses his tusks. "A medical friend's servant, who was sauntering through the forest, was actually disemboweled by a Rhinoceros. He examined the wound immediately, and I heard him say afterward that if it had been done with the sharpest instrument, it could not have been cleaner cut. This could not have been done with the horn."

The extraordinary irritability of the Rhinoceros conceals in a great degree its real intelligence. While far inferior to the elephant, it yet is superior to most of the ruminants; and in captivity soon learns to know its keeper, and submit to his wishes. We still, however, know too little of the animal in its wild life. The female defends its young at all hazards. A hunter in India discovered a female with its young one; the mother rose up and slowly retired, pushing the little one before her with her snout. The hunter rode up and made a cut at her with his sabre, but the weapon only left a few white marks on the solid hide. The mother endured patiently all his blows till her offspring was safe in the bush. Then she turned, gnashing her teeth, on the assailant. His horse had the sense to run away, the Rhinoceros pursued, smashing and crashing through all obstacles. When she reached the hunter's attendants, she charged them too, and when they climbed some trees, she attacked them; the huge trunks quivered under the blows of the enraged beast, which was finally shot in the head. A young Rhinoceros was born on board a ship in London in 1872, but, to the great loss of science, it died in three or four days, deeply lamented by Mr. Bartlett.

Pliny's remark about the hostility of the Rhinoceros and the Elephant is a mere fable, of course. But if the Rhinoceros has no hereditary enemy, it has an hereditary friend. All African travelers relate that the Borélé is attended by a small bird which lives on the parasitic insects abounding on its patron's ample hide, and which wakens him from slumber when danger draws nigh. "They are his best friends," writes Gordon Cumming, "and seldom fail to rouse him. I have often chased a Rhinoceros for miles; and during the chase the birds sat upon his back. When I put a ball into his shoulder, they fluttered about six feet above

him, screaming, and then resumed their station. Sometimes boughs of trees swept them away, but they soon returned. I have shot a Rhinoceros by night, and the birds remained with it till morning, thinking it was asleep, and tried to awaken it when I came up." Other enemies than man the Rhinoceros need not fear. Lions and tigers know that their claws are powerless, and that the paw which can prostrate an ox would not be felt by the armor-clad pachyderm. Man, however, in all regions, pursues the Rhinoceros, and modern improvements in musketry have rendered him an easy victim to the European sportsman. When unaccustomed to the sight of intruders, the animal takes to flight; but when it has been repeatedly disturbed, it does not wait to be attacked, but commences hostilities, and fights to the death.

The Rhinoceros is constantly found in our menageries, where it shows itself, as a rule, good-tempered, ready to take food from the spectators' hands, and tame enough to be allowed to walk about in a paddock. It ought to be bathed in or sprinkled with lukewarm water every day. How long they will live is not known, but captive ones in India have been said to have attained the age of forty-five. The use which can be made of the Rhinoceros does not compensate for the damage he does. He is intolerable where regular cultivation exists. All parts of the animal, however, have their uses. The blood, as well as the horn, are highly esteemed in the East for their medicinal qualities. Cups and drinking-vessels of rhinoceros-horn are deemed a necessary in the house of a wealthy man, for such cups reveal the presence of poison in any fluid poured into them. The horn is used also for the handles of sabres, and when polished, has a beautiful, soft, yellowish tint. Shields, breast-plates, dishes, and other utensils are made from the hide: the flesh is eaten, the fat and marrow employed as salves of magic efficacy. The Chinese say that after swallows' nests, lizards' eggs, and little dogs, nothing is such a dainty as the tail of a rhinoceros.



CHAPTER IX.

THE ASIATIC RHINOCEROSSES.

THE ONE-HORNED RHINOCEROSSES—THE INDIAN RHINOCEROS—ITS THICK HIDE—MODE OF HUNTING—
THE WARA OR JAVANESE RHINOCEROS—THE EMPEROR BABER—THE TWO-HORNED RHINOCEROS
OR BADAK OF SUMATRA—THE FIRE-EATING RHINOCEROS—THE ROUGH-EARED RHINOCEROS.

DOCTOR GRAY, in his last Catalogue of Mammalia, groups the Asiatic Rhinoceroses into two genera, *Rhinoceros* and *Ceratohinus*. The former comprehends those species which have the armor-like hide divided into distinct shield-like plates, the latter those in which the hide has divisions only at the shoulders and the loins; the former have one horn, the latter two; there are also differences in the dentition of the genera.

THE ONE-HORNED RHINOCEROS.

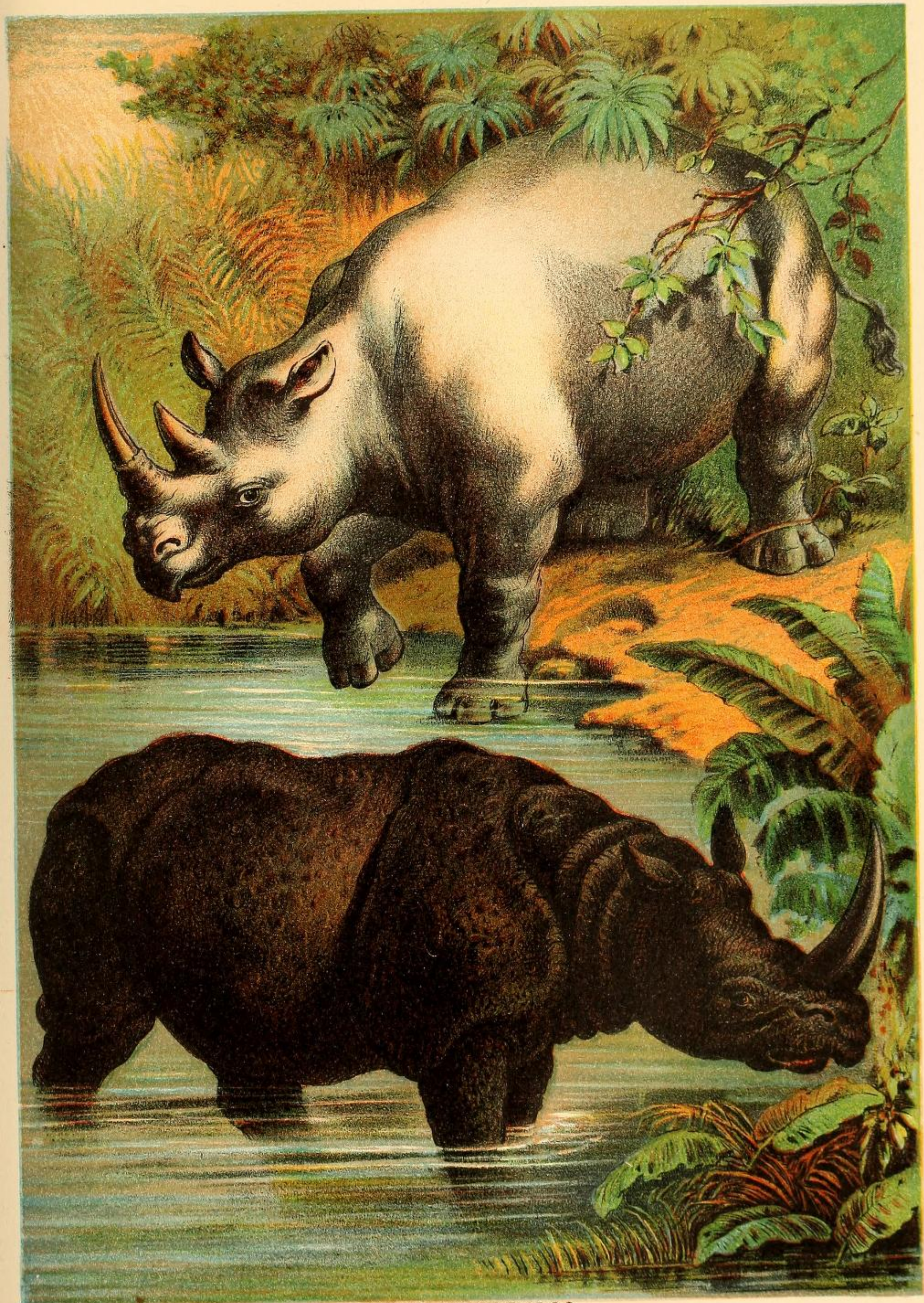
The INDIAN RHINOCEROS, *Rhinoceros Indicus* (Plate XXXV), attains a length of twelve feet, including its tail, and stands about five feet high; its weight is about forty-five hundred pounds. Its head is short and triangular; its mouth, of a moderate size, has an upper lip, which is longer than the lower, pointed and movable. It has in each jaw two strong incisor teeth. Its eyes are small; its ears are rather long and movable. The horn upon its nose is pointed, conical, not compressed, sometimes two feet in length, and slightly curved backwards. This singular weapon is composed of a cluster of hairs closely adherent; for when the point is blunted, it is often seen divided into fibres resembling the hairs of a brush. This horn is, however, very firm and hard, of a brownish-red on the outside, of a golden-yellow inside, and black in the centre.

The thick, horny hide lies upon a thick layer of loose cellular tissue, and is thus capable of being easily moved to and fro. This integument is divided into plates by regular deep folds which exist even in the newborn young ones. The skin in these folds is very soft and thin, while the

hard plates, which can be lifted up by hand, are as thick and solid as boards. The first fold runs just behind the head around the neck, forming below it a kind of dewlap; from this fold two oblique folds, one on each side, run backwards and upwards, deep at first, but vanishing at the withers; from the centres of these folds a pair of creases runs forward to the back of the neck. Behind the withers is a very conspicuous deep fold which descends behind the shoulder-blade, and then turns horizontally over the fore-arm and passes in front of it. Another deep fold commences at the loins, and descends obliquely in front of the thigh, sending out other folds toward the tail. The hide appears divided into three grand pieces, one on the head and shoulders, another one on the body, the third on the hind-quarters. The animal is thus defended with a shield on its back, one on each shoulder, one on the rump, and one on each thigh. This hide has been compared to a suit of armor of well-adjusted pieces. It is, however, so thick and hard that, without these creases or folds, the animal, imprisoned as it were in its armor, could scarcely move. It is of a dark color, nearly bare, generally provided with only a few coarse and stiff hairs on the tail and ears, occasionally with curly woolly hairs on certain parts of the body. But each of these shields is everywhere covered with irregular, round, more or less smooth, tubercles of horn, which lie so thick together on the outside of the legs that these limbs look as if they were covered with scale-armor. The skin in the folds is of a dark flesh-color.

The tubercular prominences on the hide sometimes assume an extraordinary degree of development. In the old wood-cut by Albert Durer, the Rhinoceros is represented with horns on the shoulder-plates as well as on the nose. In the Zoological Gardens of Antwerp, a Rhinoceros eighteen years old was remarkable for the size of these tubercles; some were as large as hazel-nuts, others on the collar-bone and on the skin before the ears attained a length varying from two to five inches. In the centre of the neck there was a group of five perpendicular horns, one of which was over three inches in height. These little horns fell off from time to time, and were quite different in structure from the wart-like knobs which occur on the sides of the animal. A Rhinoceros in the Zoological Gardens of Moscow did actually shed a horn, and another grew in its place. There can be no doubt this happens with wild animals.

The Indian Rhinoceros is at present restricted to the Terai, an unhealthy, marshy tract at the foot of the Himalayas, skirting Nepaul,



WHITE RHINOCEROS
INDIAN RHINOCEROS

PLATE XXXV. UNGULATA.

Sikkim, and Bhotan, being more common in the eastern portion of the district, and may perhaps occur in the hill ranges east and south of the Brahmaputra River.

In India, in former times, the Rhinoceros was hunted on light, quick horses. The huntsmen followed it from afar off, and without any noise, till the animal became tired and was obliged to lie down and sleep. Then the sportsmen approached it, taking care to keep to leeward, for it has a very acute sense of smell. When they were within shot, they dismounted, aimed at the head, fired, and galloped away; for if the Rhinoceros is only wounded, it rushes furiously upon its aggressors. When struck by a bullet, it abandons itself wholly to rage. It rushes straight forward, smashing, overturning, trampling under foot, and crushing to atoms everything which comes in its way.

THE JAVANESE RHINOCEROS.

The JAVANESE RHINOCEROS, *Rhinoceros sondaicus*, obtains its English epithet from the belief that it was a species peculiar to Java. This is not the case, for it is found in Tenasserim and the Sunderbunds, and is often confounded with the Indian Rhinoceros. The difference, indeed, between the two species is not sufficiently striking to be noticed by ordinary beholders unless the two animals were close together. The *Rhinoceros sondaicus* is about a third less in size than the Indian Rhinoceros; its coat of mail is much the same except that the tubercles on the hide are smaller and of uniform size, while the polygonal facets of the skin have a few small bristles growing upon a depression in the centre of each. The strong fold or plait at the setting-on of the neck is continued across the shoulders; the neck-folds are less heavy and pendulous, and the posterior plate crossing the buttock from the tail is less extended.

The Javanese Rhinoceros, or Wara as it is called by the natives, is reported to be a timid animal, but an instance is related of one attacking a sailors' watering-party in Java. It is diffused, more or less abundantly, over the whole Indo-Chinese region and the Malayan peninsula, but is not found in Sumatra. In Java it is found in the most elevated regions, ascending with astonishing swiftness even to the tops of the mountains. Its retreats are discovered by deeply-excavated passages which it forms along the declivities of the hills. In Bengal it is found not only in the Sunderbunds, but in the Rajmahal hills, near the Ganges, and several

have been killed within a few miles of Calcutta; it lives in these cultivated districts on growing rice and vegetable roots.

In the time of Baber, the founder of the Great Mogul dynasty, the Rhinoceros occurred near Benares, in Central India. In his notice of the animals peculiar to Hindustan, after describing the elephant, the imperial author remarks: "The Rhinoceros is another. This also is a huge animal. The opinion prevalent in our countries that a Rhinoceros can lift an elephant on its horn is probably a mistake. It has a single horn over its nose upwards of a span in length; but I never saw one of two spans." From this it would seem that the particular species referred to is *Rhinoceros sondaicus*, inasmuch as Baber would probably have been able to obtain larger examples of the horn of *Rhinoceros indicus*. "Out of one of the largest of these horns," he adds, "I had a drinking-vessel made and a dice-box, and about three or four fingers' bulk of it might be left. Its hide is very thick. If it be shot at with a powerful bow drawn up to the arm-pit with much force, the arrow enters three or four fingers' breadth. They say, however, that there are parts of its skin that may be pierced, and the arrows enter deep. On the sides of its two shoulder-blades, and of its thighs, are folds that hang loose and appear at a distance like cloth housings. It is more furious than the elephant, and cannot be rendered so tame. It strikes powerfully with its horn, with which, in the course of these hunts, many men and many horses were gored." This description of a One-horned Rhinoceros is unmistakable, but it is strange to read that these animals could be killed with arrows.

The Wara is hunted for the sake of its horn, which is in great demand in China. Pitfalls are dug in the paths it is known to traverse, and the bottom of the pits planted with sharp stakes; the whole is then covered with branches and twigs. The Rhinoceros comes along, unsuspecting, treads on the treacherous boughs, and is either impaled at once, or at all events rendered helpless. The adults are slain because they cannot be extricated from the pit; the young ones are led away captive.

THE TWO-HORNED ASIATIC RHINOCEROS.

The SUMATRAN RHINOCEROS or BADAQ, *Rhinoceros sumatranus*, is the basis of Gray's genus *Ceratorhinus*. It is a comparatively small animal, which certainly never much exceeds four feet in height; but its horns

sometimes attain a beautiful development, more especially the anterior one, which is much longer than the other, slender except at base, and has a graceful curvature backward, more or less decided in different individuals; the other, or posterior horn, is not placed close behind the first, as in the different two-horned African species, but at a considerable distance from it, and it has a corresponding backward curvature. An anterior horn of this small Rhinoceros in the British Museum measures thirty-two inches along its front, and is seventeen inches in span from base to tip. The posterior horn is very thick, short, and pyramidal. A pair of horns of this species is a beautiful object when carved and polished, and set with the bases upward and on a parallel in a carved black wooden stand, similar to those upon which Chinese metallic mirrors are mounted. The wealthy Chinese give such extravagant prices for fine specimens that they are exceedingly difficult to be got hold of by any one else. A pair upon the head was estimated to be worth twenty-five dollars; and the price, as usual, increases with the size and length to a sum much higher. The natives of Sumatra assert that sometimes a third horn is seen, but this is doubtless such a development as that already mentioned in our description of the Indian Rhinoceros.

This Rhinoceros has a smooth hide, thinly but conspicuously covered with short, coarse, black hair; there are folds about the neck, a distinct fold behind the fore-quarters, a slight crease before the hind-limbs, but nothing comparable to the coat of mail of the one-horned varieties. The hide is rough, but easily cut with a knife. Both lips are broad and non-prehensile, and the animal therefore grazes rather than browses. The tail terminates in a thin tuft. The head is peculiarly long, the neck short and heavy, and the limbs very clumsy. It is a very quiet creature, and an adult male has been seen to fly in terror from a native wild dog.

The Asiatic Two-horned Rhinoceros has been supposed, until recently, to be peculiar to the island of Sumatra, as the smaller one-horned Rhinoceros is to that of Java; but both of them are widely diffused over the Indo-Chinese countries, and throughout the Malayan peninsula, the smaller one-horned being likewise found in Java, and the Asiatic two-horned also in Borneo as well as in Sumatra. The two-horned species has been killed in one of the hill ranges immediately to the southward of the Brahmaputra River, so that its range may be said to extend northward into Assam. It is worthy of notice that the full-grown female of this species becomes very speedily tame and tractable. It is probable

that Rhinoceroses described as existing in the southeast of China belong to this species. The Burmans speak of the Fire-eating Rhinoceros, and Professor Oldham's camp-fire was attacked by one which proved to be of the two-horned species.

All the three species above described occur in the southern provinces of British Burmah; the *Rhinoceros indicus* in the high range called the Elephant-tail mountain, the *Rhinoceros sondaicus* in the extreme south, and the *Rhinoceros sumatranus* between the tenth and seventeenth degrees of north latitude. The first is the shyest, the last is the wildest, the middle one the mildest in character.

The ROUGH-EARED RHINOCEROS, *Rhinoceros lasiotis*, is the name given by Sclater to the small one-horned elephant found in the peninsula of Malacca and Farther India. It is usually considered to be identical with the Badak. The first specimen to which a separate species was given was captured by a strange accident. Some English officers on duty in the northern part of the Bay of Bengal, collecting elephants for the army, heard that a rhinoceros had got into some quicksand and could not get out by its own efforts, but two hundred of the inhabitants of the vicinity had succeeded in rescuing it by casting ropes over it, and had fastened it to two trees, where it was in the best condition, and so fierce that they durst not let it loose. Captain Hood and Mr. Weekes proceeded to the spot with eleven elephants; they found a female rhinoceros eight feet long and four feet high, with horns only slightly developed. They placed it between two elephants and took it to Chittagong, where it became tame very soon. It was a difficult matter to induce the elephants to assist in the capture, and when the savage beast was fastened to them, a scream from it threw them repeatedly into alarm. At last the march began till a river was reached, which had to be crossed by swimming. The elephants entered it boldly, but the rhinoceros refused and was dragged through the stream by her two companions, for she refused to swim a stroke. Finally, the rhinoceros was brought safe to Calcutta, and thence shipped to Europe.



CHAPTER X.

THE AFRICAN RHINOCEROS.

THE BORELE OR LITTLE BLACK RHINOCEROS—THE SWORD-HUNTERS OF ABYSSINIA—THE KEITLOA—THEIR FIERCENESS—THE MOHOGOO OR WHITE RHINOCEROS—HUNTING ADVENTURE OF MR. OSWELL—THE KOBABOBA—PROBABILITY OF ITS EXTINCTION.

THE African Rhinoceroses are all two-horned, but are formed by Gray into two genera: *Rhinaster* with a prehensile upper-lip, and *Ceratotherium* with a non-prehensile upper-lip, which are known to travelers as the Black and White Rhinoceros respectively. Each genus has two species.

THE BLACK RHINOCEROSES.

The BORELE OR LITTLE BLACK RHINOCEROS, *Rhinoceros bicornis* (Plate XXXIV), is the commonest of the African species, and is easily distinguished from the Asiatic two-horned species by its upper-lip and the shape of its horn. The foremost horn is of considerable length and inclines backward, while the second is short and conical.

The Borele is a very fierce and dangerous animal, and is more feared by the natives than even the lion. Although so clumsy in shape and aspect, it is really a quick and active creature, darting about with lightning speed, and testing the powers of a good horse to escape from its charge. Like many other wild animals, it becomes furiously savage when wounded, but it will sometimes attack a passenger without the least provocation. On one occasion an angry rhinoceros came charging down upon a wagon, and struck his horn into the bottom plank with such force as to send the wagon forward for several paces, although it was sticking in deep sand. He then left the wagon and directed his attack upon the fire, knocking the burning wood in every direction, and upsetting the pot which had been placed on the fire. He then continued his

wild career in spite of the attempts of a native who flung his spear at him, but without the least effect, as the iron point bent against the strong impenetrable hide, which covered its huge carcass.

The skin of this animal does not fall in heavy folds, like that of the Asiatic species, but is nevertheless extremely thick and hard, and will resist an ordinary leaden bullet, unless it be fired from a small distance. The skin is employed largely in the manufacture of whips, or jamboks, and is prepared in a rather curious manner. When the hide is removed from the animal it is cut into strips of suitable breadth and laid on the ground. These strips are then hammered for some time in order to condense the substance of the skin, and when they are dry are carefully rounded with a knife and polished with sandpaper. One of these whips will continue serviceable for several years. The horn of the Borele, from its comparatively small dimensions, is not so valuable as that of the other species, but is still employed in the manufacture of drinking-cups and sword-handles. Its value is about half that of ivory.

When wounded, the Black Rhinoceros is a truly fearful opponent, and it is generally considered very unsafe to fire at the animal unless the hunter is mounted on a good horse or provided with an accessible place of refuge. An old experienced hunter said that he would rather face fifty lions than one wounded Borele; but Mr. Oswell, the well-known African sportsman, always preferred to shoot the Rhinoceros on foot. The best place to aim is just behind the shoulder, for, if the lungs are wounded, the animal very soon dies. There is but little blood externally, as the thick loose skin covers the bullet-hole, and prevents any outward effusion. When mortally wounded the Black Rhinoceros generally drops on its knees.

One of a party of Namaquas shot a Borele, and, approaching to what he thought the carcass, stood astride of it and stabbed it. At the touch of the cold steel the beast rose up and made off at full speed with its dismayed rider. The Borele stopped when it had run forty or fifty paces, and was killed by a lucky shot.

"The Borele," says Mr. Chapman, "is a dumpy, plump-looking animal of a very dark color, very lively in his actions, always on the trot, very nervous, wary, and fidgety, often flying round in a fury whether he has observed danger or not, making the hunter sometimes believe that he has been discovered. When he fancies he sees or hears anything, he lifts one foot, tosses up his horn and nose and sinister little eyes, and

presents altogether a picture of the most intense and earnest scrutiny and attention, wheeling round with great rapidity, and by his active gestures and startling snorts often rendering the nerves of the inexperienced hunter very unsteady. On the whole his actions are those of a lively pig." This Rhinoceros extends as far north as Abyssinia, where it was seen by the traveler Bruce. In that country it is pursued and killed by the *agageer* or Sword-hunters. Two men ride on the same horse. One dressed, and armed with javelins; the other naked, with nothing but a long sword in his hand. The first sits on the saddle, the second rides behind him on the horse's rump. Directly they have got on the track of the quarry, they start off in pursuit of it, taking care to keep at a great distance from the Rhinoceros when it plunges into the thickets, but the moment it arrives in an open spot they pass it, and place themselves opposite to it. The animal, in a rage, hesitates for a moment, then rushes furiously upon the horse and its riders. These avoid the assault by a quick movement to the right or the left, and the man who carries the long sword lets himself slide off on to the ground without being perceived by the Rhinoceros, which takes notice only of the horse. Then the courageous hunter, with one blow of his formidable sabre, cuts through the tendon of the ham or hock of one of the monster's hind legs, which causes it to fall to the ground, when it is dispatched with arrows and the sword.

THE KEITLOA.

The KEITLOA, *Rhinoceros Keitloa*, is distinguished from the Borele by having horns of nearly equal length. The hind horn, which is straight, grows to two feet and a half or more in length, being often as long as the anterior horn, although as a rule the latter is the longer. The upper-lip is very pendulous, the neck is somewhat long, the head is not thickly covered with wrinkles. At its birth the horns are only indicated by a prominence on the nose, and at six years of age are only nine inches long. The Keitloa is a terribly dangerous opponent, and its charge is so wonderfully swift that it can hardly be avoided. One of these animals that had been wounded by Mr. Andersson, charged suddenly upon him, knocked him down, fortunately missing her stroke with her horns, and went fairly over him, leaving him to struggle out from between her hind legs. Scarcely had she passed than she turned and made a

second charge, cutting his leg from the knee to the hip with her horn, and knocking him over with a blow on the shoulder from her fore-feet. She might easily have completed her revenge by killing him on the spot, but she then left him, and plunging into a neighboring thicket, began to plunge about and snort, permitting her victim to make his escape. In the course of the day the same beast attacked a half-caste boy who was in attendance on Mr. Andersson, and would probably have killed him had she not been intercepted by the hunter, who came to the rescue with his gun. After receiving several bullets, the rhinoceros fell to the ground, and Mr. Andersson walked up to her, put the muzzle of the rifle to her ear, and was just about to pull the trigger, when she again leaped to her feet. He hastily fired and rushed away, pursued by the infuriated animal, which, however, fell dead just as he threw himself into a bush for safety. The race was such a close one, that as he lay in the bush he could touch the dead rhinoceros with his rifle, so that another moment would probably have been fatal to him.

The Keitloa is of a dark neutral gray color, as seen from a distance. This animal droops behind, and has a stiff, clumsy, and awkward walk. He feeds on bushes and roots, is nervous and fidgety when discovered, but confines his movements generally only to the head and horns, moving them about in an undecided manner, first one way, then the other. He is not so excitable as the Borele. But both are fierce and energetic animals, and so active and swift that they cannot be overtaken on horseback. The Keitloa, it may be added, is more an inhabitant of rocky hills, while the Borele loves the thorny jungle. The Keitloa, as well as the Borele, extends as far north as Abyssinia. It exceeds, however, the latter in height, sometimes measuring six feet at the shoulder.

"Both species," writes W. C. J. Andersson, "are extremely fierce, and, excepting the buffalo, are, perhaps, the most dangerous of all the beasts of Southern Africa. Seen in its native wilds, either when browsing at its leisure or listlessly sauntering about, a person would take this beast to be the most stupid and inoffensive of creatures; yet, when his ire is roused, he becomes the reverse, and is then the most agile and terrible of animals. The Black Rhinoceroses are, moreover, subject to sudden paroxysms of unprovoked fury, rushing and charging with inconceivable fierceness animals, stones, and bushes; in short, every object that comes in their way." "The Black Rhinoceros," writes Gordon Cumming also, "is subject to paroxysms of sudden fury, often ploughing

up the ground for several yards with its horns, 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 to pieces. During the day they 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 food of the Black Rhinoceros, whether the Borele or the Keitloa, is composed of roots, which the animal ploughs out of the ground with its horn, and of the young branches and shoots of the wait-a-bit thorn. It is rather remarkable that the black species is poisoned by one of the Euphorbiaceæ, which is eaten with impunity by the two white species.

THE WHITE RHINOCEROSES.

The WHITE RHINOCEROS or MOHOGOO, *Rhinoceros simus* (Plate XXXV), so called from its pale color, is a very different animal from those of which we have been treating. It grows to more than six feet and a half high at the withers, where there is a sort of square hump, and the head is a foot longer than in the Keitloa, being nearly one-third of the entire length of the body, with an exceedingly long anterior horn, attaining to more than four feet in length, while the hind horn is very short, not exceeding seven or eight inches. "Its color," remarks Mr. Chapman, "is of such a light neutral-gray, as to look nearly as white as the canvas tilt of a wagon." His fellow-traveler, Mr. Baines, describing a freshly-killed one, tells us that "the skin was of a light pinky-gray, deepening into a bluish neutral tint on parts of the head, neck, and legs. The limbs, shoulders, cheeks, and neck were marked with deep wrinkles, crossing each other so as to have a lozenge-shaped reticulated appearance; but the only approach to a fold was a slight collar-like mark across the throat. The mouth was very small, and the limbs were dwarfish compared with the bulk of the carcass. The eyes were small and set flat on the side of the head, with no prominence of brow, and in such a posi-

tion that I should doubt very much the assertion that the Rhinoceros can see only what is straight before it. I should think, on the contrary," continues Mr. Baines, "that anything exactly in front would be absolutely hidden from its view." Mr. Chapman estimated the weight of one of these White Rhinoceroses as being probably not less than five thousand pounds avoirdupois.

"The male," he says, "measures six feet eight inches at the withers, carries his head so low that the chin nearly sweeps the ground, and is constantly swaying his head to the right and left when suspicious. The calf, instead of going behind or at the side, always precedes the dam, and when fleeing is helped on by her horn or snout. The back of this animal is tolerably straight, the croup being as high, or even higher, than the withers. It moves each ear alternately backwards and forwards when excited, and the ears, when thrown forward, turn as if on a pivot, so as to bring the orifice innermost. In the other African Rhinoceroses the two ears are moved together, and not alternately. The ears are pointed or tufted."

This animal is of a comparatively mild and gentle disposition; and, unless in defence of its young, or when hotly pursued, or wounded, will very rarely attack a man. "It is gregarious in families," remarks Mr. Chapman, "the individuals comprising which are greatly attached to each other; and it utters a long sound, and not such a startling, whistling snort as the Borele does. It is an indolent creature, and becomes exceedingly fat by eating grass only." Elsewhere, he remarks of a herd of eight which he observed at a drinking-place: "The Rhinoceroses, all of which were of the white kind, occupied each twelve minutes to drink their fill, after which they wallow in the mud, or else go to their regular sleeping-places. At these their dung is found accumulated sometimes to the amount of a ton or more. They like the warmth of the manure to lie in. The sounds emitted by these animals is something like the coughing of a horse, and when in distress, a stifled asthmatic cry; when in pain they squeal like a storm-whistle." According to Gordon Cumming and others, their flesh is excellent, and even preferable to beef. The speed of this species is very inferior to that of the others, so that a person well mounted can easily overtake and shoot them.

But in spite of its usual gentleness the White Rhinoceros is sometimes pugnacious, as the following anecdote related by Mr. Oswell displays: "Once as I was returning from an elephant chase, I observed a

huge white rhinoceros a short distance ahead. I was riding a most excellent hunter—the best and fleetest steed that I ever possessed during my shooting excursions in Africa—at the time; but it was a rule with me never to pursue a rhinoceros on horseback, and simply because this animal is so much more easily approached and killed on foot. On this occasion, however, it seemed as if fate had interfered. Turning to my after-rider, I called out: ‘By heaven! that fellow has got a fine horn! I will have a shot at him.’ With that I clapped spurs to my horse, who soon brought me alongside the huge beast, and the next instant I lodged a ball in his body, but, as it turned out, not with deadly effect. On receiving my shot, the Rhinoceros, to my great surprise, instead of seeking safety in flight, as is the habit of this generally inoffensive animal, suddenly stopped short, then turned sharply round, and having eyed me most curiously for a second or two, walked slowly toward me. I never dreamed of danger. Nevertheless, I instinctively turned my horse’s head away; but strange to say, this creature, usually so docile and gentle—which the slightest touch of the reins would be sufficient to guide—now absolutely refused to give me his head. When at last he did so, it was too late; for, notwithstanding the rhinoceros had only been walking, the distance between us was so inconsiderable, that by this time I clearly saw contact was unavoidable. Indeed, in another moment I observed the brute bend low his head, and with a thrust upward, strike his horn into the ribs of the horse with such force as to penetrate to the very saddle on the opposite side, where I felt its sharp point against my leg. The violence of the blow was so tremendous as to cause the horse to make a complete somersault in the air, coming heavily down on its back. With regard to myself, I was, as a matter of course, violently precipitated to the ground. While thus prostrated, I actually saw the horn of the infuriated beast alongside of me; but seemingly satisfied with his revenge, without attempting to do farther mischief, he started off at a canter from the scene of action. My after-rider having by this time come up, I rushed upon him, and almost pulling him off his horse, leaped into the saddle; and without a hat, and my face streaming with blood, was quickly in pursuit of the retreating beast, which I soon had the satisfaction to see stretched at my feet.”

The flesh of the White Rhinoceros is apt to be rather tough, but is of good flavor. The best portions are those which are cut from the upper part of the shoulder and from the ribs, where the fat and the lean

parts are regularly striped to the depth of two inches. If a large portion of the meat is to be cooked at one time, the flesh is generally baked in the cavity of a forsaken ant-hill, which is converted into an extempore oven for the occasion; but if a single hunter should need only to assuage his own hunger, he cuts a series of slices from the ribs, and dresses them at his fire. The hide of the Mohogoo is enormously thick, and gives a novice no little trouble to get it from the body, as it is as hard as a board, and nearly as stiff. An adept, however, will skin the animal as quickly and easily as if it were a sheep.

THE KOBABOA, *Rhinoceros Oswellii*, is much rarer than either of the preceding species, and is found far in the interior, mostly to the east of the Limpopo River. The peculiar manner in which this species carries its horns makes it a very conspicuous animal. In all the other species the horns are curved, and incline rather backward; but in the Kobaboa the foremost horn is nearly straight, and projects forward, so that when the animal is running the tip of the horn nearly touches the ground. Indeed, the extremity of an adult Kobaboa's horn is generally rubbed down on one side, owing to the frequency with which it has come in contact with the earth. The head of this and the preceding species is always carried very low, forming a singular contrast to the saucy and independent manner in which the Borele carries his head.

The long horn of this species sometimes exceeds four feet in length, and is almost straight. The best ramrods are manufactured from it, and a ramrod four feet long has been seen. Mr. Chapman, however, believes that the Kobaboa is only an old Mohogoo. He writes: "I believe that wherever guns are to be found at present the White Rhinoceros is not allowed to reach its prime, and will soon be extinct. In newly-opened countries we always find long-horned Rhinoceroses at first. These are selected and shot by every new-comer for their long horns. I have never found a person yet who could conscientiously say that he had seen a young or middle-aged Kobaboa that was distinguished from a Mohogoo—not even a Bechuana or Bushman." That traveler, however, nevertheless believes in the existence of a second species of flat-lipped and grass-eating African Rhinoceros, but he gives no description of it.

