

Pachydermata. manner, in there being only three toes to the hinder feet, and in the tail being tubercular. These animals, commonly called *peccaries*, are native to South America, where there are two species, the collared peccary (*D. torquatus*), and the white-lipped peccary (*D. labialis*). The former inhabits the Atlantic coasts of the New World from Guyana to Paraguay, the latter occurs in parts of the same extensive range, and is sometimes met with in vast flocks. It is easily tamed, and its flesh is good to eat. Prior to the practical researches of Azara, both species seem to have been confounded under the title of *Sas Tapassu*, Linn.

GENUS RHINOCEROS, Linn. The number of teeth in this genus differs according to the species. Each foot is divided into three toes. The bones of the nose, which are very thick, and united into a hollow arch, bear one or more horns, which adhere to the skin, and are composed of a fibrous substance, resembling a mass of agglutinated hairs.

The species, of which four or five are known to naturalists, are of a dull and heavy aspect, and of much more restricted capacity than the elephant. Though inferior also in size to that sagacious creature, they are yet of sufficiently gigantic dimensions to form a very imposing feature in zoology. Their senses of sight and touch are said to be rather defective; those of smell and hearing more acute. A young rhinoceros, kept in the Garden of Plants, in Paris, was habitually gentle, obedient to his keepers, and extremely sensible of kindness. He exhibited, however, at times the most violent paroxysms of rage, during which it was necessary to keep beyond "the pale of such contention," as it would have been but poor comfort to those whom he might have gored, to be informed that his ordinary proceedings were entirely innocuous. He was usually mitigated by a liberal supply of bread and fruit, and as soon as he saw those who were in the habit of feeding him, he would stretch his muzzle towards them, open his mouth, and extend his tongue.

The preceding observations apply to the species of continental India (*Rh. Indicus*, Cuv. Plate CCCXXXVIII. fig. 8), which, besides twenty-eight molars, has two strong incisive teeth in each jaw, two others of a smaller size between the lower incisors, and one still smaller on each incisor of the upper jaw. It has only one horn, and its skin forms deep folds behind and across the shoulders, and before and across the thighs. "The power of this species is frequently displayed to a surprising degree when hunting it. A few years ago, a party of Europeans, with their native attendants and elephants, when out on the dangerous sport of hunting these animals, met with a herd of seven of them, led, as it appeared, by one larger and stronger than the rest. When the large rhinoceros charged the hunters, the leading elephants, instead of using their tusks or weapons, which, in ordinary cases, they are ready enough to do, wheeled round, and received the blow of the rhinoceros on the posterior. The blow brought them immediately to the ground with their riders, and as soon as they had risen, the brute was again ready, and again brought them down, and in this manner did the combat continue until four of the seven were killed, when the rest made good their retreat."

The rhinoceros of Java (*Rh. Javanicus*, Cuv.) is possessed of the large incisives and single horn of the Indian species, but its skin has fewer folds, and is entirely covered with small close-set angular tubercles. A third eastern species occurs in Sumatra (*Rh. Sondaicus*, Cuv.). Its skin is more hairy, with scarcely any folds, and there is a small horn behind the ordinary one.¹

The African species have two horns, no folds on the skin,

and want the incisive teeth. The best known is the *Rh. Burchellii*, *noceros Africanus* of modern writers.—*Rh. bicornis*, Linn. Its name was changed on the discovery of the two-horned Sumatran species, and the title of *African* was bestowed upon it, in the erroneous belief that it was the only species found upon that continent. But the discovery of a distinct species in the interior of southern Africa by Mr Burchell (and which that traveller names *Rh. sinuatus*), affords a proof, among many others which might be adduced, of the impropriety of naming any species from the continent which it inhabits. Few creatures stand so "alone in their glory" as to exist over a vast tract of country without claiming kindred with any other, and it may almost be inferred *a priori* that when one of a genus is discovered, a second or a third will ere long be ascertained. When this happens, such names as *Africanus*, *Americanus*, &c. cease to be discriminating, and consequently lose their value. In the mean time, we have no means of ascertaining the difference in the geographical distribution of the two species of African rhinoceros, or how far their history and description may not have been confounded by travellers. Mr Burchell's species is chiefly distinguished by the truncated form of the lips and nose, and by its general dimensions being much larger. It was first met with amid immense plains near the 26° of south latitude, and was described by the natives as feeding on nothing but grass, while the other is said to browse on shrubs and branches. One or other of the species extends over a great expanse of Africa, where they are much esteemed as food, the tongue especially being regarded as a great delicacy. The hunters of the rhinoceros are called *agageer* in Abyssinia, from *agaro* to kill, by cutting the hams or tendon of Achilles, with a sword. The eyes of the animal being extremely small, his neck stiff, and his head very ponderous,² he seldom turns round so as to see any thing that is not directly before him. To this, according to Bruce, he owes his death, as he never escapes if there is as much plain ground as to enable a horse to get in advance, for his pride and fury then induce him to lay aside all thoughts of escaping but by the victorious overthrow of his enemy. He stands for a moment at bay, then starting forward, he suddenly charges the horse, after the manner of a wild boar,—an animal which he greatly resembles in his general mode of action. The horse, however, easily avoids this heavy though impetuous onset, by turning short aside,—and now is the fatal instant,—for a naked warrior, armed with a ruthless sword, drops from behind the principal hunter, and unperceived by the huge rhinoceros, who seeks only to wreak his vengeance on his more open enemy, he smites him with a tremendous blow across the tendon of the heel, and thus renders him incapable of further fight. It may be easily conceived that his rage is great, and his resistance vain.

A rhinoceros in confinement will consume towards two hundred pounds of vegetable substances in a day. They are usually fed on moistened beans, hay, carrots, and a certain allowance of grain. In speaking of the supply of vegetable matter essential to the support of so gigantic a living mass, we must likewise bear in mind the vast quantity of water which it consumes. No country, according to Bruce, but such as that of the Shangalla, deluged with six months' rain, full of large and deep basins hewn by nature in the living rock, and shaded from evaporation by dark umbrageous woods, or one watered by extensive and never-failing rivers, can supply the enormous draughts of his capacious maw.⁴

¹ Griffiths's *Animal Kingdom*, vol. III. p. 426.

² For a description of its habits of life, see Dr Horsfield's *Zoological Researches in Java*.

³ A head, when displayed from the vertebrae, is described by Mr Burchell as being of such enormous weight that four men could scarcely raise it from the ground, and eight were required to place it on a carriage.

⁴ We may here note an opinion entertained both by Mr Salt and Baron Cuvier, that the figure of the African rhinoceros gives

We shall here briefly notice the Genus *HYRAX* of Hermann, which seems to contain only a single well authenticated species (*H. capensis* and *agrinus*, Plate CCCXXXVIII, fig. 5), described under a variety of names, such as daman, Cape marmot, Cape gavy, &c. It is an animal of the dimensions of a rabbit, with a greyish-coloured fur. It was long classed among the Rodentia, probably on account of the smallness of its size; but, as Cuvier has remarked, with the exception of the horn, which is here wanting, the hyrax may be said to represent the rhinoceros in miniature. It has exactly the same molars, but there are two strong incisors curved downwards in the upper jaw, and, in the young state, a pair of small canines; there are four incisors in the lower jaw. The fore feet have four toes, the hinder three, all furnished with very small rounded hoofs (or rather nails, for in this respect our present genus seems to form an exception to its order), except the inner toe of the hinder extremities, which bears a curved oblique nail. The tail is tubercular. This animal has twenty-one pair of ribs, being exceeded in that number, we believe, by only a single quadruped, the *vauxi* or two-toed sloth, which has twenty-three. In this character, as in many others, it agrees with the pachydermous tribes in general, all of which have numerous ribs; whereas the majority of the Rodentia have only twelve or thirteen pair of ribs, those of the beaver alone amounting to fifteen. The hyrax is spread over a vast portion of Africa from the Cape of Good Hope to the north of Abyssinia. It dwells in clefts of the rocks, feeding on herbs and roots. Bruce describes it as "found in Ethiopia, in the caverns of the rocks, or under the great stones in the Mountains of the Sun, behind the queen's palace at Koscam. It is also frequent in the deep caverns in the rock in many other parts of Abyssinia." It is there called *aukoko*, and several dozens are frequently seen sitting together upon great stones at the mouths of caves, enjoying the warmth of the mid-day sun, or the freshness of a fine summer evening. They are gentle and easily tamed, though at first, if roughly handled, they are apt to bite. "In Arabia and Syria he is called Israel's sheep or gannim Israel, for what reason I know not, unless it is chiefly from his frequenting the rocks of Horeb and Sinai, where the children of Israel made their forty years' peregrination; perhaps this name obtains only among the Arabians. I apprehend he is known by that of *sapari* in the Hebrew, and is the animal commonly called by our translators *cuniculus*, the rabbit or coney."

GENUS *TAPIR*, Linn. Incisors $\frac{1}{1}$ canines $\frac{1}{1}$, molars $\frac{7}{7}$; = 44. Muzzle prolonged into a small fleshy trunk, but not prehensile. Anterior feet with four toes, posterior with three. Tail very short.

The most anciently known of this genus is the *Tapir Americanus*, supposed to be the largest quadruped native to the southern division of the New World, where it is very generally distributed from the Isthmus of Panama to the neighbourhood of the Straits of Magellan, being, however, more abundant in Guyana than in Paraguay. Its prevailing colour is deep brown, and there is a small mane on the upper portion of the neck of the male. This species measures nearly six feet in length, with a height of about three feet six inches. It is hunted by means of dogs, on account both of its flesh and hide, the former being held in some esteem by the Indians, whose taste is not distinguished for delicacy. When pursued, it seeks its safety by bursting through close and thorny thickets, where it is with difficulty

followed by its thinner skinned enemies. It is also sometimes shot by those who lie in ambush during the night among the water melons, its accustomed food. It is tenacious of life, if we may judge from the account given by Azara, who saw one run for some time after it had received two balls through the heart. It is a solitary animal, of nocturnal habits, easily tamed if taken young. See its cranium on Plate CCCXXXVIII, fig. 6.

A second American species has been discovered of late years by M. Roulin,² and described under the title of *Tapirus piacheque*. It is nearly equal in size to the preceding, and resembles it in its general form and aspect, but its osteological structure exhibits a considerable difference, and it is said to occur only at a great height among the mountains.

The only other described species is the Malay tapir of Rafines and Horsfield (*Tapir indicus*, Cuv., Plate CCCXXXVIII, fig. 7), a native of Sumatra and the Peninsula of Malacca. It exceeds the American kinds in size, and is further distinguished by a peculiar and contrasted colouring, the head, shoulders, and fore and hind legs being of a blackish-brown, while the intermediate portion of the body is of a dingy white. Though a common animal in the east, its habits in a state of nature are but little known. The specimen described by Sir T. S. Raffles was young and tractable. It roamed about the park at Barrackpore, and was frequently observed to enter a pond and walk along the bottom under water, but without any exercise of the ordinary mode of swimming.³

FAMILY III.—SOLIDUNGULA.

We here place the different species of the horse tribe, technically characterized by possessing only one external toe to each foot, covered by a single undivided hoof. But, beneath the skin on each side of the metacarpal and metatarsal bones, are two small protuberances or styles, which represent the lateral toes. The three kinds of teeth exist in the males; the canines are almost always wanting in the females.

GENUS *EQUUS*, Linn. Incisors $\frac{6}{6}$ canines $\frac{1-1}{1-1}$, molars $\frac{6-6}{6-6}$; = 40. Upper lip developed and flexible. Eyes lateral. Ears large, pointed, moveable. Limbs long and slender. Tail of medium length, and either furnished throughout its whole extent with long hair, or terminated by a somewhat lengthened tuft. Stomach simple, and of medium size; intestines very long; cæcum enormous.

According to the views of modern naturalists, this important genus consists of six distinct, though nearly allied species, namely, the horse (*Equus caballus*), the zingithai (*E. hemionus*), the ass (*E. asinus*), the quagga (*E. quagga*), the zebra or mountain zebra (*E. zebra*), and the zebra of the plains (*E. Burchellii*). It has been remarked that the characters which distinguish these animals from each other, though sufficient for the purposes of the naturalist, are not, anatomically considered, of an essential nature. They are rather superficial, consisting chiefly in the comparative size of the ears, the length and texture of the hair, and the distribution of the external colours. As the size varies remarkably in several of the species, the difference of dimension can scarcely be assumed as a specific character. Hence the most accomplished comparative anatomist can with difficulty distinguish a species merely from the inspection of a few isolated bones, although such inspection is amply suffi-

by Bruce must have been copied, for convenience, from the one-horned species of Buffon, with the addition of a second horn, as the two-horned rhinoceros wants the folds in the skin, which are nevertheless represented by the Abyssinian traveller.

¹ Bruce's Travels, Appendix, p. 136, pl. 23. See also the late Dr Scott's Essay in *Pennsylvanian Memoirs*, vol. vi.

² *Annales des Sciences Nat.* 1829, t. i. p. 26.

³ See Linn. Trans. vol. xiii. part 24, and Horsfield's *Zoological Researches*.