# N A T U R A L H I S T 0 R Y 

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Lutitish and forrign

# Q U A DRUPEIS; 

MODERN DISCOVERIES, ORIGINAL OBSERVATIONS,
asid
NUMEROUS ANECDOTES.

BY JAMES H. FENNELL.

WITH TWO HUNDRED WOOD CUTS.
" Feience alumbld be stripped of whatewer tende to clothe at in a stiange and repuisive garb; and every thing which, to keqp of mapparmee of superiority in its professors over the rest of mankind, assumes an untacessary gaibe of ulocurity, =hould be sacrifiecd withont intacy." Sir John Hzrschel.

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1841. 

the neck is a somewhat erectile mane of long black bristles, which become gradually longer as they approach the buttocks; a curved collar of yellow-pointed hairs intersects the neck and body; the legs are rather slender and nearly black; the hind feet have only three toes; the tail is pendulous, remarkably flat, very short, and scarcely perceptible among the bristles.

This species does not associate in vast herds, as the whitelipped peccary does, but lives only in pairs, or at most in small families, which seldom quit their native forests. The peculiar grunt of both species may be heard a long way off; but either may be more easily traced to their abodes by the strong odour that exhales from a fluid matter, which is copiously secreted by a large gland situated beneath the skin on the middle of the loins, but concealed by the bristles. D'Azara, Ray, and others, speak of this odour as being musky, swect, and agreeable; but Buffon, Sonnini, Bennett, and others, call it unsavoury and disgusting. Both species grub up the earth in search of roots, and sometimes commit great ravages among the sugar-canes, maize, manihot, and potatoe crops. They also devour fish, and are said to be expert in killing reptiles, not excepting the rattlesnake.

The females, of both species, produce each only two young ones in a year. If a young one be captured, it will become nearly as tame and familiar in confinement as the common hog; but its flesh is said to be inferior to pork in flavour and fatness, and to partake of the strong smell, unless the gland has been removed immediately after death.

## The Common Indian Rhinoceros.

(Rhinoceros Indicus, Cuv.)
Animals of this genus are peculiar to Asia and Africa. The Asiatic species are three in number, namely the common, or one-horned Indian rhinoceros ( $R$. Indicus), the Javanese one-

horned rhinoceros (R. Javanicus, Cuv., R. Sondaicus, Desm.), and the Sumatran two-horned rhinoceros ( $R$. Sumatranus). There are three, if not four, African species, namely, the common two-horned rhinoceros ( $R$. Africanus), the two-horned blunt nosed, or white rhinoceros ( $R$. Simus), and the two-horned Ketloa rhinoceros (R. Ketloa); the doubtful fourth species, being that with one-horn, which Burckhardt describes as inhabiting a part of Abyssinia. Though it appears that one or other of the two-horned African species was frequently exhibited in the ancient Roman sports, yet, in modern times, no living specimen has ever been brought to Europe. Those that have been imported since we have desired these animals for the purposes of science, not for brutal sport, have all been of the species which we have here selected for description.

The common, or one-horned Indian rhinoceros, is far more widely distributed than the two other Asiatic species. It abounds in the hills of the lower region of Nepal, and the plains of India, Pegu, Siam, and Cochin-China, usually associating in small herds, and keeping to the dense jungles and forests.

When full-grown, the circumference of the body is about twelve feet, and the length of the animal from the muzzle to
the tail about the same measurement. Its hide is of a dark greyish brown colour, very thick, and covered with scaly incrustations (giving it somewhat of the appearance of the excoriated bark of the maple-tree), and about the joints of the body it hangs in large folds; between these folds, the skin is of a pale pinkish colour, and so soft, smooth, and flexible, that when the rhinoceros turns in any direction, he can, as Dr . Parsons observes, " slip or shove one part of his board-like skin over the other," and thus facilitate the performance of every motion he is disposed to assume : the sides and belly are protuberant; the neck is short and powerful; the head of ponderous size, and very irregular shape; the ears are large, open, pointed, slightly hairy, and placed on each side of the summit of the head, and being rapid and varied in their movements, the animal's sense of hearing is very acute; the eyes are very small, bright, and prominent, and are situated so much nearer to the muzzle than in most mammals, that a slight turn of the head brings an ample circuit within their range, their backward vision not being obstructed by the body, as it would have been, had they been placed higher in the head; the upper lip is very flexible, capable of elongation, and possesses a fingerlike extremity with which the animal can grasp its food, but when not in action it curls over the lower lip, which is rather square, and very broad; the tongue is very flat, large, yellowish, and perfectly smooth; there are twenty-cight molar teeth, and four incisor teeth in each jaw ; the horn on the head is conical, curved backwards, and arises from a broad limpet-shaped base over the nasal bones, which are necessarily thicker and more solid than in other mammals that have not to bear such a weight, or to wield such heavy blows from that part of the head; the legs present the appearance of short stout pillars to support the enormous superstructure; the feet have three toes, each encased in a solid hoof; the tail is of moderate length, and its extremity is fringed on either side with bristles.
" When we speak of the nasal horn of the rhinuceros, it must not be supposed that it presents a similar structure to the horns
of the ox, which consist of a bony core from the skull, encased in a horny sheath. The nasal horn of the rhinoceros is a solid structure, composed of agglutinated fibres, analogous to hair, and much resembling those into which whatebone is so easily separable. The horny sheath in the ox, goat, or antelope, is indeed also thus composed, but it covers a bony process from the skull itself. Here there is no bone, the whole mass being secreted, fibre by fibre, from the skin, to which it is firmly attached-this being as firmly attached to the nasal bones, so that the horn is almost, if not quite, immoveable. Burchell's theory respecting horns in general, appears to be reduceable to the following statement. The pores of the skin secrete a corneous matter. When the pores are separate the matter forms hairs, having an insertion not deeper than the skin, and growing by the addition of new matter at their base. When the pores are confluent and in a line, the matter forms nails, claws, hoofs. When the pores are confluent, and in a ring, the matter furnishes the horns of animals of the ruminating order; and when confluent, over the whole of a circular area, the result is the formation of solid horns, like the rhinoceros's horn, which grows from the skin only, and in the same manner as the hair. It is not at all extraordinary, therefore, that the rhinoceros should possess the power of moving its horn, although by no means so loose as some writers have supposed."*

The rhinoceros is more rapid in its movements than its comparatively clumsy and massive appearance would, at first sight, induce one to expect. "The Onamese," Lieutenant White tells us, "speak with great energy of its irresistible strength and velocity. Speaking of this animal one day to the viceroy, he observed, 'You now see him here before you, in Saigon; and, snapping his fingers, 'now he is in Canjeo.' However hyperbolical these accounts appear to be, we may yet infer from them, that the rhinoceros can exert great strength and speed." $\dagger$
"In a state of nature, the rhinoceros leads a calm but indo-

* The Menageries (1840), vol. iii. p. 11.
+ Voyage to Cochin.China in 1819-20, (1824).
lent life: sluggish in his habitual movements, he wanders along with a heavy measured step, carrying his huge head low, so that his nose almost touches the ground, and stopping at intervals to uproot with his horn some favourite food, or in playful wantonness to plough up the ground, throwing the mud and stones behind him. As he passes through the tangled coverts, every obstacle gives way before his strength, and his track is said to be often marked by a line of devastation in his rear. Inoffensive, but fearless, he is, when roused, a most tremendous antagonist; and such is the keenness of his sense of smell and hearing, that except by very cautiously approaching him against the direction of the wind, it is almost impossible to take him by surprise. On being thus disturbed, he usually endeavours to retreat in peace, though instances are on record in which he has furiously advanced to the attack. 'A few years ago,' says the translator of Cuvier's Animal Kingdon, 'a party of Europeans, with their native attendants and elephants, went out to hunt rhinoceroses, and met with a herd of seven, led as it seemed by one larger and stronger than the rest. When the large rhinoceros charged the hunters, the leading elephants instead of using their tusks, which in ordinary cases they are ready enough to do, wheeled round and received the blow of the rhinoceros's horn upon their posteriors. 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 contest continue until four out of the seven were killed, when the rest made good their retreat.' We are not to infer from this account that there is a natural antipathy between the elephant and the rhinoceros, though Pliny asserts such to be the case, an error repeated by other writers. The fact is, that there are seasons in which the rhinoceros becomes excessively furious; and upon any animal large enough to attract his notice, which intrudes within the precincts of his haunt, he rushes with impetuous violence. The rhinoceros's mode of attack is very similar to that of the wild boar, except that the former strikes with his horn, and the
latter with his tusks; in cither case the blows are directed more or less obliquely upwards, and rapidly repeated,"*

Notwithstanding the thickness and solidity of his hide, the rhinoceros is annoyed by the bites and stings of insects, which abound in his swampy haunts; and to protect himself from these puny tormentors, and also to defend the skin from the burning heat of the sun, he wallows in the marsh, so as to cover his body with a layer of mud. But he also delights to bathe and swim in the clean water.

Huge herbivorous animals, like the rhinoceros, elephant, hippopotamus, and others of the present order, must necessarily consume a prodigious quanity of food; but the very places which their habits lead them to haunt, are those where it can be obtained in the greatest abundance. As they drink large quantities of water, require plenty to swim in, and muddy marshes to wallow in, they are compelled to keep to those localities which supply these requisites to their existence and comfort, and which also, from the moisture of the situation, constantly maintain a most luxuriant and rapid vegetation.

Although the rhinoceros, when adult, is subject to occasional paroxysms of fury, be may, by proper management, be rendered so tame and gentle as to be perfectly tractable. The late Bishop Heber says: "In passing through the city of Baroda, I saw a rhinoceros (presented by Lord Amherst to the Guicar), which is so tame as to be ridden by a mahout, quite as patiently as an elephant. At Lucknow there were five or six large rhinoceroses, quiet and gentle animals, except that one of them has a feud with horses. They seem to propagate in captivity without reluctance; and, I should conceive, might be available to carry burdens as well as the elephant, except that, as their pace is still slower than his, their use could only be applicable to very great weights, and very gentle travelling. They have sometimes had howdahs on them, and were once fastened in a carriage, but only as an experiment, which was never followed up."

In May 1834, the Zoological Society purchased their fine * Abridged from The Menageries (1840), vol. iii. p. 15-17.
male specimen from the captain of an East India vessel, for the sum of one thousand guineas. It is supposed to be about eight years old, and, of course, not full grown, although when measured, on May 3rd, 1837, it was eleven feet seven inches in length from the snout to the root of the tail.

His ordinary pace consists in a slow, sluggish walk, but during his sportive moments he proceeds round his paddock or den, at a heavy lumbering gallop with headlong precipitancy, the nose almost touching the ground, and playfully ploughing up the straw or gravel as he proceeds. It is in this position that the animal in a state of nature would rush upon his antagonist, striking an upward blow with his formidable horn. His senses are acute, especially those of hearing and smell. He is almost constantly turning his ears in different directions, as if intent to catch the various sounds around him. He scents the buns or bread with which the visitors feed the elephant in the next paddock, and approaches the bars to solicit a share, gazing intently and expressively at them, while be stretches out his upper lip to receive them. He recognises his keeper's voice, and playfully follows him as he passes before the den, as if begging for food or courting his notice. While the keeper, bringing his meal to him, is yet at a distance, he is still aware of his approach, and testifies his satisfaction by a short inward grunt, similar to that which he utters when about to repose. When excited, however, he frequently utters a neighing sort of sound, which, though not very loud, is shrill and piercing. His daily diet at present consists of twentyeight pounds of clover, the same quantity of meadow hay, five pounds of potatoes, three pecks of boiled bran, and eight pounds of boiled rice, the two latter articles being mixed up with three-quarters of a pound of salt. Of water he drinks daily fourteen gallons. "In summer, he is permitted to enjoy a plunge in the large bath, constructed in the elephant's paddock, and it is interesting to watch his gambols. He runs to and fro, ploughing the mud with his snout; then he plunges into the bath, runs out, and again plunges in, and often remains for a
long time almost wholly immersed. On these occasions another of his delights is to wallow in the mud. Basking in the sun, with his huge frame lolling on the margin of his bath, where the clayey soil has been trampled into mud by the elephant's fect and his own; now rolling his little eyes around, as if to survey all about him; now closing them in tranquil slumber, he presents a picture of thorough epicurean enjoymeut. He quietly suffers himself to be driven from his den to the bath, but he is not easily induced to leave the water, or his muddy resting-place; and it requires no little management to get him into the passage to his own apartment: not that he offers any violent resistance, but he avoids, as long as possible, all efforts to entrap him between the railings, and at last proceeds reluctantly. The quietness of his temper is, however, not a little remarkable; hitherto he has exhibited no paroxysms of rage, but is inoffensive, happy, and contented. He neither pines nor evinces impatience in his captivity. To eat, drink, and sleep, to roll in the mud, or luxuriate in his bath on a fine sunny day, constitute the sum total of his felicity. He passes about fourteen hours a day in repose, and is generally lively in the afternoon and evening. During one of his ebullitions of sportiveness, he managed, by repeated blows with his horn, to break some of the thick boards which line the walls of his den, and would have continued his mischief if he had not been timely interrupted. On another occasion of his exuberant mirth, when his keeper was in the den, he nearly squeezed the man to death in his unwieldy play. Thrasting at him, the animal followed up a regular attack, and at length fairly pinned him in a corner against the wall, driving the horn forcibly against his chest. The man's cries for assistance led the other keepers to the spot, and he was rescued from his perilous situation; but it was sometime before he recovered from the effects of the bruises he had received from his rough playmate."*

The female rhinoceros goes with young from seventeen to eighteen months, and produces one at a birth. When first * Abridged from The Menageries (1840), vol. iii. p. 27-33.
born it measures three feet four inches in length, and two feet in height, and has, for about a month afterwards, a pink suffusion over the dark colour which is proper to the mature hide. It continues to suck for nearly two years.


The Common American Tapir.-(Tapitus Americanus, Linn.)
Mborcbi. Anta.
Few mammals of its size have so extensive a range as the American tapir. It inhabits every part of South America to the east of the Andes, from the Straits of Magellan to the Isthmus of Darien; but it appears to be most common within the tropics. M. Roulin says, that although it occurs as low as forty degrees to the south of the equator, its range abruptly terminates at about eight degrees north, in a situation where it is extremely abundant, and there docs not appear adequate cause to bar its further progress; no large rivers nor lofty mountains intervening, nor any change appearing in the character of the vegetation of the country. The left bank of the Atrato near its mouth, and the part of Darien inhabited by the independent natives, may be considered as its northern limit. Its highest range in the province of Maraquita, at least

