

A. N
UNIVERSAL SYSTEM
OF
NATURAL HISTORY,
INCLUDING THE
NATURAL HISTORY OF MAN;
THE ORANG-OUTANG;
AND
WHOLE TRIBE OF SIMIA;
ALL THE KNOWN
QUADRUPEDS, BIRDS, FISHES,
AND
AMPHIBIOUS ANIMALS;
INSECTS, POLYPEES, ZOOPHYTES, AND ANIMALCULÆ;
TREES, SHRUBS, PLANTS, AND FLOWERS;
FOSSILS, MINERALS, STONES, AND PETREFACTIONS.

FORMING A MAGNIFICENT VIEW OF

THE THREE KINGDOMS OF NATURE,

Divided into DISTINCT PARTS, the Characters SEPARATELY
DESCRIBED, and SYSTEMATICALLY ARRANGED.

VOLUME THE THIRD.

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J. P. G. 1847

The RHINOCEROS.

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THE BABYROUSSA.

THE babyroussa is of a plump, square, form, and nearly equal to the stag in size; but what chiefly distinguishes it, is the size and the shape of its tusks: each jaw is furnished with two: those in the inferior jaw rise eight inches out of their sockets, towards the eyes: the sockets of those above are placed on the outside of the jaw; and the tusks rise twelve inches out of them; they bend like horns, till their points nearly touch the forehead: the ears are small, erect, and pointed: a few weak bristles cover the back; the rest of the body is covered with a sort of soft wool: the tail is long, often twisted, and terminates in a point.

The babyroussa is found in the islands of Java, Celebes, and Boero, in the East. A few individuals are often diffused through the other islands of the Indian Ocean. The species are naturally gregarious: their sense of smelling is extremely acute: plants and leaves of trees are their favourite food: they grunt like our common hogs: they are not unsusceptible of domestication. To escape from a pursuer, they often rush into the sea, and swim to a distance, or conceal themselves by diving. They even swim occasionally from isle to isle. A babyroussa is often seen to rest its head in a forest, by hooking its upper tusks on some bough. None of these animals ever commits any devastations in gardens.

THE RHINOCEROS.

ANIMALS of this genus are distinguished, sometimes by one, sometimes by two, large, solid, conical, horns on the nose; and by having each hoof cloven into three parts. There are only two species, the descriptions of which are as follow:

RHINOCEROS

RHINOCEROS with one Horn; or UNICORN.

THIS animal is among the largest of quadrupeds. His body equals the bulk of the elephant; and, were not his legs shorter, he would exhibit a no less stately figure. A single, black, smooth, horn, sometimes three feet and a half long, and situated near the extremity of the nose, constitutes his specific character: the upper lip is disproportionably large, hanging over the lower, and terminating in a point: it is furnished with muscles, which enables the animal to move it with great dexterity in collecting his food, and introducing it into the mouth: the nostrils are in a transverse direction: the ears are large, erect, and pointed: the skin is naked, rough, and extremely thick: about the neck it is gathered into enormous folds; a fold extends between the shoulders and the fore legs, and another from the hinder part of the back to the thighs: the tail is slender, flat at the end, and covered on the sides with very stiff, black, hairs. In consequence of the vast bulk of the body, and the disproportionate shortness of the legs, the belly hangs low. The breadth of the feet does not exceed the circumference of the legs.

This animal was well known to the ancients. Several of the sacred writers make frequent allusions to them, as an animal familiarly known to the people to whom their writings were directly addressed. They have not indeed condescended to a minute description; but the terms in which they have mentioned it sufficiently indicate the species. Pliny mentions the rhinoceros as an animal that appeared in the Roman circus, in games exhibited by Pompey. He was opposed to the elephant, and shewed himself no unequal antagonist. In addition to this information, the Roman natural historian fables, that the elephant and the rhinoceros are natural enemies; and that the latter carefully whets his horn upon stones, to tear up the belly

of the former. Though not described by Aristotle, the rhinoceros is mentioned by the historians of Alexander, as one of the strange animals discovered by his army in their progress into India.

But from the time when they ceased to be exhibited on the Roman amphitheatres, till within the sixteenth century, no animals of this species appeared in Europe. It was forgotten that any had ever appeared. Those who were acquainted with what the ancients relate concerning the rhinoceros, concluded, or at least suspected, either that no such species of animals had ever existed; or that, though they might once exist, they were now extinct.

In the sixteenth century, the existence of the species was fully ascertained. A number of individuals have since been, at different times, introduced into Europe. Many figures have been drawn; and the form of the rhinoceros is no longer strange. His character and manners are also tolerably known.

He is a native inhabitant of Bengal, Siam, Cochin-China, Quangsi in China, and the isles of Java and Sumatra. He is a solitary, stupid, animal. Shady forests adjoining to rivers, and miry, marshy, plains, are his favourite haunts. Unless provoked by injuries, he is commonly mild and inoffensive: his rage is desperate and dangerous. The mode in which copulation takes place between the two sexes is not certainly known: the female produces only one at a birth. During the first month of its age, the young rhinoceros does not rise above the size of a large dog: the horn is at first almost imperceptible, and increases by slow gradations: the bulk of the animal is indeed but very slowly enlarged: at the age of two years he has scarcely attained half his full height: his eyes are small, and his sight dull: but he possesses the senses both of hearing and smelling in high perfection: thorns and prickly shrubs are his chief food: his tongue was once said to be rough and hard; but, from later and more accurate observation,

observation, we learn, that it is as smooth and soft as the tongue of any other animal. It has been conjectured, that sixty or seventy years may be the natural term of the life of the rhinoceros. His skin has been represented as impenetrable, even by balls; but we now find that this vast animal is liable to be mortally wounded by missile weapons of all kinds. The flesh is not unlike pork; but of a coarser grain, and a stronger taste.

RHINOCEROS with two Horns.

IN size, form, and manners, and almost all other characteristics, this species appears nearly allied to the former. The only, or at least the chief, distinction is an additional horn. The former rhinoceros bears only one horn on his nose; but this species are furnished with two,---one standing straight behind the other. We know not whether the unicorn and the bicorn copulate and breed together indifferently. It has even been doubted, whether all animals of the rhinoceros character may not naturally possess two horns; and an unicorn appear only in consequence of an accidental loss.

The anterior is always larger than the posterior. Both horns are universally of a conical shape, with the tips reclining somewhat backward. The posterior horn of an old rhinoceros has always the appearance of being worn away. Dr. Sparrman relates, from the information of the Hottentots and colonists at the Cape, that the horns are remarkably loose on the nose of the living rhinoceros; he moves them backwards and forwards at pleasure; as he walks carelessly, they shake and clatter against each other; and in digging roots, which he eats, as well as prickly shrubs, he reclines the anterior horn, and, employing only the posterior, thus wears the latter by degrees to a stump, while the former remains entirely uninjured. The tips of both horns are slightly bent backwards: their texture seems

composed of parallel horny fibres: near the root, the surface of the horn is rough and unequal; towards the point smooth and plain like the horns of oxen. The anterior horn of a rhinoceros of moderate size, shot by Dr. Sparrman, was a foot in length, and five inches in circumference at the base. The anterior horn of a larger rhinoceros was a foot and an half in length, and seven inches in circumference at the base: the posterior horn stands rather on the forehead than on the snout.

Dissecting the smaller rhinoceros, Sparrman found its stomach filled with masticated roots and branches of trees, and succulent plants, several of which seemed to be prickly. It had no fore-teeth; but the lips were of so hard a texture, that they might easily serve to perform all the same functions as the fore-teeth of other animals. The jaws of a full-grown rhinoceros were furnished with four-and-twenty grinders: the anterior part of the os palati exhibits a tooth-like process; but so distant from the lower jaw, that it can scarcely serve any of the purposes of a tooth: the skin is hard and thick in proportion to the bulk of the animal; but not proof against the impression even of blunt-pointed weapons: on the feet, the skin is thicker, and more callous than on the other parts: the skin is not gathered into folds, as that of the former species: it is smooth and flesh-coloured between the legs; a few stiff bristles are thinly scattered over the other parts of the body; they are most numerous about the ears and the end of the tail: the skin is of a deep cinereous grey colour; and numerous warts appear all over the body: the foot is divided into three parts, the hoofs of which project but a little beyond the leg. Such, according to Dr. Sparrman, are the more remarkable external characteristics of the rhinoceros with two horns.

Another observer of nature ascribes to this species a very different appearance, and treats Sparrman with great asperity, for advancing what appears to him absolutely

solutely fabulous. These writers disagree so remarkably, that I should consider them as describing different species, or different varieties, did I not see reason to suspect that wonder, or partial observation, or a spirit of opposition, may have contributed to create the differences which appear in their descriptions.

Mr. Bruce represents the rhinoceros of Abyssinia as having his skin gathered into folds, on the neck, the shoulders, the buttocks, and some other parts of his body. His mouth he describes as furnished with twenty-eight teeth: the upper lip he allows to be remarkably large: the skin is always smooth, except when flies and other troublesome insects have broken it, so as to produce pustules; a distress to which the animal is very liable: the tongue of the young rhinoceros is indeed smooth; but, as he grows old, it becomes very rough: the anterior horn is round, and bends slightly back at the point; behind it appears the second, which is flat and strait; and behind this have been observed the rudiments of a third.

It is only in Africa that this animal has been discovered in modern times. In the southern parts of the African continent, the species are well known. The Europeans, who have penetrated into Abyssinia, represent them as not less numerous in that country. From an epigram of Martial, and some coins of Domitian, we learn that the rhinoceros with two horns was not unknown to the Romans.

The manners and economy of this species differ but little from those of the last. But the bicorn has been more accurately observed than the unicorn. He resides almost constantly in deep forests: he never eats hay or grass: large succulent plants, prickly shrubs, the branches, and even the trunks, of trees, are the articles of food which he prefers. The strength of his jaws and teeth enables him to break off and masticate the thickest branches of the hardest and toughest trees. But the forests of Abyssinia afford trees of a softer consistency,

sistency, and peculiarly succulent; which he eats in preference to others: his upper lip is his chief instrument in collecting his food: he extends and twists it, so as to perform with it many of the functions which the elephant performs with his proboscis. After stripping a tree of its branches, a rhinoceros often applies his horn to the trunk, and, splitting it into so many lathes, devours it with as much ease and avidity as an ox would eat up a bunch of celery. In the forests inhabited by animals of this species, there appear sometimes trees divested of their leaves and branches, sometimes a trunk divided into lathes, a part of which have been eaten, and another part left for a future repast; and sometimes short stumps, of which the leaves, branches, and trunks, have been devoured. The horns of the rhinoceros suffer greatly in the preparation of his food; he often leaves a part of a horn either fixed in a tree, which he has in vain attempted to tear, or lying beside it on the ground. The sensibility of the rhinoceros in this part, must render such an accident as the breaking of a horn, if not fatal, at least extremely painful and dangerous. Mr. Bruce relates, that he saw a rhinoceros so affected, on having the point of his foremost horn broken off by a musket ball, as to appear, for an instant, absolutely incapable of sense and motion.

However unwieldy his form, the rhinoceros displays astonishing swiftness. He moves with a sort of trot; quickening his pace by degrees, as he runs. His speed is not equal to that of a swift and vigorous horse; but, between speed and cunning, he seldom suffers a hunter, mounted on horseback, to overtake him. The Hottentot and Caffrarian hunters are accustomed to steal upon the rhinoceros when asleep, and gore him with several deep wounds. After which they follow his footsteps, even for several days, till he drops down of weakness, or dies of his wounds. But they commonly poison their darts immediately before the enterprise; and,

and, in this case, the animal does not long survive. As he moves through the forest, the trees are crushed under his weight, like so many dry reeds. His eyes are so small, and his sight so feeble, that he sees only a very short way before him. The Abyssinians pursue him, two on a horse; and, as he seldom looks behind him, commonly overtake him before he is aware. The one, armed with a sword, then drops down; and, cutting the hams of the rhinoceros, the vast animal falls to the ground, alike incapable of flight and of resistance. Although naturally peaceable, he is disposed, as well as other animals, to defend himself when attacked. His rage is impetuous, and generally ill directed; he injures himself as readily as an antagonist; he knocks his head against a wall or manger; strikes against a tree with as much satisfaction as against the hunter who attacks him.

It may be naturally conceived, that so large an animal as the rhinoceros must require a considerable quantity of water to macerate his food. The tracts of country which he inhabits are interspersed with marshes, lakes, and rivers. The district of Shangalla, the favourite abode of this species, in Abyssinia, is, for six months in the year, deluged by constant rains, and overspread with woods which prevent evaporation. The rhinoceros, as well as most other species, is pestered by flies. Being destitute of hair, he is peculiarly exposed to the persecution of these insects. Nature has taught him, however, to roll occasionally in the mire, till he acquires a crust of dirt, which may, for some time at least, protect him from their stings. But this dries, cracks, and falls off in pieces. The flies then renew their attacks, and often pierce through his skin; so that his body is at length covered over with pustules. It is in the night chiefly, that he rolls in the mire; and the hunters often steal on him at that period, while he is enjoying one of his favourite pleasures, and stab him with mortal wounds in the belly,
before

before he is aware of their approach. By wallowing in the mire, he often gathers reptiles and insects upon his body; such as millepedes, scolopendræ, worms, and snails.

The rhinoceros, though next in size, yet in docility and ingenuity greatly inferior, to the elephant, has never yet been tamed, so as to assist the labours of mankind, or to appear in the ranks of war. The Romans introduced him on the amphitheatre, and opposed him to the elephant; it is even pretended, that he appeared no unequal match. The bear was a contemptible antagonist to the rhinoceros. The flesh of this animal, though not a delicate dish, is with the Shangalla, and great part of the inhabitants of Lower Abyssinia, a principal article of food. The soles of his feet, consisting of a gristly substance, soft like the soles of a camel, are the most delicate part. The rest of the flesh is said to taste like pork; but is much coarser, and smells of musk. The negro hunters of Abyssinia eat it without salt. The hairs about the tail are so thick and strong, that with ten of them a whip may be made, which will draw blood at every stroke. The skin cut into thongs forms excellent whips: the horns are made into cups, which have been fancied to act as antidotes against poison. In Abyssinia, the handles of daggers are always made of the horn of the rhinoceros. The second horn is scarcely ever applied to any use. The surface is susceptible of a perfect polish; and beautiful snuff-boxes might be formed of this material, were it not that it is a substance easily scratched, and extremely liable to crack or splinter.

THE HIPPOPOTAMUS.

THIS genus consists only of one solitary species. Even the rhinoceros yields to the hippopotamus in size. He is sometimes not less than seventeen feet long, and generally about seven feet in height: his
head