

GOLDSMITH'S
NATURAL HISTORY,
WITH NOTES

FROM ALL THE POPULAR TREATISES
THAT HAVE BEEN ISSUED SINCE THE TIME OF GOLDSMITH;

COLLECTED WITH THE UTMOST CARE:

COMBINING

A MASS OF INFORMATION AND REFERENCE;

FORMING

A COMPLETE VADE-MECUM OF MODERN DISCOVERY IN THE
SCIENCE WHICH IT ILLUSTRATES.

WITH A LIFE OF OLIVER GOLDSMITH.

BY GEORGE MOIR BUSSEY.

~~~~~  
"Some one told Dr. Johnson that Goldsmith was engaged in writing a work on Natural History. 'Is he so engaged?' said the great lexicographer,—'then he will produce a work on the subject as pleasing and delightful as a fairy tale.'"  
~~~~~

By HENRY INNES,

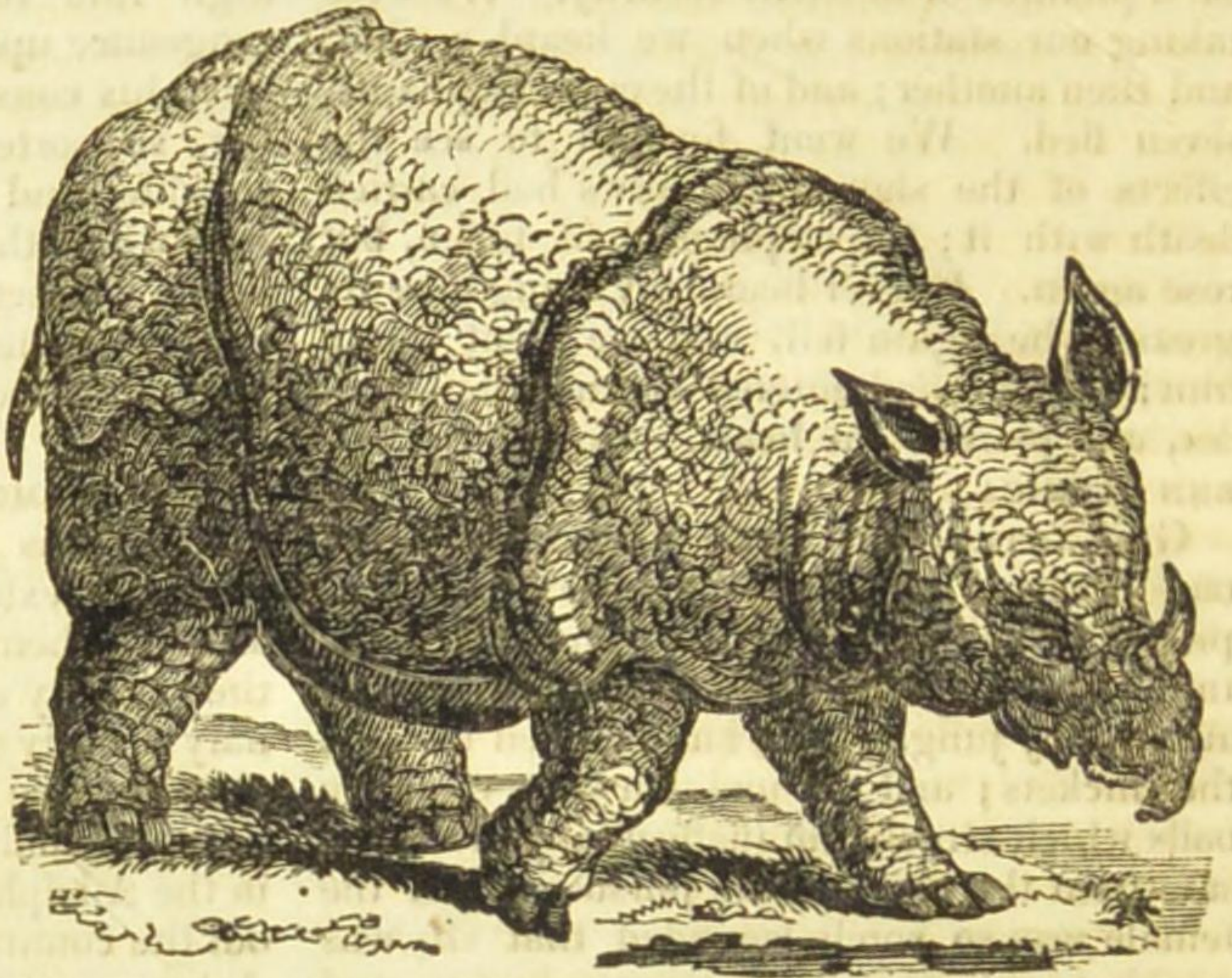
AUTHOR AND EDITOR OF VARIOUS WORKS ON EDUCATION.

JOHN LOFTS, 262, STRAND, LONDON.

CHAP. XXIII.

THE RHINOCEROS.

NEXT to the elephant, the Rhinoceros is the most powerful of animals.* It is usually found twelve feet long, from the tip of the nose to the insertion of the tail; from six to seven feet high; and the circumference of its body is nearly equal to its length. It is, therefore, equal to the elephant in bulk; and if it appears much smaller to the eye, the reason is, that its legs are much shorter. Words can convey but a very confused idea of this animal's shape; and yet there are few so remarkably formed: its head is furnished with a horn, growing from the snout, sometimes three feet and a half long: and but for this that part would have the appearance of the head of a hog; the upper lip, how-



* HISTORY OF THE RHINOCEROS.—If the moderns are able to boast of a more extended knowledge of animated nature than was possessed by the ancients, it must be acknowledged that it is rather the result of their geographical discoveries, than of the zeal of their governments or commercial companies for its promotion. And it is humiliating to think that the nations, among which a pure love of science is most widely diffused, still should be debarred the contemplation of those rarer species of quadrupeds inhabiting the Old World, which in ancient Rome were repeatedly exhibited to gratify a tyrant's love of ostentation, and a people's lust for the cruel combats and wholesale slaughter of the Amphitheatre.

The history of the remarkable quadruped with which the present work commences (the Giraffe) in some measure exemplifies this anomalous fact, and the rhinoceros is a still stronger proof of it. This quadruped, which is second in bulk to the elephant alone, is peculiar to the Old World; yet of the five or six distinct species which inhabit Africa and Asia, only one has been exhibited in modern Europe, and that at rare and distant intervals; while the knowledge of the rest has been chiefly acquired in our own times.

The first rhinoceros of which any mention is made in ancient history, was that which appeared at the celebrated festival of Ptolemæus Philadelphus, and which was made to march the last of all the strange animals exhibited at that epoch, as being apparently the most curious and rare. It was brought from Ethiopia.

The first which appeared in Europe graced the triumph and games of Pompey. Pliny states that this animal had but one horn, and that that number was the most common.

Augustus caused two to be slain, together with a hippopotamus, when he triumphed after the death of Cleopatra: and these, also, are described as having each but one horn.

Strabo very exactly describes a one-horned rhinoceros, which he saw at Alexandria, and mentions the folds in its skin. But Pausanias gives a detailed account of the position of the two horns, on a species having that number, which he terms the Ethiopian Bull.

Of this latter kind two appeared at Rome under Domitian, and were engraved on some of the medals of that emperor; these occasioned some of the epigrams of Martial, which modern commentators, from ignorance of the species with two horns, find so much difficulty in comprehending.

ever, is much longer in proportion, ends in a point, is very pliable, serves to collect its food, and deliver it into the mouth; the ears are large, erect, and pointed; the eyes are small and piercing; the skin is naked, rough, knotty, and lying upon the body in folds, after a very peculiar fashion: there are two folds very remarkable; one above his shoulders, and another over the rump:

The emperors Antoninus, Heliogabalus, and Gordian, severally exhibited the rhinoceros: and Cosmus expressly speaks of the Ethiopian species as having two horns: there is abundant evidence, therefore, that the ancients possessed a degree of knowledge respecting these animals, of which the moderns were for a long period destitute.

The first rhinoceros which was exhibited in Europe after the revival of literature, was a specimen of the one-horned species. It was sent from India to Emmanuel, king of Portugal, in the year 1513. This sovereign made a present of it to the Pope; but the animal being seized during its passage with a fit of fury, occasioned the loss of the vessel in which it was transported. A second rhinoceros was brought to England in 1685; a third was exhibited over almost the whole of Europe in 1739; and a fourth, which was a female, in 1741. That exhibited in 1739 was described and figured by Parsons, in the *Philosophical Transactions* (vol. xlii. p. 583), who mentioned also that of 1685 and of 1741. A fifth specimen arrived at Versailles in 1771, and it died in 1793 at the age of twenty-five or twenty-six years. The sixth was a very young rhinoceros, which died in this country in the year 1800: some account of its anatomy was published by Mr. Thomas, in the *Philosophical Transactions* for that year. Lastly, a seventh specimen was living a few years ago in the Garden of Plants at Paris. All these specimens were one-horned, and all from India. So that the two-horned rhinoceros has never been brought alive to modern Europe, and it was long before even an accurate description of it was given by travellers; its existence was known only by specimens of the horns adhering to the skin of the head, which were preserved in different museums. As these specimens were from Africa, and as the first authentic accounts of the living animal of the two-horned species were derived from the histories of African travellers, a general notion prevailed that Asia afforded the one-horned species only, and that the two-horned kind was peculiar to Africa. However, in the year 1793, Mr. William Bell, a surgeon in the service of the East India Company, discovered a species of rhinoceros in the Island of Sumatra, which had also two horns, whose skin, like the African two-horned species, did not exhibit those folds which are so peculiar to the hide of the Indian rhinoceros. This species, however, differed from the African rhinoceros in possessing incisive or front teeth, which in

the latter are wholly deficient. The Abyssinian traveller Bruce has given a vague indication of a two-horned rhinoceros, which exhibits the plaiting of the hide peculiar to the Indian species; and some naturalists have supposed it probable, from the form of the horns, that this may ultimately be found to be a true and distinct species. More recently, again, the accurate and scientific traveller Burchell has announced the existence in the interior of the southern promontory of Africa, of a rhinoceros double the size of the ordinary Cape species, which, like it, has also two horns, and a skin without hairs or folds, but which differs in having the lips and nose thickened, enlarged, and as if flattened.

An interesting memoir from the pen of M. Frederic Cuvier, has appeared in the splendid work published by him conjointly with M. Geoffroy St. Hilaire, on the animals in the menagerie in the Garden of Plants at Paris. It relates to the rhinoceros lately living in that establishment, and from which the figure was taken which serves to illustrate the present account.—*ZOOLOGICAL MAG.*

“This rhinoceros was but young at the time that the figure was taken; and, contrary to the commonly received opinion, was habitually of a very gentle disposition, obedient to his keeper, and receiving his care and attention with a real affection. However, he would occasionally be seized with fits of fury, during which it was not prudent to come near him. No cause could be assigned for these violent paroxysms: one might say that a blind impulse or desire to regain a state of liberty, (which he had never enjoyed,) excited him to break his chains, and escape from the bondage in which he was retained. Bread and fruits, however, always pacified him; and the claims of hunger always silenced those of liberty; so that this resource against his fury was always kept in reserve. He knew those persons who most indulged him in his *gourmandise*, and they were received with the liveliest manifestations of affection: the moment he saw them he stretched towards them his long upper lip, opened his mouth, and drew in his tongue. The narrow stall in which he was confined did not allow him to manifest much intelligence; and his keeper took no other pains than to induce him to forget or misconceive his own strength, and to obey: but from the attention which he paid to every thing which was passing around him, and from the readiness with which he distinguished individuals

the skin, which is of a dirty brown colour, is so thick as to turn the edge of a scimitar, and to resist a musket-ball: the belly hangs low; the legs are short, strong and thick, and the hoofs divided into three parts, each pointing forward.

Such is the general outline of an animal that appears chiefly formidable from the horn growing from its snout: and formed rather for war, than with a propensity to engage. This horn is sometimes found from three to three feet and a half long, growing from the solid bone, and so disposed as to be managed to the greatest advantage.* It is composed of the most solid substance; and

and recognised those circumstances which seemed the preliminaries of his receiving something agreeable to him, one can readily judge that his intelligence would have acquired greater development under favourable circumstances. But his immense force, and the apprehensions constantly entertained that in one of his fits of passion he would break down his apartment, insured for him the most indulgent treatment; nothing was required of him without a reward; and the little degree of motion which was allowed him, was an additional reason for requiring from him no other actions than to open his mouth, turn his head to the right or to the left, hold up his leg, &c."—ZOOLOGICAL MAG.

TRACTABILITY OF THE RHINOCEROS.—The learned Bishop Heber confirms the supposition of Frederic Cuvier, as to the tractability of the rhinoceros. In his journey through India, he observes: "At Lucknow there were five or six very large rhinoceroses, the first animals of the kind I ever saw, and of which I found that prints and drawings had given me a very imperfect conception. They are more bulky animals, and of a darker colour than I had supposed, and the thickness of the folds of their impenetrable skin much surpasses all which I had expected. These at Lucknow are 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 burthens 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. These have sometimes had howdahs on them, and were once fastened in a carriage, but only as an experiment, which was never followed up."—vol. ii.

And in the third volume he observes: "In passing through the city I saw two very fine hunting tigers in silver chains; and a rhinoceros, (the present of Lord Amherst to the Guicwar,) which is so tame as to be ridden by a mohout quite as patiently as an elephant."

The able translator of Cuvier's *Animal Kingdom* observes: "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'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.

"By comparing the tenor of these short observations of them in their wild condition and in a state of confinement, we may gather sufficient data on which to form a tolerable estimate of the character of these animals. Endowed with amazing powers of body,—powers which can repel, if not overcome the active ferocity of the lion and the ponderous strength of the elephant, but at the same time seeking their sustenance not by the destruction of animal life, but in the profuse banquet of the vegetable kingdom, they might naturally be expected to avail themselves of their physical power principally in self-defence. Accordingly we find that to the first aggressor the rhinoceros is a terrible enemy; but if left to the ordinary bent of his own inclination, if unmolested, in short, he does not wantonly seek occasion to exercise his strength to the injury of other creatures."—ZOOLOGICAL MAGAZINE.

* **THE UNICORN.**—There is every reason to believe that the graceful Unicorn of heraldry had no other foundation in truth, than the uncertain description given by early travellers, of the clumsy figure of the above animal. Mr. Edward Ruppell, who has resided during six successive years in the north-eastern regions of Africa, has published several numbers of a work illustrative of the natural history of these regions. To our knowledge of the giraffe he has added considerably. He obtained in Nubia and Kordofan five specimens, two of which were males and three females. He regards the horns as constituting the principal generic character, they being formed by distinct bones, united to the frontal and parietal bones, by a very obvious suture, and having

pointed so as to inflict the most fatal wounds. The elephant, the boar, or the buffalo, are obliged to strike transversely with their weapons; but the rhinoceros employs all his force with every blow; so that the tiger will more willingly attack any other animal of the forest than one whose strength is so justly employed. Indeed, there is no force which this terrible animal has to apprehend: defended, on every side, by a thick horny hide, which the claws of the lion or the tiger are unable to pierce, and armed before with a weapon that even the elephant does not choose to oppose.

But though the rhinoceros is thus formidable by nature, yet imagination has not failed to exert itself in adding to its terrors. The scent is said to be most exquisite; and it is affirmed that it consorts with the tiger. It is reported, also, that, when it has overturned a man, or any other animal, it continues to lick the flesh quite from the bone with its tongue, which is said to be extremely rough. All this, however, is fabulous: the scent, if we may judge from the expansion of the olfactory nerves, is not greater than that of a hog, which we know to be indifferent; it keeps company with the tiger only because they both frequent waters

throughout the same structure with the other bones. In both sexes one of these abnormal bones is situated on each branch of the coronal suture, and the male possesses an additional one placed more anteriorly, and occupying the middle of the frontal suture. The anomalous position of this appendage furnishes a complete refutation of the theory of Camper with regard to the unicorn, that such an occurrence was contrary to nature, and proves at least the possibility of the existence of such an animal. Mr. Ruppell also obtained some information in Kordofan respecting this much debated animal. It was stated to be of the size of a small horse, of the slender make of the gazelle, and furnished with a long, straight, slender horn in the male, which was wanting in the female. According to the statements made by various persons, it inhabits the deserts to the south of Kordofan, is uncommonly fleet, and comes only occasionally to the Koldagi Heive Mountain or the borders of Kordofan.—
EDINBURGH NEW PHILOSOPHICAL JOURNAL.

ACCOUNT OF THE CHIRU, OR UNICORN OF THE HIMALAYAH MOUNTAINS.—Mr. Hodgson's paper on the *Chiru* concerned the animal which has been so often mentioned as the unicorn of the Himalayah. The reports respecting this animal have been so numerous and concurring, and so borne out by the specimens of single horns sent down at various times to the Asiatic Society, and by Bhotea drawings of a deer-like animal with one horn springing from the centre of the forehead, that scepticism has been almost silenced by the variety and quantity of evidence. The skin and horns sent by Mr. Hodgson were the spoils of an animal which died in the menagerie of the Rajah of Nepal, to whom it was presented by the Lama of Digurchi, whose pet it had been. The persons who brought the animal to Nepal informed Mr. Hodgson that the favourite abode of the *Chiru* is the Tingri Maidan, a fine plain or valley through which the Arun flows,

and which is situated immediately beyond the snows of the Kooti pass; that in this valley beds of salt abound, to which the *Chirus* are said to resort in vast herds. They are represented as in the highest degree wild, and unapproachable by man, flying on the least alarm; but if opposed, assuming a bold and determined front. The male and female are said to present the same general appearance.

The living subject of Mr. Hodgson's description presented none of those formidable attributes with which the tales of the Bhoteas had clothed the *Chiru*. In form and size he offered the common character of the antelope tribe, lived chiefly on grass, and did not seem dissatisfied with his captivity, although his panting showed that even the climate of Nepal was oppressive to him; he at length sunk under a temperature which rarely exceeded 80° as a maximum at the commencement of the hot weather. Although timid, and on his guard against the approach of strangers, he would, when warily laid hold of, submit patiently to handling.

The general form of the animal was graceful, like that of other antelopes, and was adorned with their matchless eye. His colour was reddish or fawn on the upper, and white on the lower part of the body. His distinguishing characters were, first, long, sharp, black horns, having a wavy, triple curvature, with circular rings towards their base, which projected more before than behind; and, secondly, two tufts of hair projecting on the outer side of each nostril, together with an unusual quantity of bristles about the nose and mouth, and which gave to his head a somewhat thickened appearance. The hair of the animal resembled in texture that of all the trans-Himalayah animals which Mr. Hodgson has had the opportunity of examining, being harsh and of a hollow appearance. "It was about two inches long, and so thick as to present to the hand a sense of solidity; and beneath lay a spare fleece of the softest wool."—ARCANA OF SCIENCE, 1828.

places in the burning climates where they are bred ; and as to its rough tongue, that is so far from the truth that no animal of near its size has so soft a one. " I have often felt it myself," says Ladvocat, in his description of this animal ; " it is smooth, soft, and small, like that of a dog, and to the feel it appears as if one passed the hand over velvet. I have often seen it lick a young man's face who kept it, and both seemed pleased with the action."

The age of these animals is not well known. It is said by some that they bring forth at three years old ; and, if we may reason from analogy, it is probable they seldom live till above twenty. That which was shown in London was said, by its keeper, to be eighteen years old, and even at that age he pretended to consider it as a young one : however, it died shortly after, and that probably in the course of nature.

The rhinoceros is a native of the deserts of Asia and Africa, and is usually found in those extensive forests that are frequented by the elephant and the lion. As it subsists entirely upon vegetable food, it is peaceful and harmless among its fellows of the brute creation ; but, though it never provokes to combat, it equally disdains to fly. It is every way fitted for war, but rests content in the consciousness of its security. It is particularly fond of the prickly branches of trees, and is seen to feed upon such thorny shrubs as would be dangerous to other animals either to gather or to swallow. The prickly points of these, however, may only serve to give a poignant relish to this animal's palate, and may answer the same grateful ends in seasoning its banquet that spices do in heightening ours.

In some parts of the kingdom of Asia, where the natives are more desirous of appearing warlike than showing themselves brave, these animals are tamed, and led into the field to strike terror into the enemy ; but they are always an unmanageable and restive animal, and probably more dangerous to the employers than those whom they are brought to oppose.

The method of taking them is, chiefly, watching them till they are found either in some moist or marshy place, where, like hogs, they are fond of sleeping and wallowing. They then destroy the old one with fire-arms ; for no weapons that are thrown by the force of man are capable of entering this animal's hide. If, when the old one is destroyed, there happens to be a cub, they seize and tame it. These animals are sometimes taken in pitfalls, covered with green branches, laid in those paths which the rhinoceros makes in going from the forest to the river side.

There are some varieties in this animal as in most others. Some of them are found in Africa with a double horn, one growing above the other : this weapon, if considered in itself, is one of the strongest and most dangerous that Nature furnishes to any part of the animal creation. The horn is entirely solid, formed of the hardest bony substance, growing from the upper maxillary bone by so strong an apophyse as seemingly to make but one part with it. Many are the medicinal virtues that are ascribed to this horn when taken in powder ; but these qualities have been attributed to it without any real foundation, and make only a small part of the many fables which this extraordinary animal has given rise to.*

* ENMITY AGAINST THE ELEPHANT.—The rhinoceros and male elephant have been discovered both dead—the elephant's bowels being ripped open, and the rhinoceros transfixed under the ribs by one of the elephant's teeth. These combats are, however, very rarely seen. Major Lally, in one of his hunting parties, as mentioned in the *Oriental Field Sports*, having arrived at the summit of a low range of hills, was suddenly presented with a distinct view of a most desperate engagement between a rhinoceros and a large male elephant ; the latter, to all appearance, protecting a small herd which were retiring in a state of alarm.

The elephant was worsted, and fled, followed by the rhinoceros, into a heavy jungle where much roaring was heard, but nothing could be discerned.

TRICK-DEFENCE.—The rhinoceros, as well as the camel, is retromingent ; and, like that animal, not only smells extremely rank, but its urine is highly offensive and corrosive. This might be of no moment, had not the rhinoceros a filthy trick of discharging his urine suddenly at such as are behind him, causing great pain and inflammation to the individual unfortunately operated upon. The lizard and spider are equally obnoxious on this

account : they cling to the ceilings of houses in India, and sprinkle persons below ; and if the part on which the urine falls be not immediately washed, a blister will soon rise, followed by an excoriation extremely hard to heal.—ORIENTAL FIELD SPORTS.

RHINOCEROS' SKIN.—The skin of the rhinoceros is much valued, and often sells for a great price. A shield made from it will resist a leaden bullet, which, for the most part flattens on it the same as when fired against a stone. An iron ball, however, from a smart piece, will generally penetrate, and such is invariably used by those who make a livelihood by selling the skin and tallow of the animal. The *shecarries*, or native sportsmen, who lie in wait for the rhinoceros, are ordinarily furnished with heavy matchlocks, such as are commonly appropriated for the defence of mud forts ; they carry balls from one to three ounces weight. To the power of an iron ball, discharged from such a matchlock, even the rhinoceros must submit ; though sometimes he will carry off one or more balls, and wander many hours before he drops. Levelling with precision at the eye, the *shecarrie* fires at the thorax, or under the flap of the shoulder, which generally proves a fatal wound.—ORIENTAL FIELD SPORTS.

PECULIARITY IN ITS HABITS.—One very striking peculiarity attends this animal—viz., that it invariably goes to the same spot to dung, until the heap becomes so high as to render further increase inconvenient, when a fresh spot is chosen, usually on a small open-

ing in the midst of a heavy jungle. These heaps, while they serve as beacons to warn other animals, afford to the *shecarrie*, or native sportsman, an opportunity of making certain of his quarry. Much caution is necessary in approaching the purlieus of these extraordinary piles. The rhinoceros, with its quick sense of smelling, steals craftily through the cover, and not unfrequently surprises whoever unfortunately comes near its haunt.

SAVAGE DISPOSITION.—As an instance of the extremely savage disposition of the rhinoceros, I shall adduce a memorable circumstance which occurred in the year 1788. Two officers belonging to the troops cantoned at *Dinapore* went down to the river to shoot and hunt. They had encamped ; when one morning as they were rising, about day-break, to quest for game, they heard a violent uproar, and, on looking out, found that a rhinoceros was goring their horses, both of which, being fastened by their head and heel ropes, were consequently unable to escape or to resist. This may serve as an example of the species of wanton attack in which this animal indulges.—ORIENTAL FIELD SPORTS.

HORN.—As an instance of the power of the horn of the rhinoceros, in the anecdote quoted of the wanton ferocity of this animal in goring the horses at *Dinapore*, one of the horses on that occasion was saddled, and was killed by a stroke of the horn ; which not only penetrated through the saddle-flap and padding, but fractured two ribs, leaving a wound, through which a small hand might pass to the horse's lungs.—ED.

