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especially in North America, is as good for them as any other.

They were imported originally into America by the Spaniards, and afterwards by other nations, where they have run wild, and multiplied in such numbers, that in several places they are become a nuisance. Ulloa informs us, that, in the kingdom of Quito, the owners of the grounds where they are bred, permit any persons to take away as many as they can, on paying a small consideration, in proportion to the number of days their sport continues. Their manner of catching them is remarkable. A number of persons go on horseback, attended by Indians on foot. At proper places they form a circle, in order to drive them into some valley, where, at full speed, they throw the noose, and endeavour to halter them: the animals, finding themselves enclosed, make furious efforts to escape, and if only one happens to make his way through, they all follow with an impetuosity irresistible: but when they are noosed, the hunters throw them down, secure them with fetters, and leave them till the chase is over. These animals will not suffer a horse to live among them; and should any one happen to stray into the place where they graze, they immediately fall upon him, and without permitting him to escape, they bite and kick him till they leave him dead. When they are attacked, they defend themselves with their heels and mouth with such activity, that, without slackening their pace, they often maim their pursuers: they have all the swiftness of horses, and neither declivities nor precipices can retard their career. It is, however, extremely remarkable, that, after carrying their first load, their celerity and ferocity leaves them, and they soon contract the stupidity and dulness peculiar to tame asses.

As wild asses are unknown in these climates, we cannot say whether the flesh is good to eat; but it is certain that the flesh of the domestic ass is extremely bad, and harder than that of the horse. Galen says, that it is a pernicious aliment, and occasions several diseases. But the Persians set so great a value on the flesh of these animals, that they have a proverb expressive of it. However this be, asses milk is a specific remedy, and by no means to be ranked in the class of useless medicines: it is well known to be of great use in many complaints, being clearer, lighter, and easier of digestion, than the milk of any other animal that we are acquainted with: it curdles less upon the stomach than any other; and, therefore, when the tone of the stomach is so weak as to digest nothing else that is

nourishing, asses milk will sit easy upon it: for this reason it is used in curing diseases of the lungs, and may be of service in all internal ulcers. Some affirm it helps the gout and the rheumatism, by abating the acrimony of the fluids. That it may be good in its kind, we should chuse a young healthy she-ass, full of flesh, that has lately foaled, and which has not since been with the male: the young one which she suckles must be taken from her, after which she is to be fed well with hay, wheat, and grass, whose qualities may have influence on the disease, with particular care not to let the milk cool, nor even expose it to the air, which will spoil it in a little time.

NATURAL HISTORY of the UNICORN.

WHETHER this animal ever existed or not, we are now scarce able to tell, since there is no living testimony of its existence, nor has been for several ages. There are, it is true, many horns kept in the cabinets of the curious, that have been said to be horns of a unicorn; but these, we know, do not belong to a quadruped, but to a fish distinguished by that name; it is possible, however, that such an animal might once have existed, but, like the European elk, has long since disappeared. In holy writ, the Divine Being is represented as thus speaking to Job; "Will the unicorn be willing to serve thee, or abide by thy crib? Canst thou bind him with his band in the furrow? Or will he harrow the valleys after thee? Wilt thou trust him because his strength is great? Or wilt thou leave thy labour to him? Wilt thou believe him that he will bring home thy seed, and gather it into thy barn?" But in this description of the unicorn there are no particular marks of distinction, nor any characteristics, except such as are equally applicable to every beast, remarkable for his vigour, spirit, and fortitude. This animal has been described by some authors as having the body of a horse, with one horn growing out of his forehead. The certainty of his existence as represented by them, has induced many travellers to search after him with greater care: but, after the most diligent enquiry, made in all parts of the world, there is no such creature now to be found. We know of no quadruped that has a single horn, but the rhinoceros; nor is that in the middle of the forehead, but on the nose: whether this has given rise to the fable of the unicorn, or not, we will not take upon us to determine.

C H A P. II.

The NATURAL HISTORY of RUMINATING ANIMALS, and those of the Beeve kind, namely, the BULL, OX, COW; the URUS, BISON, BONASUS, ZEBU; the BEEVE HOG; BUFFALO, and SIBERIAN COW.

TO preserve a succession of beings, it is necessary they should destroy among themselves; and that animals may subsist and be nourished, they must destroy vegetables, or other animals; yet nature, like a prudent mother, in the midst of abundance, has fixed bounds to her liberality, and prevented an apparent waste, in giving but a few species of animals the instinct of feeding on flesh, and she has even reduced to a small number those species which are voracious. Such as feed on plants or vegetables, she has more abundantly multiplied: she seems to have been prodigal to the vegetable, and to have bestowed on each great profusion and fecundity, perhaps, to second her views in maintaining and even establishing this order on the earth. Animals that chew the cud are the most inoffensive, and the most easily tamed. Living en-

tirely upon vegetables, they have neither pleasure nor interest in making war upon other creatures. The fiercest of the carnivorous kind seek their food in gloomy solitude; but these range together in herds, and the very meanest of them unite in each others defence. The food of ruminant animals being easily procured, they seem naturally more indolent, and less artful, than those of the carnivorous kinds. The fox and the wolf are habituated to want, and long habit furnishes them with a degree of sharpness and cunning; their life is a continued series of stratagem and escape, but the bull and ox enjoy the repast which nature has abundantly provided them with, certain of subsistence, and satisfied with security.

Before grass can be transmuted into flesh, it requires a long and tedious process, therefore nature has generally

rally furnished such animals as feed upon grass with four stomachs. The first is called the paunch, which receives the food after it has been lightly chewed; the second, a continuation of the former, is called the honey-comb; these two, which are very capacious, the animal fills with as much expedition as it can, and then lies down to ruminate. When these two stomachs are filled, and the grass, that was slightly chewed, begins to swell with the heat of the situation, the stomachs dilate, and afterwards contract upon their contents. The aliment, thus squeezed, has two passages to escape at; one in the third stomach, which is very narrow; and the other back, by the gullet, into the mouth, which is wider. The greatest quantity is driven back through the largest aperture into the mouth, to be chewed a second time; and a small part, the most liquid, is driven into the third stomach, through the small aperture. The food which is chewed a second time, is by that means rendered more soft and moist, and at length passes into the conduit that leads to the third stomach, where it still suffers comminution. The third stomach is called the manifold, from the number of its leaves, which all tend to promote digestion. It requires the operation of the fourth stomach to make a part of the animal's nourishment, where it undergoes a compleat maceration, and is separated to be turned into chyle. Thus all quadrupeds that ruminate are furnished with four stomachs for the macerating of their food. These only are properly called the ruminant kinds, though many others have this quality in a less observable degree. The rhinoceros, the camel, the horse, the rabbit, the squirrel, and the marmotte, all chew the cud occasionally, but they are not furnished with stomachs like the ox and cow. There are many other animals that appear to ruminate, as birds, fishes, and insects. Among birds that have a power of disgorging their food to feed their young, are the pelican, the stork, the heron, the pigeon, and the turtle; all which have the stomach composed of muscular fibres, in the same manner as those which are particularly distinguished in this chapter by the appellation of ruminants. Men themselves have been known to ruminate. An account of a ruminating family is given us in the Philosophical Transactions; but, as the particulars cannot possibly be agreeable to our readers, we shall purposely omit them. Instances of this kind, however, are accidental and uncommon; and it is fortunate for mankind that they are so. Of all other animals, we spend the least time in eating: this is a principal distinction between us and the brute creation; and eating is a pleasure of so inferior a kind, that only such as are allied to the quadruped, desire its prolongation.

All animals with horns, if of the ruminating kind especially, have suet, others have only fat, which is softer, and melts more readily before the fire. Cloven-footed animals have each toe covered with a kind of hoof, the upper part of which is of a horny substance; and the lower, which composes the sole of the foot, is callous. In the deer, goat, and sheep kind, it is softer, and these animals have two small hoofs or nails behind, which are useful to keep the feet from sliding.

The climate of England is above all others productive of the greatest variety and abundance of wholesome vegetables, almost equally diffused over all its parts. For this general fertility we are indebted to those clouded skies, which mistaken foreigners mention as a reproach to our country: but let us cheerfully endure a temporary gloom, whereby our hills and meadows are clothed with the richest verdure. To this we owe the number, variety, and excellence of our cattle, the luxurious plenty of our dairies, and innumerable other advantages. After man, animals that live on flesh only, are the greatest destroyers, enemies of nature, and our rivals; but the bull, ox, and cow, of which we are now about to treat, and other animals which subsist on grass, are the best, the most useful, and the most precious for man; since they not only nourish him, but consume and cost him

least: they likewise give as much to the earth as they take from it, and enrich the ground whereon they live. We have no general name for these kind of animals, except the beeve, which is now almost out of use, though very proper to be retained. It answers to the Latin word *bos*, which comprehends the bull, ox, and cow, and may be extended to all of this kind. Of all ruminating animals, these deserve the first rank, with respect to their size, their beauty, and their services: we therefore shall proceed to give a descriptive account of them; and point out their utility in due order.

NATURAL HISTORY of the BULL, OX, and COW.

THE bull is a very heavy, yet a fierce, stately looking animal. The head is large, oblong, and very broad: the nose is obtuse: the nostrils are wide; the eyes large, and have a very fierce aspect; the ears are long and patulous; the horns short, hollow, turned forward, smooth on the surface, and sharp at the point; their figure is lunulated, or like the moon when crescent. The forehead is decorated with short curled hair; the skin hangs loose under his throat; the neck is very thick and robust; the body very large; the legs strong, and of a moderate length; the tail long, and the colour is generally a deep reddish brown, but it varies greatly. The fore-teeth are eight in number, but there are no canine teeth.

Among the ancients, the bull was the most usual victim in sacrifices, and was chiefly offered to Jupiter, Mars, Apollo, Minerva, Ceres, Venus, and the Lares. Black bulls were selected for Neptune, Pluto, and the infernal deities: before they were sacrificed, they were variously adorned. Over the middle of the body was placed a large piece of cloth, which hung down on both sides, and was ornamented with flowers; their horns were decorated with festoons. The bull that was sacrificed to Apollo, had usually great horns. The blood of a bull was looked upon by them as a poison; this opinion is found to be false, for some of the moderns have given a drachm of it, mixed with white wine vinegar, against all internal hæmorrhages, though with what success it is hard to say. Formerly, the flesh of this animal, after he had been baited, was much used in England, especially by the poor; but it is now seldom bought for food; and, if we are not mistaken, when butchers expose bull beef in their shops, they are obliged, by a penal law, to burn a candle during the time of sale. However, this is certain, bull beef contains a great deal of volatile salt and oil; it is also hard, tough, and dry; for which reasons it cannot be either pleasant or wholesome food. At present the bull is kept chiefly for the propagation of his species; and we must be on our guard against the use he makes of his strength, for nature has made this animal indocile and haughty; and, at certain times, he is very furious. The bull that is to be turned among cows, should always be the most beautiful that can be found, large, well made, and fleshy; of a middle age, between three and nine years old; he ought not to have above fifteen cows, though this rule is never observed near London. In all quadrupeds, the voice of the male is stronger and deeper than that of the female, and we believe there is no exception to this rule. The ancients say, that the cow, the ox, and even the calf, have the voice deeper than the bull; but, it is certain, this animal has a stronger voice, since he can be heard much farther. What has afforded grounds to think that his voice is less deep is, that his bellowing is not a simple sound, but one composed of two or three octaves, the highest of which strikes the ear most; and, if we give attention thereto, we hear a grave sound, and at the same time one much deeper than the voice of the cow, the ox, or the calf, whose lowings are much shorter. The bull bellows only when he is enamoured; the cow more frequently lows through fear and dread than love, and the calf bellows from pain, want of food, and a desire of being with its mother.

NATURAL HISTORY of the RHINOCEROS.

THIS animal inhabits Bengal, Siam, Cochinchina, Quangsi in China, the islands of Java, and Sumatra, Congo, Angola, Æthiopia, and the country as low as the Cape. Next to the elephant, the Rhinoceros is the most powerful of animals. Bontius informs us, that in respect to bulk of body, it equals the elephant, but is lower on account of the shortness of its legs. It is generally about twelve feet long, from the tip of the nose to the insertion of the tail; and from six to seven feet high.

This animal is so remarkably formed, that a perfect idea of its shape cannot be conveyed in words, we have therefore been particularly careful in giving an accurate delineation of it on copper. Its head is furnished with a single horn, placed near the end of the nose, which is generally from three feet to three feet and an half long. The upper-lip is long, hanging over the lower, and ending in a point. It is very pliable, and serves to collect its food, and deliver it into the mouth: the nostrils are placed transversely: the ears are large, erect, and pointed; the eyes small, and without lustre: the skin is almost naked, rough, and knotty, and lying upon the neck and body in vast folds. The skin, which is of a dirty brown colour, is so hard and thick as 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. It delights in shady forests, and the neighbourhood of rivers and marshy places: like the hog, it loves to wallow in the mire, and is said, by that means, to give shelter in the folds of its skin, to scorpions, centipes, and other insects. It is a solitary, quiet, and inoffensive animal, but swift and furious when it is enraged. It never provokes to combat, but it equally disdains to fly. It brings forth but one at a time, about which it is extremely solicitous.

The scent of this animal is said to be most exquisite; and it is affirmed that it consorts with the tiger: this, however, is fabulous, and founded on their common attachment to the sides of rivers; because they both frequent watery places in the scorching climates where they are bred. It is also reported to have a tongue so extremely rough, as to take off the flesh from the human body by licking it, but Ladvocat affirms, "it is smooth, soft, and small, like that of a dog."

This animal appears chiefly formidable from the horn growing from its snout. It is composed of the most solid substance, and pointed so as to inflict the most fatal wounds. With every blow, the Rhinoceros employs all its force, and the tiger will more willingly attack any other enemy of the forest than this formidable creature. It is defended on every side by a thick horny hide, which cannot be pierced by the claws of the lion or the tiger, and it is armed before with a weapon that even the elephant does not choose to oppose. It is said the elephant is often found dead in the forests, pierced with the horn of a Rhinoceros; and Emanuel, king of Portugal, by way of experiment, actually opposed them to each other, and the Rhinoceros was victorious.

In 1739, a Rhinoceros was shewn in London, which came from Bengal. It was of a gentle disposition, and suffered itself to be handled by all visitors, never attempting to do any mischief, except when hungry or when abused; in such cases, its fury could only be appeased by giving it something to eat. When it was angry, it would jump with violence against the walls of its room, but seldom attempted to attack its keeper, and was obedient to his threats.

The Rhinoceros brings forth at about three years old, and will live till it is about twenty. Its flesh is eaten, and Kolben says, it is very good. Cups are made of its horn, and many medicinal virtues are ascribed to it, when taken in powder; but seemingly without foundation. There are some varieties in this animal found in Africa with a double horn.

The Rhinoceros is the unicorn of Holy Writ, and of

the antients; the oxyx, and the Indian ass of Aristotle, who says it has but one horn: his informers might well compare the clumsy shape of the Rhinoceros to that of an ass, so that he might easily be induced to pronounce it a whole footed animal. The unicorn of Holy Writ has all the properties of the Rhinoceros.

This animal was known to the Romans in very early times: its figure is among the animals of the Prænestine pavement; and Augustus introduced one into his shews on his triumph over Cleopatra.

NATURAL HISTORY of the HIPPOPOTAME, or SEA-HORSE.

THE Hippopotame is as large and formidable as the rhinoceros, and, in bulk, is second only to the elephant. The length of the male has been found to be seventeen feet, from the extremity of the snout to the insertion of the tail; the circumference of its body fifteen feet, and its height almost seven; the legs near three feet, and the head almost four. Hasselquist says, its hide is a load for a camel. Its jaws extend about two feet, and it has four cutting-teeth in each jaw, which are above a foot long. The head is of an enormous size; the ears small and pointed, and lined within with a short fine hair: on the lips are some strong hairs scattered in bunches. The hair on the body is very thin, of a lightish colour, and, at first sight, hardly discernible. Those writers who say this animal has a mane on its neck, are mistaken; but the hairs on that part are rather thicker than on the other parts of the body: the skin is very thick and strong, and, though not able to resist a musket-ball, is impenetrable to the stroke of a sabre. The tail is flat and pointed, and about a foot long: the hoofs are divided into four parts, and, in some measure, resemble those of the elephant; but they are unconnected with membranes, notwithstanding the Hippopotame is an amphibious animal.

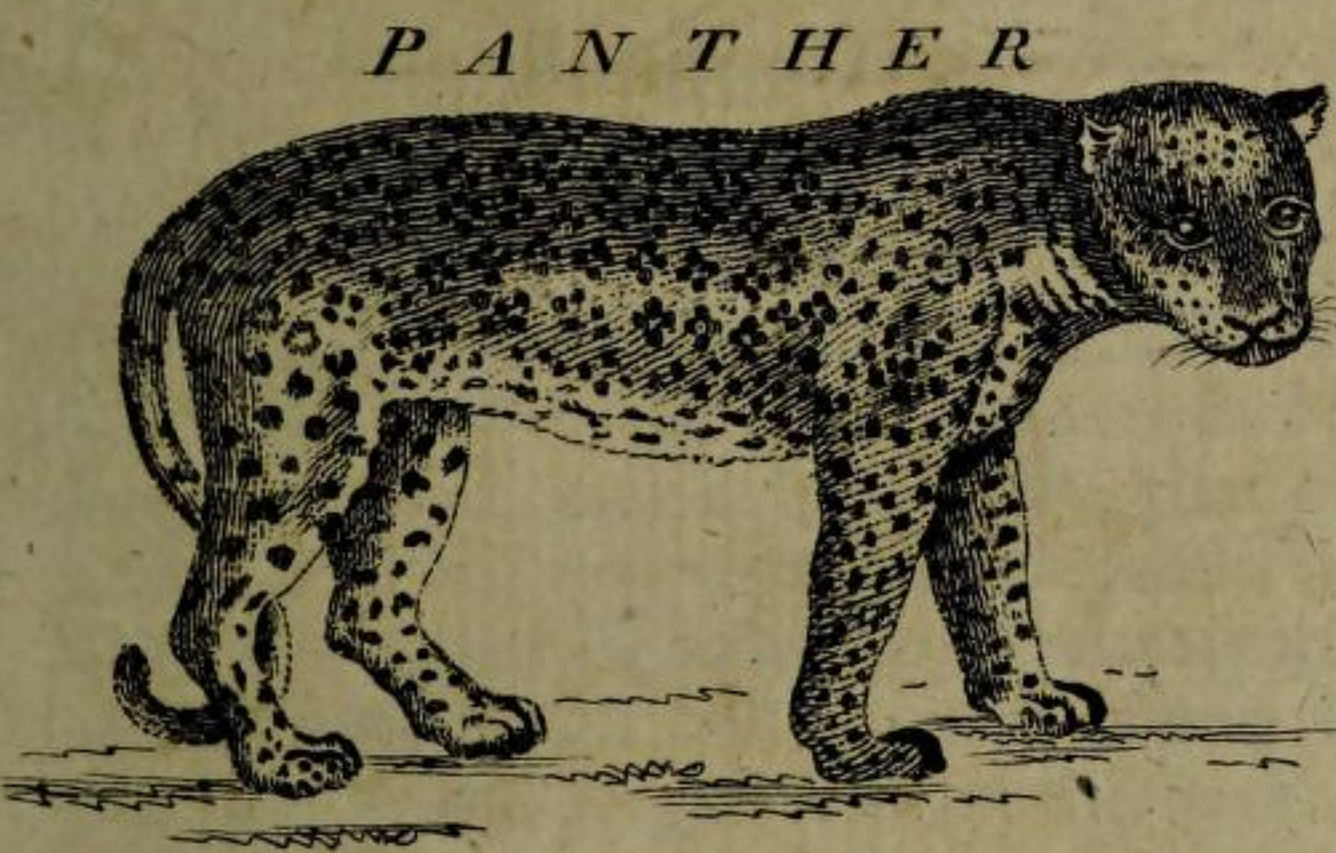
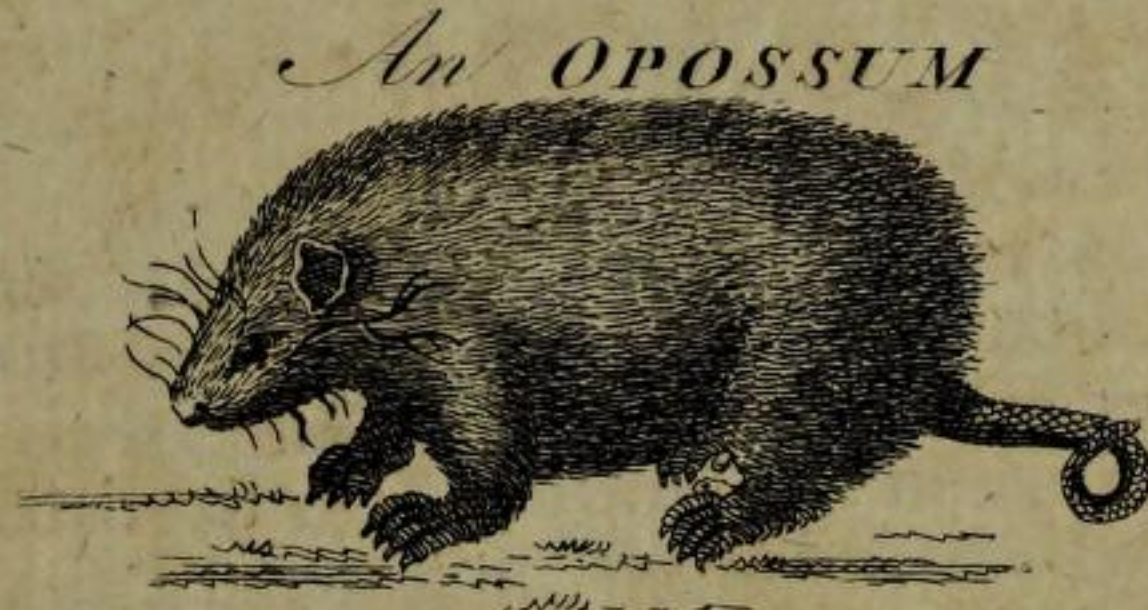
This creature, whose figure is something between that of an ox and a hog, resides chiefly at the bottom of the great rivers and lakes of Africa, from the Niger to the Cape of Good Hope. It is found in none of the African rivers which run into the Mediterranean, except the Nile; and even there only in the Upper Egypt; and in the lakes and fens of Æthiopia, which that river passes through. It leads an indolent kind of life, and seems seldom disposed for action, except when prompted by the calls of hunger. In the water they pursue their prey with great swiftness and perseverance, and continue at the bottom for thirty or forty minutes without rising to take breath. They traverse the bottom of the stream with as much ease as if they were walking upon land, and make a terrible devastation where they discover plenty of prey. But when the fishy food is not supplied in sufficient abundance, this creature is forced to come upon land, where it moves awkwardly and slowly; and, if it cannot be supplied with food on the margin of the river, it is forced up into the higher grounds, where it commits dreadful havock on the sugar-canes, and plantations of rice and millet: it also feeds on the roots of trees, which it loosens with its great teeth.

When the natives see their possessions thus destroyed by this animal, they beat drums, light fires, and raise a terrible outcry to frighten it back to its favourite element. As it is extremely timorous upon land, they usually succeed in their endeavours. But if the creature should be wounded, or too much irritated, it then becomes formidable to all that oppose it. When it is pursued it takes the water, plunges in and sinks to the bottom, but it frequently rises to the surface, and remains with its head out of water, making a bellowing noise that may be heard at a vast distance. If wounded, it will rise and attack boats or canoes with great fury, and often sink them by biting large pieces out of the sides. People are thus frequently drowned by them; for they are as bold in the water as they are timid on land. This animal, however, possesses a very inoffensive disposition, and never attacks the mariners in their boats,

QUADRUPEDS



CHIMPANZEE
or ORANG-OUTANG



The CRESTED PORCUPINE



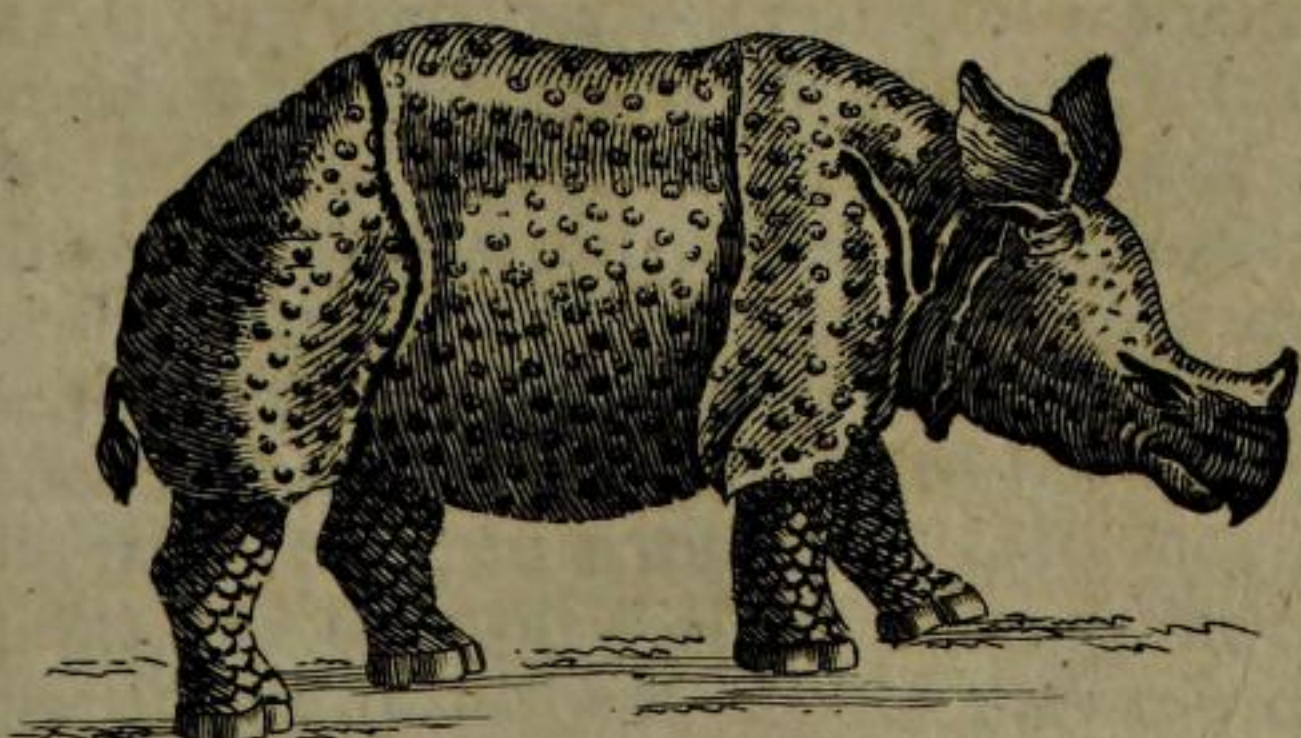
CANADA-PORCUPINE



RACKOON



The ONE-HORN'D RHINOCEROS



The TWO-HORN'D RHINOCEROS



Eastgate sculp^d