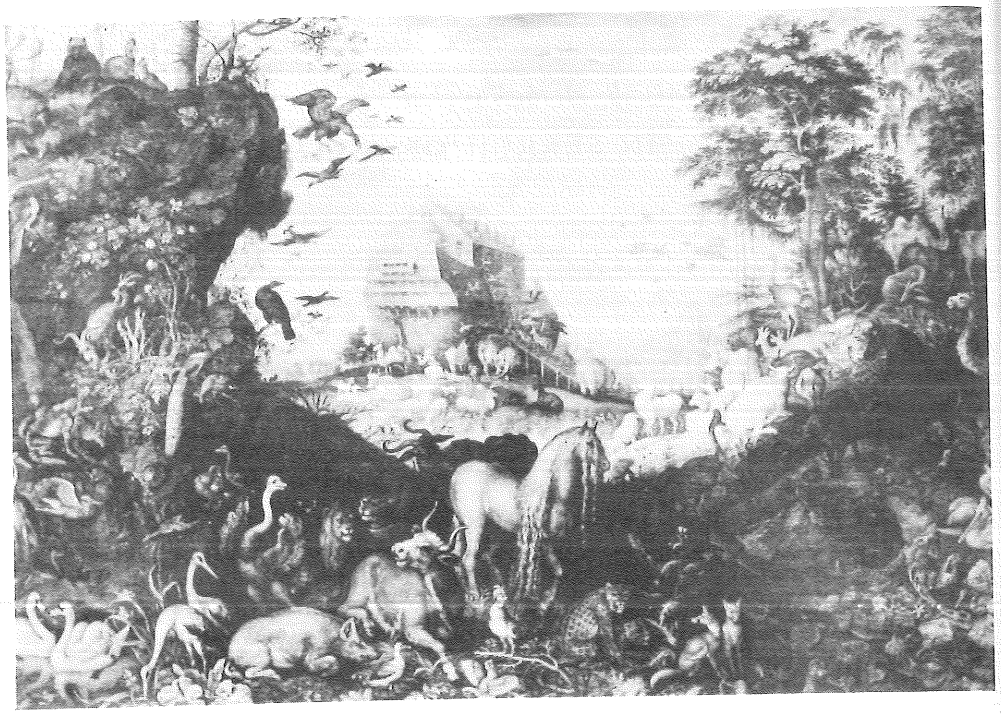

The animals saved from the Flood by Noah.
Detail from a painting by Roeland Savery.

OUT OF NOAH'S ARK

THE STORY OF MAN'S DISCOVERY
OF THE ANIMAL KINGDOM

BY HERBERT WENDT

Translated from the German by
MICHAEL BULLOCK

Illustrated with photographs
and line drawings

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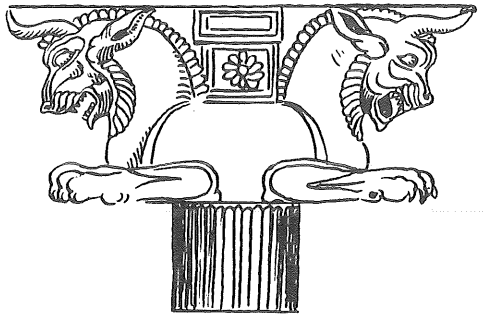
in a thoroughly practical way. He had an elephant station set up near Api in the Congo—the first of its kind on African soil since the days of Ptolemy Philadelphus. The experiment succeeded, although Kornaks brought from India could not cope with the forest elephants of the Congo. Native Zanga negroes, on the other hand, managed very well. After the closing of Api a new station was established at Gangala-na-Bodio on the upper Wele. Here the tame elephants of the colonial government still perform valuable services as draught animals and beasts of burden in all sorts of forestry work, in spite of the introduction of lorries and tractors. They live in almost complete freedom in a tract of country covering 5,000 acres; their number can be increased without difficulty from the vast game preserves totalling over 3,000 square miles on the River Wele, which are still veritable elephant paradises.

Monoceros and Rhinoceros

We read in the Book of Job: 'Will the unicorn be willing to serve thee or abide by thy crib? Canst thou bind the unicorn with his bands 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?'

It is not certain whether the original Hebrew word *re-em*, translated in the Authorized Version as 'unicorn', really refers to a one-horned animal. It would appear from other passages that the creature in question possessed two horns, but it was rendered in



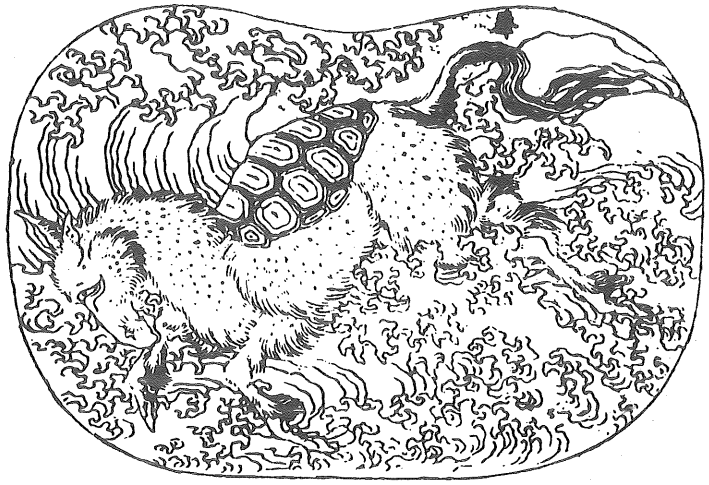
The king of fabulous beasts on a capital in the Hall of Xerxes at Persepolis

earlier versions by the Latin word *unicornis* or the Greek *monoceros* —both meaning one-horn. It is clear, at any rate, that there once existed in the East a powerful beast which men caught, tied to the crib, put in harness and set to work in the fields. The taming of this beast seemed to the men of those days a great and wonderful event, an epoch-making feat that could not have been accomplished without the grace of God.

This unicorn was already a legendary creature in the ancient world. In the Middle Ages it developed into a mythical super-beast, the nature of which Leonardo da Vinci outlined in the following words: 'In its lack of moderation and restraint and the predilection it has for young girls, it completely forgets its shyness and wildness; it puts aside all distrust, goes up to the sitting girl and falls asleep in her lap. In this way hunters catch it.' In heraldry the unicorn was sometimes depicted as a rhinoceros, often as a ram, but most frequently in the form of a horse. It always bore a long, twisted horn on its forehead. It may be seen on old church stalls and in many paintings and drawings; some medieval painters even gave it the angel's place in their pictures of the Annunciation.

Many magic powers were attributed to the unicorn. Its powdered horn was regarded as a remedy for all sorts of ailments, and especially as an antidote to poisons. It was said that any drink would begin to froth the moment it was poured into a goblet of 'alicorn', if it contained the slightest trace of poison. Medieval physicians were especially inclined to prescribe a dose of alicorn powder in cases of male impotence or female barrenness. So the unicorn found its way on to apothecaries' signs. It also entered into literature, arts and crafts and the national coat of arms of Great Britain. It soon rose to the topmost rung in the ladder of fabulous beasts and remained until the eighteenth century uncrowned king in the realm of mythology.

Or did the unicorn really exist? If it did—what sort of animal was it? The question was finally answered by the combined detective efforts of zoologists, archaeologists, theologists, philologists and historians. Naturally the discoverers of the unicorn had first to feel their way through a maze of false trails, misleading clues and erroneous deductions. The search was closely linked with the history of the rhinoceros, an animal that was long identified with the unicorn. It is true that the rhinoceros lent many of its characteristics to the unicorn. But can we assume that by *re-em* the

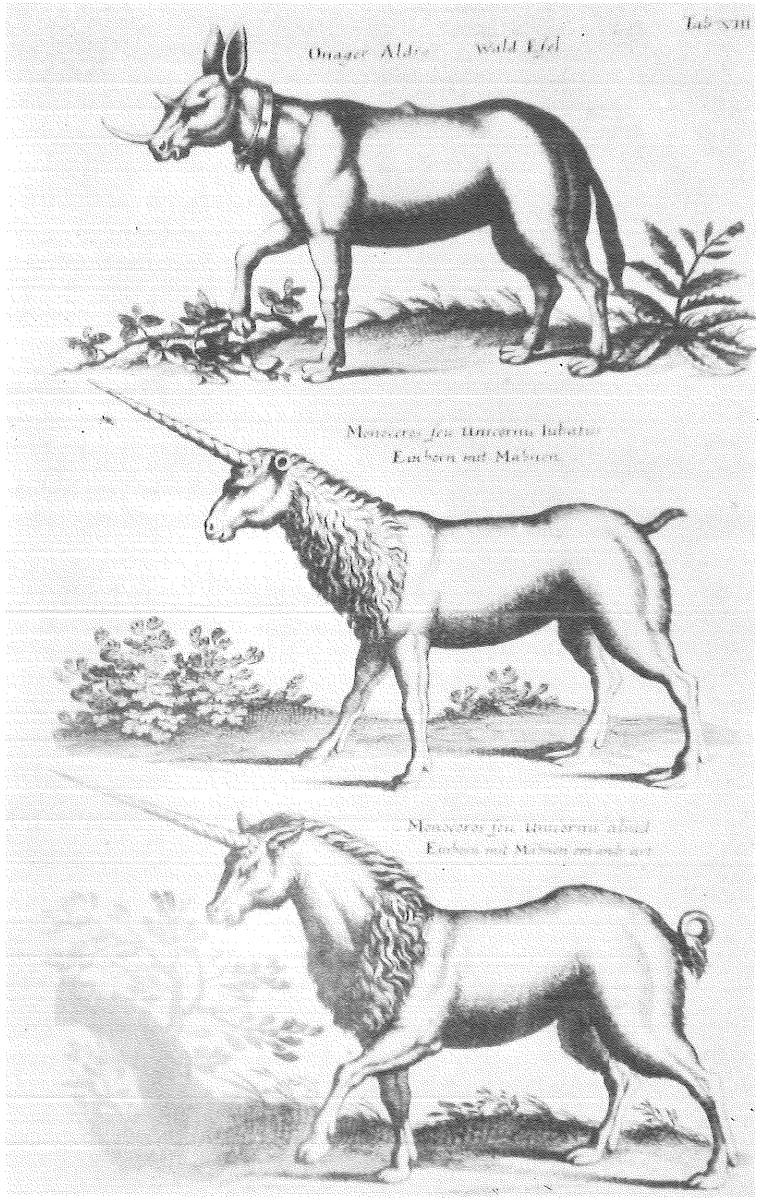


In addition to the one-horned deer, Eastern Asian mythology also figured a curious unicorn with a tortoise shell, which symbolized the house and family life. It was probably modelled on Serow's chamois, which is often referred to in Chinese legends as the unicorn. Hokusai

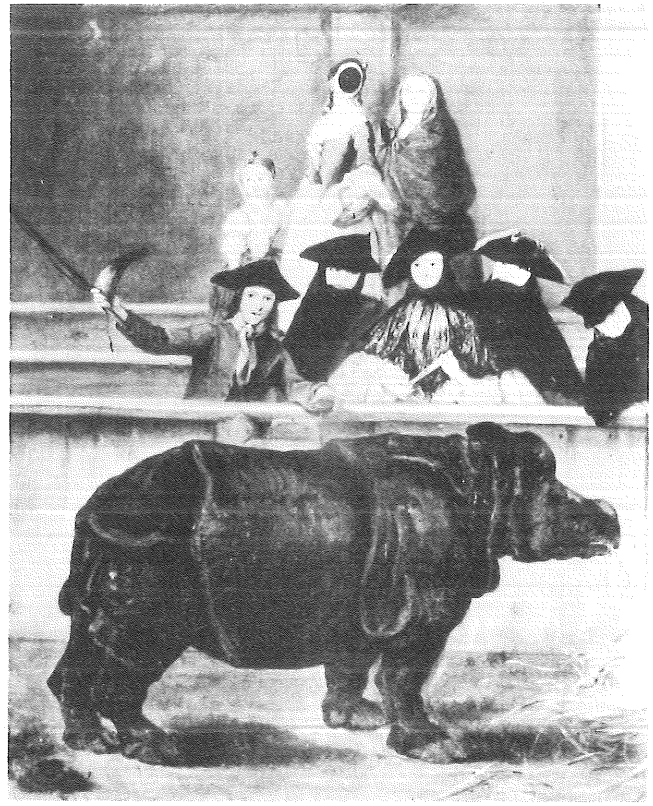
Kethubim, the sacred writings of the Hebrews, really meant the rhinoceros?

The Book of Job is not the first literary reference to the unicorn. There were unicorn legends all over the ancient East, which later spread to Greece and Rome and as far as China. But the fabulous beast was depicted quite differently by the different peoples. In China the 'unicorn' was a stag with a dragon's head and only one antler. It resembled the famous 'plum-blosson stag' that appears frequently in old ink drawings from Eastern Asia, the living prototype of which was perhaps Père David's deer that was preserved for centuries in the Imperial Gardens at Peking. Its rôle in Far Eastern mythology was quite different from the one it played in Western Asia and Europe, and it can therefore be disregarded in the present context. A unicorn bearing some resemblance to the legendary beast of the ancient Orient reappears in certain Japanese woodcuts of comparatively recent date.

The *monoceros* of the latter days of Greece, and the Romans' *unicornis*, on the other hand, was in fact the rhinoceros, with which the ancient authors were superficially acquainted. Agatharcides and Strabo described it; the poet Martial celebrated the

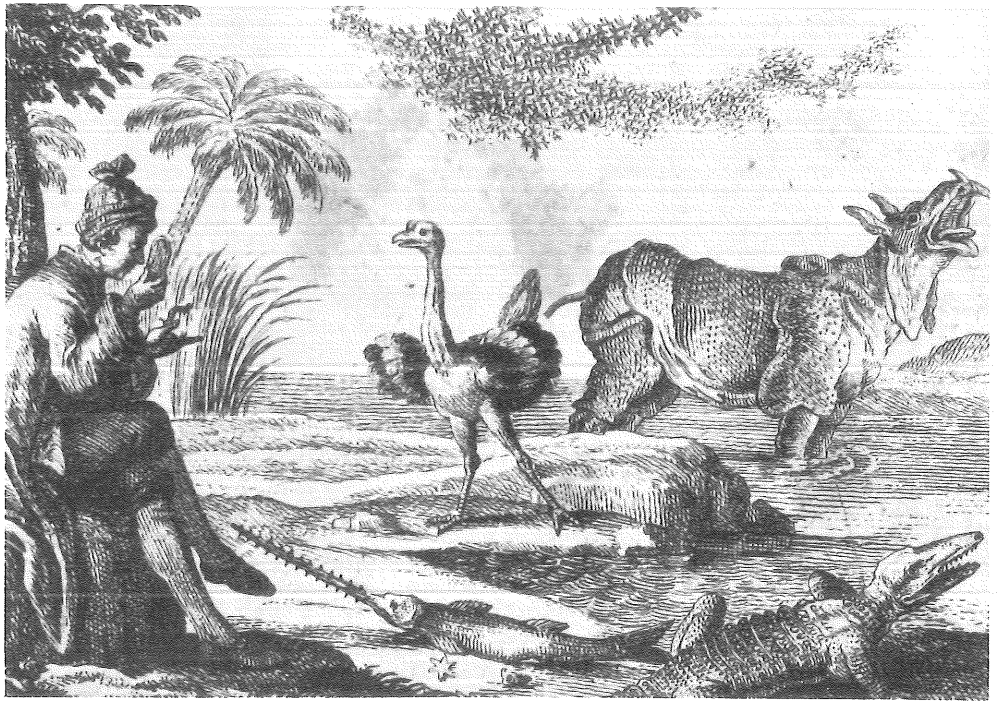


3. The fabulous unicorn, which bears a narwhal's tusk on its brow, is compounded of onager and rhinoceros, antelope, ox and ram.



4. In the eighteenth century it was considered indelicate to enter a menagerie. The curious therefore hid behind masks when they went to see strange beasts like this armoured rhinoceros in Venice Zoo.

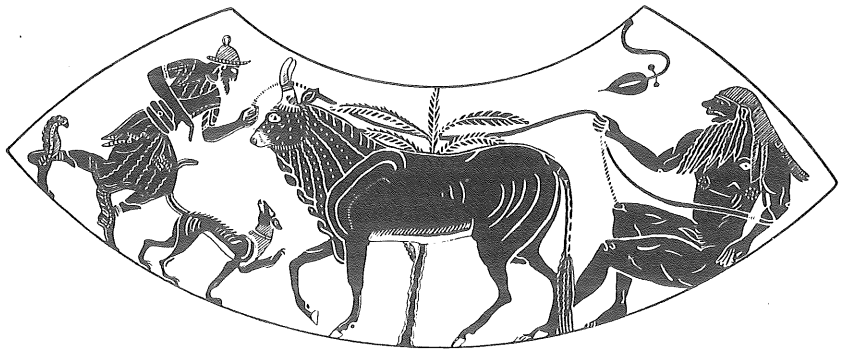
Below. The Indian rhinoceros, depicted by the copperplate-engraver Daniel Chodowiecki in an African landscape whose sky is darkened by a swarm of migrating locusts.



manner in which it flung huge bears up to the stars. The rhinoceros, which according to Pliny was 'the born enemy of the elephant that sharpens its horn on a stone and in combat aims at the elephant's belly, well knowing that it is soft', was accounted by the late Greeks and Romans the strongest and most powerful of creatures. And since the Indian rhinoceros in fact has only one horn on its nose, since it comes from the East, and since a powder prepared from its horn is regarded by the Asiatics as a magic remedy, it is no wonder this animal was thought to be the Oriental unicorn.

The unicorn described by early Greek authors was quite a different type of creature. The earliest report, once more by Ctesias, portrays the animal as 'a kind of wild ass, white with a dark red head and an eighteen-inch horn on its forehead, which, when ground to powder, yields a certain remedy against epilepsy and the most potent poison'. Here the unicorn already possesses both its wonder-working horn and the equine shape in which it roamed medieval forests one and a half millennia later. For this reason Ctesias's description deserves careful study. Such study shows that Ctesias has, in all probability, combined four quite distinct species of animal into a single composite figure. First, there was the one-horned Indian rhinoceros, from whose horn the Chinese have since time immemorial prepared all sorts of nostrums, thus contributing appreciably to its extermination. Then Ctesias had heard of the onager, the wild ass of Western Asia, which is credited by the Orientals with particular ferocity; this led him to give the unicorn an ass's body. Further, he had heard of the blackbuck or heran, a species of gazelle in the bucks of which one horn sometimes atrophies. And finally he had seen in Babylon various depictions of the *rimu*, the original unicorn, the *re-em* of the Hebrews.

The *rimu* of the ancient Babylonians and Assyrians was neither a rhinoceros nor a wild ass; it was a large ox, frequently portrayed in such a way that one horn concealed the other. The Egyptians depicted in a similar manner, horn over horn, the oryx antelope or gemsbok, the *rim* of the Arabs; they considered this animal very dangerous, but nevertheless tamed it and, no doubt for religious reasons, deformed its horns. For a time many researchers were misled by this into thinking that the oryx antelope was actually a unicorn. Now we know that the Egyptian antelope cult was merely one animal cult among many and only combined later with the unicorn cult. The real original of the fabulous beast,

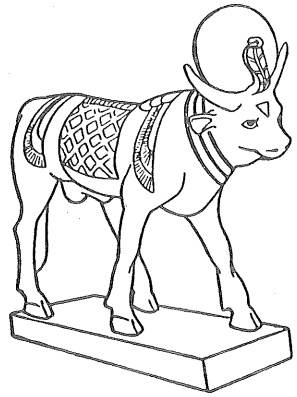


The cult of the sacred cow once extended from Crete to South Africa and Indonesia. It has echoes in Greek mythology—Hermes stole the sacred cow Io from the giant Argus. Greek vase painting, Munich

the Babylonian *rimu* and the Hebrew *re-em*, is *Bos primigenius*, the oriental race of the aurochs, the wild ox from which mankind bred domestic cattle in the Late Stone Age.

A scene depicted on a golden bowl from Ras Shamra shows an Ugaritic ruler hunting the *remu*, the aurochs, and various antelopes. The low reliefs on Ishtar's Gate at Babylon show the same animal, the wild form of which was by then extinct, horn over horn, in a tame state as *rimu*, a sacred beast. Between the scene from Ras Shamra and that on Ishtar's Gate lies one of the greatest events in human history: the domestication of the ox. This first enabled the wandering nomads to take up a fixed abode, to found settlements and towns, to till the soil and—as the Book of Job puts it—'to gather the seed into the barn'. It was the first step in the development of civilization. For understandable reasons the ox was considered sacred by all peoples who knew how to domesticate it. Ox cults occurred and still occur in India and Burma, Bali, the whole of Western Asia, Egypt and among the East African races of herdsmen as far south as the Hottentots. And what the Brahmani zebu is to the Hindu and the long-horned ox to the Watussi, what the apis was to the Egyptians, the minotaur to the Cretans and the Golden Calf to Jeroboam, the *rimu* was to the Babylonians, the *remu* to the Akkadians and the Ugarites and the *re-em* to the Hebrews.

This miraculous creature *rimu* no longer seemed so miraculous in the classical world, where the tame ox was taken for granted.



The Apis bull, a well-known archaeological testament to the worship of cattle in the ancient East. Bronze, London

But the Oriental cult legends had remained and aroused in the Greeks and Romans the belief that somewhere in Asia there must still exist a mighty beast possessed of magic powers, which was the origin of these legends. So the *rimu* merged first with the dangerous antelope *rim*, then with the wild ass onager and finally with the *monoceros*, the one-horned Indian rhinoceros, to form a single fabulous beast—the unicorn. And it was the rhinoceros that lent the unicorn those medicinal properties which hitherto had existed only in the minds of Chinese quacks.

The first fossils—especially bones of saurians, mammoths and cave bears—were already dug up in antiquity and the early Middle Ages. They were taken to be the remains of dragons, basilisks, behemoths and similar legendary creatures, but above all else *ebur fossile*, fossil ivory. Mammoth tusks, in particular, were invariably described by ancient writers as *unicornum verum*: horn from the head of the unicorn. Sick people paid high prices for them in the apothecaries' shops. Although sensible theologians inveighed against 'these ludicrous monstrosities and absurdities, this shameless nonsense that only causes unnecessary expense' as early as the eleventh century, every fresh discovery of mammoth remains gave the unicorn legends a tremendous boost. Gesner, Leonardo da Vinci, Mercati, Otto von Guericke and Leibniz figured the unicorn in their books and had no doubt of its reality. Even in the time of Linnaeus, the great classifier of the animal and vegetable kingdoms, the 'fierce, reckless and uncontrolled unicorn' clung stubbornly to its position in almost all zoological textbooks. Only it had undergone a striking change since the sixteenth century: it now wore on

The narwhal, whose tooth was mistaken for the unicorn's horn. Gesner

its forehead not the horn of a rhinoceros, but a very long and twisted tooth that really belonged in the upper jaw of a male whale.

This whale bears the descriptive name *Monodon monoceros*, one-tooth, one-horn, and is called by sailors simply narwhal. It crops up in various ancient reports telling of sea devils, sea serpents and similar monsters of northern waters, is about fifteen feet long, has a cylindrical body and is today classed with the sub-order of toothed whales. As a rule, however, it was not the whole body that came into possession of man, but only one of the two tusks which the male carries in its upper jaw—especially the left tusk, which is longer than the right and may reach a length of up to ten feet. Zoologists soberly describe these tusks, which are unique in the whole genus of whales, as secondary sex characteristics. But our forefathers were greatly excited by this object that looked as though it had been turned on a lathe and were convinced that it could only be the head ornament of a unicorn.

Narwhal teeth were carefully preserved and purchased for fabulous prices. Apothecaries who had the good fortune to come into possession of one attached the costly 'alicorn' to a chain and solemnly scraped off a few grains of dust for individual customers. An electoral prince of Saxony paid no less than a hundred thousand thalers for a single narwhal tooth, while the Emperor Charles V was able to discharge a truly imperial debt which he owed the Margrave of Bayreuth with two narwhal teeth. Of course there were a few sceptics and intellectual scoffers, who scathingly referred to the narwhal tooth as *unicornum falsum* and even talked

some rubbish about a 'toothed whale'. But this had no effect: towards the end of the eighteenth century apothecaries were still holding fast to the most miraculous of all their miracle remedies—the tooth of *Monodon monoceros*, the alicorn. With equal obstinacy every portrayer of the unicorn continued to set a narwhal's tooth on the fabulous beast's forehead, where it may still be seen in modern pictures of the unicorn.

At the beginning of the nineteenth century, zoologists, headed by the Frenchman Georges Cuvier, tore the king of fabulous beasts to pieces with merciless detachment. They proved that an artiodactyl or even-toed animal with the body of a horse and a horn on its forehead was a self-contradictory monstrosity. Around the turn of the twentieth century the conjecture that a still unknown animal might lie behind the unicorn legend flickered up again for a short time. Ethnologists heard of Siberian legends featuring huge oxen with a horn on their foreheads; and in this same Siberia prehistorians discovered a giant prehistoric rhinoceros, Elasmotherium, whose brow was thus decorated. But Elasmotherium turned out to have become extinct at the beginning of the Ice Age, so that the peoples of Siberia could only have come across it in a fossilized state. Thus the fact remains that the *re-em* of the Book of Job is identical with the aurochs and that all the characteristics of the unicorn added later are merely products of the ever-active human imagination.

The great contributor to the unicorn legend in antiquity, the rhinoceros, also had a most eventful story. Like the elephant, this animal did not have to be discovered; early man—at least in the Old World—had always been surrounded by rhinoceroses. The golden age of the titans with the horned nose was the Tertiary era—though it must be added that to begin with the rhinoceros was characterized neither by a horn nor by titanic size. During the Eocene period, the dawn of Tertiary times, rhinoceroses started as primitive hoofed animals with five toes and a stature midway between a marten and a sheep, they gradually developed a multitude of forms, as did their distant cousins the tapirs and horses. There were long-legged and slender rhinoceroses, rhinoceroses like horses or heavily built like bears, rhinoceroses with long necks, hornless or many-horned, rhinoceroses with tusks and barrel-shaped rhinoceroses that lived in the water like hippopotamuses; some species were smaller than sheep dogs, others like the Baluchitherium from Central Asia reached a height of almost eighteen feet.

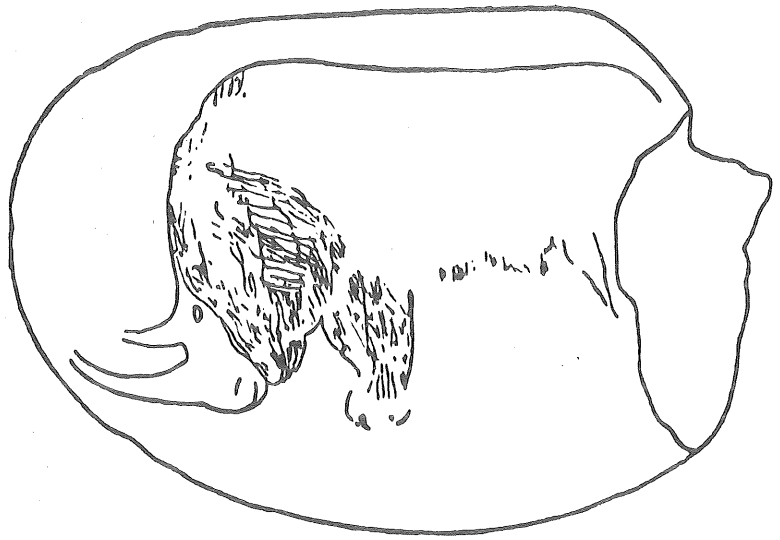
When man appeared on the scene only four groups remained: armoured rhinoceroses, half-armoured rhinoceroses, sharp-nosed rhinoceroses and blunt-nosed rhinoceroses. The first group is characterized by a single horn on its nose, the other three have two.

The one-horned armoured rhinoceroses live in tropical Asia and, apart from the number of their horns, are distinguished from other rhinoceroses by an unusually thick skin-armour cut by deep folds. They were already known to the ancient Chinese, Babylonians, Greeks and Romans; their horns, as we have seen, were employed as a remedy for poisoning, epilepsy and impotence. Of the Indian species, *Rhinoceros unicornis*, only two hundred and fifty specimens are still living today, of the Javan variety, *Rhinoceros sondaicus*, only forty.

Much smaller and more slender are the half-armoured rhinoceroses, the most primitive type now living. They have two horns on their noses, are incompletely armoured, covered with blackish-brown bristles and scarcely four feet high. During the Mid-Tertiary they also occurred in Europe; later their area of distribution was confined to Indo-China and the Sunda Islands. One species, *Didermoceras sumatranus*, has managed to survive to modern times—if it has not been totally exterminated during the last few years; it lives in very small numbers on Sumatra, Borneo and Malacca.

The position of the African rhinoceroses, or at least of the sharp-nosed rhinoceroses, is somewhat better. They were originally also native to both Europe and Asia Minor; their last representative, *Diceros bicornis*, which still survives in the African savannahs, is probably the only species that will not become extinct in the lifetime of readers of this book. This African sharp-nosed rhinoceros, also known as the black rhinoceros, has a smooth skin, longer legs than the armoured rhinoceroses, is dull reddish-brown in colour and has two large horns; unlike members of the next group, its upper lip grows to a sharp point and is adapted to browsing on plants. It entered zoological literature during the eighteenth century, when the Asiatic armoured rhinoceroses had been known for a long time.

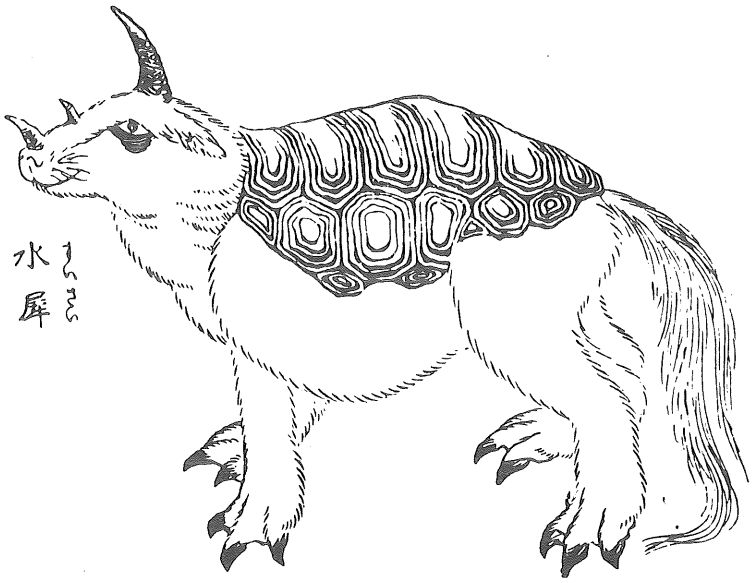
Finally, the giants of the rhinoceros tribe, the square-mouthed, blunt-nosed rhinoceroses, played a special rôle in the life of primitive man. They are characterized by hump-like withers, an enormous anterior horn and a small posterior horn; their largest



Ice Age woolly rhinoceros engraved by a Cro-Magnon hunter on a pebble, at La Colombière, Ain

forms may be up to fifteen feet long and six feet tall. The woolly rhinoceros (*Tichorinus antiquitatis*) was hunted by the Ice Age nomads in the tundras of Europe and Siberia, its cousin the forest rhinoceros (*Coelodonta merckii*) by the men of the warm interglacial periods, and the square-mouthed African rhinoceros (*Ceratotherium simum*) by the aboriginal peoples of the Sahara. Just as the woolly rhinoceros occurs in many European cave paintings, so the square-mouthed rhinoceros may be seen in countless rock drawings in North Africa and Cape Colony. This square-mouthed rhinoceros, the legendary 'white rhinoceros' of big-game hunters, was the only one of the giant blunt-nosed rhinoceroses to survive into the twentieth century. A total of rather less than one thousand five hundred animals now live in four widely separated reserves—six hundred on the Umfolosi River in Zululand, sixty in the South African reserve of Hluhluwe, three hundred in the rhinoceros park between the Sudan and Uganda, and five hundred in the Garamba game preserve in the Belgian Congo.

The ancient Egyptians, Greeks, Romans and Arabs clearly distinguished between Asian rhinoceroses with one horn and African rhinoceroses with two. But during the Middle Ages this knowledge was lost to Europe; what little was known about the rhinoceros



When the Chinese carried out their large-scale transportations of Southern Asian rhinoceroses, artists lent the 'unicorn in the tortoise shell' some of the rhinoceros's attributes. Hokusai

was absorbed into the unicorn legend. But it so happened that the first rhinoceros of which the world heard again belonged to a species entirely unknown in antiquity: it had two horns and yet it came from Asia. In 1292 Marco Polo returned home after his seven-year stay in Eastern Asia, with a fleet of fourteen ships that had sailed for eighteen months through the Indian Ocean and had put in, among other places, at Sumatra. There the great Venetian traveller saw some 'lion-horns, which, though they have feet like elephants, are much smaller than the latter, resemble the buffalo in the distribution of their hair and have two horns on their heads, with which, however, they harm no one'. A two-horned, hairy rhinoceros on Sumatra can only be identical with the small half-armoured rhinoceros, the rarest species of all, which even today has not been exhaustively studied. This was the species which, through Marco Polo's report, broke the silence that had sur-surrounded the colossus with the nose horn ever since the barbarian migrations.

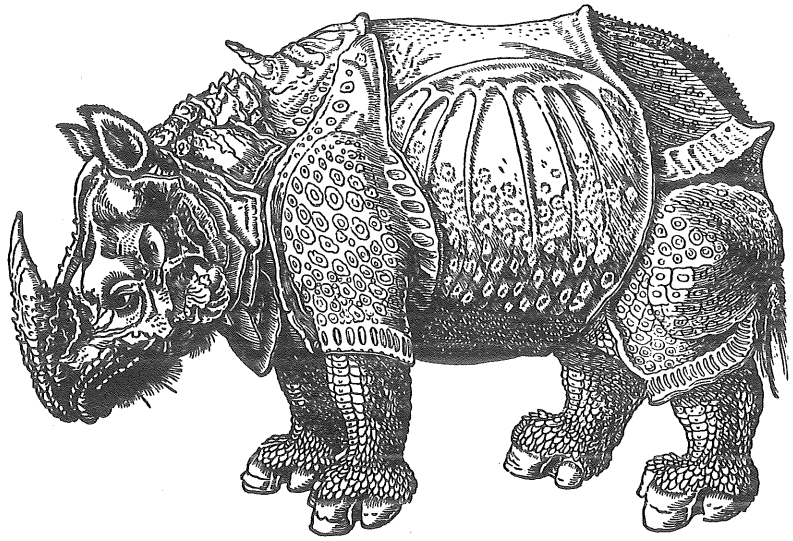
Marco Polo, a child of his time, naturally identified the good-

natured 'lion-horns' with the unicorn of fable. But he did not fail to add a few critical notes in the margin of the unicorn legend:

> All in all they are nasty creatures, they always carry their pig-like heads to the ground, like to wallow in mud and are not in the least like the unicorn of which our stories speak in Europe. Can an animal of their race feel at ease in the lap of a virgin? I will say only one thing: this creature is entirely different from what we fancied.

Europe heard nothing more of the Sumatran half-armoured rhinoceros for another five and a half centuries—until one of these animals was caught in quicksands, hauled ashore by two hundred men, tamed with the aid of elephants and later placed in an English zoo.

The real discoverers of the great Asiatic armoured rhinoceros were the Chinese. Some interesting instances of rhinoceroses being transported over great distances occurred in Eastern Asia long before Marco Polo's time. The Ts'ien-han-shu Annals, dating from the reign of the Emperor P'ing around AD 300, contain, for example, the following sentences: 'In the time of the Emperor P'ing,



The famous armoured rhinoceros of King Manuel the Great, which was represented in all natural-history books with its skin growths. From Gesner, probably copied from Dürer's famous woodcut

Wang-mang, as he reformed the government, wished to display the power of His Majesty. He sent rich gifts to the King of Hwangchi with the request that the latter should despatch an embassy to him bringing as tribute a living rhinoceros.' And: 'The envoys from Hwangchi, who came from a distance of thirty thousand li, have brought as tribute a living rhinoceros.'

The kingdom of Hwangchi is placed by some geographers near Madras in India and by others in Indonesia—at all events far to the south of Asia, endless miles by sea from China. The transport of a rhinoceros over this enormous distance to the imperial court of China is an astonishing achievement, only to be explained by the value attached to the rhinoceros by Chinese physicians and their patients. Down to Marco Polo's time various other armoured rhinoceroses found their way into the imperial garden of the Son of Heaven along with pheasants, white stags, banded tapirs, buffaloes, tigers and elephants. Most of them came from Cambodia, where today, not least through the fault of the Chinese, they have been exterminated.

The first representation of an armoured rhinoceros that came to European eyes after classical times was by the hand of Albrecht Dürer. He made a woodcut of the animal from a poor sketch. It is a rhinoceros from India that looks as though it is wearing saddle-cloths and has scales on its feet, a small horn on its shoulder and horn-like excrescences on every imaginable part of its body. The woodcut in Gesner's *Historia Animalium* of 1551 is a copy of Dürer's.

The living model of this representation, whose story has been recorded for posterity by the Italian naturalist Ulisse Aldrovandi, was a rhinoceros sent by sea to King Manuel the Great at Lisbon in 1513, after the Portuguese conquest of Goa on the west coast of India. It developed a multitude of horny excrescences on its skin during its long confinement in the ship's hold. These were taken for natural characteristics of every rhinoceros and appear in every picture of a rhinoceros in natural history books down to the eighteenth century.

A better depiction of a rhinoceros appeared in 1711 in the record of his travels published by a Huguenot jeweller named Jean Chardin, who went to Persia and India in connexion with the diamond trade, spent most of his life there in British commercial and diplomatic posts, and finally retired to London, where he was knighted by Charles II for his services. The animal represented in his book

was one he had seen not in India but at the Persian Court at Ispahan.

The one-horned Asiatic armoured rhinoceros gradually took possession of textbooks, museums and zoological gardens. At the same time the first two-horned, sharp-nosed rhinoceroses from Africa began to arrive in Europe. Although Arab drawings of these creatures had existed since the thirteenth century, zoologists were at first unwilling to believe that they had a smooth skin devoid of folds. A museum curator who had one of these sharp-nosed rhinoceroses to prepare assumed that the animal had suffered on the journey, and ironed folds into the skin to make it 'authentic'. This two-horned rhinoceros with folded skin caused some confusion in the classifications, until it occurred to some intelligent investigator to iron the folds out again and then compare the creature with other African rhinoceroses. The 'two-horned armoured rhinoceros' quickly and silently disappeared from all standard works.

But Africa kept back its greatest rhinoceros secret until modern times. Up to the beginning of the nineteenth century everyone was convinced that no other species occurred in the dark continent than the sharp-nosed rhinoceros, the *kifaru* of the Swahili, the 'Ethiopian ox' of the ancient Romans. Doubt began to creep in when unusually long and very peculiar rhinoceros horns kept appearing for sale in the markets of Eastern and Southern Africa. In 1817 the English traveller Burchell crossed Southern Bechuanaland, where he studied the great herds of zebra and quagga and caught the first hyaena-dogs, which he later brought back to London alive. During his treks into the veldt Burchell heard from the Boer settlers rumours of a *wijd rhino*, a 'big rhinoceros', said to be considerably larger than the known variety. Apparently he (or his successors) had an imperfect knowledge of Afrikaans, for when he finally discovered the animal it became known throughout the whole English-speaking world as the 'white rhinoceros', although this giant rhinoceros, which is six feet tall, weighs two tons and has an anterior horn that is a yard long, is really greyish-brown in colour.

In Burchell's day no one suspected that the giant rhinoceros had once lived all over Africa. It was thought never to have occurred north of the Zambezi or south of the Orange River. This belief was a blessing to the square-mouthed rhinoceros, for while big-game hunters wrought such havoc among its herds in South

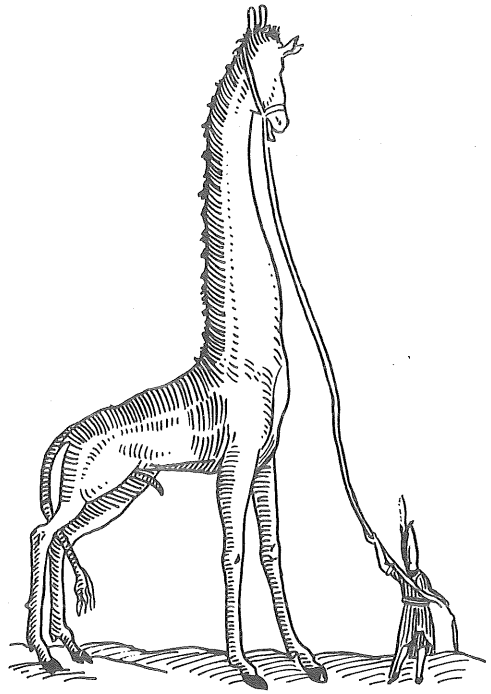
Africa that only about seven hundred beasts now remain in this region, they did not look for it elsewhere in Africa.

In 1900 a well-known English big-game hunter, Major Powell-Cotton, killed a number of 'white' rhinoceroses on the Upper Nile. The news brought hordes of zoologists, museum directors, animal collectors and hunters to the border region between the Sudan, Congo and Uganda—among them President Theodore Roosevelt, a passionate devotee of the chase. Thereafter, zoologists listed besides the *Ceratotherium simum* of Bechuanaland and Zululand, a new race of the white rhino living in North-East Africa—the last remnants of the prehistoric giant rhinoceros of the early Sahara. In honour of Major Powell-Cotton the animal received the name *Ceratotherium simum cottoni.*

A Marvellous Beast

We do not know what chance led Melchior Lorch from Flensburg to Constantinople, but somehow he came to this city—either as a traveller, a trader or a prisoner-of-war of the all-conquering Turks, who at that period reached the walls of Vienna. After his return home in 1599 he painted a water-colour picture of the greatest of all the wonders he had seen on the Golden Horn and wrote underneath it: 'A strange and marvellous beast, the like of which we had never seen before.' This marvellous beast had long legs and a long neck like a camel, was spotted like a panther and bore on its head horny processes like a stag that has shed its antlers. It was the giraffe.

Nowadays, when giraffes may be seen in every zoo of any size, it is difficult to imagine the excitement and perplexity once aroused by this 'camelopard', this apparent cross between a dromedary and a 'pard', as the panther was then called. Among all the existent and non-existent monstrosities of the medieval bestiary the giraffe was the craziest freak. To its extraordinary appearance was added the fact that the giraffe manifestly occupied a special position in the eyes of the arch enemies of the West, the Turks and Mamelukes, Arabs, Moors and Saracens. *Serafe* it was called in the Koran, 'the lovely one'. Eastern poets compared its long-lashed eyes with those of the beloved, Arab travellers filled pages with rapturous descriptions of this queen of beasts admired by the Prophet, sultans honoured particularly beautiful specimens of the *serafe*, most of which they received as gifts from the neighbouring



The wonder of wonders which Melchior Lorch saw on the Golden Horn. His drawing of a giraffe was reproduced in Ulisse Aldrovandi's great book on natural history (1599)

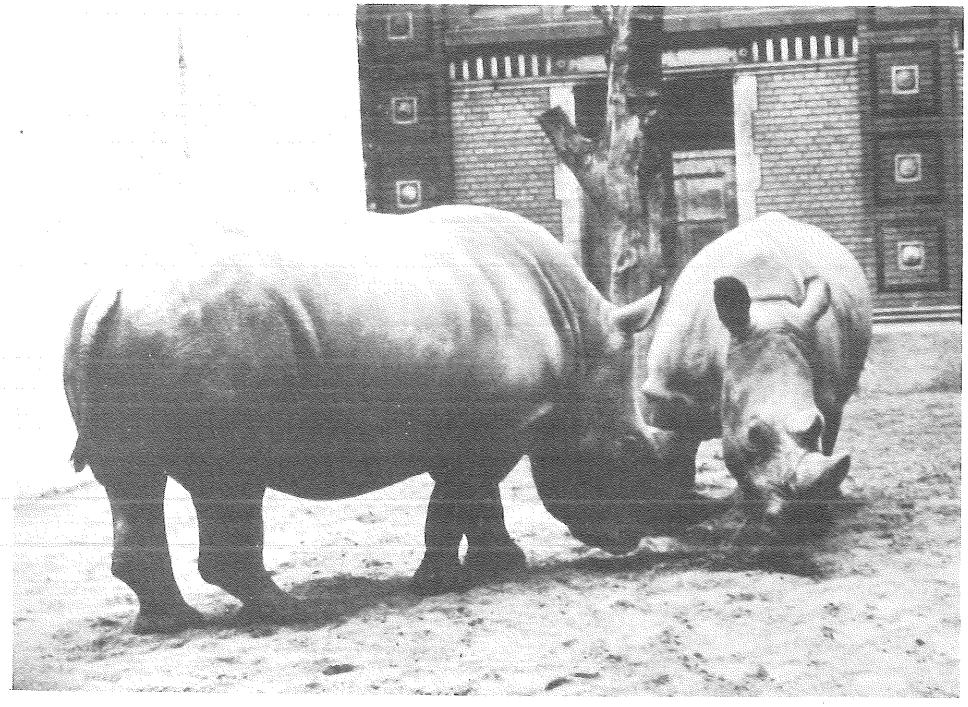
rulers of Sennar and Kordofan. Reason enough for the West to be suspicious, to approach the long-necked apparition with caution and to make of the lovely *serafe* a dubious giraffe.

Melchior's wonder-beast was not the first giraffe to be seen by European eyes. Cosimo de Medici, the 'Father of the Fatherland', as the Florentines called him after his death, ardently desired to have one of these 'Mameluke monsters' in his famous zoo. When finally he received one from Africa he was puzzled as to whether it was by nature more like a camel or a panther. He therefore staged a sensational experiment. On the occasion of a visit of Pope Pius II to Florence, he placed the poor giraffe in an enclosure before his government building together with a few lions, bloodhounds and fighting bulls, and waited with interest in the company of the Pope to see which of these animals would prove itself the strongest. The experiment ended without result: Cosimo's lions

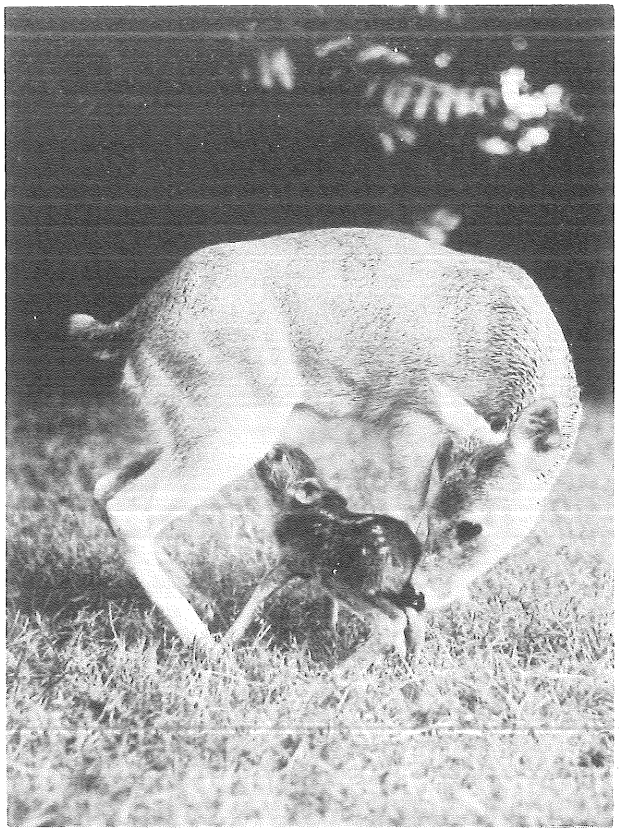
Tertiary era and virtually nothing of the genetic history of animals. At the beginning of the nineteenth century, Arabs from the Blue Nile region used to hunt the vast herds on their swift horses, capture young animals, bring them up and sell them at high prices to Europe. One day in 1827 the Pasha of Egypt learnt that the Sennar Arabs had caught two young female giraffes and kept them alive on camel's milk. He had them brought to Cairo and showed them in his gardens to European residents. The European merchants, consular officials and officers gaped. The existence of this fabulous creature had been almost forgotten in their homeland, although it was mentioned in all natural history books and many travel reports. Pasha Mehemed basked in their wonderment and decided to present the giraffes to two of his European colleagues, causing the consuls of the various countries to draw lots for them. The lucky winners in the draw were Great Britain and France. The giraffes were loaded on to long-boats, taken to Alexandria and shipped. Soon afterwards a veritable giraffe mania seized the population of London and Paris. In Paris, especially, the giraffe became in the most literal sense the height of fashion: for years afterwards every true woman of the world bore herself *à la giraffe*.

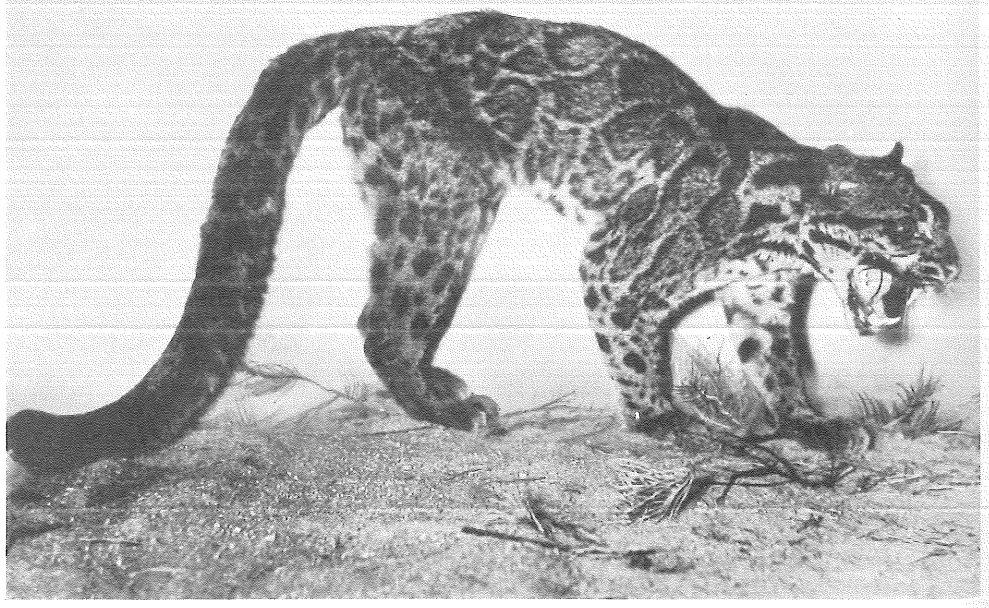
Once before, a few decades earlier, the whole of France had been thrilled by the creatures of the African veldt as described and illustrated by François Levaillant, an adventurous traveller and one of the most striking personalities in zoological research. Levaillant grew up in the South American port of Paramaribo, where as a small boy he had brought down exotic birds with an Indian blow-pipe. In 1777 he came to Paris and arranged for the directors of menageries and museums to finance a trip to Africa. For three years, from 1781 to 1784, Levaillant roamed Cape Colony as far as the Orange River and the still mysterious regions inhabited by the Kaffirs. He was the true discoverer of the savannah fauna of Cape Colony and his fascinating books on Africa were praised by great scientists and beloved of a vast circle of readers.

To Levaillant we owe the classical descriptions of the myriad herds of springbok that are pursued by lions, cheetahs, desert lynxes or caracals and hyaenas and can overrun men and beasts in their passing. He was the first chronicler to witness the gripping struggle between the secretary bird—a long-legged African bird of prey—and a venomous snake. He told of the skilfully made nests of the weaver bird, the brilliant-plumaged, banana-eating turaco



5. The woolly rhinoceros died out towards the end of the Ice Age. Its surviving cousin is the white rhinoceros of Africa. Antwerp was the first zoo to obtain a pair of Sudanese Cotton's rhinoceroses. They arrived on April 7, 1950.





34. *Left*. The Chinese water-deer and (*below*) clouded leopard, two animals discovered in Asia by British colonial officials.

with a pig's snout. He figured a snouted rhinoceros of this type in his book on the island of Sumatra—apart from its unusual colouring. It looked exactly like the tapir of the South American jungle. The few zoologists who took the trouble to read Wahlfeldt's book smiled knowingly at the imaginative drawing. Everyone knew that tapirs lived exclusively in America and therefore could not occur in Southern Asia. Probably Wahlfeldt had let the Chinese fairy story of the *mé* mingle in his mind with various Malay tales of rhinoceros and wild pig, and afterwards seen ghosts in the jungle. Cuvier referred to this report in 1800, but dismissed the unknown creature from the Indonesian jungle as a 'young rhinoceros'.

Shortly after this Cuvier himself recovered various tapir-like primitive ungulates from the European Early Tertiary. Nothing would have been more natural than to suppose that these archaic perissodactyls had sent out branches to South-East Asia as well as America. But this was incompatible with Cuvier's cataclysm theory, according to which the European primitive tapirs had vanished without issue. The tapir-like *teuxon* was also mentioned in another book on the history and natural history of Sumatra, written in 1783, where it was numbered among the great island's most common animals. The author of this book was the polyhistor William Marsden, secretary to the British government at Benkulen. Cuvier pronounced the same judgment on Marsden's report as he had on Wahlfeldt's. The British, he said, were incapable of distinguishing between a tapir and a rhinoceros: there were no Asiatic tapirs.

It was a lucky day for Marsden when a fourteen-year-old lad joined the East India Company, in 1795, and ten years later came to Benkulen as assistant secretary. Marsden made friends with young Raffles, introduced him to natural history and, among other things, told him of the (in Cuvier's view) non-existent *teuxon*. Raffles obtained further information about the animal. At first he made the same mistake as Wahlfeldt and took the *teuxon* for a new species of rhinoceros. 'In the forests of Sumatra there is an animal so far unknown to us,' he summarizes the results of his investigations, 'which resembles a rhinoceros in size and appearance and bears only one horn. But it differs from the rhinoceros through having a white band on its body.'

This description contains not merely *one* unknown animal, but *two* of them. As Raffles knew, there existed on Sumatra the *two-horned* rhinoceros mentioned by Marco Polo, which could not be

identical with the *teuxon*, because it had one horn too many and no saddle-cloth. In addition to this, the natives spoke firstly of a *one-horned* rhinoceros and secondly of the animal with the white saddle-cloth. Raffles erroneously assumed that these were one and the same animal. In reality the Sumatrans knew two different pachyderms beside the small, two-horned hairy rhinoceros—the banded tapir and the large, one-horned Sunda rhinoceros. Both these animals, the *chipang* of the Malays and the *varak* of the Javanese, were now fused in Raffles's account into a single creature. Hence we cannot really blame Cuvier for having so many hard words to say about Raffles's one-horned *teuxon*, with its tapir's snout and its saddle-cloth.

Raffles was knighted for his political services, and from 1811 onwards resided at the Javanese metropolis of zoological research, Buitenzorg. There he met the Pennsylvanian doctor Thomas Horsfield, an outstanding zoologist and botanist, who had begun to collect and describe the plants and animals of Java twenty years before the research station of Buitenzorg was founded by the Dutch Indies Natural History Commission. Among other creatures, he had discovered on Java the budeng, a silky black langur, the linsang, the Javan civet cat and the little muntjak deer. He had given zoologists further details concerning the strange flying lemur—a creature that looks like a cross between an insectivore, a bat and a lemur. He kept rare Javan beasts in a private zoo, among them a skunk-badger, a 'gentle creature of mild character,' as he wrote, 'which behaved very amicably towards me and never got into such a rage that it released its pestiferous vapour'. From Dr Horsfield, Sir Stamford Raffles heard more about a one-horned rhinoceros.

The rhinoceros in question lived in the courtyard of Soerakarta castle, and was so good-tempered that visitors could ride on its back. As Horsfield and Sir Stamford saw for themselves, it didn't look very different from the Indian armoured rhinoceros. A Dutch physician, Jacob Bontius, had spoken of this animal as long ago as the sixteenth century. It had no saddle-cloth nor any other sort of black-and-white markings. Soon afterwards Sir Stamford came across a representative of this species in the wild state. According to his statement the animal was 'harmless and positively cowardly'; for it made off as soon as Sir Stamford's dogs began to bark. This Sunda rhinoceros, it was soon learnt, also lived in Indo-China and Malacca; it must be identical with the mysterious unicorn of Sumatra. This meant there were two forms of rhinoceros on Sumatra—a small two-horned species and a large one-horned species. But was the Sunda rhinoceros the same as the animal with a saddle-cloth, the mysterious *teuxon*?

In November 1817 Sir Stamford returned once more, as governor, to Fort Marlborough, Sumatra. He resolved to explore the island of Sumatra as thoroughly as Dr Horsfield had explored the island of Java. Above all, he wanted to write a great natural history of the 'Meadows of Gold' (as the Arab Masudi once dubbed the Indonesian archipelago). His friends, his old patron Marsden and the naturalist Arnold, gave him their enthusiastic support. Marsden had also discovered meanwhile that the *teuxon* was not a rhinoceros, but a black-and-white hornless proboscidian. In the residence at Benkulen were the skin, skeleton and some of the internal organs of the animal, and here Sir Stamford's collaborators also preserved the skin and bones of a one-horned rhinoceros from the jungles of Sumatra. The haze surrounding the Indonesian pachyderms was beginning to clear. Sir Stamford sent the remains of the one-horned rhinoceros to London with a note to the effect that, by all appearances, there were two species of rhinoceros on Sumatra and also a tapir that had not yet been fully studied.

In 1869 the rhinoceros was described and identified as the Sunda rhinoceros by John Edward Gray, who was revising the zoological material at the British Museum.

The second problem, the identity of the *teuxon*, was solved by Sir Stamford himself. In 1818 Sir Stamford went to visit the East India Company at Calcutta—partly for administrative reasons and partly in pursuit of his natural history studies. His industrious collector, Joseph Arnold, had died at Padang, Dr Horsfield had left Indonesia, and so Sir Stamford was looking round in India for competent scientific collaborators he could take into his service. He picked on two Frenchmen who were staying just then at Chandernagore with the aim of exploring India. Their names were Pierre-Médard Diard and Alfred Duvaucel.

Diard was an experienced animal collector with an expert knowledge of the tropics. The twenty-five-year-old Duvaucel, on the other hand, was a complete tyro, but to make up for this he carried in his pocket a secret commission from his stepfather, the great Georges Cuvier, instructing him to supply the Jardin des Plantes, Paris, with any interesting creatures he could obtain from