

THE
STUDENT
AND
INTELLECTUAL OBSERVER
OF
SCIENCE, LITERATURE
AND ART.

VOLUME IV.

ILLUSTRATED WITH PLATES IN COLOURS AND TINTS AND NUMEROUS
ENGRAVINGS ON WOOD

LONDON
GROOMBRIDGE AND SONS
PATERNOSTER BOW.

MDCCLXX.



TWO-HORNED RHINOCEROS.—RHINOCEROS BICORNIS.
(Young Male.)

AFRICAN RHINOCEROSES.

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(With a Coloured Illustration.)

ON the 11th of September last year the first living African rhinoceros that has reached Europe, since the days of the Roman Amphitheatre, arrived in London. Along with a figure of this animal, as it now appears in the Gardens of the Zoological Society of London, I propose to offer to the readers of *The Student*, some particulars of what is known of its history, and to add some remarks upon the present state of our knowledge of the African rhinoceroses in general.

First, as regards the history of the present specimen; the first and only individual—as far as we know—that has been brought alive to Europe in modern days. It was purchased by the Zoological Society for the sum of one thousand pounds of Mr. Carl Hagenbeck, a well-known dealer in living animals at Hamburgh. Mr. Hagenbeck had bought this rhinoceros some weeks previously, along with a large collection of giraffes, African elephants, and other animals imported by Herr Casanova, of Vienna, from Eastern Africa. Herr Casanova obtained the rhinoceros from the Hamran Arabs, who inhabit the district to the south of Cassalà, in Upper Nubia; and concerning whose peculiar mode of hunting Sir Samuel Baker has told us such marvellous stories. Herr Casanova's visit to Cassalà in 1867—1868 was the last of a series of expeditions made by this enterprising traveller into that country for the purpose of obtaining collections of living animals, for the menageries of Europe. Of that of the previous season (1866—67), one of his companions, Mr. Ernest Marno, of Vienna, has published a very interesting account,* which will serve to give us some idea of the mode in which such expeditions are conducted.

The party left Trieste by the usual steamer to Alexandria, and proceeded thence to Cairo and Suez by railway. From Suez they took one of the Egyptian steamers, of the Abdul Azziz Company, down the Red Sea to Suakim. After a detention of fourteen days in this city, during which they were engaged in collecting the necessary goods and supplies, they started on the last day of December, 1866, with a caravan of thirty camels, through the terri-

* See "*Der Zoologischer Garten*," 1868, p. 81.

tory occupied by the Hadendowa Arabs, and in eighteen days march reached Cassalà, the chief city of the district of Taka, which Herr Casanova makes a sort of head-quarters during these expeditions. The young elephants, giraffes, and most of the other living animals brought home are procured by purchase from the Hamran Arabs, who, in the summer months, dwell on the banks of the rivers Settite and Atbara, several days journey to the south of Cassalà. After a short stay at Cassalà, Herr Marno joined the rest of his companions, who had preceded him, at the summer-quarters of the Hamran sheik, Ued Agagl, near the banks of the Settite, four days march from Cassalà, and took up his residence for two months, in a straw hut, assigned to the party by the sheik. The price given for each young African elephant when brought in, is stated to have been one hundred Maria-Theresa dollars (about £20), of which, ten dollars goes to the sheik, whilst the rest belongs to the fortunate individual who has captured it. Before they left the sheik's head-quarters, eleven elephants had been obtained in this way, and five more were subsequently bought of the Menna Arabs in the market at Cassalà; so that the party finally quitted that city on the 7th of May, with a collection of sixteen elephants, besides a large number of hyenas, lions, antelopes, and birds of various kinds. To conduct these to the sea-port at Suakim, thirty camels and forty drivers and attendants were employed. While the elephants were led by one or more attendants, the antelopes and smaller animals were packed in cases and carried on the backs of camels. But, in spite of every care, the losses met with on the route to Suakim, and subsequently on the sea-voyage, were considerable; and the collection was much diminished before it finally reached Trieste, and was there disposed of to the European dealers in living animals.

Such is an outline of Herr Casanova's expedition of 1866—7. No living rhinoceros was brought home on this occasion, although, as Herr Marno informs us, one of the Aggaggeers, or sword-hunters, captures a very young specimen, which, however, died before reaching sheik's encampment on the Settite. During the next expedition (that of 1867—8) Herr Casanova was more fortunate. A young male rhinoceros brought in by the Arabs on the 12th of February, 1868, was reared with much difficulty; and, along with a number of African elephants, giraffes, antelopes, and other animals, transported to the coast at Suakim. Hence he was carried by steam and rail to Hamburgh (via Suez, Alexandria, and Trieste), and, as I have already stated, eventually survived to reach the Zoological Society's Gardens, in the Regent's Park. In this

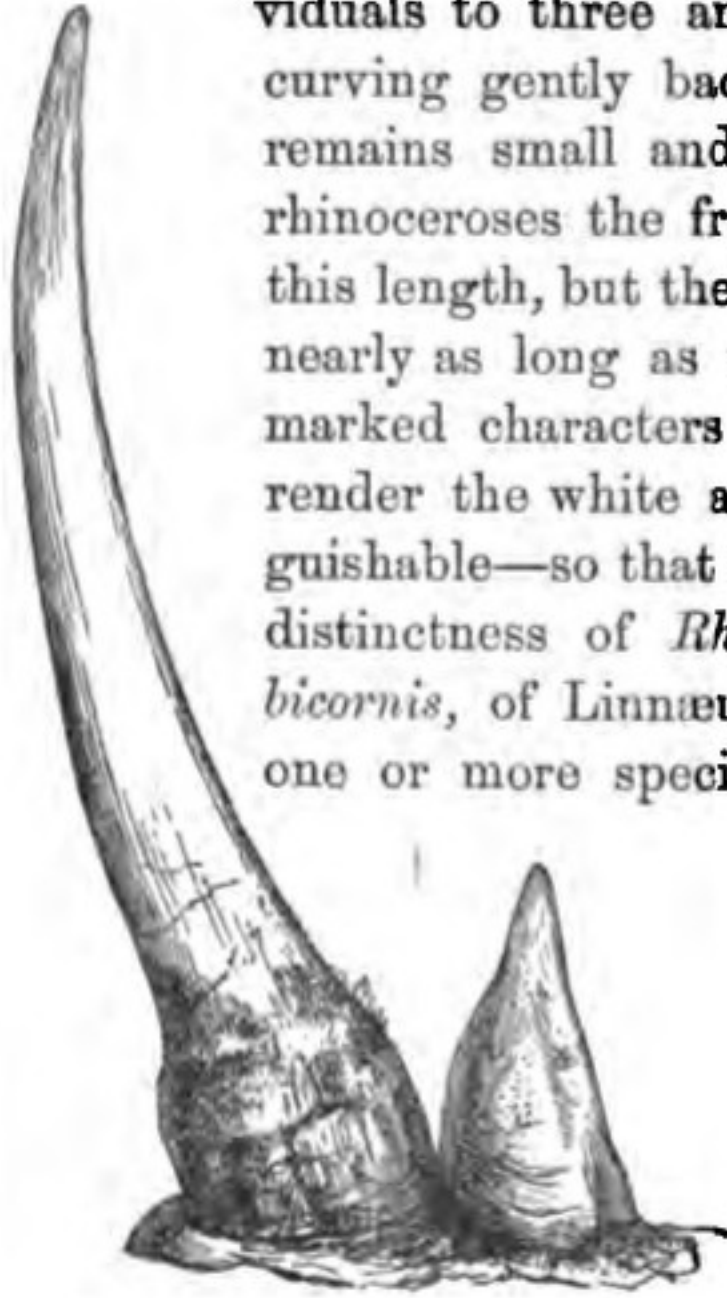
establishment he has since remained in good health, and has greatly increased in size, and improved in appearance.

“Theodore,” as our African rhinoceros has been named, after his famous but illfated compatriot, is now about four feet in height, but still growing fast. He consumes daily about three quarters of a truss of the best clover hay, six quarts of oats, mixed with three pecks of bran, seven pounds weight of biscuit, and the best part of a truss of straw; so that his board costs the Society from six to seven shillings a day. He was first lodged in the giraffe-house, but on the recent completion of the new elephant-house was removed thither, and has for his companions two Indian elephants, two African elephants, two Indian rhinoceroses, and a pair of Tapirs. He is the only unmated animal in the building—a deficiency which we hope to remedy before he is quite adult.

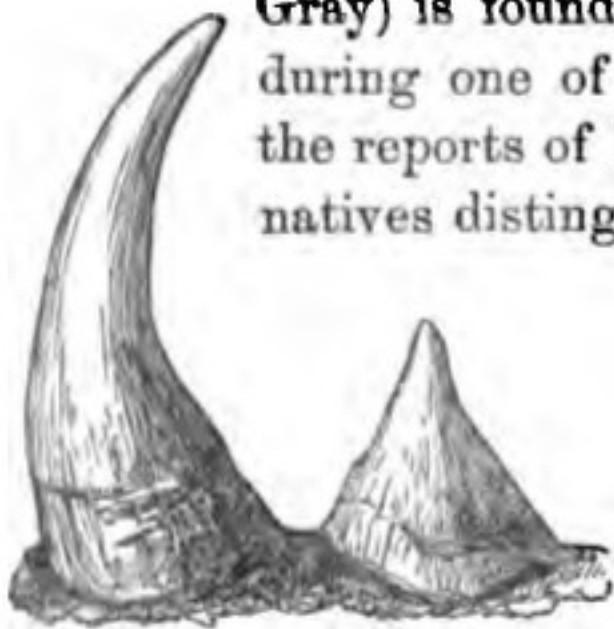
Having now given the history of our individual African rhinoceros, I must say a little about the position of this animal in the scheme of nature. In the first place it should be stated, that the genus *Rhinoceros*, which was in a former epoch of wide distribution over the world's surface, is now confined within a comparatively small area—or, I should rather say, within two widely separated areas—one of which is Asiatic and one African. The Asiatic rhinoceroses, of which three species are known to exist, form a group by themselves, easily distinguishable from their African brethren by the presence of incisor teeth, and folds on the skin. Of these animals I propose to say more on a future occasion. The African rhinoceroses, to which group the animal I have been speaking of belongs, on the contrary, have no incisor teeth when adult, and scarcely any appearance of the peculiar folds of the integument, which form such a characteristic feature in the Indian species.

The African rhinoceroses are again subdivisible into two sections—commonly known as white rhinoceroses and black rhinoceroses—from the prevailing colours of their skins; which, although by no means strictly white and black respectively, are, according to those authorities who have become acquainted with them in their native wilds, strongly contrasted in hue, and render the two varieties easily recognizable. Another trenchant difference between these forms is in the shape of the upper lip. This in the white rhinoceros is quite short and rounded, being formed for grazing, like that of a cow. From this feature, Dr. Burchell, the first scientific traveller who met with the white rhinoceros, named the animal *Rhinoceros simus*. In the black rhinoceros on the contrary, the upper lip is long and prehensile, forming a short proboscis, well fitted for

taking hold of the small branches of trees, upon which it subsists. Besides this, there is a great difference between the horns of the black and white rhinoceroses. In the white rhinoceros the front horn is enormously produced in the adult, reaching in old individuals to three and a half or four feet in length, and curving gently backwards, but the hinder horn always remains small and slightly developed. In the black rhinoceroses the front horn never attains anything like this length, but the hinder horn is longer—in some cases nearly as long as the front one. There are also well-marked characters in the bones of the cranium, which render the white and black rhinoceroses readily distinguishable—so that no doubt can remain as to the perfect distinctness of *Rhinoceros simus* from the *Rhinoceros bicornis*, of Linnæus, or black rhinoceros. But whether one or more species are not comprised under each of



WHITE RHINOCEROS.



BLACK RHINOCEROS.

these two names, is a subject which admits of some argument. Dr. Gray, who has recently written a paper in the "Proceedings of the Zoological Society of London,"* on the *Rhinocerotidæ*, makes out two species of white and two species of black rhinoceros. The second species of the white form (*Rhinoceros Oswelli* of Dr. Gray) is founded upon a horn obtained by Mr. Oswell, during one of his expeditions to Lake Ngami, and upon the reports of hunters and travellers, who state that the natives distinguish the *Kobaaba*, in which the front horn is bent forward at the end, from the *Monoohoo* or *Mohoohoo*, in which it is recurved throughout. There is I think, as yet, no sufficient ground for regarding this as more than an occasional variation occurring in old individuals of *R. simus*, especially as the natives say that they

have "never seen a young *Kobaaba*."

As regards the black rhinoceroses, we have much better evidence of there being possibly two species of this form, but

* "Observations on the preserved specimens and skeletons of the *Rhinocerotidæ*, in the collection of the British Museum and Royal College of Surgeons, including the descriptions of three new species." By Dr. J. E. Gray, P.Z.S. 1867, p. 1003.

neither in this case is it, I think, quite sufficient. Sir Andrew Smith was the first naturalist to discriminate a *Rhinoceros keitloa* from the Linnean *R. bicornis*, the characters chiefly relied upon being the larger size and more produced lip of the former, and the fact of the hinder horn being longer; nearly, if not quite as long as the front horn. The *Keitloa* was only met with in the far interior of the colony, near Kurrichaine, and is supposed by Sir Andrew Smith, to be the northern representative of the *Bovili* or *R. bicornis*. If this be the case, all the specimens of black rhinoceros from Natal, Zambesia, and Eastern Africa generally, ought to belong to the *R. keitloa*, and our living animal must be referred to the same species. But I have examined many heads of rhinoceros from these countries, and have not been able to convince myself that the characters above stated, as far as they can be observed in dead specimens, are always to be relied upon. There is certainly much individual variation in the comparative length of the anterior and posterior horns of the African black rhinoceroses, and the existence of two distinct and well-marked species of this form appears to me to be not yet proved. It would, however, be very desirable that a careful comparison should be made between an authentic skull of *R. bicornis*, and the skull of the rhinoceros obtained by Mr. Jesse during the recent Abyssinian expedition, as that would go very far to solve the present question.

As regards the habits of the black rhinoceros in a state of nature, we have some interesting details given us in Sir Samuel Baker's "Nile Tributaries of Abyssinia." Sir Samuel met with this animal, on the Atbara and Settite—the same locality, whence our living individual was procured—and tells us that it is the only species of rhinoceros inhabiting that country. It is "generally five feet six inches to five feet eight inches high at the shoulder, and, although so bulky and heavily built, is extremely active. Its skin is about half the thickness of that of the hippopotamus, but of extreme toughness and closeness of texture, and when dried and polished resembles horn. . . . It is extremely vicious, and is one of the few animals that will generally assume the offensive; it considers all creatures to be enemies, and, although it is not acute in either sight or hearing, possesses so wonderful a power of scent, that it will detect a stranger at a distance of five or six hundred yards, should the wind be favourable.

"I have observed that a rhinoceros will generally charge down upon the object that it smells, but does not see; thus, when the animal is concealed either in high grass or thick jungle, should it

scent a man who may be passing unseen to windward, it will rush down furiously upon the object it has winded, with three loud whiffs, resembling a jet of steam from a safety valve. As it is most difficult and next to impossible to kill a rhinoceros when charging, on account of the protection of the brain afforded by the horns, an unexpected charge in thick jungle is particularly unpleasant; especially when on horseback, as there is no means of escape but to rush headlong through all obstacles.

“The teeth of this animal are very peculiar. The molars have a projecting cutting edge on the exterior side; thus the jaws when closed form a pair of shears, as the projecting edges of the upper and lower rows overlap; this is a favourable arrangement of nature to enable the animal to clip off twigs, and the branches on which it feeds, as, although it does not absolutely refuse grass, this rhinoceros is decidedly a wood-eater. There are particular bushes which form a great attraction; among these is a dwarf mimosa with a reddish bark; this tree grows in thick masses, which the rhinoceros clips so closely, that it frequently resembles a quickset-hedge that has been cut by the woodman’s shears. These animals are generally seen in pairs, or the male, female, and calf; the mother is very affectionate, and exceedingly watchful and savage. Although so large an animal, the cry is very insignificant, and is not unlike the harsh shrill sound of a penny trumpet. The drinking hour is about eight p.m., or two hours after sunset, at which time the rhinoceros arrives at the river from his daily retreat, which is usually about four miles in the interior. He approaches the water by regular paths made by himself, but not always by the same route; and after drinking, he generally retires to a particular spot, beneath a tree that has been visited on regular occasions; in such places large heaps of dung accumulate. The hunters take advantage of the peculiarity, and set traps in the path leading to his private retreat, but he is so extremely wary, and his power of scent is so acute, that the greatest art is necessary in setting the snare.”

Sir Samuel Baker, then proceeds to describe at full length the peculiar pitfalls constructed by the Hamran Arabs, for the capture of this wily animal. They are made so that not the whole body of the rhinoceros falls into them, but only one of his feet, which thus becomes fixed in a noose, to which a log of wood is attached. The animal quits the spot dragging about after him this inconvenient companion, and thus becomes an easy prey to the experienced sword-hunter.