

8/2

51192
H317

ZOOLOGICAL RESEARCHES

IN JAVA,

AND THE NEIGHBOURING ISLANDS.

BY

THOMAS HORSFIELD, M. D. F. L. S. M. G. S.

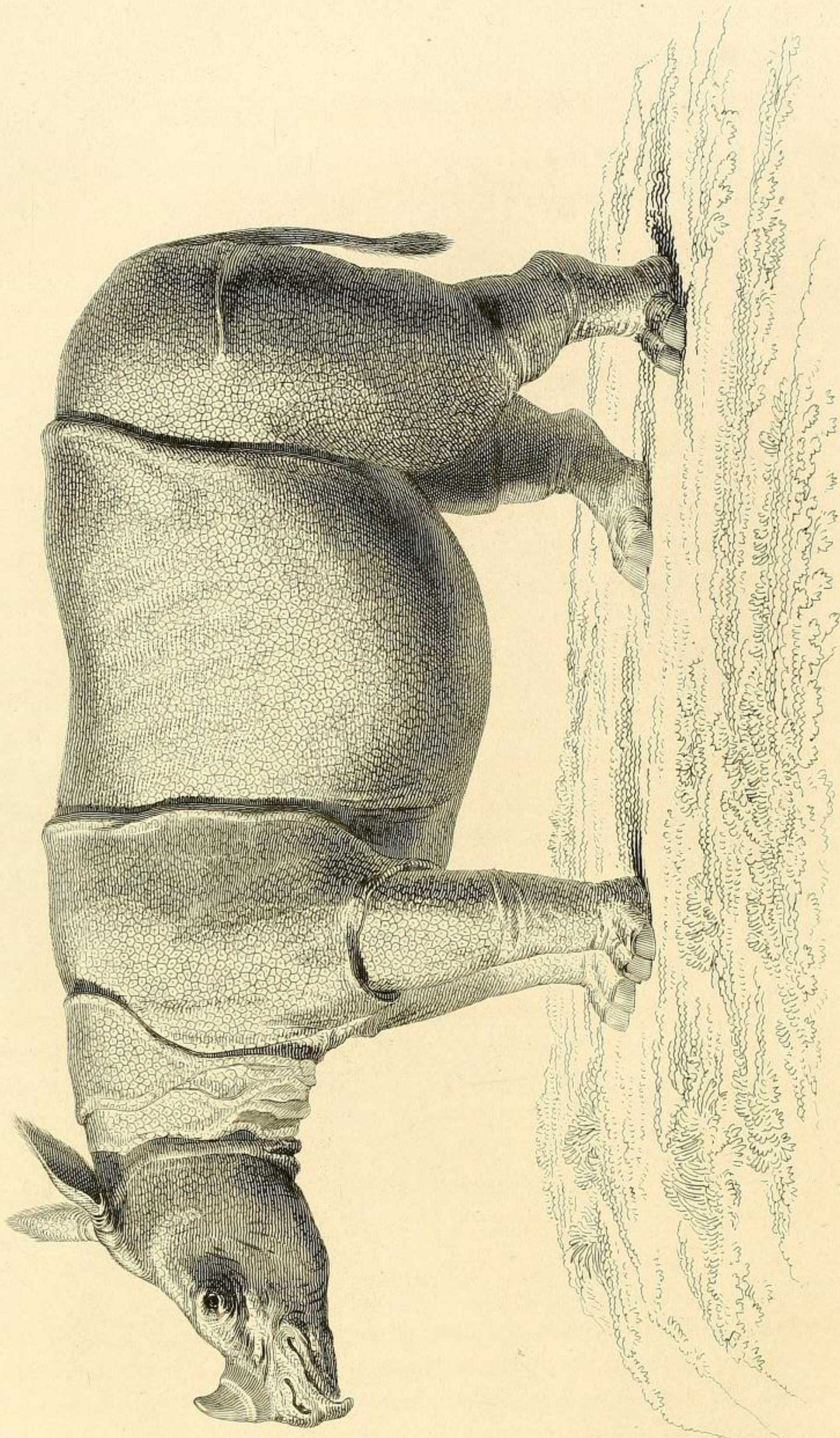
London:

PRINTED FOR KINGSBURY, PARBURY, & ALLEN,

LEADENHALL STREET.

1824.





1 Foot

RHINOCEROS SONDAICUS.

Engraved by W. Taylor.

RHINOCEROS SONDAICUS.



ORD. VI^{me} PACHYDERMES, *Cuvier*. 2^{de} Famille. Pachydermes ordinaires,
2^{de} Division.

ORD. II. BRUTA, *Linn.* Syst.

ORD. V. MULTUNGULA, *Illiger*. Fam. 18, Nasicornia.

RHINOCEROS, *Linn. Briss. Erxleb. Bodd. Cuv. Geoff. Illig.*

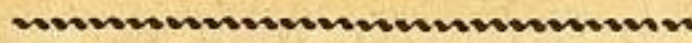
CHAR. GEN.—*Dentes primores* his nulli, illis supra duo minuti decidui, infra duo minuti conici inter duo majores cylindricos, omnes inclusi. Pro *Laniariis* diastema. *Molares* complicati tuberculati, supra infraque utrinsecus septem.

Rostrum productum chilomate obtuso; labro in processum mobilem excurrente.

Cornu unicum aut duo cornea solida acuta, naso imposita. *Auriculæ* oblongæ, capite multo breviores, basi infundibuliformes.

Corpus setis raris obsitum. *Cauda* brevis. *Mammæ* apertæ duæ ventrales.

Pedes distincti ambulatorii, tridactyli, digitis cute obvolutis. *Ungues* : unguæ tres insistentes, omnes anticæ. *Illiger*.

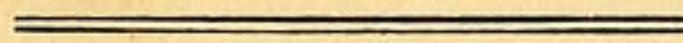


Rhinoceros cornu unico, rugis colli obsoletis, scutulis epidermidis margine angulatis medio concavis setis paucis brevibus obsitis, auribus margine caudaque subtus pilosis.

Warak of the Javanese.

Badak of the Malays, and of the inhabitants of the western parts of Java.

Rhinoceros sondaicus, *Cuvier*, in *Encycl. Method. Mammalog.* p. 399, par *M. A. G. Desmarest*, 1822.



THE Rhinoceros sondaicus has so great a resemblance in its general physiognomy, to the Indian Rhinoceros, hitherto known by the name of One-horned Rhinoceros, that it requires considerable accuracy and care to demonstrate its distinguishing characters. Having had an opportunity, during my residence at Surakarta, the capital of the dominions of the Emperor of Java, to examine an individual, taken during infancy, and kept in confinement, or rather in a state of

RHINOCEROS SONDAICUS.

domestication, I propose here to detail concisely the peculiarities on which the specific distinction is founded, and to add some general remarks on the manners and distribution of this species through the Island.

The separation of this, from the common Indian species, the *Rhinoceros unicornis* of Linné, and the *Rhinoceros indicus* of the *Régne animal*, was proposed by the Baron Cuvier, who applied to it the name of *Rhinoceros sondaicus*. I am acquainted with his account and definition of this species, only by the summary notice published by M. Desmarest in the *Encyclopedia*; and this has served for my comparison. But the decision of M. Cuvier on this subject must be considered conclusive. To ascertain and establish the characters of a new species, he was prepared, not only by his unparalleled knowledge as a Zoologist, but also by his previous labours and researches concerning the common Indian, or One-horned *Rhinoceros*. We owe to him the most complete account that has yet been made public of this species; it is contained in the *Ménagerie du Mus. d'Hist. Nat.*, and illustrated by a beautiful and accurate engraving. The materials I have collected to enable me to contribute to the illustration of this species, consist in some remarks made at Surakarta, in 1817, and in a drawing, prepared under my inspection, by an artist, who, although educated in Java, had acquired considerable proficiency. On the Plate annexed to this article, a careful representation is given of this drawing, which, though deficient in some points that the skilful pencil of Mr. Daniell would have supplied from the living animal, exhibits, with scrupulous accuracy, the form and proportions of our animal. This individual was, by measurement taken in 1817, nine feet long, and four feet three inches high at the rump. The *Rhinoceros* figured by M. Fred. Cuvier, in the 13th Livraison of the *Hist. Nat. des Mammiferes*, brought to Europe from the British possessions in India, was higher in proportion to its length, and its form was more unwieldy. The entire length was seven feet, and its height four feet and ten inches. The individual described by M. Georges Cuvier, in the *Menag. du Mus. &c.* had, according to the dimensions given, a more lengthened form; but the figure exhibits an animal, in comparison with the *Rhinoceros sondaicus*, of greater bulk, and more gross dimensions. The head of our animal is strongly attenuated to the muzzle, and has a triangular form; the flexible upper lip is considerably lengthened, and the sides of the head are marked with protuberances, or scutula, resembling those on the body, but no great roughnesses or folds are apparent. The characters therefore, given by M. Cuvier, as far as regard the form of the body and of the head, are confirmed by the drawing, and by the measures taken from life. The marks of distinction afforded by the folds of the external covering, are less evident than those afforded by the form of the body and the attenuated head. The following modifications may,

RHINOCEROS SONDAICUS.

however, be noticed:—The folds, on the whole, appear less rough or prominent than in the Indian Rhinoceros; those of the neck are comparatively smaller; and the posterior fold, which has an oblique direction towards the spine, is less extended. The thick covering, or coat, of our animal is divided on the surface into small tubercles, or polygonous scutula; and a few short bristly hairs, rising from a slight depression in the centre, constitute a peculiar character. The ears are bordered with a series of long stiff bristles, closely arranged; and a similar series of bristles also extends along the tail, underneath, through its whole length.

The distinguishing characters of our animal now detailed, are, a lengthened form of body; legs proportionally elevated; head acuminate; scutula many-sided, with a central depression, giving rise to one or to several short bristles, and a series of long hairs at the extremity of the ears, and under the tail: this is likewise the substance of the description of the *Rhinoceros sondaicus*, given by M. Desmarest, in the *Encyclopedia*.

The individual which is represented in our Plate, and which has afforded the preceding details, was taken, while very young, in the forests of the Province of Keddu, and was conveyed to the Residency at Magellan, in the year 1815 or 1816. By kind treatment it soon became domesticated to such a degree, that it permitted itself to be carried in a large vehicle resembling a cart, to the capital of Surakarta. I saw it during its conveyance, and found it perfectly mild and tractable. At Surakarta it was confined in the large area or square which bounds the entrance to the royal residence. A deep ditch about three feet wide limited its range, and for several years it never attempted to pass it. It was perfectly reconciled to its confinement, and never exhibited any symptoms of uneasiness or rage, although, on its first arrival, harassed in various ways, by a large proportion of the inhabitants of a populous capital, whose curiosity induced them to inspect the stranger of the forest. Branches of trees, shrubs, and various twining plants were abundantly provided for its food; of these the species of *Cissus*, and the small twigs of a native fig-tree were preferred. But plantains were the most favourite food, and the abundant manner in which it was supplied with these, by the numerous visitors, tended greatly to make the animal mild and sociable. It allowed itself to be handled and examined freely, and the more daring of the visitors sometimes mounted on its back. It required copious supplies of water; and when not taking food, or intentionally roused by the natives, it generally placed itself in the large excavations, which its movements soon caused in the soft earth that covered the allotted space. The animal rapidly increased in size: in the year 1817, having been confined at Surakarta about nine or ten months, the dimensions as

RHINOCEROS SONDAICUS.

already stated, were nine feet in length, and four feet three inches in height at the rump. In 1821, it had acquired the height of five feet seven inches. This information I received from my friend Mr. Stavers, who is now in England, on a visit from the interior of Java; and he favoured me further with the following details, which complete the history of the individual, whose figure is annexed to this article. Having considerably increased in size, the ditch of three feet in breadth was insufficient for confining it; but leaving the inclosure, it frequently passed to the dwellings of the natives, destroying the plantations of fruit-trees and culinary vegetables, which always surround them. It likewise terrified those natives that accidentally met with it, and who were unacquainted with its appearance and habits. But it shewed no ill-natured disposition, and readily allowed itself to be driven back to the inclosure, like a Buffalo. The excessive excavations which it made by continually wallowing in the mire, and the accumulation of putrefying vegetable matter, in process of time became offensive at the entrance of the Palace, and its removal was ordered by the Emperor, to a small village near the confines of the capital, where, in the year 1821, it was accidentally drowned in a rivulet.

The Rhinoceros lives gregarious in many parts of Java. It is not limited to a particular region or climate, but its range extends from the level of the ocean to the summit of mountains of considerable elevation. I noticed it at Tangung, near the confines of the Southern Ocean, in the districts of the native Princes, and on the summit of the high peaks of the Priangan Regencies; but it prefers high situations. It is not generally distributed, but is tolerably numerous in circumscribed spots, distant from the dwellings of man, and covered with a profuse vegetation. On the whole, it is more abundant in the western than in the eastern districts of the Island. Its retreats are discovered by deeply excavated passages, which it forms along the declivities of mountains and hills. I found these occasionally of great depth and extent.

In its manners, the Rhinoceros of Java is comparatively mild. It is not unfrequently met in the wilds by Europeans and by natives. No instance of its shewing a disposition to make an attack has come to my knowledge; being the largest animal in Java, its passions are not roused, as in many parts of India, by contentions with the Elephant. It is rarely seen in a domestic state, but it is occasionally decoyed into pits, and destroyed. Our animal rambles chiefly at night, and often occasions serious injury to the plantations of coffee and pepper, which are laid out in the fertile districts selected for its retreats.

The horns and skin are employed for medicinal purposes by the natives.



One foot

TAPIRUS MALAYANUS.

Drawn & Engraved by W. Daniell.

TAPIRUS MALAYANUS.



ORD. VI^{me} PACHYDERMES, *Cuvier*. 2^{de} Famille. Pachydermes ordinaires,
2^{de} Division.

ORD. VI. BELLUÆ, *Linn.* Syst.

ORD. V. MULTUNGULA, *Illiger*. Fam. 20, Nasuta.

TAPIRUS, *Cuv. Briss. Schreb. Fischer, Illiger, &c.*

HYDROCHOERUS *Erxleb.*

CHAR. GEN. *Dentium formula: Primores* $\frac{6}{6}$, *Laniarii* $\frac{1}{1}$, *Molares* $\frac{7-7}{6-6}$. *Primores* inclusi, utrinque 6, contigui, subobliqui, supra quatuor intermedii incisorii, lateralis utrinque major, lanarium mentiens, infra quatuor intermedii superioribus æquales, lateralis utrinque minor. *Laniarii* inclusi, supra a primoribus remoti, minimi; infra illis contigui, mediocres, primoribus superioribus exterioribus longitudine æquales. *Molares* supra utrinsecus 7 infra 6, complicati, coronide collinis rectiliniis duobus transversis.

Rostrum acutum. *Nasus* elongatus mobilis. *Auriculæ* oblongæ.

Corpus pilis appressis rariusculis tectum. *Cauda* brevissima. *Mammæ*.....

Pedes antici tetradactyli digito externo brevior et minore, postici tridactyli. *Ungues*: unguæ omnes insistentes anticæ.



Tapirus ejubatus niger, tergo lateribus abdominis uropygio auriumque apicibus albis.
Tapirus Malayanus, *Sir T. S. Raffles's Cat. of a Zool. Coll. made in Sumatra. Trans.*
Linn. Soc. XIII. p. 2.

Le Maïba, *Fred. Cuv. Mamm. lithogr.*

DESCRIPTION.—“ The Malay Tapir resembles in form the American, and
“ has a similar flexible proboscis, which is six or eight inches in length. Its general
“ appearance is heavy and massive, somewhat resembling the hog. The eyes are
“ small. The ears roundish, and bordered with white. The skin is thick and firm,
“ thinly covered with short hair. There is no mane on the neck as in the American
“ species. The tail is very short, and almost destitute of hair. The legs are short,
“ and stout; the fore feet furnished with four toes, the hind feet with three. In the
“ upper jaw there are seven molars on each side, one small canine inserted exactly
“ on the suture of the incisor bone, and in front six incisors, the two outer of
“ which are elongated into tusks. In the under jaw there are but six molars; the
“ canines are large; and the number of the incisors, the outer of which are the

TAPIRUS MALAYANUS.

“ smallest, is the same as in the upper jaw.” (From the third in the upper, and the second in the lower jaw, the molars have individually two elevated transverse ridges, which are received into the corresponding grooves of the opposite sides; but the first and second in the upper, and the first in the lower jaw, have a longitudinal ridge, which, when the mouth is shut, passes the ridge on the opposite tooth obliquely.) “ The general colour is glossy black, with the exception of the back, “ rump, and sides of the belly, which are white, and separated by a defined line “ from those parts that are black.”

The preceding description is extracted from a Descriptive Catalogue of a Zoological Collection, made in the Island of Sumatra, by Sir Thomas Stamford Raffles, Lieut.-Governor of Fort Marlborough, and contained in the Thirteenth Volume of the Transactions of the Linnean Society, published in May, 1821. This contains the substance of the original description by Major Farquhar, and communicated by him to the Asiatic Society in 1816. The following account of a very young Tapir which Major Farquhar had alive in his house, forms part of a subsequent communication to the Asiatic Society. “ It appears that until the age of four “ months it is black, and beautifully marked with spots and stripes of a fawn colour “ above, and white below. After that period it began to change colour, the spots “ disappeared, and, at the age of six months, it had become of the usual colour of “ the adult.” Major Farquhar says that he found this animal of a very mild and gentle disposition; that it became as tame and familiar as a dog; fed indiscriminately on all kinds of vegetables, and was very fond of attending at table, to receive bread, cakes, or the like. “ The living specimen,” Sir Stamford Raffles adds, “ sent from “ Bencoolen to Bengal, was young, and became very tractable. It was allowed to roam “ occasionally in the Park at Barrackpore, and the man who had charge of it, informed “ me, that it frequently entered the ponds, and appeared to walk along the bottom “ under water, and not to make any attempt to swim. The flesh is eaten by the “ natives of Sumatra. It is known by different names in different parts of the country. “ By the people of Limun it is called *Saladang*; by those of the interior of Manna, “ *Gindol*; in the interior of Bencoolen, *Babi Alu*; and at Malacca, *Tennu*.”

The following are the exact dimensions of two Malay Tapirs; one a male, described by Major Farquhar; the other a female, killed at Bencoolen.

	MALE.		FEMALE.	
	Feet.	Inches.	Feet.	Inches.
Extreme length from the nose to the tail, measured along the back	6	10½	8	1
Circumference of the body	6	0	6	3
Height of the shoulder	3	2	3	5
Ditto of the haunch	3	4	3	9

TAPIRUS MALAYANUS.

To these extracts from the accounts of Major Farquhar and of Sir T. S. Raffles, which comprise all the information that has hitherto been communicated from Sumatra relating to the Malayan Tapir, I have only to add an account of the discovery of this interesting animal.

The first intelligence of its existence in Sumatra was given to the Government of Fort Marlborough at Bencoolen, in the year 1772, by Mr. Whalfeldt, who was employed in making a survey of the coast. In the month of April of that year, it is noticed in the records, that Mr. W. laid before the Government his observations on the places southward of Cawoor, where he met with the Tapir at the mouth of one of the rivers. He considered it to be the Hippopotamus, and described it by that name; but the drawing which accompanied the report, identifies his animal with the Tapir. This mistake in the name may readily be explained, when it is recollected that in the Tenth Edition of the *Systema Naturæ* of Linnæus, the Tapir is placed as a species of Hippopotamus, while in the Twelfth Edition no mention is made of that animal.

The learned Author of the *History of Sumatra*, William Marsden, Esq. was at this time Secretary to the Government at Bencoolen; and the Public owes to his zeal in collecting every valuable information relating to that Island, the first notice of the existence of this animal, which is by the Malays in many places denominated *Kuda-ayer*, literally Hippo-potamus. After the first discovery in 1772, the Tapir was not observed for a considerable period. From the same Catalogue of Sir T. S. Raffles, which has furnished the preceding description, it appears that in the year 1805, a living specimen was sent to Sir George Leith, when Lieutenant-Governor of Penang. It was afterwards observed by Major Farquhar in the vicinity of Malacca. A drawing and description of it were communicated by him to the Asiatic Society in 1816, and a living subject was afterwards sent to the Managerie at Barrackpore from Bencoolen. At this place a drawing was made by Mr. Diard in the year 1818, which, accompanied by an extract from the description of Major Farquhar, was communicated to his friends in Paris, where, in March, 1819, M. Fred. Cuvier published it in his large Lithographic Work on the Mammalia of the Menagerie in Paris.

In the month of September, 1820, the first specimen of the Malayan Tapir was received in England from Sir Thomas Stamford Raffles, with the general Zoological Collection of Mammalia and Birds, the descriptive catalogue of which being contained in the Thirteenth Volume of the *Transactions of the Linnean Society*, has been already referred to. This specimen of the Tapir was accompanied by a

TAPIRUS MALAYANUS.

complete skeleton, and the thoracic and abdominal viscera preserved in spirits of wine; and in giving this concise narrative, I am happy to state that Sir Everard Home has been enabled by these materials to illustrate the resemblance between the Sumatran and American species, in a manner highly instructive and interesting both to the Zoologist and the comparative Anatomist, in a paper read before the Royal Society, in the month of April of the present year, and which will appear in the volume of the Society's Transactions now in the press.

The specimen deposited in the Museum of the Honourable East India Company, agrees in length and circumference of the body with the female, of which the dimensions are given by Sir Stamford Raffles; it measures a few inches less in height at the shoulder and at the haunch. It is in a perfect state of preservation. In the Plate which illustrates this article, it is very faithfully represented by the pencil of Mr. William Daniell; and a desire to communicate to the Public, without delay, an accurate figure of this interesting animal, will, I hope, be accepted as an apology for introducing it into the first number of this Work.