

**PHILOSOPHICAL
TRANSACTIONS,
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PART I.

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II. *Description of the double horned Rhinoceros of Sumatra. By Mr. William Bell, Surgeon in the Service of the East India Company, at Bencoolen. Communicated by Sir Joseph Banks, Bart. P. R. S.*

Read January 10, 1793.

THE animal herein described was shot, with a leaden ball from a musket, about ten miles from Fort Marlborough. I saw it the day after; it was then not in the least putrid, and I put it into the position from which the accompanying drawing was made. (See Tab. II.)

It was a male, the height at the shoulder was four feet four inches; at the sacrum nearly the same; from the tip of the nose to the end of the tail, eight feet five inches. From the appearance of its teeth and bones it was but young, and probably not near its full size.

The shape of the animal was much like that of the hog. The general colour was a brownish ash; under the belly, between the legs and folds of the skin, a dirty flesh colour.

The head much resembled that of the single horned rhinoceros. The eyes were small, of a brown colour; the *membrana nictitans* thick and strong. The skin surrounding the eyes was wrinkled. The nostrils were wide. The upper lip was pointed, and hanging over the under.

There were six *molares*, or grinders, on each side of

the upper and lower jaw, becoming gradually larger backward, particularly in the upper. Two teeth in the front of each jaw.

The tongue was quite smooth.

The ears were small and pointed, lined and edged with short black hair, and situated like those of the single horned rhinoceros.

The horns were black, the larger was placed immediately above the nose, pointing upwards, and was bent a little back ; it was about nine inches long. The small horn was four inches long, of a pyramidal shape, flattened a little, and placed above the eyes, rather a little more forward, standing in a line with the larger horn, immediately above it. They were both firmly attached to the skull, nor was there any appearance of joint, or muscles to move them.

The neck was thick and short, the skin on the under side thrown into folds, and these folds again wrinkled.

The body was bulky and round, and from the shoulder ran a line, or fold, as in the single horned rhinoceros, though it was but faintly marked. There were several other folds and wrinkles on the body and legs ; and the whole gave rather the appearance of softness.

The legs were thick, short, and remarkably strong ; the feet armed with three distinct hoofs, of a blackish colour, which surrounded half the foot, one in front, the others on each side. The soles of the feet were convex, of a light colour, and the cuticle on them not thicker than that on the foot of a man who is used to walking.

The testicles hardly appeared externally.

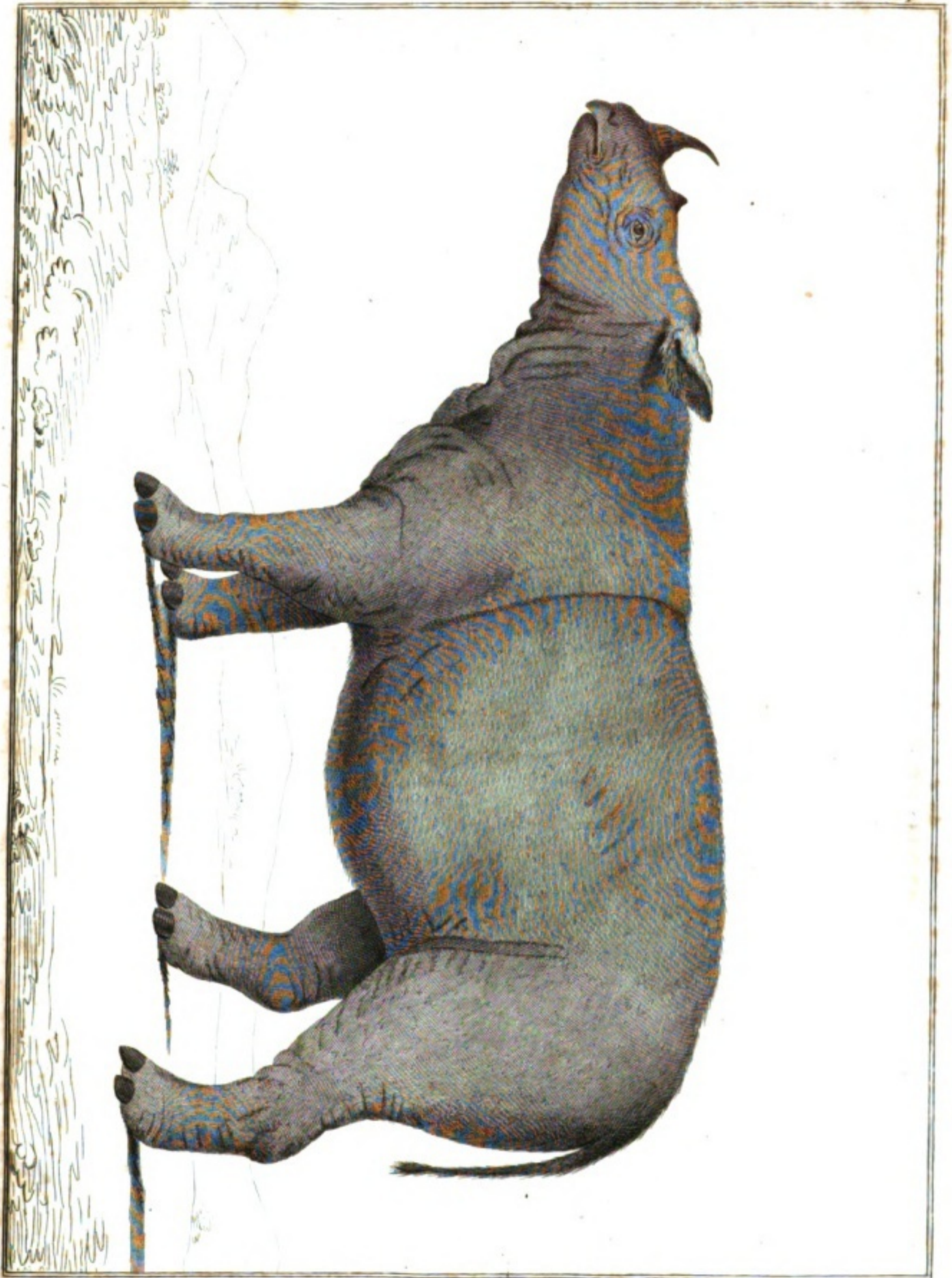
The penis was bent backward, and opened about eighteen

inches below the anus. At its origin it was as thick as a man's leg, and about two feet and a half long; the bend in it occasions the urine to be discharged backwards. The glans is very singular: the opening of the urethra is like the mouth of a cup with its brim bending over a little, and is about three quarters of an inch in diameter; the glans here is about half an inch in diameter, and continues that thickness for an inch and a half; it is then inserted into another cup like the first, but three times as large. The glans afterwards gradually becomes thicker, and at about nine inches from the opening of the urethra are placed two bodies on the upper part of the glans, very like the nipples of a milch cow, and as large; these become turgid when the penis is erected. The whole of this is contained in the prepuce, and may be considered as glans.

From the os pubis arises a strong muscle, which soon becomes tendinous. This tendon is continued along the back, or upper part, of the penis; it is flattened, is about the size of a man's little finger, and is inserted into the upper part of the glans, near the end. The use of this muscle is to straiten the penis.

On the under side of the penis there are two muscles, antagonists to the above; they arise from the os ischium fleshy, run along the lower side of the penis, on each side of the corpus spongiosum, and are inserted fleshy into the lower side of the glans. The action of these muscles will draw in the penis, and bend it.

The male has two nipples, like the female, situated between the hind legs, they are about half an inch in length, of a pyramidal form, rounded at the end.



6 *Mr. BELL's Description of the double horned Rhinoceros, &c.*

The whole skin of the animal is rough, and covered very thinly with short black hair. The skin was not more than one third of an inch in thickness, at the strongest part; under the belly it was hardly a quarter of an inch; any part of it might be cut through with ease, by a common dissecting knife.

The animal had not that appearance of armour which is observed in the single horned rhinoceros.

Since I dissected the male, I have had an opportunity of examining a female, which was more of a lead colour; it was younger than the male, and had not so many folds or wrinkles in its skin, of course it had still less the appearance of armour.

The only external mark which distinguishes it from the male is the vagina, which is close to the anus; whereas, in the male, the opening for the penis is eighteen inches below the anus.

Tab. II. Represents the entire animal.

Tab. III. The cranium.

Tab. IV. The upper and under jaw, separated from each other.



