

BURCHELL'S RHINOCEROTINE DRAWINGS

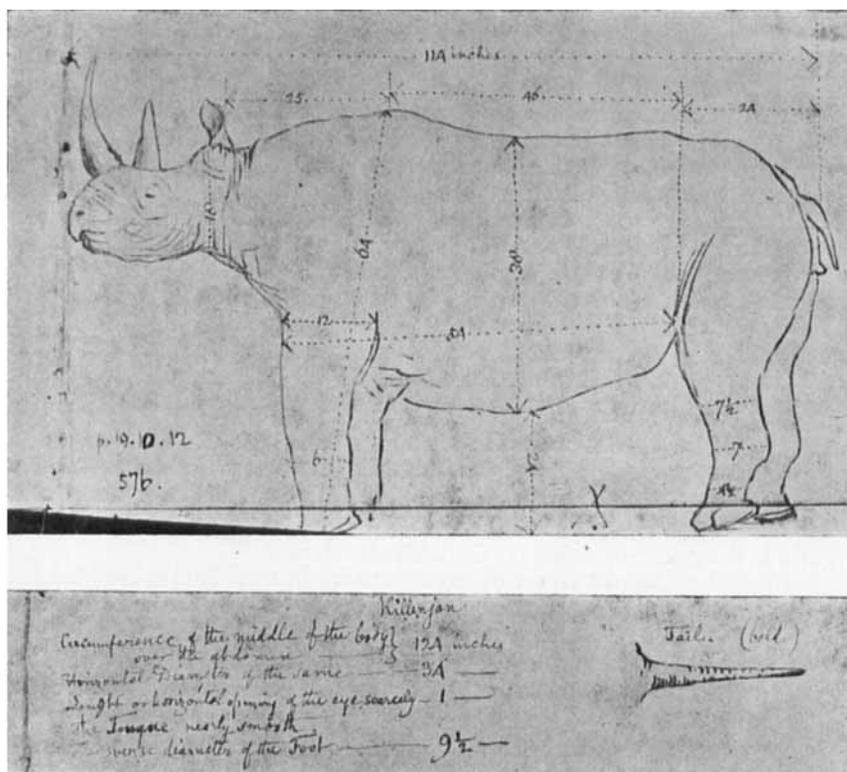
By A. J. E. CAVE, M.D., D.Sc., F.L.S.

(Plates 4 & 5 and 2 text figures.)

[Read 23 January 1947.]

William John Burchell, F.L.S., (1782-1863), undertook his classical exploration of southern Africa between the years 1811 and 1815. The exploits of 1811-12 were published in his *Travels*¹ illustrated by his own hand. In 1812 he made the acquaintance, not only of the then well-known Black Rhinoceros (*Rhinoceros bicornis* Linn.), but also of the hitherto scientifically unknown

TEXT-FIG 1.



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'White', or Square-lipped, Rhinoceros (*Rhinoceros simus* Burchell), which he described² in 1817. Of the two species, Burchell, an accomplished draughtsman, made field studies of both living and dead animals. Two such sketches of the Black species were reproduced as woodcuts in Vol. II of the *Travels*, viz., a front view of the entire animal (p. 46) and a left lateral view of the head (p. 79). His other rhinocerotine drawings (save one sent to de Blainville in illustration of his type-description of the new species) remained unpublished. They are now the property of their custodians, the Gubbins Trustees of Johannesburg, and are preserved in the Main Library of the University of the Witwatersrand, Johannesburg. These drawings, of great

historical interest, reveal, far more than do any of the published woodcuts, Burchell's remarkable faculties of accurate observation and felicitous draughtsmanship. That they might therefore be accorded a wider recognition and appreciation than hitherto possible, the Gubbins Trustees have generously consented to their reproduction here. Mrs. Helen M. McKay, of Johannesburg, has most kindly provided photographs of the original drawings, together with sketch maps relevant to Burchell's itinerary, as well as numerous notes on the field location and subsequent fate of some of his rhinoceros specimens. To this indefatigable lady, and to the Gubbins Trustees, zoologists in general and Fellows of the Linnean Society in particular are therefore deeply beholden.

BURCHELL'S RHINOCEROS.

The 'White', Square-lipped, or Burchell's Rhinoceros (*Rhinoceros simus* Burchell), is, after the elephants, the largest extant land mammal. It is distinguished externally from its congeners by its greater size, its square, non-prehensile upper lip, the truncated muzzle, the fleshy prominence anterior to the withers, the heavily fringed ears, the low carriage of the head, and the absence of skin folds. Apart from dentition and osteology, the internal anatomy of this creature remains unknown (as, indeed, does that of the Black Rhinoceros (*Rh. bicornis* Linn.)). The seemingly inappropriate name 'White' does not refer to skin colour, but apparently derives by corruption from the Cape-Dutch word *widg*, meaning 'great', 'huge'. A fast-vanishing species, Burchell's Rhinoceros is now restricted in range to the Lado region in the north and to parts of Zululand and Mashonaland in the south. Protection has probably come too late to save it from extinction.

Burchell encountered this Square-lipped species for the first time on the 16th October 1812, in the locality of Chué Spring (approximately lat. 26° 15' S., long. 23° 10' E.), on the Makuba Range, in the present Bechuanaland. (The type locality is indicated in the accompanying map (text-fig. 2)). He made several drawings of the animal in the field, which are reproduced here :—

- (1) Pl. 4, fig. 1.—*Rh. simus*. Sketchbook drawing 572. Oblique anterior view of living animal, showing the characteristic muzzle, lip, and stance. Pencil. Original $3\frac{1}{2}'' \times 2\frac{1}{2}''$. Executed 16th or 18th October 1812.
- (2) Pl. 4, fig. 2.—*Rh. simus*. Sketchbook drawing 573.
 - (a) Left lateral aspect of head. Inkwash, with dimensions and notes in pencil. Original $2'' \times 1-7/10''$. Executed 16th or 18th October 1812.
 - (b) Oblique anterior view of head, with certain dimensions added. Inkwash. Original $1-3/5'' \times 1-1/5''$. Executed 16th or 18th October 1812.
 - (c) Oblique postero-lateral view of detached head, without dimensions marked. Original $3\frac{1}{2}'' \times 2''$. Executed 16th or 18th October 1812.
 - (d) Left lateral aspect of dried skull. Labelled 'Mokhoru'. Pencil. Original $1-2/5'' \times 1-4/5''$. Executed 5th November 1812.
- (3) Pl. 4, fig. 3.—*Rh. simus*. Sketchbook drawing 572. Right lateral view of dead body of entire animal minus the feet, with certain dimensions and proportions marked thereon. Labelled 'Mokhōōhu'. Inkwash. Original, from tip of horn to edge of paper $6-4/5'' \times 3-2/5''$. (The feet are continued on the subsequent page of the sketchbook). Executed 16th October 1812.

In 1817 Burchell published, in French, a very brief description² of his new rhinoceros, mentioning its habitat, habits and principal external characteristics, and bestowing upon it the apt specific name of *simus*. He gives



FIG. 1.

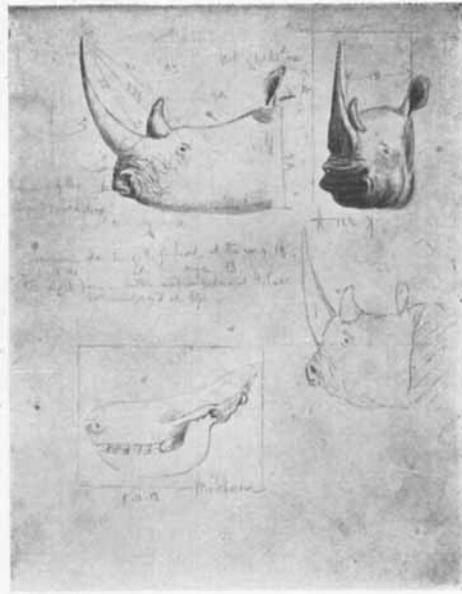


FIG. 2.

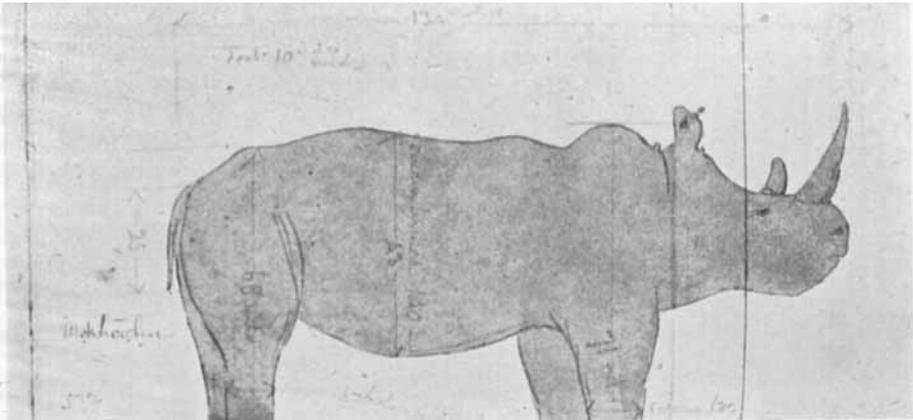


FIG. 3.

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Burchell's drawings of *Rhinoceros simus* Burchell.

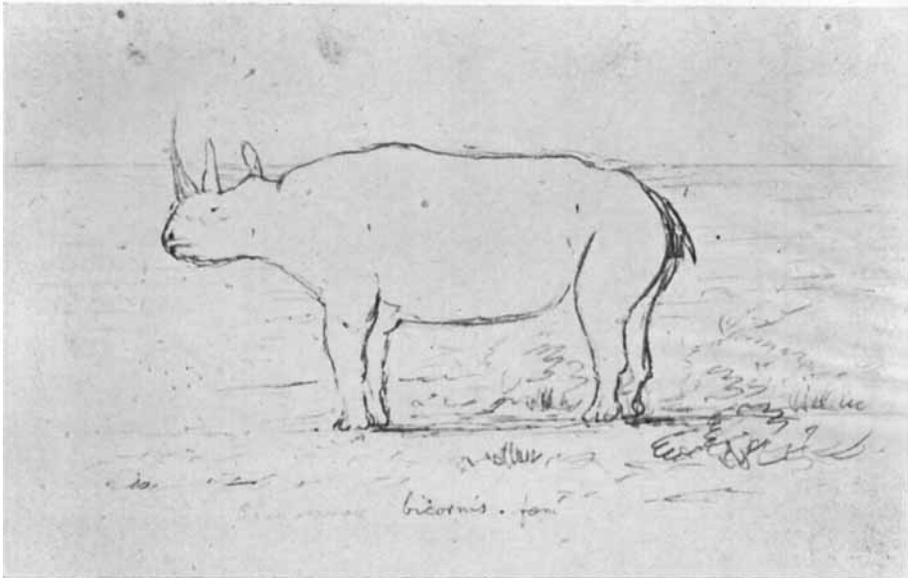


FIG. 1.



FIG. 2.

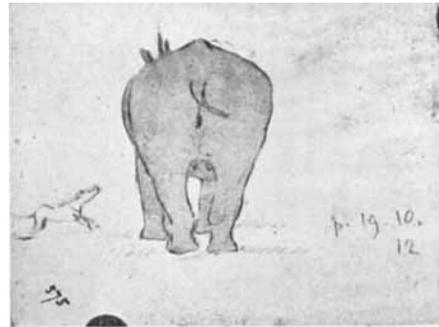


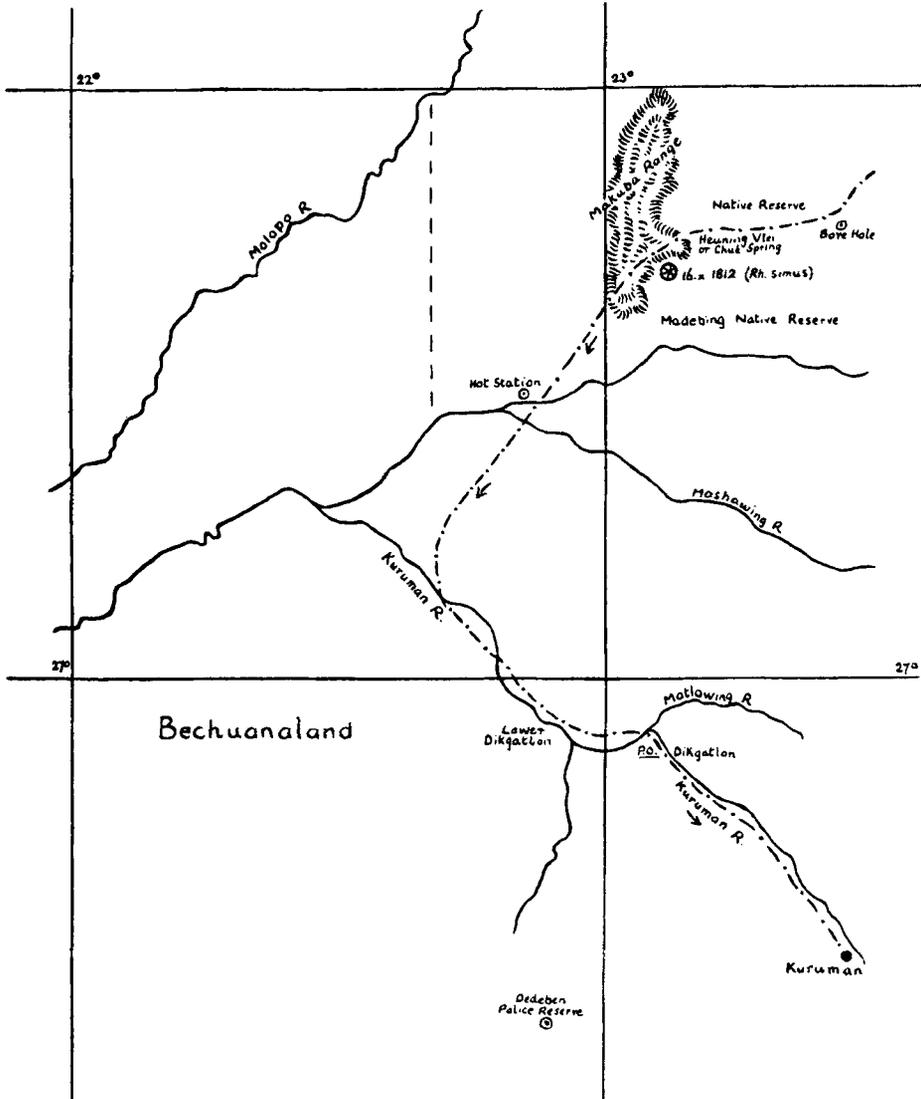
FIG. 3.

(Copyright Gubbins Trustees.)

Burchell's field drawings of *Rhinoceros bicornis* Linn.

the native name(s), Mokhohu, Mokohu, Mokhoru, Mokhōhu, for this species in his field drawings and in his *List of Quadrupeds*³. For the Black Rhinoceros (*Rh. bicornis*) he gives the native name of Killenjan (Killen'yan) and the Cape-Dutch name of Rhenoster. This native recognition of two distinct kinds of rhinoceros may well have prompted Burchell's curiosity and effected that nice examination of the animals killed by his servants which resulted in

TEXT-FIG. 2.



scientific recognition of the specific status of the White Rhinoceros. For, in his memoir² establishing the formal zoological separation of the White from the Black species, he expressly states that, 'Ces deux animaux sont reconnus par les Nègres et par les Hottentots pour deux espèces très-distinctes, et portent chez eux des noms particuliers', and that he had 'assez d'occasions d'observer

les caractères qui les distinguent'. His observations confirmed the accuracy of the native recognition of two separate kinds of rhinoceros, the distinction between which lay 'principalement dans la forme de la bouche'.

Burchell provided a drawing ('soigneusement faite d'après nature') of the head of *Rh. simus*, with the reproduction of which, apparently, de Blainville took liberties, for in a letter (Salisbury MSS., Linn. Soc.) to R. A. Salisbury, dated Fulham, 30th September 1817, Burchell complains that, 'In the plate of *Rh. simus* which Blainville has published in the *Bulletin des Sciences*, he has added, in my name, a pair of horns which I knew nothing about: nor can I guess for what purpose they were put there: they certainly are very different from the horns of *Rhinoceros simus*. So that you see my own endeavours at correctness are rendered fruitless'. The plate in question (unpaginated and inserted at some distance from the relevant text) displays, to the right, a 'Fig. I', a woodcut depicting a left anterior-oblique view of the head. The orientation recalls that of the head of the animal shown in field drawing 572 (Pl. 4, fig. 1, herein), but the anterior horn is very much smaller. Below the woodcut appears the legend, 'ad. nat. viv. delin. Wm. J. Burchell'. To the left of this cut appears another, ('Fig. II'), representing an isolated pair of rhinoceros horns, with some integument about the base of the hinder one, and, between them, two shaded ovals, probably cross sections. These adventitious horns doubtless represent some species other than *Rh. simus* and were presumably introduced by de Blainville for purposes of comparison; but no legend accompanies them, and, as their specific identity is not intelligible from the figure, they remain anonymously inutile and merely detract from the Burchell figure. This last is itself decidedly inferior in artistic merit to the generality of the field drawings, so that the particular drawing submitted in illustration of the text would seem to have suffered somewhat in the process of reproduction. Altogether, Burchell's annoyance is understandable.

On his return-journey southward to the Cape from Chué Spring (*i. e.* after October 1812), Burchell began the collection of skins and odontological specimens of both 'White' and Black species of rhinoceros. Of *Rh. simus* he presented to Oxford University Museum the following specimens:—

'Cat. No.

1562 Integument and snout with horns.

1563 Integument and snout with horns.

1564 First true molar, left side.

1565 Second true molar, left side.

1566 Third upper premolar, right side.

1567 Third upper premolar, left side.

1568 Second true molar.

1569 Third lower true molar, right side.

1571 First lower true molar, left side.

1573 Horns'.

To the Museum of the Royal College of Surgeons he presented two teeth and a pair of horns. The reference numbers of these items are those of Flower's *Catalogue* ⁴, 1884; the 'O.C.' (=Old Catalogue) comparison numbers are those of Owen's earlier (1853) *Catalogue*. The relevant entries are quoted verbatim in illustration of Flower's characteristic caution and his hesitancy regarding the specific attribution of the teeth:—

'Cat. No.

2155 The calcified but unworn crown of a left upper molar attributed to this species. O.C. 2959.

In the freedom of the extremities of the combing plates, which cut off no accessory valley, it most resembles *R. bicornis*.

2156 A much-worn tooth, said to be the posterior upper milk molar. O.C. 2960.

2157 Anterior and posterior horns. O.C. 2968.

The length of the front horn is 39 inches (99 cm.), its basal circumference being 26 inches (66 cm.)'.

These four specimens represent the entire rhinocerotine material received from Burchell; all perished in 1941 when the Hunterian Museum was severely damaged by enemy action.

The fate of the skull depicted in field drawing 573 (Pl. 4, fig. 2, *d*) is unknown. It was not presented, with other material, to either the Oxford University or the Hunterian Museum, and most likely never left Africa. It must have been a heavy and bulky object, and it is significant that Burchell's rhinocerotine field drawings are concerned solely with objects (*e. g.* living animals, carcasses, detached heads) impossible, or too difficult, of transport, whilst they ignore easily portable objects, such as horns and teeth. The probability is, then, that the type skull of *Rh. simus* was not preserved but was left in the field.

THE BLACK RHINOCEROS.

Burchell's men killed (for food) a total of 10 rhinoceroses, the majority being of the Common or Black species (*Rhinoceros bicornis* Linn.). Of these 10 animals, 6 only are traceable, viz:—

(A) White Rhinoceros (*Rh. simus*).

One, killed near Chué Spring, Bechuanaland, on 16th October 1812. (Burchell's drawings 572, 573, reproduced here in Pl. 4, figs. 1, 2, 3).

(B) Black Rhinoceros (*Rh. bicornis*).

Two, killed in the region of Britstown (then outside the Cape Colony). (*Travels*, II, p. 75, and woodcuts pp. 46 and 79).

One, a female, killed in the region of Chué Spring (Heuning Vlei), Bechuanaland, on 19th October 1812. (Burchell's drawings 575, 576, reproduced here in Pl. 5 and text-fig. 1).

Two, a female and her calf, killed 'at Hot Station, on the Moshowa [Mashawing] River, in the Transgariepine', *i. e.* S.W. of Chué, Bechuanaland. The young animal was presented to the British Museum, being item no. 11 (p. 4) in Burchell's *List of Quadrupeds*³. But no available permanent record, other than Burchell's printed *List*, details its acquisition, and recent search has failed to establish its survival.

Burchell's field drawings of the Black species are reproduced herein as follows:—

- (1) Pl. 5, fig. 1.—*Rh. bicornis*. Female. Sketchbook drawing 576. Left lateral view of living animal (that shown dead in text-fig. 1). Labelled 'Rhinoceros bicornis, fem.'. Pencil. 'Drawn from the measurement of half an inch to the foot'. Original, nose-tip to tail-tip 5-4/5": horn-tip to ground 3 1/2". Executed 19th October 1812.
- (2) Pl. 5, fig. 2.—*Rh. bicornis*. Female. Sketchbook drawing 575. Front view of same living animal, showing characteristic prehensile upper lip and carriage of head. Labelled 'Killenjan'. Inkwash. Original 2-1/5" x 1-1/5": human figures in background respectively 9/10" x 3/10" and 1" x 1/2". Executed 19th October 1812.
- (3) Pl. 5, fig. 3.—*Rh. bicornis*. Female. Sketchbook drawing 575. Hind view of same living animal, with dog to left. Inkwash. Original 2-3/10" x 1 1/2": figure of dog 1 1/2". Executed 19th October 1812.

- (4) Text-fig. 1.—*Rh. bicornis*. Female. Sketchbook drawing 576. Left lateral view of dead animal (depicted alive in Pl. 5), with dimensions indicated. Inkwash. Original, nose-tip to tail-tip 6-7/10"; horn-tip to edge of paper 4". Executed 19th October 1812. The hairless tail and some odd notes are shown separately and below, from the succeeding page of Burchell's sketchbook, headed 'Killenjan'.

To the Museum of Oxford University (which, in 1834, conferred upon him its D.C.L.) Burchell presented the following specimens relating to this species:—

' Cat. No.

- 1574 Snout with the horns attached.
 1575 Mandible.
 1575(a) Large horn of a Rhinoceros.
 1575(b) Small horn of a Rhinoceros'.

To the British Museum, then at Bloomsbury, he presented, in 1817, the young animal already mentioned as shot at Hot Spring ('in company with its dam') and which cannot now be traced.

The drawings reproduced here of the two rhinocerotine species manifest a naturalness and a vivacity altogether absent from Burchell's published figures. Their examination, especially if made with a hand lens, cannot fail to evoke profound admiration for his artistic ability, an admiration enhanced by recollection of the adverse conditions under which, perforce, the originals were made.

The writer's grateful acknowledgments are hereby tendered to the Gubbins Trustees, Johannesburg, for their courteous permission to reproduce the original drawings, to Mrs. Helen M. McKay for her enthusiastic and invaluable co-operation, and to Dr. F. C. Fraser, British Museum (Natural History), for his assistance in the scrutiny of records and specimens.

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