

This *Gobius*, which I have much pleasure in naming after Mr. Percival, is closely allied to another large Arabian species, described by me from specimens obtained at Muscat by Dr. Jayakar, *G. jayakari* (P. Z. S. 1887, p. 663, pl. liv. fig. 2). It differs from *G. jayakari* in the shorter mouth, not extending to below the eye, in the broader interocular region, and in the shorter caudal peduncle.

June 4, 1901.

Dr. W. T. BLANFORD, F.R.S., Vice-President, in the Chair.

The following papers were read:—

1. Notes on the Type Specimen of *Rhinoceros lasiotis* Sclater; with Remarks on the Generic Position of the Living Species of Rhinoceros. By OLDFIELD THOMAS.

[Received May 7, 1901.]

On August 31st, 1900, there died in the Gardens of the Society the famous female Rhinoceros from Chittagong which has so often been referred to in our 'Proceedings,' and the characters of which it is only fitting should be here noted, now that its skull and head-skin have passed into the possession of the National Museum.

As the animal was captured in January 1868, its age at death was more than 32 years.

The first reference to this specimen is an account of its external characters given by the late Dr. Anderson, the Superintendent of the Calcutta Museum (P. Z. S. 1872, p. 129). Then followed (*t. c.* p. 185) an announcement of its purchase for £1250. In March of the same year (*t. c.* p. 493, pl. xxiii.) our Secretary gave the history of the specimen's capture, and a figure of it, and in a footnote assigned to it the name of *R. lasiotis*, given after comparison with a Malaccan example of *R. sumatrensis* which arrived in August. In November (*t. c.* p. 790) he gave his full reasons for separating the two forms, accompanied by figures of the heads, and of the Malaccan specimen.

Dr. Gray, however (Ann. Mag. N. H. (4) x. p. 207, 1872), with a total disregard to the geography of the question, considered that it was the Chittagong animal that was the true *R. sumatrensis*, assigning the Malaccan animal first to his *R. crossii* (P. Z. S. 1854, p. 250) and afterwards (Ann. Mag. N. H. (4) xi. p. 357, 1873)

giving it the special name of *Ceratorhinus niger* (nec *Rhinoceros niger*, Schinz, Syn. Mamm. ii. p. 335, 1845).

In the latter paper Gray, perceiving (as I think rightly) that the skulls figured in Blyth's valuable paper of 1863, quoted below, belonged to different forms, gave the name of *Ceratorhinus blythii* to some of them, but so worded his remarks that it is not easy to make out to which he applied the name. This point is, however, of but little importance, as the term *blythii* is antedated by names covering all the forms figured.

Other references bearing on the subject are as follows :—

Sclater, Ann. Mag. N. H. (4) x. p. 298 (1872).

Blyth, t. c. p. 399; also J. A. S. B. xxxi. p. 151 (1863), and xlv. Burmese Appx. p. 51 (1875).

Flower, P. Z. S. 1876, p. 443, and 1878, p. 634.

As might have been expected, after so many years in confinement, the animal had become very much diseased, and after its death it was found that the skull and the head-skin were alone worth preservation, and it is on these that my observations have been taken.

For comparison I have had before me 13 skulls belonging to the group of *R. sumatrensis*, four of them having been kindly lent me by Prof. Stewart from the College of Surgeons collection (Nos. 2142, 2143, 2145, and 2146 of the 1884 Catalogue), and the others being those belonging to the British Museum.

In the first place, with regard to the external characters of colour and hair development, a comparison of the head-skin of *R. lasiotis* with the two specimens in the Museum of "*Ceratorhinus niger*" leads me to the conclusion that the differences described were mainly due to age. For it will be remembered that the "*C. niger*" (that is to say the specimen determined by Sclater as *sumatrensis* and used by him for his comparison with *lasiotis*) was very old, while the type of *lasiotis* was then quite young. In its old age the latter has become practically quite like the former, for the tufts on the ears do not exceed $1\frac{1}{2}$ –2 inches in length, and are in no way noticeably different from those of the Malaccan specimen. In fact Dr. Anderson's supposition (P. Z. S. 1872, p. 130) that the tufts on the ears might wear off with age, seems to me entirely confirmed by the evidence, so far as can be judged from a menagerie specimen.

Nor is there in colour any difference worthy of note, that described by Sclater having apparently disappeared with advancing age.

Turning to the skull, we find that in size the type of *R. lasiotis* surpasses all the other thirteen skulls examined, but differs in no other tangible character, so that the question of the validity of *R. lasiotis* as a special form seems to depend purely on the matter of size. The following are its measurements, given in inches for comparison with those published by Sir W. Flower in 1878 :—

Length from occipital crest to end of nasals, in straight line $23\frac{5}{8}$, with tape over curve of nasals 24.5; greatest zygomatic breadth

127 $\frac{7}{8}$; interorbital breadth 8. [Teeth and palate too much diseased for measurement.]

From these measurements it appears that *R. lasiotis* exceeds considerably the equally aged skull of "*C. niger*" (Flower's No. 2) from Malacca, and is only approached by No. 5 (R. C. S. No. 2142), said to be from Sumatra.

Allowing for its much more youthful condition, the latter skull is practically of the same size as the Chittagong one, and therefore, if it really came from Sumatra, disposes at once of the claim of *R. lasiotis* to distinction on the ground of size.

But I am not satisfied about the question of locality, for Sir Stamford Raffles, as a collector of Natural History objects, and a great Governor and Administrator, might easily have had brought to him a skull from any part of the East Indies; so that, merely on the evidence of this skull only, I do not like to dismiss the claims of *R. lasiotis* to distinction, since such dismissal would carry with it the assumption, otherwise unsupported, that the skulls of the Sumatran Rhinoceros vary in size to so considerable an extent.

The Pegu skull (Theobald, B.M. No. 68.4.15.1, Flower's No. 4) is intermediate in size, as in locality; while all the Malaccan and other Sumatran skulls are comparatively small, as are those from Borneo.

For the time being therefore, on the assumption that the Raffles skull referred to was not really from Sumatra, I should consider *R. lasiotis* as a tenable northern subspecies of *R. sumatrensis*, characterized mainly by its greater size. As noted by Flower in the case of the Pegu skull, and borne out by that from Chittagong, the post-glenoid processes appear to be longer in proportion than in the Malaccan and Sumatran Rhinoceros.

Of course it follows, from the tentative nature of this conclusion, that further material is badly wanted, both from the North, to see if the form found there is constantly larger, and from Sumatra, to see if any such skull as R. C. S. No. 2142 may really occur there.

Further material may also prove that the typical horn of Gray's "*Rhinoceros crossii*" belongs to the northern subspecies, in which case the name *crossii* will have to supersede *lasiotis*. But this identification is as yet too doubtful to be definitely accepted.

Now with regard to the general question of the nomenclature of Rhinoceroses and the genera in which the recent species should be placed, I would draw attention to the recent important paper by Prof. Osborn on the "Phylogeny of the Rhinoceroses of Europe"¹.

¹ Bull. Amer. Mus. N. H. xiii, p. 229 (1900). I should demur to the characterization of *R. bicornis* as a *dotichocephalic* form, for its short stumpy head is one of its most marked distinctions from its long-headed congener *R. simus*, but in all other respects Prof. Osborn's conclusions seem justified. In conjunction with Mr. Lydekker, I have compared the fine skull in the Museum of *R. platyrhinus*, hitherto usually considered related to the *simus* group, and after careful consideration we have come to the conclusion advocated by Osborn, that, in spite of its tooth characters, it is really most nearly allied to the *sumatrensis* group.

In this paper no less than six groups of the family are recognized, distinguished mainly by the characters of the skull, those of the teeth being considered to be of less phylogenetic value. Of these six groups, which are treated by the author as subfamilies, three are still existent, the "Ceratorhinæ" (*sumatrensis*), the "Atelodinæ" (*simus* and *bicornis*), and the "Rhinocerotinæ" (*unicornis* and *sondaicus*), groups which were also recognized by Flower as genera in his paper of 1876.

Now if there is to be any sort of uniformity in the value of genera as recognized among Mammals, it appears to me impossible to continue to include such essentially different animals in one genus *Rhinoceros*. Flower came to this conclusion in 1876, although he did not carry it out in his later works; and now that Osborn arrives at a like opinion from the palæontological side, I venture to think the generic groups should be accepted for ordinary use.

But in so doing it would be advisable to start with the names for them which have technical priority, so that no name-changing may hereafter become necessary. Both *Atelodus* and *Ceratorhinus*, used by Flower and Osborn, are antedated by earlier names, as the following synonymy will show:—

I. RHINOCEROS.

	Type.
<i>Rhinoceros</i> , Linn. Syst. Nat. (10) i. p. 56 (1758) . . .	<i>R. unicornis</i> .
<i>Eurhinoceros</i> , Gray, P. Z. S. 1867, p. 1009	<i>R. unicornis</i> .

One-horned. Occipital plane much slanted forward. Meatus closed in below by the junction of the post-tympanic and post-glenoid processes. Functional incisors present above, and canines below.

1. *Rhinoceros unicornis* L.
2. *R. sondaicus* Desm. Mamm. ii. p. 399 (1822).

II. DICERORHINUS.

	Type.
<i>Dicerorhinus</i> , Gloger, Naturg. p. 125 (1841) . . .	<i>D. sumatrensis</i> .
<i>Ceratorhinus</i> , Gray, P. Z. S. 1867, p. 1021	<i>D. sumatrensis</i> .

Two-horned. An open groove below the meatus. Incisors and canines as in *Rhinoceros*.

1. *Dicerorhinus sumatrensis* G. Cuv.
- 1a. *D. sumatrensis lasiotis* Selater.

III. DICEOS.

	Type.
<i>Diceros</i> , Gray, Med. Repos. xv. p. 306 (1821) . .	<i>D. bicornis</i> .
<i>Calodonta</i> , Bronn, Jahrb. Min. Geol. 1831, p. 51	<i>D. antiquitatis</i> .
<i>Opsiceros</i> , Gloger, Naturg. p. 125 (1841)	<i>D. bicornis</i> .

	Type.
<i>Atelodus</i> , Pomel, Ann. Sci. Auvergne, xxvi. p. 114 (1853)	<i>D. bicornis</i> .
<i>Rhinaster</i> , Gerrard, Cat. Bones Mamm. B. M. p. 282 (1862)	<i>D. bicornis</i> .
<i>Keitloa</i> , Gray, t. c. p. 1025	<i>D. bicornis</i> .
<i>Ceratotherium</i> , id. t. c. p. 1027	<i>D. simus</i> .

Two-horned. Occipital plane slanted backward. Auditory region as in *Diccerorhinus*. Incisors and canines rudimentary or absent.

1. *D. bicornis* Linn.

2. *D. simus* Burch.

Should *D. simus*, on the ground of its much longer skull and the different structure of its molars, be separated generically or subgenerically from *D. bicornis*, it and its fossil allies would have to bear the name of *Cælodonta*, Bronn.

These conclusions are practically identical with those to which Sir W. Flower came in his classical paper on the craniology of the group (P. Z. S. 1876, p. 443), but unfortunately his study of the nomenclature did not carry him back to the names now shown to have priority.

2. On a small Collection of Fishes from Lake Victoria made by order of Sir H. H. Johnston, K.C.B. By G. A. BOULENGER, F.R.S.

[Received May 21, 1901.]

The Fishes which have reached the Natural History Museum from the Victoria Nyanza through Sir H. H. Johnston are referable to seven species only, four of which were previously unrepresented in the National Collection, two being besides new to science.

1. PROTOPTERUS ÆTHIOPICUS Heck.

Three specimens, two adult measuring 1 m. 35 and 1 m. 10, and a young one measuring 160 millim. The latter was taken from the crop of a *Balaniceps*.

In the adult specimens the length of the head is contained $4\frac{2}{3}$ times in the length from snout to vent, the diameter of the eye is 15 or 20 times in the length of the head and $4\frac{1}{2}$ or $5\frac{1}{2}$ times in the interocular width; dorsal fin originating nearer the vent than the head; pectoral fin twice length of head, ventral fin $1\frac{3}{4}$; vent sinistral; 65 scales in a longitudinal series to above vent, 44 or 50 round middle of body; no traces of external gills. The scales show very distinctly the punctulations of *ganoinæ* already noticed by Kölliker.