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MIOCENE MAMMALIA OF CONGO

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INTRODUCTION

The first Tertiary mammals found in Congo have been made known by DARTEVELLE (1935), who gave provisional identifications of a Miocene fauna from Malembe (Cabinda). This was followed almost twenty years later by a preliminary note by HOPWOOD (*in* HOPWOOD and LEPERSONNE, 1953) on fossil mammals collected by Dr. J. LEPERSONNE from the plain of Lake Albert and from the Sinda river. Apart from Miocene mastodonts and rhinoceroses, HOPWOOD mentioned mammals typical of the Lower Pleistocene deposits of Uganda commonly known as the Kaiso Beds. These mammals have been listed by LEPERSONNE (*in* ADAM, 1959, pp. 84, 95 and 96), who based himself on an unpublished report by HOPWOOD, as *Deinotherium*, *Mastodon*, *Stegodon*, *Rhinoceros*, hyena and suid. In the original opinion of LEPERSONNE (1949), the deposits from which these supposedly Pleistocene fossils had been derived belonged to the same stratigraphical unit as the Miocene, a view that was altered on the base of HOPWOOD's findings in their joint paper of 1953.

The collections of fossil mammals made by DARTEVELLE and by LEPERSONNE have been sent to me for study and report by Dr. L. CAHEN, Director of the Royal Museum for Central Africa at Tervuren. Professor J. DE HEINZELIN of Ghent University has sent me the Miocene mammals collected by him in the Sinda area in 1954, 1957 and 1960. Since some of LEPERSONNE's sites are very close to, or even the same as those of the DE HEINZELIN collection, it was logical to combine the studies of their material in one paper.

I am very much indebted to Dr. L. CAHEN and to Professor J. DE HEINZELIN for entrusting this interesting material to me. I am also grateful for the geological and stratigraphical reports on the areas and the deposits that yielded the fossil mammals, published with this paper. In studying the fossil mammals it became evident to me that the alleged Pleistocene mammals of HOPWOOD's in reality belong to Miocene forms instead. This, of course, confirms Dr. LEPERSONNE's views of 1949 (not based on fossils), and results in a bouleversement of the stratigraphical conclusions held and published by geologists and others on the area since 1953. The bearing of these revised determinations of the fossil mammals on the

Order PERISSODACTYLA Owen

Family CHALICOTHERIIDAE Gill

MACROTHERIUM (?) spec.

R.G. 6411, Malembe (pl. V, fig. 6-8).

An isolated, apparently upper, incisor is worn but still has a labial height of the enamel of 30 mm; the cutting edge of the tooth is 16 mm wide, and the crown measures 14.5 mm labio-lingually. There is a thick and crenated cingulum lingually, rising more steeply on the medial side than on the lateral. There is a small contact facet medially, where this (right) specimen touched its fellow from the other side. The root so far as preserved is massive and laterally compressed, 14 mm labio-lingually and almost 10 mm transversely at the broken end, just 1 cm from the labial base of the crown.

The present tooth is one of the most intriguing specimens of the collection. It was taken to represent an equid by Dartevelle (1935, p. 717), who further notes that according to Hopwood the tooth would have belonged to a chalicothere. The incisors of chalicotheres are usually not present in collections, and unfortunately the upper incisors even in such a well-known chalicothere as *Moropus* from the Miocene of North America are unknown (Holland and Peterson, 1914, p. 245). In the European Pliocene *Chalicotherium* the upper incisors and canines are wanting, but they may have been present in the Miocene *Macrotherium* of Eurasia. The upper incisors play no role in the classification of these forms (see Colbert, 1935 a). I believe that Hopwood's surmise is correct, and it is surely a strange coincidence, then, that the first chalicothere specimen to have been found in the Miocene of Africa should be such a rare tooth. If it belongs to *Macrotherium*, which from its size it might well be, it would be the first find of its kind in the African Miocene. Chalicotheriidae have been recorded from the Miocene of East Africa (Rusinga Island, Mfwangano, Songhor, and Napak) by Le Gros Clark and Leakey (1951, p. 5) and Bishop (1958), but the material has not yet been described, except for two teeth from Napak recorded by Butler (*in* Bishop, 1962) as *Chalicotherium* spec. and *Metaschizotherium* spec.

R.G. 6422, Malembe (pl. X, fig. 3).

A crown fragment, worn to a height of 30 mm, and 25 mm wide, shows a pronounced cingulum 12 mm high. The fragment is almost flat, becoming rounded at one end, evidently near the corner of the crown, where the cingulum flattens out. There is no pressure facet on the cingulum, and the wear of the crown edge is weakly concave. The specimen has

some resemblance to the posterior portion of a last lower molar; although I have not been able to match it I consider chalicothere affinities most likely.

Family RHINOCEROTIDAE Owen

ACERATHERIUM ACUTIROSTRATUM (Deraniyagala)

R.G. 2362 (1), Lake Albert n° 448 (pl. VI, fig. 1-3; pl. VII, fig. 1, 3-5, 8; pl. VIII, fig. 2).

The upper dentition of one individual is represented by the following elements : outer portion of P^2 dext.; part of ectoloph with metacone style and metastyle of P^3 dext.; entire P^4 sin., and anterior and posterior portions of P^4 dext.; entire M^1 dext., and inner and outer portions of M^1 sin.; M^2 dext. without metaloph, and M^3 sin. with protoloph broken but protocone portion preserved; M^3 sin. wanting only the internal base of the medisinus and the base of the protoloph.

The dentition belonged to a young adult; the P^4 is not very much worn down and the M^3 is unworn at the paracone, which is only 49 mm high by a length of the outer surface of 65 mm. The molars are brachyodont, and have a marked paracone style. The crochet is well-developed. There is no crista, and, consequently, no medifossette. The protocone is markedly constricted. The internal cingulum is developed only at the anterior portion of the protoloph, and absent along the metaloph. The premolars, of which only P^4 is entire, agree with the molars in characters, except in the development of the internal cingulum, which is present along the protoloph but also at the anterior portion of the metaloph. The antecrochet in P^4 extends completely across the medisinus. There is no trace of an external cingulum. Measurements are given in table 6.

TABLE 6
MEASUREMENTS OF UPPER TEETH OF ACERATHERIUM (in mm).

P^2	anteroposterior	32	M^2	anteroposterior	56
P^4	anteroposterior	46		anterotransverse	64
	anterotransverse	60		posterotransverse	57
	posterotransverse	53	M^3	anteroposterior	57
M^1	anteroposterior	52		anterotransverse	62
	anterotransverse	62		length outer surface . .	65
	posterotransverse	56	Length P^4-M^3 approx. . . .		200

The dentition of this Miocene rhinoceros agrees very well in all visible characters as well as in size with that of the skull of *Aceratherium* (« *Turkanatherium* ») *acutirostratum* (Deraniyagala, 1951) from Lower Miocene

beds West of Lake Rudolph in East Africa (see ARAMBOURG, 1959, p. 74). I am grateful to Dr. DERANIYAGALA for sending me good photographs of the dentition of the type skull. An *Aceratherium* ? spec. had already been recorded by ARAMBOURG (1933) from nearby Losodok; this was based on a lower molar, an axis, and some foot bones of the slender aceratherine type. The Losodok astragalus is 74 mm high by a total width of 86 mm.

Coll. DE HEINZELIN, 1960; Sinda n° 2.

The external surface of a left upper molar is slightly shorter anteroposteriorly than that of the M^1 of *Aceratherium acutirostratum*; its length is 44 mm. It agrees in the development of the paracone style and the absence of a cingulum, but differs in its rather thinner enamel and the hollowing of the ectoloph behind. Most probably it represents the posterior milk molar, DM^4.

In the same lot there are two fragments of molars in the germ stage, unworn, and incomplete basally. One is the parastyle portion of a left upper, the other the protoloph of a right upper tooth. These apparently represent milk molars, too.

Coll. DE HEINZELIN, 1957; Sinda n° 15.

Of three upper molar fragments from this site, one is a posterior ectoloph portion of a right upper molar that can be precisely matched in the dentition of *Aceratherium acutirostratum*, and therefore may be regarded as representing that species.

R.G. 2656, Semliki n° 531 C.

A small fragment of the ectoloph of a molar shows no cingulum, and is so similar to the above mentioned specimens that it appears to belong to *Aceratherium acutirostratum* as well.

ACERATHERIUM cf. TETRADACTYLUM (LARTET)

Coll. DE HEINZELIN, 1960; Sinda n° 2 (pl. VIII, fig. 4-6).

A left M^2 of much larger dimensions than that in the dentition of *Aceratherium acutirostratum* (DERANIYAGALA) is well preserved. The ectoloph is not depressed between the roots, the crochet is somewhat less prominent, the antecrochet relatively more extended at the base than in the M^2 of the smaller species. There is a voluminous tubercle at the entrance to the medisinus, but the internal cingulum is so very weakly developed at proto- and metaloph as to be practically absent. In table 7 the dimensions of the Sinda specimen may be compared with those of two M^2 from the Middle Miocene referred to *Aceratherium tetradactylum* (LARTET) by MAYET (1908, pl. III, fig. 7; pl. X, fig. 4).

TABLE 7

MEASUREMENTS OF M^3 ACERATHERIUM (in mm).

	Sinda	MAYET, 1908	
		Pl. III	Pl. X
Anteroposterior	63	—	—
Anterotransverse	77	73	79
Posterotransverse	63	59	62

The large European *Aceratherium* molars do have a stronger crochet and internal cingulum than the Sinda specimen, but the resemblance in size is too striking to be left unnoticed. Although about the generic position of the Sinda specimen there cannot be much doubt, the specific determination presents a delicate problem. The specimen is at any rate indicative of the presence of a rhinoceros species in the Miocene of Africa decidedly larger than *Aceratherium acutirostratum* or the *Brachypotherium* to be described in the sequel. It is likely to be a new species, but provides too little for an adequate diagnosis. Until further and more complete materials are forthcoming the present tooth may be placed on record as *Aceratherium* cf. *tetradactylum* (LARTET).

Coll. DE HEINZELIN, 1954; Karugamania, escarpment between Bogoro and Kasenyi.

The anterior outer portion of a large right upper molar, with a powerful parastyle and marked parastyle fold, flattening out toward base and top, almost 60 mm high as preserved, in all probability belongs to the large acerathere, too. There is further a portion of the metaloph of a right upper molar with the crochet, slightly prominent, that also agrees with the M^2 from Sinda and may be referred to the same form.

BRACHYPOTHERIUM HEINZELINI nov. spec.

Diagnosis : A *Brachypotherium* in which P^4 has an external cingulum, as in *B. brachypus* (LARTET) from the Middle Miocene of Europe. Internal cingulum absent in P^4, as in the Lower Miocene *B. aurelianense* (NOUEL) from Europe and *B. snowi* (FOURTAU) from Egypt. Size as in these species.

Holotype : The P^4 sin. figured in the present paper (pl. VI, fig. 4-6).

Locality : Right bank of the Sinda river, facing the ravine of Ongoliba, Lower Semliki, northeastern Congo.

Age : Lower Miocene.

Name : The specific name is given in honour of Professor J. DE HEINZELIN, who collected the type in 1957.

Coll. DE HEINZELIN, 1957; Sinda n° 15 (pl. VI, fig. 4-6; pl. VIII, fig. 1).

An isolated but perfectly preserved left upper fourth premolar is of an old individual, worn down externally to 30 mm from the crown base. The most characteristic feature of the tooth is the presence of an external cingulum, which is quite marked and even forms a point between the two external roots. The ectoloph is peculiarly flattened behind the paracone style; there is no metacone style, and the metastyle is not marked. On the internal surface, a tubercle at the entrance to the medisinus is the only trace of a cingulum. The antecrochet is weak, and does not block the medisinus. The anteroposterior diameter of the crown is 49 mm externally, the anterotransverse diameter 62 mm, the posterotransverse diameter 58 mm.

In his description of *Brachypotherium* (« *Teleoceras* ») *brachypus* (LARTET) from the Vindobonian of La Grive-Saint-Alban, DEPÉRET (1887, p. 223) drew attention to the presence of an external as well as internal cingulum in the upper premolars and molars. « Je ne connais aucun Rhinocéros fossile dont les molaires présentent un bourrelet basal aussi continu » (l.c.). The Sinda specimen of P^4 has the external cingulum as marked as that in *B. brachypus* (l.c., pl. XXIII), but, on the other hand, lacks the internal cingulum so conspicuously developed in *B. brachypus*. The upper premolars and molars of the Burdigalian *Brachypotherium* (« *Teleoceras* ») *aurelianense* (NOUEL) do not have an external cingulum, and the internal cingulum is weakly developed or absent except for tubercles at the entrance to the medisinus (MAYET, 1908, pl. I, fig. 1-2, textfig. 29). The same holds for *Brachypotherium* (« *Teleoceras* ») *snowi* (FOURTAU) from the Lower Miocene of Moghara, Egypt (« Le bourrelet basilaire fait défaut sur la muraille externe », FOURTAU, 1920, p. 39). The P^4 of *B. heinzelini* is intermediate in size between that of *B. aurelianense* (anterior width 57 mm : MAYET, 1908, fig. 29) and large specimens of *B. brachypus* (68-70 mm : VIRET, 1961, p. 69). In *B. snowi* P^4 is 60-69 mm wide (FOURTAU, 1920, p. 39).

There are various fragmentary upper molars showing the distinctive characters of *Brachypotherium heinzelini*, enumerated below :

R.G. 2487 (3), Lake Albert n° 490 (pl. VII, fig. 6).

The posterior outer fragment of a P^4 dext. shows the characteristic

external cingulum and the absence of the metacone style. It may be confidently referred to *B. heinzelini*.

R.G. 2294 (1), Lake Albert n° 446 (pl. VII, fig. 7).

The protocone portion of a right upper premolar or molar shows the anterior cingulum, weakly developed and not extending to the internal surface of the protoloph, and a tubercle blocking the entrance to the medisinus. In these characters it resembles the type of *B. heinzelini* closely (in the small *Aceratherium* from Lake Albert the anterior cingulum is stronger, dentate, and encroaches upon the internal surface of the protoloph).

Coll. DE HEINZELIN, 1957; Sinda n° 15.

Two fragments of upper molars, closely similar in appearance, one of which is, again, the protocone portion of a right specimen, with the same distinguishing features as the last.

Coll. DE HEINZELIN, 1957; Sinda n° 15 (pl. V, fig. 10; pl. VIII, fig. 7).

A right astragalus, only slightly injured, has the proportions of a brachypothere rhinoceros. It is shorter and wider than that in the slender-footed aceratherine rhinoceroses, and agrees in shape with that of *Brachypotherium brachypus* (LARTET) figured by DEPÉRET (1887, pl. XXIV, fig. 4). The height of the Sinda astragalus is 68 mm, the total width 102 mm; ten per cent. larger, both ways, than the astragalus of *B. brachypus*. These figures should be compared with those of the *Aceratherium* astragalus from Losodok cited above under *Aceratherium acutirostratum* (DERANIYAGALA) (height 74 mm, total width 86 mm). It is a fortunate coincidence that among the postcranial material of rhinoceroses in the present collection there is this highly characteristic astragalus that permits of generic determination (for illustrations showing the differences in proportions of the astragalus in *Brachypotherium*, and *Aceratherium*, respectively, see RINGSTRÖM, 1924, p. 59, fig. 40, and COOPER, 1934, p. 604, fig. 18). It doubtless belongs to the species *Brachypotherium heinzelini* founded above on a premolar from the same site.

RHINOCEROTIDARUM gen. et spec. indet.

R.G. 2295 B, Lake Albert n° 446 (pl. VII, fig. 2).

A large upper incisor, well worn and with most of the root broken off, is 76 mm in crown length and 25 mm in width at the crown base.

Coll. DE HEINZELIN, 1957; Sinda n° 15.

A still larger upper incisor, damaged anteriorly, and worn down to the base of the crown but with the root entire, is about 80 mm in crown length and 30 mm wide.

The above mentioned incisors do not appear to be identifiable as to genus. They are intermediate in size between two upper incisors of the Burdigalian *Brachypotherium aurelianense* (NOUEL) figured by MAYET (1908, p. 104, fig. 32 and pl. I, fig. 4). Equally large upper incisors, however, have been referred to *Aceratherium tetradactylum* (LARTET) (MAYET, l.c., p. 277, fig. 89 : 72 by 25 mm). Both *Brachypotherium* and *Aceratherium* do occur in the Miocene Lake Albert and Sinda collections. Although the size of the specimens suggests the large *Aceratherium* cf. *tetradactylum*, there is no reason why *Brachypotherium heinzelini* should not have sported the same enormous upper incisors as did *Brachypotherium aurelianense*. To which of the two genera, *Aceratherium* or *Brachypotherium*, the upper incisors should be referred is a problem to be solved only upon the discovery of complete upper jaws not now available.

R.G. 2611 (2), Semliki n° 527.

A tooth fragment appears to represent a lower incisor of a rhinoceros. It is flattened from above downwards, and presents a subtriangular cross section. The lower surface is slightly convex transversely, and ribbed longitudinally. The specimen comprises the basal portion of the crown, which has a thin enamel cover, and an extensive wear facet on the upper surface, showing traces of transverse wear movements. At the base of the crown the diameters are 22 mm transversely, and 11 mm from above downward. What is preserved of the root indicates that it tapered toward its apex.

The fragment does not appear to represent a milk incisor of a mastodont, which are more oval in cross section, nor that of a *Deinotherium* either (STEHLIN, 1925, pp. 155 and 157). It can be closely matched in a recent right lower incisor of *Dicerorhinus sumatrensis* (FISCHER) (Leiden Museum, cat. ost. g) although the median edge is sharper in the recent tooth. The wear facet, however, is exactly the same in formation.

Small lower incisors of triangular cross section have been referred to the Burdigalian « *Diceratherium* » *douvillei* OSBORN (1900, p. 239) by MAYET (1908, pp. 94-95); this species, according to STEHLIN (1925, p. 113), is based on female individuals of *Brachypotherium aurelianense* (NOUEL). Equally small lower incisors, however, have been referred to *Dicerorhinus tagicus* (ROMAN), likewise Burdigalian (MAYET, 1908, p. 113). It seems impossible to arrive at an exact identification of the present fragment.

R.G. 2487 (3), Lake Albert n° 490.

A posterior fragment of a right lower molar.

R.G. 2607, Semliki n° 525.

A posterior fragment of a left lower molar.

Coll. DE HEINZELIN, 1957; Sinda n° 15 (pl. V, fig. 9, 11; pl. VIII, fig. 3).

Three lower teeth of a rhinoceros, all from the right side. The smallest specimen is a P_3, and measures 35 mm anteroposteriorly and 27 mm transversely at the base behind. The second specimen, probably a P_4, is 42 by 29 mm and differs from the P_3 in the flattening of the external surface. Both teeth are slightly worn and do not show an external cingulum. The third specimen, much worn down, is 44 mm long by a posterior width of 25 mm. It is flattened externally, and has no external cingulum.

Coll. DE HEINZELIN, 1960; Sinda n° 15.

A slightly worn right lower last molar, incomplete anteriorly, is 27 mm wide behind. There is no external cingulum; the posterior cingulum is reduced to a small point.

The lower premolars and molars of rhinoceroses afford fewer characters for specific distinction than do the uppers. Those of *Brachypotherium aurelianense* (NOUEL) are characterized by their external cingula and flattened external surfaces (MAYET, 1908, p. 107, pl. II, fig. 2). In *B.* cf. *brachypus* (LARTET) we find the same characters in the lower molars; in the lower premolars the external cingulum is less developed (ROMAN and VIRET, 1934, p. 33, pl. X, fig. 7-8). In *B. snowi* (FOURTAU) the lower premolars do not have flattened external surfaces and no cingula (FOURTAU, 1920, p. 41). In *Aceratherium platyodon* MERMIER (1895), likewise of Burdigalian age, the lower dentition is characterized by a pronounced external cingulum, interrupted in the molars by the deep vertical groove between meta- and hypolophid (MERMIER, 1895, p. 179; ROMAN and VIRET, 1934, p. 29). The *Aceratherium* lower molar from Losodok figured by ARAMBOURG (1933, pl. I, fig. 3) lacks the cingulum, however.

As far as size is concerned, the last lower molar from Sinda is intermediate between that of *Brachypotherium aurelianense* (MAYET, 1908, pl. I, fig. 6) and that of *Aceratherium* cf. *platyodon* (ROMAN and VIRET, 1934, pl. VIII, fig. 6). The P_3 tallies well in size with that of *Brachypotherium snowi* (FOURTAU, 1920, p. 41 : 34 by 25 mm). It seems best, for the present, to leave the isolated lower rhinoceros teeth generically undetermined.

Coll. DE HEINZELIN, 1960; Sinda n° 15.

The proximal portion of a left scapula is damaged internally; the anteroposterior diameter of the glenoid cavity is ca. 95 mm; the transverse, ca. 70 mm. The spina scapulae is broken off, the tuber, however, perfectly preserved and 45 mm in diameter transversely. There is an incipient coracoid process projecting inward from the tuber scapulæ.

Coll. DE HEINZELIN, 1957; Sinda n° 15.

A right cuneiform, slightly injured superiorly, is at least 55 mm high;

the greatest horizontal diameter, from the anterior inner end posteriorly outward, is 68 mm.

Comparisons of these two limb bones with those of the modern rhinoceroses of Africa shows the recent forms to have a more rounded glenoid cavity of the scapula, and a less distal extension of the cuneiform. However, neither the scapula nor the cuneiform are of much value in determining whether the species to which they belong is broad-footed or slender-footed, as are *Brachypotherium*, and *Aceratherium*, respectively. Therefore, although the same site yielded an astragalus of undoubtedly brachypothere affinities, here referred to *Brachypotherium heinzelini*, the Sinda n° 15 scapula and cuneiform may be left without a generic designation.

ORDER ARTIODACTYLA OWEN

Family SUIDAE GRAY

PALAEOCHOERUS DARTEVELLEI nov. spec.

Diagnosis : A *Palaeochoerus* larger in size than *P. waterhousi* POMEL; M_3 relatively wider and talonid shorter. Length of M_3 26 mm.

Holotype : The M_3 dext. figured in the present paper (pl. IX, fig. 3).

Locality : Malembe, south of the mouth of the Shiloango, Atlantic coast of Cabinda.

Age : Lower Miocene.

Name : The specific name is given in honour of Dr. E. DARTEVELLE, who collected the material in 1933.

R.G. 6412, Malembe (pl. IX, fig. 3).

A right lower last molar is bunodont, and the four main cusps are distinct, but with the tendency to form transverse ridges. The valley between the anterior and the second lobe is wide; there is an accessory tubercle in it, attached to the postero-external cusp. A weak cingulum is present externally. The talonid is simple, and slightly shorter than the main lobes. There are small accessory cusplets on either side of the median cusp at the entrances to the valley separating it from the second lobe. The length of the crown is 26 mm; the anterior width 16 mm.

In the same lot there is also a fragment of a molar, possibly upper, that cannot be allocated. It is of the same jet-black colour.

R.G. 6416, Malembe.

The posterior half of what is apparently an M_1 dext., much worn

down and 11 mm in width, is very similar in appearance to the foregoing molar and may be referred to the same form.

R.G. 6415, Malembe.

Four fragments apparently of a lower incisor, the best of which is 13 mm long and 6 by 5 mm in diameters, are here provisionally placed with the *Palaeochoerus*.

R.G. 6419, Malembe.

A proximal sesamoid bone of an artiodactyl, 10 mm wide and 13 mm high, might belong to the *Palaeochoerus* as well. There is also a tiny fragment of a suid molar under this number.

The Malembe *Palaeochoerus*, which is numerically the best represented form in the small collection of mammals from this site, is far superior in size to *Palaeochoerus aurelianensis* STEHLIN (1899, p. 42); the length of M_3 in this Burdigalian form is only 14-19 mm (MAYET, 1908, p. 158, pl. V, fig. 8-9, 11). Of this species, I have examined a number of last molars in the Museum of Natural History at Basle; I am indebted to J. HÜRZELER for permitting me to study this material. A larger species, *P. waterhousi* POMEL of the Upper Oligocene, of which the length of M_3 is 22 mm (STEHLIN, 1899, p. 38), and to which MAYET (1908, p. 161, pl. V, fig. 16) provisionally refers an M_3 of 24.5 mm, is characterized by its relatively narrower M_3 which has a relatively longer talonid. In point of fact DARTEVELLE (1935, p. 717) already observed that the Malembe *Palaeochoerus* probably represents a new species, differing in particular by its larger size from the European forms as well as from the *Propalaeochoerus* spec. described from the fossil southwestern African fauna by STROMER (1926, p. 114, pl. 40, fig. 21 a and b), the length of M_3 of which is 16.8 mm.

Although the upper molars will be needed to establish the distinctness of the Malembe suid more fully than is at present possible, the lower last molar available already permits of a distinction as a new species to be made.

Palaeochoerus was possibly present in the Lower Miocene Losodok fauna; ARAMBOURG (1933, p. 18) described from this site the distal end of a metapodial as closely akin to *Palaeochoerus*.

LISTRIODON cf. JEANNELI ARAMBOURG

R.G. 2645 (2), Semliki n° 531 B (pl. IX, fig. 5-7).

An isolated premolar crown represents the P_3 sin. of a *Listriodon*. It has a high, conical main cusp with a deep vertical median groove posteriorly, surrounded by a dentate cingulum that forms a point anterior-

PLATE VIII

Fig. 1 and 7. — *Brachypotherium heinzelini* nov. spec.; fig. 1, P^4 sin., Sinda n° 15 (holotype), internal view; fig. 7, astragalus dext., Sinda n° 15, posterior view, 0.7 nat. size,

Fig. 2. — *Aceratherium acutirostratum* (DERANIYAGALA), P^4 sin., Lake Albert n° 448. R.G. 2362 (1), internal view.

Fig. 3. — Rhinocerotidarum gen. et spec. indet., P_3 dext., Sinda n° 15, crown view.

Fig. 4-6. — *Aceratherium* cf. *tetradactylum* (LARTET), M^2 sin., Sinda n° 2; fig. 4, crown view, 0.7 nat. size; fig. 5, anterior view, 0.7 nat. size; fig. 6, internal view, 0.7 nat. size.