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V.—On the Madagascar river-hog (Potamochoerus), and on the skulls of the three species of the genus

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Localities. Limekilns Old Quarry, near Limekilns House, near East Kilbride, from shale between the first and second limestones of the Calderwood series, Lower Carboniferous Limestone group; Calderside Old Quarry, near East Kilbride, from a similar geological horizon: collected by Mr. James Bennie. Mousewater, opposite Lambcatch, near Wilsontown, from shale between two thin limestones of the Lower Carboniferous Limestone group; quarry near Hillhead, near Wilsontown, from shale over the Guildhouse Limestone, Lower Carboniferous Limestone group: collected by Mr. A. Maccochie (collection of the Geological Survey of Scotland).

EXPLANATION OF PLATE IV. B.

[The figures are all considerably enlarged.]

- Fig. 1.* *Hyphasmopora Buskii*, a bifurcating stem, showing the longitudinal series of cell-depressions, with a peculiar swelling of the interstitial surface.
Fig. 2. The same. In this specimen are visible a few of the true cell-orifices.
Fig. 3. The same, showing the opposite face or interstitial zone, with its single row of cell-depressions.
Fig. 4. The same, a similar specimen to the last, but the branches with a wider angle of bifurcation.

V.—On the *Madagascar River-Hog* (*Potamochoerus*), and on the *Skulls of the three Species of the Genus*. By Dr. J. E. GRAY, F.R.S. &c.

[Plate IV. A.]

FLACOURT, in his 'History of Madagascar,' notices a wild boar in that island; and D'Aubenton, in his additions to Buffon's 'Hist. Nat.' xiv. p. 390, describes a dry head of a "sanglier de Madagascar" in the Cabinet of Paris, which he says is that of a "cochon de Siam;" but by his description it is evidently that of a river-hog (*Potamochoerus*). I noticed it as a species of that genus in 'Proc. Zool. Soc.' 1868, p. 38, more especially as Mr. Sclater informed me that there was a living specimen of the animal from Madagascar in the Garden of Plants at Paris; and in the 'Catalogue of Carnivorous, Pachydermatous, and Edentate Animals in the British Museum,' 1869, p. 344, I named it *Potamochoerus madagascariensis*, observing that I was not aware of any specimen in this country. I now find, which had escaped me

when I gave the name *madagascariensis* to this species, that M. Grandidier, in the 'Revue et Magasin de Zoologie,' 1867, tome xix. p. 318, had named the wild pig from Madagascar *Potamochoerus Edwardsii*; and I gladly adopt his name, as it was published previously.

All M. Grandidier says respecting this species is:—"P. *Edwardsii* (nob.). Nom malgache Lambou. De la côte S.O. (Moroundava). Roux-cannelle, crinière blanchâtre, épaisse; membres d'un brun foncé. Taille petite. Les soies sont très-longues; les oreilles sont dépourvues de pinceau de poils à leurs extrémités; joues noires, encadrées de longues soies blanches."

The British Museum purchased of Mr. Edward Bartlett a young specimen of a wild pig from Ambodiahue, west of Tananarivo, the capital of Madagascar, which he names "*Potamochoerus madagascariensis*." I have compared with this specimen a young bosch-vark (*Potamochoerus africanus*) in the British Museum from South Africa, and I can find very little difference between it and the much younger specimen from Madagascar received from Mr. Bartlett.

The latter has the longer white hairs on the chine, which are black at the base and form a black spot between the ends of the bladebones; and it agrees in the general colouring, and only differs from the larger specimen in having the short black stripes on the sides rather less indistinct, evidently the remains of the dark spots with which the very young bosch-varks are marked.

The skull of this specimen, which is probably that of a female, has the impressions on the side of the nose only slightly defined, and the zygomatic arch is thin and with a rounded outline beneath. The nose is slender and rather flat, and rounded on the sides of the upper edge, but was in too young a state to afford any specific characters.

I was inclined to believe it to be the young of the continental species. I had not seen an adult skin from Madagascar; and unfortunately the skull was in too young a state to show the characters of the species. But Mr. Edward Gerrard, jun., has since brought to the Museum the skull of an adult male river-hog (*Potamochoerus*) from Tamatava forest in Madagascar, which proves that the Madagascar animal is a very distinct species, characterized by the narrowness of the nose, with a rounded upper edge, the width of the skull at the zygomatic arch, and the angular outline of the lower edge of this arch, and by the situation of the aperture for the vessel in the lower jaw, which seems to be a permanent character, as it is uniform

in the six or eight skulls of *P. africanus* and *P. porcus* in the British Museum.

The three species of this genus may be thus characterized by their skulls :—

* *Head and face varied with blackish ; fur elongate, harsh. Crest of the sheath of the upper canines elongate in the male.*

P. africanus. Nose of skull broad, flat at top, and keeled at sides ; lower edge of zygomatic arch regularly curved.
South and Central Africa.

P. Edwardsii. Nose of skull narrow, rounded at top and upper margin of sides ; lower edge of zygomatic arch sub-angular in the middle. (Plate IV. A.)
Madagascar.

** *Head and face varied with white ; dorsal mane white. Crest of the sheath of the upper canines of the male shorter, broad.*

P. porcus. Nose of skull broad, flat at top, and keeled on the upper margin.
West coast of Africa.

They may be further characterized as follows :—

* *The zygomatic arch swollen out, with an irregularly rounded lower edge ; the impression on the side of the forehead broad and truncated behind, with a perpendicular edge just before the orbit ; the lower jaw with the perforation for the passage of the vessel under the space between the second and third lower grinders ; the front of the upper part of the nose flat, broad, rather keeled on the sides.*

Potamochærus porcus, Gray, Hand-Cat. B.M. tab. 23. fig. 1, ♂.

The lobe over the sheath of the upper canines of the male truncated, spreading outwards, and not reaching the callosity of the lateral ridge on the side of the nose.

Potamochærus africanus, Gray, Hand-Cat. B.M. tab. 23.
fig. 2, ♂.

The lobe over the sheath of the upper canines of the male elongate, adpressed to and reaching the callosity of the lateral ridge on the side of the nose.

** The zygomatic arch swollen out, broad in the middle, and with a produced subangular lower edge; the impression on the side of the forehead rather narrow, obliquely truncated, produced above so as to have an oblique edge, extending forward in front of the orbit; lower jaw with a perforation for the passage of the vessel under the space between the first and second lower grinders; the front of the upper part of the nose narrow, flattish, rounded on the sides.

Potamochoerus Edwardsii.

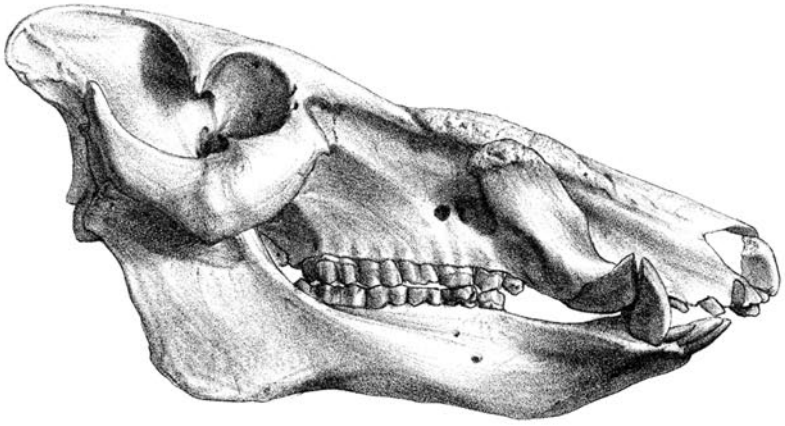
The lobe over the sheath of the upper canines elongate, adpressed, and reaching the callosity of the lateral ridge on the side of the nose.

The lobe over the base of the sheath of the canines in the males is elongate and adpressed to the sides of the nose, as in *P. africanus*, and not short and diverging outwards as in *P. porcus*. The skull has a much slenderer nose, is much lower behind, and has a narrower occipital end than in either of the continental species, in both of which it is high and broad behind and has a broad square nose.

The skulls of the female river-hogs (*Potamochoerus*) only have a sharp ridge across the base of the sheath of the canines; and the sides of the nose are smooth, and not callous and warty in the middle part as in the males; and the impressions on the sides of the forehead just before the eyes are not so deep and well marked as in the skulls of the males; and the lobe of the maxillary bone forming the front portion of the maxillary arch is broader than in the males.

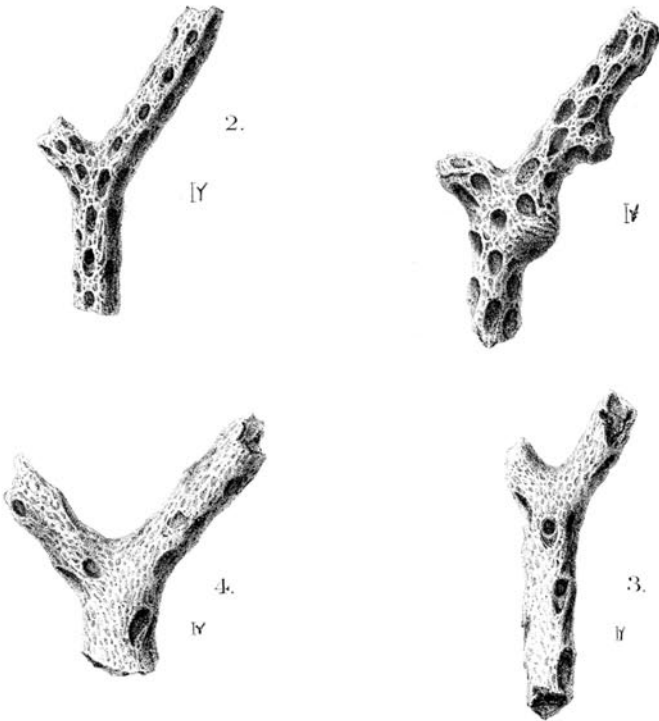
The lobe over the base of the canines of the males of *P. porcus* is compressed, callous, and rugose at the ends. It seems to vary in shape: in two skulls in the Museum from the Cameroons and Gaboon it is moderately broad, with a rounded outer edge and a convex rounded outer surface; and in one from West Africa (believed to be from the Niger) it is flattened, broader, and with a much flatter surface. The lobes over the base of the canines of the males of *P. africanus* are longer and broader; one has a distinct keel on the hinder part of the outer side; and the other has but very slight indications of such a keel and is rounded.

A.



POTAMOCHERUS EDWARDSII.

B.



G.H. Ford

Mintern Bros. imp.