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1. *On the PREMAXILLARIES and SCALPRIFORM TEETH of a large extinct WOMBAT (PHASCOLOMYS CURVIROSTRIS, OW.).* By Sir RICHARD OWEN, K.C.B., F.R.S., F.G.S., &c. (Read November 4, 1885.)

[PLATE I.]

OF the fossils discovered in the late exploration of the Wellington bone-caves, casts of a selection have been transmitted to me for determination by the authorities of the Australian Museum, Sydney, New South Wales.

I submit a description, with figures, of a specimen showing so much of the premaxillary bones (Pl. I. figs. 1-3) as includes the pair of scalpriform incisors (*i*, *i'*). The length of the tooth, following the outer curve, is 160 millim. ($6\frac{1}{2}$ inches); the transverse breadth is 12 millim.; the antero-posterior diameter is 10 millim.; the length of the worn or working surface is 26 millim. The major part, if not the whole, of the pulp-cavity, exposed at the back part of the fossil (fig. 3), shows the sharp border of the pulp-cavity, *i'*, and the chamber which lodged the persistent organ of growth.

The fore part of the tooth is convex across, the back part feebly so. The implanted portions of the incisors incline towards each other as they approach the hinder open end; the breadth of the pair, there, is 26 millim.

The prominence of the outer walls of the socket gradually increases as it approaches the tooth's base, dividing the premaxillary surface into an upper and lower subvertical tract (fig. 1). The under part of the alveolar wall (fig. 2, 22) loses breadth as it recedes from its

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fellow, gradually narrowing as it leaves the tooth's socket, to form a ridge, *r*, *r*, which expands abruptly at the beginning of the alveolar tract (*m*) for the molar teeth, which tract is broken away with the missing part of the skull. The intervening edentulous tract bounds, with its fellow, a deep subangular anterior palatine depression (fig. 2, *d*, *d*). The breadth of the unworn incisor equals that of the socket of the same tooth in the extinct *Phascolomys medius**. The contour of the premaxillary palatal ridge extending to the molar tract is deeply arched, viewed sideways (fig. 1 *r*), and is not continued there in an almost straight line, as in *Phascolomys medius*†: the depression at the hinder half of the diastema is also much deeper in the present fossil; the least breadth of this part of the palate is 1 inch.

The premaxillaries rise at their mid upper suture to about an inch from the prominent alveolar tracts of those bones, and unite to form a ridge, augmenting in height as it extends back; the fractured border probably united with the nasal bones, which are wanting in the fossil.

The accompanying figures, of the natural size, of this portion of the skull may enable us to dispense with further description.

Of the animals characterized by the pair of scalpriform incisors the grounds for referring the present large extinct kind to the Marsupial rather than the Rodent order have weighed with me; and until further evidence, especially that supplied by a molar tooth, or teeth, negating the present conclusion, be received, I place it in the Wombat family.

The specimen indicates, therein, a somewhat larger animal than the *Phascolomys medius*, Ow., but one less than the type of the subgenus *Phascolonus*‡. The chief difference from phascolomyidian species, both recent and extinct, of less magnitude, has suggested the *nomen specificum*.

EXPLANATION OF PLATE I.

Portions of the premaxillary bones, including the incisors: nat. size.

Fig. 1. Left side view.

2. Under or palatal surface.

3. Back view, showing pulp-cavities, *i'*, of incisors.

DISCUSSION.

Dr. H. WOODWARD regretted that he had been unable to bring the cast, but would produce it at the next Meeting. The original specimen is in the Sydney Museum. Without molar teeth it is difficult to compare the specimen with other species. There was some resemblance to *Diprotodon*, but it was difficult to go into this in the absence of the cast.

* Fossil Mammals of Australia, 4to, pl. 1. fig. 6.

† *Op. cit.* pls. lvii., lviii. fig. 3.

‡ *Op. cit.* vol. i. p. 339, pls. lvii.–lix.

A. S. Ford del. et lith.

PHASCOLOMYS CURVIROSTRIS

Mintern Bros. imp.