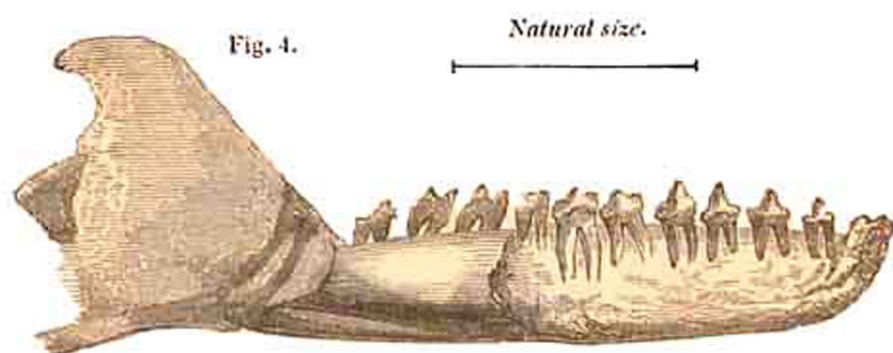


mian, the Upper New Red Sandstone and Muschelkalk, the Lias, Oolite, Wealden, Green-Sand and Chalk, scarcely any well-authenticated instances of the occurrence of fossil birds in Europe are on record, and one only of fossil mammalia.

In regard to the absence of birds, they are usually wanting, for reasons afterwards to be explained (see chap. 48.), in deposits of all ages, even in the tertiary periods, where we know that birds as well as land quadrupeds abounded. Some at least of the fossil remains formerly referred to this class in the Wealden (a great freshwater deposit below the chalk), have been recently shown by Mr. Owen to belong to Pterodactyles.* But in North America still more ancient indications of the existence of the feathered tribe have been detected, the fossil foot-marks of a great variety of species, of various sizes, some larger than the ostrich, others smaller than the plover, having been observed. These bipeds have left marks of their footsteps on strata of an age decidedly intermediate between the Lias and the Coal.†

The solitary example of mammalia above alluded to, is that of the Stonesfield slate in Oxfordshire, one of the inferior members of the Oolitic series.‡ The remarkable fossils found there consist of the lower jaws of three species of small quadrupeds about the size of a mole. Cuvier, when he saw one of them (in a visit to Oxford in



Thylacotherium Prevostii (*Valenciennes*). Amphithorium (*Owen*). Lower jaw, from the slate of Stonesfield, near Oxford.§

1818), referred it to the marsupial order, stating however, that it differed from all known Carnivora in having ten molar teeth in a row. This opinion, although afterwards called in question by eminent

* Quart. Journ. Geol. Soc. No. 6. p. 96.

† See Hitchcock's Report on Geol. of Massachusetts, and Lyell's Travels in North America, chap. 12.

‡ For a full account recently published, 1846, of these singular fossils, see Owen's British Fossil Mammals and Birds, p. 29.

§ This figure (No. 4.) is from a drawing by Professor C. Prevost, published Ann. des Sci. Nat., Avril, 1825. The fossil is a lower jaw, adhering by its inner side to the slab of oolite, in which it is sunk. The form of the condyle, or

posterior process of the jaw, is convex, agreeing with the mammiferous type, and is distinctly seen, an impression of it being left on the stone, although in this specimen the bone is wanting. The anterior part of the jaw has been partially broken away, so that the double fangs of the molar teeth are seen fixed in their sockets, the form of the fangs being characteristic of the mammalia. Ten molars are preserved, and the place of an eleventh is believed to be apparent. The enamel of some of the teeth is well preserved.