

1832 I pointed out that the occurrence of this single fossil in the oolite was 'fatal to the theory of successive development,' as then propounded.* Since that period great additions have been made to our knowledge of the existence of land quadrupeds in the olden times. We have ascertained that, in Eocene strata older than the gypsum of Paris, no less than four distinct sets of placental mammalia have flourished; namely, first, those of the Headon series in the Isle of Wight, from which fourteen species have been procured; secondly, those of the antecedent Bagshot and Bracklesham beds, which have yielded, together with the contemporaneous 'calcaire grossier' of Paris, twenty species; thirdly, the still older beds of Kyson, near Ipswich, and those of Herne Bay, at the mouth of the Thames, in which seven species have been found; and fourthly, the plastic clay or lignite formation, which has supplied ten species.†

We can scarcely doubt that we should already have traced back the evidence of this class of fossils much farther had not our enquiries been arrested, first, by the vast gap between the tertiary and secondary formations, and then by the marine nature of the cretaceous rocks.

The mammalia next in antiquity, of which we have any cognisance, are those of the upper oolite of Purbeck, discovered between the years 1854 and 1857, and comprising no less than fourteen species, referable to eight or nine genera; one of them, *Plagiaulax*, considered by Dr. Falconer to have been a herbivorous marsupial. The whole assemblage appear, from the joint observations of Professor Owen and Dr. Falconer, to indicate a low grade of quadruped, probably of the marsupial type. They were, for the most part, diminutive, the two largest not much exceeding our common hedgehog and polecat in size.

* Principles of Geology, 2nd ed. i. 173.

† Lyell's Supplement to 5th ed. of Elements. 1857.