

work in this direction has been supplemented by the more recent monographs of H. G. Seeley. In 1880, Cope described several representatives of Theromorpha from the Permian deposits of Texas, and E. T. Newton has recently made known some remarkable genera of Anomodontia from the Triassic Sandstones of Elgin in Scotland.

*Birds.*—Cuvier gave an account of the few remains of fossil birds that were known in the beginning of this century. A general review of the geological distribution of birds was contributed by Milne-Edwards (1863), who also provided, in a large monograph (1867-72) of the fossil birds of France, an osteological basis for the study of this class. In the year 1860 a fossil feather was discovered in the Jurassic shales of Solenhofen, and a year later at Eichstatt a whole skeleton of the oldest fossil bird was found. It was, however, described by A. Wagner as a winged reptile. Sir Richard Owen (1863) recognised in it the characters of a true bird, notwithstanding the long tail and the peculiarly constructed front extremities; several palæontologists thought it intermediate between birds and reptiles. A second specimen of Archæopteryx was found at Eichstatt in 1877; it was obtained by the Berlin Museum and described by Dames (1884). In 1875, Marsh drew attention to the occurrence of toothed birds in the Cretaceous rocks of Kansas, and published a monograph in 1880 with excellent illustrations of these Odontornites. The remarkable fossil giant birds of New Zealand were described in detail by Owen (1849-86), and the powerful Æpyornites of Madagascar were studied by Bianconi, Grandidier, and Milne-Edwards. The comprehensive work of Fürbringer (1888) contains a full exposition of the phylogenetic relations of fossil and living birds, and is of the utmost importance for the morphology and classification of birds.

*Mammals.*—No sub-division of Palæontology was so far advanced in the beginning of the nineteenth century as that of fossil Mammalia. Cuvier's famous investigations on fossil bones (*ante*, p. 135) not only contain the principles of a Comparative Osteology, but also show in a manner that has never been surpassed how fossil Vertebrates ought to be studied, and what are the broad inductions which may be drawn from a series of methodical observations. A consider-