

such quadrupeds may have succeeded to another, until at a later era, and after the interval marked by the Wealden and Cretaceous rocks, another and a different geographical state of things being established, the tertiary mammalia of Europe entered on the stage and occupied the same area.

The advocates, however, of the doctrine of progressive development will offer a different explanation of the phenomena. They will refer the large admixture of marsupials in the Stonesfield and Purbeck fauna to chronological rather than to climatal conditions,—to the age of the planet rather than to the state of a portion of its dry land. In the Triassic and Oolitic periods they will say the time had not yet come for the creation or development of more highly organized beings. Experience must test and determine the soundness of these theoretical views. In the mean while it may be useful to bear in mind that while Australia supports at present 100 species of marsupials, the rest of the continents and islands of the globe are tenanted by about 1,700 species of mammalia, of which only 46 are marsupials (namely, the opossums of North and South America), and in like manner there flourished in the Pliocene period throughout Europe, Asia, and America, so far as we yet know, a placental fauna, consisting of species now for the most part extinct, which was coeval with the extinct Pliocene marsupials of Australia. Such facts, although far too limited to enable us to generalize with confidence, seem rather to imply that at certain periods of the past, as in our own days, the predominance of certain families of terrestrial mammalia has had more to do with conditions of space than of time; or in other words, has been more governed by geographical circumstances than by a law of successive development of higher and higher grades of organization, in proportion as the planet grew older.

DISCOVERY OF MAMMALIAN REMAINS IN ROCKS OF HIGH ANTIQUITY
IN NORTH CAROLINA, UNITED STATES.

ALTHOUGH only six weeks have elapsed since the foregoing remarks on the Purbeck mammals appeared in the first edition of this Supplement, a remarkable addition has already been made during this short interval to our knowledge of the ancient geographical range of Secondary Mammalia. Dr. Emmons, in the newly published volume of his "American Geology" (Part VI. p. 93), announces that last year (1856) he met with three lower jaws of an insectivorous mammal in the Chatham Coal-field in North Carolina. He has given a figure of the outside of the ramus of one of these jaws, nine-tenths of an inch in length, containing ten molars in a continuous series, one canine, and three incisors. The three posterior molars are tricuspoid, as in *Spalacotherium*; the four next, multicuspid; and the three anterior ones are simple, conical,