

controversy has been raised as to the position of the "Laramie series," its rich terrestrial flora having an undoubted Tertiary facies, while its fauna is Cretaceous. According to Fuchs, the most important turning-point in the history of the plant-world is to be found not, as in the case of the terrestrial fauna, between the Sarmatian stage and the *Congeria*-beds, but on an older horizon, namely between the first and second Mediterranean stage.<sup>38</sup> Nor is this intercalation of types characteristic of other periods entirely confined to the vegetable world. Examples may be found of survivals of types of terrestrial animals when the contemporaneous marine fauna has become distinctly more modern. The present mammals of Australia and New Guinea are more allied to forms that lived in Mesozoic time than to those now living in other countries. The remarkable Miocene mammalian fauna of Pikermi has been found to lie upon strata containing Pliocene marine shells.

From what has now been stated, it will be understood that the existence of any living species or genus of plant or animal, within a certain geographical area, is a fact which cannot be explained except by reference to the geological history of that species or genus. The existing forms of life are the outcome of the evolution which has been in progress during the whole of geological time. From this point of view, the investigations of palæontological geology are invested with the profoundest interest, for they bring before us the history of that living creation of which we form a part.

§ vi. The collecting of Fossils.—Some practical suggestions regarding the search for fossils may be of service to

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<sup>38</sup> E. Weiss, Neues Jahrb. 1878, p. 180; also Z. Deutsch. Geol. Ges. xxix. p. 252.