

him in the same set of rocks through Sussex and the Isle of Wight. They appear to belong to 3 or 4 species of reptiles, but no one of them to any warm-blooded quadruped. They ought, therefore, to serve as a warning to us, when we fail in like manner to detect mammalian foot-prints in older rocks (such as the New Red Sandstone), to refrain from inferring that quadrupeds, other than reptilian, did not exist or pre-exist.

But the most instructive lesson read to us by the Purbeck strata consists in this:—They are all, with the exception of a few intercalated brackish and marine layers, of fresh water-origin; they are 160 feet in thickness, have been well searched by skilful collectors, and by the late Edward Forbes in particular, who studied them for months consecutively. They have been numbered, and the contents of each stratum recorded separately, by the officers of the Government Survey of Great Britain. They have been divided into three distinct groups by Forbes, each characterized by the same genera of pulmoniferous mollusca and cyprides, but these genera being represented in each group by different species; they have yielded insects of many orders, and the fruits of several plants; and lastly, they contain “dirt beds,” or old terrestrial surfaces and soils at different levels, in some of which erect trunks and stumps of cycads and conifers, with their roots still attached to them, are preserved. Yet when the geologist inquires if any land animals of a higher grade than reptiles lived during any one of these three periods, the rocks are all silent, save one thin layer a few inches in thickness, and this single page of the earth’s history suddenly reveals to us in a few weeks the memorials of so many species of fossil mammalia, that they already outnumber those of many a subdivision of the tertiary series, and far surpass those of all the other secondary rocks put together!

It is remarked by Professor Owen that many of the Purbeck Insectivora belong to the same natural family as those of Stonesfield. Some at least of them were Marsupials, and Dr. Falconer has pointed out that the *Plagiaulax* of Purbeck, an herbivorous marsupial, was so much allied to the *Microlestes* of the Trias as to lead us to infer that that more ancient mammifer was likewise a pouched quadruped, having some affinity to the living Kangaroo-rat.

In Australia and the neighboring islands about 100 species of marsupials exist, together with a certain number of placentals (bats and rodents), while the fossil species of that continent show that kangaroos, wombats, Tasmanian wolves (or *Thylacines*), dasyures, and other marsupials of species now extinct, preceded the present creation. Although the localities of Stuttgart, Stonesfield, and Purbeck, do not relate to an area larger than the middle island of New Zealand, yet there may have prevailed, during the Oolitic period, throughout a much wider space in European latitudes, certain geographical and climatal conditions and a peculiar vegetation, favorable to a fauna more analogous to that of the present Antipodes than to that of modern Europe. During the Upper Triassic, the Liassic, and Oolitic epochs, one assemblage of