

forms of these island territories were even approximately identical with those of the present mountains, and the limits and orographic contours of these fragments of an old physical geography can only be approximately guessed at. They have undoubtedly been subjected to repeated disturbance and upheaval since the beginning of the deposition of the Lias, but after these old palæozoic mountains first rose high into the air, they suffered so much from all the agents of waste and degradation, that in Liassic and pre-Liassic times, I have no doubt they were higher than now, and partly occupied more extended areas.

THE LOWER LIAS CLAY AND LIMESTONE is about 900 or 1,000 feet thick, where best developed in England, and consists of beds of blue clay or shale (weathering brown), interstratified with beds of blue argillaceous limestone, largely quarried in Leicestershire, Warwickshire, and elsewhere, for hydraulic lime. These limestones, lying flat and unconformably on the upturned and denuded edges of the Carboniferous Limestone, form splendid cliffs on the coast of Glamorganshire, and, with the Rhætic beds, they are also well exposed in the coast section at Lyme Regis. From thence, scarcely interrupted at the east end of the Mendip Hills, the Lower Lias strikes north to the junction of the Severn and Avon, and again NE. and N. to the sea-coast of Yorkshire, E. of the river Tees. Throughout this area it usually forms a flat or undulating country, lying much in pasture land. The strata dip generally gently to the east, but are sometimes for a space quite flat. Occasionally the limestones of the Lower Lias form a low escarpment, generally facing west, and, almost invariably, the *Marlstone* or *Middle Lias* makes a similar and higher escarpment, the top