

*Nautili*, and bivalve shells, similar, in general grouping of genera, to those of the Marlstone and Lias clay, with both of which, but especially with the Marlstone, it has species in common. In Yorkshire, the well-known jet of Whitby is excavated from the shales on the cliffs, and is formed of the fossilised stems of coniferous trees that grew on the hilly islands, on the west and north.

The remarkable assemblage of large Reptilia that inhabited the Liassic seas, the number of great and small Cephalopoda, including many species of Ammonites, Nautili, and Belemnites, the swarms of Terebratulæ and Rhynchonellæ, the plentiful genera and species of Lamellibranchiate molluscs and of univalve shells, all speak of warm seas, surrounding islands, on which grew Cycads, Zamias, and other plants, that seem to tell of a tropical or subtropical climate. Nor was this phase of the physical geography of the time specially peculiar to the Lower Lias, for it belongs alike to each of the divisions, and, as we shall by-and-by see, was continued into much later times.

Nothing is more clear to me than this, that there was no break in time between the successive conventional divisions of the Lower, Middle, and Upper Lias. Each in ascending succession lies quite conformably on the other; between the Lower and Middle divisions there is a clear lithological passage, accompanied by passage of species, and though there is generally a very sudden break in lithological character between the Marlstone and the Upper Lias clay or shale (due, perhaps, to rapid depression of the area), yet contrary to a not unprevalent belief, there is a greater number of species common to these divisions than is generally imagined.

Out of 668 known species in the Lower Lias, 94,