

petrified forest must have sunk to the depth of many hundred feet. A highly interesting section occurs on the east of Lulworth Cove (Tab. 71). It presents a portion of the dirt-bed, with petrified trunks of coniferous trees, standing in the black mould in which they grew (2), interposed between the fresh-water Purbeck slate above (1), and the marine Portland limestone below (3); the whole of the strata being in an inclined position.*

42. MODERN SUBMERGED FOREST.—An interesting modern example of the subsidence of a considerable tract of country clothed with forests, the trees remaining erect, although submerged beneath a river which still flows over them, is described by a late American writer, and will serve to illustrate the preceding remarks. The whole district, from the Rocky Mountains on the east and the Pacific Ocean on the west, and from Queen Charlotte's Island on the north to California on the south, presents one vast tract of volcanic formation. Basalt, both columnar and in amorphous masses, veins and dykes, every where occurs, and craters of extinct volcanoes are still visible. Elevations and dislocations of the strata have taken place on an immense scale; and successive beds of basalt, amygdaloidal trap, and breccia, prove the alternation of igneous action and periods of repose. Within a few miles of the cascades of the river Columbia, and extending upwards of twenty miles, trees are seen

* Bridgewater Essay, vol. ii. p. 97.