

humid peat; the circumstances under which it was placed being most favourable for that process to take place, by which, as we shall show hereafter (see Lecture VI.), vegetable matter is converted into coal.

37. SUBTERRANEAN FORESTS.—Independently of the trees immersed in peat bogs and morasses, there are also found entire forests buried deeply in the soil; the trees having their roots, trunks, branches, fruits, and even leaves, more or less perfectly preserved. Several accumulations of this kind have been discovered on the coast of Sussex, occupying low alluvial plains, that are still subject to periodical inundations.* The trees are chiefly of the oak, hazel, fir, birch, yew, willow, and ash; in short, almost every kind that is indigenous to this island occasionally occurs. The trunks, branches, &c. are dyed throughout of a deep ebony colour by iron; and the wood is firm and heavy, and sometimes sufficiently sound for domestic use. In Yorkshire it is employed in the construction of houses. The specimens which I now place before you, for which I am indebted to Professor Babbage, exhibit the usual characters of such remains; they are portions of large trunks of yew, oak, and fir, from a peat bog in Ireland.

38. GEOLOGICAL EFFECTS OF THE SEA.—While the mountains, valleys, and plains of the interior of a country, are undergoing slow but perpetual change by the combined effects of atmospheric

* See Illustrations of the Geology of Sussex, p. 288.