

cretionary masses, with leaves and fragments of wood. 3. Wood in various degrees of bituminization, and of shades of colour, from a light-brown to jet-black. 4. Very finely laminated masses of bituminous matter and clay, of a dark chocolate colour, and separating into elastic flakes, as thin as paper, whence its name *papierkohle*. These specimens, collected by Sir P. M. de Grey Egerton, Bart. exhibit the peculiar character of the substance, which is so highly bituminous as to burn with a bright flame. The wood is generally in inconsiderable fragments; but stems of large trees, somewhat compressed, occasionally occur; in some instances the trees are imbedded in an upright position, with the roots attached and the stems passing through several beds of lignite. In many examples the wood is so little changed, that, like the timber of our peat-bogs, it is employed in building; in others it is highly pyritous, or in other words, is impregnated with sulphuret of iron, like the fossil vegetables of Sheppey. Mr. Horner states, as the result of his investigations, that there were extensive fresh-water lakes, in the sediments of which trees and plants, drifted by land-floods, were engulfed; and that volcanic eruptions were simultaneously going on, in the same manner as in the modern submarine volcanoes. There is a great fault, or dislocation, of the brown coal formation, which may be attributed to a powerful and sudden volcanic explosion, that probably occasioned the elevation of the