

of these alternate with white grits and a conglomerate of coarser texture than I had ever seen in any productive coal-measures, some of the pebbles of quartz being of the size of a hen's egg. I was curious to know whether the *Stigmaria* would be found here in the underclays, as at Blossberg before-mentioned, situated 120 miles to the westward. It was easy to ascertain the fact, for several of the coal seams, from eight to ten feet thick, were quarried in the open air, and the strata being vertical, a void space was left after the removal of the fuel, like a straight open fissure, in which we could walk, and see, in the wall on the one side, a stratum originally above, and on the other, that which had been immediately below the coal. On the former, or what is usually termed the roof, were shales with distinct impressions of ferns; among others, the British species *Pecopteris lonchitica* and *Neuropteris cordata*, together with trunks and stems of *Sigillaria*, *Lepidodendron*, and *Calamites*; while on the opposite or south-eastern side, was an underclay with numerous *Stigmaria*, often several yards, and even in some cases thirty feet long, with their leaves or rootlets attached.

In this coal-field, as in all the others hitherto observed in America, particular seams of coal are found to be far more persistent than the accompanying beds of shale, sandstone, or limestone. As we proceeded from Pottsville, by Tamaqua, to the Lehigh Summit Mine, we found the beds of grit and shale gradually to thin out, so that several beds of anthracite, at first widely separated, were brought nearer and nearer together, until they united, and formed one mass about fifty feet thick, without any greater interpolated matter