

*lonchitica*). The coal is coarse and earthy, with much epidermal and bast tissue, spore cases, etc., vascular bundles of ferns and impressions of bark of *Sigillaria* and leaves of *Cordaites*. It may be considered as a compressed vegetable soil resting on a subsoil full of rootlets of *Stigmaria*." In this case the coal is an inch in thickness, but there are many beds where the coal is a mere film, and supports great erect stems of *Sigillaria*, sending downward their roots in the form of branching *Stigmaria* into the underclay, thus proving that the *Stigmaria* of the underclays are the roots of the *Sigillaria* of the coals and their roofs.

Here is another example which may be called a coal group, and is No. 11 of the same division :

“ Grey argillaceous shale, erect *Calamites*.

Coal, 1 inch.

Grey argillaceous underclay, *Stigmaria*, 1ft. 6in.

Coal, 2 inches.

Grey argillaceous underclay, *Stigmaria*, 4 in.

Coal, 1 inch.

Grey argillaceous underclay, *Stigmaria*.

“ This is an alternation of thin, coarse coals with fossil soils. The roof shale contains erect *Calamites*, which seem to have been the last vegetation which grew on the surface of the upper coal.”

Such facts, with many minor varieties, extend through the whole eighty-one coal groups of this remarkable section, as any one may see by referring to the paper and work cited in the preceding note. It is possibly because in most coal fields the smaller and commercially useless beds are so little open to observation, that so crude ideas derived merely from imperfect access to the beds that are worked exist among geologists. The following summary of facts may perhaps serve to place the evidence as to the mode of accumulation of coal fairly before the reader :—