

In many of the strata that accompany the coal, fragments of these plants occur in vast abundance; they have been long noticed in the sandstone called *Gannister* and *Crowstone*, in the Yorkshire and Derbyshire coal fields, and have been incorrectly considered to be fragments of the stems of Cacti.

The discovery of the dome-shaped centres above described, and the length and forms of the leaves and branches render it highly probable that the *Stigmaria* were aquatic plants, trailing in swamps, or floating in still and shallow lakes, like the modern *Stratiotes* and *Isoetes*. From such situations they may have been drifted by the same inundations, that transported the Ferns and other land vegetables, with which they are associated in the coal formation. The form of the trunk and branches shews that they could not have risen upwards into the air; they must therefore either have trailed on the ground, or have floated in water.* The *Stigmaria* was probably dicotyledonous, and its internal structure seems to have borne some analogies to that of the *Euphorbiaceæ*.

* The place and form of the leaves, supposing them to have grown on all sides of branches suspended horizontally in water, would have been but little changed by being drifted into, and sinking to the bottom of, an estuary or sea, and there becoming surrounded by sediments of mud or sand. This hypothesis seems supported by the observations made at Jarrow, that the extremities of the branches *descend* from the dome towards the adjacent bed of coal.