

ment than destroyed.\* But if we suppose the originals of the coal-plants to have been succulent vegetables, this difficulty will vanish, and many of them, as we have seen, resemble this class rather than any other. It is more easy too to conceive how plants of a marshy seat should have been washed down into the basins which now constitute our coal-fields, and there covered with deposits of sand and clay, &c., for the fact will then be analogous to what is often observed in the present day on the borders of our lakes.

These plants are sometimes parallel to the coal-strata in which they lie, sometimes shoot as it were through them perpendicularly, and have been observed in this latter position rising 15 feet or more. Mr. Trevelyan has drawn some striking examples of this exhibited in the cliffs of the Durham and Northumberland coast: these positions probably arose only from the distribution of gravity in the trunks as they subsided amidst the thin, loose, and unconsolidated materials of the strata in which they are buried.

Mr. Brongniart has published in the *Annales des Mines* for 1821, a plate exhibiting many of these erect stems, from the open coal mines of St. Étienne, Department de la Loire.

The above statements will shew that the accounts which have been given of trunks closely resembling peeled oaks, &c. discovered in our coal-fields, must have originated in the hasty judgment of an eye unpractised in examining these remains.

The roots of these stems have in few instances been ascertained. Mr. Brewster, however, in the *Edinburgh Phil. Trans.* for 1821, figures a stem with branching roots found at Niteshill, but the whole of the external carbonaceous coat being stripped off, its species cannot be identified. Count Sternberg has figured in his second part, T. 14. a magnificent specimen of the trunk of *Lepidodendron aculeatum*, in which the base spreads out in a sudden concave swell.

Sternberg, in the second part of his great work, has instituted the new genera *Schlotheimia*, *Annularia*, and *Rotularia*, from some of the verticillate leaves above alluded to: his generic characters are

*Schlotheimia*.—Caudex articulatus ad articulos contractus verticillo foliosus. Both the species he describes occur in the English mines.

*Annularia*.—Folia in verticillum disposita annulo proprio inserta. We may cite *A. reflexa*, T. 19. fig. 5. as occurring in our mines.

\* The greatest quantity of woody matter in the coal strata we have ever seen was an irregular compressed stem about two inches thick, which more resembled a tuberose root than any thing else.