

hill 450 feet above the level of the sea. Here I was welcomed by the professor of chemistry, Mr. Brumby, who had the kindness to set out immediately with me (Feb. 10) to examine the coal-fields lying immediately north of this place. Starting in a northeasterly direction, we first entered a hilly country formed of sandstone, grit, and shale of the coal formation, precisely like the strata in which coal occurs in England. These hills were covered with long-leaved pines, and the large proportion they bear to the hard wood is said to have been increased by the Indian practice of burning the grass; the bark of the oak and other kinds of hard wood being more combustible, and more easily injured by fire, than that of the fir tribe. Every where the young seedlings of the long-leaved pine were coming up in such numbers that one might have supposed the ground to have been sown with them; and I was reminded how rarely we see similar self-sown firs in English plantations. When we had gone about twenty miles northeast of Tuscaloosa, we came to a higher country, where nearly all the pines disappeared, and were replaced by oak, hickory, sumach, gum-trees, sassafras, and many others. In some clearings here, as in Georgia and the Carolinas, the quantity or cordage of wood fit for charcoal produced in thirty years by the new growth, is said, from its greater density, to have equaled the wood contained in the aboriginal forest.

Near the banks of the Black Warrior River, we examined several open quarries of coal, where the edges of the beds had been dug into by different proprietors, no regular mining operations having as yet been attempted. Even at the outcrop the coal is of excellent quality, and highly bituminous, and I soon satisfied myself that the strata were not of the age of the Richmond coal before described,\* but were as ancient as that of the Alleghany Hills, or of Western Virginia. In the beds of black shale covering each coal-seam, were impressions of fossil plants, precisely similar to those occurring in the ancient coal-measures of Europe and America. Among these we found more than one species of *Calamite*, several ferns of the genera *Sphenopteris* and *Neuropteris*, the trunks of *Lepidodendron* and *Sigilaria*, the stems and

\* Ante, vol. i. p. 214.