

cuttings, and examining the rocks and fossils on the way. I was desirous of making these explorations, because this line of road traverses the entire area occupied by the tertiary strata between the sea and the borders of the granitic region, which commences at Macon, and the section was parallel to that previously examined by me on the Savannah river in 1842. When I came to low swampy grounds, or pine-barrens, where there were no objects of geological interest, my black companions propelled me onward at the rate of ten or twelve miles an hour, by turning a handle connected with the axis of the wheels. Their motions were like those of men drawing water from a well. Throughout the greater part of the route, an intelligent engineer accompanied me. As there was only one line of rail, and many curves, and as the negroes can not be relied on for caution, he was anxious for my safety, while I was wholly occupied with my geology. I saw him frequently looking at his watch, and often kneeling down, like "Fine-ear" in the fairy tale, so as to place his ear in contact with the iron rails to ascertain whether a passenger or luggage-train were within a mile or two. We went by Parramore's Hill, where the sandstone rocks detained me some time, and, at the ninety-fifth mile station from Savannah, I collected fossils, consisting of marine shells and corals. These were silicified in the burr-stone, of which mill-stones are manufactured. Near Sandersville I saw a limestone from which Eocene shells and corals are procured, as well as the teeth of sharks and the bones of the huge extinct cetacean called Zeuglodon. Here I had ample opportunities of confirming the opinion I had previously announced as the result of my labors in 1842, that this burr-stone, with its red, yellow, and white sands, and its associated porcelain clays or kaolin, constitutes one of the members of the Eocene group, overlying the great body of calcareous rock, once supposed by some to be cretaceous, but which really belongs to the same tertiary period.\* Although the summit level of the railway attains an elevation of about 500 feet, descending afterward somewhat abruptly to Macon, which is only 300 feet above the sea, it is surprising how we stole imperceptibly up this ascent, as if on a perfectly level plain, every

\* See Quarterly Journ. of Geol. Society, 1845, p. 563.