

penentiy of their well-marked organisms, there is a simple test through which the lignites of the newer formations may be distinguished from the true coal of the carboniferous system. Coal, though ground into an impalpable powder, retains its deep black color, and may be used as a black pigment; lignite, on the contrary, when fully levigated, assumes a reddish, or, rather, umbry hue.

I have said that the waters of the well of the coal-heugh are chalybeate — a probable consequence of their infiltration through the iron oxides of the superior beds of the formation, and their subsequent passage through the deep red strata of

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formations beneath the only one at which the object of his search could have been found. Mr. Murchison thus relates the story: —

“At Tin-y-coed I found a credulous farmer ruining himself in excavating a horizontal gallery in search of coal, an ignorant miner being his engineer. The case may serve as a striking example of the *coal-boring mania* in districts which cannot by possibility contain that mineral; and a few words concerning it may, therefore, prove a salutary warning to those who speculate for coal in the Silurian Rocks. The farmhouse of Tin-y-coed is situated on the sloping sides of a hill of trap, which throw off, upon its north-western flank, thin beds of black grauwacke shale, dipping to the west-north-west at a high angle. The color of the shale, and of the water that flowed down its sides, the pyritous veins, and other vulgar symptoms of coal-bearing strata, had long convinced the farmer that he possessed a large hidden mass of coal, and, unfortunately, a small fragment of real anthracite was discovered, which burnt like the best coal. Miners were sent for, and operations commenced. To sink a shaft was impracticable, both from the want of means, and the large volume of water. A slightly inclined gallery was therefore commenced, the mouth of which was opened at the bottom of the hill, on the side of the little brook which waters the dell. I have already stated that, in many cases, where the intrusive trap throws off the shale, the latter preserves its natural and unaltered condition to within a certain distance