

polygonal form by pressing against each other, and by the weight from above. (See Note I.)

The gray fissile bed in which these organisms occur was perforated to its base on two several occasions, and in different parts of the quarries—in one instance, merely to ascertain its depth; in the other, in the course of excavating a tunnel. In the one case it was found to rest on a bed of trap, which seemed to have insinuated itself among the strata with as little disturbance, and which lay nearly as conformably to them as the greenstone bed of Salisbury Crags does to the alternating sandstones and clays which both underlie and overtop it. In the other instance the excavators arrived at a red, aluminous sandstone, veined by a purplish-colored oxide of iron. The upper strata of the quarry are overlaid by a thick bed of grayish-red conglomerate.

Leaving behind us the quarries of Carmylie, we descend the hill-side, and rise in the system as we lower our level and advance upon the sea. For a very considerable distance we find the rock covered up by a deep-red diluvial clay, largely charged with water-worn boulders, chiefly of the older primary rocks, and of the sandstone underneath. The soil on the higher grounds is moory and barren—a consequence, in great part, of a hard, ferruginous pan, which interposes like a paved floor between the diluvium and the upper mould, and which prevents the roots of the vegetation from striking downwards into the tenacious subsoil. From its impervious character, too, it has the effect of rendering the surface a bog for one half the year, and an arid, sun-baked waste for the other. It seems not improbable that the heaths which must have grown and decayed on these heights for many ages, may have been main agents in the formation of this pavement of barrenness. Of all plants, they are said to contain most iron