black patches. The criterion, therefore, proposed by Cordier, here fails us.* A portion of the rock broken into small fragments, and exposed for an hour to the heat of a Black's furnace, gave a black glass much resembling that produced by various forms of the dolomite under the same circumstances.

The same obscurity which is attached to the mineralogical character of this rock seems to extend in some measure to its relations with the conglomerate in which it occurs. In some places it covers, and in others is covered by sandstone. On the road from Killerton to Silverton, near a house occupied (in the year 1812) by Mrs. Brown, we saw it resting on the large-grained conglomerate; and at one of the Radden quarries, near Thorverton, covered by a sandstone bed of from three to ten feet in thickness. Its line of separation from the sandstone is sometimes tolerably distinct. In one quarry at Thorverton, a line of sandy clay, not quite a foot thick, prevents their actual contact. At other places, especially at the Radden quarries, the two substances appear to pass so insensibly into each other as to induce for the moment a conjecture that both were the result of a common deposition, modified in its characters by the partial intrusion of some extraneous matter. This phænomenon has already been notied by Mr. Greenough. "What mineralogist," he asks, "can draw a line of demarcation between the red marle and the toadstone at Heavitree." (Essay, p. 215.) Your geological readers have probably already anticipated that a vulcanist would at once decide that the whole of the amygdaloidal beds was a series of *whin-dykes*; while others will be disposed to regard them as concretions or depositions more nearly connected and contemporaneous with the strata which envelope them. The difficulty would probably vanish before a more accurate investigation of their character and position, which I beg to recommend to such mineralogists as may travel westward.

It may be added that at the Radden quarries we noticed the occasional tendency of this rock to split into basaltiform balls; and in one spot observed it traversed by nearly horizontal veins of its own substance, differing slightly from the mass by their greater compactness, and the largeness of the nodules which they contained. The veins of extraneous matter were mostly vertical, or at a very high angle.

(*e*) *Height of Hills, &c.* Although the great central plain of red marle gives rise to several tributary streams of the Avon, flowing towards the Bristol Channel, and of the Trent flowing

* I am acquainted with the experiments of M. Cordier only through the notice given of them in M. Bouet's Geologie de l'Ecosse.