

sidered as subordinate to it. These have been noticed chiefly at Christian Malford and Kelloway bridge near Chippenham in Wiltshire, and have been denominated, from the latter locality, the Kelloway rock. This stone occurs in irregular concretions, the exterior aspect of which is brown and sandy, the interior being harder and of a blueish colour. It consists almost entirely of a congeries of organic remains, among which several varieties of ammonites are predominant. The beds of clay (says Mr. Smith) which immediately cover this rock abound in selenite, and below it are found a brown aluminous earth and bituminous wood. Beds of clay separate the Kelloway rock from the oolites of the next division.

This limestone is only used for mending the roads, and as there are very few excavations for this purpose, it is difficult to trace its course; Mr. Smith, however, mentions the following localities in addition to those which have been already stated; Thames and Severn Canal near South Cerney; Kennet and Avon Canal near Trowbridge; Wilts and Bucks Canal near Chippenham; a Pit sunk in a fruitless search for coal at Bruham near Bruton, Somersetshire.

(b) *Mineral contents.* Iron pyrites and selenite occur abundantly in this, as indeed in all argillaceous formations. The association of sulphur with the clay strata seems to afford an interesting subject of enquiry. Mr. Smith believes the mineral waters of Melksham, &c. to be derived from the beds of this formation immediately contiguous to the Kelloway rock.*

Every variety of this stratum, in the preceding section, agrees in the two following properties—the presence of calcareous matter, which is manifested by a brisk effervescence when any part of it is submitted to the action of acids; and secondly, a more or less abundant admixture of pyrites; all the bituminous slates, when exposed to the action of fire, burn with a very strong offensive smell, but those found below the depth of 80 yards were not so disagreeable in that respect, as those which were higher in the stratum. Varieties 33 and 35 are remarkable for their inflammability, and burn with a thick bituminous flame, appearing nearly equal in this respect to common coal; but after the bitumen was exhausted, the remainder was left undiminished in size. The organic remains observed in these beds, as their general characteristics, are impressions of ammonites and some small bivalve shells. (G. T. vol. iii. p. 327)

In the Philosophical Transactions for 1787, is an account of the strata penetrated in sinking 478 feet for water in this formation near Boston; these consisted of clay mingled with marly concretions (called in that account chalk) and what is there termed gravel—probably loose and rubbly marle-stones—at 470 feet from the surface, a thin bed of stone (perhaps the Kelloways rock) was met with.

An interesting account of the sinking through the strata at Melksham will be found in the 'Guide' for that watering place.

* See further particulars of these springs in the article on the waters of this formation.