

(c) *Organic remains.* Vegetable impressions, analagous to those of the superior strata of coal, are also found in the shales in this series; and nodules of iron-stone containing muscles, probably the same species with those before described as occurring in the coal-strata. In the limestone beds of this series, again, the organic remains appear to be decidedly of marine origin, and analagous to those of the subjacent limestone. Thus, in a blue limestone of this class at Newton hall near Corbridge, Mr. Winch specifies pectines, and large ostreae as occurring; and in the limestone covering the thin coal of Newton near Felton (both subordinate members of this series) a bed contains impressions of bivalve shells, as mentioned by the same writer, but the species is unfortunately not distinguished.

(d) *Range and extent.* See the local details in the ensuing chapter.

(e) *Elevation.* The mountains formed by these beds are often between 1 and 2000 feet in height, and sometimes between 2 and 3000, above the level of the sea; for particulars see the ensuing chapters.

(f) *Thickness.* Sometimes exceeds 120 fathoms, for particulars see the ensuing chapters.

(g) *Inclination.* The phenomena in this respect are the same with those of the coal-measures, with which these subjacent beds are perfectly conformable. The solid strata of millstone-grit, however elevated, usually form rectilinear planes, while the more yielding shales are often singularly contorted. The same faults traverse these beds and the coal-measures.

(h) *Agricultural character.* The millstone-grit usually forms the surface of barren and elevated moorlands covered with mountain peat, the moisture of these elevated regions being favorable to the growth of the mosses, &c. which form them; and, as it appears, the soil afforded by the gritstone also concurring to facilitate their production, for they are not common in calcareous mountains of equal height. The shales associated in this part of the series are very variable even in different parts of the course of the same beds, sometimes affording good, and sometimes poor soils; perhaps the different proportions of calcareous matter dispersed through them may be the cause of this.

(i) *Phaenomena of water.* This part of the series agrees with the coal-measures in this respect. The well-known waters of Harrowgate are believed to be in this part of the series.