

(c) *Organic remains.* It is generally destitute of organic remains; but towards its lower regions, where it approaches the limestone of the transition series, some beds of micaceous sandstone-slate occur, containing anomia and encrinites similar to those in the transition limestones, which will be described hereafter. Vegetables similar to those of the coal are said in some instances to occur.

(d) *Range and extent.* The particulars falling under this head will be given, together with the local details, in the ensuing chapters. It may, however, be here stated generally, that this rock is most abundant in the vicinity of the southwestern coal-fields, especially that of South Wales, adjoining to which it forms an immense tract in Brecon, Monmouth, and Herefordshires, occupying the whole of the latter county; in the other coal districts it is only of partial and limited occurrence.

(e) *Height.* The old red sandstone frequently forms mountains between two and three thousand feet above the sea level; in this respect it yields only to the transition and primitive chains of this island, surpassing those of every other formation.

(f) *Thickness.* In the borders of the forest of Dean, this formation, there interposed between the carboniferous and transition limestone, exceeds 2000 feet. In Herefordshire and Brecon its thickness must be considerably greater than even this, while in some parts of Gloucestershire, near Tortworth, it cannot exceed two or three hundred feet.

(g) *Inclination.* The remarks already made with regard to the mountain limestone may be considered as equally applicable to this also, both being conformable inter se.

(h) *Agricultural character.* Where argillaceous beds alternate with this rock, it often affords a very fertile soil, as the rich fields and luxuriant orchards of Herefordshire abundantly testify; but where the sandstone exclusively prevails, sterile heaths are the result: the summits of mountains of this formation are usually covered with mosses.

(i) *Phænomena of water.* Springs, usually descend from the morasses on the hills of this formation, and the argillaceous beds alternating in the series, are in general sufficiently frequent to occasion such a distribution of the rain waters percolating through the sandstones, as brings them within the reach of wells of no great depth.

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Such is the general outline of the four series of rocks which are usually associated in the districts affording coal; and it will be seen in the following survey of our coal-fields, that with very few exceptions, each of these series is of constant