

No. II. *Construction of the southern Mountains of Hindostan.*

[Communicated by Dr. Buchanan.]

The most common rocks in *Karnata*, that is to say in the country above the *Ghats*, belonging to the British and their ally the *Raja of Mysore*, are various granites and gneisses with other aggregate stones, disposed in vertical strata, and much intersected by veins of quartz and of feldspar. Some of these veins are of great thickness. The granites are of great variety, and some of them and of the porphyries are very beautiful, afford large masses for building, and take an elegant polish. Iron shot quartz and hornstone are very common; as is also flinty mica, most beautiful specimens of which may be procured on the *Kurighat* hill which overlooks *Seringapatam*. Hornblende and pot-stone, with a variety of rocks of an intermediate nature, are also common, and afford excellent materials for building. Of the first have been formed the highly polished columns by which *Hyder's tomb* is supported. In almost every part of the country are found in the soil sporadic calcareous concretions, which in some fields are very abundant, and supply the inhabitants with lime.

Dravida or the country between the Eastern *Ghats* and *Madras* consists nearly of the same materials with those above mentioned; but the most common aggregate rock is one composed I imagine of small masses of arid and fat quartz united. Some suppose that what I have called arid quartz is feldspar in a state of decay; the stone however is excessively hard, and an excellent material for building, although it does not admit of a marble polish.

In the province of *Coimbatore* the same vertical rocks form the basis of the country; but in many parts they are covered entirely by a calcareous stratum, which in its nature and appearance entirely resembles the sporadic concretions found to the northward, and these also are common in *Coimbatore*. That it is a tufa, or deposition from water, I have no doubt, having found it marked by the impression of leaves of trees, and also united with small fragments of the primitive rocks so as to resemble the cement formed of lime and small gravel.

The maritime region between the sea and the western mountains from *Pali-ghat* to *Goa*, and probably still farther north and south has for its basis a solid grey granite without veins of quartz. Towards the north I observed intermixed with this granite rock of talcose argillite and hornblende slate. The most remarkable stratum in this part of the country lies over the primitive rock, and by the natives is called *Brick-stone*. It is an indurated clay containing much oxyde of iron. While in the stratum, and covered by the soil, it is so soft that it can readily be cut with any iron instrument, such as a knife; and is easily raised in masses with a pick-axe, after which it is cut with a saw into pieces fit for building, which by exposure to the air become equal in hardness to the best bricks, and are used in all buildings, even such as are under water, as a most durable and excellent material. The parts of this stratum that are exposed to the air assume the appearance of a black rock, containing numerous small cavities as if it had undergone the action of fire, and which is extremely sterile.

Iron ore abounds in almost every part of the south of India: the most common is in the form of black sand, which is found pure in the channels of torrents, or is procured by washing it from beds of clay with which it is intermixed.

Height of the Mountains of Datan or Tibet.

By Colonel Crawford's observations, taken with great care near *Patna*, the highest peak of *Himala* then within view is more than twenty thousand feet above the plain of *Nipal*, which is probably five thousand feet above the sea.

•• In the Hindoo chronology mention is made, by *Sir W. Jones*, of Billions, &c. of years. *Dr. Johnson* having given no explanation, the following may not be unnecessary.

Trillions.	Billions.	Millions.	Units.
222,222,	222,222,	222,222,	222,222,

By a Billion is meant, in short, what is otherwise called a Million of Millions; and by a Trillion, is meant a Million of Millions of Millions. And the like is to be understood of Quadrillions, Quintillions, Sextillions, &c. *Wallis's Arithm.* 1723; 8vo. p. 8, 10.