

The soil of the Sahara is singularly broken up. For centuries this great desert was pictured as one immense sandy plain, whose uniformity was scarcely relieved by some slight undulations of the surface. Such is not the case. The central desert rises in a succession of terraces. It is a broken or indented table-land, interspersed with hills, and even more or less elevated mountains. Dr. Barth records that, in his travels, he met with mountains 5000 feet in height; their flanks ploughed by wild and precipitous ravines, bare of all vegetation, and generally composed of black, gloomy rocks. Hills, or dunes, of indurated sand bristle against the horizon with sharp ridges and pyramidal summits. As these are of fixed position, and perfectly stable, they serve as points of reconnoitring, and as landmarks to indicate the traveller's road. The soil of the Sahara, alternately stony or sandy, only merges into immense plains at its two extremities, on the east and on the west.

Among the rocks which are here and there exposed may be distinguished the *primitive* (granite, gneiss, and syenite); *eruptive* (trachyte, dolomite, basalt, and lavas); rocks of transition, and the metamorphic; and, finally, the sandstones and shelly limestone.

Upon the geological character of the Sahara we can put forward no positive opinion, on account of its immense extent and the deficiency of scientific exploration.

An eminent geographer, M. Marcou, in his "Carte Géologique de la Terre," leaves this whole extent a blank, with the exception of one of the central districts of the Sahara, which he refers to the primitive formation.

It is probable that there, as in Europe, the nature of the crust varies considerably, and that different regions belong to different geological formations.

On the north, in the districts bordering upon Algeria, the Sahara, from the observations of Messrs. Laurent and Degousée, appears to be a quaternary formation, and to exhibit traces of the *diluvium*, for rolled pebbles are abundant; the same formation also crops up in dis-