

in Book III. Part I. Sect. iv. § 2.¹⁵⁶ Dolomite sometimes forms picturesque mountain masses, as in the Dolomite Mountains of the Eastern Alps.

Gypsum—a fine granular to compact, sometimes fibrous or sparry aggregate of the mineral gypsum, having a hardness of only 1.5–2 (therefore scratched with the nail), and a specific gravity of about 2.32, and being unaffected by acids; hence readily distinguishable from limestone, which it occasionally resembles. It is normally white, but may be colored gray or brown by an admixture of clay or bitumen, or yellow and red by being stained with iron-oxide. It occurs in beds, lenticular intercalations and strings, usually associated with beds of red clay, rock-salt, or anhydrite, in formations of many various geological periods from Silurian (New York) down to recent times. The Triassic gypsum deposits of Thuringia, Hanover and the Harz have long been famous. One of them runs along the south flank of the Harz Mountains as a great band six miles long and reaching a height of sometimes 430 feet.

Gypsum furnishes a good illustration of the many different ways in which some mineral substances can originate. Thus it may be produced, 1st, as a chemical precipitate from solution in water, as when sea-water is evaporated; 2d, through the decomposition of sulphides and the action of the resultant sulphuric acid upon limestone; 3d, through the mutual decomposition of carbonate of lime and sulphates of iron, copper, magnesia, etc.; 4th, through the hydration of anhydrite; 5th, through the action of the sulphurous vapors and solutions of volcanic orifices upon limestone and calcareous rocks.¹⁵⁷ It is in the first of these ways that the thick beds of gypsum associated with rock-salt in many geological formations have been formed. The first mineral to appear in the evaporation of sea-water being gypsum, it has been precipitated on the floors of inland seas and saline lakes before the more soluble salts.

Anhydrite—the anhydrous variety of calcium-sulphate, occurs as a compact or granular, white, gray, bluish or reddish aggregate in saliferous deposits. It is less frequent than gypsum, from which it is distinguished by its much greater hardness (3–3.5) and into which it readily passes by

¹⁵⁶ On the mineralogical nature of dolomite see O. Meyer, *Z. Deutsch. Geol. Ges.* xxxi. p. 445, Loretz, *op. cit.* xxx. p. 387, xxxi. p. 756. Renard, *Bull. Acad. Roy. Belg.* xlvii. (1879), No. 5.

¹⁵⁷ Roth. *Chem. Geol.* i. p. 553.