

special designations have been given in English. *Knottenschiefer* (Knotted schist) contains little knots or concretions of a dark-green or brown, fine-granular, faintly glimmering substance, of a talcose or micaceous nature, imbedded in a finely-laminated matrix of a talc-like or mica-like mineral.<sup>213</sup> These aggregations appear to be in many cases incipient stages in the formation of definite crystals of such minerals as andalusite. In *Fruchtschiefer* the concretions are like grains of corn; in *Garbenschiefer*, like caraway seeds; in *Fleckschiefer*, like flecks or spots. Some of these rocks might be included with the mica-schists, into varieties of which they seem to pass. Round some of the eruptive diabase of the Harz, the clay-slates have been altered into various crystalline masses to which names have been attached. Thus *Spilosite* is a greenish, schistose rock, composed of finely granular or compact felspathic material, with small chlorite concretions or scales. *Desmosite* is a schistose mass in which similar materials are disposed in more distinct alternations.<sup>214</sup>

2. QUARTZ ROCKS.<sup>215</sup>—*Quartz-schist* (schistose quartzite), an aggregate of granular (or granulitic) quartz with a sufficient development of fine folia of mica to impart a more or less definitely schistose structure to the rock. The disappearance of the mica gives quartzite, and the greater prominence of this mineral affords gradations into mica-schist. Such gradations are quite analogous to those among recent sedimentary materials from pure sand, through muddy sand, and sandy mud, into mud or clay, and between sandstones and shales. The Highlands of Scotland, for instance, embrace large tracts of quartz-schists-rocks which are not properly either mica-schist or ordinary quartzite. They consist of granular (granulitized) quartz, with fine parallel laminae of mica, and are capable of being split into thick or thin flagstones. Interstratified pebbly varieties occur.

*Itacolumite*—a schistose quartzite, in which the quartz-granules are separated by fine scales of mica, talc,

<sup>213</sup> A. von Lasaulx, *Neues Jahrb.* 1872, p. 840. K. A. Lossen, *Z. Deutsch. Geol. Ges.* 1867, p. 585 (where a detailed description of the Taunus phyllites will be found), 1872, p. 757.

<sup>214</sup> Other names are *Bandschiefer*, *Contactschiefer*, etc. See K. A. Lossen, *Zeitsch. Deutsch. Geo. Ges.* xix. (1867), p. 509, xxi. p. 291, xxiv. p. 701. Kayser, *op. cit.* xxii. p. 103.

<sup>215</sup> J. Macculloch, *Trans. Geol. Soc.* 1st ser. ii. (1814), p. 450, iv. (1817), p. 264; 2d ser. i. (1819), p. 53. Lossen, *Zeitsch. Deutsch. Geol. Ges.* xix. (1867), pp. 615-634.