

or hanging in pendent stalactites from cavernous spaces which are from time to time reached by the hot water. When purest, it is of snowy whiteness, but is often tinted yellow or flesh color. It consists of silica 84 to 91 per cent, with small proportions of alumina, ferric oxide, lime, magnesia, and alkali, and from 5 to 8 per cent of water. (See Book III. Part II. Sect. iii. § 3, par. 6.)

Flint and **Chert** have been already described among the rocks of organic origin (*ante*, p. 247). **Hornstone**, an excessively compact siliceous rock, usually of some dull dark tint, occurs in nodular masses or irregular bands and veins. The name has sometimes been applied to fine flinty forms of felsite. **Vein-Quartz** may be alluded to here as a substance which sometimes occurs in large masses. It is a massive form of quartz found filling veins (sometimes many yards broad) in crystalline and clastic rocks; more especially in metamorphic areas. (See Quartz Rocks, p. 310.)

Some of the other varieties of silica occurring in large masses may be classed as rocks. Such are **Jasper**, and **Ferruginous Quartz**. These, as well as common vein-quartz, occur as veins traversing both stratified and unstratified rocks; also as beds associated with the crystalline schists. With them may be grouped **Lydian-Stone** (*Lydite*, *Kieselschiefer*), a black or dark-colored, excessively compact, hard, infusible rock with splintery fracture, occurring in thin, sharply defined bands, split by cross joints into polygonal fragments, which are sometimes cemented by fine layers of quartz. It consists of an intimate mixture of silica with alumina, carbonaceous materials, and oxide of iron, and under the microscope shows minute quartz-granules with dark amorphous matter. It occurs in thin layers or bands in the Silurian and later Palæozoic formations interstratified with ordinary sandy and argillaceous strata. As these rocks have not been materially altered, the bands of Lydian-stone may be of original formation, though the extent to which they are often veined with quartz shows that they have, in many cases, been permeated by siliceous water since their deposit. The siliceous rocks due to the operations of plant and animal life are described on p. 247, also in Book III. Part II. Sect. iii. § 3.

Some originally clastic siliceous rocks have acquired a more or less crystalline structure from the action of thermal water or otherwise. One of the most marked varieties has been termed *Crystallized Sandstone* (see p. 232). Another variety, known as *Quartzite*, is a granular and compact ag-