

6. Soda-lime-Feldspar Series, with or without Hornblende or Pyroxene, — the feldspar a triclinic species of the series from albite to anorthite.

III. SAUSSURITE ROCKS. — Alkali (soda) bearing, but containing saussurite in place of a feldspar.

IV. WITHOUT FELDSPAR, OR WITH VERY LITTLE.

1. Garnet, Epidote, and Tourmaline Rocks.
2. Hornblende, Pyroxene, and Chrysolite Rocks.

V. HYDROUS MAGNESIAN AND ALUMINOUS ROCKS.

I. Siliceous Rocks.

QUARTZYTE, GRANULAR QUARTZ. — A siliceous sandstone, usually very firm, occurring in regions of metamorphic rocks. It does not differ essentially from the harder siliceous sandstones of other regions. Conglomerate beds are sometimes included.

Varieties. — a. *Massive.* b. *Schistose.* c. *Micaceous* ("Greisen"). d. *Hydromicaeous.* e. *Feldspathic*, and sometimes *Porphyritic* (then called by some, *Arkose*). f. *Friable.* g. *Flexible (Itacolumyte).* h. *Andalusitic.* i. *Ottrelitic.* j. *Tourmalinic*, containing tourmaline. k. *Gneissic*, it occasionally graduating into gneiss.

SILICEOUS SLATE (*Phthangite*). — Schistose, flinty, not distinctly granular in texture. Sometimes passes into mica or hydromica schist.

CHERT. — An impure flint or hornstone occurring in beds or nodules in some stratified rocks. It often resembles *felsyte*, but is infusible. Colors various. Sometimes oölitic. Kinds containing iron oxide graduate into jasper and clay-ironstone.

JASPER ROCK. — Dull red, yellow, brown, or green, or of some other dark shade, breaking with a smooth surface like flint. Consists of quartz, with more or less clay and oxide of iron. The red contains the oxide of iron in an anhydrous state, the yellow in a hydrous; on heating the latter, it turns red.

BUHRSTONE. — A cellular siliceous rock, flinty in texture. Used for millstones. Found mostly in connection with Tertiary rocks, and formed apparently from the action of siliceous solutions removing fossils and so making the cavities. The best is from near Paris, France.

FIORYTE (*Siliceous Sinter, Pearl Sinter, Geyserite*). — Opal-silica, in compact, porous, or concretionary forms, often pearly in luster; made by deposition from hot siliceous waters, as about geysers (*geyserite*), or through the decomposition of siliceous minerals, especially about the fumaroles of volcanic regions. Geyserite is abundant in Yellowstone Park, about the Iceland geysers, and in the New Zealand geyser region.

II. Rocks having Alkali-bearing Minerals as Chief Constituents.

1. *The Potash-feldspar and Mica Series.*

GRANITE. — Metamorphic and eruptive. Consists of feldspar, mica, and quartz; has no appearance of layers in the arrangement of the mica or other ingredients. The quartz usually grayish or smoky, glassy, and *without any appearance of cleavage*. The feldspar commonly whitish or flesh-colored, less glassy than the quartz, and cleavable in two directions; the mica in very cleavable scales.

Metamorphic granite is common in Connecticut and other parts of New England, where it may be often seen graduating into gneiss, or in alternating layers with it.

Varieties. — There are, A, Muscovite-granites; B, Muscovite and Biotite granites; C, Biotite-granites; D, Hydromica granite. The most of the following varieties occur under each except the hornblendic, which is usually a Biotite or Muscovite and Biotite granite. a. *Common or ordinary granite.* Color, grayish or flesh-colored, according as the feldspar is white or reddish, and dark gray when much black mica is present. Varies in texture from fine and even to coarse; sometimes the mica, feldspar, and quartz