

erals in micropegmatite, in which the feldspars contain oriented inclusions of quartz. Masses of pure quartz are very abundant and in some cases hold needles of fibrous hornblende. This acid phase strongly resembles in composition the granite (micropegmatite) described below, although it is coarser in texture, holds no biotite, and is richer in plagioclase. The similarity between the acid bands and the granite (micropegmatite) suggests that they have had the same origin.

The basic phase of the pegmatoid gabbro consists of long needles of hornblende with some interstitial quartz and feldspar. Under the microscope it is seen that the apparent order of crystallization is the reverse of that of the hypersthene gabbro which has an ophitic texture. In the pegmatoid variety, the hornblende, which is here compact and evidently primary, tends to idiomorphic outlines against the andesine, the other essential constituent. A little orthoclase and calcite are the accessory constituents, while the secondary minerals consist of epidote and calcite. The contact between the two phases of the pegmatoid gabbro is generally gradational, but has been observed to be quite sharp, like an igneous contact.

In one instance a dyke of aplite was found, which distinctly cut the basic gabbro, but was confined to the sill and apparently occurred near the upper contact of the sill. Microscopically, the essential constituents of the aplite are quartz and micropegmatite in which the quartz of the latter contains oriented inclusions of orthoclase. The latter mineral is usually clouded with a great number of sericite particles. The fibrous hornblende which is present, exhibits the pleochroism, *c*, bluish green, *b*, strong green, *a*, yellowish green, and thus resembles the secondary hornblende described above.

In the interior of the basic sills, there occurs a granitic phase in irregular masses with gradational boundaries with the surrounding gabbro. This phase consists of long needles of hornblende enclosed in a ground-mass of micropegmatite. The microscope shows that this hornblende is identical in optical and physical properties with the secondary hornblende described above, but in this case, transformation of the augite into hornblende is complete. The hornblende has a distinctly shredded