rocks, which, possessing a granitic structure, differ from the granites in their much smaller percentage of silica, and from the syenites in containing plagioclase instead of orthoclase as their chief constituent. They are sometimes divided into two sections, the quartz-diorites and the normal diorites. Many of these rocks were formerly included in the general division of "Greenstones."

Quartz-diorite—a holocrystalline mixture of plagioclase (oligoclase, less frequently labradorite) and quartz with some hornblende, augite, or mica. It outwardly resembles gray granite, and, indeed, includes many so-called granites. Its silica ranges up to 67 per cent. In normal Diorite, quartz is almost entirely absent; hornblende and black mica occur together in some varieties, while pyroxene characterizes others. Under the microscope a thoroughly crystalline structure is seen, and among the pyroxene-diorites the felspar and pyroxene are sometimes intergrown in ophitic aggregates. The average chemical composition of quartzless diorite is: silica, 54; alumina, 16-18; potash, 1.5-2.5; soda, 2-3; lime, 6-7.5; magnesia, 6.0; oxides of iron and manganese, 10-14; mean specific gravity, about 2.95.

Among the varieties of diorite, the following may be mentioned. Corsite (from Corsica)-a granitoid mixture of grayish-white plagioclase, blackish-green hornblende, and some quartz, which have grouped themselves into globular aggregations with an internal radial and concentric structure (Orbicular diorite, Kugeldiorit, Napoleonite -Fig. 8). Tonalite (from Monte Tonale, Tyrol)-a variety containing quartz, hornblende, and biotite in strongly contrasted colors. Epidiorite-a name given to ancient rocks which have originally been pyroxenic eruptive masses, but, by metamorphism, have acquired a crystalline rearrangement of their constituents, the pyroxene being changed into hornblende, often fibrous or actinolitic, the felspar becoming granular, and the whole rock having acquired a more or less distinct schistose structure. The dark intrusive sheets associated with the crystalline schists of the Scottish Highlands and the north of Ireland are largely Some of these rocks are quartziferous, but epidiorites. many of them belong to the basic series (see p. 1052).

As the granites pass into fine-grained quartz-porphyries,

stones" of the older geologists is clearly worked out. Many of these ancient rocks are there shown to be forms of doleritic lava and the change of their original augite into hornblende is traced.