

second case an aggregate of olivene and pyroxene with more or less magnetite was the result. This type is called *peridotite* (Iherzolite).

The two non-feldspathic types of eruptive rocks, pyroxenite and peridotite, are peculiarly subject to alteration, which is not, however, decomposition. Briefly it is this: the pyroxene, when it occurs alone, tends to pass into secondary hornblende, and this in turn gives rise to talc. This is the origin of the extensive beds of steatite in eastern Maryland and Virginia. The talc is always mixed with more or less pale, fibrous hornblende (tremolite) and chlorite.

When, as in the peridotite, olivene accompanies the pyroxene, especially if it is bronzite, the rock tends to form serpentine instead of talc. The serpentine also contains secondary hornblende formed from the diallage.

Both types of non-feldspathic eruptives are very intimately associated. They do not usually cover large areas, but occur in small lenticular patches. Varieties intermediate between the two extremes are common, so that the two alteration products, steatite and serpentine, are even more intimately mingled than the rocks themselves.

THE DIORITE.—The rocks included under this head are closely allied to the granites and at first glance may easily be mistaken for them. They differ, however, in the character of their feldspar and in their darker color. They always contain a green hornblende, and biotite with orthoclase and plagioclase, sometimes the former and sometimes the latter in excess. Quartz is usually present and the rocks then resemble the well-known tonalite from European localities. Under the microscope the diorites generally show evidences of the destruction of their constituents through dynamic action or through weathering processes.

The areal distribution of these rocks has not been fully studied, but they have been mapped in several small areas to the west of Washington on either side of the Potomac river. They are most extensively developed, so far as recognized, around Georgetown and near Cabin John's Bridge. At the quarries at the former place, clearly defined inclusions of other rocks have been noticed, which substantiate the view that these rocks represent ancient eruptive masses which