

mapped as eruptive granite by Dr. Bell. It is not within the scope of this paper to discuss the point. (For localities see pages 22, 23, 25, 26, 27, 30, 31, 33 and 34.)

*Syenite*.—This rock also is not widespread, typical examples being very few. One mass occurs about fifteen miles up the Black River and shows altered hornblende and feldspar, the character of the latter being somewhat hard to determine in the specimen obtained; but as the general field appearance is decidedly syenitic, and the microscope reveals scarcely any trace of striation in the feldspar, it is concluded that the rock is syenite, although it probably contains some plagioclase. In addition to this exposure and some narrow bands associated with the schists, all the syenite is, like the granite, blended with gneiss and syenite gneiss and must be classed as Laurentian. (For localities see pages 23 and 30.)

*Augite syenite*.—The mass of eruptive which crosses the Abitibi River, forming the Lobstick and other rapids as well as the Great Canyon, is represented at its upper or southern margin by a rock of this nature, which continues with some variations for two or three miles. It is intersected by small dykes of fine black diabase, which present some beautiful examples of miniature faulting and branching. At the Lobstick Portage it is somewhat schistose in places and much altered, showing numerous red garnets, a little quartz, considerable orthoclase and some plagioclase with bright green augite. At the Oil Can Portage and above it, a section shows fairly large crystals of augite in a somewhat finer and mosaic-like mass of orthoclase with a little quartz and plagioclase. The augite is, in many places, almost entirely altered to fibrous hornblende, flakes of brown mica, garnet and magnetite. This rock presents a grayish-black, somewhat speckled appearance with evidence of flow structure or secondary lamination. In its more altered parts are seen sphene and mellilite. (For localities see page 33.)

*Quartz porphyry*.—This rock does not occur in a good state of preservation, but in an altered and schistose condition it is very common; in order to carry out the classification adopted, it cannot be included here but will receive consideration under the schists.

*Diorite*.—Typical diorite is composed of distinct anhedral hornblende and plagioclase, forming a hard, massive and sonorous rock. In some cases the individual minerals reach a size of several inches, giving the rock a mottled appearance. From this coarse