

PHLOGOPITE.

The colour of this mineral varies from amber brown to a almost white. The largest crystals are about four inches across but are too imperfect to be of economic value.

DIOPSIDE, Macdonald Island.

Crystals of diopside sometimes three inches in length occur in calcite. They are olive green in colour with very fresh, brilliant surfaces in the prism zone while the terminal faces are often rounded and even corroded. The habit of the crystals is peculiar in that the most prominent end face is the positive orthodome (101). Basal cleavage or parting is so well developed that most of the crystals have been broken across showing very smooth cleavage surfaces. The material is much brighter and fresher than the diopside found to the north of the city of Ottawa. Owing to the unusual crystal habit and the degree of corrosion this mineral merits further study.

SPINEL, Locality unknown.

The mineral occurs in the form of octahedra whose edges are sometimes truncated by the rhombic dedecahedron. The largest crystals are about half an inch in diameter. The crystals are lilac in colour but too much fractured to be of value for gem purposes.

CORDIERITE, Garnet Island (Long 72° 30', Lat. 63° 45').

The specimens of cordierite consist of irregular fragments of vitreous lustre which are sometimes two inches in diameter. It is associated with white felspar rock and probably occurs as lenses in gneiss. The mineral is deep blue in colour and some of the fragments are sufficiently free from flaws to suggest its use as a gem mineral. Cordierite has up to the present been a very rare mineral in Canada so that its discovery in Baffin Land has considerable mineralogical interest.

In thin sections under the microscope the mineral is seen to be polysynthetically twinned so that it is difficult to believe that the section is not composed of plagioclase. A subordinate part of the cordierite consists of an intimate intergrowth of twinned mineral in which the two portions present a vermicular intergrowth.* It is also characteristic that though the cordierite as seen in thin sections there are distributed many small inclusions of rutile or zircon, each of which is surrounded by a deep pleochroic aureole, orange in colour.

* Walker and Collins., Rec. Geol. Survey of India, Vol. XXXVI., p. 1.