

plates, usually somewhat cloudy from the presence of decomposition products. The pyroxene is present in rather sparing amount, and is not seen in every slide. It is pale green in colour and without noticeable pleochroism, and is intimately associated with the hornblende, being in many cases apparently in process of alteration into that mineral, as in the case of the Arnprior rock. It may, perhaps, best be termed a *Plagioclase Scapolite Diorite*.

The rock from the Robertsville Mine is rather coarse-grained, and in external appearance bears a strong resemblance to that from McDougall, but possesses a more distinct foliation. Under the microscope it is seen to be composed of scapolite, plagioclase and hornblende, with accessory biotite and epidote. The scapolite is present in large amount, and is generally very free from decomposition products. It usually occurs in rather large plates, which polarize in brilliant colours. The cleavage with extinction parallel to it is well seen, and in sections parallel to the base the mineral is found to be uniaxial and negative. The plagioclase, which is also present in large amount, polarizes in much more subdued tones. Polysynthetic twinning is seen in many, but not in all cases. It is often rendered cloudy by the presence of decomposition products, which resemble kaolin in appearance, and as a general rule is not so fresh as the scapolite which occurs side by side with it. The hornblende, which is light green in colour, is without good crystalline form, but is not fibrous in character. It is strongly pleochroic, in yellowish and bluish-green tints. The biotite occurs in very small amount, intimately associated with the hornblende and partly altered to chlorite. Scattered through the plagioclase, and less frequently also in the scapolite, are many small, stout prisms and irregular grains of a colourless mineral, with high index of refraction, and which polarizes in brilliant colours. Occasionally these are pleochroic, with the yellowish tint characteristic of epidote, and have been referred to that species. The rock, which under the microscope resembles one of the crystalline schists, may be termed a *Plagioclase Scapolite Amphibolite*.