

of the Laurentian System. There are, however, many amphibolites and dioritic rocks occurring in the same district intimately associated with these limestones, but which contain no scapolite whatever. There is, for example, a great thickness of amphibolites, interstratified with crystalline limestone, exposed on the north shore of the Ottawa, just below the town of Arnprior, which we examined some years ago when on a visit to that locality for the purpose of endeavouring to discover the Scapolite-Diorite in place. They are all rather fine-grained and weather dark gray and black, and have a more or less distinct foliation. They were followed for a distance of about five miles below Arnprior, being gradually replaced by quartz feldspar rocks. Like all the other amphibolites and dioritic rocks of the district which do not hold scapolite, when examined with the naked eye the feldspar is seen to be wanting in that peculiar bluish-white tint characteristic of the scapolite, and which the Norwegian geologists compared to wet snow. Three specimens, collected respectively a quarter of a mile, two and a quarter, and three and a half miles below Arnprior, were sliced and examined. The last of these is traversed by little pegmatite veins, and under the microscope is found to be composed of hornblende, biotite and plagioclase, with accessories of epidote and sphene. The hornblende is green in colour, strongly pleochroic and without any tendency to a fibrous structure. It occurs in irregular shaped fragments, which occasionally have an imperfect idiomorphic development, and which mark the lines of foliation. The biotite, which is present in much smaller amount than the hornblende, is brown, with the usual strong dichroism and parallel extinction. The plagioclase is generally twinned, the lamellae being narrow and the twinning generally faint. All untwinned grains which could be found cut in a direction at right angles to an optic axis, showed the revolving bar of a biaxial crystal. They polarize in rather dull tints, and extinguish simultaneously over the whole surface, showing little or no evidence of having been submitted to pressure.