

Maynard⁴. Quartz veins containing native gold associated with galena, pyrite and chalcopyrite are found. Development in the area is retarded by timber berth restrictions. The Gammon River area and the Rickaby Lake schist belt, District of Kenora (Patricia), Ontario, were examined by Geoffrey Gilbert³. The geology on the Manitoba side of the boundary had been studied and it was desired to find how far east the schist belt extended. It was found to cease in Ontario within a few miles of the boundary; the remainder of the territory is underlain by granite and gneiss. Thus the results of the examination proved disappointing.

Iron.—In Mining and Metallurgy, mining development in the stratified, sedimentary, oolitic hematite ore at Wabana, Newfoundland, is described by A. O. Hayes. Three workable and many thin beds occur in a thickness of 400 feet of interbedded sandstones and shales. It is not profitable under present conditions to mine extensively in ore beds less than four feet thick. In Fennia, W. H. Collins discusses the replacement type of banded iron formation with particular reference to the Goudreau area. There are several varieties of iron formation found in the Keewatin:—(1) clastic sedimentary formations; (2) chemical sediments; (3) replacement deposits. The variety described is confined to a complex assemblage of lavas and locally intercalated sediments—conglomerates and greywackes—of early Precambrian age. Evidence indicates that the Keewatin iron formations are stratiform bodies that have the following sequence from below to above:—(1) a carbonate member grading into pyrite above and into the volcanics below; (2) a pyrite member in abrupt contact above with the silica and merging into carbonate below; (3) a banded silica member, overlain by volcanics, and in sharp contact with pyrite below. As a rule the iron formations dip at high angles. There seems little doubt that the carbonate and pyrite members represent chemical replacements of Keewatin schists. In the Bulletin of the Geological Society of America, E. S. Moore and J. E. Maynard describe chemical experiments to illustrate the origin of the Precambrian iron formation. C. K. Leith, in the Bulletin of the Geological Society of America, summarizes the studies of the origin of iron ores. Recent studies of the origin of the iron formations, including those of Collins, Gremer, Hawley and others, tend on the whole to show that the iron formations are inorganic chemical precipitates, that organic agencies have played a relatively small part, that volcanic sources have made notable contributions and that normal processes of weathering have likewise been effective. Studies of secondary concentrations of the iron ores have not changed earlier concepts of the processes. There is a notable tendency among geologists to abstain from generalizations about the region as a whole and to confine their attention for the time being to attempts to agree on basic facts. Fraleigh F. Osborne⁷ describes a study of certain magmatic titaniferous iron ores and their origin.

Limestone.—M. F. Goudge² made a preliminary report upon the limestones of Nova Scotia, New Brunswick, Gaspé and the Temiskaming District of Ontario. Limestones of commercial importance in Nova Scotia are of Precambrian and Carboniferous age. Isolated occurrences of Ordovician, Silurian and Devonian limestones are known, but, with possibly one exception, are of little value. Precambrian limestones are found on the island of Cape Breton, but are not known to occur on the mainland. No limestones of commercial quality or quantity have been found in that part of the province west of a line from Windsor to Chester. Commercial limestone in New Brunswick is found in the Precambrian, Carboniferous and Silurian horizons. The Precambrian crystalline limestones comprise