

It is about six feet thick, and is followed by thirty feet of the thin bedded sandstones, some parts of which might yield good flagstones. Some of the surfaces of these are very distinctly ripple-marked. Above these come thin, shaly, rapidly disintegrating layers, in which are found spheroidal concretions from five to ten inches in diameter. It is not possible to ascertain the total thickness of these sandstones, since they descend beneath the level of the lake. They are similar in lithological character to the sandstones which occur on the north side of Point-aux-Mines. Although there is no doubt that these sandstones unconformably overlie the melaphyre series, still their lithological characters are very different from those of the horizontal red sandstone above referred to. The latter is evenly small-grained, is coloured red by iron oxide, and contains here and there small pieces of red shale, which have evidently furnished the colouring matter. It frequently consists of evenly bedded red and yellowish-grey layers, and exhibits sometimes the phenomenon named by Naumann, discordant parallel-structure, and by Lyell, diagonal or cross stratification.

In enquiring next as to what geological formation in Europe most closely resembles the Upper Copper-bearing series of Lake Superior, the opinion expressed by Delesse ought not to be lost sight of, viz., that the constituent minerals have the same meaning and importance for eruptive rocks which organic remains have for those of sedimentary origin. Therefore, where the palæontological evidence does not entirely contradict it, that derived from lithological resemblance ought to be allowed its full weight. The melaphyres of the upper rocks being interbedded with conglomerates and sandstones, the age of the latter may be ascertained approximatively by enquiring under what circumstances and during what period the melaphyres of Europe were developed. Upon this point Naumann thus expresses himself: "With regard
 " to the eruption-epochs of the melaphyres, there appears, indeed,
 " to have been many of them, but the most occur in the period
 " of the Rothliegende, or in the first half of the Permian forma-
 " tion, and all are probably more recent than the Carboniferous
 " system. This applies at least to the melaphyres on the south
 " side of the Hundsrück, to those of the Thuringian Forest, of the
 " neighbourhood of the Hartz, of Lower Silesia, Bohemia, and
 " Saxony. Many of these melaphyres were deposited soon
 " after the commencement, others towards the end, of the