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on the whole coast of Lake Superior. They are made up of variously colored beds, such as compose the upper group of Mr. Logan, and repose in a nearly horizontal position. These detrital rocks attain a thickness of nearly a thousand feet and are crowned with a sheet of trappean rocks, three hundred feet in thickness.

At L'Anse a la Bouteille, the slates reappear, with the granite protruding through them, and occupy the coast for about fifteen miles: numerous dykes of greenstone, bearing east and west, are seen cutting the rocks vertically. The Slate islands form a part of this group, and derive their name from their geological structure.

They are next seen, according to Mr. Logan, for about seven miles on each side of the Old Pic river. Near Otter Head, a gneissoidal rock forms the coast, which presents a remarkably regular set of strata, in which the constituents of syenite are arranged in thin sheets and in a highly crystalline condition. From this point to the Michipicoten river, the slates and granite occupy alternate reaches along the coast, for the distance of fifty miles. "With the exception of a few square miles of the upper trap of Gargantua, these two rocks appear to hold the coast all the way to the vicinity of Pointe aux Mines, at the extremity of which they separate from the shore, maintaining a nearly straight south-easterly line across the Batchewauang Bay, leaving the trap of Mamainse between them and the lake. Thence, they reach the northern part of Goulais Bay, and finally attain the promontory of Gros Cap, where they constitute a moderately bold range of hills, running eastwardly towards Lake Huron."*

This range, according to the same authority,† in its easterly prolongation, where it bounds the St. Mary's river on the north, consists of purely silicious masses of quartz rock, the bedding sometimes well-defined, and the surfaces not unfrequently ripple-marked; of conglomerate bands, containing pebbles of vitreous quartz and variously-colored jaspers; and of limestones of a compact texture and colored green, buff and grey, the whole reposing on granite. Interstratified beds of chert and chlorite slate are not wanting.

The bedded masses of igneous rock consist, for the most part, of greenstone trap, which in some instances attains the thickness of a thousand feet.

The limestone in different parts of the range varies in thickness from fifty to one hundred and fifty feet, and, wherever seen, is found in contact with quartz rock, or syenitic conglomerate. On Thessalon lake, great mountain masses of quartz, with subordinate masses of jasper conglomerates, appear to underlie the limestone, and at La Cloche, a band from 3000 to 4000 feet rests upon it. The scale upon which these older rocks are here developed, seems almost incredible.

The associated bands are traversed by several systems of dykes both of greenstone and granite, and, at the points of contact, afford numerous evidences of metamorphism and disturbance. They are also intersected by veins more recent in their origin, which contain several forms of the sulphurets of copper, and afford promise of profitable exploitation.‡

* Canada Report, 1846-7, p. 25.

† Report, 1848-9.

‡ Professor Agassiz, in his work on Lake Superior, has described many of the igneous belts and metamorphic rocks which occur on the north shore, and has called attention to the interesting fact that its outlines have been determined in a great measure by these belts. As that work is readily accessible to the American reader, we deem it unnecessary to present the views of the distinguished author in a more extended form.