

ation, that the glimpses which even a very partial examination of its shores affords of some of the phenomena peculiar to them, may not be unacceptable to the members of the Institute. With its wide extent of waters, covering an area of thirty-two thousand square miles, a lengthened period of sojourn in the regions with which it is surrounded, and many facilities for their exploration, would be required, in order to satisfy the curiosity of scientific enquirers in relation to their varied attractions. But even a brief visit discloses much that is highly interesting, and that serves at once to illustrate, and to contrast with what comes under the observer's notice elsewhere. Having employed both pen and pencil in noting several of the most striking features which catch the eye from their novelty, a description of some of them may not be unacceptable in the absence of more valuable contributions, even though trenching on the legitimate grounds of the geologist, with the mere notes of an amateur observer.

The settlers on the shores of the great fresh-water lakes of this continent are cognizant of various remarkable formations, differing from the phenomena with which the dwellers on the sea-coast are familiar. Of one class of such, the peninsula, or "Island" of Toronto Bay, is a striking, though by no means singular example. Similar natural barriers—hooks or spits, as they are termed, according to the curved or straight outline of their extremities—are still in course of formation on Lake Erie, as well as at other points on the shores of Ontario, by the waves and currents, under the action of the winds in certain prevailing directions, wasting away salient points of the coast, and depositing the detached debris on a less exposed bottom. Peninsular barriers of this class are to be met with also on the higher lakes, and constitute indeed a striking feature among the littoral features of Lake Superior. Certain peculiarities, however, distinguish the formations of this class in Lake Superior, from those belonging to the lower lakes; and it would seem as if a special character were traceable in such on each of the lakes. Owing to its uniform shallowness, the waters of Lake Erie appear to differ to a certain degree from those of Lake Ontario—which otherwise it most nearly resembles,—in their mode of action and the consequent results; while both present a striking contrast in these respects to Lakes Huron and Michigan, with their main coast lines running nearly due north and south, and thereby subjected to very varied actions from the same winds and currents. This diversity of aspect becomes still more apparent, when the same forces are found in operation, but the materials opposed to this united action are no longer the loose drift