

the present channel is a narrow and shallow one, excavated through the surface of the loose materials which fill the more extensive ancient channel. In Ohio and Indiana these buried river-beds are of frequent occurrence. The ancient gorge of the Niagara River was filled by the obliterating agency of this continental glacier. For ages and ages the river had patiently labored upon this excavation, as it has since done upon the existing one; but the glacier came with its cubic miles of rubbish, and wiped out the trifling furrow, leaving the surface comparatively level, and making it necessary for the river to begin anew its work when the invading glacier had disappeared. The excavation of lake basins is sometimes attributed to this agency, but these may have been partly the result of subsequent aqueous action. It was probably the force which dug the shores of northern seas into their numerous deep and narrow fiords, as can be seen upon the coast of Maine, and the European and Asiatic shores of the Arctic Ocean. It bore southward, over distances of twenty, fifty, and even five hundred miles, fragments of Northern rocks, some of which are of enormous magnitude. One in Bradford, Massachusetts, is thirty feet each way, and weighs not less than four and a half millions of pounds. A boulder of jaspery conglomerate, weighing about seven tons, was transported three quarters of a mile by the class of 1862, and mounted upon the campus of the University of Michigan, an imperishable monument to their memory and their enterprise. The native home of this huge mass is the northern shore of Lake Huron, where the formation is found in place, and where I have seen detached and rounded masses weighing probably a hundred tons. These fragments have thus been transported over lakes, sounds, and seas. Masses of native copper from Lake Superior are strewn over Wisconsin and Lower Michigan, and have wandered even into Ohio and