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Buried Laurentian Valley. Below the outlet of lake Ontario, the valley is covered to some extent with drift, but the greater part of the barrier closing the lake is rocky. Between Georgian bay and lake Ontario, the writer discovered a. deep buried valley (by a series of borings, for there was no superficial evidence of it, although parallel' to the Niagara escarpment), beneath the great drift ridges intervening between the two waters. The full depth has not been reached, although not less than 750 feet beneath the higher ridges, and it is probably very much deeper, as indicated by the fjords at both ends (in lake Ontario and in Georgian bay); so that here is the connecting valley between the submerged channels of the upper lakes and lake Ontario. The fjords of northern Michigan and the buried channels continue the evidence that from lake Michigan to the outlet of lake Ontario, the ancient Laurentian river flowed partly through the basins and partly across the country north of Toronto. The ancient river is thus named to distinguish it from the modern St. Lawrence river. The connection of the valley of Superior with the Laurentian river has not been determined; but judging from soundings in lake Michigan, we may suppose it to have been by way of the northern end of that valley.*

6. Buried Tributaries. A branch of the Laurentian river, now buried beneath 500 feet of drift, extended from the southern basin of lake Michigan across the Michigan peninsula and the southern end of the Huron basin. This large tributary, which has been named the Huronian river, is of the same age as the Laurenteen river.

Through the Erie basin flowed the now buried and submerged Erigan river. Niagara river was not then in existence. But the Erigan passed from the Erie basin across the province of Ontario to the great canyon at the head of lake Ontario, thus descending to the lower basin.

Many branches and smaller tributaries are known to have joined these greater rivers, as revealed by the borings. In some cases there were no changes in the direction of the ancient and modern drainage. In other cases the streams have locally left the original waterways and again returned to the

*"Origin of the Basins of the Great Lakes," cited before; also "Discovery of the Preglacial Outlet of the Basin of Lake Erie into Lake Ontario," by the writer, Proc Am. Phil. Soc., Philadelphin, 1881.