

the latter case the surface of the lake must have fallen from its place at present lake level at Port Huron, Mich., in Saginaw bay, and at Two Rivers, Wis., to a level 500 feet lower or to within 80 feet of present sea level. Then there had to intervene time enough for about 500 feet of uplifts in the Mattawa-Ottawa region before the Nipissing beach could have begun to be formed. We cannot say positively that this was or was not the course of events. It is a possible alternative. But it seems much more likely, and it apparently agrees better with the Niagara gorge, to suppose that the major part of the Algonquin uplifts occurred during the life of lake Algonquin and hence before the breaking away of the ice dam in the Ottawa valley. In this case when the break came the level of the lake at North Bay was not very much above the pass and the fall to the pass and to the level of the Nipissing beach was not great. But we do not know whether the change was directly to the Nipissing beach, the uplifts ceasing then altogether, or whether there may not have been some slight uplifting at North Bay after the fall to the level of the pass.

The whole subject of the Algonquin uplifts and their relations to the lake history is extremely complex. While a large number of data have been gathered which bear on the questions involved, probably many more will be needed before any decisive conclusion can be reached. But in justice to the subject and to those who have been most closely connected with its study it should be said that the data even now on hand have not yet been fully worked over. An account of submergence phenomena observed at lower levels in the Mattawa and Ottawa valleys will be given in another paper.