

*Chapter 5*

## RETREAT OF THE ICE SHEET IN THE CHAMPLAIN VALLEY

The retreat of the ice sheet in the Champlain valley has been largely obscured by the extensive modification of deposits at low levels through the action of waves and running water. In only one portion of the field was much attention paid in the course of the present investigation to the ice retreat and at no point in the length of the lake am I at present able to state the precise line of ice frontage across the lake valley. The following notes on such localities as chanced to be examined in the course of the search for water levels by no means give a complete account of the recession.

As will be noted from allusions in these descriptions and from the conclusions to which I have been led, a glacial lake appears to have extended northward in the valley *pari passu* with the retreat of the ice front. Still earlier as remarked by several observers there were probably lakes held in along the margin of the ice sheet both on the Adirondack and Green mountain sides. Taylor has given the name of Lake Adirondack to such a body of water whose traces he recognized in the region back of Plattsburg. Probably other similar lakes existed in the upper basins of the Winooski and Lamoyille rivers in Vermont [see pl. 27]. Some or all of these marginal lakes must have later become confluent with or drained into the greater lake which was held in by the ice sheet while its front stretched across the valley from the Green mountains to the Adirondacks.

Mr Baldwin has supposed this front to have been concave northward on account of the melting effect of the water which bathed it. This need not necessarily have been the case, however, provided the rate of the forward movement during the retreat counterbalanced or exceeded at times the rate of melting. My studies on the Mooers quadrangle have led me to an opinion just the opposite of that expressed by Mr Baldwin. All the phenomena in that area show that the ice was "alive" even at this late time in the retreat. It built frontal moraines; it maintained its frontage for some time along the margin of