

Chapter 11

COMPARISONS AND CONCLUSIONS

In the foregoing chapters the local history of the retreat of the ice through the Hudson and Champlain valleys has been presented in its general outlines, with its accompaniment of proglacial lakes of ever increasing length, finally giving way to the invasion of the sea over the Champlain district. It remains to compare certain phases of this history with reference to related data before proceeding to the drawing of such conclusions as appear tenable.

COMPARISON OF THE WATER LEVELS OF THE CHAMPLAIN AND HUDSON VALLEYS

The difference in the aspect of the surface deposits of the Champlain and lower Hudson districts is so great when viewed in the light of a critical diagnosis of glacial and marine phenomena that I am sure one coming from the easily recognized shore line and sea bottom phenomena of the Champlain valley to the mouth of the Hudson would find no equivalent indication of submergence in that district other than that which now appears to be in progress. All of the evidence in the lower Hudson appears to me permissive of a much higher stand of the land thereabouts during and since the retreat of the Wisconsin ice sheet began. But one serious point of difference which has been much discussed by Dr Merrill and myself concerns certain fine silty sands which occasion the tops of bluffs near the Hudson river, ranging in altitude up to 200 feet at least. It has seemed possible that some of this material may have been laid down over the district during a time of late submergence. In such places as I have examined the deposits or where they were examined in company with Dr Merrill, they seemed to me to be involved in the ice-laid drift in such a manner as to indicate their contemporaneity with the melting of the ice sheet in the southern Hudson valley and I have, rightly or wrongly, considered the evidence of the proglacial deltas and terraces with their ice contact borders and their exemption from overlying clays and marks of erosion by standing water as weighing more strongly in favor of the nonsubmergence of this