Chalmers describes small rock fractures of postglacial date in southern Quebec like those above mentioned near Albany, and the same kind of rock movement breaking glaciated surfaces has been reported in New Brunswick by G. F. Matthew.[1] It is evident that the changes of level which have taken place in this region have been accompanied by the local apparently widely distributed faulting of ancient rocks. It is hoped that special investigation of these dislocations in the upper Hudson valley will give data for applying a correction to the local data on which the recognition of the present attitude of the ancient water levels depend.

BEARING OF CHANGE OF LEVEL ON THE DURATION OF THE POSTGLACIAL INTERVAL

The elevation of shell-bearing beds at Montreal on Mt Royal to a hight of 550 feet together with the existence of the ancient marine limit marked by beaches at an altitude of 450 feet near the international boundary on the north slope of Covey hill, affords a basis for the calculation of the time which has elapsed since the marine shore lines were level water lines, provided the rate of tilting and local elevation can be satisfactorily determined. The fact shown in plate 28 and discussed in the preceding pages that an upper water level, apparently of lacustrine nature declines at a rather uniform rate from north to south in the Champlain region makes it evident that the assumption of any given rate of vertical movement e. g. 3 feet a century would be erroneous for all except one point in the elevated district. Far to the north of the international boundary in the Hudson Bay district, Bell has given his reason for thinking that elevation is now taking place at a rate between 4 and 5 feet a century. On the south along the coast at the mouth of the Hudson river, Cook and others have estimated that the coast is now being depressed in relation to sea level at the rate of 2 feet a century; but recent engineering measurements of tidal range show according to Mr George W. Tuttle[2] that at New York city since 1875 the subsidence has been at the rate of 1.45 feet a century. On the contrary from 1853

[1] Matthew, G. F. Post-glacial Faults at St John, New Brunswick. Am. Jour. Sci. ser. 3. 1894. 48:501–3.

[2] See bibliography, No. 148a.