such power as did the waves at the 330 foot level or if they had this strength they acted for a much shorter time at each level. It is to be presumed, when the mouths of the Champlain and the St Lawrence valleys were freed from the ice sheet, that the winds from the north and east would have had a greater fetch and that the glacial lake conditions of the higher water levels would be at once exchanged for more vigorous cliff cutting. It has therefore seemed to me highly probable that this cliff has its base approximately at the marine limit. There is another consideration which supports this view.

It is to be shown presently that the marine limit of this epoch is now tilted more steeply to the south than the shore lines of the earlier water-levels on the south. It appears to follow from the divergence of these ancient water planes, that before the marine invasion was established, the land was tilted down toward the north, thus determining the extent of the submergence; since then the land has risen. The marine action would undoubtedly be longer maintained at the level of the maximum of depression of the shore lines, for there the sinking land halted, reversed its movement and came up. Thus we ought to find, other opportunities being equal, rather decided evidences of wave action at this particular water level, for the land probably stood longer at the marine limit than at any other stage in its movement.

On the basal slopes of Trembleau mountain to the east of the cliff, are patches of beaches with well waterworn pebbles between the bare ledges at about the level of the base of the cliff above described.

There is also a very extensive development of the gravelly and sandy delta of the Ausable just below this level indicative of a longer stage of delta building than is found again below this level. If I am not mistaken Mr S. P. Baldwin has taken this delta to mean the same thing—the local index of the marine limit.

True proportions of the postglacial tilting of the upper marine limit. Lest the reader obtain from the diagrammatic profile of plate 28 an exaggerated idea of the steepness of the tilting of the old sea level in the Champlain valley, let him construct a straight line 1 mm thick having a length of 1196 mm. The thickness of this line will have the same proportion to the hight of