

beaches may now be traced. Such an oscillation of the ice margin as is here merely suggested, undoubtedly took place, and the possibility of it constitutes the weak point in the argument presented in this report in the attempt to fix the upper marine limit.

Such diffused shore lines might be expected to exhibit a trace in the waterworn character of the glacial drift along the belt in which the overridden shore lines were formed, in the case of a temporary and slight advance of the ice, one which, in this field need only have amounted to an oscillation of from 10 to 15 miles.

In this connection, it should be stated that certain peculiarities of the drift before referred to along the western border of the Mooers quadrangle from Deer Pond northward to the English river at Cannon Corners are not inconsistent with an advance of the ice such as is here considered possible. Waterworn drift varying from gravel to very coarse cobblestones with on the whole an unstratified structure and ice-swept contour covers the slope between the 700 and 800 foot lines quite above, however, the latest lake levels of this latitude.

These deposits lie, it should be noted, on the east of Blackman's rock, one of the large spillways of bare Potsdam sandstone, only the northern extremity of which appears on the map. It has seemed to me that the waterworn materials are to be ascribed to stream action contemporaneous with the position of the ice front along this line rather than to the involution in the drift of an earlier beach deposit formed at a higher stand of the sea than is advocated in this report. The fact that there are no clear traces of such smudged beaches around the Covey Hill slope has confirmed me in the belief that this objection to the accepted marine limit has in this case no clearly observed facts upon which to rest.

A second objection to the view that the higher beaches in the Champlain district are of lacustrine origin may be raised from the fact that along the slope of the Adirondacks the lowest shell-bearing layers of the marine series, as at Mooers on the Big Chazy, and Freydenburg's Mills on the Saranac, are found resting directly on the boulder clay without intervening nonfossiliferous beds or those bearing nonmarine fossils attributable to the deposits of a lake. The absence of lacustrine deposits in these two localities in the northern part of the area can