thus presenting points of resemblance to the sections on the coast which I have described between Berwick-on-Tweed and the mouth of the Humber. These sands and gravels which contain sea-shells have been named by these gentlemen 'Middle Glacial.'

The Upper Glacial Boulder-clay has been called by Mr. Wood and Mr. Skertchly the great Chalky Boulder-clay, from the circumstance that it chiefly consists of chalk, ground up by an advancing glacier travelling from north-east to south-west, the chalky and flinty débris being sparingly mingled with fragments of Oolite, quartz, basalt, granite, &c., sometimes smooth and striated. Though chiefly formed of chalky material, yet when found lying on Kimeridge Clay it is found to be mingled with the detritus of that formation, and when it reaches the Oxford Clay, all three are intermingled. The Boulder-clay lying on each formation that lay under the glacier ice-sheet, which was invading the country from north to south, always partakes of the nature of the underlying rock, and the total area occupied by this chalky Boulder-clay must, according to Mr. Skertchly, have been more than 3,000 square miles in the south-east of England. If, however, this supposed glacier extended as far south as Romford, where there is Boulder-clay with scratched chalk-flints and masses of Oxford and Kimeridge Clay, then the area covered by the great Chalky Boulder-clay and its southern continuation instead of 3,000 square miles must have covered 9,000 or 10,000 square miles of ground.

It must now be evident to the reader, that on the east coast of England, and on the adjoining ground in the interior, there is no want of evidence of a cold episode or of episodes when snow and glacier-ice largely