

to distinguish from that *marine drift* which, at equal levels, covers so much of the country further south.

There is often great difficulty in distinguishing between these latter moraines and the great masses of moraine-matter that were formed during that earlier period when the northern ice-sheet covered the greater part of Britain, and which undoubtedly were not terminal, but actually lay under the ice—*moraines profondes*, as they have been termed by French and Swiss geologists. Neither is it always easy to distinguish between this 'Till' and the marine glacial drift when shells are absent, for the plains of the latter melt into gentle slopes of glacial débris that pass far up the valleys, and on the hill-sides over many high watersheds.

One reason for this difficulty is that, in certain stages of the history of the period, the larger sheet or sheets of glacier-ice covered the hills and filled the valleys so thickly and completely that, pushing out to sea, they even excluded it from parts of valleys that were at a lower level than the sea itself; and moraine-matter thus got sorted and mingled with other marine deposits. This partly accounts for the gradual merging of those marine gravelly mounds, called Kames or Eskers, into Boulder-clay and true moraine heaps full of ice-scratched stones. The Eskers themselves are often largely charged with water-worn stones originally well ice-scratched. These glacial scratchings have since been almost entirely worn away by friction, the stones having been rubbed against each other by moving water. The mere ghosts of the original sharp scratchings now remain.

The foregoing sketch of the Glacial epoch is of much importance in a geological point of view, more especially because of the pictures we get of phases of a