

These rocks have a strike parallel, approximately, to the length of the lakes, the dip being to the south, and changing to eastward at the southern end of the lake, with an angle varying from 4° to 10° . The lower beds resting unconformably on the gneiss, at the western side of Lake Mistassini, are made up of a dark bluish-grey limestone, holding concretionary masses of dark blue chert, with thin bands of black argillaceous shale. Above this are thin beds of light blue fine-grained dolomitic limestone, weathering yellow, interbedded with thin layers of a greyish, coarse, gritty limestone, containing large quantities of sand. Next, a ten-feet bed of massive light blue, pure limestone, very compact and hard. This rock is traversed by deep vertical cracks, probably due to the action of frost. Overlying this bed are thinner ones of the same character, intermingled with beds of coarse, grey, silicious limestone, full of grit.

The top layer is a limestone conglomerate, made up of limestone pebbles embedded in a sandy matrix.

The thickness of the whole series does not exceed one hundred feet.

Although closely examined, none of the above beds gave any evidence of fossil remains, the supposed fossils found by Mr. Richardson having, on closer examination, proved to be only mineral concretions.

SUPERFICIAL DEPOSITS.

Owing to the absence of any considerable elevations near the sea coast, and to the shallow valleys cut by the rivers, but little information was obtained relating to the drift deposits.

Where good rock exposures occurred, they were generally formed by having the usual covering of vegetable matter burnt away; and the heat occasioned by this, along with subsequent rains, has been sufficient to obliterate any traces of glacial striation. Thus the direction of the drift can only be arrived at by a study of the travelled boulders. In the vicinity of Lake Mistassini, no rounded boulders of limestone were met with in directions to the east and north-west of the lake, and the probability is that the drift there was from north-east to south-west. On the Peribonka River, boulders of green chloritic and epidotic rocks were seen. These are supposed not to have come from the rocks of Lake Wakiniche, but from a similar patch of Huronian rocks, which, I am told, occurs near the head-waters of the Outard and Maniquagan Rivers, to the north-east of the place where the boulders were seen.

No exposures of boulder-clay were seen, although the surface of the whole country is thickly covered with rounded, travelled boulders, both great and small, showing the action of ice.