

In the neighbourhood of St. John's the drift-covering is noticeably full of such stones. Similar material covering the country may also be seen in many other parts of the Avalon peninsula, where we have good sections of an unstratified clayey base, containing both pebbles and boulders.

Further to the north Mr. Murray has observed these superficial deposits occurring on a much larger scale. In Little Bay, near Terra Nova Mine, he has noted deposits consisting of "probably fifty or sixty feet of stratified clay, gravel, and sand containing modern marine shells at the height of about 40 feet above high-water mark."

In Hall's Bay, up Indian Brook, he also noted stratified deposits of clay, "which is sometimes of a reddish and sometimes of a drab or bluish colour." Although these stratified deposits appear to show a divergence from what has hitherto been observed by Packard and others in the neighbouring mainland of Labrador, they show considerable relation and similarity to observations which have been made further up the valley of the St. Lawrence in Canada. It would seem that at no very remote period Newfoundland has been almost if not entirely subjected to the action of ice. To this fact the rounded hills, the basin-shaped hollows, the scored rocks, the erratic blocks and the immense coverings of drift, all bear testimony; but the mode in which all these phenomena have been brought about is a matter so speculative that I shall refrain from doing more than indicating a possible manner in which they may have occurred, rather than attempting to give any definite solution to such an obscure enigma.

*Conclusions.* — The general conclusions which might appear naturally to result from a consideration of observations made by myself during two summers travelling in the island, and also those made by other geologists, are as follows :—

If Newfoundland has been steadily rising during past ages, as it now appears to have done at no very remote geological period, it may have been beneath the surface of the ocean. During the period when it was undergoing elevation, no doubt a considerable amount of debris and boulders were dropped by icebergs over its surface when the Laurentian backbone, which would be the first land to emerge, reached the surface, it formed a barrier for the coast-ice which would carry its load of boulders and strow them with those of the bergs. This latter, as will hereafter be shown, might to some degree have been influential in giving a definite character to the rising area. After the final emergence the climate of Newfoundland might still have been a cold one, and the same highlands which gave birth to coast-ice, probably next gave birth to glaciers which scooped and hollowed out a great portion of the remaining marine drift, and left the island with its present contour. After the raising of the great North-East and South-East ranges, first coast-ice flowed East and West, and afterwards the glaciers followed in a similar direction, and thus perhaps the origin of the boulders, those which are so curiously perched being due rather to the latter than to the former. Thus it would seem that icebergs and coast-ice pre-