

sheet, when it so happened that the cold of that region became most intense.

Assuming this theory to be true, the old glacier must have reached the plateau of Romford that overlooks the valley of the Thames, and the low country on the coast of Essex, near Southend. One serious difficulty to its acceptance occurs in the fact, that on the coast-cliff near Lowestoft there are beds of Boulder-clay which overlie thick strata of soft false-bedded sands with gravel, *and these sands lie apparently quite conformably and undisturbed beneath the Boulder-clay.* If the latter was the *ground-moraine* that underlay a heavy glacier pressing southward, it is hard to understand why the sands show no signs of pressure and glacial erosion. Neither is it necessary to suppose that glaciers are always needed for the production of ice-polished surfaces of rock and for the making of Boulder-clay, for, as shown by Professor H. Youle Hind, the formation of both on a large scale is now and has been for long in progress on the north-east coast of Labrador, through the agency of 'Pan ice,' which 'is derived from Bay ice, floes, and coast ice, varying from five to ten or twelve feet in thickness, all of which are broken up during spring storms.' This broken ice is pressed on the coast by winds, 'and being pushed by the unfailing Arctic current, which brings down a constant supply of fice-ice, the pans rise over all the low-lying parts of the islands, grinding and polishing exposed shores,' and removing 'with irresistible force every obstacle which opposes their force . . . and the masses pushed or torn from those surfaces . . . are urged into the sea and rounded into boulder forms by the rasping and polishing pans.' Here, too, goes on the process of manufacturing Boulder-clay, for the deep hollows and