

in 38 and 45 fathoms it was 52° F. The Southern basin not only lies in a lower latitude, but is much shallower and has a bottom largely composed of sand. Apart from these circumstances, the natural flow of the warm Michigan surface waters is towards and into this basin before their final entrance into the St. Clair River at Sarnia. On the other hand, the tendency of the colder Superior waters constantly flowing into the Central basin and modifying the warm surface waters from Lake Michigan, is to maintain a somewhat lower temperature in the depths of the Central than in the lesser depths of the Southern basin.

In their main expanse, Lake Superior and the Georgian Bay thus constitute in midsummer, great bodies of colder water, whilst the Central basin of Lake Huron in its greater depths also forms a reservoir of cold water, but tempered by the warmer inflow from Lake Michigan.

Lakes Erie and Ontario are, on the other hand, warmer lakes, consequent on their geographical position, their affluent streams from the south and south-west, and the necessarily higher temperature of the larger volume of waters which have flowed over the great shallows of Lake St. Clair before reaching Lake Erie.

Records of observations made by myself during this last summer near the outlet of Lake Ontario, and in the St. Lawrence and other rivers, and by Staff-Commander Boulton, R.N., during last and previous seasons in the Georgian Bay, appear to establish some interesting results which are here appended. It is not assumed that these results are new, but they exemplify some characteristics of fresh water in the great masses in which it occurs in the Canadian Great Lakes and rivers, and under the varying conditions of climate which the geographical position of these lakes and rivers presents.

The instruments used in my observations were:—for surface readings, Negretti & Zambra's Reference Thermometer with Kew corrections, and, for deep water, the same makers' Patent Marine Thermometer, carefully compared with standard instruments. Staff-Commander Boulton's