

seas. Lakes Superior and Michigan may be regarded as two distinct reservoirs—the former of cold and the latter of warmer water—which constitute the largest sources of supply for the lower Great Lakes. Hind found the surface of Lake Superior on 30th July, at noon, as low as  $39.50^{\circ}$  at fifty miles from land. The outlets of these two lakes into Lake Huron are close to each other, the Michigan waters flowing directly into the main basin of Lake Huron, and the colder waters from Superior, while joining them in part through the detours between the Manitoulin Islands, appearing in part also to find their way eventually to the Georgian Bay by the channels north of the same islands. Now, Lake Huron in its profound depths forms three great basins—the Georgian Bay, the Central and the Southern Basins. The Georgian Bay is separated from the Central Basin, not only by the Bruce Peninsula, but by a continuous sub-aqueous ridge which comes to the surface in islands at different points, whilst under water it presents on the one side bold precipitous cliffs facing the Georgian Bay, and on the other, shelves somewhat gradually towards the deeper waters of the Central Basin. This ridge prevents the free interchange of water between the deeper portions of the Georgian Bay and Lake Huron proper, and makes the former a somewhat isolated basin of cold water without any considerable free current of warmer water flowing into and through it. This isolation aids in retaining in the Bay the colder waters which have accumulated there during the winter months. Thus, whilst the surface in July and August may be as high as  $65^{\circ}$  F., the bottom temperature at 31 fathoms and upwards, varies between  $39.5^{\circ}$  and  $37.75^{\circ}$  F.

The Central and Southern basins of Lake Huron, on the other hand, are separated by the sub-aqueous coniferous escarpment which diagonally crosses the lake in a south-eastern direction from the outlet of Lake Michigan, and which also appears to have its effect on free circulation between the deeper waters of these two basins. In the Central basin, at the bottom in 65 fathoms the temperature in July was  $42^{\circ}$  F., whilst in the Southern basin at the bottom