

north shore. That the mud of Red River pollutes the waters of this lake for a distance of almost 100 miles is evidence of the exceedingly fine condition of the suspended clay in that river.

The island is about 15 miles in circumference and presents a more or less irregular shape. Irregularity of coast line is quite characteristic of these islands whose shores show exposures of limestone in thin layers.

Having spent four days on this lonely spot ample opportunity was afforded to examine the rocks along the coast. On the south side of the island very little solid rock is in view, but immense piles of shingle form a sort of breakwater along the shore.

These fragments of stone are of all sizes from five inches long to small pebbles; the embankment extends for forty yards inland and is fully ten feet high. It shifts with every storm; at one time a large portion of it is forced along the shore and heaped into immense piles at one spot, where it remains until another storm sweeps them along to another on the coast. The whole barrier of shingle never disappears entirely but the greater part changes its position. A short time before my visit a violent storm occurred, which had shifted much of the shingle westward along the south shore. Behind this wall on the south-east side, is a large swamp, which no doubt accounts for the common name given the place; the water of this is influenced by the rise and fall of that in the lake, which shows that the centre of the island is about the same level as the lake. Sometimes during a storm the water in the swamp rises quite rapidly and subsides as soon as the wind falls. It is evident there is communication between the lake and swamp through the porous bank of shingle. Passing around to the north-east you find solid rock which at this point reaches the surface but farther inland it is buried beneath the shingle. The rock is in thin layers as observed at Black Bear Island. This explains how such great piles of small, circular, flat stones, (shingle) are formed. The upper thin layer becomes attached to the ice during the winter; when spring returns the floating ice lifts this and pushes it to the shore. Should a storm occur at this stage, one can readily understand how this large thin section of rock may soon be dashed to pieces and afterwards by the lashing of waves be gradually broken up and rounded into the shingle of the heaps that line the shore. It may be remarked here that the water in many places along the shore