

mile. It is unfortunately unprotected from southerly and southeasterly winds. If obliged to anchor in this bay, vessels should lie in close under the eastern shore where a small cove makes in, affording good shelter from easterly and southeasterly winds.

Tides.—It is high water, full and change, in Machias Bay at 10h. 47 m. Mean rise and fall is 18 feet.

Little Machias Bay.—Just to the eastward of Machias Bay, and separated from it by a promontory averaging about $1\frac{1}{4}$ miles in breadth, Little Machias makes in about $2\frac{1}{4}$ miles to the northward. Its breadth varies from $\frac{3}{4}$ mile at its mouth, to $1\frac{3}{8}$ near its head. It is of little importance, although it has good water, as its navigation is rendered dangerous by the ledges and rocks off its mouth, and it is open to southerly and southeasterly winds. The entrance lies between Dennisons Point on the east, and Davis Point on the west, but the channel is much obstructed and very unsafe for strangers. When in the bay the best anchorage will be found on the western shore in from 2 to 5 fathoms, but it is unsafe ground on account of being open to the southward.

Ice.—Little Machias Bay is usually closed to navigation during the winter, and in severe winters remains closed from December to April. For ice in Machias Bay, see "Ice in Englishman Bay."

Little River.—Two miles to the eastward of Little Machias Bay lies the entrance to Little River, which forms one of the best and most frequented harbors of refuge between Englishman Bay and Eastport.

The Coast between Little Machias Bay and Little River runs in a general ENE. and WSW. direction, and is generally high, rocky, barren, and steep-to.

Little River has a length from its entrance to the head of the river of $1\frac{1}{2}$ miles, having a general westerly direction, but is navigable only to the town of Cutler on its northern bank and just above its mouth. It affords excellent anchorage for vessels in all winds, in from 2 to 5 fathoms, with a bottom of stiff gray mud.

Little River Island lies in the middle of the entrance to Little River. It is small and rocky, and is covered with a thick growth of stunted fir.

Little River Entrance lies between Eastern Knubble on the north and Little River Head on the south. There are two channels; one between Eastern Knubble and Little River Island, called the Main Channel, and one between the island and Little River Head called the Western Channel. The latter is shoal, but has no obstructions.

Eastern Knubble is a high, precipitous, rocky head, covered with a few spruce and fir trees. To the eastward of it will be seen a high, square, tower-like head, called Great Head, which is a good landmark if approaching the coast in thick weather and the light-house can not be seen.

Little River Head, forming the southwestern side of the entrance to Little River is of moderate height. With the exception of its northern