

*St. Croix Bar.*—Tide tables were again computed for this locality, which has been the shallowest point in the St. Lawrence above Quebec. These tables are published in company with the tide tables for Quebec, by the Montreal Harbour Commissioners, in the publication they prepare annually for the information of the St. Lawrence pilots. The new information regarding the tides and currents of the Lower St. Lawrence was also supplied in a condensed form for this publication. The deepening of the ship channel through this bar being now completed, the next shallowest point is at St. Augustin bar, for which tidal data are also computed.

*Charlottetown, Pictou and St. Paul Island.*—These tide tables have the same character as last year, and they again include the whole twelve months. A distinct improvement in the accuracy of these tables was obtained from the observations taken in Northumberland Strait during the season of 1901. The tidal relations of Charlottetown to Pictou, and of Pictou to St. Paul Island, have thus been better determined; and also the tabulation of the tidal record from St. Paul Island itself, which was submitted to analysis, is of direct benefit to this set of tables, as they are dependent upon it as a principal station.

The time of high water for Charlottetown, taken from these tables, has been published a month at a time by the *Patriot* and the *Examiner*. The tide tables for Pictou have also been published in full by the *Advocate* one month at a time, accompanied by the tidal differences for the dependent places in Northumberland strait.

*Summerside, P.E.I., and Yarmouth, N.S.*—Tide tables for Summerside were calculated for the eight months from April to November and supplied to the *Summerside Journal*, in which they were published one month at a time, with due acknowledgement to this Survey. These tables are based upon the observations which were secured at that port itself in 1901. The tide tables for Yarmouth are computed from St. John, N.B., by means of the difference in time already determined by this Survey. They are published in the *Yarmouth Times*.

*Tadoussac, Cacouna and Little Métis.*—Tide tables for the months of July, August, and September were again computed for these seaside resorts to meet the demand of the summer residents and tourists. These tide tables were prepared in manuscript only and posted at the leading hotels.

The tide tables for the five places last mentioned were all prepared by some extra work, without incurring expense or the cost of printing.

#### CABOT STRAIT.—TIDAL COMPARISONS.

*Summary of Results for Cabot Strait, between Cape Breton and Newfoundland.*—One of the principal tidal stations is at St. Paul Island in the middle of this strait; and the endeavour was first made to obtain comparisons with Sydney harbour and Port aux Basques on the two sides. The tide at Sydney has so unusual a character, with large secondary undulations, which are often one-third of the height of the main tide, that it was quite unsuitable for comparison with St. Paul Island. After one complete month was secured at Sydney, the gauge was removed to Neil Harbour, a point on the Atlantic side of Cape Breton Island, as near to its northern extremity as practicable. It was distant 30 miles from St. Paul Island to the westward; while Port aux Basques, which is close to Cape Ray, at the south-west angle of Newfoundland, was distant 52 miles to the eastward. The clear width of the strait is 66 miles.

St. Paul Island is the principal station to which the tides on the south-west side of the Gulf of St. Lawrence and in the region of Northumberland strait are referred; and the immediate object of the comparative observations on the two sides of Cabot strait, was to see whether a sufficiently constant relation could be established with St. Paul Island to enable either of these localities to be used to replace it as a reference station for the regions above referred to. The extreme exposure of St. Paul Island makes the gauge unusually liable to accident; and once already it has been carried away, and twice afterwards it was partially wrecked by winter storms.

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