

Magdalen Islands, however, although it was placed on their eastern side, it soon became apparent that the tidal wave had already lost its full range in the expanse of the Gulf. A careful examination was therefore made to find if possible a position on St. Paul Island sufficiently sheltered to protect a gauge from destruction. The sheltered site at which the gauge now stands, was eventually discovered; and observations in Cabot Strait itself are thus being secured.

On the main line of the progress of the tidal wave from St. Paul Island to Quebec, a distance of 650 miles, the intermediate tide stations which have been selected as most suitable are the Southwest point of Anticosti Island, and Father Point. These two points have the following important advantages: They are near to the edge of the main channel above described, which traverses the Gulf; and they are similarly situated with regard to it, as they are both within six or eight miles of the 100-fathom line; they are both situated on the open coast, where they are unaffected by such local conditions as might exist in a bay or inlet. On these grounds they are admirably adapted to follow the progress of the tide and serve as reference stations. The only position that can claim superiority to Father Point as commanding the mouth of the St. Lawrence, is Point de Monts on the north shore; as this stands more truly at the dividing line between the river and the Gulf. Against this, however, Father Point has the practical advantage of being the Pilot Station, where direct information regarding tides and currents is of the first importance and can be made immediately available.

In this chain of tidal stations an important region is still omitted. The line of the main channel across the Gulf from Cabot Strait to Gaspé, is very direct with only a slight bend to the northeast in passing the Magdalen Islands. This main channel thus forms the deep-water edge of the large semi-circular bay of comparatively shallow water, which is bounded by the wide sweep of coast from Gaspé along New Brunswick to Cape Breton, and in which Prince Edward Island lies. The depth of water throughout this bay averages only about thirty fathoms; and the tidal wave has to pass over an extent of about 200 miles of this shallow water to reach its shores. It is therefore most important to establish at least one tide station somewhere near the centre of the sweep of coast which bounds it. The position we would recommend would be in the vicinity of Miramichi Bay; as this is the point farthest removed from the deep water and from the tidal entrance at Cabot Strait. The tide gauge now on the Magdalen Islands will give, in a comparatively short time, a record sufficient to establish its tidal difference from St. Paul Island; and it can then be utilized for the more permanently important position at Miramichi. This change may therefore be made with advantage before the end of next season.

At Father Point the erection of the tide gauge was only begun, up to the beginning of the present winter, when the ice stopped further operations. It is a position which presents much difficulty, as the gauge has to be placed above high-water mark to prevent it from being carried away by the heavy ice which drifts up and down the river with the tide. This necessitates the excavation of a trench 280 feet in length across a foreshore of shale rock to lead the tide to the gauge. On account of these difficulties the wharf at Rimouski, some six miles distant, was examined before the work was commenced. The dredging of the silt to deepen the water at this wharf has caused it to settle, and there is no certainty that further settlement may not take