

to find, that there was not only no reason to find fault with their determination, but that their latitude, and also the meridian distance from Halifax, is the same as ours, within two or three seconds of space. About two miles of the West end of the Island have been washed away since they observed in 1828; and this reduction of the Island, and consequent addition to the Western Bar, is reported to have been in operation at least since 1811, and seems almost certain to continue. A comparison some years hence with the present survey, can alone show precisely the amount of waste in any given time, the correctness or otherwise of the reported shifting of the Bars, and of the opinion that the Island is insensibly becoming narrower, &c. All agree that there has been no material change in the East end of the Island within the memory of any one acquainted with it, a circumstance of importance with reference to the selection of a site for a light house, the utility of which I now proceed to consider.

The Western Bar can be safely approached by the lead from any direction, with common precaution, and the West end of the Island, wasting continually by the action of the sea, furnishes only an insecure site; I have therefore no hesitation in thinking a light there unnecessary for the general purposes of navigation, whilst at the same time I admit the correctness of the opinion, that a light at the West Flag Staff or Principal Establishment, would be highly useful to the Colonial vessels and fishermen that frequent the Island in annually increasing numbers. The length of the N. E. Bar has been greatly exaggerated, but it is still a most formidable danger, extending fourteen miles from the Island to the depth of ten fathoms, and thirteen miles to six fathoms,—all within the last named depth being a line of heavy breakers in bad weather. Not far from the end of this Bar, the depth amounts to one hundred and seventy fathoms, so that a vessel going moderately fast, might be on the Bar in a few minutes after trying in vain for soundings. This Bar, moreover, is very steep all along its north side, and is, on these accounts, exceedingly dangerous. The reduction of this Bar from its reported length of twenty-eight miles to its real length of fourteen miles, will greatly lessen one of the objections to a light on the East end of the Island, which can be plainly seen from the end of the Bar. It is true that almost all the vessels wrecked upon the Island have come on shore in fogs, when a light could not have been seen; but, on the other hand, I was informed of two or three instances in which vessels have run ashore in clear weather, under circumstances which render it almost certain that a light might have saved them. The people of the Island frequently see mail steamers, passing the Island, as well as other vessels, which, from their distance, were probably unaware of their proximity, and it is therefore probable that a light would be useful in such cases. There remains the objection, that a light might induce vessels to be less careful in avoiding the Island, but, upon the whole, I am of opinion, that a light on the hill which, in anticipation, has been named the light house hill, would be more useful than otherwise; for if it prevented only one considerable wreck in three or four years, it would more than compensate for the expense of its erection and support. I must not omit to inform you, that there are occasionally brief intervals in the fog, in which a light might be seen by vessels in the vicinity of the Island; and it is not improbable that some of those that have come on shore in fogs, might have been previously warned of their danger had there been a light on the Island, and especially if there had been a heavy gun fired at intervals. Nevertheless, the question whether the utility of a light on the Island, for the general purposes of navigation, is such as to render its erection expedient, is one which I submit to your superior judgment, after laying before you all the information respecting it, which I have been enabled to collect.

I have, &c.

(Signed)

H. W. BAYFIELD,

Captain, Surveying the Gulf St. Lawrence.

Scattari Island.

This Island, in length about six miles, and varying in breadth from one mile to three-fourths of a mile, lies off the south-end side of the Island of Cape Breton, and previously to the erection of a Light House thereupon, was the scene of frequent and many most disastrous shipwrecks. Between the Island and the main is a channel known to coasters as the *Tickle*, the width very nearly two, or quite two miles, and the water of sufficient depth to make it a convenient and safe passage for the coal-droghers, who, by