

Pictou, Sept. 16, 1852.

Dear Sir

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As agreed on when at
Amherst, I visited the submarine forest
near that place, in company with J. Chan-

Mer by on Wednesday Thursday 9th inst.
I found it much more interesting than I
had anticipated, and regretted that you
could not visit it. I shall by however
to describe it as clearly as I can.

It occurs at the extremity of Fort Lawrence
ridge, between the mouths of La Planche and Mijsa-
quash rivers, on a gently sloping shore beyond the outer
margin of the marsh. The edge of the marsh, which
is here thinly covered with salt grass and *Salicornia*

cut off perpendicularly by the tide, presenting a front of
five feet in height. Below this ~~is~~ a
sloping expanse of red mud, the more recent layers
of which had been much cut away by the tide,
and presented, in consequence of frequent partial de-
positions and reconstructions, curious examples of false
stratification on a very small scale. On the surface
of this mud I saw numerous of rain drops, sun-cracks,

trunks of Sandpapers and Crows, and abundance of shells of *Sanguinolana fusca*. There were also a few long straight furrows, which I was told had been produced by the ice last spring. They had been covered by 3 or 4 inches of new mud, most of which had been again washed away by the tide without changing their form.

At the distance of 32.6 paces from the abrupt edge of the marsh, and about 25 feet below the level of the highest tides which here rise in all about 40 feet, I saw the first of the stumps, which occur at the commencement of a belt of sand and gravel with occasional large stones, which intervenes between the mud to be mentioned and the level of low tide. Beyond the first stump ^{and also prostrate trunks} others were seen to be irregularly scattered, as in an open wood, for 135 paces, and they extended on either side as far as they could be distinguished. Probably 30 or 40 may have been in sight at one time. Between the lowest stump seen and the water level there was a space of 170 ~~paces~~ paces in which no erect stumps were seen, though there were scattered fragments of roots and trunks.

On digging around and under some of the stumps, they were found to be rooted in a soil having all the characters of forest soil, but covered in places by an uneven layer of tenacious blue clay with some grass roots,

and which was probably deposited around
the stumps during or after their submergence.

In one place the soil was a reddish sandy
loam with small stones like the ordinary
Amherst upland. In another place the
soil was black and peaty resting on greyish
sand. All the rootlets of the stumps were
entire and covered by their bark, and the
appearances were perfectly conclusive as
to their being in the place of their growth.

I brought away specimens of several
of the stumps. Most of them are pine,
but two are beech, and it is worthy
of note that these are trees indicative
rather of dry upland ~~rather~~ than
of swampy ground. The pine stumps
are quite sound, though somewhat softened
and discoloured at the surface. The beech,
on the other hand, though retaining much
of the appearance of sound wood in the
interior, is quite carbonised at the surface,
and is so soft and brittle that it can
be easily cut with a spade, and that

thick trunks can be broken across by a slight blow. Owing to this, the beech stumps are worn to the level of the mud, while some of the pines project to the height of a foot. Even these last however are much worn and crushed by ~~strong~~ the pressure of the ice. The largest stump observed was a pine 2 ft 6 inches in diameter, and showing more than 200 rings of growth, though part of the outer surface was wasted away.

I was informed that similar appearances are observed on the opposite side of the La Planchette, and the occurrence of Pent and trunks and stumps of trees under the marsh, appears to be a fact commonly observed not only in the marshes near Anshurst, but in those of all parts of the Bay of Fundy.

The amount of subsidence required to account for the appearances above described, must have been at least 30 feet, and