

Bairn

Sept 1857

North River P. E. Island.
Sept. 12th '57.

To Sir W^m. Dawson—

Dear Sir,

I beg to thank you for the 20 copies of the paper on "Geology and fossil plants of P. E. Island"; and also for the trouble which you have so generously taken in this matter. Ought I not to bear some of the cost of publication?

Referring to Trilodendron, I have a silicified stem apparently of this class, though the markings are something indistinct, as is usual in large stems. There is no trace of a dadoxylon pith though well silicified to the centre, and the wood

is of a peculiar structure which causes it to break up into splinters lengthwise with the grain. I may say that all the silicified wood which I have found on St Peter's Island is of this character, except the stems of *Xinoria*. I will send you a bit of this wood.

I am disinclined to consider *Phylodendron* synonymous with *Walchia* from the following considerations: The naked stems of the two have a different appearance in outline; the leaves of *Walchia* are small and crowded, the leaf-bases of *Phylodendron* are large and comparatively distant; and the leaf-bases of *Phylodendron* increase their distance vertically as they approach the apex of the stem, while this is not observed to be the case in *Walchia*.

I am much pleased to have your opinion expressed in regard to the bearing of the fossiliferous evidence on the age of our Island formations. The mixture of Permian and Triassic forms makes quite a tangle. It will require a good deal of work to draw a definite line of distinction between the two.

You well remark that the Permo-carboniferous here may be the representative of the fern and asterophyllite zone of Europe. We have many ferns from Whimnigosh and St. Peter's Isd. is a perfect fern bed, though the foliage has not been preserved in the coarse strata.

Did *Walchia* shed its branch-lets like leaves? I have seen slabs ^{of rock,} covered with these detached branch-lets, thick as fallen leaves.

Very truly yours,
Francis Bain