

Boston

Frederickton - Feb^y 2nd 86

Sir J. W. Dawson L. D. D. &c.

President of Geological Section, Royal Soc. Can.

My dear Sir William

Your communication of
13th inst. was duly received, and in reply I may
say that I fully concur with you in the
desire that special effort be made to give
to the next meeting of the Royal Society, and
especially to the Geological Section of it, re-
newed and increased interest. I could not
but feel that the showing of the last meeting
was less than it should be, and felt that
I was myself blameworthy in having so little
to offer, and that little too in an incomplete
condition. But you will readily understand
that where one is called upon, as I am, to de-
vote the larger part of my time to teaching,
and not to the teaching of one subject only
but rather a dozen, there cannot be very much

time for original investigation. Add to this the troubles through which our college has been passing during the last twelve months, and the cares incidental to the management of a large family, and you will perhaps not think it strange that I have not been able to do much new scientific work.

But it is not my wish so much to excuse shortcomings in the past as to say a few words about the future. You may perhaps know that during the last two summers I have been engaged, in connection with the Survey, in the study of the Upper Silurian rocks of the upper St. John river valley, and that in connection therewith collections of fossils were made by Matthew and myself, indicating the existence in the Beccagnimie region of two well marked and unconformable formations - the one of about the age of the Lower Helderberg or possibly Niagara - and the other that of the Trenton. In connection with these are found also in the same region beds which are evidently Lower Carboniferous - as well as others, holding Psilophyta - regarded and mapped

by Mr. Ellis as Devonian - Being anxious to make out if possible the true relations of all these beds I was led to extend my work across the boundary and to re-examine the interesting district about Lake Sedgewick described by Packard, and from which such interesting collections of fossils were collected and examined by Mr. Bellings. As I had expected I found them almost an exact counterpart of the Beccaugenic beds, but whereas Packard and Hitchcock were led to regard them as belonging respectively to the Silurian and Devonian, my own observations tended to show that in both cases the rocks were rather Cambro-Silurian and Silurian, the Devonian (if present at all) being confined to a few areas of conglomerate. From this point I next passed to Lake Temiscouata, searching as before for the base of the Silurian - and was then led to review on the ground the detailed section given by Sir Wm Logan in the Report of 1863. Here once more I found the rocks presenting remarkable resemblances to those of the Beccaugenic and of Squan Lake, but while

The bulk of the beds constituting Mt. Lennox were evidently Silurian and abounded with fossils, the lower beds of the same mountain, referred by Sir Wm. to the same group, were found repeated on the west side of the Lake and all along the Temiscouata road all the way to Riviere du Loup in a region always regarded as of the Quebec group. The further to complicate matters we found on the shales of the Cabano the remains of plants, ^{which are} apparently Calamites, resembling *C. transitorius* of the Carleton beds, and you will remember that all these Temiscouata rocks were first regarded as Devonian. Finally the observations of Mr. Ellis further eastward, as detailed in his last report, seem to indicate that much if not the whole of the Caspé limestone is likely to prove to be Devonian as well.

To conclude I have thought it well to review these several points, and though our observations have not yet been sufficiently extensive to remove all doubts, to at least indicate the desirability of a careful revision of the Temiscouata section. On this work I am now engaged, and should you think it suitable for the meeting I shall make every effort to have

it completed in good time. In the mean-
while I should be glad to have your
opinion as to the supposed Calamite referred
to above, and therefore forward to you a
specimen by mail - together with another
containing small brachiopod shells. These were
not obtained from precisely the same beds
but from ^{what} I believe to be parts of the same
group. Any views which they ~~are~~ or the
remarks above made may suggest, would
be highly valued.

And with all kind wishes to Lady
Dawson as to yourself - I am

my dear Sir

Sincerely yours

L. M. Bailey