

Saint John N.B.
16 Mar 1882

My dear Sir

At length after many delays I have found opportunity to examine the Paradoides collected within the last two years from the Saint John Bed, and find a much greater variety of species than I had anticipated. There are at least nineteen species within the Saint John Basin, varying very much in size and characteristics, from one a foot long to the smallest which probably was not more than an inch. There are

quite a number of groups viz.

1. Hemispherical Bead, ^(with glabella) 3 species

P. micinae, of Academic Zoology falls here.

2. Cyrtiform heads ^(glabella) - 3 species, I send you a specimen of one of these - a little crushed and not complete but as good as any I have of that kind.

3. Mitriiform heads ^(glabella), 3 species

4. Spreading heads (to the glabella) 3 species one a foot long - This group contains the largest species

5. Clubshaped glabella 3 species These are small species

6. Bonneted Head (to the glabella) 2 species These are quite small. Billings' P. tenellus is of this kind.

7. Besides the above there is another small species with furin test, and Harter's P. lamellatus.

I am now preparing wood-cuts and short descriptions of these species all of which, except Harter's two, are new to America and I have no Bohemian forms like them out of a few in my coll.

2

that came through the ordeal
of the fire. I am desperately
in want of books on the European
forms, but I very much incline
to think the great majority of ours
are new. I have black leaded
the surface of your specimen
(which I send by post) as this
marks it more distinctly, and makes
the surface markings more distin-
guishable. If you do not like it it is
easily rubbed off. I have just received
from Dr. Geo. Lawson, and accepted
an invitation to become a member
of the new Canadian Scientific
and Literary Society, - making a
jump in the dark, for I do not
know anything about its rules
and regulations, having been too
busy to read up

I made some abortive attempts
a year or two ago to work out
~~Heath~~ Conocoryphes &c, but I
fear no satisfactory work in that
way can be accomplished unless
his types can be got at, and they
seem to have disappeared. How-
ever if time and health are given
me I will attack them next
winter again -

I have been making some
interesting discoveries regarding
the life of the period extending
from the time of the Upper Leau
clay to the present, but have laid
the work aside till I can make
some summer observations on the
Lacustrine flora. During the
Lavinian Period the Flora
was cold Northern, apparently

(3)

much the same as in the Leda clay time; but afterward there was a change in the flora, and the fauna as well. The lacustrine deposits overlying the Leda clay exhibit about three variations prior to the prevalence of mollusca and six stages of variation after. The later the stage the longer the uniformity continued - as a rule.

Our Natural History Society (of which you are the only surviving Honorary Member) still lives and is more flourishing than at any former time.

Hoping the fossil may reach you safe, I remain dear sir
Yours very truly
A. Matthews

Matthew

Jul 1872

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fair to the procedure of
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Obliging the fossil may
reach you safe I remain dear
Yours very truly
W. M. Smith