Eos Dupe
Matthews
Aug 1888

Dear Sir Wm

I have been away from the city for some time and did not get my correspondence until this A.M.

The Hyolithus of the Olenellus horizon are different from those of our Paradoxides beds in that the shells are much thicker and I judge have more calcic carbonate - so that points of structure may appear in yours that are not obvious in ours. I think with you that their claim to be regarded as Pteropods is very doubtful -

There seem to me several objections to the reference of Hyolithes, to worms, the tubes do not show the imbricated lines of growth common in worms and the apex of the tube is in many species chambered. Some species have a slender, more or less flexible apex - annulated as though divided into chambers, and one shows a double tube with partitions on one side, between. The lines of growth seem rather those of the mollusca, but exactly what section is difficult to say. The operculum certainly resembles the valve of a Brachiopod, but the tube in Hyolithes (our species) is so long and so slenderly pointed that it would be a decidedly abnormal group and I would seek rather for affinities among the gasteropods

or cephalopods, though on the other hand the tubulated structure which you discover is an objection to this. If you have my paper, of two years ago in the Trans. Roy. Soc. Can. you will find the Hyolithes of the St. John group discussed. I have not studied the intimate microscopic structure of these shells, and do not know where to refer for such.

My week's work on the Long Reach Basin of Cambrian was greatly impeded by wet weather. But I found a great expansion in thickness of the sandstones of Div. 1b and that lithologically the bed of Div. 1c of that basin are similar to those of Div. 1d of the St John basin — indicating greater depth

or less sediment along Reach
of water (at the time of Div. 1c,
in a northerly direction). I
incline to think there is more
"primordeal" to the north than
we have yet discovered by its
fauna. In the Basal Series
I found some scattered organ-
isms, but the fauna still grows
very poor. I found Div. 2
with its spiral seaweed, &c.
Numerous faults make it
difficult to make out the
succession in the Cambrian rocks
of this basin.

I am glad to hear that you
have recovered from your mis-
hap - I remain yours very truly

C. D. Walcott

P.S. I observe that Barrande says
the test of Hyolithes has the same
composition as that of the trilobites