

22/11/21/19

Lyon / My MS

73 Harley Street  
August 4. 1868

My dear Dawson

I resume my remarks on your Acadia in continuation of the letter posted on July 31.

Page 387 That large Ephemerid must have been a splendid insect. When I recollect after studying the falcons some twenty years ago with such a rich marine fauna & not a few quadrupeds such as the Dinotherium, without a single insect; & then reflect on the enormous <sup>Salinian</sup> insect fauna of Ohio begin to think that some day, some layer a few inches thick may give us a Carboniferous or Devonian entomology equally rich; but it is strange considering the coal was formed in situ by terrestrial trees that the landshells & insects have come to light so unwillingly.

422 After your sketch of the nature of the carboniferous flora even Cordaites being cryptogamous, I doubt whether you want the roof of a conservatory to protect your plants. Your sketch of the botany comprising the structure of the plants & your restoration of so many of them strikes me as very masterly & complete. The disk-bearing & pine-like tissue of Sigillaria surprised me (p. 46)

p. 468 The rings of growth in *Dadoxylon* being pro-  
-portionate in number & dimensions to some  
living pines is a good point but I should have  
wished a word or two on the <sup>actual</sup> number of rings  
counted in some specimens. ~~The~~

The number of Devonian plants, ninety-three,  
already more than half the carboniferous is  
an astonishing step & their not indicating a  
lower grade is curious. Their being deciduous is  
a great contrast to the number of evergreens in  
the Miocene Flora of Central Europe nay, even  
of the Arctic Regions & is in favour of your inference  
of a temperate climate

Page 557 I am glad you have given your opinion  
that the Silurian might very well constitute two  
geological epochs coordinate in importance with the  
Devonian & Carboniferous. That Barrande's  
primordial ought to form another antecedent &  
distinct period has appeared clear to me from the  
time when he first published his primordial  
trilobites. I think it was to be regretted that Murchison  
wished the term Silurian to be so comprehensive.  
We may one day perhaps have five periods; the  
equivalents of Laurentian, Huronian, Primordial

(or Cambrian) lower Silurian, Upper Silurian.

Page 622. Your explanation of the origin of yellow & red clays, white sandstones etc is very good.

p. 642 The discovery of so many species of *Paradoxides* = ~~Conocorymbus~~ *Conocorymbus* etc makes your Acadian series very complete.

By the way Logan's discovery of *Coronites* & *Psilophyton* in Upper Silurian of Gaspé is very important.

p. 660. If we have littoral deposits of Acadian age it might be said why not plants & air-breathing animals. But in reply we may remark over how wide an extent of North America you have no evidence of the land animals which belonged to the Permian, Triassic, Liassic, & Cretaceous Periods & the farther back we go in time the more difficult will be the recovery of such monuments.

p. 666 I do not doubt that the Devonian convulsions gave to the surface its grand features which have lasted from the time of the Carboniferous swamps to our day. Still I find it very difficult to reconcile this with the enormous changes of level downwards & upwards implied.

by the South Joggins & the tilting of the beds of that section, & if I remember rightly the verticality of some of the Carboniferous strata in Acadia.

p. 667. Gigantic applies to some of the quadrupeds of the Glacial or Post-glacial Period, but hardly to the whole race of quadrupeds of that era.

p. 669. I have often thought how many ancient beds & dykes of trap must ~~be~~ under metamorphism have assumed the form of granite & other plutonic formations.

p. 670. The improvement of the Carboniferous floral type is a question of which we shall be better judges when the Antholites are better known. I hinted to you before that Carruthers thinks he has evidence of angiosperms of the coal.

As to the break between Devonian & Carboniferous it is very convenient while it lasts to the classification at least.

p. 671. As to the progress of unorganised nature since the period of the coal I am not so sure of that. There seems to have been a great advance in the organic world since the