

Columbus <sup>Ohio</sup> ~~Nov. 3<sup>rd</sup> 88~~  
Prof. J. W. Dawson, <sup>Montreal</sup> ~~Montreal~~ <sup>Canada</sup>  
My dear Sir.

Lesquerens

Cycliflora

Knackflora

I shall not be able to answer to day all the B. of your kind letter (30<sup>th</sup> Dec<sup>r</sup>). The text of the Coal flora is all printed and stereotyped. I have only my copy of the corrected proof for reference and as I have sent it to Pittston to a friend who want it for a few days I can not positively know from memory what I have deviced in it. As soon as it is received, or in less than one week I shall be able to answer you B 3.

On the first B. I owe to Prof. H. A. Riley of Montrose Pa. the communication of a sketch of what he considered as A. obtusa, from the figure of this species in the Geol. Rep. of Penn: (1858) Pl. 1. p. 11. I send you herewith this sketch from which my figure of the Coal flora has been made. Mr. Riley had on the same kind of stone, a hard calcareous shale, fragments or branches found with the large frond which were just of the same size as that of p. 11. l. c. The specimen of the



figure by Mr. Riley was too large and too heavy to  
be sent to me, and I never had opportunity to  
visit the place. Therefore I know the species  
merely from the sketch from Montron and  
from specimens found on the Mauch Chunk gap  
of the Schuylkill in red shale considered by Rogers  
as Poconet. Mr. Riley remarked that the  
Red sandstone at his place was probably referable  
to the Catskill. If you consider the form of  
the leaflets on both Mr. Riley's sketch and my  
own, the mode of decurving and of attachment, I  
believe that you will admit both species as identical,  
especially from the remark of Mr. Riley that he had  
specimens with leaflets as small as those I had  
figured and from which he identified the species.

It. Except the evidence afforded by the characters  
of the leaves, their shape and nervation, no other  
are obtained of the relation of this plant to  
*Archæopteris*. But, the evidence is quite as  
close <sup>to me</sup> as for the other species I have described;  
*A. Boeckschiana*? *A. stricta*. *A. Alleghaniensis*  
have not been found in fruit. *A. minor* is the  
only one I ever saw fructified with *A. Hybernica*



of which a most beautiful specimen is in the  
Museum of Comp. Zool. Cambodge, a present of  
Lyell.

§3 It may be that *Pithecophyllum truncatum* is identical with *Cyclopteris Browniana* of Main. (Further Observations etc. Pl. XLII, p. 60.)

The only specimen obtained appears of a thick texture, the surface undulate by the depression of the veins; the borders of the leaves are deeply lacinate and their apex cut square or truncate. I made a comparison of it. It is on this subject that I can not answer until I have seen the text of the flora. The specimen belongs to M. R. D. Sauer of Pittsboro, Pa. I think that he would send it to you for comparison if desired. It was found with *Archaeopteris minor* a species extremely abundant in what the survey of Penn<sup>a</sup> calls the Gococo.

§. The fossils of Pl. XXI, XXII, XXIII of the great survey of Penn<sup>a</sup> have been examined in England or Scotland by Prof. Balfour and you have on them his remarkable determinations. XXI is merely *Fruerdes Caudagalli*



That of Pl. ~~XXII~~ is unknown to me. I have never  
seen a specimen of it and this I can not understand,  
as I had at Boston where I spent a few months  
with Prof. Rogers, full opportunity to examine all  
the specimens of the survey either collected by  
myself or by others. But in ~~XXIII~~, figure and  
plant, I can give you a detailed history. This  
fragment figured represent merely a small part  
of a frond four to five feet high and about one  
and an half wide. This frond was exposed upon  
the vertical surface of the red, red shale, of the  
Gowanus <sup>rather</sup> or of the March Chert, a little below  
Gottsville on the side of the old reservoir. My  
friend Deser<sup>ts</sup> made a fine drawing of the whole  
which I studied its characters <sup>on</sup> a number of  
fragments which were then rather common  
at and around the same place. It is not  
at it may seem from the figure Bell-marks but  
a true plant, attached to the rock, or perhaps  
to the mud by long linear diverging hold-  
fasts or rootlets derived from a cylindrical  
rhizoma about two inches broad, two to four  
feet long simple and of the same size in its



whole length. The top of this rhizome <sup>is</sup>  
 or was before opening, formed of appressed leaves,  
 closely packed upon ~~to~~ each other, just like the  
 leaves of a cabbage, <sup>head half a foot in diameter</sup> showing, in breaking of the  
 subdivisions of the leaves at least the primary  
 secondary and tertiary ones, quite distinctly.

From these materials ~~and~~ ~~Fraga~~ with Desor  
 large plate, I made long and detailed description.  
 All has been taken by Prof. Poyer to England  
 and I have never seen any thing of this but  
 what is written by Prof. Balfour. I have  
 however received through the Smithsonian  
 Institution very fine specimens of this species  
 obtained in Kansas lower Coal measures or  
 subcarboniferous; and on this I have given  
 description of the plant both to the Smithsonian  
 and to Prof. Sheldon of Davenport Academy.  
 I think that originally I prepared the name of  
 Dendrophyces for this remarkable plant. I had  
 never <sup>an</sup> opportunity of publishing a description of it as  
 all the specimens were in England <sup>and few only in</sup>  
 the Mus. Com. Zool. Now I may <sup>describe the plant</sup> do so with the speci-  
 men of the Smithsonian. Some of the branches, especially  
 - by on a specimen which I have seen at Prof. Andrews



6  
have the rachis and branchlets or leaves as clearly  
defined as if they were cut into the stone. - In

In the U. S. Geol. Surv. as you will see I have  
admitted a few Devonian plants which you have  
mentioned and described from Mass. etc. As we  
have coal measures or a series of three coal strata  
as low as the vergent in Paders of Rogers or lower  
than or within the Chemung, this admission is  
in order. Moreover you will see all distinctly, not  
only in the Table of distribution of the species but in  
the details explaining it. You will have many  
observations to make, but it is better to wait  
for discussion until you have the documents in  
hand. The columns of the table below <sup>tree</sup> Carboni-  
ferous or the Millstone grit are marked one for  
Devonian, <sup>Chemung</sup> one for Catskill, one for Towns, One for Mass  
Chemung Red shales or rather subconglomerate, one  
for intra Conglomerate and then for the coal in  
different sections. - I know nothing about that  
remains of Prof. Dana. I have only the Ed. 1874 and  
can not understand where from the assertion has  
come as I generally refused to admit the presence  
of Conifers in the coal measures as I do still, consid-  
ering even all the *Hernbergia* as derived from Cordaite.  
But I will write to Prof. Dana on the subject.

Very sincerely yours  
J. Lesquereux