

DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

Washington, D.C., Apr. 21, 1891.

Sir J. William Dawson,
McGill University, Montreal, Can.

Dear Sir:

If it will not be too much trouble, I should very much like to have you examine the fragment of Neuropteris-pinna, with its counterpart, which I take the liberty to send you this day "under frank". The specimen is from the Coal-Measures (Carboniferous outliers) of Missouri.

The markings on the pinnules has puzzled me somewhat. Can they be merely dilations of the nerves? They seem to lie between the nerves, which on the fossil may be seen with their carbonaceous fibers contiguous, but enter at the bases of the pits. Are they perhaps the work of some fungus - such as Phyllactora? If they were made by fungi, would not the pits present a different appearance, some of them being eaten through the leaf instead of leaving a thin covering to give the brown color to the stone which

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appears white through the ~~stomach~~^{leaf} wherever the leaf has been ruptured. If fungi, would they not also be more irregular, perhaps crossing the veins? Finally, if the markings (see counterpart) were not produced by dilation nor fungi, can they ~~be~~^{rep-}resent fructification? If so - would they not suggest the double indusia of Scelopendrium?

It is rather difficult for me to regard the phenomenon as mere near-dilation, though the fructification of N. heterophyllum, described by Kidston, is diametrically opposite to such as this would suggest.

I trust I may not be bothering you or imposing on your courtesy too far in asking your opinion on the fern. Should it be of interest to you I would be glad to present you with other specimens, though I would like this, the largest fragment, returned. Enclosed is a label for returning by express.

Hoping the matter may engage your interest and consideration, I remain,

with sincere respect,

David White.

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White
W. M. Knight