North River. P. E. I.
July 16th '89.

Dear Sir Wm. Dawson—

Yours of the 6th inst. received. I thank you for the notice of a new Devonian plant.

I now send by parcel post specimens of the external cylinder of Lyclodendron. They are labled to suit the accompanying diagram. I made an error in describing the external cylinder or bark of Lyclodendron in my last letter. It is the cellular substance of the bark. not the vascular bundles, which is arranged in radiating masses.

As to the external markings of Lyclodendron, stems four inches in diameter still show the characteristic markings of leaf bases and lines. Stems

ten inches in diameter show a few distant markings of enlarged leaf bases, while the general surface is finely imbricated. In a very large trunk, at Gallas Pt, the bark of which is converted into coal, I observed no peculiar markings of any kind, the surface being varied only with obscure and shallow ridges and depressions.

I found the foliage of this plant at St Peters Isd, attached to a well-marked stem. It has a general resemblance to Walchia, but the branchlets are twice as distant, and the leaves much larger. In place of being arranged in bilateral rows also, they arise all round the stem, and have the appearance of being decurrent. There are no scale leaves on the stem among them, but every base bears a compound leaf, or branchlet. I will send you a drawing of this when I get time to execute it.

I still think that there are two species of Xylodendron, one characterised by very distinct nodes, the other by the absence of observable nodes. The foliage and external features herein described refer to the latter.

I will be most happy to receive further suggestions from you about working out this interesting plant. I expect to spend another day on St Peter's Rd. soon, and will pay every attention to the matter.

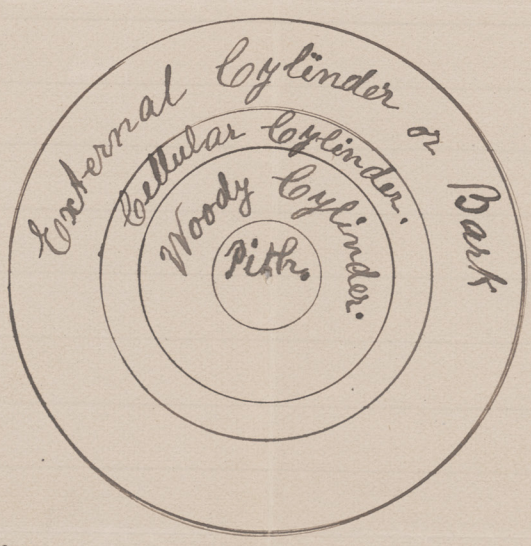
I would like to have the accompanying specimen of Bark with part of Cellular Cylinder attached returned at your convenience, Also the better specimen of Pith enclosed in its Woody cylinder, previously sent.

Anything further I can do will be gladly done.

Yours.

Francis Brain.

Diagaram showing the relation of Specimens Sent.



The thickness and structure of the Bark are remarkable. It is frequently calcified when the rest of the trunk is silicified. Sometimes it is ferruginised and sometimes converted into coal. When this last is the case, it is the parenchima which is carbonised, the vascular bundles are mineralised.

Bain
Jus/89