

of a laminated resinous substance found associated with the plant shows that it is wholly amorphous, and, as indicated by distinct lines of flow, that it must have been in a plastic state at a former period. The only evidence of structure was found in certain well-defined mycelia, which may have been derived from associated vegetable matter upon which they were growing, and over which the plastic matrix flowed."

I have only to add to this description that when we consider that *Nematophyton Logani* was a large tree, sometimes attaining a diameter of more than two feet, and a stature of at least twenty before branching; that it had great roots, and gave off large branches; that it was an aërial plant, probably flourishing in the same swampy flats with *Psilophyton*, *Arthrostigma*, and *Leptophleum*; that the peculiar bodies known as *Pachytheca* were not unlikely its fruit—we have evidence that there were, in the early Palæozoic period, plants scarcely dreamt of by modern botany. Only when the appendages of these plants are more fully known can we hope to understand them. In the mean time, I may state that there were probably different species of these trees, indicated more particularly by the stems I have described as *Nematoxylon* and *Celluloxylon*.\* There were, I think, some indications that the plants described by Carruthers as *Berwynia*, may also be found to have been generically the same. The resinous matter mentioned by Prof. Penhallow is found in great abundance in the beds containing *Nematophyton*, and must, I think, have been an exudation from its bark.

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\* "Journal Geol. Society of London," 1863, 1881.