

the latter have usually been considered as characterized by the leaf-scars being placed in vertical rows and often on continuous prominent ribs, and also by the fact that the lateral vascular scars are much larger than the central one; but in such a case as Lesquereux's species, *L. costatum*, the confluent leaf-bases in vertical rows have the effect of ribs, and in a less degree the same remark applies to *L. Murrayanum*. I may add that when one happens to find young stems of *Sigillaria* not compressed, the leaf-bases are seen to project in the manner of those of *Lepidodendron*, and that in some non-ribbed *Sigillarids*, as in *S. elegans*, the very young branches have the scars arranged spirally.<sup>1</sup> In connection with this I may observe that Sauveur<sup>2</sup> has described two species of *Sigillaria*, *S. angustata* and *S. undulata*, which are scarcely distinguishable, so far as the old bark is concerned, from *L. Murrayanum*; and Goldenberg<sup>3</sup> has two similar species, *S. aspera* and *S. coarctata*. Goldenberg's two species are by the character of their scars unquestionably *Sigillaria*, but *S. angustata* and *S. undulata* of Sauveur, especially the former, might well have been lepidodendroid trees very near to *L. Murrayanum*. This, however, could be certainly ascertained only if more complete specimens could be found. On the whole one might infer that as the spiral and Lepidodendroid characters of *Sigillaria* appear most prominently on young branches, the more Lepidodendroid and spiral *Sigillaria* are the lowest in type and the ribbed *Lepidodendra* among the highest of that genus. But such a conclusion must be received as liable to many exceptions."

Subsequently to the appearance of this paper, in which I referred only to the branches and cones, I was led, in arranging the specimens in our museum, to strip off some of the long leaves from the largest slab in my possession, representing a portion of the trunk or a main branch, and was surprised to find that the leaves and leaf-bases were arranged on the plan of *Lepidophloios*. My Clifton specimen thus showed characters which combined those of *Lepidodendron* and *Lepidophloios*, and as the leaves and fruit were those of the latter genus, I have now no hesitation in referring it to this; though it furnishes a very interesting illustration of the close approximation of the two genera, as well as an example of the possibility of referring fragments of *Lepidophloios* to *Lepidodendron*. At the same time, a specimen from the Clifton quarries which is evidently a portion of the surface of a trunk or large branch, shows that in this species, which I think may be referred to *Lepidodendron Wortheni*, the character of the leaf-bases and leaf-scars, which are confined to slender branches in the associated *Lepidophloios*, may be persistent on the main trunk. Were it not for this specimen I would be induced to suggest that

<sup>1</sup> Acadian Geology, 1878, p. 434.

<sup>2</sup> Fossil Flora of Belgium, 1848, pl. lvi. and lviii.

<sup>3</sup> Brit. Mus. Catalogue, 1886, p. 151.