"I would remark here that the leafy branches in figure 8 (plate 22) are not a 'restoration,' but taken from a sketch in my note-book of a specimen exposed on a large slab of sandstone. It is the more necessary to remark this, as several European paleobotanists have borrowed similar figures from my papers without acknowledgment, and have printed them as 'restorations.' It may also be remarked that though the leaf-bases of *L. Cliftonense* are smaller in the older part of the stem than those of *L. Murrayanum*, this difference may be more apparent than real, since the specimen of the latter may be from the main trunk, and that of the former from one of the larger branches only.

"These plants raise several interesting points in regard to the Lepidodendra. As I have elsewhere pointed out,[1] the growth in diameter of stems of Lepidodendra took place in three different ways: In some, as in *L. Sternbergi*, the bark retains its vitality in such a manner that the leaf-bases increase in size and do not become separated from each other. In others, as in *L. Veltheimianum* and *L. Pictoense*, the leaf-bases remain small and the intervening bark becomes torn in strips, leaving wide gashes without any scars. An intermediate type is that which we have in *L. rimosum* and *L. corrugatum*, in which the scars increase only slightly in size and then become separated by rims of slightly wrinkled bark. It would appear, from the observations of Williamson and others, that the first condition appertains to those Lepidodendra that possess only a very slight development of the woody axis, while the second occurs in those species in which the woody zone becomes thick and strong.

"The two species above referred to evidently belong to the first category; and, as the stems found are not large, still older stems would probably show larger leaf-bases. Such species of Lepidodendra approach nearer than others to the genus *Lepidophloios* in the expansion of the old leaf-bases and the small development of the woody axis; and it is interesting to notice that they also resemble them in the great length of the leaves and the thickness of the branches. The Lepidodendra whose branches end in slender sprays are usually, if not always, those in which the woody axis is large and the bark of the old stems torn and wrinkled.

"I may add that these differences are most important in the discrimination of species of the genus *Lepidodendron* by the markings on the stems, though they have been too often overlooked.

"Another noteworthy point is the manner in which the fruit of *L. Cliftonense* is borne on slender branchlets with few and short leaves, extending from the thick branches. Such branchlets might, if alone, be readily mistaken for branches of other species. They also help to explain the scars of fructification often found on Lepidodendra, as well as on the so-called Ulodendra, some of which, however, are not generically distinct

[1] Ibid, p. 162; also Acadian Geology, 1878, p. 452.