Instead of the narrow filiform mid-rib represented in the figures and descriptions of the authors mentioned, these specimens present a broad linear mid-rib continued from the apex to the base, and extended beyond the base in a slender filiform radicle, usually of no great extent, but in some instances nearly half an inch in length. The mid-rib is rarely smooth, varying in width, with its margins not often strictly defined. In examining a great number of individuals of one species, I have discovered that this mid-rib is serrated ; and though for the most part the serratures are obscure, they nevertheless present all the characteristics which they exhibit in graptolites of other forms, in which the branches have been compressed vertically to the direction of the serratures.

In this view, the lateral leaf-like portions appear to be appendages to the central serrated portion; but these are nevertheless denticulate on their margins, and the intermediate spaces are well-defined, as if admitting of no communication by serratures or cellular openings with the centre.

In another species the central axis or mid-rib is strong and broad, often prominent and distinctly serrate, the edges of the interspaces being all broken off as if the extremities had been left in the slate cleaved from the surface. At the same time the lateral portions are so well preserved as to show distinct cellules upon each side. We have therefore three ranges of cells visible, the central axis projecting at right angles to the two lateral parts. This remarkable feature leads to the interference that this graptolite was composed of four semi-elliptical parts joined at their straight sides, and projecting rectangularly to each other, presenting on each of the four margins a series of serratures, which penetrating towards the centre, were all united in a common canal, and all sustained upon a simple radicle.

In another more elongate form, the specimens examined are extremely compressed, and I have not been able to detect serratures in the axis, which however is sufficiently wide to admit of this feature.

For these remarkable forms, whether consisting of bilateral or quadrilateral foliate expansions, or with two or four series of cellules, I propose the name of PHYLLOGRAPTUS, from their leaf-like appearance when compressed in the slaty strata.

It is easy to perceive how bodies formed as these are may present different appearances, dependant upon the line of separation of the parts by the slaty luminæ. When separated longitudinally