Position and Locality.—Common in the black shale at Lockerby, Dumfriesshire; some curled up doubtful specimens in the slate at Greiston on the Tweed.

Explanation of Figures.—Plate 1. B. fig. 4. Portion natural size, from Lockerby. Fig. 4 *a*. Do. Magnified six diameters, shewing the tubular stem with the denticular cells, coming off at an acute angle each with its transverse diaphragm on which the body of the polyp rested. Fig. 5. Do. Curved specimen.

Genus. DIPLOGRAPSUS (*M'Coy*).

For Gen. Char. see p. 3.

Diplograpsus foliaceus (*Murch. Sp.*)

Syn. and Ref.—Graptolites foliaceus. Murch. Sil. Syst. t. 26. f. 3. Id. Geinitz, Leonhard and Bronn's Jahrbuch for 1842. t. 10. f. 15.

Sp. Ch.—Straight, simple, about two inches long (Geinitz), gradually tapering to the base, average width one and a half lines; cells narrow, straight, coming off from the axis at an angle of about 60°, forming a small sharp serration at the margin; seven cell-denticles in the space of two lines.

If the figure above quoted of Geinitz be strictly after nature, it shews the form and size to be nearly that of the *D. pristis*, but rather wider, differing principally in the more numerous, narrower, and closer cells, producing also a smaller serration of the margin; in those latter characters it approaches the *D. folium*; but when fragments of the two are compared, this is distinguished by the much more obtuse angle at which the cells come off from the axis.

Position and Locality.—Rare in the shale and nodules of Pentre W. of Llangynyw, Montgomeryshire (Ludlow Rock).

Diplograpsus folium (*His. Sp.*)

Syn. and Ref.—Prionotus folium. Hisinger, Leth. Suec. t. 35. f. 8. Portlock, Geol. Rep. t. 20. f. 5.

Sp. Ch.—Simple ovate, broadly rounded at the end, gradually tapering to the base, about five lines long, and nearly two lines wide; axis fine capillary; cells narrow, linear, coming off at a very acute angle (about forty degrees) from the axis, and either straight or with a slight downward curvature, the distal extremity of each truncated at right angles to its length, producing small rectangular denticles with sides of equal length at the margin; seven in the space of two lines.

From the discrepancies between the two figures of Hisinger with each other, and with his description, it is clear they are not of authority; I therefore quote Portlock's figure, which, though not good, is more like all the specimens I have examined. I have little doubt of Hisinger's species being the same.

Position and Locality.—Common in the black shale of Lockerby, Dumfriesshire.

Diplograpsus mucronatus (*Hall. Sp.*)

Syn. and Ref.—Graptolites mucronatus. Hall. Pal. N. Y. t. 73. f. 1.

Sp. Ch.—Polypidom simple; about one and a half inches long, and one line wide (in slate), tapering rather abruptly towards the base; denticular cells, five in the space of two lines, outer and lower margin oblique, upper margin horizontal, the angle produced into a long, slender, flexible filament; axis excessively fine hair-like.

A beautiful and distinct species, easily recognized by the little mucronate film terminating each denticle, and which films, from their flexibility, extend in every direction, upwards and downwards, or horizontally. Professor Hall describes the species from the partially altered slates of the Hudson River group, near the upper limit of the New York Cambrian system (probably not far from the parallel of our Caradoc shale).

Position and Locality.—Abundant in the partially altered slates of Cairn Ryan, Ayrshire; rare in the black shale of Pen Cerrig, Builth, Radnorshire.