

GRAPTOLITES LATUS (*M^cCoy*). Pl. 1. B. fig. 7.

Ref.—*M^cCoy*. Quart. Jour. Geol. Soc. Vol. IV. p. 223.

Sp. Ch.—Several inches long, straight, undivided portion of the stem between the axis and the base of the cell-denticles one line (or slightly more) in width; cell-denticles very small, triangular, slightly curved, their bases touching, and their length not exceeding the width of their base; five occupy a space of only two lines.

The very small triangular denticles and width of the undivided portion of the stem easily separate this remarkable species from its congeners. In some states of preservation fine straight lines are seen dividing the cells from each other and descending from their mouths obliquely to the axis, at an angle of about 45°; in other states, stronger horizontal diaphragms may be seen extending across the middle portion of the stem at right angles to its length.

Position and Locality.—Common in the black shale of Builth Bridge; in the greenish Skiddaw slates of Seawgill; in the black Skiddaw slates of Whiteless; and in those of Knockmurton, near Lamplugh Cross, Cumberland.

Explanation of Figures.—Plate 1. B. fig. 7. Portion natural size, shewing the great width of the undivided portion of the polypidom and small denticles from the shale of Builth Bridge. Fig. 7 *a*. Do. Magnified six diameters, denuded of its outer coat and shewing the tubular stem, the oblique divisional walls between the cells with the form of their mouths, and the transverse diaphragms near the bottom of each to sustain the polyp. Fig. 7 *b*. Do. Shewing a portion of the outer envelope, preserved in addition to the above. Fig. 7 *c*. Do. A common appearance resembling 7 *a* but with the transverse diaphragms invisible.

GRAPTOLITES LOBIFERUS (*M^cCoy*). Pl. 1. B. fig. 3.

Ref.—*M^cCoy*. Annals of Nat. Hist. 2nd S. Vol. VI. p. 270.

Sp. Ch.—Several inches long, straight, axis capillary, undivided portion of the stem about one-third of a line wide; cells forming large, obtusely rounded lobes, uniformly convex on the upper and outer margin; a notch on the under edge separates the rounded extremity from the oblique descending margin; four cell-lobes in three lines; width from axis to end of cell-lobe slightly less than one line.

The rounded lobe-like form of the cells and their size render this one of the most distinctly-marked species of the genus. Fragments are often beautifully iridescent.

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

Explanation of Figures.—Plate 1. B. fig. 3. Portion natural size, from Lockerby. Fig. 3 *a*. Do. Magnified six diameters.

GRAPTOLITES LUDENSIS (*Murch.*)

Ref.—*Sil. Syst.* t. 26. f. 1, & 1^a. (Not. 2.)

Sp. Ch.—Polypidom several inches long, thick, coriaceous, averaging one line wide, rather rapidly tapering towards the base; cell-denticles having their upper margin thickened and abruptly recurved into a rounded hook, the membranous inner margin of which when finely preserved shews a pendulous, sub-tubular, bell-shaped cell, with a round mouth, the oblique lines between the cells meeting the marginal axis at an angle of about 35°; four denticles in a space of two lines (or five in the same space close to the attenuated base).

After the careful study of an extensive suite of most exquisitely preserved specimens, I feel unable to distinguish the species of the Lower Ludlow rock from the similar one in the inferior beds by any constant character.

Position and Locality.—Common in the olive slates of Greiston, on the Tweed (one fragment upwards of nine inches long without tapering); in the slate-quarry of Ludlow rock N. of Nantyre; in the schists