

Position and Locality.—Rare in the carboniferous limestone of Derbyshire.

Explanation of Figures.—Pl. 3. C. fig. 4. Natural size, shewing the thin external wall or epitheca in parts, absent in others.—Fig. 4 a. Horizontal section, natural size.

CLISIOPHYLLUM MULTIPLEX (*Keyserl. Sp.*)

Syn. and Ref.—*Cyathophyllum*, id. Keyserling, Reise in das Petschora-Land, t. 2. f. 1.

Sp. Ch.—Corallum forming slightly curved and compressed short, broad, conical individuals, rugged with deep, obtuse, concentric rings of growth; about one inch nine lines in diameter, at one inch three lines from the base; large examples three and half inches long, and two inches in the long diameter, and one inch five lines in the short diameter of the cup, one of the broad sides of which is slightly higher than the other; terminal cup shallow, with a wide slightly sloping outer margin, and a flattened base, from near the centre of which is an elongate, lateral, siphonal depression; radiating lamellæ of alternate length, very delicate, about one hundred and seventy, at one and half inch in diameter, meeting in the centre, their edges set, with perforated papillæ; external lamellar striæ about five in two lines; *vertical section*, shewing a nearly uniform, very minute, vesicular structure, the outer area rather more than one-fourth of the diameter, having the rows of small, very numerous, elongate, rounded cells, extending obliquely upwards and outwards, with a slight reversal or deflection of the curve close to the outer wall (corresponding with the form of the outer area of the cup); inner area nearly half the diameter of the coral, the rows of cells taking an M-shaped double upward curve; about eight or nine cells in the space of two lines, either in the inner or outer area, measured at right angles to the direction of the rows.

The British specimens increasing more rapidly in proportion to their height than the foreign species, to which I refer them, is the only difference I see, and as the coincidence is so exact in other external characters, and in those of the vertical section, I think it best to note it only as a distinct variety at present, with a name which can be considered specific at any time, if necessary. When the *shorter* diameter is compared with the length, the difference between the two varieties seems in this respect very trifling.

Position and Locality.—Not uncommon in the carboniferous limestone of Kendal, Westmoreland.

CLISIOPHYLLUM PROLAPSUM (*M^cCoy*). Pl. 3. C. fig. 5.

Ref.—M^cCoy, Ann. Nat. Hist. 2nd Series, Vol. III. p. 3.

Sp. Ch.—Elongate conic, much curved and twisted on its axis; *terminal cell* oblique, deep, with steep sides, a narrow flattened or concave space at bottom, from which protrudes the central boss, which is about one-third the diameter of the cup, nearly as high as wide, cylindrical, obtusely rounded above, and with a deep umbilical cavity in the middle (in partially decomposed or weathered specimens, a rough vertical fracture frequently shews the central area or axis as a thick, smooth, persistent tube); diameter of the adult little more than an inch, and which it attains at two inches long, remaining nearly cylindrical after that length; surface closely striated longitudinally, about fourteen striæ in one-fourth of an inch, when slightly rubbed so as to shew both sets of lamellæ, or half that more usually, when the large ones only are seen: *horizontal section*, inner area rather more than one-third the diameter, of small, closely blended, vesicular plates, defined by a thick circular line; outer area with 160 radiating lamellæ (in a large specimen one inch four lines in diameter), half of which reach from the wall to the edge of the inner area, and the intermediate ones only reach half way; transverse vesicular plates very delicate, about five rows of very small ones in the space occupied by the short lamellæ, fewer in the intervening space from thence to the axis: *vertical section*, inner area defined by rather thick walls; it consists of minute, compressed, elongate cells, arranged in very numerous, transverse, curved rows, the convexity of the curve upwards; outer area narrow, of minute cellular structure, inclining upwards and outwards, about five cells in a row; middle area of much larger, and less inclined, vesicular structure, three to four cells in a row.

This species forms the type of the genus *Aulophyllum* of MM. Milne Edwards and Haime, from the definite tubular boundary to the inner area or axis; this however is merely a question of degree, serving