Genus. CANINIA (*Mich.*)

Ref. and Syn.—Michelin Dict. des Sc. Nat. Sup. Vol. I. p. 485. = *Siphonophyllia* (Sc. in M^{c}Coy), Synop. Carb. Foss. of Ireland, p. 187.

Gen. Char.—Elongate conic, simple; an outer variable area of loose vesicular structure; an inner area of broad transverse diaphragms, supporting at their circumference a series of short vertical radiating lamellæ which do not reach the centre, one or two are deficient at one point of the circumference, and there the transverse diaphragms are each prolonged downwards into a sort of siphon; edges of the diaphragms at the circumference bent downwards, forming a narrow intermediate area.

I suspect all the simple *Cyathophyllæ* may belong to this genus. In some species the outer vesicular area is only added when near its adult diameter, and in all increases proportionately with age. The inner edges of the lamellæ often exhibit the tubular papillæ, supposed by Mr Lonsdale to characterise his genus *Tryplasma*.

CANINIA LATA (*M^{c}Coy*). Pl. 1. C. fig. 12.

Ref.—M^{c}Coy, Ann. Nat. Hist. 2nd Series, Vol. VI. p. 277.

Sp. Ch.—Young corallum very widely conic, attaining the adult diameter of three inches at a height of about two inches, after which it remains cylindrical for a height of several inches, marked with irregular concentric obtuse undulations and small fimbriated edges of growth; in the young the radiating lamellæ are alternately longer and shorter, but before reaching the adult diameter they are all thin and nearly equal, four or five in a space of three lines at a diameter of two inches nine lines (or a hundred and ten to a hundred and sixteen all round) connected by numerous transverse curved vesicular plates; inner area formed of broad horizontal simple diaphragms, which at a diameter of an inch, extend almost across the corallum to the exclusion of the outer vesicular and radiated layer, at a diameter of two and half to three inches, they maintain a diameter of about an inch, the outer lamellated and vesicular zone having proportionately increased; each of the diaphragms is strongly bent downwards at one point of the circumference forming a distinct siphon; outer wall extremely thin, forming a few root-like tubercles on the conical young; terminal cup with a depressed flattened centre, and very convex outer area.

Position and Locality.—In the Wenlock limestone of Wenlock, Shropshire.

Explanation of Figures.—Pl. 1. C. fig. 12. Part of old terminal cup, natural size, from near Wenlock, shewing a portion of the very thin epitheca on one side.—Fig. 13. Do. Natural size, shewing the form of the young cup, with one of the diaphragms exposed at base, with the deep siphonal inflection, and a few radiciform tubercles from the surface.

CANINIA TURBINATA (*Linn. Sp.*)

Syn. and Ref.—*Madrepora turbinata* Linn. Fougt. Var. β. *Amœn. Acad.* t. at p. 312. f. 2. *Turbinolia turbinata* His. Var. β. *Leth. Suec.* t. 28. f. 7. *Cyathophyllum turbinatum* Lonsd. (not Gold.) Sil. Syst. t. 16. f. 11 *a*. *Cyathophyllum subturbinatum* d'Orb. Prod. p. 47.

Sp. Ch.—Corallum simple, conic, slightly curved, averaging three and half inches long, and varying at that length from one inch ten lines, to two inches three lines in width at large end; adult cup deep with highly inclined walls, sulcated by the radiating lamellæ, which are about ninety-six, alternately longer and shorter, nearly equal at the edges, and a broad flat, circular, smooth diaphragm forming the bottom; *vertical section*, inner area about one-third of the diameter at top, of nearly equal width from base to top, composed of very close, irregular transverse diaphragms, about nine in three lines throughout, bending down at one point of the circumference to form a thick siphonal inflection; outer area of large curved vesicular plates, forming very highly inclined rows of elongate cells, averaging one-third the diameter on each side in adults, but gradually narrowing towards the apex, where it almost disappears; outer surface with a very thin outer wall, longitudinally marked by equal lamellar sulci, five or six in three lines at the large end; irregularly wrinkled concentrically and with occasional irregular papillate protuberances towards the smaller end.

Although agreeing with M. d'Orbigny, that this is not the Devonian *Cyathophyllum turbinatum* of