

all the septa except the quinaries, most marked on the tertiaries, very faint on the others. As in *Stephanotrochus discoides*, only one pair of quaternary septa is well developed in size in each system, and these are the quaternaries next the primaries, and they are bent towards the tertiaries to fuse with them; the two being nearly equal in size divide each half-system into three nearly equal sections, the tertiary being, as it were, out of place somewhat. The other pair of quaternaries in each system is small, looking like a large quinary, and between it and the adjacent secondary the quinary septa are absent; there are only four quinaries developed in each system instead of eight. The quinaries next the primaries rise as high in exertion as the tertiaries, and are joined to the primaries by prolongation of the wall; to the secondaries are fused the exert tips of the little developed quaternaries next them, which rise to the same height also as the tertiaries. The arrangement of the septa is shown in the preceding diagram.

The tertiary, secondary, and primary septa extended nearly to the centre of the bottom of the fossa; their ends here are fused together, and connected in the centre by a very small quantity of tortuous calcareous matter, the only representative of a columella. The coral bears some resemblance to *Turbinolia obæsa*, Michelotti<sup>1</sup> (*Trochocyathus obæsus*, M.-Edw. and H.), as figured, but the details available are not sufficient to determine if the two forms have any real alliance. In *Trochocyathus obæsus* the pali are well developed.

Height of the single specimen, to the margin of the calicle, 25 mm.; to the lips of the primary septa, 33 mm. Extreme breadth of the calicle, 33 mm.

Station 73. Off the Azores. 1000 fathoms.

#### *Cyathoceras*, n. gen.

Corallum conical, elongate, without epitheca, or with a partial one only, fixed by a stout pedicle, with a well developed fascicular columella.

This genus is formed to receive two species which might be placed with *Desmophyllum* if they had not columellas in every respect resembling those of the *Caryophyllias*.

*Cyathoceras cornu*, n. sp. (Pl. IV. figs. 7, 7a).

Corallum elongate, conical, attached by a stout base, with a few transverse irregular constrictions or ridge-like marks at intervals, looking as if formed by a partial spontaneous fracture and reuniting of the coral, or as marking succession of intervals in growth. Costæ slightly marked near the margin of the calicle only. Surface slightly roughened, or covered to a considerable extent with a thin glistening transparent epitheca. Calicle circular. Septa in six systems and four complete cycles, somewhat irregular, free from attachment to one another, barely exert, straight, except at the inner margins where they are sinuous, with nearly smooth surfaces. Columella prominent in the fossa of the calicle, slightly elongate, composed of four or five twisted laminæ.

<sup>1</sup> Description des terrains Miocenes de l'Italie septentrionale, Leide, 1847, p. 22, pl. i. figs. 21, 22.