

In a young specimen of this coral, without reference to which the true nature of the complicated structures in the adult could hardly have been determined, the corallum is almost symmetrically biconvex and perfectly circular; but the columella is elongate, as in the adult. The columella is papillar rather than laminar, and represents the rooted base of the adult columella. There are sixty perfect costæ present at the margin of the calicle, and the commencement of two more in each system (*i.e.*, twelve in all). There are twelve concentric rows of perforations in the base. The septa are not nearly so much contorted as in the adult, and the synapticular junctions between them not being as yet formed, the division of the septal cavities into successive chambers is not apparent as in the adult. No superficial fusion of the primary with the curved extensions of the tertiary and quaternary septa has as yet taken place; hence no six-rayed star or flower appears in the centre. Stout transverse granular projections are present on the upper margins of the septa, the sources of future synapticular connections. Only four cycles are complete in each system. Two members of the fifth cycle are present in each system, and are those nearest the primary septa on each side. An additional pair of quinary septa is just commencing to grow in each system, and branching off from the peripheral ends of the quaternary septa which are next the secondary, but on that side of them which is nearest the primary, *i.e.*, opposite to the secondary. A very short branch of the costa belonging to the interspace between the quaternary and secondary septa passes into each interspace formed between these newly-grown quinary septa and the quaternary adjoining.

In the development of a flower-like series of oval chambers around the elongate columella, this coral most strikingly resembles *Stephanophyllia florealis* of Quenstedt,<sup>1</sup> which is a fossil of the "White Jura" (= Oxford Clay) formation. The oval chambers here in the first series around the columella are twelve in number, and alternate with twelve in the second series. In *Stephanophyllia complicata*, six alternate with six. In *Stephanophyllia florealis* there appears to be no trace of the bisection of these chambers by the straight primary and secondary septa as in *Stephanophyllia complicata*; but the fossil specimens are, according to Quenstedt, always so much mutilated that their structure can only partially be made out. Possibly the twelve chambers of *Stephanophyllia florealis* may represent the twelve of *Stephanophyllia complicata*, formed by the bisection of the six inner by the primary septa, which might appear as figured in *Stephanophyllia florealis* in much-worn specimens. Comparison with actual specimens may determine this point. In *Stephanophyllia florealis* forty-eight septa only are distinguishable; but it is highly probable that structures so slight as the quinary septa of *Stephanophyllia complicata* might be indistinguishable in a mutilated fossil. The coral appears to fall into that division of the *Stephanophyllias* distinguished by Milne-Edwards as having the

<sup>1</sup> Milne-Edwards and Haime, judging from Quenstedt's figure, *Handb. der Petrefact*, p. 657, pl. lix. figs. 12, 13, 1852, wrongly supposed that *Stephanophyllia florealis* should be referred to the genus *Thecocyathus*, *Hist. Nat. des Coral.* t. ii. p. 49.