medial instead of from their superficial ends, seem to be crossed by the septal planes that divide the annular canals.[1] The meaning of this appearance is best seen in a transparent section (Pl. IV. fig. 8); which, traversing the annular galleries, shows the large orifices *c*, *c*, *c*, along their floors, that lead to the chamberlets of the plane beneath; and the small orifices *st*, *st*, along the *concave* borders of the septa, that lead into the chamberlets of the next annulus.

Thus the cavitary system of the disk of *Orbitolites duplex* is composed of a median series of annular concentric galleries, each freely opening, as in *Orbitolites marginalis*, into a double tier of chamberlets, one above and the other beneath; but each having *two* series of passages, that lead severally to the upper and the lower tiers of chamberlets of the next annulus. The cavitary system of every part is here in as free communication with that of every other part as it is in the "simple" forms previously described: but there is an advance in the development of this type, which shows itself *first*, in the suppression of the "orbiculine" stage, and the assumption of the cyclical plan almost from the beginning; and *second*, in the foreshadowing of the coming separation between the upper and the lower tiers of columnar sub-segments in *Orbitolites complanata*, which is given in the replacement of the *single* row of radial stolon-passages on the mesial plane, communicating between the cavitary system of each annulus and the next, by the *double* series that lead into the chamberlets of its upper and its lower tiers respectively.

Geographical and Bathymetrical Distribution.—This species appears to have the same general range, alike in area and in depth, with *Orbitolites marginalis;* but though small forms of it are abundant in the Red Sea, I have not been able to trace it as accompanying that species into the Mediterranean. Like *Orbitolites marginalis*, it acquires its maximum size in waters of no great depth off tropical shores.

Geological Distribution.—Though it is impossible to identify, with any certainty, our *Orbitolites duplex* with any of the fossil species described by Lamarck, yet as worn specimens of it often present a close resemblance to the representation given by Goldfuss (Petrefacta, Pl. XII. fig. 8) of his *Orbitolites macropora*, which he distinguishes by its *poris utroque latere majusculis*, I think it probable that the two are identical. The fossil habitat of Lamarck's specimens is given as "la montagne Sainte Pierre."

4. *Orbitolites complanata*, Lamarck (Pl. V. figs. 11–18; Pl. VI., VII., VIII.).

Orbitolites complanata, Lamarck, Syst. des Anim. sans Vertèbres [1801].
Marginopora vertebralis, Quoy and Gaimard, in De Blainville's Manuel de l'Actinologie [1834], p. 412.
Orbiculina tonga, Williamson, Trans. Micr. Soc., vol. iii. 1852, p. 115.

We come, lastly, to the large and highly differentiated form which must be regarded

[1] The relation of fig. 9 (Pl. III.) to fig. 11 will be better understood by conceiving the former to be turned a quarter round, so that the side *a* of fig. 9 should correspond with the lower border of fig. 11.