

tion. The superficial chamberlets of the same zone have no immediate connection with each other, nor is there any direct connection between the superficial chamberlets of the adjacent annuli. The communication is maintained indirectly by means of the annular galleries, in a manner analogous to that which has been observed in the simpler types, each chamberlet having two pores or passages, one at each end, opening respectively into the annular canals of its own zone and the previous zone. And, as there are two superficial layers of chamberlets in the complex type, so there are two series of annular canals.

The "intermediate stratum" is composed of columnar or cylindrical chamberlets, which, making some allowance for irregularities, correspond in number and arrangement with those of the superficial layers. These columnar sub-segments terminate above and below in the annular gallery of the zone to which they belong, and they each communicate by stoloniferous passages with the contiguous chamberlets of the preceding and succeeding annuli. The radial stoloniferous passages of the cylindrical segments of the outermost zone form the marginal pores which are seen on the exterior. From what has been stated it will be seen that the complete intercommunication of the various parts of the cavitory system is attained, firstly, by the opening of the chamberlets both of the superficial layers and of the intermediate stratum into the annular canals; and secondly, by the direct stoloniferous passages between the chamberlets of the concentric zones of the intermediate stratum.

In the very young condition the shell is occasionally adherent, growing attached to the fronds of algæ or other similar bodies, as shown in Pl. XVI. figs. 2, 3; but more frequently it is free from the commencement, and specimens in the very earliest stage, consisting of nothing more than the "nucleus" (fig. 1), are often found amongst the sand of localities in which the species abounds.

The shells of this species are subject to irregularities of growth which take place in many different ways. Perhaps the commonest sort of monstrosity is that illustrated by some of the figures in Pl. XVII., in which a portion of a second disk is projected from one of the lateral faces of the test (fig. 1). Occasionally portions of more than one supplementary or out-growing disk are found, as in figs. 3, 4, and 5; and other forms of irregularity, dependent on uneven or arrested growth, are not unfrequent.

*Orbitolites complanata* has probably a wider geographical distribution than any of its congeners. It is found in the shallow margins of tropical and sub-tropical seas, but it is more generally diffused over the eastern than the western hemisphere. It is common on the shores of the Pacific, from the Loo-choo Islands and the Sandwich Islands on the north, to the coast of Tasmania on the south, attaining its best development on the coral-reefs of the Fiji and the Friendly Islands, and it is almost equally abundant in the Indian Ocean. There appears to be some doubt as to its presence in the Red Sea and the Mediterranean, at any rate its reported occurrence requires confirmation. It has been