

or even less, to nearly 1 inch, and a thickness of from 0·012 inch to 0·100 inch. This range is less, however, in the disks brought up in the 18 fathoms' dredging, than in those collected nearer the surface, the average diameter of what seem to be the adult forms in the former not exceeding 0·7 inch; and there is an almost entire absence in them of those irregular outgrowths which are frequent in the large disks found on the summit of the reef. The disks are sometimes almost plane, with a slight central depression; but are more commonly decidedly biconcave. The central portion, consisting of the "nucleus" and the annuli that immediately surround it, is almost invariably the thinnest, and round this there is usually a progressive increase in the thickness of the next succeeding annuli. If this increase continues, the disk of course becomes thickest at the margin; but it not unfrequently ceases, so that the rest of the disk is plane; and sometimes, at about half the distance between the centre and the circumference, the thickness of each succeeding annulus diminishes, so that the marginal portion of the disk is no thicker than the central.

The concentric bands into which each surface of the disk (Pl. VI. fig 4) is marked out, are complete in the typical forms of this species, to the very margin of the nucleus; not the least vestige being here seen of any "orbicoline" spiral, but the *cyclical* plan of growth characteristic of the Orbitoline type being exhibited from the very commencement. The breadth of each zone averages about 0·003 inch, and the number of zones bears a pretty uniform relation to the diameter of the disk. In one of the largest disks that I have examined there are 166 zones, while the smallest has only three. Each zone is crossed by radial lines, which mark out areolæ that are usually somewhat rectangular in shape and sometimes approach a square, but are more commonly at least twice as long (in the radial direction) as they are broad, their long sides being nearly parallel to each other. The margin does not usually show any such convexities as are formed in *Orbitolites marginalis* by the projection of the columnar chamberlets; but the marginal pores are usually arranged more or less regularly in vertical rows, which are, however, often incomplete,—the two adjacent rows, in such cases, usually inclining towards each other. There is no constancy in the number of pores in the different vertical rows of even the same annulus; and there is no such regularity in their disposition as would mark out a horizontal stratification.

The "nucleus" is much larger in the typical forms of this species than in either of the preceding; and though it exhibits a considerable range of dimension, as shown in Pl. VI. figs. 1, 2, 3, yet even the smallest nuclei of those disks whose innermost annuli are formed on the "complex" plan are many times larger than those of *Orbitolites duplex*. Its two surfaces are generally flat, or nearly so, but are sometimes slightly convex. The pyriform primordial chamber  $\alpha$ , as in *Orbitolites marginalis* and *Orbitolites duplex*, is surrounded by a large "circumambient" chamber; and this usually shows a partial division by an incomplete partition.