

favourable conditions one such opening is found near each end of the chamberlet; and as a section only shows one side of the cavity, there is probably a lateral orifice communicating with each contiguous chamberlet.

The analogy of the individual layers of *Keramosphæra* to the superficial layers of a compound Orbitolite has been adduced in order to explain some otherwise obscure points in the structure of the test. It is, however, by no means complete, for in *Orbitolites* the superficial chamberlets are connected with each other by stoloniferous tubes, but have no communication with the exterior, except through the apertures on the peripheral edge of the test. In *Keramosphæra*, on the other hand, the layer of chamberlets is continuous over the entire sphere, and in the absence of an exposed peripheral edge the necessary communication with the exterior is afforded by the superficial orifices of the individual chamberlets. The only other abnormal character which requires notice is the irregularity of the outline of the chamberlets. But this anomaly is apparent rather than real, for though the complex types of porcellanous Foraminifera commonly display great symmetry and regularity in the contour and disposition of their various parts, this is by no means an invariable feature of the group. The labyrinthic subdivisions of the chamberlets in the complex *Alveolinæ* furnish a case in point; and in one porcellanous genus, *Nubecularia*, irregularity is the rule rather than the exception.

The two specimens of *Keramosphæra murrayi* were found by Mr. Murray in the siliceous diatom ooze from Station 157, a locality, roughly speaking, about twenty degrees south of the south-western corner of Australia, depth 1950 fathoms.

Family III. ASTRORHIZIDÆ.

Our acquaintance with the large arenaceous Rhizopods which constitute the family ASTRORHIZIDÆ is almost entirely derived from the operations of the various recent expeditions, organised and equipped by Government for the exploration of the deep sea. The genus *Astrorhiza* was described by Sandahl in 1857, and a closely allied type, *Dendrophrya* by Strethill Wright in 1861, but these are amongst the few forms that inhabit comparatively shallow water, and it is to deep-sea dredging in the North Atlantic during the past twelve or fourteen years that we owe the discovery of nearly all the more important members of the group.

Except in the case of a few species, of which the living animal has been to some extent studied, our knowledge of the life-history and organisation of the ASTRORHIZIDÆ is still very imperfect; and it is by the external form of the test and its minute structure, rather than by the characters of the animal inhabiting it, that the various types are recognised. Even concerning the test itself—the selection of material and the means employed for its incorporation—we are only at the threshold of research; but deficient