the rest having a single simple orifice; and that the distinctions between them depend primarily on the sort of material they individually select for the construction of the test, and the mode in which it is incorporated.

Turning again to the ASTRORHIZINÆ, which are characterised by their thick soft walls consisting of mud, or of only slightly cemented sand,—the longer subcylindrical varieties of *Pelosina* lead by degrees to similar forms of the genus *Astrorhiza*, which, instead of the single orifice, have an aperture at each end of the test; and these, through the compressed three-mouthed *Astrorhiza angulosa*, to the typical condition of the genus, a lenticular disk with radiating arms. The *Dendrophrya* of Strethill Wright is little more than a small irregular *Astrorhiza*, growing adherent by one of its flat surfaces; and the recently discovered *Syringammina* resembles an *Astrorhiza* with branching arms, which radiate equally in all directions, forming a subspherical instead of a flattened test.

Of the PILULININÆ, beyond the types already mentioned, *Pilulina* and *Technitella*, only one other form of test with the characteristic, felted, spicular walls is known; namely, that of the genus *Bathysiphon*, which consists of an elongated somewhat tapering tube, the open ends of which serve as the aperture.

The tubular series with firmly cemented arenaceous tests constituting the Sub-family RHABDAMMININÆ, of which *Saccammina* is but a globular modification, may be said to commence with *Jaculella*, which is represented by a tapering sandy tube, closed at the narrow end. Some specimens of this genus are scarcely distinguishable from the simpler species of *Hyperammina*, which also is typified by a nearly straight tube, but with the broad end closed and rounded. The remainder of the *Hyperamminæ* present very diverse forms; they are all tubular, either straight or sinuate, simple or branched, free or adherent, but invariably when perfect have a rounded initial chamber. The genus *Rhizammina* resembles the branched varieties of *Hyperammina*, but possesses no primordial chamber; the wall is chitino-arenaceous and flexible, and not, as a rule, solidified by much calcareous or other mineral deposit. *Sagenella*, in like manner, has a branching, tubular test, but is of parasitic habit, spreading over stones and shells, the branches often anastomosing so as to form a sort of raised network.

The genus *Rhabdammina* is connected with the foregoing by some of its irregularly branching varieties like *Rhabdammina cornuta*. The typical species *Rhabdammina abyssorum* has a radiate test consisting of three, four, or five tubular arms diverging from one point, with or without a central chamber. Straight varieties, with swollen centre, may be regarded morphologically as the two-rayed modification of the typical form, and these lead to the linear species, which consists of an arenaceous tube of nearly even diameter and indefinite length, open at both ends. *Marsipella* likewise is tubular and has terminal apertures, the test being either straight or twisted, of slender fusiform contour or of uniform diameter. Its most striking peculiarity results from its preference for sponge-spicules in the construction of the investment. They are not, however, an invariable constituent: when