

cylindrical intervals between them covering each other more or less rectangularly. Skeleton spicules of three forms, viz., (1) small sexradiate, arms not inflated at their junction, alternately pointed, and thickly spined throughout; (2) much larger sexradiate, the same but with the arms slightly inflated at the extremity; (3) still much larger, unispined, but uneven on the surface, and here and there microspined. Flesh-spicules of two forms, viz., (1) rosette globular, consisting of six short arms, each of which is surmounted by five long capitate rays expanded in a vasiform manner; (2) bundles of minute hair-like undulating acerates like the tricurvate or low spicule."

"The small sexradiate," Carter continues, "become the centres respectively of the trapezoids, which are thus formed by the extension of a thread of *vitreous sarcode*, from one end of each of the arms of the sexradiate spicules to the other, strengthened at each attachment by subsiding threads and the arm of each end of the latter; finally increasing in thickness throughout till the trapezoid is fully formed and presents four sides, with eight lantern-like holes in them, one in each triangular face, through which the sexradiate form of the original spicule may be seen in the centre intact. Spicules 2 and 3 form the fringe round the apertures which interknits with the body structure of the lamina internally, the latter or the supposed acerate form extending beyond the former, both distally and proximally, while the flesh-spicules are scattered throughout the structure unequally, that is much more numerous towards the surface."

Although Carter clearly recognised the essential difference between *Myliusia callocyathus*, Gray, and *Myliusia grayi*, Bowerbank, their generic separation appeared to him unnecessary, perhaps because of the agreement in the "convoluted cerebriform appearance." He included both in the same genus *Myliusia*. Carter, however, called attention to the fact that although the skeletal structure of *Myliusia grayi* agrees very closely with that of many fossil Hexactinellids, such as *Scyphia*, *Ventriculites*, *Cæloptychium*, &c., yet "the general structure of *Myliusia grayi*, although convoluted, is massive and labyrinthic throughout, not cup-shaped or hollow in the axis, as that of *Ventriculites*, while *Cæloptychium* consists of radiating tubes, more or less branches round a hollow axis or stem, which in the horizontal section resembles *Ventriculites*."

On the other hand, Sollas described in the same volume of the *Annals* in 1877 a new fossil genus *Stauronema*, and assigned *Myliusia grayi* to the *Ventriculitidæ*, which are characterised by a "skeletal network having the nodes complicated by the presence of an octahedral lantern about each one."

In 1878 Marshall and Meyer<sup>1</sup> described a Hexactinellid from the Philippines closely related to, yet specifically distinct from, *Myliusia grayi*, Bowerbank. This they named *Myliusia zittelii*.

Of the three specimens examined, the best preserved exhibits a system of meandering folded funnels which have fused with one another, besides wider tubes with walls sup-

<sup>1</sup> *Mittheil. d. Zool. Museum, Dresden.*