

ported by three to five layers of regularly coalescent hexradiate forms enclosing cubical meshes. Here, too, as in *Myliusia grayi* and in many fossil sponges, each ray of the hexradiate spicules is united at a certain distance from the node of intersection with one of the four adjoining rays by means of a siliceous bridge passing off at an angle of 45°, so that by means of these the appearance of an octahedral lantern with an internal axial cross is produced. Marshall, therefore, proposed the expressive name "lantern spicules." As to the oblique bridges between the arms of the central sexradiate spicules, Marshall was able to demonstrate their origin from the fusion of lateral hooks and prickles, which had become apposed to one another.

Among free spicules Marshall and Meyer found in the interior of the adult tissue scattered rod-like forms slightly bent at one end, and very small hexradiate rosettes, which bear on the extremity of each ray from four to six teeth, arranged like tulip petals. On the other hand, the covering of the soft parts contains on both sides of the tube-walls numerous four-, five-, and six-rayed spicules. On the upper slender margin of the walls of the tubes there was in some places a dense palisade row of smooth uniaxials, which are probably to be explained as a peristomial wreath. The relationship between *Myliusia* and *Cæloptychium* was particularly emphasised by Marshall and Meyer, but this difference was noted, that *Cæloptychium* is monozoic, *Myliusia*, on the other hand, polyzoic.

Oscar Schmidt also found the same species in the West Indian and Mexican region.¹ He adds to Marshall's description the observation that many nodes of intersection in the dictyonal framework of the specimens examined by him are unperforated. He found, however, a central cavity with which a markedly irregular plexus of externally opening tubes communicated. The meandering course of these tubes often makes it difficult to distinguish the canals and intercanals. Among the free skeletal elements he noted "prism rosettes."

Schmidt regarded *Myliusia* as a *Cystispongia* without a covering layer, and provided with conspicuous lantern nodes in the lattice framework.

To the genus *Cystispongia*, Roemer, Oscar Schmidt has assigned a new living form—*Cystispongia superstes*. He has given a careful account of the characteristics of the genus *Cystispongia* established by Roemer, and more accurately defined by Zittel, and of the single known species *Cystispongia bursa*, from the chalk, as also of the living *Cystispongia superstes* added by him.

1. *Aulocystis grayi* (Bowerbank), (Pl. CIV. fig. 7).

There is in the British Museum a dried round specimen about 2 cm. in breadth, and 1½ cm. in height, which Gray first described (1859 and 1867) as *Myliusia*

¹ Spongien des Meerbusens von Mexico, p. 52.