

felt in the dried condition like a delicate woollen cocoon, and he added the specific name *pupa* on account of the shape already noted.

Only one species is known, *Lanuginella pupa*, O. Schmidt.

Lanuginella pupa, O. Schmidt (Pl. LIII. figs. 3-5).

In the vessels which contained the spirit specimens collected at Station 192, off Little Ki Island, I found, along with the large *Pheronema giganteum* and several specimens of *Polylophus philippinensis*, a number of oval and spherical structures 2 to 8 cm. in diameter, which turned out on closer inspection to be small sponges. Some of them were seen to be representatives of the *Lanuginella pupa* described by Oscar Schmidt,¹ while the others were young forms of *Polylophus philippinensis* which will be again referred to in the description of that form.

Lanuginella pupa, which occasionally grows on other Hexactinellida, has the form either of a completely closed smooth sphere, 2 to 3 mm. in diameter, or of a larger oval body with a somewhat flattened basal pole, and a round oscular opening about 1 mm. in breadth at the narrow upper end (Pl. LIII. fig. 3a, b, 4, 5).

On a longitudinal section of the larger ovoid specimen, one observes the central longitudinal gastral cavity, which is rounded off at the lower end, opening superiorly of course in the already mentioned osculum. Into this gastral cavity, which is lined by a subgastral trabecular network, the sack-like chambers open, either directly, or by means of canal-like efferent passages, and in this case the whole chamber layer is deeply folded. Between the smooth external network or dermal membrane and the folded chamber layer, there is an external or subdermal trabecular space, including a subdermal trabecular network and the subdermal spaces or afferent canals which penetrate the latter (Pl. LIII. fig. 5).

The parenchyma of the sponge contains, as O. Schmidt noted, medium sized oxyhexacts with long straight or slightly curved rays usually disposed radially and tangentially. Besides these principal forms, somewhat long, straight, or slightly curved oxydiacts occur, with a central axial cross, over which cruciate tubercles often project outwards as indications of the undeveloped rays. The disposition of these oxydiacts, which are often somewhat roughened terminally, is for the most part perfectly or approximately tangential, though, in some cases, it may be more or less divergent (Pl. LIII. fig. 5).

Between these large supporting spicules, we have to note the irregular scattered occurrence of small regular oxyhexacts with thin rays, and of numerous small discohexasters, in which each of the short, simple, cylindrical principals bears three, four, or five long diverging terminal rays with four to six-toothed, somewhat recurved, transverse discs at their extremities (Pl. LIV. fig. 3; Pl. LIII. fig. 5). Besides these, the

¹ Grundzüge einer Spongienfauna des atlant. Gebietes, p. 13.