

described in the following year (1880), as having been dredged at St. Lucia in 423 fathoms, and at Granada in 416 fathoms, and which he named *Euplectella jovis*. This species is closely allied to Wyville Thomson's *Euplectella suberea*, but differs from it in its large prickles, which project freely outwards, and which, to the number of four or five, form a ring round each of the circular parietal pores. It differs further in the possession of a remarkable spicule with a fibula-like double hook. O. Schmidt also describes a transversely expanded inferior sieve-plate at the lower end of the tube, which differs from the superior terminal plate only in being less firm.

To the Euplectellidæ O. Schmidt also refers his *Regadrella phœnix*, *Hertwigia falcifera*, and *Rhabdopectella tintinnus*. In all three the inferior extremity does not, as in the genus *Euplectella*, run out into a basal tuft, but presents a tolerably firm basal portion, which either consists, as in *Regadrella*, of a dense mass growing out into knobs and lobes, or, as in *Hertwigia*, of irregularly branched protuberances, or finally, as in *Rhabdopectella*, of a simple stalk with a disc-like terminal plate, which is frilled at the margin.

While the siliceous spicules of *Regadrella phœnix* do not differ essentially in form from those of *Euplectella aspergillum*, the general shape and the entire architecture of the sponge is quite distinct. From the massive base a cup arises which is composed at first of a much perforated plate, and further upwards of a flexible lattice-like network of obliquely intersecting beams with round meshes. On the irregularly shaped upper margin of the cup a spicular wreath projects like a cuff. The terminal aperture is, as in *Euplectella*, closed by a sieve-plate. It is remarkable that within the cup of older dead specimens younger forms had settled, so that two, or sometimes even three, individuals appeared as if fixed into one another.

On the branched basis of *Hertwigia falcifera* is seated an "irregular labyrinth of cavities with thin membranous walls, which are supported by lattice-like plates of obliquely crossed rods and fibres." On account of the deficient preservation of the obviously very brittle upper portion, Oscar Schmidt was not able to obtain any definite idea of the form of the entire sponge. Among the siliceous spicules which lie scattered in the soft parts, there are, besides six- to three-rayed spicules and the typical *Euplectella* floricoles, remarkable hexradiate rosettes with four-toothed terminal umbels attached to the individual arms of the rays, and also rosettes with long backwardly bent teeth on the terminal umbels, and especially the structures called by O. Schmidt "sickle rosettes," in which each of the six principal rays bears either four simple sickle-like teeth, or a hemispherical terminal disc with several whorls of sickle-like teeth. Rods occur here and there with numerous oblique lateral prongs at one end. O. Schmidt mentions also, delicate siliceous nets on whose exceedingly fine filaments small terminal hooks and terminal umbels are found, but these nets seem to me to be fragments of Radiolaria.

The stalk of *Rhabdopectella tintinnus*, in older specimens, expands towards its upper