

a transverse, slightly convex sieve-plate closes that end which he regarded as the inferior, while *Alcyoncellum speciosum* appeared to exhibit a simple inferior extremity. Further, as he had inadvertently read the word *Alcyoncellum Alcyonellum*, he maintained that, even if there was a generic agreement between his Sponge and that described by the French investigators, yet the name *Alcyonellum* must be changed since it had been already bestowed by Lamarck on a Bryozoon. Owen also erred in regarding *Alcyonellum gelatinosum*, Blainville, as synonymous with *Alcyoncellum speciosum*, Quoy and Gaimard.

In a paper which appeared in 1857,¹ Owen described a second species of the same genus under the title *Euplectella cucumer*. This he distinguished from *Euplectella aspergillum* by its barrel-like form, by the absence of the oblique ridge and of the cuff-like collar at the extremity, which in this species is truncated and closed by a sieve-plate. The single specimen upon which the description was based was presented to Captain Etheridge by the King of the Seychelles.

The generic characters of *Euplectella*, which were more definitely formulated in this than in the previous memoir, are as follows:—"A cylindroid hollow form of body, closed at the wider end by an irregular network, and at the narrow end by the terminal tuft of finer filaments into which the parietal fibres are there resolved. The parietal fibres, or those that constitute the wall of the cylinder, are regularly disposed, and intersect each other at definite and nearly equal distances throughout its extent. They consist of longitudinal, transverse, and oblique fibres, the latter being of two kinds, winding spirally round the cylinder, but in opposite directions. The longitudinal and transverse fibres are the thickest; they are arranged at intervals of from one to two lines, averaging one line and a half apart, and divide the cylinder wall into square spaces of about the latter diameter. The longitudinal fibres are external to the transverse ones, to which they are bound by the oblique or spiral fibres; these are, some external, some internal, to the others, and they close by their decussation alternate quadrate intervals between the longitudinal and transverse fibres. The angles of the alternate open squares are intersected by finer and less regular oblique fibres, which reduce their area more or less to a circular form."

The fact that, in the specimens on which the description of *Euplectella cucumer* was based, the tuft of long siliceous spicules included a number of foreign bodies, led Owen to believe that the fixing of this sponge, and also of *Euplectella aspergillum*, was not effected by means of a sieve-plate, but by the long hair-like tuft; and accordingly, that the natural position was the inverse of what he had formerly described in regard to *Euplectella aspergillum*.

A treatise by Bowerbank, which appeared in 1858,² contained a detailed description of sponge spicules. In this memoir several of the beautiful microscopical spicules which

¹ *Trans. Linn. Soc. Lond.*, vol. xxii. (2), pp. 117-124, pl. xxi.

² On the Anatomy and Physiology of the Spougiadæ, *Phil. Trans.*, vol. cxlviii. p. 279, pls. xxii.-xxvi.