

these cells are readily distinguishable from all other cellular elements not only by their extraordinary size but also by their containing numerous, and comparatively very large, granules. That a generative product when it—contrary, *e.g.*, to the spermospores of *Calcarea*—increases during maturation, must receive nutritious material from the surrounding parts of the parent body is indeed obvious, but in the Porifera this may be done in two ways, either by the endothelial cells playing an intermediate part, or, by means of a certain modification, becoming so to speak staples for the material to be consumed by the growing product. The first is the case as regards the sperm-balls, their endothelial cells in all stages of development representing typical pavement-cells, and with further growth gradually becoming rather flatter. Since a sperm-ball, for instance, of *Aplysilla sulphurea* when quite mature is many times larger than the cell from which it derived its origin, it must be assumed that its increase is due not only to the nutritious material within the primitive cell itself, but also to the material absorbed from the surrounding elements. Now the surrounding elements, *viz.*, the endothelial cells, are neither voluminous nor rich in nutritious particles; thus the only possible conclusion is that these endothelial cells having received nutritious material from other cellular elements do not retain it but give it up instantly to the generative product. On the contrary, the endothelial cells surrounding a developing embryo of, *e.g.*, a *Cacospongia scalaris* retain the nutritious particles, and it is in this property that we have also a natural explanation of the striking aggregation of mesodermic cells in the neighbourhood of a developing embryo, as observed and described by F. E. Schulze.¹

Colour.—Outer surface brownish, parenchyma and skeletal fibres pale greyish.

Habitat.—Station 135A, October 16, 1873, off Tristan da Cunha; depth, 75 fathoms; hard ground, shells, and gravel.

Euspongia, Bronn.

Spongidæ with fine skeletal fibres forming a compact network, the meshes being very small; primary and secondary fibres readily distinguishable.

Euspongia officinalis (Linné), var. *lobosa*, n. var. (Pl. VI. fig. 1).

The single specimen on which this variety is founded recalls by its external shape the drawing which F. E. Schulze² gives of *Euspongia officinalis* var. *tubulosa*, with the distinction that its basal part is not plate-like as in the latter, but massive. As in most *Euspongiæ* the outer surface is denticulated owing to the prominent primary fibres, but here the conuli are very low, their height not exceeding 0·3 mm. A portion of the skeleton is represented on Pl. VI. fig. 1; it is bush-like, and it must be noticed that while

¹ *Zeitschr. f. wiss. Zool.*, Bd. xxxiii. pl. iii. fig. 1, 1880.

² *Ibid.*, Bd. xxxii. pl. xxxiv. fig. 8, 1879.