

to the descriptions published by him of several species, we have been able to refer to specimens in the British Museum named by Mr. Carter himself, and it is from these and from the good series brought home by the Challenger that the above diagnosis has been drawn up.

These remarkable honeycombed sponges appear to be very abundant off the south coast of Australia, and the question of their specific differences and their relations to other genera is a very difficult and intricate one. They are probably reduced Clathriids, in which, from the strong development of horny fibre rendering them unnecessary, the spicules are gradually disappearing, or, in other words, they are Clathriids on their way towards becoming horny sponges without spicules. Carter has described no forms with microsclera, but we have shown (see under *Echinoclathria favus* and *Echinoclathria carteri*) that palmate isochelæ, such as are found in typical *Clathriæ*, may be present. That the genus is closely allied to *Clathria* there can be no doubt, but it may be distinguished from the latter by the absence of a distinct kind of spined echinating stylus from the spicular complement; the fibre is, however, echinated by the smooth skeleton stylus or subtylostylus.

In accepting Mr. Carter's generic name, *Echinoclathria*, we hesitated before venturing to give a definite generic diagnosis. The present one must be regarded as preliminary. Before a satisfactory diagnosis becomes practicable a more extensive study of the group is required. The peculiar honeycombed external appearance is certainly very characteristic, but can hardly be regarded as absolutely distinctive; *Clathria frondifera*, Bowerbank, makes a near approach to it, and Carter includes in his genus *Echinoclathria* several forms which do not possess it.¹

Echinoclathria favus, Carter (Pl. XXXI. figs. 4, 5, 5a).

1885. *Echinoclathria favus*, Carter, Ann. and Mag. Nat. Hist., ser. 5, vol. xvi. p. 292.

Sponge (Pl. XXXI. figs. 4, 5) massive or branched, lobate or digitate, commonly growing over the shells of living Pectens. Honeycombed throughout; consisting of a close reticulation of anastomosing and interwoven trabeculæ, with round or oval meshes between; the meshes on the surface may be either closed in marginally or Mæandriniform. Size very variable, the largest specimen is about 162 mm. high and 75 mm. broad. Colour in spirit greyish-yellow. Texture of trabeculæ tough, rather cartilaginous. Surface very minutely hispid. Dermal membrane thin, transparent, very rarely (Pl. XXXI. fig. 5a, m) stretching across the meshes at the surface of the sponge. Oscula (Pl. XXXI. fig. 5a, o) minute, scattered over the surfaces of the trabeculæ.

¹ Viz., *Echinoclathria tenuis*, *Echinoclathria nodosa*, *Echinoclathria subhispidæ*, *Echinoclathria gracilis* (Ann. and Mag. Nat. Hist., ser. 5, vol. xvi. pp. 355, 356), but whether these really belong to the same genus as *Echinoclathria favus*, which is mentioned before any of them (*ibid.*, p. 292) is another question, into which we cannot here enter.