

transparent, parchment-like *dermal membrane*, covering the large subdermal cavities, and constituting a very characteristic feature of the species (Pl. XXVIII. fig. 3a). *Oscula* small and scattered (?) (there are a great number of round openings in the dermal membrane, especially on one side of the sponge, which might readily pass for oscula, but it is impossible to say how far they are due to shrinking back of the dermal membrane from the action of the spirit). *Pores*; on one side of the sponge are a number of small oval areas in which the dermal membrane is reduced to a sieve by numerous small perforations, which are the pores. The pore-areas are well defined and rather sparsely scattered; it is curious that they should occur on one side only, that being the side on which most of the oscula (?) are situated. Diameter of pore-areas and pores variable, of the former averaging about 0.5 mm. of the latter about 0.1 mm.

*Skeleton*.—In balsam preparations the arrangement of the skeleton somewhat resembles that of *Plumohalichondria*, the chief feature being a series of ascending, plumose columns, each consisting of a core of very slender, subtylostylote spicules echinated by entirely spined styli, the horny matter being almost invisible; but on examination in alcohol we see that there is a very large proportion of pale horny substance in the skeleton, which is arranged as follows:—There is a well-defined reticulation of horny fibre; branching primary fibres run upwards in wavy lines, ending at the surface of the sponge, and these alone are cored by long, slender, subtylostylote spicules. Secondary fibres cross the primary lines without much regularity, forming an anastomosing reticulation, and both series of fibres are echinated by spined styli. In the dermal membrane there are numerous subtylostylote spicules, scattered and in brushes.

*Spicules*.—(a) *Megasclera*; of two kinds. (1) Very slender, straight, smooth subtylostyli (Pl. XXIX. fig. 14), measuring about 0.2 by 0.003 mm.; (2) straight, slender, sharp pointed, entirely spined, echinating styli (Pl. XXIX. fig. 14a), measuring about 0.07 by 0.0032 mm. (b) *Microsclera*; of one kind only, viz., palmate isochelæ (Pl. XXIX. fig. 14b), of rather unusual form, with very slender shaft, rather strongly curved and making an unusually wide angle with the front palm; length about 0.02 mm.

This sponge is most readily recognised by its beautiful and characteristic external form.

*Locality*.—Station 162, April 2, 1874; lat. 39° 10' 30" S., long. 146° 37' 0" E.; off Moncœur Island, Bass Strait; depth, 38 fathoms; bottom, sand and shells. One fine specimen.

*Clathria inanchorata*, Ridley and Dendy (Pl. XXVIII. fig. 4; Pl. XXIX. figs. 13, 13a).

1886. *Clathria inanchorata*, Ridley and Dendy, Ann. and Mag. Nat. Hist., ser. 5, vol. xviii. p. 475.

Sponge (Pl. XXVIII. fig. 4) erect, slender, of very peculiar, rugged external appearance, the best idea of which will be obtained by reference to the figure. The