

another (e.g., *Clathria lobata*, Vosmaer, *Suberites arciger*, Schmidt, *Artemisina suberitoides*, Vosmaer, *Amphilectus apollinis*, nobis).

*Locality*.—Royal Sound, Kerguelen; depth, 20 to 60 fathoms. Two specimens.

*Amphilectus ceratosus*, Ridley and Dendy (Pl. XIX. figs. 10, 10a; Pl. XXV. fig. 2; Pl. XLVII. fig. 2).

1886. *Amphilectus ceratosus*, Ridley and Dendy, Ann. and Mag. Nat. Hist., ser. 5, vol. xviii. p. 350.

Sponge (Pl. XXV. fig. 2) massive, lobate, sessile, of very irregular shape. The largest specimen is 44 mm. long and varies much in diameter. *Colour* in spirit dark reddish-brown. *Texture* spongy, elastic, but fairly compact. *Surface* uneven, with small, angular conuli, but glabrous. *Dermal membrane* rather thick, granular and of a brown colour, peeling off fairly easily. *Oscula* small and scattered, not noticeably elevated above the general surface of the sponge.

*Skeleton* (Pl. XLVII. fig. 2).—(1) Horny, consisting of a well-developed reticulation of ramifying and anastomosing horny fibre, without any spicular core. This horny fibre is doubtless the most important part of the skeleton functionally; it averages about 0·07 mm. in thickness. (2) Spicular—(a) *Dermal*; consisting of numerous, irregularly scattered tylote spicules. (b) *Main*; consisting of similar, irregularly scattered tylote spicules; there is no spiculo-fibre in the deeper parts of the sponge though the scattered spicules are everywhere abundant, but towards the surface the spicules are often collected into loose wisps.

*Spicules*.—(a) *Megasclera*; of one kind only; viz., straight, entirely smooth tylota (Pl. XIX. fig. 10), with a distinct oval head at each end of the slender shaft; size about 0·24 by 0·003 mm. (b) *Microsclera*; of one kind only; viz., isochelæ (Pl. XIX. fig. 10a), profusely scattered both in the dermal membrane and in the deeper parts of the sponge; length about 0·025 mm.

This sponge is extremely interesting on account of the existence in it of a well-developed horny skeleton. We at first thought that this might be due to the presence of a *Euspongia* over which the *Amphilectus* had grown, but there are in the collection three specimens, and there is not the slightest reason to suppose that the horny fibre is not proper to the species. The absence of a spicular core to the fibre must be especially noticed. Coincidentally with the development of a horny skeleton we have great reduction in the spicular skeleton, and it is possible that we have in this species an actual transitional form between the Siliceous and Keratose sponges. The isochelate spicules, however, are very abundant throughout the sponge, and appear to have suffered no diminution in numbers. It is provisionally only that we include this sponge in the genus *Amphilectus*,