

dermal reticulation is seen to be arranged in a rotulate manner, similar to the dermal reticulation of Bowerbank's *Desmacidon rotalis*¹ (= *Esperella rotalis*), but hardly so regular as shown in his figure. (b) *Main*; it is difficult to make out any definite arrangement. In the cylindrical pieces there appears to be a central, rather loose core of thick spiculo-fibre; one can also distinguish thick bands of spiculo-fibre running more or less vertically to the surface; on approaching the surface the fibre opens out slightly and the points of the spicules composing it project a little way beyond the dermal membrane, thus causing the minute hispidation already noticed. The spiculo-fibre of the main skeleton is generally dense and thick.

Spicules.—(a) *Megasclera*; of one kind only, viz., tylostyli (Pl. XV. figs. 7, 7a), tapering towards the base so as to form a neck and then enlarging slightly to form the small head; towards the apex the spicule tapers very gradually to a sharp point; size about 0.4 by 0.0145 mm. (b) *Microsclera*; (1) large and peculiarly-shaped, palmate anisochelæ (Pl. XV. figs. 16, 16a, 16b, 16c), measuring about 0.072 mm. in length, with the large end 0.036 mm. wide; for further particulars as to their shape see the figures (*loc. cit.*). These spicules are frequently seen to echinate the skeleton fibre, being themselves arranged in groups, with their truncated small ends placed close together upon the spiculo-fibre and their large ends radiating outwards (perhaps the truncation of the small ends may be due to this peculiar habit). Plenty of the large anisochelæ are also found lying freely in the tissues. Numerous smaller anisochelæ also occur, which differ from those just described in having the large end relatively of greater size; they differ also slightly in general shape, but they have the cup-shaped, truncated small end found in the larger ones, and we are inclined to think that they are young forms of the latter (*vide* Pl. XV. fig. 16c). There are also some minute anisochelæ, probably still younger forms of the same. Neither of the small forms appear to be attached to the skeleton fibre, as the large ones are. (2) Very large, thick, smooth, contort sigmata (Pl. XV. fig. 13), something like the diancistra found (*e.g.*) in *Vomerula esperioides*, nobis, but without the membranous expansions and with no notch in the centre of the shaft; size 0.24 by 0.019 mm. These spicules are also very often found adhering, usually by their backs, to the skeleton fibre, which thereby acquires a very formidable appearance. (A similar arrangement of the large diancistra may be seen in *Vomerula esperioides*, nobis, and in *Hamacantha johnsoni*, Bk., sp.) (3) Very fine, single, scattered, smooth toxa (Pl. XV. figs. 12, 12a), measuring about 0.145 by 0.003 mm.

This is a highly interesting species; unfortunately, it is represented in the collection by only a few fragments. With, so far as we can judge, a very insignificant external form, it combines a spiculation which in beauty and variety is hardly surpassed among the known Monaxonida. One of the most remarkable features about it

¹ Mon. Brit. Spong., vol. iii. p. 327, pl. xc. figs. 8-14.