

character which would seem to be not confined to this subgenus, for Mr. Carter figures a similar structure in the isochelate spicules of his *Microciona affinis*;¹ further information concerning the latter species is, however, much needed, especially with regard to the megasclera.

The new Challenger species are very closely related to that of Johnston and Bowerbank, and it is exceedingly interesting to meet with such intimately related forms in such distant localities as Great Britain, Kerguelen, and the Cape of Good Hope.

Desmacidon (Homæodictya) kerguelenensis, Ridley and Dendy (Pl. XXIII. figs. 3, 3a, 3b, 3c; Pl. XXIV. fig. 3).

1886. *Homæodictya kerguelenensis*, Ridley and Dendy, Ann. and Mag. Nat. Hist., ser. 5. vol. xviii. p. 346.

Sponge (Pl. XXIV. fig. 3) lobate or digitate. The larger of the two specimens obtained consists of a short peduncle, narrower towards the base and then expanding and dividing into two divergent, stout, finger-like lobes of very unequal size. Height of the sponge 69 mm. Diameter of lobate processes 13 mm. Colour in spirit light brownish-yellow. Texture soft, spongy and resilient. Surface rough to the touch, woolly-looking and minutely hispid. Dermal membrane delicate, transparent. Oscula few, small and scattered. Pores irregularly scattered, abundant in parts, diameter about 0.1 mm.

Skeleton.—Very loose and ill-defined, consisting of an irregular, somewhat Isodictyal reticulation of oxeote spicules, occasionally forming fibres.

Spicules.—(a) *Megasclera*; of one kind only, viz., simple oxea (Pl. XXIII. figs, 3, 3a) short and rather stout, tapering gradually to a sharp point at each end; size about 0.35 by 0.019 mm. (b) *Microsclera*; the peculiar palmate isochelæ of the genus (*vide supra*; and Pl. XXIII. figs. 3b, 3c); length about 0.028 mm.

We were at first inclined to regard this sponge as a variety of the British species, *Desmacidon (Homæodictya) palmata*, which it very nearly approaches both in external form and in spiculation. There can be no doubt that the two are closely related, but on the whole it appears better to separate the Kerguelen form as distinct. The main differences between the two concern (1) the size of the oxeote spicules, which in *Desmacidon (Homæodictya) palmata* (according to Bowerbank's preparations in the British Museum) are little more than half as long as in the Kerguelen form; (2) the skeleton fibre, which is more distinct and highly developed in Bowerbank's than in the Challenger specimens. The isochelæ are of about the same size in the two species, and present no important structural differences. The ends of the anterior palms are, as a rule, more turned out in the British species, and the angle which they make with

¹ *Ann. and Mag. Nat. Hist.*, ser. 5, vol. vi. p. 41, pl. iv. fig. 15.