

membrane, a dermal network of spicules, and a subjacent bast-like layer of reticulating spiculo-fibres. The interior of the sponge is composed of a compact reticulate tissue, containing both spiculo-fibres and free spicules, and penetrated by branches of the canal system. Megasclera, oxea, sharp-pointed or blunt, passing into strongyla in some species. In one genus (*Oceanapia*) microsclera are present in the form of sigmata.

Genus *Rhizochalina*, Schmidt (Pls. VIII., IX.).

1867. *Biemna*, *pars*, Gray, Proc. Zool. Soc. Lond., 1867, p. 538.

1870. *Rhizochalina*, Schmidt, Spong. Atlant. Gebiet., p. 35.

1882. *Phlæodictyon*, *pars*, Carter, Ann. and Mag. Nat. Hist., ser. 5, vol. x. p. 122.

No microsclera present.

*Rhizochalina fistulosa*,<sup>1</sup> Bowerbank, sp. (Pl. VIII. figs. 2, 2a; Pl. IX. fig. 4).

1873. *Desmacidon fistulosa*, Bowerbank, Proc. Zool. Soc. Lond., 1873, p. 19, pl. iv. figs. 7, 8.

1884. *Rhizochalina fistulosa*, Ridley, Zool. Coll. H.M.S. "Alert," Brit. Mus., p. 420.

Sponge (Pl. VIII. fig. 2) more or less globular, solid, with fistulæ arising abruptly from all parts of the surface. *Colour* in spirit yellowish to white, when dry light brownish-yellow (Bowerbank's specimen). *Size* of the body very variable, from 6 mm. in diameter upwards. *Fistulæ* broken off (?) in all cases so as to exhibit open ends, no branching visible. *Texture* firm and compact throughout in well-preserved specimens. In broken specimens from a great depth the internal portion appears to have undergone disintegration and run out, leaving little but the external rind formed mainly of the tough bast-like layer. *Surface* smooth, covered with a very thin transparent membrane.

*Skeleton*.—(a) A dermal network of oxeote spicules, which are a trifle shorter than those lying below, measuring 0.213 mm. in length. (b) A bast-like reticulation of spiculo-fibres, which are, however, not so coarse and stout as in *Oceanapia robusta*. (c) A reticulation of spiculo-fibre filling up the centre of the sphere and supporting the canal systems. Some of the canals are lined by a very dense layer of oxeote spicules arranged vertically to their walls, and not collected into fibres.

*Spicules*.—Oxea (Pl. IX. fig. 4), usually slightly curved, moderately sharp, tapering more abruptly towards the ends, but much less abruptly than in *Rhizochalina putridosa*, and measuring in the deeper parts of the sponge 0.265 by 0.0126 mm.

<sup>1</sup> Since this account was written we have discovered in one of the specimens from Station 188, which we have here referred to *Rhizochalina fistulosa*, numerous sigmata. This fact necessarily modifies our views both as to the species and genus. Probably *Rhizochalina*, Schmidt, and *Oceanapia*, Norman, should be united in one genus, but it is now too late to make any such radical alteration in the present work. As regards the species *Rhizochalina fistulosa*, it is still very possible that we are correct in our determination, and that the sigmata have hitherto simply been overlooked, as Bowerbank at first overlooked them in describing his *Desmacidon Jeffreysii* (= *Oceanapia robusta*), cf. Mon. Brit. Spong., vol. ii. p. 347, and vol. iii. p. 162.