

II. Microsclere. 4. *Sigmaspire*, surface raised into irregular rounded transverse ridges, 0·035 by 0·006 mm.

*Habitat*.—Florida; depth, 100 to 123 fathoms (not from Iceland?).

*Remarks*.—This is probably a good species, distinguished by the large and characteristic sigmaspire. Schmidt assigns specimens from Iceland to this species, but the mounted spicules in the British Museum do not support this determination.

*Craniella zetlandica* (Carter).

*Tethya zetlandica*, Carter, Ann. and Mag. Nat. Hist., ser. 4, vol. ix. p. 417, pl. xxii. figs. 1-6, 13-17, 1872.

*Tethya cranium*, var. *zetlandica*, Norman, Bwk., Mon. Brit. Spong., vol. iv. p. 39, 1882.

*Sponge* similar to *Craniella cranium*.

*Spicules*.—I. Megascleres. 1. *Somal oxea*, 4·6 by 0·06 mm. 2. *Cortical oxea* 1·1 by 0·05 mm. 3. *Protriæne*, rhabdome 5·3 by 0·018 mm. 4. *Anatriæne*, rhabdome 5·3 by 0·025 at the cladose end, rapidly diminishing to 0·013 mm.; cladi 0·08 mm. long, chord 0·013 mm.

II. Microscleres absent.

*Habitat*.—Shetland Islands.

*Remarks*.—This species very closely resembles both *Craniella simillima*, Bwk., and *Craniella cranium*, Lmk. From the latter it differs chiefly in the absence of sigmaspires, which are not present at any stage of its existence; that no other notable differences are correlated with this is a remarkable fact, suggesting grave suspicions as to the value of the sigmaspires for classificatory purposes. That their presence or absence is of sufficient value, at least for specific distinction, however, will, I think, be admitted, and we may, therefore, fairly recognise the validity of Carter's species, *Tethya zetlandica*, as opposed to *Tethya cranium*. When we come to compare *Craniella simillima* with *Craniella zetlandica* the case is different; neither of these species possesses sigmaspires, and the only characters on which a distinction can be made are the relative dimensions of the spicules. In the Challenger specimens of *Craniella simillima* the somal oxeas range from 2·85 by 0·028 to 3·37 by 0·047 mm., the cortical oxeas measure 1·4 by 0·04 mm., the latter are therefore larger than the corresponding spicules in *Craniella zetlandica*, the former smaller. Whether this difference is sufficient for the distinction of species appears to me very doubtful.

*Fangophilina submersa*, O. Schmidt.

*Fangophilina submersa*, O. Sch., Spong. Meerb. Mexico, p. 73, pl. x. fig. 3, 1880.

This evidently very interesting species is insufficiently characterised by Schmidt. It recalls in some sort the general appearance of *Cinachyra barbata*, Sollas.

*Habitat*.—Caribbean Sea.