

these occur in his species, is shown by a preparation in the Bowerbank collection in the British Museum. Vosmaer, presumably following Bowerbank, also omits to mention the sigmata. The discovery of these sigmata fully justifies the reference of this species to the genus *Gellius*.

The measurements of the spicules are as follows:—Oxea (megasclera) 0·29 to 0·34 by 0·009 to 0·01 mm. Toxa (microsclera) 0·08 by 0·0012 mm. Sigmata (microsclera) 0·019 by 0·0012 mm.

*Locality*.—Station 75, July 2, 1873; lat. 38° 38' 0" N., long. 28° 28' 30" W.; off the Azores; depth, 450 fathoms; bottom, volcanic mud. Three small specimens.

*Habitat*.—British Seas (Bowerbank); off Azores (Challenger).

*Gellius flabelliformis*, Ridley and Dendy (Pl. XXVI. figs. 5, 5a).

1886. *Gellius flabelliformis*, Ridley and Dendy, Ann. and Mag. Nat. Hist., ser. 4, vol. xviii. p. 334.

Sponge (Pl. XXVI. figs. 5, 5a) erect, compressed, forming thin laminae. The largest piece forms an erect, flattened, broadly expanded lobe, arising from a small woody base and rapidly expanding upwards; margin entire, thin, turned back; in addition to this backward curvature of the margin, which would appear most plainly in longitudinal section, the lamella is also curved in a direction at right angles to the former, the second curvature being most evident in horizontal section, and causing the sponge to become convex on one side and concave on the other. The specimen, in fact, resembles a piece broken off from a cup, with the lip turned back; it is not improbable that the sponge may sometimes be caliciform, but we do not think the present specimen has ever been so. Height of the largest piece 68 mm., greatest breadth 79 mm., thickness about 4 to 8 mm. Colour in spirit greyish-yellow. *Texture* very fragile. *Surface* even, with a deeply, though minutely, pitted appearance all over. On the convex side each little pit is covered over by the pore-bearing dermal membrane, but on the concave side the pits seem to represent the oscula, for we have been able to find none other. *Dermal membrane* very delicate indeed. *Oscula* (? minute, very abundant over the concave surface). *Pores*, very numerous rounded openings in the dermal membrane on the convex surface, measuring about 0·085 mm. in diameter, reducing the dermal membrane to a mere network. We have found none on the concave surface, but should not like to say for certain that they do not exist here, though probably, from the analogy of other flabellate sponges, they are almost or quite confined to the one surface.

*Skeleton*.—(a) *Dermal*; there is no very definite dermal skeleton on either side of the sponge, but on the pore-bearing side the toxa are enormously abundant and arranged in loose, irregularly reticulating, fibre-like tracts. (b) *Main*; a loose and quite irregular reticulation of oxeote spicules.