

*Gelliodes licheniformis*, Lamarck, sp. (Pl. XII. fig. 3; Pl. XLVII. figs. 1, 1a).

1813. *Spongia licheniformis*, pars, Lamarck, Ann. Mus. Hist. Nat. Paris, vol. xx. p. 371.

1836. *Spongia licheniformis*, Lamarck, Hist. Anim. sans Vert., t. ii. p. 543.

To this species we refer a single, encrusting, very lichen-like specimen from Station "135 (?) 60 fathoms." The Challenger specimen differs from the type (as evidenced by a dry specimen in the British Museum, in the series of Lamarckian sponges), in having slightly larger sigmata and a more slender fibre; in its present condition the surface is also more even, but no doubt this is in part due to the fact that the specimen is preserved in spirit. As so little is known of the species we may add a few details derived from an examination of the Challenger specimen.

Sponge (Pl. XII. fig. 3) sessile, encrusting. Colour in spirit light yellowish-brown. Texture (in spirit) soft, spongy, very fibrous. Surface uneven. Dermal membrane very thin and transparent. Pores small, scattered. Oscula?

*Skeleton*.—A not very regular reticulation of strongly developed, very distinctly lamellated, horny fibre cored by oxeote spicules, and of oxeote spicules united together by more or less horny substance (spongin). In addition to the main skeleton thus constituted there is a very well-developed and beautiful dermal reticulation (Pl. XLVII. figs. 1, 1a) of spiculo-fibre, consisting of a unispicular network of oxeote spicules with a very large proportion of spongin; backed up behind by a network of much stouter spiculo-fibre, with very few spicules and still more spongin.

*Spicules*.—(a) *Megasclera*; of one kind only, viz., straight, smooth oxea, measuring about 0.23 by 0.0096 mm. (b) *Microsclera*; of one kind only, viz., smooth, slender sigmata, usually measuring about 0.032 mm. in length, very rarely up to about 0.09 mm; thickness about 0.0012 mm.

The Challenger specimen might readily be mistaken for a young form of *Gelliodes poculum*, nobis, but this idea is precluded by the different character of the dermal skeleton. There is no doubt that Lamarck's *Spongia licheniformis* includes more than one species, both as shown by the specimens in the British Museum and by his own statement (*loc. cit.*):—"Habite dans differentes mers, et offre beaucoup de variétés." Our specimen agrees sufficiently closely with that in the British Museum to be ranked in the same species with it, but regarding Lamarck's other varieties we are not able to speak with certainty.

*Gelliodes poculum*, Ridley and Dendy (Pl. X.).

1886. *Gelliodes poculum*, Ridley and Dendy, Ann. and Mag. Nat. Hist., ser. 5, vol. xviii. p. 334.

Sponge (Pl. X.) consisting of a thin, spreading lamina, which, in the case of the Challenger example, grows over a large, massive Tetractinellid sponge; from this