it is doubtful whether or no any opening exists in the living sponge, though traces of what appears to be such can be found. *Colour* in spirit yellowish-grey. *Texture* tough and leathery, internally coarsely fibrous; the cortex is very firmly adherent to the underlying tissues. *Surface* between and on the mammiform processes even, seen in sections to be minutely hispid; the hispidity is more strongly marked over the body than on the mammiform processes; on the body there is a considerable amount of foreign matter collected, while the mammiform processes are free from it and almost glabrous in appearance. *Oscula* (? minute, at the summits of the papillæ). *Pores* scattered (? singly) over the surface of the body and of the mammiform processes.

Skeleton.—(*a*) Of the main body (1) a thin, very dense and compact external layer (Pl. XLII. fig. 6, *b*), about 0·15 mm. thick, composed of vertically placed, tightly packed, small, straight and slender tylostylote spicules, with their apices directed outwards and projecting for a short distance beyond the surface of the sponge. (2) Immediately below the above and inseparable from it a similar but very much thicker layer (Pl. XLII. fig. 6, *c*) of larger, stout tylostylote spicules, arranged as in the first layer and with their apices embedded in it, thickness about 0·35 mm. These two layers may be considered as cortical. Besides the spicules already mentioned, there are in the cortex spicules of another and very remarkable kind, the grapnel-spicules (Pl. XLII. fig. 6, *d*) to be described later. These have the base and part of the shaft embedded in the cortex while the remainder of the spicule projects freely for a considerable distance beyond the surface of the sponge, and bears at its extremity the grapnel. Immediately below the cortex, as above defined, comes a layer (Pl. XLII. fig. 6) about as thick as the second cortical layer, of still larger, stout tylostylote spicules, not vertically disposed but for the most part horizontally and irregularly, forming a compact mass. Below this layer comes the general parenchyma of the sponge (choanosome), with very numerous scattered tylostylote spicules, and with very well defined, stout fibres (Pl. XLII. fig. 6, *a*), composed of large stylote or subtylostylote spicules longitudinally placed and with their apices outwardly directed. These primary fibres run vertically towards the surface of the sponge; before arriving there they expand into divergent brushes of large spicules whose apices penetrate right into or even through the cortex. Secondary skeleton fibres, if present at all, are very ill defined. (*b*) The skeleton of the mammiform processes (Pl. XLII. fig. 7); the cortex and the layer immediately below it are arranged very much as in the main body, except with regard to the grapnel-spicules, which seem to be entirely absent; then come very definite, stout, longitudinally placed bundles of spiculofibre (Pl. XLII. fig. 7, *a*), like those of the main body and arranged mainly, and fairly regularly, in two concentric circles, and with the spaces between them filled with a great number of irregularly but closely arranged tylostylote spicules; in the centre of the inner circle of fibre bundles is a space almost quite free from spicules and filled with a yellow, granular substance.