Skeleton.—(1) Of the body at large; the outermost portion of the skeleton consists of a dense layer (Pl. XLII. fig. 4, *a*) of thickly set brushes of small, slender, tylostylote spicules, whose points project beyond the surface of the sponge; this layer, the most external layer of the cortical skeleton, is about 0·28 mm. thick;[1] it is immediately succeeded below by a very much thicker layer (Pl. XLII. fig. 4, *b*) of large stylote or subtylostylote spicules, closely and for the most part more or less vertically placed, and with a few small tylostyli amongst them; this layer constitutes the remainder, which is by far the greater portion, of the cortical skeleton. Below the cortex the skeleton is no longer definitely arranged, but consists of a confused mass of thickly scattered spicules, often forming rude fibres. (2) In the mammiform projections there is no such thick cortex as on the main body, they are, comparatively speaking, thin-walled. The outermost layer of the cortical skeleton, consisting of closely packed, small tylostylote spicules, is, however, still present, and below this we find definite longitudinal bands of stout spiculofibre, composed of the large megasclera, and a loose network of similar spicules irregularly disposed.

Spicules.—Megasclera; (1) small, straight or slightly curved, fusiform tylostyli (Pl. XLII. fig. 5*a*), sharply and gradually pointed at the apex and with well developed, pointedly oval heads; size about 0·28 by 0·008 mm. (2) Large, straight, smooth, fusiform styli or subtylostyli (Pl. XLII. figs. 5, 5*b*, 5*c*), tapering very gradually to a sharp point at the apex and narrowing considerably towards the base; size about 0·98 by 0·022 mm.

The species is distinguished from its congeners by its very pure white colour and the very large size and flattened form of the larger mammiform processes.

Locality.—Station 125, September 12, 1873; lat. 10° 46′ S., long. 36° 2′ W.; between Pernambuco and Bahia; depth, 1200 fathoms; bottom, red mud. One specimen.

Polymastia agglutinans, Ridley and Dendy (Pl. XLI. fig. 6; Pl. XLII. figs. 1, 2, 2*a*, 2*b*, 3).

1886. *Polymastia agglutinans*, Ridley and Dendy, Ann. and Mag. Nat. Hist., ser. 5, vol. xviii. p. 488.

Sponge (Pl. XLI. fig. 6) sessile; encrusting and enveloping pebbles, &c., and collecting and cementing on to its own surface numerous fragments of shells, grains of sand, and other foreign objects (whence the specific name), and giving off long, slender, cylindrical, fistular processes, each with a distinct canal up the centre but closed at the top. These processes are quite clean and free from any coating of foreign objects such as covers the body of the sponge. There are two specimens in the collection, the largest of which has a body of irregularly globular form, about 12 to 18 mm. in diameter, and with a great deal of coarse foreign matter inside and adhering to it, quite disguising it

[1] Many of the spicules in this layer are drawn out into long, hair-like points, not shown in the figure.