Axinella profunda, Ridley and Dendy (Pl. XXXVIII. figs. 2, 3; Pl. XL. figs. 3, 3*a*).

1886. *Axinella profunda*, Ridley and Dendy, Ann. and Mag. Nat. Hist., er. 5, vol. xviii. p. 480.

Sponge (Pl. XXXVIII. fig. 2) small, erect, stipitate, dichotomously branched; stem and branches slightly flattened in one and the same plane; stem expanding below into a small, woody base. Height of specimen 50 mm.; breadth of stem and branches about 4 mm. *Colour* in spirit yellowish-grey. *Texture;* there is a tough, woody axis surrounded by a soft, spongy coat. Thin, membranous threads extend and form connections between adjacent branches; possibly we have here the first steps on the road to complete anastomosis such as not infrequently occurs between adjacent branches of ramose sponges. *Surface* fairly even where the dermal membrane is intact, hispid. *Dermal membrane* thin and transparent. *Oscula* of moderate size, scattered.

Skeleton.—There is a dense central axis of more or less longitudinally placed, large stylote spicules, from which similar spicules radiate to the surface in tracts or brushes, projecting beyond it and surrounded by bunches of smaller, slender styli whose apices also project beyond the surface.

Spicules.—Megasclera; of one form only, viz., styli (Pl. XL. figs. 3, 3*a*), straight, or nearly so, and sharply pointed; ranging in size from about 0·55 by 0·0084 to about 2·0 by 0·037 mm.; the bases of the spicules, with few exceptions, are very minutely spined (Pl. XL. fig. 3*a*).

This description is taken from one specimen only (that from Station 241). A second (Pl. XXXVIII. fig. 3), met with since it was written, confirms it in a very satisfactory manner indeed, even down to the spination of the bases of the styli; but it is of a dark, reddish-brown colour.

The most characteristic feature of the species is, perhaps, the incipient spination of the bases of the stylote spicules; this, though very minute, is a perfectly definite feature; it is most noticeable in the smaller spicules. The species is especially interesting on account of the very great depth and the widely distant localities from which it was obtained. It would appear to be a widely spread species in abyssal regions of the Pacific, maintaining its peculiar specific characters with singular constancy in very different localities.

Localities.—Station 241, June 23, 1875; lat. 35° 41′ N., long. 157° 42′ E.; North Pacific Ocean; depth, 2300 fathoms; bottom, red clay; bottom temperature, 35°·1. One specimen.

Station 281, October 6, 1875; lat. 22° 21′ S., long. 150° 17′ W.; South Pacific Ocean; depth, 2385 fathoms; bottom, red clay; bottom temperature, 34°·9. One specimen.