

*Corallistes thomasi*, n. sp. (Pl. XXXV. figs. 12, 13; Pl. XV. figs. 40-46).

*Sponge* (Pl. XXXV. figs. 12, 13).—A small, somewhat ear-shaped plate, margin rounded, erect, attached by an incrusting base. Oscules numerous, small, with raised margins, scattered at nearly equal distances apart over the convex face of the plate (Pl. XXXV. fig. 13). Pores scattered evenly on the concave side of the plate (Pl. XXXV. fig. 12), each porous area singly perforated by a central circular pore.

*Spicules*.—I. Megascleres. 1. *Desma*, epirabd stout, cylindrical, cladi similar, rather short, bearing somewhat stud-shaped tubercles, presenting a short, cylindrical stalk or neck, which terminates in an expanded, somewhat hemispherical head, about 0·032 to 0·064 mm. in diameter, bearing low, rounded, secondary tubercles, arranged in groups, those on the sides being frequently elongated longitudinally. The ends of the cladi terminate in expanded lobate processes, which grow over the sides of neighbouring desmas, closely embracing the necks of the tubercles. The breadth of the cladi is usually about 0·045 to 0·052 mm., their length 0·065 to 0·097 mm.

2. *Dichotriæne* (Pl. XV. figs. 40-42), rhabdome stout, short, conical, strongylate; protocladi relatively very short, deuterocladi long; both spreading horizontally, bearing on their distal face short, rounded, conical tubercles which project forwards, growing out into tubercles at the edges also. Rhabdome 0·366 by 0·039 mm., often 0·013 mm. wide at the end where rounded off, protocladus 0·0194 by 0·032 mm., deuterocladus 0·084 by 0·026 mm.

II. Microscleres. 3. *Strongylospire* (Pl. XV. fig. 43), undulating or vermiculate rods, axis straight, curved, or irregularly bent, 0·026 to 0·032 by 0·004 mm.

4. *Spiraster* (Pl. XV. figs. 44-46), of various forms, approaching the metastar and amphiaser types, 0·032 mm. long, a single spine from 0·008 to 0·016 mm. long.

5. *Orthotrichites*; scattered amongst the spicules obtained by boiling out with nitric acid on the glass slide, are fine siliceous filaments distinctly double-contoured, but too fine to afford measurements of thickness, sharply pointed at each end, and about 0·16 mm. long.

*Colour*.—In the dried state yellowish-white.

*Habitat*.—Station 192, off the Ki Islands, south of Papua, September 26, 1874; lat. 5° 49' 15" S., long. 132° 14' 15" E.; depth, 140 fathoms; bottom, blue mud.

*Remarks*.—This specimen so closely resembles in form and size another belonging to a different genus and species, *Azorica marginata*, obtained at the same station, that they were originally mistaken for one another, and the whole sponge of *Corallistes thomasi* was figured along with the desmas of *Azorica marginata*.

The present sponge is about 16 mm. wide, 11 mm. high, and 4 mm. thick. The oscules occur as central perforations about 0·048 mm., at the bottom of circular craters,