

borne upon it, usually in the region of the swelling, or extending towards the base, the distal extremity being left free. A robust-looking secondary spine, 4 mm. in length, is placed well back on the surface of each plate. These spines stand perpendicularly, and are encased in a membranous sheath with crowded pedicellariæ, precisely similar to the large perpendicular spine in the adambulacral armature throughout the ray.

The ambulacral tube-feet are short and stout, tapering a little towards the distal extremity, which terminates with a well-defined and centrally deeply invaginated terminal disk.

The madreporiform body, though small, is remarkably conspicuous on account of being prominent and almost semiglobular. Its outline is circular, 2.5 mm. in diameter, and it is situated at about the same distance from the margin of the disk. There are only about half-a-dozen deep, widely spaced striations upon its surface; some, which are simply wavy, traverse the area, whilst others are convolute, their disposition being altogether irregular and without any approach to centrifugal radiation.

Colour in alcohol, a bleached yellowish white, the disk with a slightly brown shade.

Localities.—Station 205. West of the Island of Luzon, Philippine group. November 13, 1874. Lat. 16° 42' 0" N., long. 119° 22' 0" E. Depth 1050 fathoms. Blue mud. Bottom temperature 37°·0 Fahr.; surface temperature 82°·0 Fahr.

Station 216. Midway between the Pelew Islands and New Guinea. February 16, 1875. Lat. 2° 46' 0" N., long. 133° 58' 0" E. Depth 1675 fathoms. Globigerina ooze. Bottom temperature 35°·4 Fahr.; surface temperature 82°·8 Fahr.

Station 198. In the Celebes Sea, between Celebes and Mindanao. October 20, 1874. Lat. 2° 55' 0" N., long. 124° 53' 0" E. Depth 2150 fathoms. Blue mud. Bottom temperature 38°·9 Fahr.; surface temperature 85°·0 Fahr.

Remarks.—*Freyella echinata* is readily distinguished from *Freyella pennata* by the small papillate spinulation of the disk, and the spinelets sheathed with membrane crowded with pedicellariæ on the ovarian region. In *Freyella echinata* the rays are somewhat shorter in relation to the disk, but still more delicate, and have a different character, the lateral spinelets being longer and finer. In the armature of the adambulacral plates the inner or furrow spine is always solitary, and the armature of the mouth-plates is in like manner simpler. The madreporiform body is large and conspicuous, whereas in *Freyella pennata* it is hidden. The pedicellariæ are of larger size.

4. *Freyella fragilissima*, n. sp. (Pl. CXIII. figs. 1-4).

Rays eleven. $R = 265$ mm.; $r = 10$ mm. $R > 26 r$. Breadth of a ray at the base, 5 mm.; the greatest breadth of a normal ovarian inflation, 8.5 mm. (which is situated at about 10 mm. from the disk); and the greatest breadth of the largest inflation, 16.5 mm. At 40 mm. beyond the disk the width of the ray is 4.25 mm.