are covered with thin membrane, and have a few pedicellariæ near the base. Each plate bears on its actinal surface a secondary or superficial mouth-spine 4 mm. in length, enclosed in a membranous sheath crowded with large pedicellariæ. The entrance of the ambulacral furrow is barred at the actinostomial margin by two broad crescent-shaped processes or plates, which are articulated on the mouth-plates and appear to be the modified representatives of the inner or furrow spine on the adambulacral plates. These plates meet their correspondents in the median radial line and form a noticeable tract separating the first pair of ambulacral tube-feet from the buccal membrane.

The madreporiform body is situated on a distinct prominence, and at the margin of the abactinal surface. The slope of the prominence is covered with membrane and spinelets, in fact a continuation of the dorsal tegumentary structures. The striation is of great simplicity, consisting apparently of only two angulated furrows, one outside the other.

Colour in alcohol, ashy white, with a slight pinkish shade on the side of the ovarial regions, probably owing to the thinness of the plating there.

Locality.—Station 244. In the Mid-North Pacific, between Yeddo and San Francisco, near the meridian of 170° E. June 28, 1875. Lat. 35° 22′ 0″ N., long. 169° 53′ 0″ E. Depth 2900 fathoms. Red clay. Bottom temperature 35°·3 Fahr.; surface temperature 70°·5 Fahr.

Remarks.—This species is remarkable for the great length of the rays and the relatively short ovarial regions. It may be readily distinguished by the number of the rays, by the peculiar subcrescent or scimitar-shaped mouth-spines, by the armature of the adambulacral plates, and by the character of the spinulation of the abactinal plates.

11. *Freyella attenuata*, n. sp. (Pl. CXIII. figs. 5–7).

Disk and number of rays unknown. Breadth of a ray at the base, 2·8 mm.; at the widest part of the ovarial inflation, 3·8 mm. (which is measured at about 5 mm. from the base); and at 33 mm. from the base, 2·1 mm.

Rays elongate, delicate, and slender; subcylindrical at the base, swelling rather rapidly into a small fusiform ovarial inflation, which contracts more gradually outwardly and terminates at about 12 mm. from the base, the ray beyond this point being subtriangular.

The abactinal surface of the ray at the base is covered with very thin but comparatively large subhexagonal plates which bear from one to three short, sharply pointed, minute spinelets, most of the plates on the ovarial region having the larger number and with a tendency to a lineal arrangement on the plate transverse to the axis of the ray. Beyond the ovarial region the plates diminish in size and become irregular, whilst only some of them bear spinelets which are also smaller; isolated minute spinelets may be