

Localities.—Station 46. Off the coast of North America, east of New Jersey. May 6, 1873. Lat. $40^{\circ} 17' 0''$ N., long. $66^{\circ} 48' 0''$ W. Depth 1350 fathoms. Blue mud. Bottom temperature $37^{\circ} 2$ Fahr.; surface temperature $40^{\circ} 0$ Fahr.

Station 47. Off the coast of North America, east of Massachusetts. May 7, 1873. Lat. $41^{\circ} 14' 0''$ N., long. $65^{\circ} 45' 0''$ W. Depth 1340 fathoms. Blue mud. Surface temperature $42^{\circ} 0$ Fahr.

Station 50. South of Halifax, Nova Scotia. May 21, 1873. Lat. $42^{\circ} 8' 0''$ N., long. $63^{\circ} 39' 0''$ W. Depth 1250 fathoms. Blue mud. Bottom temperature $38^{\circ} 0$ Fahr.; surface temperature $45^{\circ} 0$ Fahr.

Remarks.—*Freyella bracteata* is distinguished by the number of its rays, by their comparative rigidity, by the proportionally short and robust lateral spines, by the character and the small number of the spinelets on the abactinal plates, and by the character of the armature of the mouth-plates.

6. *Freyella dimorpha*, n. sp. (Pl. CXV. figs. 1-5).

Rays twelve. $R = 250$ mm.; $r = 10$ mm. $R = 25 r$. Breadth of a ray at the base, 4.7 mm.; at the widest part of the ovarian inflation, 8 to 9 mm. (measured at about 16 mm. from the disk); at 50 mm. from the disk the breadth is 3.25 mm.; and at about midway between the extremities, 2.5 mm.

Rays very long and delicate, narrow and cylindrical at the base, and immediately swelling gradually into an elongately oval or subfusiform ovarian inflation, the tumidity of which is not great, and is of nearly the same dimension for some distance along the median part of the region; it contracts gradually outwardly and terminates at about 30 to 32 mm. from the disk, thus occupying about the proximal eighth of the length. Beyond the ovarian region, the ray is subtriangular, with a truncate median carination, and tapers gradually to the extremity. The interbrachial arcs are simple clefts.

The disk is small, with the abactinal surface subplane and probably capable of slight inflation; it is on a higher level than the abactinal surface of the rays, and the margin is sharply rounded and passes towards the basal part of the rays almost precipitously. The abactinal surface of the disk and of the rays as far as the ovarian region extends is covered with imbricating, subhexagonal plates, overlaid with a delicate membranous tissue. The plates are thin, but often comparatively large, and their greater diameter lies transverse to the direction of the ray. Each plate bears from five to ten (usually about half a dozen) very minute spinelets, from 0.35 to 0.45 mm. in length, covered with simple membrane and articulated on small miliary tubercles. The spinelets have a tendency to form lineal series along the major, transverse, diameter of the plates, especially on the lateral regions. Isolated sessile pedicellariæ are to be found here and there upon the plates, though in some examples they appear to be wanting altogether. The disk has a