

protrudes over the actinostome, which is contracted and nearly closed. Their armature consists of a marginal series of about nine short papilliform spinelets on each plate, nearly subequal in length, the outermost being slightly smaller, standing upright and parallel to one another. The actinal surface of the plate is covered with numerous rather broad granuliform papillæ, truly granules on the outer portion of the plates, but becoming longer and more papilliform as they approach the inner end of the mouth-angle, the innermost three or four being nearly as long as, and more robust than, the marginal series. All are very obtusely tipped.

The actinal interradial areas are large and well-developed, extending as far as the twelfth or thirteenth adambulacral plate. They are occupied by well-defined plates arranged in regular series or columns extending from the adambulacral plates to the infero-marginal plates. The innermost plate of each series is normally subequal in breadth to the adjacent adambulacral plate, and the columns diminish in breadth as they proceed towards the margin. Seven plates may be counted in the series on each side of the median interradial line. The surface of the plates is covered with closely placed hemispherical granules of similar size and character to those on the adambulacral and marginal plates, disposed in regular subrectangular groups, each group being marked out by distinct and well-defined sutures or channels from those adjacent. The regularity of the arrangement is constant and very conspicuous.

The anal aperture is subcentral, and, though comparatively large, is inconspicuous, as there is no modification in the character of the surrounding paxillæ.

The madreporiform body is entirely obscured by paxillæ, a group of five or six in this region being larger and slightly more prominent than any of the others. These indicate its position, which is rather nearer the margin than midway between the centre and the interbrachial arc. It is possible that the madreporiform body may be of large size or even compound, judging from appearances; but these remarks are purely conjectural, as the fact cannot be decided without damaging the specimen.

The ambulacral tube-feet are large and conical, with a very small, mamelon-like, conical termination.

Colour in alcohol, a very light drab, with an ashy grey shade of the same on the paxillar area.

*Locality*.—Station 44 or 45. Off the coast of North America, east of Delaware and Maryland.

Station 44. May 2, 1873. Lat.  $37^{\circ} 25' 0''$  N., long.  $71^{\circ} 40' 0''$  W. Depth 1700 fathoms. Blue mud. Bottom temperature  $36^{\circ} \cdot 2$  Fahr.; surface temperature  $56^{\circ} \cdot 5$  Fahr.

Station 45. May 3, 1873. Lat.  $38^{\circ} 34' 0''$  N., long.  $72^{\circ} 10' 0''$  W. Depth 1240 fathoms. Blue mud. Bottom temperature  $37^{\circ} \cdot 2$  Fahr.; surface temperature  $49^{\circ} \cdot 5$  Fahr.

*Remarks*.—*Plutonaster rigidus* is distinguished from *Plutonaster ambiguus* by its larger size, by the large marginal plates, by the absence of a prominent tubercle on the