

spines. The spines are short, increasing slightly as they approach the mouth, the outermost being much smaller than any of the others. They are slightly subclavate and slightly curved, and radiating apart form an elegant armature. The actinal surface of the plate is covered with numerous short, obtuse, papilliform spinelets, which increase in length and robustness as they proceed towards the inner end of the mouth-plates, those next the marginal series being nearly equal to them in length and very much more robust.

The actinal interradial areas are large and well-developed, and occupied by plates arranged in regular series or columns passing from the adambulacral plates to the marginal plates. Five or six plates may be counted in the series on each side of the median interradial line, and each of the plates in the column imbricates slightly on the next outward plate. Naturally the number of plates in a column decreases as the columns proceed along the ray, and no intermediate plates extend beyond the ninth or tenth adambulacral plate. The intermediate plates adjacent to the adambulacral plates are equal in breadth to the length of the adambulacral plates, and the succeeding plates in a column diminish slightly as they proceed outward. The surface of the intermediate plates is covered with short, uniform, papilliform granules, which form regular rectangular groups, each group being marked out by distinct and well-defined suture-lines or channels from those adjacent, the regularity of the arrangement of the plates being very conspicuous.

The anal aperture is subcentral, but often inconspicuous, as there is nothing in the character of the paxillæ in its neighbourhood to indicate its presence.

The madreporiform body is obscure and hidden by paxillæ, a group of two or three in that position being rather larger than any of the others on the abactinal surface. The position is about one-third of the distance from the margin to the centre.

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

Colour in alcohol, a greyish white, with a slightly darker or ashy shade over the paxillar area.

Locality.—Station 73. West of Fayal, Azores. June 30, 1873. Lat. $38^{\circ} 30' 0''$ N., long. $31^{\circ} 14' 0''$ W. Depth 1000 fathoms. Pteropod ooze. Bottom temperature $39^{\circ} \cdot 4$ Fahr.; surface temperature $69^{\circ} \cdot 0$ Fahr.

Remarks.—*Plutonaster notatus* is most nearly allied to *Plutonaster abbreviatus*, but is distinguished by the broad disk and very narrow rays. These characters also serve to separate it at a glance from the other species; and it is further distinguished by the absence of any spines either on the superior or inferior series of marginal plates. In the largest example in the collection, however, minute or rudimentary representatives of infero-marginal spinelets are present on the plates in the interbrachial arc.

6. *Plutonaster abbreviatus*, n. sp.

Rays five. $R = 20$ mm.; $r = 7 \cdot 5$ mm. $R > 2 \cdot 5 r$. Breadth of a ray between the third and fourth supero-marginal plates, 5 mm.