

detailed examination of the smaller specimens for those more important regions, and have added such structural features from the larger specimen as could be detected without injuring it.

The test of the larger specimen is comparatively stout; the abactinal region is covered posteriorly to the peripetalous fasciole with slender slightly club-shaped spines of uniform length (Pl. XXXIII. fig. 1); within the peripetalous fasciole the spines are longer, not club-shaped, somewhat more slender, and less crowded together (Pl. XXXIII. figs. 1, 3). Towards the ambitus the spines are somewhat more crowded (Pl. XXXIII. fig. 3), and on the actinal side they are club-shaped, longer, stouter, and closely packed round the exterior half of the actinal region (Pl. XXXIII. fig. 2). The median space is left quite bare towards the small actinal plastron and round the actinostome; the actinal plastron carries a small number of large spathiform curved spines.

The test is quite cylindrical (Pl. XXXIII. figs. 5, 5'), and the anal system (Pl. XXXIII. figs. 1, 5, 7) is placed well up on the abactinal surface. Seen in profile (Pl. XXXIII. fig. 3), the anterior part of the test is abruptly rounded, curving more gradually towards the apex, which is posterior to the apical system and placed somewhat anteriorly immediately beyond the broad peripetalous fasciole (Pl. XXXIII. figs. 3, 5'); it then curves more gradually towards the posterior extremity which is pointed.

Seen from above, the outline is rounded anteriorly (Pl. XXXIII. figs. 1, 2), with a slight re-entering angle at the odd median ambulacral area. Even in this largest specimen the gigantic ambulacral suckers (Pl. XXXIII. fig. 1) of the odd anterior ambulacrum, usually characteristic in Spatangoids of the younger stages only, are fully as prominent as in the smaller specimen (Pl. XXXIII. figs. 8, 10). There are eight of these gigantic ambulacral feet surmounted with huge sucking disks (Pl. XXXIII. figs. 1, 5', 6, 8, 10); through the genital openings pass four long slender pointed tubes (Pl. XXXIII. figs. 5, 6, 8). These large ambulacral feet are placed on each side of a broad median ambulacral zone (Pl. XXXIII. figs. 5, 6, 8); the principal peripetalous fasciole is very broad near the apex, rounded posteriorly (Pl. XXXIII. fig. 1), and gradually slopes towards the ambitus on the anterior part of the test (Pl. XXXIII. fig. 3; Pl. XXXIII.^a fig. 9). The actinostome is circular, placed in advance of the centre (Pl. XXXIII. fig. 2; Pl. XXXIII.^a figs. 8, 11), surrounded by a ring of ten large ambulacral suckers (figured by Thomson, *Voyage of the Challenger*, vol. i. p. 381, fig. 99). The genital organs form flattened clusters occupying the anterior abactinal part of the test (Pl. XXXIII. fig. 4). The intestinal canal runs at first towards the anal part of the test (Pl. XXXIII. fig. 4), thence it makes a complete loop to the anterior end, back again to the posterior extremity and then runs again towards the anterior edge of the test, enclosing at the posterior end the first part of the alimentary canal which starts from the actinostome. From the second anterior loop it runs to the posterior part of the test, forming a small loop again, before the small intestine finally passes to the anal opening.