species of the group, I am compelled, for the present at least, to distinguish this species from *Phormosoma luculentum*, although it is found associated with it. It resembles *Phormosoma placenta* in the closer tuberculation of the actinal surface (Pl. X.[b] figs. 3, 6), and differs from both *Phormosoma placenta* and *Phormosoma luculentum* in the greater height of its coronal plates, and the presence of large primary tubercles extending both in the ambulacral and interambulacral areas far towards the abactinal system (Pl. X.[b] fig. 4). These primary tubercles carry long curved spines (Pl. X.[b] fig. 1), of a whitish-yellow colour, and not filled with dark pigment as in *Phormosoma luculentum*. This however, I do not consider a character of importance, depending as it does entirely upon the general colour of the test, which, in this species, is of a dirty orange-yellow, with a slight violet tint. The primary spines are comparatively stouter than in *Phormosoma luculentum*.

The most important feature which distinguishes this species at once from *Phormosoma luculentum* is the comparatively large abactinal system (Pl. X.[b] figs. 1, 4, 8), the genital openings extending well into the median interambulacral space between the upper coronal plates, and the larger number of the anal plates of the anal system than in *Phormosoma luculentum*. On the actinal surface (Pl. X.[b] fig. 2) the primary spines are not tipped with a solid hoof, but all end in a fleshy bag (Pl. X.[b] fig. 10), which gives these spines much the appearance of those of the actinal surface of *Micropyga*. There are from two to three primary tubercles on each interambulacral plate near the ambitus, and about half-way towards the abactinal system. In the ambulacral area the large primary tubercles extend nearly to the abactinal extremity of the ambulacrum. The lines of miliaries, extending round the test immediately at the ambitus, are more prominent than in *Phormosoma luculentum* (Pl. X.[b] fig. 7); still they do not correspond in the interior of the test to the remarkable band noticed by Thomson in that species.

This species is also characterised by its extremely narrow poriferous zone which, even on the abactinal surface, forms a more or less irregular vertical zone, composed of short arcs of three pairs of pores, and placed in close proximity to the outer edge of the poriferous zone (Pl. X.[b] figs. 3, 4, 5, 7). The number of primary tubercles near the ambitus is larger in *Phormosoma bursarium* than in *Phormosoma luculentum*. In a specimen of the former measuring 28 mm., there are four primary interambulacral tubercles to each plate, while in a large *Phormosoma luculentum* measuring 160 mm. there are only three large primaries. The miliaries of the abactinal surface are somewhat larger also than in *Phormosoma luculentum*, and less numerous; the interambulacral coronal plates of the latter species being pitted all over with miliary tubercles, sunk in the cutis of the test. The ridges separating the deeply sunken areolas of the primary tubercles of the actinal surface (Pl. X.[b] fig. 6) are quite narrow in *Phormosoma bursarium*, while in *Phormosoma luculentum* the primary tubercles near the ambitus are separated by flat spaces of the