

the edges, when held to the light, is a very dark brown, but on the surface it looks quite black.

The test is hard and tough. In thin sections it is transparent, but in mass is quite opaque. The structureless matrix is densely crowded with test cells. In some places they are so numerous as almost to touch one another (Pl. XXXI. fig. 18, *t.c.*). These test cells are nearly all spindle-shaped or stellate, with large central nuclei, and with the protoplasm so full of small dark granules that it might almost be called pigmented. In addition, however, there are larger cells of ovate or globular form which are much more deeply coloured and are true pigment corpuscles. The pigment granules are dark brown or nearly black in colour.

Each longitudinal muscle band in the mantle has four to eight fibres (Pl. XXXI. fig. 19, *m.b.*), and these fibres are exceptionally broad. Some parts of the mantle are slightly pigmented (Pl. XXXI. fig. 19, *p.c.*). The branchial sac is thick walled and opaque, and the stigmata are inconspicuous.

The alimentary canal is moderately large. The stomach is rounded, and its wall is folded longitudinally.

The post-abdomen is short, and in the *Ascidiozooids* examined the reproductive organs were in an undeveloped condition.

*Psammaplidium*, n. gen.

*Colony* incrusting, massive, or lobed.

*Systems* inconspicuous.

*Ascidiozooids* usually small, not much elongated, and not distinctly divided into regions.

*Test* thick, and greatly strengthened by imbedded and incrusting sand-grains and other foreign bodies which form a great part of its bulk.

*Branchial Sac* small, and not well developed.

*Post-Abdomen* usually short.

I have separated this group of species from the other *Polyclinidæ* on account of the very abnormal condition of the test which they exhibit. This region of the colony in all of these species contains, in a more or less marked degree, sand and shell fragments, &c., and these foreign bodies constitute, in most cases, a very considerable part of the investing mass. This sand is not merely incrusting, but the grains are actually imbedded in and surrounded on all sides by the test substance. Evidently in this genus the test has the power, during its whole development, of taking up foreign particles in large numbers and of finally growing over them, so that they come to be placed in its interior. This power is of course seen, to a limited extent, in the region of the test which forms the base of attachment in any fixed colony, and in the branched hairs