

meshes are nearly square, the transverse extent being slightly the greater; each contains six to eight stigmata.

*The Dorsal Lamina* is ribbed transversely; between each pair of ribs a slighter one, extending only half way to the margin, is generally present; the edge is plain.

*The Tentacles* are simple and rather short and stout; they are thirty to thirty-five in number, and of two sizes, placed long and short alternately.

*The Dorsal Tubercle* is serpentiform, greatly elongated laterally, and disposed in a series of irregular folds; the horns at the extremities are not coiled.

In the specimen figured (Pl. XXXIII. figs. 1 and 2), the vascular ramifications in the test are very conspicuous; they show as delicate white lines spreading over the left (lower) side (fig. 2) and round the margins and the posterior end, but seem to die away on the right side, in the centre of which none are visible (fig. 1). The other two specimens in the collection have the vessels in the test more feebly developed, and they do not form so prominent a feature in the external appearance.

The apertures are distinct but not conspicuous, and their lobes are not well marked. The atrial aperture is placed very far round on the right side, being nearer to the centre than to the dorsal edge (Pl. XXXIII. fig. 1).

The plication of the branchial sac is very distinctly seen on the external surface (Pl. XXXIII. fig. 3), the pouches being large and clearly marked. The stigmata are not long, but are often pointed at their ends; shorter and more irregular ones are frequently present. The papillæ at the angles of the meshes are large (Pl. XXXIII. fig. 4), and have wide horizontal membranes attached to them.

The dorsal lamina is narrow and plain edged, but is distinctly ribbed transversely (Pl. XXXIII. fig. 6); about half the ribs are slighter than the others, and do not extend to the free edge.

The condition of the dorsal tubercle is very remarkable (Pl. XXXIII. fig. 5). Instead of forming a single large curve, with the ends more or less coiled, as is usual in the Ascidiidæ, it has a serpentine course, being thrown into a series of folds, and having its long axis directed transversely (parallel to the peripharyngeal bands). The tubercle lies in a shallow and wide peritubercular area, with a narrow but deep diverticulum extending posteriorly from its central part (Pl. XXXIII. fig. 5).

Three specimens of *Ascidia translucida* were obtained at Kerguelen Island, January 1874; depth, 28 fathoms.

*Ascidia cylindracea*, Herdman (Pl. XXXIII. figs. 7-9).

*Ascidia cylindracea*, Herdman, Prelim. Rep., Proc. Roy. Soc. Edin., 1879-80, p. 714.

*External Appearance.*—The shape is oblong and nearly cylindrical; the posterior end is rounded and wider than the truncated anterior end; the ventral edge is nearly