

The dorsal lamina is wide and the ribs are strong ; like those on the dorsal lamina of *Pachychlæna obesa*, they rather increase in size as they approach the free margin, on which they form considerable projections (Pl. XXXIII. fig. 12).

I was unable to determine the nature of the dorsal tubercle without injuring the unique specimen.

One specimen of *Ascidia despecta* was obtained at Kerguelen Island, in January 1874, from a depth between 10 and 100 fathoms.

*Ascidia pyriformis*, Herdman (Pl. XXXIV. figs. 1–6).

*Ascidia pyriformis*, Herdman, Prelim. Rep., Proc. Roy. Soc. Edin., 1879–80, p. 468.

*External Appearance.*—This species is irregularly pear-shaped ; the anterior end is narrow and pointed, the posterior is broad and rounded. It is attached by a small area near the posterior end of the left side. The branchial aperture is terminal, and is placed on a long, somewhat conical projection, turned dorsally ; the sides of this projection are channelled by eight grooves leading down from between the lobes of the aperture. A strong elevated ridge extends from the base of the branchial projection along the anterior part of the dorsal edge. The atrial aperture is sessile, and is placed at the posterior extremity of this ridge, being about half-way from the anterior to the posterior end, and directed posteriorly.

The surface is irregular ; it is slightly rough, and is prolonged into a few short thickish tufts for attachment at the base ; the globular posterior end is incrustated with sand and shell fragments. The colour is a dull dirty grey.

Length of the body, 5 cm. ; breadth of the body, 3 cm.

*The Test* is remarkably thin, except on the siphons and the ridge connecting them, the latter being very thick.

*The Mantle* is moderately muscular over the right side of the body and on the siphons ; it is membranous over the large distended left side. The body, when the test has been removed, is very peculiarly shaped. The right (branchial) side is flat, narrow, and elongated antero-posteriorly ; while the edges of the mantle forming it are produced into a thin margin, which runs out at intervals, especially round the posterior end, into fine points attached to the inner surface of the test. The left (visceral) side, on the other hand, is large, globular, and distended, extending beyond the branchial area laterally, but not reaching so far posteriorly. The siphons are long and narrow, the branchial is terminal, and is directed anteriorly ; the atrial is about half-way from the end of the branchial siphon to the posterior end of the body, and is directed dorsally and a little anteriorly. A crested ridge extends from the base of the branchial to the base of the atrial siphon, and similar crested ridges extend down both siphons from the lobes round the apertures. The projecting points of these ridges are received into minute pits on the inner surface of the test.

*The Branchial Sac* is of moderate size ; it is long, pointed at the dorsal edge of the