

The *Branchial Sac* has two distinct folds upon each side near the dorsal edge, and one or two more indistinct ones ventrally. The transverse vessels are all of one size. The internal longitudinal bars are numerous. The meshes are slightly elongated antero-posteriorly, contain each four or five stigmata, and are divided transversely here and there by a membrane.

The *Dorsal Lamina* is plain, and has no ribs nor teeth.

The *Tentacles* are larger and smaller alternately. The larger ones are short and stout.

The *Dorsal Tubercle* is a simple elliptical tubercle, with no visible markings.

This species (Pl. XVIII. fig. 1, the upper specimen) was obtained, along with *Styela bythia*, from 2600 fathoms. Although the two species are not unlike in external appearance, they differ greatly in their internal structure. *Styela bythia* has four well-marked folds upon each side of the branchial sac, while in *Styela squamosa* only two are distinct upon each side, the others being in a rudimentary state.

Then again the internal longitudinal bars in *Styela squamosa*, though broad and flat as in *Styela bythia*, are not nearly so numerous as in that species (compare figs. 2 and 6 on Pl. XVIII.), and consequently the meshes are not so narrow, and usually contain four or five stigmata in place of one or two. On the folds, however, they are of course more closely placed, and there the meshes are more nearly of the size found in *Styela bythia* (Pl. XVIII. fig. 4, *br.f.*). The meshes next the dorsal lamina contain each eight to ten stigmata (Pl. XVIII. fig. 5).

The dorsal lamina also differs from that of the last species, as it is a plain membrane with no ribs or other markings, and with no marginal teeth. (Pl. XVIII. fig. 5, *d. l.*) The tentacles (Pl. XVIII. fig. 3) are of two sizes, but both are small.

This species was obtained along with the last at Station 160; March 13, 1874; lat. 42° 42' S., long. 134° 10' E.; depth, 2600 fathoms; bottom temperature, 0°·2 C.; bottom, red clay.

*Styela grandis*, Herdman (Pl. XIX. figs. 1 and 2).

*Styela grandis*, Herdman, Prelim. Rep., Proc. Roy. Soc. Edin., 1880-81, p. 67.

*External Appearance.*—The shape is irregularly pyriform, the anterior end being large and somewhat globular, while the posterior narrows into a short thick stalk, by which the animal is attached. The ventral edge is straight or slightly concave; the dorsal is long, and strongly convex. The branchial aperture is a little to the ventral edge of the anterior end, and is directed ventrally; the atrial is on the dorsal edge, about two-thirds of the way from the anterior to the posterior end, and is directed dorsally and slightly anteriorly. Both apertures are sessile; they are not very distinctly lobed, but are conspicuous.