sac, placed in the dorsal region of the right side, but usually there are indications of the positions of more or fewer, usually of all seven, of the missing folds.[1]

In several of the new Challenger species (*e.g.*, *Styela flava* and *Styela oblonga*) the folds are absent as such, but are represented by eight longitudinal tracts, four upon each side, along which the internal longitudinal bars are very numerous, and are much more closely placed than in other regions of the sac. There can be no doubt that these are merely the folds in a rudimentary condition.

It has been necessary to modify somewhat Heller's definition of the genus, as in one of the newly discovered species (*Styela bythia*) the dorsal lamina is found in the form of languets. In most species of the genus, however, the dorsal lamina has, as Heller says, a smooth edge.

The Challenger expedition obtained only one known species (*Styela gyrosa*), the other eleven were new to science.

Styela bythia, Herdman (Pl. XVIII. figs. 1 and 6–8).

Styela bythia, Herdman, Prelim. Rep., Proc. Roy. Soc. Edin., 1880–81, p. 63.

External Appearance.—The body is between cubical and hemispherical in shape, and it is scarcely flattened laterally. The anterior end is broad and obtuse. The dorsal and ventral edges slope backwards and slightly outwards, and the body is attached by a wide posterior end, slightly expanded at the margin. The apertures are sessile, inconspicuous and four-cleft; the branchial is at the ventral, and the atrial at the dorsal end of the anterior extremity.

The surface of the test is flat, but rough, especially at the anterior end.

The colour is dark brown, paler towards the posterior end.

Length of the body, 2 cm.; breadth of the body, 1 cm.

The Test is thick; it is very stiff, but rather brittle, and is white on section and on the inner surface.

The Mantle is reddish-brown. It is moderately thick, and is closely united to the test.

The Branchial Sac has four folds upon each side. There is a considerable space on each side between the endostyle and the most ventral fold. The transverse vessels are all of one size. The internal longitudinal bars are extremely numerous, and are much crumpled. The meshes are small and elongated antero-posteriorly; each contains one or two stigmata only, and is divided transversely by a delicate bar.

The Dorsal Lamina is in the form of a series of short languets.

This is a very interesting species, as it presents a combination of characters not previously known, and requiring an alteration in the definition of the genus.

[1] See Herdman, On Individual Variation in Simple Ascidians, Trans. Lit. Phil. Soc., Liverpool, for 1882.