

that gemmation takes place in connection with the vascular prolongations from the bodies of the Ascidiozooids into the test. A well-marked vessel, enclosed in a prolongation of the mantle, leaves the posterior end of each Ascidiozooid (Pl. XLV. figs. 9, 12) and runs for a longer or shorter distance through the test before ending in a dilated bulb (Pl. XLV. fig. 9, *t.k.*). Usually the vessels branch considerably (Pl. XLV. fig. 4, *v.*). Figure 9 shows an unusually simple condition.

Figure 10 on Plate XLV. represents a transverse section through the terminal bulb of a vessel with its covering of mantle, and figure 11 shows a part of a similar section more highly magnified, exhibiting spaces in the connective tissue of the mantle under the columnar layer of ectoderm cells. The three layers seen in this section (Pl. XLV. fig. 11, *ec.*, *mes.*, and *end.*) are probably continuous with the ectoderm, the mesoderm, and the endoderm respectively of the body of the parent Ascidiozooid.

Bearing in mind the part which similar vascular appendages play in the process of gemmation in other Compound Ascidians, the probability is that here also the young Ascidiozooids are developed in connection with these enlarged terminal bulbs on the vessels. Cunningham speaks of *Goodsiria* as a "Social Ascidian," thereby expressing, I suppose, his belief that gemmation takes place by means of vascular stolons as in the case of the Clavelinidæ.

Synstyela, Giard.

Synstyela, Giard, Assoc. franç. pour l'avancem. d. Sci., t. iii. Lille, 1874.

Colony thin and incrusting.

Ascidiozooids large and closely placed, completely imbedded in the common test.

Body not divided into thorax and abdomen.

Test relatively small in amount. Matrix sometimes fibrillated; test cells small; bladder-cells absent; vessels present.

Branchial Sac well developed. Rudimentary folds present. Internal longitudinal bars well marked.

Dorsal Lamina in the form of a plain membrane.

Tentacles well developed.

Alimentary Canal not prolonged behind the branchial sac. Stomach folded longitudinally.

Reproductive Organs in the form of polycarps attached to the mantle.

This genus is one of the two forms very briefly described by Giard in 1874,¹ the other one being *Polystyela*. It differs from *Polystyela* and *Thylacium* in having the Ascidiozooids depressed and not projecting above the general surface of the colony. From *Goodsiria* and *Oculinaria* it differs in forming thin incrusting colonies, while the

¹ *Assoc. franç.*, Lille, t. iii.