

the present family and the Didemnidæ, where the vas deferens always commences by coiling spirally around the single large testis.

Pyloric gemmation, which is sometimes met with in the Didemnidæ, is found typically in the Diplosomidæ, where it produces in the Ascidiozooids the curious double-bodied appearance (see Pl. XLII. figs. 7, 8) first noticed by Macdonald in *Diplosoma rayneri*. Each new Ascidiozooid produced by gemmation in the colony is formed by the union of two distinct buds, which either arise independently from the body of the parent, or separate very soon after their origin, the one becoming the thorax and the other the abdomen. The first process of gemmation, however, is so early that it commences in the embryo. Consequently the larva produces at least two Ascidiozooids in place of one, but all the future Ascidiozooids of the colony have their bodies formed by two distinct buds<sup>1</sup> in place of by one, as in the case of other Ascidiæ Compositæ.

It has been shown conclusively by von Drasche that the three genera *Diplosoma*, *Pseudodidemnum*, and *Astellium* were distinguished by Giard upon quite insufficient grounds, so that the two latter names must be given up, leaving *Diplosoma*, Macdonald, as the only genus in the family. Jourdain<sup>2</sup> has recently changed Giard's *Astellium* into *Brevistellium*. Both names are unnecessary and must be abandoned. The suggestion made by von Drasche<sup>3</sup> that the species forming thicker colonies might with advantage be separated from those which produce mere incrusting films may possibly have to be carried out, but I believe that it is more practicable in the present state of our knowledge of the group to divide the family into two genera, in the one of which the test has no calcareous spicules, while in the other spicules are present, and I would propose the name *Diplosomoides* for the latter group, leaving *Diplosoma* for the more typical members of the family, with soft transparent colonies. The species of *Diplosomoides* are obviously more nearly allied to the Didemnidæ than are those of *Diplosoma*.

*Diplosomoides*, n. gen.

*Colony* usually thin and incrusting, sometimes only slightly attached.

*Test* gelatinous, sometimes firm externally, more or less opaque and of a whitish colour. Calcareous spicules present in the superficial layer.

The other characters of this genus are the same as those of the following one, *Diplosoma*, the single important distinguishing feature being the presence of spicules in the test. This, however, gives rise to opacity, and produces a whitish colour in the

<sup>1</sup> According to Jourdain, however (*Comptes rendus*, t. c., No. 24, p. 1512), the two buds arise as a single projection, from the cesophageal region of the body, which very soon divides into two parts.

<sup>2</sup> *Comptes rendus*, t. c., No. 24, p. 1512.

<sup>3</sup> *Die Synascidien*, p. 39.