

This genus contains the typical members of the family, with clear soft gelatinous colonies, like Macdonald's *Diplosoma rayneri* and Giard's *Pseudodidemnum crystallinum* but it also includes those species, like von Drasche's *Diplosoma carnosum*, where the colony becomes thick and fleshy; in none of them, however, are calcareous spicules ever developed in the test. The other characters are merely those of the family, which have already been sufficiently discussed.

In the living condition colonies of this genus are most beautiful objects, and on account of their wonderful transparency they allow a great deal of the anatomy of the Ascidiozooids to be made out without cutting into the test. The common cloacal apertures are also clearly visible in the living and expanded condition of the colony. They are circular apertures with very slight lobes or none at all, but often pigmented round the margin, and are placed on delicate conical processes from the surface of the colony. In spirit-specimens the common cloacal apertures are very rarely visible, and the limits of the irregular systems are difficult to determine.

Six species of *Diplosoma* are known with certainty. These are Macdonald's *Diplosoma rayneri*, Giard's *Pseudodidemnum crystallinum*, Giard's *Astellium spongiforme*, von Drasche's *Diplosoma chamæleon*, von Drasche's *Diplosoma carnosum*, and the new species *Diplosoma macdonaldi*. Milne-Edwards' *Didemnum gelatinosum* belongs to the genus, and may either be the same as *Pseudodidemnum crystallinum*, Giard, or a distinct species. Again, Della Valle's *Pseudodidemnum listerianum* may be *Diplosoma chamæleon* or a distinct species. Jourdain's *Pseudodidemnum zosterarum* has not yet been described; it may be merely a synonym. Leaving out these doubtful species, the genus may be divided as follows:—

