Didemnoides, which would therefore lapse as Della Valle's name has the priority, (3) it may have some peculiarities of its own distinguishing it from both Leptoclinum and Didemnoides, and necessitating the employment of all three sections. Della Valle's figures and remarks¹ do not decide the matter, and therefore Tetradidemnum gigas, Della Valle, must be provisionally placed on one side until more is known in regard to its structure and affinities.

I am not, however, inclined to ascribe very much importance to the number of rows of stigmata, since species differ in that respect which appear to be otherwise closely allied, and I have found in one new species of *Leptoclinum* (see below) three rows and four rows of stigmata present in different Ascidiozooids of the same colony. Consequently, I only use the number of rows as a diagnostic feature in conjunction with other characters, and I regard *Didemnoides* as being quite as closely related to the thick fleshy species of *Didemnum*, although it has four rows of stigmata, as it is to the thin incrusting species of *Leptoclinum*. I therefore divide the family into genera according to the following Table :—



Further remarks as to the affinities of the groups will be found under the generic descriptions.

The species of the Didemnidæ have been described chiefly by Savigny, Milne-Edwards, Giard, Della Valle, and von Drasche. The majority of them belong to the genus *Leptoclinum*, which has a wide distribution, mainly in shallow water.

In the Challenger collection only the two commoner genera *Didemnum* and *Leptoclinum* are with certainty represented, and the majority of the species belong to *Leptoclinum*. The genus *Didemnoides* contains two species found by von Drasche in the Adriatic and on the coast of Normandy. Possibly *Leptoclinum carpenteri*, *Leptoclinum japonicum*, *Leptoclinum jacksoni*, and *Leptoclinum rubicundum*, might be referred to this genus instead of to *Leptoclinum*.

In regard to *Eucœlium*, the only undoubted member of the genus that I know of is Savigny's *Eucœlium hospitiolum*, which differs markedly from all other species of the family in having six rows of stigmata in the branchial sac. Giard's *Eucœlium parasiticum* is probably, as von Drasche supposes, merely a species of *Leptoclinum*. It has only four rows of stigmata in the branchial sac.

¹ Nuove Contribuzioni, &c., p. 50.