

branchial sac, and a well-developed atrial siphon is present; and *Tetradidemnum*, in which there are four rows of stigmata, and the atrial aperture is provided with a languet. This classification appears, however, to refer only to the species which Della Valle was investigating, and which seem from his descriptions and figures to be all referable to the old genus *Didemnum*. Consequently his *Trididemnum* and *Tetradidemnum* may be regarded as subdivisions of Giard's *Didemnum*.

Von Drasche,¹ in his recent scheme of the classification of the Synascidiæ, does not recognise *Eucælium*. His family Didemnidæ contains two genera only, which are named *Didemnum*, Giard, and *Leptoclinum*, Milne-Edwards, and he gives as a new distinguishing feature that the former possesses four rows of stigmata while the latter has only three rows.² In his large work on the Synascidiæ of the Gulf of Rovigno (1883), von Drasche divides the family into *Didemnum* and *Leptoclinum*, and then subdivides the latter genus into *Leptoclinum* and *Didemnoïdes*; he rejects the genus *Eucælium* on the ground that the characters ascribed to it by Savigny and Giard are not sufficient to distinguish it from *Didemnum* and *Leptoclinum*.

If the various classifications referred to above are combined as far as possible, they will form the following scheme, which contains all the subdivisions of the family which have been proposed:—

| Family. | Genus. | Subgenus. | |
|------------|--------|----------------------|------------------------|
| DIDEMNIDÆ, | { | <i>Didemnum</i> . | { <i>Trididemnum</i> . |
| | | | <i>Tetradidemnum</i> . |
| | | <i>Eucælium</i> . | |
| | { | <i>Leptoclinum</i> . | { <i>Leptoclinum</i> . |
| | | | <i>Didemnoïdes</i> . |

It is clear, however, that Della Valle's *Tetradidemnum*, with its four rows of stigmata and its atrial languet, is closely allied to von Drasche's *Didemnoïdes*, and cannot be retained as a subdivision of *Didemnum* if that genus is used in von Drasche's sense.

If the number of rows of stigmata is to be regarded as the most important distinguishing feature in the family, then three sections must be recognised, viz., (1) with three rows of stigmata, *Trididemnum* (or *Didemnum* in the limited sense); (2) with four rows of stigmata, *Tetradidemnum*, *Leptoclinum*, and *Didemnoïdes*; (3) with six rows of stigmata, *Eucælium* (see Savigny's figures). *Leptoclinum* and *Didemnoïdes* may then be separated by the thickness of the colony, leaving *Tetradidemnum* (in regard to which we have not yet sufficient information) with three possibilities before it, viz., (1) it may possibly form thin incrusting colonies, and in that case it should be included in *Leptoclinum*, (2) it may form thick masses and would then be identical with

¹ Zool. Anzeiger, 1882, p. 695.

² I am inclined to think that he has accidentally misplaced the figures and means the reverse, viz., *Didemnum*, 3, and *Leptoclinum*, 4. See also, Die Synascidien der Bucht von Rovigno, p. 9.