

restricted genus. Macleay, in 1823, separated *Styela* from Savigny's genus *Cynthia*, but this division was not accepted by other writers, and the term *Cynthia* continued to be used in the old sense until Heller, in 1877,¹ defined the four genera—*Microcosmus*, *Styela*, *Polycarpa* and *Cynthia*, using the latter in the restricted sense in which it is employed here.

A genus *Cynthia* was founded by Thompson subsequently to Savigny's "Mémoires," for a small group of Schizopodous Crustaceans allied to *Mysis*. Even although *Cynthia* is not now employed strictly as defined by Savigny, still it includes the most typical forms of Savigny's genus, and as it is generally recognised and accepted, there is no doubt that it ought to remain. There is more chance of confusion arising from the substitution of *Halocynthia*, as proposed by Verrill, than from the employment of the same generic name in a totally distinct class of animals.

Traustedt² admits the distinctness of *Styela* from *Cynthia*, but does not, however, accept Heller's *Microcosmus*. Hence Traustedt employs *Cynthia* in rather a wider sense than that in which it is used here.

The characters of *Cynthia* are those of the sub-family, with the exception of the features which distinguish *Microcosmus*. The body may vary greatly in shape, but is always attached, is very rarely stalked at all, and has never a long peduncle. The branchial and atrial apertures are both either square or surrounded by four lobes. The test is usually leathery; it may be thin but is always tough. Occasionally it is soft and cartilaginous, but never so much so as in the genus *Ascidia*. There are no hairs developed upon the outer surface,³ and there is almost never an incrusting coat of sand. The mantle is usually very thick, and has the muscle bands strongly developed, forming two or three distinct layers.

The branchial sac is thrown into a series of strongly-marked folds, usually six or seven on each side, but more may be present (there are eleven upon each side in *Cynthia complanata*, and twelve upon each side in *Cynthia grandis*).

The condition of the dorsal lamina is one of the characters upon the strength of which Heller separated *Microcosmus* from *Cynthia*. In the latter genus the dorsal lamina has its free edge bordered by a series of short languets, while in *Microcosmus* it is a plain membrane. The tentacles are compound, and they do not differ appreciably from those of *Microcosmus*, or of the Bolteninæ.

The alimentary canal is usually large, and the stomach is distinct; the intestine forms a wide loop. The genitalia have various forms, but are developed upon both sides of the body, and are usually simple or lobed elongated masses.

The Challenger collection contains nine species of *Cynthia*, eight of which are new

¹ Untersuch. ü. d. Tun. d. adriat. und Mittelm., Abth. 3, Th. 1, Denkschr. k. Akad. Wissensch. Wien, Bd. xxxiv.

² Oversigt over de fra Danmark, &c., Ascidiæ Simplices, vid. Medd. Nat. For., Kjøbenhavn, 1880.

³ Except upon *Cynthia hispida* and the anterior end of *Cynthia formosa*.