

Two specimens of this large species were obtained off East Moncœur Island, Bass Strait, at Station 162; April 2, 1874; depth, 38 to 40 fathoms; bottom, sand.

Sub-family STYELINÆ.

Body attached, sessile, rarely incrustated with sand. Branchial and atrial apertures either four-lobed or cross-slit.

Test usually coriaceous, rarely cartilaginous.

Branchial Sac with four or less than four folds upon each side.

Tentacles simple, unbranched.

This section of the Cynthiidae represents the Cynthiæ Styelæ and Cynthiæ Pandociæ of Savigny's system, and corresponds to the genus *Styela* alone as used by Macleay, Fleming, and Traustedt, with the addition of *Pelonaia*, and the new Challenger genus *Bathyoncus*. It is a very distinct sub-family, and can be clearly distinguished from both the Bolteninæ and the Cynthiæ by two important characters:—(1), the branchial sac has never more than eight longitudinal folds, four upon each side; and (2), the tentacles are always simple.

Savigny recognised these characters in both his third and fourth tribes of Cynthiæ,—the Styelæ and Pandociæ, and Macleay, who in 1823 formed Savigny's tribes into genera, distinguished those with only eight folds and unbranched tentacles from *Cynthia* and *Caesira*, which had a greater number of folds and possessed compound tentacles. But both these writers went on to sub-divide the group further according to the condition of the genital organs. Thus Savigny distinguished the Cynthiæ Pandociæ from the Cynthiæ Styelæ on account of the presence in the former of a single ovary placed in the intestinal loop. R. Hertwig¹ has, however, shown that Savigny was mistaken as to the nature of the body which he called the ovary, and probably the Pandociæ agree with the Styelæ in having genital glands upon both sides of the body.

Macleay formed three genera,—*Styela*, with at least one ovary on each side of the body; *Pandocia*, with a single ovary in the intestinal loop; and *Dendrodoa*, with a single ovary upon the opposite side of the body. *Pandocia* was probably founded from Savigny's mistaken account of the Cynthiæ Pandociæ, and *Dendrodoa* should, I consider, be merged in *Styela*. Various modifications of the genital glands occur among the species of this genus, and I think they can scarcely be relied upon as furnishing generic characters.

The genus *Pelonaia*, discovered and described by Forbes and Goodsir in 1840, and investigated since by McIntosh, Kupffer and Traustedt, seems to me to fall naturally into this group. I have lately had an opportunity of dissecting *Pelonaia corrugata*, and it appears to be closely allied to *Styela*, and certainly does not require a distinct family or sub-family for itself.

¹ Jenaische Zeitschrift, Bd. viii. p. 96.