

In conclusion, as has been said by Fol,<sup>1</sup> the embryonic characters are not sufficient to justify the separation of the Pteropoda from the Gastropoda.

We see then that the Pteropoda possess the principal general characters of the Gastropoda and especially the visceral asymmetry which results from the unilateral development of the visceral organs and characterises the specialised, that is to say the most numerous, Gastropoda.

But if we seek out from among the Gastropoda those forms with which the Pteropoda have the greatest affinity, we find the common characters still more numerous.

1. In the Pteropoda, as in the Tectibranchia,<sup>2</sup> a partition, or species of diaphragm, divides the body-cavity into a posterior visceral and anterior or cephalic portion, this latter enclosing the buccal mass, the central nervous system, and the copulatory organ.

2. The salivary glands of the Pteropoda, like those of the Tectibranchia (*e.g.*, Bulloidea and Aplysioidea) do not exhibit a duct differentiated off from the secretory portion.

3. The stomach in the Thecosomata at all ages and in the larval Gymnosomata has masticatory plates, as in the great majority of the Tectibranchia. The adult Gymnosomata in consequence of their diet have an unarmed stomach like that of the carnivorous Tectibranchia (*e.g.*, *Doridium*).<sup>3</sup>

4. The liver of the Pteropoda is disposed like that of the Tectibranchia, the Gymnosomata resembling *Gastropteron*, the Thecosomata the Bullidæ in this respect.

5. The generative gland of the Pteropoda is hermaphrodite like that of the Tectibranchia; as in the Aplysioidea and Bulloidea it possesses a single undivided efferent duct with a single orifice. As in these two the genital aperture is connected by a spermatic groove with the copulatory organ which is situated in the head.

6. The pedal ganglia both of the Thecosomatous and Gymnosomatous Pteropoda have two commissures like those of the above-mentioned Tectibranchia, Aplysioidea, and Bulloidea (the second commissure figured in *Cuvierina* and also seen in *Cavolinia* has probably escaped notice in the other genera on account of its small size).

The Pteropoda are thus clearly separated from all the other classes of Mollusca, whilst they present all the characters of the "typical" (asymmetrical but not primitive) Gastropoda.

Further, among the Gastropoda their whole organisation (hermaphroditism and the structure of the nervous system) separates them from the Streptoneura (Prosobranchia

<sup>1</sup> Fol, *ibid.*, pp. 197, 198.

<sup>2</sup> Vayssièrè, Recherches anatomiques sur la famille des Bullidés, *Ann. d. Sci. Nat. (Zool.)*, sér. 6, t. ix. p. 78.

<sup>3</sup> Vayssièrè, Recherches zoologiques et anatomiques sur les Mollusques Opisthobranches du Golfe de Marseille, i. Tectibranches, *Ann. Mus. Marseille*, t. ii. p. 44.