

have a deep conviction that these organisms do not really belong to the group in question, and am firmly of opinion that Pteropods do not occur as fossils till the end of the Lower Tertiary. I shall afterwards revert more explicitly to this point in the anatomical part of the Report, in connection with the origin and phylogeny of the group.

Among the living Thecosomata really known there are, then, strictly speaking, only eight genera, including one new genus established in this Report.

These genera are :—

<i>Limacina</i> , Cuvier.		<i>Cavolinia</i> , Abildgaard.
<i>Peracle</i> , Forbes.		<i>Cymbulia</i> , Péron and Lesueur.
<i>Clio</i> , Linné.		<i>Cymbuliopsis</i> , n. gen.
<i>Cuvierina</i> , Boas.		<i>Gleba</i> , Forskål.

The following table indicates the chief diagnostic characters :—

#### KEY TO THE GENERA.

##### I. Calcareous shell quite outside the mantle.

###### 1. Shell twisted into a spiral.

- A. Shell with somewhat gentle whorls, a moderately wide opening, and a columella not prolonged into a recurved rostrum, . . . . . *Limacina*.
- B. Shell with rapidly ascending whorls, with a very wide opening and a columella prolonged into a recurved rostrum, . . . . . *Peracelis*.

###### 2. Shell straight and bilaterally symmetrical.

###### A. Shell larger at the aperture than just behind.

- a. Shell without constriction behind the aperture, . . . . . *Clio*.
- b. Shell with a constriction immediately behind the aperture, . . . . . *Cuvierina*.

###### B. Shell narrower at the aperture than just behind, . . . . . *Cavolinia*.

##### II. Cartilaginous shell covered by the pallial epithelium.

###### 1. Voluminous shell with a marked cavity.

- A. Thick shell, with the cavity not extending dorsally to the very end, . . . . . *Cymbulia*.
- B. Shell with thin walls, cavity extending dorsally to the very end, . . . . . *Cymbuliopsis*.

###### 2. Flattened shell with almost no cavity, . . . . . *Gleba*.

As to the relations of these eight genera with the other Pteropods, we have already noted in the Systematic Report on the Gymnosomata,<sup>1</sup> that Fol doubts whether *Cymbulia* has not more affinity with the Gymnosomata than with the Thecosomata. Wagner also separates the genus *Cymbulia* from the Thecosomata, and in order to get over the difficulty without solving it, creates for these animals a third division among the Pteropods, viz., Alata.<sup>2</sup>

In reality the members of the genus *Cymbulia* do not differ from the typical Thecosomata which Souleyet included in his family "Hyales" except in external appearance.

<sup>1</sup> Zool. Chall. Exp., part lviii. p. 6.

<sup>2</sup> Die Wirbellosen des weissen Meeres, Bd. i. p. 119.