

more tough than those of some *Pneumonoderma*. Moreover, the Gymnosomata form a group of too low a status, and contain forms differing too little from one another to enable one to establish within it more important divisions than families.

Three of the seven genera I have admitted—*Pneumonoderma*, *Spongiobranchæa*, and *Dexiobranchæa*—show a very close resemblance to one another, and clearly differ from the other genera by the presence of acetabuliferous buccal appendages and of a right lateral gill; they constitute the family Pneumonodermatidæ.

*Clione* and *Halopsyche* are quite separated from the other genera by the complete want of branchial apparatus; they differ as much by the form of the body as by that of the fins, by the buccal appendages, &c., and respectively represent the families of the Clionidæ and Halopsychidæ.

*Clionopsis*, till now ranked near *Clione*, because its organisation was imperfectly known, cannot remain among the Clionidæ. In several characters (the presence of a tetroradiate posterior gill and of a dorsal spot) this genus resembles some Pneumonodermatidæ more than *Clione*; but other more important characters (the absence of a lateral gill and of acetabuliferous buccal appendages, the presence of a retractile proboscis of extraordinary length) exclude it from so natural and so well-characterised a group, which includes *Pneumonoderma*, *Spongiobranchæa*, and *Dexiobranchæa*. Therefore *Clionopsis* represents a special family—Clionopsidæ.

As to the new genus *Notobranchæa*, it must be excluded from all the above cited families: from the Clionidæ and Halopsychidæ, by the presence of a gill; from the Pneumonodermatidæ, by the want of the lateral gill and suckers; and from the Clionopsidæ, by the presence of buccal appendages and by the form of the gill and the foot.

A new family must therefore be established, Notobranchæidæ, for this new genus.

Hence, the Gymnosomata are divisible into five families, of which the first (Pneumonodermatidæ) includes three genera.

#### Family I. PNEUMONODERMATIDÆ.

1840. *Pneumodermidæ*, Gray (*pars*), Synopsis of the Contents of the British Museum, p. 86.  
 1842. *Pneumodermidæ*, d'Orbigny, Paléontologie française, terrains crétacés, t. ii. p. 4.  
 1846. *Pneumodermoidæ*, Agassiz, Nomenclator zoologicus, Index, p. 299.  
 1852. *Clios*, Souleyet (*pars*), Histoire naturelle des Mollusques Ptéropodes, p. 74.  
 1855. *Clionidea*, Gegenbaur (*pars*), Untersuchungen über Pteropoden und Heteropoden, p. 212.  
 1858. *Pneumodermoidæ*, H. and A. Adams (*pars*), The Genera of recent Mollusca, vol. i. p. 62.  
 1862. *Pneumodermidæ*, Bronn, Die Klassen und Ordnungen des Thierreichs, Bd. iii. p. 645.  
 1871. *Pneumonodermatidæ*, Dall, Description of Sixty New Forms of Molluscs from the West Coast of North America, Amer. Journ. of Conchology, vol. vi. p. 139.  
 1881. *Clionidæ*, Fischer (*pars*), Manuel de Conchyliologie, p. 243.

*Characters*.—Suckers on the ventral side of the protrusible anterior portion of the buccal cavity. A lateral gill on the right side. A jaw. Pigmented skin.