

Such are the distinctive characters of this family, which only Bronn understood in the sense in which we now treat it, including the three genera *Dexiobranchæa*, *Spongiobranchæa* and *Pneumonoderma*.

Description.—The *body* of the Pneumonodermatidæ is more or less elongated, and rounded at its posterior extremity. The length of the cephalic region and the form of the lateral gill vary in the different genera.

The *foot* shows a posterior, generally long lobe, and two rather narrow antero-lateral lobes, united throughout their entire length to the cephalic region, between which posteriorly is a small tubercle.

The *fins*, tapering at their free end, are nearly triangular in shape, with bent margins; they are bluntly contracted at the posterior side of the base.

The *colour* in the individuals of this family is nearly uniform, being violet-brown. A dorsal glandular spot must be noticed as another character common to the three genera of Pneumonodermatidæ; this also exists in *Clionopsis*,¹ but it is here smaller and longer (see *Spongiobranchæa*, Pl. I. fig. 7).

The *suckers* of the buccal cavity are generally inserted on appendages; three in *Dexiobranchæa* (two symmetrical and lateral and one median, anterior during the evagination of the front part of the digestive tract), and two (lateral and symmetrical) in *Spongiobranchæa* and *Pneumonoderma*.

There is on the ventral wall of the buccal cavity in the two last genera, in front of the lateral appendages (during the evagination of the proboscis) a small median papilla. I found this papilla in *Spongiobranchæa australis* (fig. 2, p. 19), *Pneumonoderma violaceum*, *Pneumonoderma pacificum* (Pl. II. fig. 5), and *Pneumonoderma souleyeti* (Pl. II. fig. 6). Boas, who previously noticed this in some specimens of *Pneumonoderma*, regarded it as the rudiment of the median acetabuliferous appendage of *Dexiobranchæa*.²

The acetabuliferous appendages, which are inserted on the ventral wall of the buccal cavity, are flattened parallel to the body-wall, and show many different forms, being often short, broad and triangular, or else long, narrow, and with nearly parallel margins.

In *Spongiobranchæa* and *Pneumonoderma* the lateral appendages, which are typically developed, fold backwards when retracted, so that their base is then their most anterior part. They bear suckers only on the side which is turned against the wall of the buccal cavity during retraction. During the extension of the appendages, the two acetabuliferous surfaces are turned towards one another (since the appendages are inserted on the ventro-lateral sides of the cylinder formed by the exerted part of the digestive tract), in order to be applied together, on opposite sides of any prey which may pass in front of the mouth.

¹ Paul Pelseneer, Recherches sur le système nerveux des Ptéropodes, *Archives de Biologie*, t. vii. p. 109.

² *Spolia atlantica*, p. 151, note 1.