

fig. 10, F), the external lamina of the outer plate extends dorsally, so as to form the beginning of a third lamella. This is what is called an "appendage."

On the other hand, the whole of the outer plate may be reduced and directed dorsally, as, for instance, in *Tellina* (Pl. IV. fig. 10, G). This portion is then also called an "appendage." But it is in nowise comparable, as Fischer believed, to the appendage of *Cardium*, or of other Pelecypoda with two branchial plates of which the outer is appendiculate. For in the latter cases the appendage corresponds to the entire outer plate of the typical gill (E).

It is by regarding this appendage of *Cardium* and of other Pelecypoda with two branchial plates, as a structure homologous with the so-called "appendage" of *Tellina*, that Fischer¹ has come to consider the ventrally directed branchial plate of *Tellina* as homologous with the outer plate of the Pelecypoda which he designates as "Tetrabranh."

But this branchial plate of *Tellina* has its recurrent or reflected lamina *internal*. If the plate were external, its recurrent lamina would also be *external*. It therefore represents surely the internal branchial plate of the other Pelecypoda mentioned above.

This arrangement of the gill seen in *Tellina* occurs in the greater number of the members of Fischer's group Anatinaceæ (in which Hancock² has also previously supposed that the ventrally directed plate corresponded to the outer plate of other Pelecypoda), and in the family Clavagellidæ which he includes in his group. But in these groups the outer plate of the gill (Fischer's "appendage"), very much reduced in *Pandora*, only possesses the internal lamina (Pl. IV. fig. 10, I, α), the "direct" lamina of Lacaze-Duthiers; the external or recurrent lamina is absent.²

I cannot for a moment suppose that this disposition of the gills (G and I) of Tellinidæ, Anatinacea, Clavagellidæ (that is to say, the "Appendiculate Dibranhs" of Fischer), could be derived from the arrangement found in *Solenomya* (BB), where the two branchial plates are also directed in opposite directions, the one ventrally and the other dorsally (the dorsal plate being for Fischer the "appendage"), but where neither of the plates exhibits any recurrent or reflected portion.

I would regard the gill arrangement of *Tellina*, &c., as a modification of the typical disposition ("Tetrabranh") (E). For each of the groups cited, one may find among the "Tetrabranhs" neighbouring forms which hardly differ, except in the arrangement of the outer plate of the gill.

¹ Manuel de Conchyliologie, p. 1141.

² Hancock, On the animal of *Chamostrea albida*, *Ann. and Mag. Nat. Hist.*, ser. 2, vol. xi. p. 109; Hancock, On the animal of *Myochama anomioides*, *ibid.* p. 289; Lacaze-Duthiers, Morphologie des Acéphales, *Arch. de Zool. Expér.*, sér. 2, t. i. p. 715, pl. xxxvii. fig. 4 (*Aspergillum*).