

The facts and instances above referred to may be summed up in the following table:—

Anisopleural Gastropods with rudimentary organs of vision.	From habit.	{ Burrowers.	{	Auricula auris-judæ, Auricula auris-mida.	{	Diphyllidia.
		{ Pelagic.				Some Terebræ.
	From the absence of light.	{ Subterranean (Cave fauna).	{ Pulmonate.	{	{	Cæcilianella.
						{ Fresh water.
{ Abyssal.	{	{	{	{	Pleurotoma nivale.	
						— leptæ.
						— brychia.
						Fusus abyssorum.
						Guivillea.
						Eulima stenostoma.
						Fossarus? cereus.
						Tectura fulva.
						Lepeta s. str.
						Propilidium.
						Puncturella brychia.

II. PELECYPODA.

The arrangement of the gills in *Malletia*, in the "*Cryptodon*" of the Challenger, and in the entire group of "*Anatinacea*" formed by *Poromya*, *Silenia*, and *Cuspidaria*, prompted me to study their structure in a large number of other Pelecypoda. I shall here summarise the results of my comparative investigation.

It has been already indicated that among all the known gills of Pelecypoda, those of *Malletia* have the simplest structure, and most closely approach the gills of Cephalopods and Gastropods (such as *Fissurella* and *Haliotis*). They may be regarded, then, as the type most closely resembling the primitive gill of Pelecypoda.

It is possible, in fact, to derive from this type all the other forms of gill found in the group. One can readily understand that with further specialisation, that is to say, with increase of surface for blood exposure, these organs must needs have their gill-lamellæ elongated into filaments. But the two rows of lamellæ being then compressed between the mantle and the visceral mass, they must, in order to elongate and become transformed into filaments, extend towards the ventral side, parallel to one another. This is what occurs in the animals allied to *Malletia* (Pl. IV. fig. 10 BB), in the entire group of Arcidæ.