

II.—COMPARATIVE PART.

I. GASTROPODA.

WE have seen that in the majority of the Gastropoda from great depths, the organs of vision are very rudimentary or even completely absent.

But, on the other hand, adjacent species (as for *Pleurotoma brychia*, *Pleurotoma leptota*, *Fossarus cereus*, and *Puncturella brychia*) and allied genera (as in the case of *Guivillea*) may possess well-developed and normal eyes. The state of these organs in the Gastropods from the depths cannot therefore be regarded as a zoological characteristic of their group, which has been retained in a new habitat. It is rather a modification impressed upon these organs by the conditions of abyssal life.

In fact, there are other Gastropods, which are, as regards their eyes, in the same condition as those from the deep sea.

The Gastropods in which the eyes are wholly absent are not numerous. The instance of *Vermetus*, quoted by Gegenbaur,¹ is wholly erroneous: very evident eyes are to be seen in *Vermetus triqueter*, where they have been observed by Lacaze-Duthiers, and in *Vermetus gigas*, as I have myself noted, &c.

In the group formed by *Neomenia* and *Chætoderma*, designated Aplacophora, the organs of vision are absent. As to the Polyplacophora (or Chitons), though they have numerous dorsal eyes, as H. N. Moseley has shown, they do not possess in their adult life organs homologous to the two cephalic eyes of the Anisopleural Gastropods. It is therefore a distinct character of the entire group of Isopleura, that they have no cephalic eyes.

It is inaccurate, however, to say, as Claus² does, that "cephalic eyes are absent only in the Chitons," for some other Gastropoda are reputed to be without visual organs. But in these cases the absence of visual organs is not, as in the Isopleura, a general

¹ Grundriss der vergleichenden Anatomie (1878), p. 373.

² Grundzüge der Zoologie (1882), Bd. ii. p. 31.