

*On the Organization of the Genera Phyllosoma and Sapphirina.*

By Prof. GEGENBAUR.

In this memoir M. Gegenbaur publishes a detailed anatomy of *Phyllosoma mediterranea*, a little crustacean which has often been arranged among the Stomapoda, but which appears to be a true Decapod, and of *Sapphirina fulgens*, a little Copepodous crustacean.

In reference to the circulation, the author believes that in the *Phyllosomæ* there exist true orifices which effect a communication either of the arterial capillaries or the large vascular branches with the abdominal cavity. These Crustacea, notwithstanding they are Decapoda, have therefore a lacunar sanguinary system, and are removed, in this point of view, from the common Crab, in which the vascular circulatory system is perfectly closed, as M. Hæckel has lately shown. The liver of *Phyllosoma* is formed of two bundles of blind membranous tubes, which M. Guérin has described as circulatory organs. However, the secreting activity of the liver appears to be very small, and it frequently happens that the food passes from the stomach into the interior of the hepatic tubes.

The *Sapphirinæ* have the property of shining in the light with most brilliant colours, passing alternately from a sapphire blue to a golden green or a splendid purple. This brilliant colouring is seated, according to the author, in the layer of cells which secretes the chitine of the skeleton. Under the microscope, the cells are seen to pass alternately from one colour to the other; and it may be ascertained that the variations of colour of each cell are independent of those of the neighbouring cells. This remarkable property vanishes with life. The *Sapphirinæ* possess two well-developed eyes, each furnished with a cornea and crystalline cone. Between the two eyes is placed a little three-lobed body, which is put in communication with the central nervous system by a small nervous filament. This body contains several refracting corpuscles, and M. Gegenbaur regards it as the remains of the single eye of the larva. It is well known that the single eye of the larva persists in several Crustacea (*Daphnia*, *Artemia*, *Branchipus*, *Argulus*, &c.) in the form of a spot of pigment. The two eyes of *Sapphirina* would not therefore be the morphological analogues of the single eye of other Copepoda (*Cyclopidae*), but of the more perfect eyes observed in the *Argulina*, *Daphniadae*, *Phyllopoda*, &c., and which are absent in *Cyclopidae*.—Müller's *Archiv*, 1858, i. p. 43.

*On the Metamorphosis of the Pranizæ into Ancei.* By M. HESSE.

The author states that he has ascertained by continued experiments that the *Pranizæ* are the larvæ of *Anceus*.—*Comptes Rendus*, March 22, 1858, p. 568.





Gegenbaur, C. 1858. "On the organization of the genera Phyllosoma and Sapphirina." *The Annals and magazine of natural history; zoology, botany, and geology* 1, 467–467.

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