

pigment (*Serolis næra*), or there may be no pigment present (*Serolis gracilis*, *Serolis bromleyana*).

Development.—Several of the species of *Serolis* contained eggs within the brood cavity in various stages of development, and although these embryos were not sufficiently well preserved to admit of any examination by means of sections, I have been able to note down some developmental facts which have an important bearing upon the affinities of the genus. The development history of *Serolis*, so far as I have been able to trace it, is strikingly similar to that of the Cymothodæ, which has recently been worked out in detail by Mr. J. F. Bullar.¹ The Isopoda generally differ from the Amphipoda in that the embryo has a dorsal flexure in the former group and a ventral flexure in the latter. Thus Fritz Müller (Facts for Darwin, p. 71) says—“The curvature of the embryo upwards instead of downwards was met with by me as well as by Rathke in *Idothea* and likewise in *Cassidina*, *Philoscia*, *Tanais*, and the Bopyridæ; indeed I failed to find it in none of the Isopoda examined by me.” And at p. 74—“The Amphipoda are distinguished at an early period in the egg by the different position of the embryo, the hinder extremity of which is bent downwards.” In the Cymothodæ—at least in those species which are treated of by Bullar in the paper from which the above quotation has been made—the embryo is intermediate between the typical Isopoda on the one hand and the Amphipoda on the other; it only occupies the ventral surface of the egg, and does not extend so far towards the dorsal surface as in the Isopoda generally, and the telson is bent downwards as in the Amphipoda. In *Serolis* the embryo is exactly similar, and on Pl. X. fig. 7 I have figured a young embryo of *Serolis antarctica*; if this figure be compared with the figures of *Cymothoa* in Mr. Bullar’s paper, the close similarity between the two will be at once apparent.

This fact appears to me to be very strong evidence in favour of Milne-Edwards’s view concerning the zoological position of the Serolidæ, which are regarded by him as a division of the Cymothodæ.²

Post-Embryonic Development.—As in many other Isopoda, the males of *Serolis* when first hatched show none of the distinctive secondary sexual characters of males; the time at which they assume these characters differs in different species.

In *Serolis cornuta* the males are at first exactly like the females in general aspect; the body is more oval than in the fully-developed males, being considerably narrower proportionately; the thoracic appendages of the third pair are, as in the females, similar to the succeeding thoracic limbs; the penial filament of the second abdominal appendages is short, and the sterna of the free abdominal segments resemble those of the female in being

¹ *Phil. Trans.*, vol. clxix. p. 505, 1879.

² *Hist. Nat. d. Crust.*, 1840, t. iii.