

*The Lysioerichthus larva, and the Metamorphosis of Lysiosquilla.*

If my decision that all the *Alima* larvæ are young *Squillæ* be correct, we must look for the larvæ of all the other genera of Stomatopoda among the *Erichthi* and *Squillerichthi*; or, as *Squillerichthus* is simply an advanced *Erichthus*, among the *Erichthi*.

The series of *Erichthus* larvæ is so complete, and transitional forms are so numerous, that it is very difficult to divide the group into minor groups; and while it is obvious that there are several distinct larval types, they are so intimately united by intermediate forms that the attempt to study them is very puzzling. The genera merge into each other in such a way that it is difficult to find any strictly diagnostic characteristics, but this is no more than we should expect from the absence of sharply limited genera among the adult Stomatopoda.

I have shown that the species of *Lysiosquilla*, in which genus I include *Coronis*, and the species of *Squilla* including *Chloridella*, exhibit proofs of divergent descent from a common stem form, which was more like *Coronis* and *Chloridella* than it was like the more divergent *Lysiosquillæ* and *Squillæ*; and as I have also shown that the larvæ of all the species in the *Squilla*-branch from this common stem are *Alimæ*, we naturally turn to the *Alima*-like *Erichthi* in our search for the larval type of the second or *Lysiosquilla*-branch.

In addition to their features of relationship to the adult genus *Squilla*, the *Alima* larvæ agree with each other in the general occurrence of marginal spines on the lateral edges of the carapace, the length of the telson, which is almost always greater than its breadth, the flatness of the hind body and the presence of marginal spines on the inner edge of the dactylus of the raptorial claw. *Squilla* and *Lysiosquilla* agree with each other in the flatness of the hind body, and in the presence of spines on the dactylus, but the *Alima* larva shows its relationship to *Squilla* by the presence of numerous secondary spines between the submedian and intermediate marginal spines of the telson, by the small number of spines on its dactylus, and by the fact that the inner spine of the uropod is always longer than the outer.

Now there is a group of *Erichthus* larvæ, of which *Erichthus duvaucellei* (*Lysiosquilla maculata* ?) (Pl. X. fig. 7), and *Erichthus multispinosus* (*Lysiosquilla excavatrix*) (Pl. XI. figs. 1, 2 and 3) are examples, which show by the flatness of the hind body, and by the presence under the cuticle of the dactylus, in the older larvæ, of traces of marginal spines, that they are either *Squilla* or *Lysiosquilla* larvæ. Claus refers them to the genus *Squilla*, but as the marginal spines are usually more numerous than they are in any known *Squilla* or in the *Alima* larva, we must exclude the genus *Squilla* in our attempt to trace them to their adult form. In some of these larvæ there are as many as seventeen of these rudimentary spines on the dactylus, and they are seldom less than six, and there