laboratory at Wood's Holl, and I have found one specimen at Beaufort, although sickness in my family prevented me from studying, and my hope of rearing it from preserving it. It died, however, without moulting, like all the young Stomatopod larvæ which I have tried to rear in captivity. It is essentially like the *Erichthoidina*, from Honolulu, shown in Pl. XII. figs. 1, 2, and very similar to Claus's *Erichthoidina gracilis*[1] and *Erichthoidina armata* (fig. 3), and it differs from the *Erichthoidina*, shown in Pl. XII. fig. 3, and from Claus's *Erichthoidina brevispinosa*, which I hold to be young *Gonodactyli*, in the absence of a spine below the base of the postero-lateral, and in the greater relative distance between this spine and the dorsal spine.

I shall give reasons for believing that these differences are characteristic of the *Lysiosquilla Erichthus* as distinguished from the *Erichthus* of *Gonodactylus*, and as we find two corresponding types of *Erichthoidina* it is natural to believe that one becomes converted at last into a *Lysiosquilla*, and the other into a *Gonodactylus*.

I therefore regard Claus's *Erichthoidina gracilis* and *Erichthoidina armata*, the Challenger *Erichthoidina* from Honolulu (Pl. XII. figs. 1, 2), Faxon's larva and Smith's larva as very young *Lysiosquillæ*, and Claus's *Erichthoidina brevispinosa* and the Challenger *Erichthoidina*, from St. Vincent (Pl. XII. fig. 3), as young *Gonodactyli*, for reasons which will be more fully developed in the sequel. If this is true we have a most striking corroboration of the correctness of the opinion so ably and ingeniously advocated by Claus (Crustaceen System) that the Stomatopod larva without appendages upon the last six thoracic somites, in which condition the *Alima* larva leaves the egg, is the phylogenetic descendant of a larva with biramous feet on all these somites, for this change must actually occur during the ontogenetic development of *Lysiosquilla excavatrix*, since Faxon's and Smith's larvæ have biramous appendages on the third, fourth, and fifth of these somites, like those on the first and second, although the youngest *Lysioerichthus*, shown in our figure has no traces of them on these somites, or upon the sixth, seventh, and eighth.

The great rarity of *Erichthoidina* larvæ may possibly be due to the fact that during this early period of its larval life, the young Stomatopod remains within the burrow of its parent, or it may be that the larva does not usually escape from the egg until this stage is passed, and that the few specimens which are met with at rare intervals are those which have been prematurely hatched.

The analogy of other Crustacea, the various species of *Alpheus*, for example, shows that two closely related species may hatch in different stages, and it is therefore possible that one *Erichthus* may hatch as an *Erichthoidina*, while another hatches in the *Erichthus* stage. It is not impossible that some *Alimæ* may hatch as *Erichthoidinæ*, although there is no evidence that this is the case.

Before I enter upon the general discussion of the *Lysioerichthus* I will describe

[1] Metamorphose der Squilliden, Taf. i. figs. 1, 2.