

Article

Taxonomical study of laboratory reared first to eight zoeal stages of *Lysmata vittata* (Stimpson, 1860) (Crustacea: Decapoda: Hippolytidae)

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Abstract

The larvae of Hippolytidae show such diversity that it is impossible to frame any definition which will distinguish them as a whole from other Caridea (Gurney, 1942). The present information is based on the morpho-taxonomic study of the zoeal stages of *Lysmata vittata* (Stimpson, 1860). The ovigerous females of *L. vittata* was collected from Buleji. Larvae were hatched at room temperature 23-25°C, in filtered seawater of a salinity of 40-37 ppt and pH 7.8. Eight zoeal stages of *L. vittata* are described along with their illustrations, and compared with the available descriptions of its congener's larvae given earlier.

Keywords Decapoda; Hippolytidae; taxonomic study; *Lysmata vittata*, Pakistan.

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1 Introduction

The family Hippolytidae Dana, 1852 is distributed worldwide (Bauer, 2004) and consists of 318 species divided in 36 genera (De Grave et al., 2009). The larval morphology of the family Hippolytidae or some hippolytid genera have been reviewed by several authors (Lebour, 1931; Gurney, 1937; Gurney, 1942; Haynes, 1985).

The larvae of the family Hippolytidae exhibit an immense diversity in larval forms, which makes it impossible to define any larval characters typical for the entire family (Gurney, 1942; Yang et al., 2001). There are some characters that are always present in a specific genus for example *Lysmata* has a scale which is segmented distally, no exopod seta on the basis of the maxillule and 5 setae on the scaphognathite (Terossi et al., 2010).

The larvae can be identified with the help of following characters: Supraorbital spines when present without spinules; pereopod V develops before pereopods III and IV, terminal spine of dactylus extremely long (extends at least beyond eyes and provided with spinules distally); protopod of maxilla with 3 endites only, exopod shorter than endopod in early larvae. Endopod of maxillule small and unsegmented. Endopod of

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