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Description of the newly-hatched juvenile of *Aegla paulensis* (Decapoda, Anomura, Aeglidae)

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Abstract

The postembryonic development of *Aegla paulensis* is epimorphic (= direct), in which the hatching form is a juvenile that morphologically resembles the adult. Hatching is asynchronous, taking 3–5 days for all juveniles from a single brood to hatch. This paper provides a complete description of the external morphology of the newly-hatched juvenile of *A. paulensis* as analyzed through light microscopy (LM) and scanning electron microscopy (SEM). One of the striking features observed in the newly-hatched juvenile of *A. paulensis* was the presence of four pairs of rudimentary pleopods, a trait never described before in early juveniles of *Aegla*. Additional novelties include three unique types of setae and two types of pore sensilla.

Key words: Appendages morphology, pore sensilla, postembryonic development, setae morphology

Introduction

Perhaps the earliest report regarding the type of postembryonic development in aeglids was provided by the great German naturalist Fritz Müller, then living at Itajaí, state of Santa Catarina, Brazil, during the late 19th Century. In his work on the abbreviated larval development of the palaemonid prawn *Macrobrachium potiana* (Müller, 1880) from Brazil, Müller (1892) reported the large size of the brooded eggs in ovigerous females of *Aegla odebrechtii* (Müller, 1876) specimens he had observed, and suggested that the type of post-embryonic development of this freshwater anomuran could either be very abbreviated or practically devoid of a larval form.

Although Müller himself apparently did not take further steps to elucidate the matter, the epimorphic type of post-embryonic development in *Aegla* Leach, 1820 was recognized and reported by some investigators few decades later (Mouchet 1932; Bahamonde & López 1961). Soon after hatching, juveniles remain under maternal care in the brooding chamber formed by the flexed pleon of the female for a few days (Bahamonde & López 1961; Rodrigues & Hebling 1978; Bueno & Bond-Buckup 1996; Bond-Buckup *et al.* 1999; Swiech-Ayoub & Masunari 2001; López-Greco *et al.* 2004; Francisco *et al.* 2007).

Complete descriptions and illustrations of the morphology of newly-hatched juveniles are currently available for some Brazilian aeglid species: *A. prado* Schmitt, 1942, *A. violacea* Bond-Buckup & Buckup, 1994, *A. platensis* Schmitt, 1942, *A. franca* Schmitt, 1942 and *A. schmitti* Hobbs III, 1979 (Bond-Buckup *et al.* 1996; Bueno & Bond-Buckup 1996; Bond-Buckup *et al.* 1999; Francisco *et al.* 2007; Teodósio & Masunari 2007). A brief description of the newly-hatched juvenile of *A. ligulata* Bond-Buckup & Buckup, 1994 and *A. longirostri* Bond-Buckup & Buckup, 1994 was provided by Bond-Buckup *et al.* (1999), but illustrations were not included. Rodrigues & Hebling (1978) provided a dorsal view illustration of the newly-hatched juvenile of *A. perobae* Hebling & Rodrigues, 1977, but full description and illustration of the appendages remain unpublished.

Aegla paulensis Schmitt, 1942 is endemic to Brazil, and are usually found under rocks and stones along the bottom of small streams, brooks and rivulets from three major river basins in the states of São Paulo and Paraná: