



Morphology of first seven larval stages of the striped soldier shrimp, *Plesionika edwardsii* (Brandt, 1851) (Crustacea: Decapoda: Pandalidae) from laboratory reared material

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Abstract

With the idea of starting a research program for the biological study of *Plesionika edwardsii*, eight ovigerous females were collected with artisanal bottom traps at 220 m depth in the Southwest of Gran Canaria island, north-western Africa (27°43.864'N 15°47.822'W), for laboratory larval cultures. The first seven zoeal stages of *Plesionika edwardsii* were obtained for 20 days after hatching at 23.4 ± 0.4°C, 10°C above adult habitat temperature. The zoeal stages are described and illustrated, constituting the first detailed larval description of the genus *Plesionika*. The larval morphology is compared with previous larval descriptions attributed to *Plesionika* spp. collected in plankton tows and with descriptions of the first stage of development of *Plesionika acanthonotus* reared in laboratory.

Key words: *Plesionika edwardsii*, Pandalidae, larval development, zoea

Introduction

The genus *Plesionika* Bate, 1888 is the most speciose genus within the caridean family Pandalidae Haworth, 1825, being represented by more than 80 species (Chan & Yu 2000). Of these, 12 species have been reported from the north-eastern Atlantic waters (d'Udekem d'Acoz 1999): *Plesionika acanthonotus* (Smith, 1882), *P. antigai* Zariquiey Álvarez, 1955, *P. edwardsii* (Brandt, 1851), *P. ensis* (Milne-Edwards, 1881), *P. geniculatus* (Milne-Edwards, 1883), *P. gigliolii* (Senna, 1902), *P. heterocarpus* (Costa, 1871), *P. holthuisi* Crosnier & Forest, 1968, *P. martia* (Milne-Edwards, 1883), *P. narval* (Fabricius, 1787), *P. rossignoli* Crosnier & Forest, 1968, and *P. williamsi* Forest, 1964. All of these species have been included in the FAO catalogue of species of interest to fisheries (Holthuis 1980).

The striped soldier shrimp, *Plesionika edwardsii*, occurs at Atlantic and Indo-Pacific low latitudes. In the eastern Atlantic Ocean, it has been collected in the Ibero-Moroccan region (western Sahara) from Mauritania to Angola, in the Azores, Madeira and Canary Islands archipelagos (Udekem D'Acoz 1999; González *et al.* 2001) and in the Mediterranean Sea. *P. edwardsii* is a bathyal species (54 to 649 m depth) that inhabit mud, sandy and rocky bottoms (González *et al.* 2001). Although it broods continuously throughout the year, the highest reproductive activity of *P. edwardsii* occurs from April to July (Colloca 2002). This species is frequently caught in trawlers and bottom shrimp-traps in Tunisia, Algeria, Italy, Mediterranean coast of Spain and Canary Islands (Zariquiey Álvarez 1968; Holthuis 1980; Santana *et al.* 1997; Vafidis *et al.* 2005). The Spanish fishing fleet has an annual catch between 80–100 tons (González *et al.* 1992). Moreover, a small artesian fleet has been developed specifically for this fishery in the Canary Islands and Madeira archipelagos in the last decades (Santana *et al.* 1997).