



## The first zoea of *Inachus aguiarii*, *Inachus communissimus* and *Ergasticus clouei* (Decapoda, Brachyura, Majoidea) with implications for the systematics of the family Inachidae

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### Abstract

The first zoeal stages of the inachid crabs *Inachus aguiarii* de Brito Capello, 1876, *I. communissimus* Rizza, 1839 and *Ergasticus clouei* A. Milne-Edwards, 1882, are described and illustrated from laboratory-hatched material obtained from ovigerous females collected in the western Mediterranean. The morphologies of the first zoeae were compared with the corresponding stage of other known species in the family Inachidae. The zoeae of *I. aguiarii* and *I. communissimus* are very similar to those described in other species of the genus, especially *I. thoracicus* and *I. dorsettensis*. The zoeae of *I. aguiarii* and *I. communissimus* differ from each other in the number of setae on the ventral margin of the carapace. The first zoea of *E. clouei*, however, does not share the zoeal characters common to other Inachidae. Therefore, does not completely fit into the characteristics of the family.

**Key words:** Brachyura, Majoidea, Inachidae, zoea, morphology, *Inachus*, *Ergasticus*

### Introduction

The family Inachidae MacLeay, 1838 (see Martin & Davis 2001) is represented in the northeastern Atlantic and Mediterranean by *Achaeus* Leach, 1817; *Dorynchus* Wyville Thomson, 1873; *Macropodia* Leach, 1814; *Inachus*, Weber, 1795; *Stenorhynchus* Lamarck, 1818 and *Ergasticus* A. Milne-Edwards, 1882 (d'Udekem d'Acoz 1999). So far, information on larval morphology is available for species of all these genera except for *Ergasticus* (Ingle 1992, González-Gordillo *et al.* 2001, dos Santos & González-Gordillo 2004). The larval development is known for *Inachus dorsettensis* (Pennant, 1777), *I. phalangium* (Fabricius, 1775), *I. leptochirus* Leach, 1817, and *I. thoracicus* Roux, 1830 (Lebour 1927, 1928, Ingle 1977, 1992, Clark 1983, Clark & Webber 1991 and Guerao *et al.* 2002).

*Inachus aguiarii* de Brito Capello, 1876 is known from Guinea to Portugal, (including Madeira and the Canary Islands) and the Mediterranean Sea at depths of 20–200 m (Zariquiey- Álvarez 1968, Manning & Holthuis 1981, d'Udekem d'Acoz 1999). In the Mediterranean Sea the species has been only recorded in the Alboran Sea (westernmost Mediterranean) (García-Raso, 1984, 1989, present data) and by one single record in the Aegean Sea (Kocatas, 1981).

*Inachus communissimus* Rizza, 1839 is a Mediterranean shallow-water species recorded in both the eastern and western basins, as well as in the Gulf of Cadiz in the Atlantic Ocean closest to the Mediterranean (Zariquiey- Álvarez 1968, Cuesta Mariscal & González-Gordillo 1992, d'Udekem d'Acoz 1999). This species has been recorded from 5–174 m (García Raso 1984, Abelló *et al.* 1988, 2002, d'Udekem d'Acoz 1999).