



A new dwarf sentinel crab from Mayotte Island, western Indian Ocean (Decapoda: Brachyura: Macrophthalmidae)

JOSEPH POUPIN¹ & JEAN-MARIE BOUCHARD²

¹Institut de Recherche de l'Ecole Navale, IRENav, BCRM Brest, Ecole navale et groupe des écoles du Poulmic, CC 600, F-29240 Brest cedex 09, France. E-mail: joseph.poupin@ecole-navale.fr

²Kraken Underwater works, 40, rue Babou Salama, Cavani, 97600 Mamoudzou, Mayotte. E-mail: jean-marie.bouchard@orange.fr

Abstract

A new sentinel crab of the genus *Macrophthalmus* is described from Mayotte Island, western Indian Ocean. The new species is remarkable by its very small size, with a carapace width not longer than 5.5 mm for the largest ovigerous females. It is closely related to *Macrophthalmus (Chaenostoma) boscii* Audouin, 1826. Affinities of these two species are discussed.

Key Words: Crustacea, Decapoda, Brachyura, Macrophthalmidae, *Macrophthalmus*, *Chaenostoma*, sentinel crabs, Indian Ocean, Mayotte, new species

Introduction

Sentinel crabs of the genus *Macrophthalmus* Desmarest, 1823 (family Macrophthalmidae Dana, 1851), are common inhabitants of mudflats in the Indo-West Pacific region. The genus has been recently reviewed by Barnes (2010). He documents 46 species distributed in 15 subgenera or morphological groups. An additional species has also been described from the Philippines by Mendoza & Naruse (2009). The species studied here belong to the subgenus *Macrophthalmus (Chaenostoma)* Stimpson, 1858, which includes only two species, *Macrophthalmus (Chaenostoma) boscii* Audouin, 1826 and *Macrophthalmus (Chaenostoma) punctulatus* Miers, 1884. Both species are characterized by their small sizes but can be easily separated. *Macrophthalmus boscii* is larger, with maximum carapace width of about 14.5 mm; its carapace is granular and it lives under stones in tide-pools, without making burrows; it is widely distributed in the Indo-West Pacific. *Macrophthalmus punctulatus*, on the other end, is smaller, with carapace width rarely exceeding 10 mm; its carapace is smooth and it lives on the high intertidal on sandy mudflats, where it digs burrows; it is known only from eastern Australia.

Several specimens of a species resembling *M. boscii* were collected in the island of Mayotte, in the Western Indian Ocean. They differ from typical *M. boscii* by a series of morphological traits and are attributed to a new species described herein.

Material and methods

Specimens were collected on the island of Mayotte in November 2009 during fieldwork for an inventory of the decapods and stomatopods Crustacea. The expedition was organised by the second author, head of the Kraken Underwater Works Company (KUW), Mamoudzou, Mayotte, in collaboration with the Institut de Recherche de l'Ecole Navale, Brest, and the Muséum national d'Histoire naturelle, Paris (MNHN) (see Bouchard *et al.* 2009, <http://crustaceamayotte.free.fr/>). *Macrophthalmus* crabs were collected on the upper intertidal, on sandy mudflats. They were photographed before being preserved in 75% alcohol and deposited in the MNHN.