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## A new species of deep-sea squat lobster of the genus *Munida* Leach, 1820 (Crustacea: Decapoda: Anomura: Munididae) from a hydrothermal field in the southwestern Indian Ocean

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### Abstract

A new species of the genus *Munida* Leach, 1820, is described and illustrated based on a single specimen from the deep-sea hydrothermal area in the southwestern Indian Ocean. *Munida manqingae* sp. nov. closely resembles *M. tiresias* Macpherson 1994, but differs in the morphology of the carapace, basal segment of the antennular peduncles, first segment of the antennal peduncle.

**Key words:** *Munida manqingae*, new species, Galatheoidea, hydrothermal area, southwestern Indian Ocean

### Introduction

The genus *Munida* Leach, 1820 has a worldwide distribution (Baba *et al.* 2008), being currently represented by more than 250 species with depth ranges from the subtidal zone to over 2000 m. *Munida magniantennulata* Baba & Türkay, 1992 is the single species of the genus that has been recorded from the hydrothermal vent areas in the Lau Basin, southwestern Pacific (Baba & Türkay 1992; Baba & de Saint Laurent 1992).

Six new hydrothermal fields and two water column hydrothermal anomalies have been found along the Southwest Indian Ridge (SWIR) during the Leg 5-7 of the Chinese DY115-20 expedition on R/V Dayangyihao from 2008 to 2009 (Tao *et al.* 2009). In this area, a series of studies were undertaken, including benthic surveys, water sampling, and grabbing for biological and geological specimens. During this expedition, an unusual munidid specimen was collected by a TV-grab and sorted from the sediment from Station 20VII-S20-TVG17. The present paper describes it as a new species of *Munida* and the second species of the genus found in hydrothermal fields. The holotype is deposited in the Third Institute of Oceanography, State Oceanic Administrator, China. Carapace length (CL) is measured along the dorsal midline and excludes the carapace.

### Systematic account

#### Family Munididae Ahyong, Baba, Macpherson & Poore, 2010

#### Genus *Munida* Leach, 1820

#### *Munida manqingae* sp. nov.

**Material examined.** HOLOTYPE: ♀ (CL 6.9 mm) ovigerous, Southwest Indian Ridge, hydrothermal vent field, 36.1010°S 53.2552°W, 2218 m, TVG17, 16 February 2009.

**Description.** Carapace (excluding rostrum) 1.2 times longer than broad, with gastric region anteriorly elevated

**Etymology.** The species is dedicated to the newborn niece of the first author.

**Remarks.** *Munida manqingae* **sp. nov.** belongs to the group of deep-sea species in having five spines on the branchial margins of the carapace, smooth thoracic sternites, and small eyes. This informal group includes *M. clevai* Macpherson 2009, *M. endeavourae* Ah Yong & Poore, 2004, *M. parvioculata* Baba, 1982, and *M. tirsias* Macpherson, 1994. The new species appears closest to *M. tirsias* in the anterolateral and hepatic marginal spine being small and not well developed and the absence of spines on the anterior transverse ridge of the second abdominal somite. *Munida clevai*, *M. endeavourae*, and *M. parvioculata* have at least two distinct spines on the second abdominal somite. However, *M. manqingae* **sp. nov.** is distinguished from *M. tirsias* by the following features: 1) the transverse ridges on the posterior parts of the branchial and cardiac regions of the carapace are uninterrupted; 2) three spines are present on the lateral margin of the basal antennular segment (only two lateral spines in *M. tirsias*); 3) the distal spine on the lateral margin of the basal antennular segment overreaches the end of the distolateral spine (it does not reach the tip of the distolateral spine in *M. tirsias*); 4) the distomesial spine of the first antennal segment nearly reaches the end of the second segment (this spine falls far short of the distal margin of the second segment in *M. tirsias*).

The new species is also similar to *M. magniantennulata* Baba & Türkay, 1992, but there are some distinctions between the two species. The frontal margin of the carapace of *M. manqingae* is more strongly oblique than in *M. magniantennulata* and the anterolateral spine of the carapace is much shorter in the new species. The supraocular spines clearly overreach the distal margins of the cornea in the new species, but they do not reach those margins in *M. magniantennulata*. The antennular basal segment of the new species reaches only to half the length of the rostrum, instead of clearly overreaching it in *M. magniantennulata*. The distomesial spine of the first antennal segment nearly reaches the distal margin of the second segment in the new species, whereas it falls far short of that margin in *M. magniantennulata*.

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