



## A new species of decorator crabs, genus *Menaethiops* Alcock, 1895 (Crustacea: Decapoda: Brachyura: Majoidea: Epialthidae), from Abu-Musa Island, Persian Gulf, Iran

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### Abstract

*Menaethiops abumusa* n. sp. is closely similar to *M. bicornis* Alcock, 1895, and *M. gadaniensis* Kazmi & Tirmizi, 1999, regarding the relatively contiguous rostral spines. The new species is easily distinguishable from its two congeners by having distinctly round angles of orbital eaves and distally divergent rostral spines. Whereas in *M. bicornis*, and *M. gadaniensis*, the angles of orbital eaves are anteriorly produced and rostral spines are closely attached to each other along their entire length. Other morphological differences include the carapace spination/granulation, basal antennal segments, and morphology of the male's first gonopod. *Menaethiops gadaniensis* was described from Gadani, Pakistan and was only known from the type locality, but is here recorded for the first time from the Gulf of Oman.

**Key words:** Indian Ocean, Persian Gulf, taxonomy, Epialthidae, *Menaethiops abumusa*

### Introduction

The brachyuran crabs of the superfamily Majoidea Samouelle, 1819, are currently represented by 19 species in the Persian Gulf (Apel 2001, Naderloo & Türkay, 2012). They are grouped into three families: Inachidae (3 species), Epialtidae (12 species) and Majidae (4 species). The biota of the Persian Gulf is relatively poorly known and very rarely studied, in particular by taxonomists. Among the different groups, however, brachyuran crabs have been relatively well studied (Stephensen 1946; Titgen 1982; Apel 2001; Naderloo & Türkay 2012), although the superfamilies Xanthoidea, Pilumnoidea, and Majoidea need detailed taxonomic consideration.

The genus *Menaethiops* Alcock, 1895, currently includes 15 valid species worldwide (Ng *et al.*, 2008) of which only one species *Menaethiops nodulosus* (Nobili, 1906), has been recorded from the Persian Gulf by Nobili (1906) and Apel (2001) from UAE and Naderloo & Türkay (2012) from Iran. A second species of *Menaethiops*, similar to *M. bicornis* Alcock, 1895, and *M. gadaniensis* Kazmi & Tirmizi, 1999, is described from the Persian Gulf.

Measurements are given in millimeter. The following abbreviations are used: CL = carapace length, CB = carapace breadth, G1 = first male pleopod. The material examined is deposited in the SMF (Forschungsinstitut Senckenberg, Frankfurt am Main, Germany), ZMUC (Universitets Zoologiske Museum, Copenhagen, Denmark), and ZUTC (Zoology Museum, University of Tehran, Iran).

### Taxonomic accounts

#### Superfamily Majoidea Samouelle, 1819

#### Family Epialtidae MacLeay, 1838

**Remarks.** Currently, 15 species of the genus *Menaethiops* are known of which just one species, *Menaethiops nodulosus* (Nobili, 1906) (originally described as *Parahoplophrys nodulosa*), was described and recorded from the Persian Gulf (Nobili 1906). *Menaethiops nodulosus* is different from the new species by having widely divergent rostral spines, distinctly produced orbital eaves, and morphology of chelipeds (Fig. 5b). *Menaethiops abumusa* n. sp. is rather very closely related to *M. bicornis* Alcock, 1895, and *M. gadaniensis* Kazmi & Tirmizi, 1999 (Fig. 5a) with respect to the long and relatively contiguous rostral spines. The rostral spines of *M. abumusa* n. sp. are slightly divergent distally, while in both of the other congeners the rostral spines are closely attached to each other along their entire length. *Menaethiops bicornis* and *M. gadaniensis* have two spines on the bulged hepatic region, but there is a distinct tubercle on the hepatic region in the new species. The basal antennal segment in *M. bicornis* is distally two-lobed, with the outer lobe being distinctly shorter than the inner lobe and the lateral margin of the basal antennal segment nearly straight, while in related congeners, the anterolateral lobe of the basal antennal segment is tooth-shaped and larger than the inner lobe, and the lateral margin of the segment is sinuous with two concavities (see Tirmizi & Kazmi 1986: 168, fig. 52b; Kazmi & Tirmizi 1999: 371, fig. 1B; Naderloo & Türkay 2012). *Menaethiops gadaniensis* has strongly produced orbital eaves and longer rostral spines, whereas orbital eaves of *M. abumusa* n. sp. are not produced and rostral spines are shorter in comparison to the postrostral length of the carapace. Furthermore, regarding the morphology of the G1, *M. gadaniensis* is distinct from its congeners by having the apical inner lobe markedly hook-shaped (see Kazmi & Tirmizi 1999: 371, fig. 1G, G', G'').

**Distribution.** So far only known from Abu-Musa Island in the Persian Gulf, and Iranian coast of the Gulf of Oman in the intertidal rocky/rubble habitat.

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