On the distribution range of *Chaenostoma sinuspersici* (Naderloo & Türkay, 2011) (Decapoda: Brachyura: Macrophthalmidae) in Indian waters

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**ABSTRACT**

*Chaenostoma sinuspersici* (Naderloo & Türkay, 2011) (Macrophthalmidae) is recorded for the first time in Indian waters. The species has so far been only reported from the western Indian Ocean and Arabian Sea.

**KEY WORDS**

Range extension, species complex, rocky shore, Gujarat, first record.

The genus *Chaenostoma* (Stimpson, 1858) of family Macrophthalmidae is composed of small sized crabs which are common on the rocky shores of tropical and subtropical regions (Litulo, 2005; Davie, 2012). *Chaenostoma* currently contains six species: *Chaenostoma boscii* (Audouin, 1826), *Chaenostoma punctulatus* (Miers, 1884), *Chaenostoma sinuspersici* (Naderloo & Türkay, 2011), *Chaenostoma java* Naderloo, 2013, *Chaenostoma orientale* Stimpson, 1858 and *Chaenostoma crassimanus* Stimpson, 1858 (Stimpson, 1858; Ng et al., 2008; Naderloo and Türkay, 2011; Naderloo, 2013; Shih et al., 2015, Teng et al., 2016). Another species, *Chaenostoma lisae* (Poupin & Bouchard, 2010) is now considered as junior synonym of *C. crassimanus* (Shih et al., 2015; Teng et al., 2016). *Chaenostoma sinuspersici* was described from Persian Gulf and has a widespread distribution in Indo-West Pacific (Naderloo and Türkay, 2011; Teng et al., 2016). In the present study, *C. sinuspersici* is reported first time from Indian waters. The following abbreviations are used throughout the text: G1 = male first gonopod, CL = carapace length, and CW = carapace width. All measurements are given in millimeters (mm).
Infraorder Brachyura

Family Macrophthalmidae Dana, 1851

Genus Chaenostoma (Stimpson, 1858)

Chaenostoma sinuspersici
(Naderloo & Türkay, 2011)  
(Fig. 1)


Macrophthalmus sinuspersici Naderloo and Türkay, 2011: 509–513, fig. 3c–d, 4c–d, 5, 6, 7.

Chaenostoma sinuspersici—Naderloo, 2013: 2836; Teng et al., 2016: 19. Fig. 1d–g.

Figure 1. Chaenostoma sinuspersici (Naderloo & Türkay, 2011), adult male, CL: 7.84 mm, CW: 10.2 mm, Shivrajpur (22°19’58”N 68°57’01”E), Gulf of Kachchh, Gujarat, India, 03 September, 2015. (a) Dorsal view, fresh coloration (b) Carapace dorsal view; (c) chela outer and inner view; (d) male abdomen; (e) female gonopore (adult female, CL: 4.03 mm, CW: 7.45 mm); (f) stridulating ridge on merus of cheliped; (g) G1; (h) G1 apical lobe.
A total of 20 males and 19 females (CL: 3.2 mm–7.24 mm; CW: 4.5 mm–9.44 mm) were collected from rocky shores of Shivrajpur (22°19′58″N 68°57′01″E), located on the coastal area of Gulf of Kachchh, Gujarat state, India. The specimens are deposited in the Zoology Museum, Department of Zoology, Faculty of Science, The Maharaja Sayajirao University of Baroda, Vadodara (ZL-AR-CR-80).

Remarks. The morphology of the specimens (Fig. 1) examined herein matches the description and illustrations given by Naderloo and Türkay (2011) and Teng et al. (2016), but varied slightly in following characters: lateral margins of third somite of male abdomen are strongly curved (Fig. 1d) (vs. almost straight in holotype of C. sinuspersici), operculum of female gonopore (Fig. 1e) is larger in size reaching median part of gonopore opening (vs. smaller operculum not reaching median part of gonopore opening in paratype female of C. sinuspersici). Teng et al. (2016) recently reviewed C. bosci species complex and identified six valid species using the following morphological characters: direction of first anterolateral tooth; depth and shape of incision present between first and second anterolateral tooth; shape of dactylar tooth of chela; presence and extent of setal patch on inner margin of cheliped palm; and shape of G1. Chaenostoma sinuspersici shows similarity with C. bosci and C. orientale in having slender chela but varies from these two species in the following characters: The first and second anterolateral teeth are of same extent in C. sinuspersici (Fig. 1b) while the first anterolateral tooth is extending beyond the second anterolateral tooth in C. orientale and C. bosci. The posterolateral margin is running straight with the same position of the margin of anterolateral teeth in C. sinuspersici while in C. orientale, it is also running straight but it is positioned slightly on the inner side than the position of margin of anterolateral teeth. In C. bosci it is slightly converging posteriorly. The striatulating ridge (Fig. 1f) is present on the inner margin of merus of cheliped in C. sinuspersici and C. orientale but it is absent in C. bosci. The length of depression present on mesial surface of apical lobe of male G1 (Fig. 1h) also varies between C. sinuspersici and C. orientale. Chaenostoma sinuspersici has widespread distribution in Indo-West Pacific and it is so far recorded from East Africa, Madagascar, Gulf of Aden, Persian Gulf, Pakistan, Indonesia, Australia (Naderloo and Türkay, 2011) and now from Gujarat, India. However, according to Rahayu and Nugroho (2012), the identity of species occurring in West Pacific needs to be checked. In Indian waters, only one species, C. bosci, is recorded from Andaman and Nicobar Islands by Dev Roy and Nandi (2005; 2012). However, according to Naderloo and Türkay (2011), the distribution C. bosci is limited to Red Sea, so the identity of species recorded by Dev Roy and Nandi (2005; 2012) is doubtful. Hence, currently C. sinuspersici is the only species of genus Chaenostoma occurring in Indian waters.

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References


