

Redescription of *Macrophthalmus (Ventius) latreillei* Desmarest, 1822 with a Note on its Identification

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Abstract: The species *Macrophthalmus (Ventius) latreillei* (Desmarest, 1822) is described from the Northern Arabian Sea. The species is widespread in the Indian Ocean. Where it is probably endemic. It is described and illustrated for the first time from Pakistan. A note on the identification is also included.

Key words: *Macrophthalmus latreillei*, identification, description, Arabian sea

While several monographs and occasional papers on brachyuran crabs from the northern Arabian Sea has been published, still there appears to be some species of crabs, which are either new, to science, new records or never described from the region. The genus *Macrophthalmus* (Latreille, 1829) is represented by *M. laevis*, (A. Milne Edwards, 1867), *M. (M.) dilatatus sulcatus* (H. Milne Edwards 1852), *M. (M.) convexus* (Ruppell, 1830), *M. (M.) grandidieri* (Milne Edwards, 1867), *M. (Mareotis) depressus* (Ruppell, 1830), *M. (Mopsocarcinus) boscii* (Audouin, 1828), *M. (Ventius) pectinipes* (Guerin, 1839). The species from the northern Arabian Sea belonging to the subgenus *Ventius* (Barnes, 1967) are represented by two species: *M. (V.) pectinipes* (Guerin, 1839) and *M. (V.) latreillei*, (Desmarest, 1822). The species *M. (V.) pectinipes* (Guerin, 1839) has been described by Tirmizi & Ghani, (1996: 107) while another species of the subgenus *Ventius* (Barnes, 1967), *M. (V.) latreillei* (Desmarest, 1822) was only listed by Hashmi (1964: 452) and is never described from Pakistan (northern Arabian Sea). The species at hand has got resemblance to the species *M. (V.) latreillei* (Desmarest, 1822) described and illustrated by Chhapparg, (1957: 513, pl.14, Fig. u & y) by Tesch (1915: 181) and has some variations also, which are discussed in the text.

From the diagrams and photograph given by Al-Yun and Song (1984, 1C, 2C, 3G, H,) the species at hand is closely allied to *M. (V.) latreillei* (Desmarest, 1822) unfortunately they have not described it. Comments on the identification of the exact species are also discussed in the following text.

It is interesting to note that with the help of the key for the identification of the species of *Macrophthalmus* (Latreille, 1829) given by Alcock (1900) and Barnes (1977), the specimens at hand leads to the species *M. (M.) convexus* (Ruppell, 1830). It is clearly *M. (V.) latreillei* (Desmarest, 1822) comparing the earlier illustrations and descriptions.

The species at hand is collected from the mangrove area of Korangi creeks. The material is housed in the Marine Reference Collection & Resource Center, University of Karachi, Karachi, Pakistan (Cat. No. BRAC 690♂, BRAC. 889♀).

The abbreviations used are cl. for carapace length, cb. for carapace breadth.

Materials and Measurements: 20.09.97 – male, cl 2.1 cm (+ rostrum), cb.3.1 cm (maximum), Ibrahim Hayderi (Mangroves) Photographed and illustrated.

04.03.99, female, cl. 1.1 cm, 2.1 cm, cb. 2.1 cm, Ibrahim Hayderi (Mangroves).

Description: The carapace (Fig. 1A) is much broader than long it is 2.1 cm, long including rostrum and 3.1 cm broad. Tesch (1915: 183) stated that in this species the shape of the carapace vary considerably in some cases being nearly equilateral, in others much more elongated transversely. The dorsal surface is provided with fine granules and fine setae all over, the regions are well defined with grooves, the granules are in definite pattern and pose bilateral symmetry. The lateral margins are parallel and converge posteriorly. These margins are fringed with thick long plumose



Macrophthalmus (Ventius) latreillei (Desmarest, 1822).

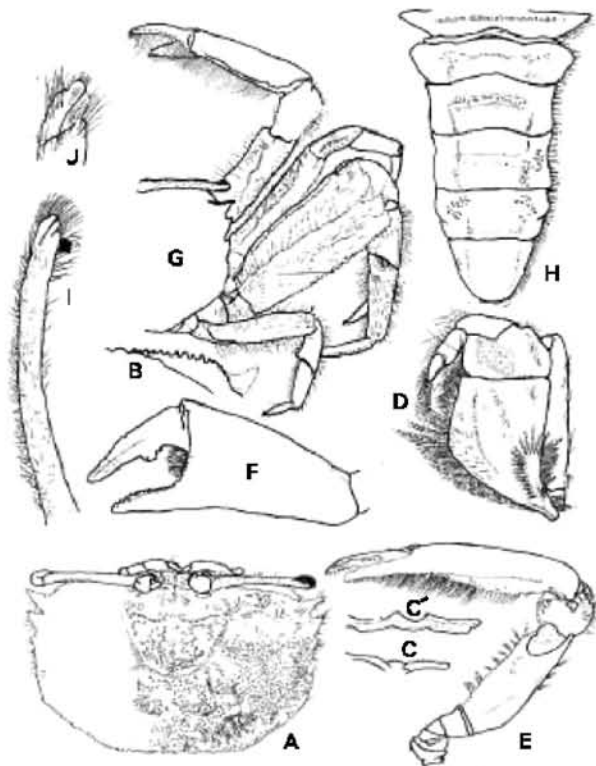


Fig. 1: *Macrophthalmus (Ventius) latreillei*, (Desmarest, 1822) Male. cl.2.1 cm, cb. 3.1. A. carapace; B. ventral orbital margin; C,C'. epistome in two views; D. third maxilliped; E. left cheliped; F. chela of the same; G. thoracic appendages of right side; H. abdomen; I. 1st male; gonopod; J. tip of the same, further enlarged.

setae the antero-lateral border is cut into four teeth the first tooth is large, acute, projects forward and from the outer-orbital angle, the second tooth is broad while third one and fourth are the smaller, these lateral borders including the teeth are minutely denticulate. The rostrum is narrow, the narrowest part is between the orbits. The outer orbital margin is denticulate. Ventrally the sternites are also granular, the pterygostomial region is finely granular and setose. The ventral orbital margin is provided with acute prominent denticles (Fig. 1B). The eye stalks are large slender and do not extend beyond the outer orbital tooth. The stalk of the eyes are also finely granular all over. The epistome is distinctly convex in the middle (Fig. 1C,C').

Third maxillipeds are broad, cover the mouth opening, merus is less than half the length of the ischium (Fig. 1D).

The male chelipeds (Fig. 1E) are large and symmetrical, the fingers are equal. The cutting edges of both the fingers are denticulate and fringed with long plumose seta, the movable finger is provided with a molariform tooth near the base (Fig. 1F). The inner surface of propodus is granular and provided with thick mat of long plumose setae. The surface where the long setae are, is without granules. The outer surface of propodus and both the fingers are provided with very fine granules, inner and outer surfaces of carapace, merus and ischium are granular, outer margin of carpus is with thick plumose setae. While both the margins of merus are with long plumose setae. The stridulating ridge is absent in this species. Tesch (1915: 184), stated that "the male chelipeds are remarkably small, they may attain a large size only in the largest specimens known".

All the legs (Fig. 1G) are with long plumose setae on the margins and outer surfaces. The outer sub-distal margins of all the meri of the legs are provided with a strong tooth on each merus.

The shape of the meri of all the legs is rectangular. The surfaces which faces the bottom or substrate are prominently granular. (Fig. 1G), first leg is with both the edges of merus finely granular, the second leg is with both margins of merus propodus and carpus finely denticulate, the outer margin of carpus is with a few denticles at the base, the third leg is with both margin of merus and base of outer margin of carpus with denticles, the fourth leg has the same texture as the preceding one.

The male abdomen (Fig. 1H) is seven segmented, all the segments are clearly marked, the first segment is with a transverse granular ridge, the second segment is very much reduced, third, fourth, and fifth segments are also with a transverse ridge in the middle of each segment. The sixth segment is winged on both the antero-lateral margins, the lateral margins of the abdomen are fringed with stiff setae, while the outer surface is with some granules. The first male gonopods (Fig. 1I) are stout, the tip (Fig. 1J) is cup shaped horny and provided with thick setae and bristles. The second male gonopod is tiny.

The female, which is newly moulted and is smaller than the male is less granular on the carapace, the chelipeds are much smaller and without any tooth on the fingers. The hairs on the carapace are also less, however, the spines on the outer and inner orbital margins are prominent just like that of the orbital margins of the male. The lateral margins of carapace are like that of the lateral margins of the male carapace.

Colour: Buff pale, with dark pale patches on margins of carapace, the chelipeds are also dark pale on the outer surfaces, propodi and dactyli of all the legs are with violet tinge, the bristles on the legs, chelipeds and carapace are dark brown (Photograph) Chhappgar (1956) has mentioned that colour is uniformly Grey, while propodi of first three legs are with faint violet tinge.

Habit & Habitat: Lives buried in the mud of mangroves.

Distribution: China, Philippines, Sumatra, Java, Malaca, New Caladonia, Thailand, Ceylon (Sri Lanka), Bombay, Madagascar & Pakistan.

Remarks: With the help of key for the identification of *Macrophthalmus* species given by Alcock (1900: 376) and Barnes, (1977: 278, 280) the species at hand can be classified as *M. (M.) convexus* Ruppell (1830) but a detailed study reveals that the species is in fact *M. (V.) latreillei* Desmarest (1822).

From the diagrams 1C, 2C (photograph, dorsal and ventral view) 3G and H given by Al-Yun & Yu-Zhi, (1984: 82,) the specimen seems to be closely allied to *M. (V.) latreillei* Desmarest (1822). Specially the chela, in the absence of any tooth on the immovable finger and in the absence of raised granular ridge on the outer surface of the palm. The petasma also seems to be similar (Figs. 1B, F, H) unfortunately they have not described it while these authors have comments on the identification of the exact species stating that "According to the description by Barnes (1967, 1971, 1977) the central region of the epistome in the subgenus *Ventius* Barnes (1967) is straight or excavated. But in *M. (Ventius) latreillei* Desmarest (1822) this region is slightly protruded. Therefore in that characteristic the definition of this subgenus should be emended to the region of epistome straight, excavated or slightly protruded"; which seems to be quiet appropriate as it is difficult to place this species with *M. convexus* Ruppell (1830) or with *M. (V.) latreillei* Desmarest (1822).

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Naseem Ghani: Redescription of *M. latreillei*

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