

First Finding of Matutid Crabs: *Matuta planipes* Fabricius, 1798 (Crustacea: Decapoda) from Iraqi Coast and Garmat Ali River, Basrah area, Iraq

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Abstract The first finding of matutid crab: *Matuta planipes* Fabricius, 1798 from subtidal zone of Iraqi coast, south Al-Fao city, NW-Arabian Gulf, Basrah, Iraq. Specimens was caught by trawl and hand net, during period from Jan. 16th, 2017 to May 28th, 2017, six females and three males, from Iraqi coast, south Al-Fao city in addition, two males and three females were collected from Garmat Ali River. The present study reports the presence specimens of this species from subtidal zone of Iraqi coast and Garmat Ali River.

Keywords First finding; *Matuta planipes*; Decapoda; Al-Fao city

1 Background

The crabs are considered as ecologically and biologically important in marine ecosystem and play an important role in coastal biodiversity. It is not evenly distributed; quite it varies greatly across the world and within regions. There are a lot of improvements that can be brought about in the biodiversity science.

Crabs of the families Calappidae and Matutidae known as box and moon crabs respectively are one of the most fascinating crabs in the tropical and subtropical seas of the world ocean (Galil and Clark, 1994; Bellwood, 1996).

The family Matutidae are distinguished by their ambulatory dactyli being distinctly paddle-like, both chelae being subequal in size and neither with special cutting teeth, and the carapace having distinct median lateral spines of varying lengths but with the posteorlateral part never expanded (Ng, 1998).

Matuta planipes is common inhabitant of the surf zone of tropical sandy shores and have a widespread distribution which extends from the Red Sea to South Africa, Asia, and Australia (Guinot, 1966; Vannini, 1976; Galil and Clark, 1994).

The aim of the present study is first record of specimens of the species *Matuta planipes* Fabricius 1798 from the Iraqi coast and Garmat Ali River.

2 Materials and Methods

The specimens of *Matuta planipes* (Fabricius, 1798) were collected from subtidal habitats near the Iraqi coast south Al-Fao city and from Garmat Ali river, Basrah, Iraq (Figure 1) by trawl and hand net. Has six adult females and three males from Iraqi coast south Al-Fao city in addition, two females and three males from Garmat Ali River, during period from Jan. 16th, 2017 to May 28th, 2017. Some physico-chemical parameters recorded from the study area in January 2016 are: water temperature, 11.5°C; pH, 7.83; salinity, 39.4 psu; dissolved oxygen, 8.26 mg/L. The specimens were preserved in 96% alcohol and shipped to the laboratory of Marine biology, Marine science Center, University of Basrah. The specimen was identified and described up to species level by using the identification keys of (Tirmizi and Kazmi, 1986; Galil and Clark, 1994). The specimens were deposited in the Marine Science Centre (MBD-MSC) (collection number: 50).



Figure 1 Map of study stations, indicating the position of the two stations (Al-Fao city and Garmat Ali river)

3 Results and Discussion

3.1 Systematics

Order: Decapoda Latreille, 1802

Super family: Leucosioidea Samouelle, 1819

Family: Matutidae De Haan, 1835

Matuta planipes Fabricius, 1798 (Figure 2; Figure 3)

Common Names: sand crab, flower moon crab, reticulated moon crab and beach crab



Figure 2 *Matuta planipes* (Fabricius, 1798) male and female in dorsal view



Figure 3 *Matuta planipes* (Fabricius, 1798) male and female in ventral view

3.2 Description

Carapace rounded, with 2 long, well-developed lateral spines. Carapace subcircular, smooth, slightly convex, covered with minutely granulate. Front, wider than orbit, with slightly rounded lobes laterally and an emarginated rostrum medially. Ischium of third maxilliped tuberculate.

Anterolateral margins un-evenly serrated, nearly uniformly crenulate, tubercles somewhat larger posteriorly. Lateral spine 0.22 times carapace width. Posterolateral margin oblique, with granulate carina extending to base of lateral spine.

Chelipeds subequal. Merus short, carpus with anterior angle produced. Upper margin of palm cut into three teeth, proximal tooth tuberculate. Upper external surface with two rows of granulate low tubercles, proximal most in lower row largest. Mid palm, in male, a rounded ridge extending to tip of lower finger, proximally with granulate tubercle followed by a prominent, acuminate spine. Mid palm, in female, five tubercles, second tubercles spine-like. At lower proximal angle of palm a small granulate tubercle. Lower margin with row of tubercles terminating at base of dactylus. In female, an additional row of obtuse granules parallel to lower margin. Distinctly milled ridge on outer surface of dactylus in male, absent in female.

Male abdomen five segmented, tapering, a granulate carina on third abdominal segment. Telson as long as wide at base, bluntly triangular. First male pleopod slender, tapered, distally setose, minutely granulate distally both on inner and outer surfaces, lacking tubular appendage on inner face.

3.2.1 Size

Maximum length of carapace in males was 45 mm and maximum width of carapace (excluding lateral spines) was 36 mm, while maximum length and width of carapace in females 37 mm, 30 mm, respectively.

3.2.2 Color

The coloration of this species is very distinctive and it cannot be confused with any other species in the area, the carapace bright yellow with red lines, which usually form spots, it ranges from white to yellow, with a range of spots, rings and mottling and dark purple through dark red to brown.

3.2.3 Remarks

The coloration of this species is very distinctive and it cannot be confused with any other species in the area. Carapace distinctly longer than broad (excluding lateral spine), carapace surface with pattern of fine red lines forming distinct mesh-or net-like pattern; lower margin of cheliped palm serrated. *M. planipes* differs from other species of *Matuta* genus in having a single spine on outer surface of male chela.

3.2.4 Habitat

Shallow subtidal mainly in sandy substrates from depths of 5 to 15 m. Taken mainly as a by catch of trawlers.

3.3 Distribution

Arabian Gulf: Iran (Stephensen, 1945; Naderloo and Türkay, 2012), Kuwait [(Jones, 1986) as *Matuta lunaris*] Saudi Arabia (Basson et al., 1977; Apel, 2001), UAE (Titgen, 1982).

World distributions: Pakistan, Oman, India, Sri Lanka, Malaysia, Indonesia, Singapore, China, Japan, Australia and New Caledonia.

Authors' contributions

All authors in this paper have contributed equally toward the publication of this paper.

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