

## First Records of Leucosiid Crabs: *Hiplyra sagitta* (Galil, 2009) from Iraqi Coast, NW-Arabian Gulf

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International Journal of Aquaculture, 2017, Vol. 7, No.22 doi: [10.5376/ija.2017.07.0022](https://doi.org/10.5376/ija.2017.07.0022)

Received: 13 Nov., 2017

Accepted: 05 Dec., 2017

Published: 15 Dec., 2017

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### Preferred citation for this article:

Al-Khafaji K.K.S., Abdul-Sahib I.M., and Ajeel S.G., 2017, First records of Leucosiid crabs: *Hiplyra sagitta* (Galil, 2009) from Iraqi coast, NW-Arabian Gulf, International Journal of Aquaculture, 7(22): 139-142 (doi: [10.5376/ija.2017.07.0022](https://doi.org/10.5376/ija.2017.07.0022))

**Abstract** In the present study, a Leucosiid crab *Hiplyra sagitta* (Galil, 2009), was found for the first time in the Iraqi coast, from the lower reaches of Shatt Al-Arab at Fao city, Basrah, Iraq, during November 2016. Diagnostic characters of the species are figured and its world geographical distribution, especially in the Persian Gulf region is considered.

**Keywords** New records; *Hiplyra sagitta*; Decapoda

## 1 Background

Leucosiidae is common family in the Arabian-Persian Gulf, Gulf of Oman and red sea. This is most diverse and distribution of all brachyuran families (Stephensen, 1946; Titgen, 1982; Apel, 2001 Naderloo and Türkay, 2012). Leucosiidae family formed about 16.6% of all brachyuran crab species of the Persian Gulf (Apel, 2001).

Previous studies on the Persian Gulf brachyuran crabs are confined to Stephensen (1945), Basson et al. (1977), Titgen (1982), Jones (1986), Apel (1994), Cooper (1995), Al-Ghais and Cooper (1996), Bahmani (1997), Apel (2001), Naderloo and Sari (2007), Galil (2009), Gilil et al. (2012), Naderloo and Apel (2012) and Naderloo and Türkay (2012) have increased the number of reported leucosiid species to 37. The aim of the present paper deals with first record for Iraqi coast of Leucosiid crabs *H. sagitta* from fresh specimens collected from NW of the Arabian Gulf at Fao region and to add this species to the brachyuran crabs list of Iraqi waters.

## 2 Materials and Methods

The specimens of Leucosiid crabs *H. sagitta* were collected from intertidal and shallow subtidal zones of Iraqi coast at the Rass Al-Beshaa area from the lower reaches of the Shatt Al-Arab in Fao city, north-western Arabian Gulf (Figure 1) by hand and trawl net. Some physico-chemical parameters recorded from the study area during the collections made in November 2016 are: water temperature, 22.5 °C; pH, 7.68; salinity, 34.5 psu; dissolved oxygen, 6.94 mg/L. The specimens of Leucosiid crabs *H. sagitta* were preserved in 70-80% alcohol and shipped to the laboratory of Marine biology Dep., Marine science Center, University of Basrah and deposited in the (MSC, 54).

The specimens of this species were identified following: Galil (2009) and Naderloo and Apel (2012)

Abbreviations used: CL. = Carapace length; CB. = Carapace breadth

## 3 Results

### 3.1 Systematics

Order: Decapoda Latreille, 1802

Superfamily: Leucosioidea Samouelle, 1819

Family: Leucosiidae Samouelle, 1819

*Hiplyra sagitta*: Galil, 2009 (Figure 2)



Figure 1 Map of study area at Al-Fao city

### 3.2 Material examined (MSC)

Two males (CL = 17.42, 12.7 mm, CB = 16.26, 10.2 mm) and one female (CL = 16.9 mm, CB = 15.1 mm) were collected from Al-Fao city, Rass-Al-Beshaa area, 29°69'N, 48°55'E, 5.5-25 m, catch by trawl net, at Nov. 10<sup>th</sup>, 2016.

### 3.3 Diagnosis

Carapace (Figure 2A) discoidal, convex; dorsal surface finely punctate on branchial, cardial and intestinal regions, along branchio-cardiac grooves, and medially on gastric region.

Anterolateral and posterolateral border covered with larger to smaller granules; front crescentic shaped nearly smooth; shallow anterior margin of efferent channel nearly straight, separated from lateral granulated margin by narrow U-shaped incision. lower margin bearing line of prominent granules. Abdominal segments 3-6, Male abdomen (Figure 2B) elongate-triangular; telson completely smooth.

Ischium of 3rd maxilliped slightly longer than merus, about 1.22 times merus length. Margins of fused male abdominal segments 2-6 distally carinate. Margins of fused abdominal segments in female minutely granulate (Figure 2C).

Chelipeds equal in size and shape; merus longer than total length of carapace, Male chelipeds (Figure 2A) moderately long than female and long than carapace length about 2.5 times the carapace length, its surface minutely granulate, anteriorly granulate.

Ambulatory legs are slender; merus longer than carpus and propodus; dactylus sharp tipped at distal end. First male pleopod (Figure 2B) slender filamentous, tip setose, apical brush like plumose setae, setae on lateral sides; distal end of base setose, bulge formed.

### 3.4 Remarks

*Hiplyra sagitta* was described from the Persian Gulf by Galil (2009). The specimens in current study agree closely with the specimens description in Galil (2009), with the anterior margin of efferent channel separated from lateral margin by triangular incision. *H. sagitta* with largest size in the genus *Hiplyra* and the largest male recorded from the Persian Gulf (CL = 16.04 mm, CB = 14.56 mm) and the largest female found in Kuwait from coast of the Persian Gulf (CL = 19.07 mm, CB = 17.66 mm).

Holotype and paratypes from Danish Expedition material collected in 1937 from south Iran shores were described by Galil (2009) and published by Stephensen (1946) under the name of *Philyra variegata*. Apel (2001) had re-examined material of *Philyra variegata* of Stephensen (1946) from Jask and mentioned that there are two new species within the material. *Philyra* n. sp.1 of Apel (2001) has been later described by Galil (2009) as *Hiplyra sagitta*. The second new species distinguished by Apel (2001) within the *P. variegata* has been assigned to *H. elegans* (Gravier, 1920) by Naderloo and Apel (2012).



Figure 2 *Hiplyra sagitta* (Galil, 2009) Male: CL = 17.42 mm, CB = 16.26 mm, (A) dorsal surface; (B) ventral surface. Female: CL = 16.92 mm, CB = 15.16 mm, (C) ventral surface (MSC, 54)

### 3.5 Distribution

Arabian Gulf (Persian Gulf): Qatar (Galil et al., 2012), Kuwait (Galil, 2009; Naderloo and Apel, 2012), Iran (Galil 2009; Naderloo and Apel, 2012), Iraq (current study)

General distribution: Indian Ocean: Persian Gulf, Pakistan, India, Andaman Sea, Hong Kong, Philippines, Timor, Australia

### 3.6 Habitat

Muddy and Sandy shallow intertidal and subtidal zones, 5.5-25 m.

#### Authors' contributions

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

#### Acknowledgements

We would like to express to thanks Dr. Ghazi Maleh Al-Maliki, Marine Biology Dep., Marine Sciences Center, Basrah University, for reading the manuscript and for their valuable advice and suggestions.

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