

First report of leucosiid crabs (Decapoda, Brachyura) from the Iraqi coast of the Persian Gulf

Amaal Gh. Yasser & Murtada D. Naser*

Griffith University, School of Environment and Science, Nathan Campus, 170 Kessels Road, Nathan Queensland 4111, Australia

*Corresponding author: nasergriffith@gmail.com

Received 30 April 2019; Accepted 22 May 2019; Published online 07 June 2019

Abstract

Three species of leucosiid crabs, *Acrania erinacea*, *Ixa holthuisi*, and *Seloucia anahita* previously described from various sites in the Persian Gulf, are here noted as new records for the Iraqi coast.

Keywords: Decapoda, Brachyura, Leucosiidae, north western of the Persian Gulf

Introduction

In recent years, a great attention has been paid to identify the brachyuran crabs from the north west of the Persian Gulf, Iraq (Naser, 2009; Ng et al., 2009; Naser et al., 2010; Naser, 2011; Naser et al, 2012; Ng et al., 2012; Naser et al., 2013; Naser, 2018; Naser, 2019; Yasser & Naser, 2019).

Seventeen genera and forty species of the family Leucosiidae were recorded in the Persian Gulf (Naderloo, 2017). The genus *Acrania* is represented by five species in the Gulf, while the genera *Ixa* and *Seloucia* with one species only (Naderloo, 2017).

Most of the surveys have taken place along the Iranian coast (Naderloo, 2017), but a recent survey along the Iraqi coast reveals additional leucosiid records.

Materials and methods

The specimens were collected in October 2012 by trawling in the shallow subtidal of the lower beaches of the Shatt Al-Arab in Fao city, Iraq (Fig. 1). The water temperature was 24°C; pH, 7.9; salinity, 36.5 PSU; dissolved oxygen, 6.5 mg/L. The specimens were preserved in 70% alcohol and deposited in the Marine Science Centre, (MSC, University of Basrah, Iraq). The Carapace Width (CW) and Carapace Length (CL) were taken with an electronic caliper at the nearest mm.

Results and Remarks

Systematics

Order Decapoda

Superfamily

Leucosioidea

Samouelle,

1819

Family Leucosiidae Samouelle, 1819

Genus *Ixa* Leach, 1816

Ixa holthuisi Tirmizi, 1970

(Figs. 2 A-B)

Examined material – 29°54'3.88"N, 48°41'17.11"E, near Fao, October 2012, coll. A. Gh. Yasser, 1 male, 55.7 × 19.0 mm (MSC 23).

Diagnosis – Carapace relatively granulated, transversely ovoid with conical distally projections. These lateral projections prolonged with sharp, smooth spines. Front broad distinctly divided into two rounded lobes, separated by a short groove. From the orbital margin, two narrow grooves extend backwards for a short distance. Eyes markedly concealed in the deep orbits (Figs. 2 A-B).



Figure 1. Sampling site, Fao region (blue dot).

Distribution – Persian Gulf: Iran (Naderloo, 2017), Kuwait (Naderloo, 2017), Saudi Arabia (Basson et al. (1977) as *Ixa* sp.; Apel, 2001), and now from Iraq. Gulf of Oman (Stephensen (1946) as *Ixa edwardsi*); Pakistan (Tirmizi, 1970).

Habitat – Subtidal, substrate sandy bottoms.

Genus *Arcania* Leach, 1817

Arcania erinacea (Fabricius, 1787)

(Figs. 2 C-D)

Examined material – 29°54'3.88"N, 48°41'17.11"E, near Fao, October 2012, coll. A. Gh. Yasser, 1 male, 15.0 × 16.0 mm (MSC 24).

Diagnosis- Carapace circular, dorsal surface armed by spinules of different size, eleven large spines on the margins of the carapace, all of which are secondarily spinulose, by which it can be distinguishable from other species of this genus. Front bidentate, with two large triangular teeth, closely covered with granules. Chelipeds moderately large, merus granulated on ventral surface, spinose on dorsal surface, anterior and posterior margins. Male abdomen basally swollen (Figs. 2 C-D).

Distribution – Persian Gulf: Iran (Naderloo and Sari, 2005; 2007), Kuwait (Apel, 2001), Qatar (Apel, 2001). Iraq, present study. Gulf of Oman: Apel (2001).

Habitat – Subtidal, substrate sandy bottoms.

Genus *Seulocia* Galil, 2005

Seulocia anahita Galil, 2005

(Figs. 2 E-F)

Examined material – 29°54'3.88"N, 48°41'17.11"E, near Fao, October 2012, coll. A. Gh. Yasser, 1 male, 17.2 × 21.0 mm (MSC 25).

Diagnosis- Carapace hexagonal, longer than broad, shiny. The front as long as broad, ending in three sharp teeth, central larger than laterals. Margin of epibranchial angle of carapace closely beaded. Posterior margin straight, minutely granulate; deflexed posterior surface smooth. Cheliped merus not inflated; palm slightly longer than wide. Male abdominal sulcus deep, elongate, nearly reaching buccal cavity. Male abdomen with segments 3-6 fused, tapering distally; telson triangular (Figs. 2 E-F).

Distribution – Persian Gulf, Gulf of Oman, Arabian Sea, Indian Ocean (Galil, 2005; Naderloo, 2017). Iraq, present study.

Habitat – Subtidal, substrate sandy bottoms.

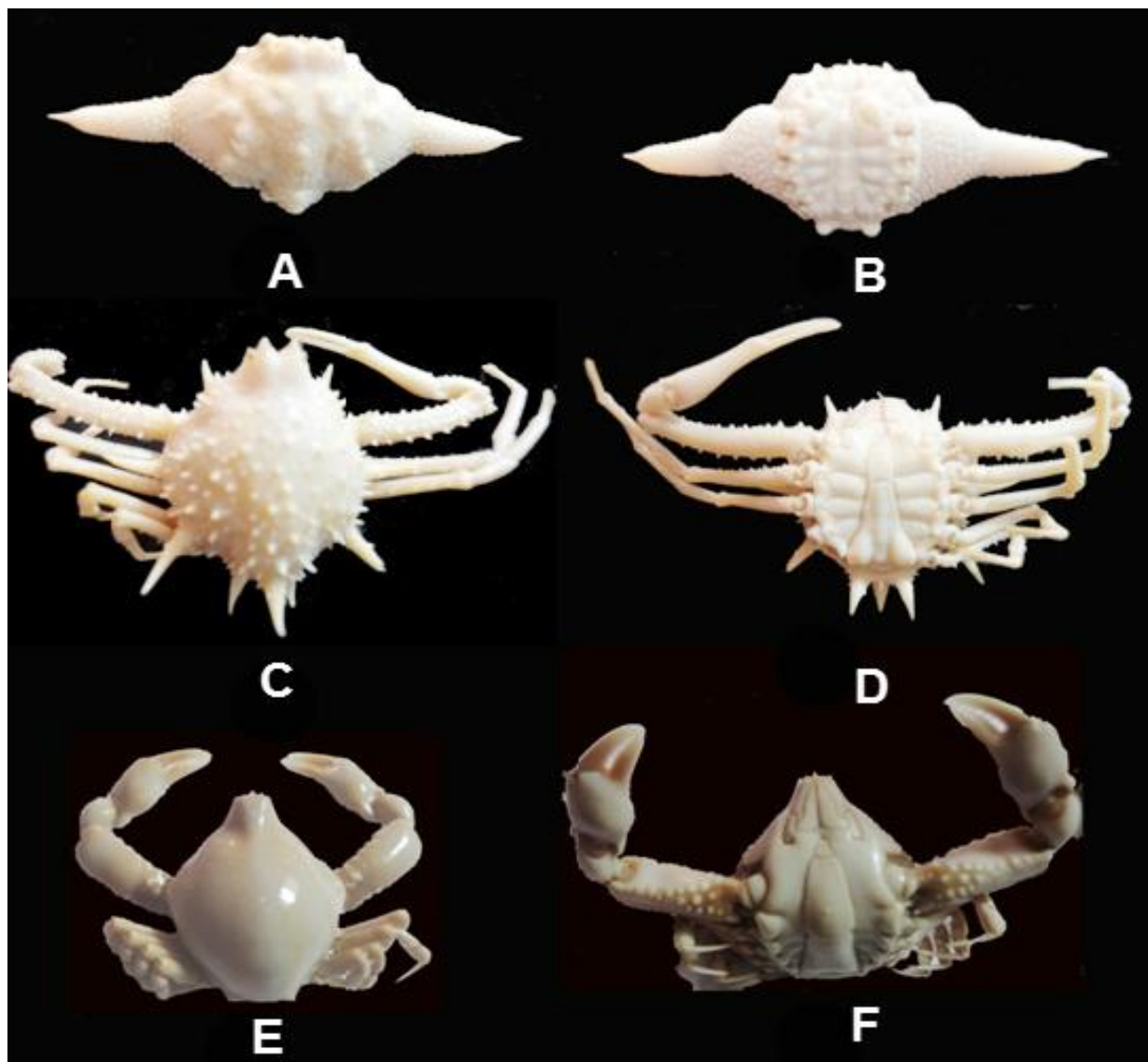


Figure 2. *Ixa holthuisi* Tirmizi, 1970, male (55.7 × 19.0 mm), A, dorsal view; B, ventral view, *Arcania erinacea* (Fabricius, 1787), male (15.0 × 16.0 mm) C, dorsal view; D, ventral view, *Seulocia anahita* Galil, 2005, male (17.2 × 21.0 mm), E, dorsal view; F, ventral view.

Conflicts of Interest

There are no conflicts of interest between the Authors.

Acknowledgements

We would like to thank the anonymous reviewers for their valuable comments and suggestions to improve the quality of the paper.

References

- Apel, M. (2001) Taxonomie und Zoogeographie der Brachyura, Paguridea und Porcellanidae (Crustacea: Decapoda) des Persisch- Arabischen Golfes. [Taxonomy and zoogeography of the Brachyura, Paguridea, and Porcellanidae (Crustacea: Decapoda) of the Persian-Arabian Gulf]. (Ph.D. Thesis, Johann Wolfgang Goethe University, Frankfurt am Main), 1-268. [In German].
- Basson, P.W., Burchard, J.A., Hardy, J.T., & Price, A.R.G. (1977) Biotopes of the Western Arabian Gulf: marine life and environments of Saudi Arabia. ARAMCO, Department of Loss Prevention and Environmental Affairs, Dhahran: 1-289.
- Galil, B. (2005) Contributions to the knowledge of Leucosiidae IV. *Seulocia* gen. nov. (Crustacea: Brachyura). Zoologische Mededelingen, 79 (2): 41–59.
- Naderloo, R. (2017) Atlas of crabs of the Persian Gulf. Springer Verlag, 1–443. DOI 10.1007/978-3-319-49374-9
- Naderloo, R. and Sari, A. (2005) Iranian subtidal leucosiid crabs (Crustacea: Decapoda: Brachyura) of the Persian Gulf: taxonomy and zoogeography. Iranian Journal of Animal Biosystematics, 1: 31–46.
- Naderloo, R. & Sari, A. (2007) Subtidal crabs of the Iranian coast of the Persian Gulf: New collections and biogeographic considerations. Aquatic Ecosystem Health & Management, 10 (3): 341–349.
- Naser, M.D. (2009) First record of the freshwater crab, *potamon mesopotamicum* brandis, storch & Türkay, 1998 (Decapoda, Brachyura, Potamidae) from the Al-Huwaizah marshes, Iraq. Crustaceana, 82(12):1599-1602.
- Naser, M. D., Ali, M. H. and Yasser, A. G. (2010) New record of the fiddler crab *Uca (Paraleptuca) sindensis* (Crustacea: Brachyura: Ocypodidae) from Khor Al-Zubair, Basrah, Iraq, Marine Biodiversity Records, 3: 1-3.
- Naser, M. D. (2011) The Sesarmid crab *Parasesarma persicum* Naderloo and Schubart, 2010 (Crustacea: Decapoda: Brachyura: Sesarmidae), New to the Iraqi Coastal Waters of Khor Al-Zubair and Shatt Al-Basrah Canal, Basrah, Iraq. Jordan Journal of Biological Sciences, 4 (3): 185-190.
- Naser, M. D., Page, T. J., Ng, N.K., Apel, M., Yasser, A. G., Bishop, J.M., Ng, P. K.L. and Clark, P. F. (2012) Invasive records of *Eriocheir hepueus* Dai, 1991 (Crustacea: Brachyura: Grapsoidea: Varunidae): Implications and taxonomic considerations. BioInvasions Records, 1(1): 71–86.
- Naser, M. D., Alkhafaji, Kh.S., Yasser, A. Gh. and Darweesh, H.Sh. (2013) New record of *Nanosesarma sarii* (Naderloo and Turkay, 2009) (Crustacea: Decapoda: Brachyura: Sesarmidae) from Khor Al-Zubair, south of Iraq. Bull. Iraq nat. Hist. Mus., 12 (4): 35-41.
- Naser, M. D. (2018) A new record of *Eurycarcinus integrifrons* De Man, 1879 (Decapoda, Brachyura, Pilumnidae) from NW of the Persian – Arabian Gulf, Iraq. Journal of Biological Studies, 1(1): 9-13.
- Naser, M. D. (2019) A new record of *Eurycarcinus orientalis* A. Milne-Edwards, 1867 (Decapoda, Brachyura, Pilumnidae) from the north western part of the Persian-Arabian Gulf. Journal of Biological Studies, 1(4): 160-164.
- Ng, P.K.L., Rahayu, D., Naser, M.D. (2009) The Camptandriidae of Iraq, with description of a new genus and notes on, *Leptochryseus* Al-Khayat & Jones, 1996 (Crustacea: Decapoda: Brachyura). Zootaxa, 2312:1–26.

- Ng, P.K.L., Safaie, M., Naser, M.D. (2012) A new species of *Raphidopus* Stimpson, 1858, from the Persian Gulf (Crustacea: Decapoda: Anomura: Porcellanidae) . *Zootaxa*, Vol 3402, No 1. DOI: <http://dx.doi.org/10.11646/zootaxa.3402.1.4>
- Stephensen, K. (1946) The Brachyura of the Iranian Gulf. With an appendix: the male pleopoda of the Brachyura. In Jessen K. and Spärck R. (eds) Danish Scientific Investigations in Iran. Part IV [1945]. Copenhagen: E. Munksgaard: 57–237.
- Tirmizi, N.M. (1970) *Ixa holthuisi* n. sp., a new species of crab from the Northern Arabian Sea (Decapoda, Brachyura, Oxystomata). *Crustaceana*, 18: 312–314.
- Yasser, A.Gh. & Naser, M.D. (2019) A new record of *Dorippe quadridens* (Fabricius, 1793) (Decapoda, Brachyura, Dorippidae) from the north western Persian-Arabian Gulf, Iraq. *Journal of Biological Studies*, 2(1):1-3.