

# An annotated checklist of the Amphipoda (Crustacea) of the Iraqi coast, north-western Persian- Arabian Gulf

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## Abstract

Amphipods are one of the most diverse groups of peracarid crustaceans, living in both marine and fresh waters, including underground and semi-terrestrial settings. Data about amphipods from the Iraqi coast are spread throughout valid published and confused published references. So, a checklist of the amphipods of the Iraq coast is presented listing 8 species belonging to six families, using published records and field observations. The present paper shows that the list of amphipoda from the Iraqi coast is very limited compared with lists of other adjacent countries on the Persian-Arabian Gulf close to Iraq.

**Key words:** Iraqi coast, amphipods, Persian- Arabian Gulf

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## 1. Introduction

In 1985, Salman described a new marine amphipod species *Stenothoe gallensis* Walker, 1904, from Khour Abdullah (Salman, 1985), and later in 1986, Salman described a new marine amphipod species, *Parhyale basrensis*, from the Shatt Al- Arab River (Abu-Al-Kaseeb, Iraq) (Salman, 1986). In 1990, Salman and Jabbar described a new amphipod species, *Cheiriphotis williamsoni*, and redescribed the known species *C. megacheles* (Giles, 1885) from two localities in Iraqi waters of the northwestern Arabian Gulf, namely, Khour Abdullah and Khour Al-Zubair (Salman and Jabbar, 1990). Later, the same author recorded two other species, namely: *Insularorchestia monodi* (Mateus, Mateus & Afonso, 1986) from Shatt Al-Arab, and *Elasmopus pecteniscrus* (Spence bate, 1863) from northwest of the Persian-Arabian Gulf in 1997 and 1998, respectively.

In 1998, Salman added another amphipod species *Podocerus brasiliensis* (Dana, 1853) from northwest of the Persian-Arabian Gulf. Most recently, Naser et al., (2010) listed another amphipod *Grandidierella macronyx* K.H. Barnard, 1935 from the brackish water of the Shatt Al-Basrah Canal.

The current paper's goal is to update the data on marine Amphipoda from the Iraqi coast in light of recent taxonomic advances.

## 2. Materials and methods

The present paper is based on the available literature records and our materials. The identification of the materials is according to “Al-Yamani et al., 2019 and Al-Kandrai et al., 2023) and the World Register of Marine Species (WoRMS): <http://www.marinespecies.org/>.

## 3. Results and Discussion

Species	Reference	Accepted name
<i>Stenothoe irakiensis</i> Salman, 1985	Salman (1985)	<i>Stenothoe gallensis</i> Walker, 1904
<i>Parhyale basrensis</i> Salman, 1986	Salman (1986)	accepted
<i>Cheiriphotis megacheles</i> (Giles, 1885)	Salman & Jabbar 1990	accepted
<i>Cheiriphotis williamsoni</i> Salman & Jabbar, 1990	Salman & Jabbar 1990	accepted
<i>Platorchestia monodi</i> (Mateus, Mateus & Afonso, 1986)	Salman & Abdullah (1997)	<i>Insularorchestia monodi</i> (Mateus, Mateus & Afonso, 1986)
<i>Elasmopus pecteniscrus</i> (Spence bate, 1863)	Salman (1998)	accepted
<i>Podocerus brasiliensis</i> (Dana, 1853)	Salman & Ahmed (1998)	accepted
<i>Grandidierella macronyx</i> K.H. Barnard, 1935	Naser et al., 2010	accepted

The current lists are in Table 1.

Family: Stenothoidae Boeck, 1871

*Stenothoe gallensis* Walker, 1904

*Stenothoe gallensis* Walker 1904: 261-62, pl. 3, fig. 19 (Sri Lanka); Nayar 1959: 17-18, pl-V, figs. 7-19 (Madras coast, India); Nayar, 1967: 144-45, fig. 5e (Sri Lanka). non Reid, 1951: 228 ff. *Stenothoe irakiensis* Salman, 1985: 244-250, figs. 1-4 (Arabian Gulf).

Type locality Ceylon = Sri Lanka

Salman (1985) erected a new species, *Stenothoe irakiensis*, from the Arabian Gulf. It matches all known details exactly, with the exception that he describes and depicts a peduncular spur on U 1 that was not previously documented; for this reason, it is given in synonymy.

Distribution: Indian Ocean: from East Africa to the South China Sea.

Family: Hyalidae Bulyčeva, 1957

*Parhyale basrensis* Salman, 1986

*Parhyale basrensis* Salman, 1986: 287-294, figs. 1-4.

Type locality: Shatt Al-Arab, Iraq

According to Bousfield and Hendrycks (2002), the genus *Parhyale* is found in warm-temperate and cosmopolitan-tropical environments, including littoral and intertidal areas. There are now 15 species in the genus *Parhyale*.

Family: Corophiidae Leach, 1814

*Cheiriphotis megacheles* (Giles, 1885)

*Cheiriphotis megacheles* (Giles, 1885)

Type locality: Bay of Bengal

The species *C. megacheles* was initially documented in the Bay of Bengal in 1885 by Giles, and subsequently documented in Sri Lanka (Ceylon) by Walker in 1904. Nevertheless, the specimens obtained from the two specific locations exhibit substantial differences in male gnathopod 1 and uropod 3, as determined by Walker (1904) as an ontogeny. The redescription of *C. megacheles* was conducted by Salman and Jabbar (1990) using data obtained from the northwest region of the Arabian Gulf. Their findings indicate that the observed variation between the specimens of Giles and Walkers is not indicative of ontogeny, but rather suggests the existence of two different species.

*Cheiriphotis williamsoni* Salman & Jabbar, 1990

*Cheiriphotis williamsoni* Salman & Jabbar, 1990:215-220, figs. 1-4

Type locality: Khor Al-Zubair, Iraq

*Cheiriphotis williamsoni* Salman & Jabbar, 1990, present in the Indo-Pacific area.

Family: Talitridae Rafinesque, 1815

*Platorchestia monodi* (Mateus, Mateus & Afonso, 1986)

*Platorchestia monodi* (Mateus et al., 1986) (Figs. 1-4) *Orchestia monodi* Mateus, Mateus, and Afonso, 1986: 100- 110, figs. 1-7. *Platorchestia platensis* (Krøyer, 1845) forma *monodi* (Mateus et al., 1986): Stock and Biernbaum, 1994: 796-800, fig. 1. *Platorchestia monodi*: Morino and Ortal, 1995: 825-829, figs. 1-3; Stock, 1996: 150-156, figs. 2-4; Serejo, 2004: 14-21, figs. 7-9.

Type locality: Pacific Region

*Platorchestia* Bousfield, 1982 (Crustacea, Amphipoda) is classified within the Talitridae family, which comprises 52 taxa (Kim & Min, 2011). It inhabits both supra-littoral and terrestrial habitats, including grasslands, riverbanks, and areas with sparse leaf litter (Serejo and Lowry, 2008).

Family: Maeridae Krapp-Schickel, 2008

*Elasmopus pecteniscrus* (Spence bate, 1863)

Moera pecteniscrus Bate, 1862, p. 192, pl. 34, figure 8; Elasmopus pecteniscrus Ruffo, 1938, p. 136; J.L. Barnard, 1955, p. 8, figure 4; Ruffo, 1959, p. 21; Nayar, 1959, p. 27, pl. 9, figures 20–35; J.L. Barnard, 1970, p. 125, figures 73 & 74; Karaman in Ruffo, 1982, p. 286, figure 192; Elasmopusserrula Walker, 1904, p. 277, pl. 8, figure 37. ; Salman, 1998, 69-75, figs. 1-2. Type locality: New Guinea

Bate (1862) provided the initial description of *Elasmopus pecteniscrus* along the littoral of New Guinea. It is primarily found in the Mediterranean Sea, Atlantic Ocean, Red Sea, Indian Ocean, and Pacific Ocean, suggesting that it is a circumtropical species. Previous studies have documented its occurrence in various locations: Alexandria (Schellenberg, 1936), Port Said, Egypt (Schellenberg, 1928), Ruffo, Israel (1959), Sconfiatti (1983), Mizzan (1998), Spain's Balearic Islands (Garcia & Jaume 2006), and the Levantine coast of Turkey (Sezgin et al. 2007). Although Myers & Momtazi (2015) questioned the reports of *E. pecteniscrus* from Kuwait (Jones 1986) and Iraq (Salman 1998), they concluded that these finds were too poorly reported to be attributed to *Elasmopus alkhiranensis*, a later species that is morphologically similar but has been published later. With care, we put this species here since more morphological revision is necessary.

Family: Podoceridae Leach, 1814

*Podocerus brasiliensis* (Dana, 1853)

*Platophium brasiliense* Dana, 1853: 838, pl. 55, fig. 9. *Platophium synptochair* Walker, 1904: 296, pl. 8, fig. 52. *Podocerus brasiliensis*. —Stebbing, 1906: 704. —K.H. Barnard, 1925: 366. —Schellenberg, 1928: 674. —K.H. Barnard, 1935: 305. —Schellenberg, 1938: 94. —J.L. Barnard, 1953: 87. —J.L. Barnard, 1955: 39. —J.L. Barnard, 1959: 39, pl. 13. —Nayar, 1959: 45, pl. 15 figs 21–26. —? J.L. Barnard, 1962: 66, fig. 30. —Nayar, 1965: 164, figs 17d, e. —J.L. Barnard, 1970: 237, figs 156, 157. —J.L. Barnard, 1971: 117, figs 58B - 60B. —Nath, 1972: 302, fig. 2. —Ortiz & Silva, 1990: 180, *Podocerus brasiliensis*. — Salman & Ahmed, 1998: 243-249, figs. 1-2.

Type locality: Rio de Janeiro, Brazil.

Distribution: Australia. Queensland: One Tree Island and Thursday Island, (Kilgallen, 2009). Brazil. Rio de Janeiro (Dana 1853). India. Quilon, Kerala; Gulf of Manaar (Nath 1972). Mozambique. Maputo Bay (Ortiz & Silva 1990). Sri Lanka. Galle Harbour and Galle Bay; Kondatchi Paar; Periya Paar Kerrai; East Cheval Paar (Walker 1904). USA. Pearl

Harbour, Hawaii (J.L. Barnard 1971); northwest of the Persian-Arabian Gulf (Salman & Ahmed 1998).

The revised checklist of the Iraqi coast now includes 8 verified species belonging to six families. The majority of the amphipods are inhabitants of soft and stone sediments. Al-Kandari et al., 2023 in their checklist on amphipods of Kuwait listed 86 species belonging to 32 families. This disparity could be explained, in part, by the fact that Kuwait has a considerably longer coastline and a lot more variety in its habitats. Furthermore, there are likely few efforts in searching for amphipods on the Iraqi coast, either due to the lack of capabilities available to researchers or the lack of specialized researchers in the field of identifying amphipods.

The genus *Stenothoe* Dana, 1852 is represented by two species in the northwest of the Persian-Arabian Gulf for Iraq and Kuwait namely: *S. irakiensis* synonym *S. gallensis* Walker, 1904, and other species *S. aucklandicus* Stephensen, 1927 (Al-Yamani et al., 2019). The genus *Parhyale* Stebbing, 1897 is represented by three species *Parhyale basrensis* Salman, 1986 which is widely distributed in brackishwater and marine water of Iraq inhabiting different habitats (e.g. sandy, among vegetations and under stones), the other species are *P. darvishi* Momtazi & Maghsoudlou and *P. bushehri* (Layeghi et al., 2022) that are widely distributed in the Persian- Arabian Gulf and Gulf of Oman (Momtazi & Maghsoudlou, 2016). The genus *Cheiriphotis* Walker, 1904 consists of two species *C. megacheles* (Giles, 1885) and *C. williamsoni* Salman & Jabbar, 1990. Salman & Abdullah (1997) recorded the only species *Insularorchestia monodi* = *Platorchestia monodi* is widely distributed in marine and brackish water of Iraqi waters. Myers & Momtazi (2015) described a new species *E. alkhiranensis* of the genus *Elasmopus* A. Costa, 1853, in addition to the listed record species *Elasmopus pecteniscus* (Spence bate, 1863) from the Gulf (Salman, 1998). The genus *Podocerus* Leach, 1814 consists of two species: *P. mamlahensis* (Myers & Nithyanandan, 2016) described from Kuwait and *Podocerus brasiliensis* (Dana, 1853) recorded from northwest of the Persian-Arabian Gulf (Salman & Ahmed 1998) with more confusion about the validity of this species in the Gulf.

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## Conflict of interests

The authors declare that they have no competing interests.

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