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First record of *Psathyrocaris infirma* (Pasiphaeidae) from Madeira and the Canary Islands (Northeastern Atlantic) **

With 2 figures

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ABSTRACT: The shrimp genus *Psathyrocaris* is recorded for the first time from Madeira and the Canary Islands, based on the first record of *P. infirma* Alcock & Anderson, 1894. This is the first species of the genus *Psathyrocaris* to be described from these Macaronesian archipelagos.

Key words: Crustacea, Decapoda, Pasiphaeidae, *Psathyrocaris infirma*, new record, Madeira, Canary Islands, NE Atlantic Ocean.

RESUMO: Neste artigo é assinalado pela primeira vez para as ilhas da Madeira e das Canárias uma espécie de camarão, *Psathyrocaris infirma* Alcock & Anderson, 1894. Esta é a primeira espécie do género *Psathyrocaris* assinalada para estes arquipélagos da Macaronésia.

Palavras-chave: Crustacea, Decapoda, Pasiphaeidae, *Psathyrocaris infirma*, novo registo, Madeira, Ilhas Canárias, NE Oceano Atlântico.

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INTRODUCTION

The genus *Psathyrocaris* Wood-Mason & Alcock, 1893 is represented by five species, two of which, *P. fragilis* Wood-Mason & Alcock, 1893 and *P. infirma* Alcock & Anderson, 1894, have a world-wide distribution and the other three, *P. plumosa* Alcock & Anderson, 1894, *P. platyophthalmus* Alcock & Anderson, 1894 and *P. hawaiiensis* Rathbun, 1906 are restricted to the Indo-West Pacific (LIN & CHAN, 2001; FRANSEN *et al.*, 2013).

All species of this genus are deep sea dwellers, occurring from 315 m to 2000 m depth (UDEKEM D'ACÓZ, 1999; LIN & CHAN, 2001).

In the Northeast Atlantic and the Mediterranean only *P. infirma* and *P. fragilis* have been recorded to date, being sympatric throughout their distribution range (UDEKEM D'ACÓZ, 1999).

Following two deepwater surveys off Madeira and the Canary Islands, two *Psathyrocaris* specimens were collected. They were identified as *P. infirma*, which is the first species of this genus to be recorded from these archipelagos.

MATERIAL AND METHODS

Two specimens collected with bottom traps, one in the Canary Islands in 2004 and the other in 2005 in Madeira. The specimens were preserved on board in 70% ethanol and measured afterwards according to standard carcinological procedures. They are deposited in the collections of Museu de História Natural do Funchal (MMF) and in the Biology Department of the University of Las Palmas de Gran Canaria (ULPGC), according to their collecting locality.

Abbreviations used: CL – Carapace length.

Psathyrocaris infirma Alcock & Anderson, 1894 (Figs. 1-2)

Material examined

MMF 36642 (Fig. 1), CL = 15 mm, ovigerous ♀, cruise Chacmad-1, St. 24, 32° 40.4' N 16° 44.6' W, ca. 800 m, south of Santa Cruz, Madeira Island, 18 October 2005, bottom trap.

ICCM 0090, CL = 16.6 mm, non-sexed due to lost pleopods, cruise Pandcan2, St. 13, 27° 41' N 15° 49' W, ca. 1050 m, 6 February 2004, Arguineguín, Gran Canaria, Canary Islands, semi-floating shrimp trap.

REMARKS

In general, the two specimens recorded in the present paper agree well with the description of specimens collected in the Atlantic Ocean made by HOLTHUIS (1951). The rostrum shows the typical high upper margin, serrated in front, characteristic of this species and the carapace bears well marked lateral carinae (Fig. 1), similar to those present in a specimen from the "Ombango Expedition" (CROSNIER & FOREST, 1973, figure 40e). Both the Ombango specimen and ours differ from the one reported by HOLTHUIS (1951, figure 2a) in having the post-orbital carina divided posteriorly into two branches (not divided in Holthuis' specimen), both going upwards, one short towards the back of the carapace and the other, much longer, going towards the rostrum. In addition, a solitary undulated carina is present just above the lower branch of the post-orbital carina. This feature is not figured in any of the other specimens drawn by HOLTHUIS (1951) and CROSNIER & FOREST (1973).

The sole second pereopod present in the specimen from the Canaries bears a row of spines over the entire length of the posterior margin of the merus, as mentioned by CROSNIER & FOREST (1973) and figured by BALSS (1925, figure 9). The second pair of pereopods were lost in the specimen from Madeira.

The Madeiran specimen is a female and carried three eggs. These are of enormous size, being 3.0 mm x 5.5 mm (Fig. 2). Once more it is confirmed that females of this species bear a low number of eggs, usually not more than three, as already found in CROSNIER & FOREST (1973) material.

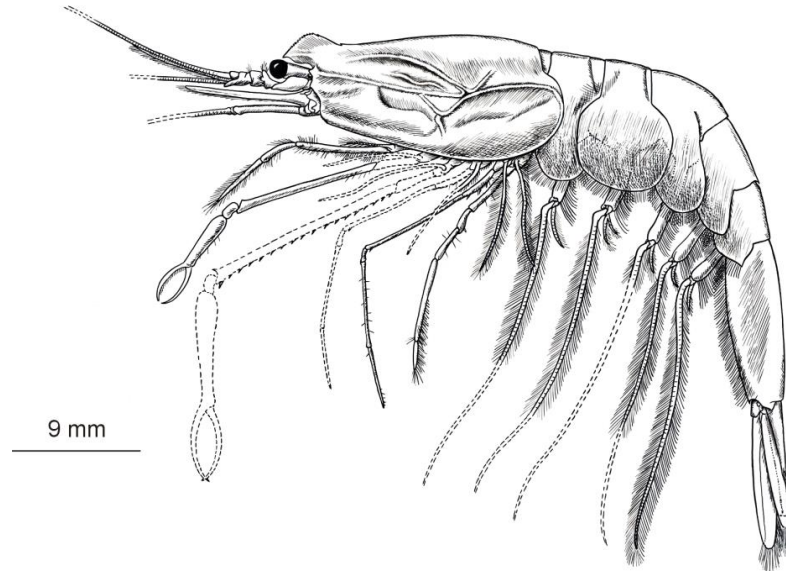


Fig. 1 – *Psathyrocaris infirma*, MMF 36642, CL = 15 mm, ♀ (drawing by Helena Encarnação).

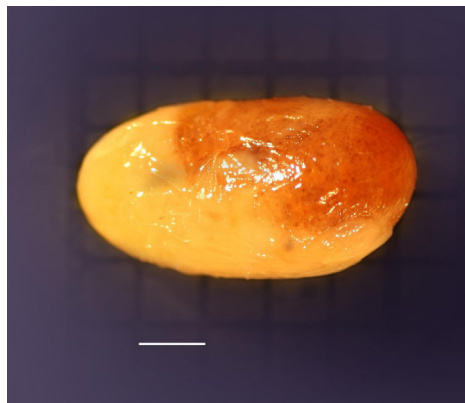


Fig. 2 – Egg of *Psathyrocaris infirma*, MMF 36642, showing the embryo (scale bar = 1 mm).

Distribution

This species has been caught at mid-waters between the surface and 2000 m of depth (BALSS, 1925; CALMAN, 1939) and more frequently with bottom trawls between 359 m (CROSNIER, 1970) and 1289 m (BALSS, 1925). The collections of the Madeiran and Canarian specimens fall within this interval and its presence inside both bottom and semi-floating traps, the latter placed ca. 2.4 m above the seafloor, corroborates that this species has both benthic and pelagic habits.

This species is known from the West Indo-Pacific and several Atlantic locations (see UDEKEM D'ACÓZ, 1999 for details).

The specimens studied in the present paper were previously mentioned by ARAÚJO *et al.* (2008) in a collective poster and are here formally described as new records from Madeira and the Canary Islands.

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