
New records of *Parasquilla ferussaci* (Roux, 1830) (Crustacea, Stomatopoda) from the Eastern Atlantic and Western Mediterranean

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Abstract

New records of Parasquilla ferussaci (Roux, 1830) (Crustacea, Stomatopoda) from the Eastern Atlantic and Western Mediterranean.— We report the occurrence of the little known stomatopod *Parasquilla ferussaci* on the Atlantic and Mediterranean coasts of the Iberian peninsula. Documentation is based on three specimens captured off Isla Cristina (Huelva) in the Gulf of Cadiz, off Fuengirola (Málaga) in the Alboran Sea and off Gavà (Barcelona) in the North–Western Mediterranean. These reports fill the distribution gap between Eastern Central Atlantic reports and previous Mediterranean reports east of the Balearic Islands.

Key words: *Parasquilla ferussaci*, Stomatopoda, Western Mediterranean, Gulf of Cadiz.

Resumen

Nuevas citas de Parasquilla ferussaci (Roux, 1830) (Crustacea, Stomatopoda) en el Atlántico oriental y Mediterráneo occidental.— En esta nota se informa sobre la presencia del estomatópodo *Parasquilla ferussaci* en las costas de la península ibérica. La documentación está basada en tres especímenes capturados, respectivamente, en Isla Cristina (Huelva) en el Golfo de Cádiz, Fuengirola (Málaga) en el Mar de Alborán y en Gavà (Barcelona) en el Mediterráneo noroccidental. Se amplía la distribución conocida de la especie completando así el vacío existente hasta el momento entre las citas atlánticas y las del Mediterráneo central.

Palabras clave: *Parasquilla ferussaci*, Estomatópodo, Mediterráneo occidental, Golfo de Cádiz.

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New records

Parasquilla ferussaci (Roux, 1830) is one of the two species of the stomatopod family Parasquillidae (Manning, 1995; Ahyong, 1997) occurring in the Mediterranean Sea. The known distribution of this species comprises the Eastern Central Atlantic from the northern shores of the Gulf of Guinea to the Gulf of Cadiz (Monod, 1951; Pérès, 1964; Manning, 1962, 1977, 1978; Sardá et al., 1982), the Western coasts of the Iberian peninsula along the Portuguese coasts (Figueiredo, 1962) in the north, including Madeira islands (Biscoito, 1985), and the Mediterranean Sea (Frogliia & Manning, 1989; Abelló & Guerao, 2004). Its usual habitat appears to be the muddy bottoms of the upper continental slope at depths comprised between around 175–185 and 700 m (Colloca et al., 2004), but it may also occur on the continental shelf (Dounas & Steudel, 1994; Mori & Tunesi, 2001).

Most reports of this species in the Mediterranean Sea refer to the Western coasts of the Italian peninsula, from Sicily to Nice (Manning, 1962, 1977; Arena & Greci, 1973; Pipitone & Tumbiolo, 1993; de Ranieri & Mori, 1994; Mori et al., 1998; Mori & Tunesi, 2001; Ragonese et al., 2001; Sartor et al., 2003; Innocenti, 2006), but it has also been reported from Menorca in the Balearic Islands (Abelló et al., 1994). The occurrence of this species in the Eastern Mediterranean has been noted by Dounas & Steudel (1994) off Crete and by Özcan et al. (2008) in the Turkish Aegean Sea.

We herein report the occurrence of *Parasquilla ferussaci* along the Southern and Eastern coasts of the Iberian peninsula, thus filling the distribution gap between the Atlantic and central and Eastern Mediterranean records, and providing an additional record in the Gulf of Cadiz (table 1; fig. 1).

A total of twelve stomatopod species have been reported in the Mediterranean Sea: *Erythroscquilla* sp., *Allosquilla africana* (Manning, 1970), *Nannosquilloides occultus* (Giesbrecht, 1910), *Platysquilla eusebia* (Risso, 1816), *Platysquilloides lillyae* (Manning, 1977), *Parasquilla ferussaci* (Roux, 1830), *Pseudosquillopsis cerisii* (Roux, 1828), *Erugosquilla massavensis* (Kossmann, 1880), *Rissoides desmarestii* (Risso, 1816), *Rissoides pallidus* (Giesbrecht, 1910), *Squilla mantis* (Linnaeus, 1758) and *Clorida albolitura* Ahyong & Naiyanetr, 2000. The records of *Gonodactylus chiragra* (Fabricius, 1781) and *Gonodactylaceus falcatus* (Forsskål, 1775) are not included since they are considered doubtful (Lewinsohn & Manning, 1980; Galil et al., 2002).

Of these 12, only *Squilla mantis* and *Erugosquilla massavensis* reach marketable densities and constitute a target for local fisheries (Abelló & Martín, 1993; Maynou et al., 2005; Sánchez et al., 2007; Galil et al., 2002; Gökoglu et al., 2008). With the exception of *Rissoides pallidus* and, to a lesser degree, *Rissoides desmarestii*, both of which are rather commonly captured by trawling (Colloca et al., 2004; Sartor et al., 2003; Abelló et al., 2002), most other Mediterranean stomatopods are known from only a few records.

Two of the Mediterranean species entered this sea via the Suez Canal: *Erugosquilla massavensis*, first recorded in the Mediterranean in 1933 and widely spread in the Eastern Mediterranean (Galil et al., 2002), and *Clorida albolitura*, recently reported in the Eastern Mediterranean (Ahyong & Galil, 2006). The erythroscquillid *Erythroscquilla* sp., yet unidentified, has been reported based on a postlarval specimen collected from plankton in the Ligurian Sea (see Frogliia, 1992).

The present reports of *Parasquilla ferussaci* are the first for the Mediterranean coast of the Iberian peninsula and fill the distribution gap between the Atlantic Ocean and the Central Mediterranean populations. The reports of *Pseudosquilla ciliata* (Fabricius, 1787) by Pérès (1964) in the Gulf of Cadiz and off W Morocco actually refer to *Parasquilla ferussaci* (see Manning, 1978).

Little is known about the biology of *Parasquilla ferussaci*. Mori et al. (1998) studied some relative growth features, including its diet, and detected a size at maturity of 20 mm CL, as well as some slight sexual dimorphism in raptorial claw size. *Parasquilla ferussaci* may be considered an active predator since epibenthic mobile crustaceans constitute most of its prey.

Table 1. Sampling and biological characteristics of the specimens of *Parasquilla ferussaci* examined: * Other species (Decapoda) caught in this bottoms were *Chlorotocus crassicornis* (Costa, 1871), *Nephrops norvegicus* (Linnaeus, 1758), *Plesionika edwardsii* (Brandt, 1851), *Solenocera membranacea* (Risso, 1816) and *Macropipus tuberculatus* (Roux, 1830).

Tabla 1. Características de muestreo y biológicas de los especímenes de *Parasquilla ferussaci* examinados: * Otras especies (Decapoda) capturadas en estos fondos fueron *Chlorotocus crassicornis* (Costa, 1871), *Nephrops norvegicus* (Linnaeus, 1758), *Plesionika edwardsii* (Brandt, 1851), *Solenocera membranacea* (Risso, 1816) and *Macropipus tuberculatus* (Roux, 1830).

	Specimen #1	Specimen #2	Specimen #3
Sex	Male	Male	Male
Carapace length (excluding rostrum)	20.0 mm	31.3 mm	27.7 mm
Date of capture	28 II 83	12 VII 07	VII 04
Locality	Off Fuengirola (Málaga, Spain)	Off Gavà (Barcelona, Spain)	Off Isla Cristina (Huelva, Spain)
Position	Approx. 36°30'N–4°34'W	Approx. 41°12'N–2°02'E	Approx. 36°50'N–07°19'W
Geographic region	North Alborán Sea (W Mediterranean)	Catalan Sea (NW Mediterranean)	Gulf of Cadiz (E Atlantic Ocean)
Depth of capture	Unknown	95 m	Probably between 200–400 m(*)
Type of bottom	Unknown (probably muddy bottom)	Terrigenous mud	Unknown (probably muddy bottom)
Gear of capture	Commercial demersal trawl	Commercial demersal trawl	Commercial demersal trawl
Deposited in	Biological Collections of Reference – Institut de Ciències del Mar (CSIC)	Biological Collections of Reference – Institut de Ciències del Mar (CSIC)	Biological Collections of Depto. Biología Animal Univ. Málaga
Register number	ICMS_93/2007	ICMS_94/2007	
Observations	Specimen identified by J. E. García Raso and F. J. Valladares	See fig. 2	Specimen identified by J. E. García Raso

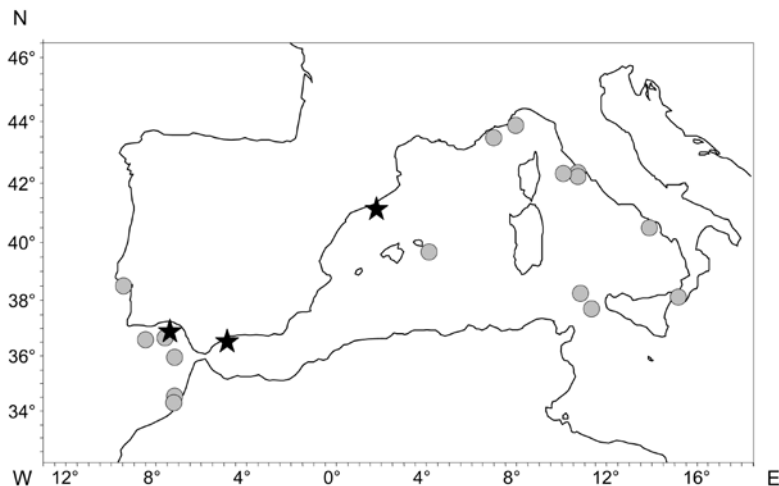


Fig. 1. *Parasquilla ferussaci*: known distribution in the western Mediterranean and adjacent Atlantic waters (grey circles: previous reports; black stars: present new reports).

Fig. 1. *Parasquilla ferussaci*: distribución conocida en el Mediterráneo occidental y aguas del Atlántico más cercano (círculos grises: citas anteriores; estrellas negras: nuevas citas).



Fig. 2. *Parasquilla ferussaci*: male from Gavà (Barcelona) (ICMS_94/2007), dorsal view.

Fig. 2. *Parasquilla ferussaci*: macho de Gavà (Barcelona) (ICMS_94/2007), vista dorsal.

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