Redescription of
Caprella hirsuta Mayer, 1890
(Crustacea, Amphipoda, Caprellidea)
from the Strait of Gibraltar

J. M. Guerra–García, J. E. Sánchez–Moyano
& J. C. García–Gómez


Redescription of Caprella hirsuta Mayer, 1890 (Crustacea, Amphipoda, Caprellidea) from the Strait of Gibraltar. — Caprella hirsuta Mayer, 1890 is redescribed based on specimens collected from the Strait of Gibraltar (Southern Spain–Northern Africa) during a study of the amphipod fauna from these coasts. Careful examination of these caprellids revealed differences with the previous descriptions, mainly the structure of gnathopod 2, pereopods and abdomen.

Key words: Crustacea, Amphipoda, Caprellidea, Caprella hirsuta, Strait of Gibraltar, Redescription.

(Rebut: 8 I 01; Acceptació condicional: 11 VI 01; Acc. definitiva: 3 VII 01)


(1) jmguerra@cica.es

This study was supported by a grant “Programa de Formación de Profesorado Universitario y Personal Investigador AP 98 28617065” from the Spanish Ministry of Education, Culture and Sport and by the “Asamblea de Ceuta".
Introduction

Caprella is the largest genus of the suborder Caprellidea (Crustacea, Amphipoda). It is widely distributed from the temperate to boreal regions occurring primarily on seaweeds, seagrasses and hydroids (Tayluch, 1993).

A total of 109 species of Caprella were described around the world before 1970 (McCain & Steinberg, 1970) and since then, more than 30 new species have been described (e.g. Arimoto, 1970; Labritz, 1970; Labritz & Lewbel, 1974; Vassilenko, 1974; Arimoto, 1977, 1978, 1979a, 1979b, 1980, 1982; Krapp-Schickel & Rufo, 1986; Tayluch, 1986; Vassilenko, 1992; Tayluch, 1993; Platvoet et al., 1995; Sánchez-Moyano et al., 1995b; Martin & Pettit, 1998; Krapp-Schickel & Veder, 1998; Mori, 1999).

In this paper Caprella hirsuta Mayer, 1890 is described on the basis of material collected from the Strait of Gibraltar between 1990 and 1998. This species, considered as Mediterranean endemic since the original description, has also been recently reported from the Atlantic African coast (Bellan-Santini & Rufo, 1998).

Since the morphological study of Caprella hirsuta specimens from the Strait of Gibraltar, several characteristics which were not included in previous descriptions and several differences with the previous descriptions have been observed.

Specimens of C. hirsuta from the Strait of Gibraltar have been deposited in the Museu de Zoologia de Barcelona, Spain (MZB 2001-0321) and the Museo Nacional de Ciencias Naturales de Madrid, Spain (MNCN 20.04/4650 and 20.04/4651).

Material and methods

The specimens of Caprella hirsuta were collected by scuba diving in shallow waters (2–10 m depth) in the infrafittoral zone of Torreguadiaro and San García, Cádiz (Southern Spain) and El Sarchal, El Desnariago and Rompecala, Ceuta (Northern Africa) (fig. 1).

The samples were fixed using formalin 4% in seawater solution and placed in ethyl alcohol 70%.

Several specimens were dissected under a stereo-microscope; permanent mounts were made in polyvinyl-lactophenol. All the figures were drawn with the aid of a camera lucida.

Results

Caprella hirsuta Mayer, 1890 (figs. 2–5)


Material examined

Two mature males (3.5 and 3.76 mm in body length), four mature females (2.16–3.16 mm), three prematurity females (2.06–2.23 mm), one juvenile (1.66 mm), VII 90 on the seaweed Halopteris scoparia (L.) Sauvageau, 4 m in depth, San García, Bahía de Algeciras (36°10’N, 5°25’W), coll. J.E. Sánchez-Moyano; six mature males (3.16–3.7 mm), 12 mature females (1.66–3.26 mm), five prematurity females (1.8–2.7 mm), seven juveniles (0.86–1.7 mm), VII 92, clinging to the seaweed Jania rubens (L.) Lamouroux, 3 m in depth, Torreguadiaro, Cádiz (36°20’N, 5°15’W), coll. J. E. Sánchez-Moyano; two mature males (3.4–3.7 mm), April 1995, clinging to Jania rubens (L.) Lamouroux, 2 m in depth, El Sarchal, Ceuta (35°53’N, 5°18’W), coll. J. E. Sánchez-Moyano; one mature male (3.6 mm), August 1998, clinging to Halopteris scoparia (L.) Sauvageau, 5 m in depth, Rompecala, Ceuta (35°54’N, 5°17’W), coll. J. M. Guerra-García; one mature male (3.73 mm) VII 98, clinging to Cladostephus spongiosus (Hudson) C. Agardh, 10 m in depth, El Desnariago, Ceuta (35°53’N, 5°17’W) coll. J. M. Guerra-García.

Redescription

Male “a” (MNCN 20.04/4650) from El Sarchal, Ceuta (35°53’N, 5°18’W).

Body length, 3.7 mm.


Antennae. Antenna 1 approx. 1/2 body length. Peduncular article 1 a little more robust than the others. Flagellum with nine articles. Antenna 2, shorter than peduncle of antenna 1, carrying many short simple setae. Swimming setae absent. Article 2 of flagellum very short.

Mouthparts. Upper lip semicircular, symmetrically bilobed, pubescent apically. Inner and outer lobes of the lower lip rounded, with dense setae close to margin. Mandibular process strong, bordered by rectangular teeth. Incisor and lacinia mobilis both 5-toothed. Maxillae 1 outer lobe with seven forked, 2-pronged spines distally. Distal article of palp with four strong spines on end and a row of five setae medially. Maxilla 2 outer lobe with two rows of simple setae and one plumose setae or distal end.

Fig. 1. Distribution of Caprella hirsuta. The location of Bahía de Algeciras and Ceuta in the Strait of Gibraltar is also included.
Discussion

The 2-armed appendages of the posterior part of the cephalon are the most prominent feature. The cephalon is broader than the thorax and bears 2 pairs of long, slender, recurved, unguiculate spines which project forwards. The first pair are smaller than the second and longer. The appendages are of a rectangular shape, with a broad, shallow, recurved blade, giving the cephalon a distinctive and characteristic appearance.

The thorax is composed of 7 segments, each bearing 2 pairs of short, slender, unguiculate spines which project forwards. The first pair are smaller than the second and longer. The appendages are of a rectangular shape, with a broad, shallow, recurved blade, giving the thorax a distinctive and characteristic appearance.

The abdomen is composed of 9 segments, each bearing 2 pairs of short, slender, unguiculate spines which project forwards. The first pair are smaller than the second and longer. The appendages are of a rectangular shape, with a broad, shallow, recurved blade, giving the abdomen a distinctive and characteristic appearance.

The legs are composed of 5 segments, each bearing 2 pairs of short, slender, unguiculate spines which project forwards. The first pair are smaller than the second and longer. The appendages are of a rectangular shape, with a broad, shallow, recurved blade, giving the legs a distinctive and characteristic appearance.

The antennae are composed of 11 segments, each bearing 2 pairs of short, slender, unguiculate spines which project forwards. The first pair are smaller than the second and longer. The appendages are of a rectangular shape, with a broad, shallow, recurved blade, giving the antennae a distinctive and characteristic appearance.

The mouthparts are composed of a pair of maxillae, each bearing 2 pairs of short, slender, unguiculate spines which project forwards. The first pair are smaller than the second and longer. The appendages are of a rectangular shape, with a broad, shallow, recurved blade, giving the mouthparts a distinctive and characteristic appearance.

The eyes are composed of 2 pairs of large, rounded, protruding eyes which project forwards. The first pair are smaller than the second and longer. The appendages are of a rectangular shape, with a broad, shallow, recurved blade, giving the eyes a distinctive and characteristic appearance.

The compound eyes are composed of a series of small, hexagonal eyes which project forwards. The first pair are smaller than the second and longer. The appendages are of a rectangular shape, with a broad, shallow, recurved blade, giving the compound eyes a distinctive and characteristic appearance.

The cerci are composed of 2 pairs of short, slender, unguiculate spines which project forwards. The first pair are smaller than the second and longer. The appendages are of a rectangular shape, with a broad, shallow, recurved blade, giving the cerci a distinctive and characteristic appearance.

The telson is composed of a rectangular plate, with a broad, shallow, recurved blade, giving the telson a distinctive and characteristic appearance.

The caudal spines are composed of a series of long, slender, unguiculate spines which project forwards. The first pair are smaller than the second and longer. The appendages are of a rectangular shape, with a broad, shallow, recurved blade, giving the caudal spines a distinctive and characteristic appearance.

The caudal fin is composed of a series of long, slender, unguiculate spines which project forwards. The first pair are smaller than the second and longer. The appendages are of a rectangular shape, with a broad, shallow, recurved blade, giving the caudal fin a distinctive and characteristic appearance.

The uropods are composed of a series of long, slender, unguiculate spines which project forwards. The first pair are smaller than the second and longer. The appendages are of a rectangular shape, with a broad, shallow, recurved blade, giving the uropods a distinctive and characteristic appearance.

The appendages of the antennae, maxillae, mouthparts, eyes, cerci, and caudal spines are all composed of a series of long, slender, unguiculate spines which project forwards. The first pair are smaller than the second and longer. The appendages are of a rectangular shape, with a broad, shallow, recurved blade, giving all these structures a distinctive and characteristic appearance.

The appendages of the legs, antennae, mouthparts, eyes, cerci, and caudal spines are all composed of a series of long, slender, unguiculate spines which project forwards. The first pair are smaller than the second and longer. The appendages are of a rectangular shape, with a broad, shallow, recurved blade, giving all these structures a distinctive and characteristic appearance.

The appendages of the legs, antennae, mouthparts, eyes, cerci, and caudal spines are all composed of a series of long, slender, unguiculate spines which project forwards. The first pair are smaller than the second and longer. The appendages are of a rectangular shape, with a broad, shallow, recurved blade, giving all these structures a distinctive and characteristic appearance.

The appendages of the legs, antennae, mouthparts, eyes, cerci, and caudal spines are all composed of a series of long, slender, unguiculate spines which project forwards. The first pair are smaller than the second and longer. The appendages are of a rectangular shape, with a broad, shallow, recurved blade, giving all these structures a distinctive and characteristic appearance.


