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(Crustacea Decapoda, Natantia).

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INVERTEBRATE
ZOOLOGY
Crustacea



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(Rijksmuseum van Natuurlijke Historie, Leiden)

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(con 1 figura nel testo)

(ricevuto il 16-VI-1955)

The deep-sea prawns of the genus *Acanthephyra* are represented in the Mediterranean by two species. The best known of these is *Acanthephyra pelagica* (RISSE, 1816), which also has been reported upon under the names *A. haeckeli* (VON MARTENS, 1868) and *A. multispina* COUTIÈRE, 1905; it has been recorded from practically the entire Mediterranean (from off S. W. Turkey westwards). The second species is rather rare and the records of it from the Mediterranean are few. The scarcity of material of this prawn has been the cause that its taxonomic position has always been misunderstood and that until now it has been treated as a distinct species, *Acanthephyra pulchra* A. MILNE EDWARDS. A study of material which was very kindly placed at my disposal by Dr. R. DIEUZEIDE, director of the Station d'Aquiculture et de Pêche at Castiglione, Algeria, and by Dr. R. ZARIQUIEY ALVAREZ of Barcelona, Spain, showed that *A. pulchra* is nothing but a synonym of *A. eximia* S. I. SMITH, which species until now had not been reported from the Mediterranean. The problem of this synonymy will be dealt with below.

Acanthephyra eximia S. I. SMITH

Acanthephyra eximia S. I. SMITH, 1884, pp. 376, 377 (*eximea* on p. 376).
Acanthephyra pulchra MONACO, 1890, p. 1179 (nom. nud.); A. MILNE EDWARDS,
1890, p. 163; RIGGIO, 1895, p. 245, pl. 1 fig. 1; ADENSAMER, 1898,
pp. 599-601, 625 (*Acanthephyra* on pp. 599-601); SENNA, 1903, p. 296,
pl. 13 figs. 1-12; KEMP, 1906, pp. 21, 23, 25, 26; COUTIÈRE, 1911 a,
p. 410; COUTIÈRE, 1911 b, pp. 186, 187, 196; COUTIÈRE, 1914, p. 886;
BALSS, 1925, p. 251; CHACE, 1936, p. 27; A. MILNE EDWARDS, 1938,
p. 185; COUTIÈRE, 1940 a, p. 4; COUTIÈRE, 1940 b, pp. 6, 7, 13.

Acanthephira pulchra MAGRI, 1904, p. 8.

Acanthephira pulchra MAGRI, 1911, p. 36.

Material examined:

Between Algiers and Castiglione, Algeria, depth about 300 m, autumn 1954, Dr. R. DIEUZEIDE. - 2 specimens, a female of 122 mm, and a male of 117 mm.

Off Blanes, N. E. Spain, depth more than 400 m, September 1954, Dr. R. ZARIQUIEY ALVAREZ. - 1 female of 105 mm.

A. MILNE EDWARDS's (1890) original description of *Acanthephyra pulchra* is extremely short, it is hardly more than a short diagnosis. Fortunately RIGGIO (1895) and SENNA (1903) provide us with extensive and well illustrated accounts of the species. The present specimens agree very well with these descriptions.

In all my specimens the tip of the rostrum is broken so that the exact number of lower rostral teeth cannot be ascertained. In one of my specimens two, in the others three teeth are still visible. The upper margin of the rostrum in my material bears four or five teeth in the basal part (A. MILNE EDWARDS and RIGGIO both mentioned six, SENNA six or seven dorsal teeth). In my larger female specimen, which possesses four dorsal teeth, the anterior tooth is separated from the rest by a very large interval, in the male specimen the intervals between the ultimate four teeth are about equal, while in the third specimen these intervals gradually increase in length distally.

Both RIGGIO and SENNA show the lower orbital angle as sharp, in my specimens it is rectangular with a rounded tip.

The abdomen in the material examined has all segments, except the first, with a sharp dorso-median carina. In the first segment the dorsal surface is evenly rounded. A carina also lacks in the anterior part of the second abdominal segment; this anterior part is concealed below the first segment when the body of the animal is fully stretched. In the rest of the segment the carina is high and sharp. In the third segment the carina is rather vague in the anterior part, which in the fully stretched animal is covered by the second segment. In the rest of the segment the carina is very distinct and sharp, like those of the following segments. RIGGIO (1895, p. 247) states « *Addome grande, compresso, carenato superiormente* », without indicating exactly which segments are carinate. SENNA's (1903, p. 297) remark « *Pleon compresso ai lati, col 3° somite carenato sul dorso nei 2/3 posteriori, la carena è elevata al suo inizio, degnadatamente in seguito; l'apice è provvisto d'un dente compresso; i somiti 4°-6° sono pure carenati e col dente posteriore meno cospicuo* », gives the impression that no carina is present on the second abdominal segment, though this is not specially mentioned by him. Judging by our specimens, this impression must be incorrect as a very distinct carina is found on the second abdominal segments there.

The telson (fig. 1 a) ends in a very short posterior margin, which in its middle bears a distinct sharp tooth, that at each side is flanked by a strong movable spine. These two spines overreach the median tooth. Slightly externally of the spines the extreme posterior part of the telson bears two small spinules on the upper surface just before the posterior margin, which they slightly overreach with their tips. In the posterior half of the telson there are three or four lateral spines. RIGGIO (1895, p. 247) states the tip of the telson to be « ottusetta », while SENNA (1903, p. 297) described the telson as « appuntato all'apice, inerme ai lati ». Obviously the lateral and posterior spines, which are very small, have been overlooked by these two authors.

The eye is well described by SENNA, as is also the antennula. The scaphocerite in my specimens is not exactly as shown by RIGGIO and SENNA. These authors, namely, figure it as regularly tapering to a sharp point, while in my material there is a distinct, though very short, anterior margin (fig. 1 b). In SENNA's figure of the scaphocerite no differentiation between the final tooth and the lamella is shown, but this differentiation must be present in his specimens as in his description it is stated that the scaphocerite has the « spina distale breve ».

Notwithstanding the small differences from RIGGIO's and SENNA's descriptions, which probably are due to incompleteness of and slight inaccuracies in these descriptions, there can be hardly any doubt as to the conspecificity of my material with that described in RIGGIO's and SENNA's papers. RIGGIO's identification of his material with *Acanthephyra pulchra* A. MILNE EDWARDS may be fully trusted, since it has been verified by A. MILNE EDWARDS himself (see RIGGIO, 1895, p. 245).

KEMP (1906, pp. 23, 24), who published a key to the species of the genus *Acanthephyra*, considered *A. pulchra* a good species and placed it near *A. eximia*. According to KEMP the difference between the two species was to be found in the second abdominal segment, which he thought to be without a carina in *A. pulchra*, while such a carina is present in *A. eximia*. KEMP's opinion evidently was based on SENNA's report, since he himself had not seen any material of *A. pulchra*, as was indicated by him in a footnote. In the latest revision of the genus *Acanthephyra*, CHACE (1936, pp. 26, 27), who like KEMP had not been able to examine material of *A. pulchra*, accepted KEMP's

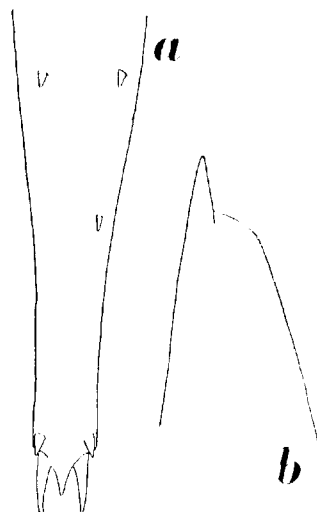


Fig. 1. - *Acanthephyra eximia* S. I. SMITH. a, extremity of telson in dorsal view; b, top of scaphocerite. x 12.

classification of this species. The study of the Algerian material of *Acanthe-phyra pulchra* shows that the supposed difference between this species and *A. eximia* does not exist. A further comparison of my material with the rather numerous and well illustrated descriptions of *A. eximia* failed to show any distinguishing characters, so that we have to consider the two species as being identical. As the name *Acantheephyra eximia* S. I. SMITH, 1884, is older than that of *A. pulchra* A. MILNE EDWARDS, 1890, it has priority and consequently has to be used for the species.

Acantheephyra eximia has a very wide distribution. It is known from the Atlantic Ocean (western Atlantic from Bermuda southwards to the Falkland Islands; central Atlantic between Bermuda and the Azores; eastern Atlantic west of Gibraltar) and the entire Indo-West Pacific region (from the Arabian Sea and South Africa eastwards to Japan, Polynesia, and the Kermadec Islands). The discovery of the identity of *A. pulchra* with *A. eximia* extends the known range of its distribution into the Mediterranean. The species is known from depths between 200 and 3700 m. *Acantheephyra pulchra* was reported from the following localities: near the Azores, 38° 35' 30" N 28° 05' 45" W, depth 1250 m (COUTIÈRE, 1911 b, 1940 b), off Monaco, depth 1650 m (MONACO, 1890; A. MILNE EDWARDS, 1890, 1938), N. W. of Sardinia, 41° 24' 42" N 7° 43' 28" E, depth 2809-2836 m; E. of Sardinia, 39° 40' 40" N 9° 54' 12" E, depth 1553 m, and 40° 44' 40" N 11° 22' 00" E, depth 2188-2390 m (SENNA, 1903), Augusta Bay, Sicily, depth about 200 m (RIGGIO, 1895; MAGRI, 1904, 1911), between Crete and the North African coast, 33° 4' 0" N 21° 15' 40" E, depth 1770 m; 33° 11' 18" N 22° 22' 56" E, depth 1765 m; 35° 26' 0" N 23° 18' 0" E, depth 2525 m; 35° 4' N 24° 17' E, depth 1445 m; 34° 45' N 24° 23' E, depth 1274 m (ADENSAMER, 1898). After 1911 no original Mediterranean records of this species have been published.

RIGGIO (1895, p. 246) made *Acantheephyra pulchra* A. MILNE EDWARDS the type of a new genus *Acanthephyropsis*, which name was only given conditionally by him and published in such a casual way that it has escaped the notice of practically all subsequent workers, and even is not found in NEAVE'S Nomenclator Zoologicus. RIGGIO'S reason for erecting this new genus was the fact that *A. pulchra* shows a rather distinct transverse groove in the posterior half of the mid-dorsal region of the carapace. In RIGGIO'S opinion the presence of this groove constitutes a character of generic or subgeneric value, while he furthermore thought that in the presence of this groove *A. pulchra* differs from all other species of *Acantheephyra*. RIGGIO'S opinion, however, is not shared by modern carcinologists, who maintain *A. eximia* (and *A. pulchra*) in the genus *Acantheephyra*. *Acanthephyropsis* RIGGIO, 1895 (type species by monotypy: *Acantheephyra pulchra* A. MILNE EDWARDS, 1890) thus must be considered a subjective synonym of *Acantheephyra* A. MILNE EDWARDS, 1881

(type species by original designation: *AcanthePHYra armata* A. MILNE EDWARDS, 1881).

Summary

Examination of specimens of the deep-sea prawn *AcanthePHYra pulchra* A. MILNE EDWARDS, 1890, showed this species to be identical with *AcanthePHYra eximia* S. I. SMITH, 1884.

Riassunto

In base all'esame di alcuni esemplari di *AcanthePHYra pulchra* A. MILNE EDWARDS, 1890, si dimostra che questa specie è identica ad *AcanthePHYra eximia* S. I. SMITH, 1884.

Zusammenfassung

Die Untersuchung einiger Exemplare der Tiefseegarnseele *AcanthePHYra pulchra* A. MILNE EDWARDS, 1890, wies daraufhin, dass die Art mit *AcanthePHYra eximia* S. I. SMITH, 1884 identisch ist.

Résumé

L'étude de quelques exemplaires de la crevette bathypélagique *AcanthePHYra pulchra* A. MILNE EDWARDS, 1890, montrait l'identité de cette espèce avec *AcanthePHYra eximia* S. I. SMITH, 1884.

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