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On the supposed validity of the specific names
Callianassa laticauda OTTO and *Callianassa*
pontica CZERNIAVSKY.

INVERTEBRATE
ZOOLOGY
Crustacea



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Callianassa laticauda OTTO and *Callianassa*
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(with 5 text figures)

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I. - *Callianassa laticauda* OTTO vs. *Callianassa tyrrhena* (PETAGNA)

In a recent publication entitled « Sulla validità del nome *Callianassa laticauda* OTTO », CAROLI (1950, pp. 189-191) tries to show that the trivial name *laticauda* OTTO, 1821, is the correct name for one of the four species of *Callianassa* occurring in the Bay of Naples. CAROLI defends his opinion against the views of GIORDANI SOIKA (1943, pp. 83-85) and myself (HOLTHUIS, 1947, pp. 320, 321). GIORDANI SOIKA, namely, tries to show that *Cancer candidus* OLIVI, 1792, is identical with *Callianassa laticauda* OTTO, 1821, and that, consequently, the trivial name of OLIVI's species, being the older of the two, should be employed. Being unacquainted with GIORDANI SOIKA's publication, I tried, independently from him, to show in my 1947 paper that both *Cancer candidus* OLIVI, 1792, and *Astacus tyrrhenus* PETAGNA, 1792, are based on specimens of *Callianassa laticauda* OTTO. Like GIORDANI SOIKA, I reasoned that in this light the trivial name *laticauda* could not be maintained for the species in question. Since the trivial names *candidus* OLIVI and *tyrrhenus* PETAGNA have been published in the same year, and as no data are available to indicate more precisely the moment of publication of the papers of the two authors, it is impossible to find out which of the two names is the older. I chose the name *tyrrhenus* as the correct trivial name for the species in question, treating the name *candidus* as a junior synonym. My choice was guided by the fact that PETAGNA's figure is far superior to that given by OLIVI, and furthermore shows unmistakably the essential characteristics of the species named *Callianassa laticauda* OTTO by CAROLI.

CAROLI (1950) states that four species of *Callianassa* have been reported from the Mediterranean: *C. laticauda* OTTO, *C. pontica* CZERNIAVSKY, *C. truncata* GIARD & BONNIER and *C. acanthura* CAROLI. According to him it is impossible to make out with certainty which of these four species is represented by the figures and descriptions of OLIVI and PETAGNA, and therefore he be-

lieves that there is no sufficient reason to let either of the trivial names *candidus* or *tyrrhenus* replace the trivial name *laticauda*.

I cannot agree at all with CAROLI as far as *Astacus tyrrhenus* is concerned. CAROLI states that PETAGNA's figure indeed is better than that of OLIVI, but that one can say with certainty only that it represents a *Callianassa*, while the shape of the telson is different from that of *C. laticauda* or any other species of *Callianassa*. During my stay in Naples in April and May of 1950, I discussed this problem with Dr. CAROLI and understood that he, from the reproduction of PETAGNA's plate 5 which I gave in my 1947 paper, obtained the im-

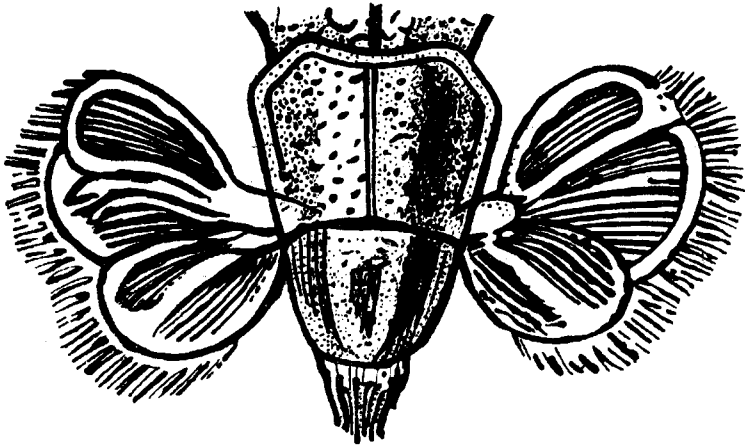


Fig. 1. - *Astacus tyrrhenus* PETAGNA. Posterior part of body. After PETAGNA (1792).

pression that PETAGNA figured the telson of his specimen as being elongate triangular. I then pointed out to Dr. CAROLI that in fact the telson in PETAGNA's figure is semicircular with a tuft of hairs on the tip. As the reproduction which I showed in my paper is somewhat reduced, the line separating the telson from the tuft of hairs is not distinct and the telson therefore at first view gives the impression of being triangular. I am giving here an enlarged reproduction of part of PETAGNA's figure of *Astacus tyrrhenus*, in which the shape of the telson is more distinctly shown (fig. 1). On comparing the shape of the telson of PETAGNA's animal with that of the four *Callianassa* species mentioned by CAROLI (figs. 2-5), it becomes evident that PETAGNA's specimen is a *Callianassa laticauda* as its telson perfectly resembles the telson of that species, while it differs strongly from those of *C. acanthura* and *C. truncata*. *Callianassa pontica* has the telson shorter than *C. laticauda*, while it moreover differs from that species in having the smaller first cheliped more slender. Also in these two characters PETAGNA's figure entirely resembles *C. laticauda*. As PETAGNA's figure of *Astacus tyrrhenus* shows all the essential characters of *Callianassa laticauda*,

the identity of these two species is definitely settled. This identity is not surprising at all in view of the fact that *Astacus tyrrhenus* PETAGNA originated from Naples, where *Callianassa laticauda* is the commonest of the *Callianassa* species. Consequently I cannot but maintain my opinion that the correct name of the species in question is *Callianassa tyrrhena* (PETAGNA, 1792). The change of the specific name *Callianassa laticauda* OTTO to *C. tyrrhena* (PET). will not cause

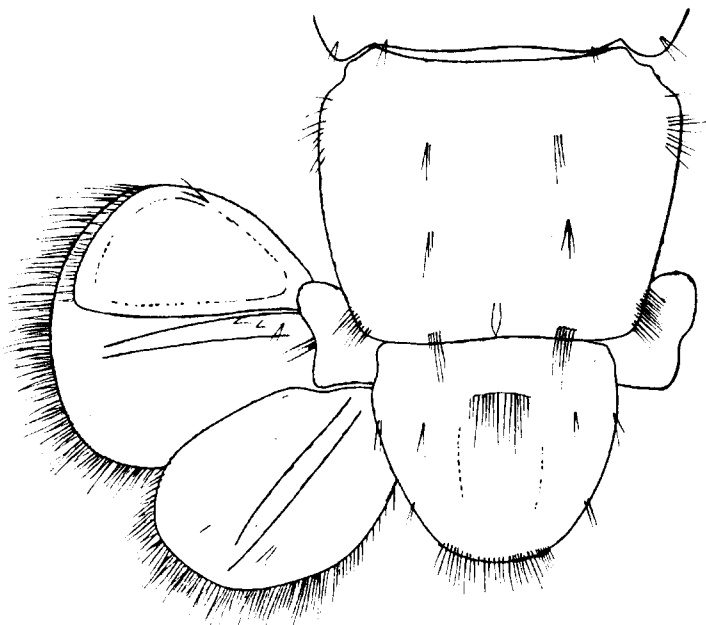


Fig. 2. - *Callianassa laticauda* OTTO. Sixth abdominal segment, telson and left uropod. After DE MAN (1928).

any confusion since the former of these names only recently came into use for the species discussed here. Though OTTO proposed this name as early as 1821, up till 1903 it was generally synonymized with *Callianassa subterranea* (MONTAGU, 1808). BORRADAILE (1903, p. 547) recognized the species to be distinct from MONTAGU's *C. subterranea* and gave it the new name *Callianassa stebbingi*. This latter name has been employed for the species till DE MAN (1928, pp. 33, 34) showed its identity with *Callianassa laticauda* OTTO, and used OTTO's name.

I have to admit the correctness of CAROLI's (1950) statement that OLIVI's description and figure of *Cancer candidus* do not give sufficient details to enable the definite identification of that species with one of the four species of *Callianassa* enumerated by CAROLI. There is no doubt, however, that *Cancer candidus* is a species of *Callianassa*. OLIVI's species was reported from the Adria-

tic. And neither *Callianassa truncata* nor *C. acanthura* has ever been reported from that sea. Only the species *C. tyrrhena* and *C. pontica* are known from the Adriatic. When I wrote my 1947 paper, for the taxonomy of the Mediterranean species of *Callianassa*, I based my conclusions on BOUVIER's (1940, p. 103) monograph, in which *C. laticauda* and *C. pestae* (= *C. pontica*) are synonymized. *C. laticauda* in my opinion thus was the only species which could be identical with *Cancer candidus*. Probably GIORDANI SOIKA in the same way came to this con-

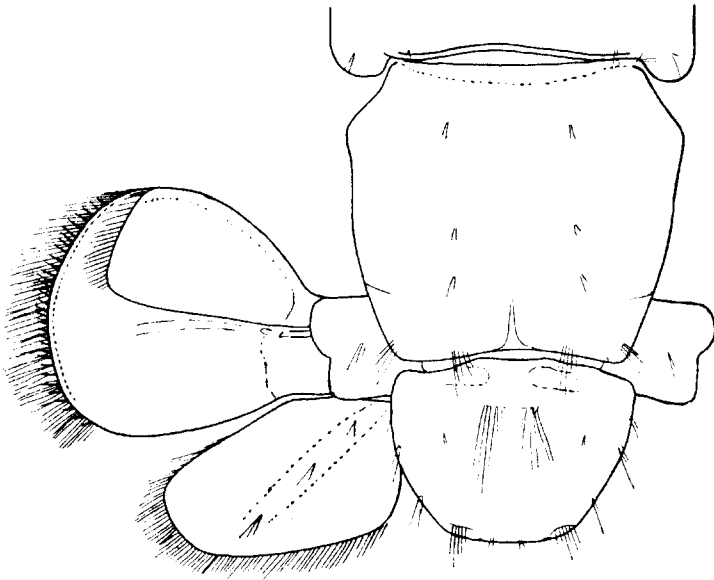


Fig. 3. - *Callianassa pestae* DE MAN. Sixth abdominal segment, telson and left uropod. After DE MAN (1928).

clusion. During my stay in Naples Dr. CAROLI convincingly showed me that *C. pontica* and *C. tyrrhena* are different species. Both these species occur in the Adriatic, and thus it is highly probable that *Cancer candidus* is based on specimens of one of these species or on both. Whether we consider *Cancer candidus* a *species dubia* or arbitrarily identify it with *Callianassa tyrrhena* (PETAGNA) will be of no influence whatsoever on the nomenclature of this species. In my opinion it is better to sink the name as a synonym of PETAGNA's *Astacus tyrrhenus* than to let it stand as a *nomen dubium*, which eventually may become a menace to the stability of the nomenclature of other species of *Callianassa*. Of course, we cannot prove that *Cancer candidus* is identical with *Callianassa tyrrhena*, but neither can we prove that they are different species. The names of many species described by old authors, from LINNAEUS on, at present are recognized as perfectly valid, though the original descriptions according to modern standards are entirely inadequate and do not

permit the certain identification of the species described. If Dr. CAROLI strictly applies his principle that a name cannot be used for a species unless this species is perfectly recognizable from the original description, an uncomfortably large number of widely accepted names would have to disappear. Anyhow, this difference between the points of view of Dr. CAROLI and myself in the present case is of no importance at all.

II. - *Callianassa pontica* CZERNIAVSKY vs. *Callianassa pestai* DE MAN.

A second problem which I may discuss here is the validity of the trivial name *pontica* for the species indicated by CAROLI (1950) as *Callianassa pontica*

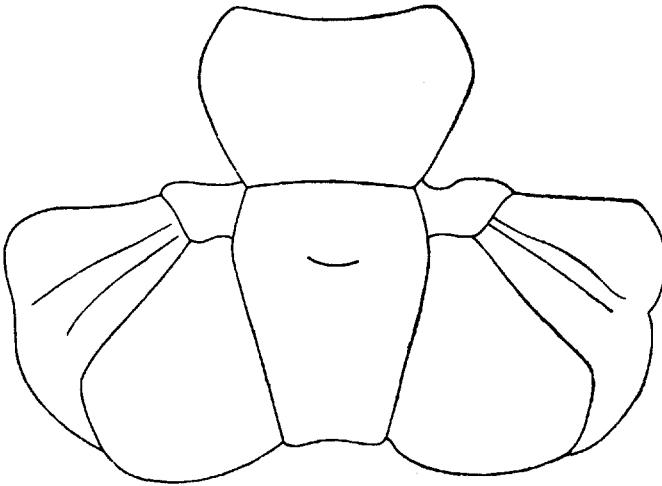


Fig. 4. - *Callianassa truncata* GIARD & BONNIER. Sixth abdominal segment, telson and uropods. After BOUVIER (1940).

(CZERNIAVSKY). This species was described for the first time by CZERNIAVSKY (1884, p. 81) as *Callianassa subterranea* (Montagu) forma *pontica*. DE MAN (1928, p. 34) described a new species of *Callianassa* from the Mediterranean under the name *Callianassa pestae*, at the same time expressing the opinion that this new species eventually might prove to be identical with *Callianassa subterranea* forma *pontica* CZERNIAVSKY. MAKAROV (1938, pp. 73, 297) showed that CZERNIAVSKY's *Callianassa subterranea* forma *pontica* is indeed identical with *Callianassa pestae* DE MAN, and he thought that for the sake of priority the name of the species should be changed to *Callianassa pontica* CZERNIAVSKY, 1884. This action by MAKAROV, however, is not justified. The revised *International Rules of Zoological Nomenclature* state « that the trivial names given to any infra-subspecific form be co-ordinate with the trivial names given to all other infra-subspecific forms but not with the trivial names given to subspecies and species », and « that a trivial name originally published as the trivial name of an infra-

subspecific form may be elevated to the status of ... a specific trivial name by a subsequent reviser and in that event shall rank in its new status for purposes of priority as from the date on which it was so elevated and shall be attributed to the author by whom it was so elevated » (1950, *Bull. zool. Nomencl.*, vol. 4, p. 93). The revised *Rules* furthermore state that any trivial name published prior to 1st January, 1951, as the trivial name of a taxonomic unit of less than specific rank should be deemed to have been published as the trivial name of an infra-subspecific form, only when, at the time of the original publication of the name, the author concerned expressly indicated that he regarded the taxonomic unit

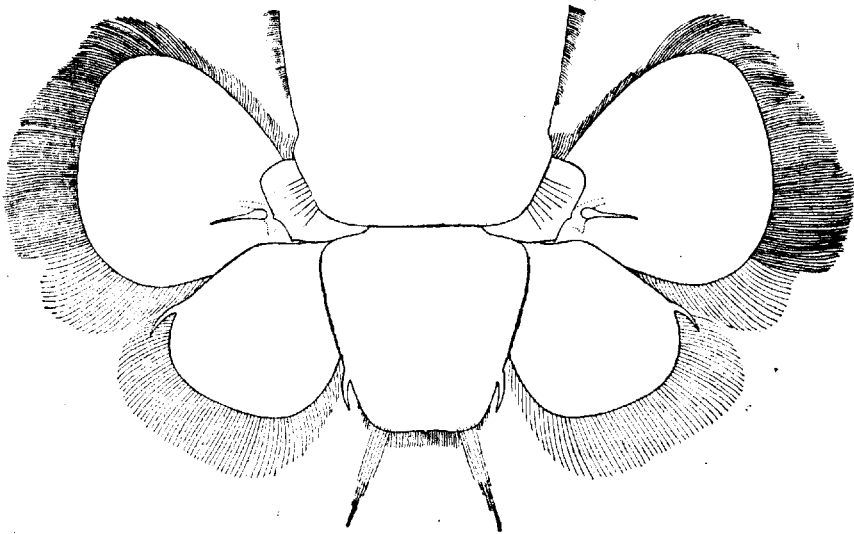


Fig. 5. - *Callianassa acanthura* CAROLI. Sixth abdominal segment, telson and uropods. After CAROLI (1946).

so named as being an infra-subspecific form (1950, *Bull. zool. Nomencl.*, vol. 4, pp. 90, 91). That the units indicated by CZERNIAVSKY (1884) with the name *forma* are indeed of infra-subspecific rank is clearly shown by the fact that he uses this name at numerous occasions (pp. 54, 55, 60, 74, 114, 115, 116, 118, 119, 120, 154, 177, 187, 201, 203) for subdivisions of units named varieties by him. It is thus clear that the name *pontica* in the nomenclature of species and subspecies ranks as from 1938 and the author to whom this name should be attributed is MAKAROV and not CZERNIAVSKY. Since the specific name *Callianassa pontica* MAKAROV, 1938, is younger than the name *Callianassa pestae* DE MAN, 1928, for the same species, the latter name is the first available name for that species. The orthography of the specific trivial name *pestae* DE MAN, 1928, as published in the binominal combination *Callianassa pestae* is incorrect. DE MAN (1928, pp. 3, 35) dedicated his new species to Dr. Otto PESTA of Vienna. Since Dr. PESTA is a man, the specific

trivial name derived from his name should be formed by adding an i to this name (see the revised *International Rules of Zoological Nomenclature* in *Bull. zool. Nomencl.*, vol. 4, 1950, pp. 205, 206). The form *pestae* as used by DE MAN for this trivial name thus is incorrect and should be changed to *pestai*. This action is prescribed by the revised *Rules* (1950, *Bull. Zool. Nomencl.*, vol. 4, p. 68). The correct name of the species mentioned by CAROLI under the name *Callianassa pontica* (CZERNIAVSKY) thus actually is *Callianassa pestai* DE MAN, 1928.

Riassunto.

1. Contrariamente all'opinione espressa da CAROLI (1950) la figura di *Astacus Tyrrhenus* pubblicata da PETAGNA (1792) mostra tutte le caratteristiche di *Callianassa laticauda* OTTO, 1821. Di conseguenza, queste due specie sono identiche e devono portare il nome di *Callianassa tyrrhena* (PETAGNA, 1792).

2. Il nome *pontica* pubblicato da CZERNIAVSKY (1884) nella combinazione *Callianassa subterranea* forma *pontica* è attribuito dall'autore ad una unità infra-sub-specifica e di conseguenza non ha alcun valore per la nomenclatura delle specie e sottospecie. La specie che da CAROLI e da alcuni altri autori viene chiamata *Callianassa pontica* CZERNIAVSKY, deve portare il giusto nome *Callianassa pestai* DE MAN, 1928.

Summary.

1. It is shown that, contrary to CAROLI's (1950) statement, PETAGNA's (1792) figure of *Astacus tyrrhenus* shows all essential characters of *Callianassa laticauda* OTTO, 1821, so that there can be no doubt about the identity of the two forms. The name *Callianassa tyrrhena* (PETAGNA) thus must be used for the species in question.

Though OLIVI's (1792) figure and description of *Cancer candidus* only enables one to recognise it as a species of *Callianassa*, it is thought best, in order to avoid possible nomenclatorial difficulties in the future, to consider OLIVI's species as being identical with that of PETAGNA and to sink the name *Cancer candidus* OLIVI in the synonymy of *Callianassa tyrrhena* (PETAGNA).

2. The validity of the specific trivial name *pontica* as used in *Callianassa pontica* by CAROLI (1950) is based on the supposition that this name dates from CZERNIAVSKY, 1884. It is shown that CZERNIAVSKY gave this name to an infra-subspecific form and that it had no status till in 1938 MAKAROV raised it to the rank of a specific trivial name. As the name *Callianassa pestai* DE MAN, 1928, is older than *Callianassa pontica* MAKAROV, 1938, the former name has to be used for the species in question. In conformity with the *International Rules of Zoological Nomenclature* the original orthography *pestae* of the trivial name of the species has been changed to *pestai*.

Zusammenfassung.

1. Die von PETAGNA (1792) publizierte Abbildung von *Astacus tyrrhenus* zeigt alle Artmerkmale von *Callianassa laticauda* OTTO, 1821. CAROLI's (1950) Behauptung, dass die Form des Telsons von *Astacus tyrrhenus* und *Callianassa laticauda* verschieden seien, ist unrichtig. Die beiden Arten sind identisch und sollen daher den Namen *Callianassa tyrrhena* (PETAGNA, 1792) bekommen.

2. Der Name *pontica* wird von CZERNIAVSKY (1884) in der Originalbeschreibung

von *Callianassa subterranea* forma *pontica* für eine infra-subspezifische Einheit benutzt und ist daher nicht gültig für die Nomenklatur von Arten und Unterarten. Die Art, die von CAROLI (1950) und einigen anderen Autoren *Callianassa pontica* CZERNAVSKY genannt wird, soll den richtigen Name *Callianassa pestai* DE MAN tragen.

Résumé.

1. Contrairement à l'opinion exprimée par CAROLI (1950) l'image d'*Astacus tyrrhenus* publiée par PETAGNA (1792) montre toutes les caractéristiques de *Callianassa laticauda* OTTO, 1821. Par conséquent ces deux espèces sont identiques et doivent porter le nom de *Callianassa tyrrhena* (PETAGNA, 1792).

2. Le nom *pontica*, publié par CZERNAVSKY (1884) dans la combinaison *Callianassa subterranea* forma *pontica*, est attribué par son auteur à une unité infra-sous-spécifique et par conséquent ne possède aucune valeur pour la nomenclature des espèces et des sous-espèces. Le nom correct de l'espèce indiquée par CAROLI (1950) et quelques autres auteurs comme *Callianassa pontica* CZERNAVSKY, est *Callianassa pestai* DE MAN, 1928.

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