NOMENCLATORIAL NOTES ON EUROPEAN MACRUROUS CRUSTACEA DECAPODA

by

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The study of the older literature on Crustacea, from Linnaeus (1758) to H. Milne Edwards (1837), has been much neglected by modern carcinologists. A result of this is that many wrong names at present are used, especially for European species. The European species namely were most extensively studied by the older authors, while moreover in the middle of the previous century handbooks on the carcinological fauna of several parts of Europe were published (for instance Bell's (1844-1853) "A History of the British stalk-eyed Crustacea", and Heller's (1863) " Die Crustaceen des südlichen Europa"), which for many authors made a consultation of older works superfluous. It is astonishing to note how many names at present are used incorrectly for species of the group. The intention of the present paper is to deal with some of these nomenclatorial puzzles and to find the correct name for the species involved.

PENAEIDAE

Penaeus kerathurus (Forsskål)

Cancer kerathurus Forsskål, 1775, Descr. Anim. It. orient., p. 95.
Palaemon sulcatus Olivier, 1811, Encycl. méthod. Hist. nat., vol. 8, p. 661.
Penaeus trisulcatus Leach, 1815, Trans. Linn. Soc. Lond., vol. 11, p. 347.
Alpheus Caramote Risso, 1816, Hist. nat. Crust. Nice, p. 90.
Penaeus sulcatus Lamarck, 1818, Hist. nat. Anim. s. Vert., vol. 5, p. 206.
Peneus caramote Risso, 1826, Hist. nat. Europ. mérid., vol. 5, p. 67.
Penaeus kerathurus Sharp, 1893, Proc. Acad. nat. Sci. Philad., 1893, p. 109.

The present species is best known under the name *Penaeus caramote,* though the name *Penaeus trisulcatus* also often is used for it. The species, however, was described for the first time neither in 1815 nor in 1816, but as early as 1775, when Forsskål gave the following description of his *Cancer kerathurus*:

"Cancer kerathurus; *macrourus; rostro ensato, superne serrato, subtus unidentato; thorace supra canalibus tribus.*

Descr. Longitudo fere spithamae; digito crassior. *Antennae* corpore sesquilongiores. *Chelae* parvae. *Color* corporis glaucus, punctis ferrugineis: *Cauda* rubra, apice coeruleo. *Cornu* subtus unidentatum, teres, non-alatum. In dorso *Thoracis* tres canales, quorum medius terminatur in basi cornu. Ad latera utrinque sulcus sursum tendens, obliquus. His notis sufficienter distinguitur a *Squilla,* cui caeteroquin quoad figuram similis est.

Smirnae & Alexandriae"

This short but careful description shows without any doubt that Forsskål's animal belongs to the same species as Risso's *Peneus caramote.*

In 1811 Olivier, in his enumeration of the species of *Palaemon,* described a new species *Palaemon sulcatus.* From his rather extensive description of the animal the identity of it with *Penaeus caramote* becomes clear. This identity furthermore is confirmed by the fact that Olivier refers to his species the *Squilla Crangon* of Rondelet and Gesner, which according to the figures given by both these authors really represent the present species; also Forsskål's *Cancer kerathurus* is synonymized by Olivier with his *Palaemon sulcatus.*

Sharp (1893) is, as far as I know, the first to use the name *Penaeus kerathurus* for the present species, but he is not followed in this respect by other authors.

There is no reason not to use the name *Penaeus kerathurus* for this species as at present there is no uniformity in the use of a name for it; part of the authors of recent years (De Man, Odhner, Seurat) namely use the name *Penaeus caramote,* while others (Balss, Monod, Schmitt) use the name *Penaeus trisulcatus.*

ATYIDAE

Troglocaris anophthalmus (Kollar)

Palaemon anophtalmus Kollar, 1848, S. B. Akad. Wiss. Wien, vol. 1, p. 137.
Troglocaris Schmidti Dormitzer, 1853, Lotos Praha, vol. 3, p. 85, 1 pl.

Kollar's name *Palaemon anophtalmus* for the present species is overlooked by most authors or is considered to be a nomen nudum. Bouvier (1925) in his monograph of the family Atyidae remarks in a footnote under *Troglocaris schmidti*: "Hamann donne en synonymie *Palaemon anophtalmus* Kollar. Je ne trouve aucun renseignement sur cette indication qui est peut-être un *nomen nudum.*" Also Sherborn in his Index Animalium considers *Palaemon anophthalmus* a nomen nudum. This, however, is not the

case, Kollar's description, though it is short, is sufficient for the recognition of the species. Kollar states: "Vor wenigen Wochen schickte Herr H. Freyer ..... ein *Crustaceum,* welches ..... des Sehorgans entbehrt. Dieser Krebs, welcher der Gattung *Palaemon,* Garneele, angehörte, und dem ich den Namen *Palaemon anophtalmus* gegeben habe, ist überdies darum merkwürdig, als er zu den wenigen Arten dieser Gattung gehört, die ausnahmsweise im süssen Wasser vorkommen, während die meisten der bekannten Species nur im Meere, oder doch im Brackwasser angetroffen werden.

Herr Freyer entdeckte dieses *Crustaceum* in den unterirdischen Gewässern von Dürrenkrain, namentlich in der *Kompoljska jama* und in *Portiskávcz* nächst Strug, wo es unter Steinen und Gerölle ziemlich häufig vorkömmt, und die Hauptnahrung des dort von dem eben erwähnten unermüdeten Naturforscher aufgefundenen *Hypochthon Freyeri* ausmacht, einer zweiten ..... Art dieser merkwürdigen Amphibien-Gattung."

Kollar stated thus that the species is a prawn, which is blind and occurs in fresh water in caves, he also gives the exact locality where the species was found. Now in Europe only four species of prawns are known to live in fresh water (*Atyaephyra desmarestii, Dugastella valentina, Troglocaris schmidti* and *Palaemonetes antennarius*), of these only *Troglocaris schmidt* has the eyes deprived of pigment and lives in caves, it is moreover known from the exact region from where Kollar reports his *Palaemon anophtalmus.* There is therefore not the least doubt as to the identity of Kollar's species. The name *anophthalmus* (Kollar's orthography *anophtalmus* obviously is a clerical error), which is older than the name *Schmidti,* in consequence has the full right to be used for the present species. The changing of the name *Schmidti* into *anophthalmus* will not cause much confusion as *Troglocaris anophthalmus* is a relatively little known species.

Dugastella valentina (Ferrer Galdiano)

Atyaephira valentina Ferrer Galdiano, 1924, Bol. Soc. Esp. Hist. nat., vol. 24, p. 210, figs. 1, 3.

Dugastella maroccana var. *hispanica* Balss, 1925, Senckenbergiana, vol. 7, p. 206, figs. 1-4.

In 1924 Ferrer Galdiano described a new species of *Atyaephyra*; the material on which this species is based originated from Laguna de Almenara near Castellon and from Albufera de Valencia. A year later Balss described a new form *hispanica* of *Dugastella marocana* from Silla near Albufera de Valencia. Comparison of the descriptions and the figures given by the two authors shows that they had the same species at their disposal. The only

difference of some importance I could find is the fact that Ferrer states that his specimens have exopods of various size at the first four pereiopods, while in Balss's description and figures exopods are shown on all pereiopods. The character of the presence or absence of exopods at the base of the last pereiopods is not constant in many species and mostly is dependent on the age of the specimens, as is shown by Stammer (1932) and Birstein (1933) for *Troglocaris anophthalmus*. As the two forms show no differences in other respects, we may consider them to belong to one species, the more as Ferrer's as well as Balss's material originate from the same locality.

Balss (1925) correctly refers the species to the genus *Dugastella*. This genus namely differs from *Atyaephyra* by having the carapace provided with a pterygostomian spine. Ferrer Galdiano does not mention this spine in his description, but it is distinctly shown in his figure 1. I think the differences between the present form and *Dugastella marocana* sufficient to separate the Spanish specimens as a distinct species, which thus must be named *Dugastella valentina* (Ferrer Galdiano).

OPLOPHORIDAE

Acanthephyra pelagica (Risso)

Alpheus Pelagicus Risso, 1816, Hist. nat. Crust. Nice, p. 91, pl. 2 fig. 7.
Pandalus pelagicus Risso, 1826, Hist. nat. Europ. mérid., vol. 5, p. 79, pl. 2 fig. 5.
Ephyra pelagica Roux, 1831, Mém. Class. Crust. Salic., p. 24.
Ephyra Haeckelii Von Martens, 1868, Arch. Naturgesch., vol. 34 pt. 1, p. 52, pl. 1 fig. 7.
Miersia pelagica Carus, 1885, Prodr. Faun. Medit., vol. 1, p. 481.
Acanthephyra Agassizii mediterranea Riggio, 1900, Monit. zool. Ital., vol. 11 suppl., p. 20.
Acanthephyra rectirostris Riggio, 1900, Monit. zool. Ital., vol. 11 suppl., p. 20.
Acanthephyra parva multidens Coutière, 1905, Bull. Mus. océanogr. Monaco, n. 48, p. 17, fig. 5.
Acanthephyra multispina Sund, 1912, Murray & Hjort's Depths of the Ocean, pp. 585, 622-624, 668, 720, pl. 3 fig. 1.
Acanthephyra haeckeli Kemp, 1939, Ann. Mag. nat. Hist., ser. 11 vol. 4, p. 575.

Risso (1816) described a prawn from the Mediterranean under the name *Alpheus Pelagicus*, a name in 1826 changed by him in *Pandalus pelagicus*. In 1831 Roux made the species of Risso the type of a new genus *Ephyra*. Under the name *Ephyra pelagica* the species is best known at present, *Ephyra pelagica*, however, generally is considered a species incerta as from Risso's description and figure the identity of the species could not be made certain. Monod (1931) in a list of the manuscripts of Risso, published two figures made by Risso of *Ephyra pelagica*: one of these figures is identical with the figure published by Risso in his papers, the other, however, up to

1931 was inedited. The latter figure distinctly represents the species named *Acanthephyra haeckeli* (Von Martens) by Kemp (1939) in his revision of the species of *Acanthephyra* belonging to the group of *A. purpurea*. Comparison of the two above mentioned figures and Risso's description of the species makes it clear that the specimen described and figured by Risso indeed belongs to Von Martens's species, but that it has the rostrum damaged. As Risso's name is the oldest name published for this species, it must be used. At the same time Roux's genus *Ephyra* becomes a synonym of *Acanthephyra*. Though *Ephyra* Roux (1831) is much older than *Acanthephyra* A. Milne Edwards (1881), it may not be used for the present genus, because it is preoccupied by the name *Ephyra* Péron & Lesueur (1810) for a genus of Coelenterata. The correct name for the present species thus is *Acanthephyra pelagica* (Risso). The changing of the name *haeckeli* in *pelagica* will not cause confusion, because the name *Acanthephyra haeckeli,* as far as I know, in recent years is only used by Kemp (1939).

PANDALIDAE

Parapandalus narval (Fabricius)

Astacus Narval Fabricius, 1787, Mant. Ins., vol. 1, p. 331.
Cancer (Astacus) Narval Herbst, 1792, Naturgesch. Krabben Krebse, vol. 2, p. 61, pl. 28 fig. 2.
Palaemon narval Bosc, 1801, Hist. nat. Crust., vol. 2, p. 105.
Palemon Pristis Risso, 1816, Hist. nat. Crust. Nice, p. 105.
Pontophilus pristis Risso, 1826, Hist. nat. Europ. mérid., vol. 5, p. 63, pl. 4 fig. 14.
Pandalus Narwal Roux, 1831, Mém. Class. Crust. Salic., p. 30.
Pandalus pristis Roux, 1831, Mém. Class. Crust. Salic., p. 30.
Pandalus (Pontophilus) Narval Brandt, 1851, Middendorff's Reise N.u.O. Sibiriens, vol. 2 pt. 1, p. 122.
Parapandalus pristis Balss, 1914, S. B. Akad. Wiss. Wien, vol. 51 pt. 1, p. 134.

and

Plesionika edwardsii (Brandt)

Pandalus narval H. Milne Edwards, 1837, Cuvier's Règne anim., ed. 4 vol. 18, pl. 54 fig. 2 (non *Astacus Narval* Fabr.).
Pandalus (Pontophilus) Edwardsii Brandt, 1851, Middendorff's Reise N. u. O. Sibiriens, vol. 2 pt. 1, p. 122.
Parapandalus Narwal De Man, 1920, Siboga Exped., mon. 39a3, p. 140.

At present two species, generally considered to belong to the genus *Parapandalus,* are known from the Mediterranean. These species are named by most authors *Parapandalus pristis* and *Parapandalus narval.* The form named *Parapandalus narval* has the upper teeth of the rostrum of unequal size, the proximal teeth namely are much larger and more widely spaced

than the distals, while in the form named *Parapandalus pristis* all teeth have the same size and are placed closely together without intervals, the rostrum thereby gets an evenly serrate shape.

The original description of Fabricius's *Astacus Narval* runs as follows:

"A. [stacus] antennis posticis bifidis, rostro longissimo adscendente compresso utrinque serrato.

Cancer Narval Herbst. Cancr. tab. fig. 134.

Habitat in mari mediterraneo.

Statura et magnitudo A. Crangon. Rostrum valde porrectum utrinque subtilissime serratum. Cauda lamellis quinque intermedia subulata."

The description of the rostrum entirely fits for the species named at present *Parapandalus pristis,* and the reference to Herbst's figure (which was published in 1792) removes all doubt concerning the identity of Fabricius's *Astacus Narval* with Risso's *Palemon Pristis*; the latter species namely also has the rostrum evenly serrate as is shown by Risso's figure. The first author who described and figured the species, which at present is named *Parapandalus narval* by most authors, is H. Milne Edwards (1837) in the "Disciples edition" of Cuvier's Règne animal. Milne Edwards did not separate the two forms and considers his specimen to be identical with those of Fabricius and Risso. De Haan (1849, p. 175) is the first who considers the two forms as two distinct species; the Dutch author gave the name *pristis* to the species with the evenly serrate rostrum, while he used the name *narval* for the species figured by H. Milne Edwards. In this respect De Haan is followed, as far as I know, by all subsequent authors but one. This one is Brandt (1851), who in his paper on the Crustacea collected by Middendorff in Siberia points out that De Haan made a mistake and that the correct name for the first species is *Pandalus narval,* while the second species needed a new name for which he proposed the name *Pandalus edwardsii.* As Brandt is entirely correct, the specific name *narval* must be given to the species with the evenly serrate rostrum, which thus is identical with *Parapandalus pristis,* while the second species, which has the proximal teeth of the rostrum large and rather widely separated from each other, must bear the specific name *edwardsii,* this latter species thus is identical with the form named by many authors of modern literature *Parapandalus narval.*

To make this question still more intricate, it shows that the latter species is incorrectly referred to the genus *Parapandalus.* Examination of material present in the Rijksmuseum van Natuurlijke Historie at Leiden showed that epipods are present at the bases of the first four pereiopods, a feature already pointed at by Calman (1939, p. 201). Now *Parapandalus* is charac-

terized by the absence of these epipods, which always are present in *Plesionika,* in fact the only difference between these two genera lies in the character of the presence or absence of the epipods.

The species named by most authors *Parapandalus pristis* (Risso) thus must be named *Parapandalus narval* (Fabr.) and the species named generally *Parapandalus narval* (H. Milne Edwards) must bear the name *Plesionika edwardsii* (Brandt). A synonymy of both species is given above.

ALPHEIDAE

Alpheus glaber (Olivi)

Cancer glaber Olivi, 1792, Zool. Adriat., p. 51, pl. 3 fig. 4.
Cryptophthalmus ruber Rafinesque Schmaltz, 1814, Préc. découv. somiol., p. 23.
Autonomaea Olivii Risso, 1816, Hist. nat. Crust. Nice, p. 166.
Alpheus ruber H. Milne Edwards, 1837, Hist. nat. Crust., vol. 2, p. 351.
Phleusa cynea Nardo, 1847, Sinon. mod. Spec. Chiereghin, p. 6.

Olivi (1792) gave a very short description of his new species *Cancer glaber,* but his figure unmistakably shows that this species is identical with *Alpheus ruber* of most authors. This fact was already pointed out by Coutière (1899) in his "Les "Alpheidae"" on p. 7. Coutière in this paper also considers *Cancer cyneus* (Chiereghin MSS) Nardo (= *Phleusa cynea* Nardo) to be identical with *Alpheus ruber,* in which respect I entirely agree with the French author, because the identity of the two forms is distinctly shown by Nardo's (1869) figure of *Phleusa cynea. Autonomaea Olivii* Risso is based upon *Cancer glaber* of Olivi and therefore must be considered a synonym of the present species. In Olivi's figure the second pereiopod is drawn without a chela, but with a simple dactylus; this error probably is caused by the fact that the second leg of *Alpheus* is very slender and thereby resembles more the last three pairs of pereiopods than the first pair. The character of the simple claw of the second leg is used by many authors to separate *Autonomaea* from *Alpheus,* Borradaile (1907) even used this character to found the family Autonomaeidae. *Cryptophthalmus ruber* Rafinesque Schmaltz too is identical with the present species as is shown by Rafinesque's description (this description also is inserted in Desmarest's Considérations sur la classe des Crustacés in a footnote on p. 215; I had only this description at my disposal, as Rafinesque's paper is not present in any of the Dutch public libraries).

Olivi's specific name is the oldest for the present species and therefore must be used; the name of the species thereby becomes *Alpheus glaber* (Olivi).

PALAEMONIDAE

Pontonia pinnophylax (Otto)

Alpheus Tyrhenus Risso, 1816, Hist. nat. Crust. Nice, p. 94, pl. 2 fig. 2 (non *Astacus tyrrhenus* Petagna, 1792).
Palaemon pinnophylax Otto, 1821, Consp. Anim. marit. non edit., p. 12.
Gnathophyllum Tyrhenus Desmarest, 1823, Dict. Sci. nat., vol. 28, p. 323.
Callianassa tyrrhena Risso, 1826, Hist. nat. Europ. mérid., vol. 5, p. 54.
Alpheus pinnophylax Otto, 1828, Nova Acta Acad. Leop. Carol., vol. 14, p. 341, pl. 21 figs. 1, 2.
Pontonia tyrhena Latreille, 1829, Cuvier's Règne anim., ed. 2 vol. 4, p. 96.
Pontonia parasitica Roux, 1831, Mém. Class. Crust. Salic., p. 26.
Pontonia custos Guérin Méneville, 1832, Expéd. sci. Morée, Zool., p. 36, pl. 37 fig. 1 (non *Cancer custos* Forsskål, 1775).
Pontonia heterochelis Guérin Méneville, 1832, Expéd. sci. Morée, Zool., p. 37.

The present species, the type of the genus *Pontonia,* has been named by almost all modern carcinologists *Pontonia tyrrhena* (Petagna). The species was for the first time described and figured by Risso (1816), who thought it to be identical with *Astacus tyrrhenus* Petagna and therefore named it *Alpheus Tyrhenus.* Almost all subsequent authors give the specific name *tyrrhena* to the present species, which proves that none of them has ever seen Petagna's original description and figure of *Astacus tyrrhenus.* These namely distinctly show that Petagna's species is no prawn at all, but belongs to the genus *Callianassa* (vid. p. 320). Thus Risso has incorrectly identified his specimens. The name *tyrrhena,* of course, may not be used for the present species. The first new name given to it is *Palaemon pinnophylax* Otto (1821). As Otto's name is valid, it must be used for the present species, which in consequence is named *Pontonia pinnophylax* (Otto, 1821).

The name *Pontonia custos* (Forsskål) also often is used for the present species, but this is incorrect, because Forsskål gave the name *Cancer custos* to a species of the genus *Anchistus* Borr. from the Red Sea.

Pontonia heterochelis was published in 1832 by Guérin Méneville as a manuscript name of Bory de St. Vincent. Guérin Méneville namely received his material of the present species from Bory de St. Vincent, the leader of the Morée Expedition under this name; Guérin, however, showed that the species was not new as Bory supposed. In the narrative of the Morée Expedition Bory de St. Vincent (1836, p. 92) still uses his name *Pontonia heterochelis* for the present species.

CRANGONIDAE

Pontocaris Bate (1888)

non *Egeon* Montfort, 1808, Conch. Syst., vol. 1, p. 166.
Egeon Risso, 1813, Nouv. Bull. sci. Soc. philom. Paris, vol. 3, p. 223.
Aegeon Kinahan, 1862, Proc. Irish Acad., vol. 8, p. 69.
Pontocaris Bate, 1888, Rep. Voy. Challenger, Zool., vol. 24, p. 495.

Of the present genus two species are known from European waters. These two species generally are named *Aegeon cataphractus* (Olivi) and *Aegeon lacazei* (Gourret). The generic name *Egeon* Risso (1813) (type: *Egeon loricatus* Risso, 1813) (at present the orthography *Aegeon* as proposed by Kinahan is more commonly used), is not valid, as it is preoccupied by the name *Egeon* Montfort (1808) (type: *Egeon perforatus* Montfort, 1808) for a genus of Foraminifera. Risso's name therefore has to be dropped. The first valid name for the genus is the name *Pontocaris* Bate (1888) (type: *Pontocaris propensalata* Bate, 1888), which therefore must be used. The two European species in consequence must be named *Pontocaris cataphracta* (Olivi, 1792) and *Pontocaris lacazei* (Gourret, 1887).

CALLIANASSIDAE

Callianassa tyrrhena (Petagna)

Astacus tyrrhenus Petagna, 1792, Institut. entom., p. 418, pl. 5 fig. 3.
Cancer candidus Olivi, 1792, Zool. Adriat., p. 51, pl. 3 fig. 3.
Callianassa laticauda Otto, 1821, Consp. Anim. marit. non edit., p. 11.
Callianassa stebbingi Borradaile, 1903, Ann. Mag. nat. Hist., ser. 7 vol. 12, p. 547.

Petagna's description of *Astacus tyrrhenus* runs as follows:
"Astacus antennis posticis bifidis, thorace laevi inermi, chela sinistra majori, pedibus filiformibus. Nobis.

In nostri maris arena habitat, piscium esca praestantissima.

Simillimus videtur Astaco malabarico, sed chelae inaequales compressae, earumque sinistra semper major, digito incurvo unicam differentiam proponunt. Esto judicium penes scientiae Peritos."

From this description *Astacus tyrrhenus* cannot be identified, but Petagna's very good figure leaves no doubt as to the identity of his species with *Callianassa laticauda* Otto. This figure namely shows all important characters of the species as there are: the shape of the chelae, the broad lamelliform third maxillipedes and the short semicircular telson. As Petagna's work seems to be very rare, I give here a reproduction of plate 5 of this book, which contains almost all Crustacea figured by Petagna (only his *Astacus squilla* is figured on plate 10 fig. 16, this figure shows that Petagna's specimen is no *Palaemon* at all, but belongs to *Sicyonia carinata* (Olivi)).

Cancer candidus of Olivi (1792) doubtless also belongs to the present species. Olivi's figure, though much less accurate than that of Petagna, shows enough characters to make its identification possible.

As both Petagna's and Olivi's descriptions are published in the same

year, we have no certainty, which of the names *tyrrhenus* and ***candidus*** is older. I choose here Petagna's name as his description is accompanied by a much better figure than that of Olivi. The name of the species thus becomes *Callianassa tyrrhena* (Petagna), its synonyms are given above (according to Bouvier, 1940, *Callianassa italica* Parisi, *C. Pestae* De Man and *C. algerica* Lutze also must be considered synonyms of the present species).

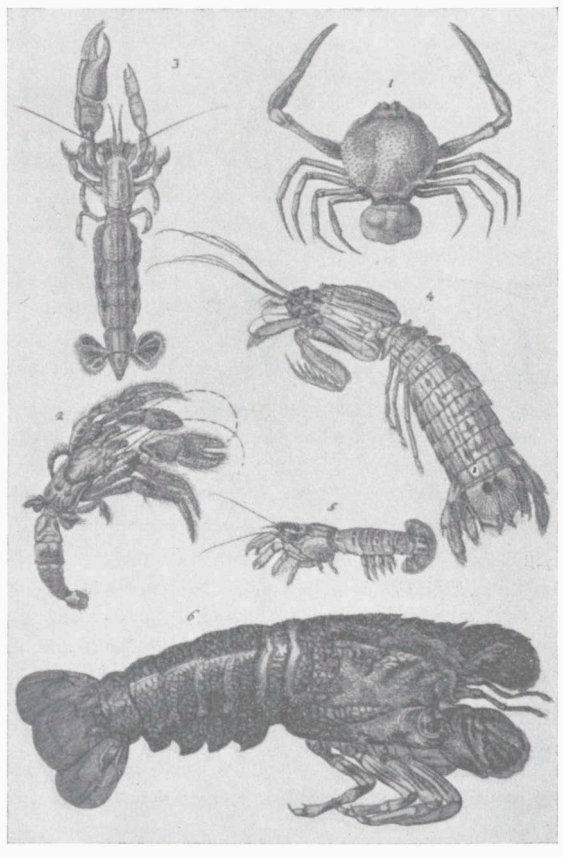

Fig. 1. Reproduction of plate 5 of Petagna's Institutiones Entomologicae.

Upogebia pusilla (Petagna)

Astacus pusillus Petagna, 1792, Institut. entom., p. 418, pl. 5 fig. 5.
Thalassina Littoralis Risso, 1816, Hist. nat. Crust. Nice, p. 76.
Gebia littoralis Desmarest, 1823, Dict. Sci. nat., vol. 28, p. 302.
Gebios littoralis Risso, 1826, Hist. nat. Europ. mérid., vol. 5, p. 51.
Upogebia littoralis Borradaile, 1903, Ann. Mag. nat. Hist., ser. 7 vol. 12, p. 543.

Another species of Petagna, which is overlooked by most authors is his *Astacus pusillus,* which he described as follows:

"Astacus antennis posticis bifidis, thorace inermi rostro brevi nigro supra serrato, chelis aequalibus, ovatis, pedibus brevibus. Nobis.

Habitat in nostri maris arena, sed rarior.

An Ast. emeritus ? an var. Tettigonii ? Dubius adhuc haereo."

Like in the previous species Petagna's figure of his *Astacus pusillus* is very accurate, and shows that the species is identical with the form at present best known under the name *Upogebia littoralis* (Risso). Risso's name, however, is younger than that of Petagna, and therefore must be rejected. The species thus must be named *Upogebia pusilla* (Petagna).

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