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NECORA, A NEW GENUS OF EUROPEAN SWIMMING CRABS (CRUSTACEA DECAPODA, PORTUNIDAE) AND ITS TYPE SPECIES, *CANCER PUBER* L., 1767

by

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Holthuis, L.B.: *Necora*, a new genus of European swimming crabs (Crustacea Decapoda, Portunidae) and its type species, *Cancer puber* L., 1767.

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The new genus *Necora* is split off from the Portunid genus *Liocarcinus* Stimpson, 1871. A single species, *Cancer puber* L., 1767, is assigned to it. As the identity of *Cancer puber* L. is not certain (the original description fits *Cancer corrugatus* Pennant better) and as no type material is known to exist, a neotype specimen is selected so as to enable the specific name *puber* to be used for the species to which it has been applied for more than 150 years.

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INTRODUCTION

The small European swimming crabs, which before 1950 were generally known to European authors as *Portunus*, have a rather complicated taxonomic and nomenclatural history. The very early authors (e.g., Linnaeus, 1767; Pennant, 1777; Herbst, 1782-1804) placed them in the genus *Cancer*, which then included all crabs. Weber (1795) and Fabricius (1798) used the generic name *Portunus* for all swimming crabs, including those discussed here. In the 19th century this genus was gradually split up, so Lamarck (1801)

placed *Portunus vigil* Fabricius, 1798 in a separate genus *Podophthalmus*, but left the other species in *Portunus*. Leach (1814) divided *Portunus* into four genera: *Lupa* (with *Cancer pelagicus* L., 1758), *Carcinus* (with *Cancer maenas* L., 1758), *Portunus* (with *Cancer puber* L., 1767, *Cancer corrugatus* Pennant, 1777, *P. emarginatus* Leach, 1814, *P. arcuatus* Leach, 1814, *Cancer depurator* Linnaeus, 1758, *P. lividus* Leach, 1814 (= *P. holsatus* Fabricius, 1798), and *P. marmoreus* Leach, 1814), and *Portumnus* (with *P. variegatus* Leach, 1814 (= *Cancer latipes* Pennant, 1777)). During the 19th century these four names have been used in this sense by many authors. The genus *Portunus* (sensu Leach) contained the greater part of the European swimming crabs. After 1814 several species were added to the genus. One of these was *Portunus tuberculatus* Roux, 1830. This species was described again as new by Prestandrea (1833) under the name *Portunus macropipus*. At the same time Prestandrea (1833) remarked that it probably should be considered as belonging to a separate genus, to be placed between Leach's *Lupa* and *Portunus*; for such a new genus he proposed the generic name *Macropipus*. An attempt for a more rigorous splitting of *Portunus* (sensu Leach) was undertaken by Stimpson (1871: 145, 146, footnote). Stimpson remarked that "By *Portunus* the typical forms are meant, *P. puber, corrugatus,* etc. *P. holsatus (marmoreus)* should be separated generically; it is quite distinct in its external max- (p. 146:) illipeds, the meros-joint of which is elongated, projecting considerably beyond the buccal margin; and the basal joint of the external antenna is slightly movable; the carapax is naked; there is no elevated line on the surface of the terminal and penult joints of the posterior pair of ambulatory feet, and the first joint of the abdomen is almost entirely concealed beneath the carapax. For *P. holsatus* and its allies the name *Liocarcinus* is proposed". Neither Prestandrea nor Stimpson were followed, and their genera were treated as synonyms of *Portunus* (sensu Leach); until 1980 no further attempts have been made for the splitting of the genus.

Rathbun (1897: 155) showed that the generic name *Portunus* Weber, 1795 (usually assigned to Fabricius, 1798) should not be used in Leach's (1814) sense, but that it is the valid name for the genus that Leach named *Lupa*. Rathbun, unaware of the existence of the name *Macropipus*, suggested that the name *Liocarcinus* Stimpson, 1871 be used for *Portunus* (sensu Leach). Most European authors ignored Rathbun's conclusions and continued to use *Portunus* in Leach's sense. This chaotic situation came to an end when the case was submitted to the International Commission on Zoological Nomenclature. In their Opinion 394, the International Commission (1956) decided that the name *Portunus* is the valid name for the genus of which *Cancer pelagicus* Linnaeus, 1758 is the type (i.e., the genus *Lupa* Leach, 1814)

and that the oldest name for *Portunus* sensu Leach, 1814 is *Macropipus* Prestandrea, 1833.

A new development occurred when Manning & Holthuis (1981: 85) showed that *Macropipus tuberculatus* (Roux, 1830), *M. australis* Guinot, 1961, and *M. rugosus* (Doflein, 1904) formed a genus distinct from that containing the other species that at that time were assigned to *Macropipus*. As *Portunus tuberculatus* Roux, 1830 is the type species of *Macropipus*, the name *Macropipus* had to be retained for the genus containing the three just cited species. *Liocarcinus* Stimpson, 1870, which has as type *Portunus holsatus* Fabricius, 1798, then becomes available for the rest of the species. The species of *Liocarcinus* recognized at that time were: *L. arcuatus* (Leach, 1814), *L. bolivari* (Zariquiey Alvarez, 1948), *L. corrugatus* (Pennant, 1777), *L. depurator* (Linnaeus, 1758), *L. holsatus* (Fabricius, 1798), *L. maculatus* (Risso, 1827), *L. marmoreus* (Leach, 1814), *L. puber* (Linnaeus, 1767), *L. pusillus* (Leach, 1815), *L. vernalis* (Risso, 1816), and *L. zariquieyi* (Gordon, 1968). Among these species several groups can be recognized: *L. holsatus, L. marmoreus, L. vernalis* and perhaps *L. bolivari* and *L. depurator* form one such group; another is formed by *L. maculatus, L. pusillus* and *L. zariquieyi; L. arcuatus* and *L. corrugatus* have no clear ties to either of these groups. *L. puber* is far more different from the other *Liocarcinus* species than even the species of *Macropipus* are. Therefore it cannot be retained in *Liocarcinus* and should form a genus in its own right. This genus is described here, and the status of its only species is discussed.

Necora new genus

Type species by present selection and monotypy: *Cancer puber* Linnaeus, 1767, as defined by the neotype selection made below.

Etymology. — The name *Necora* is chosen as it is short, euphonious and furthermore is the vernacular name given to the type species in Galicia, Spain. Gender of generic name: feminine.

Description. — The carapace is flat, with the regions faintly indicated; only the cervical groove is distinct. Some scattered tubercles are present on the dorsal surface, especially in the anterior and anterolateral regions. The carapace is entirely covered by a short dense pubescence; this velvety pubescence was the reason that Pennant (1777) gave the name *velutinus* to the type species. The front is not anteriorly produced but is straight or even slightly concave in the middle; the frontal margin shows a median incision and has four teeth, two lateral and two submedian. The lateral teeth of the front are rather large

and triangular, they are blunt with the outer margin crenulate. The submedian teeth are much narrower than the lateral and are of about the same width over their entire length, the distal margin is crenulate. Between these larger teeth each half of the front bears two to four smaller, sharply pointed teeth or denticles. The inner orbital angle is blunt with a dorsal carina; its inner margin forms a blunt but distinct angle with the outer margin of the outer frontal tooth. The orbital margin is finely but distinctly crenulate and shows two wide open fissures. The outer orbital angle forms the first anterolateral tooth. The anterolateral margin of the carapace is distinctly shorter than the posterolateral and carries five distinct, sharp teeth that are curved forward; the posterior margin of these teeth is crenulate. In old specimens the first anterolateral tooth may be slightly shorter and blunter than the rest, but usually the teeth are of about equal size. From the last anterolateral tooth a carina extends posteriorly and curves slightly up onto the dorsal surface of the carapace; it stops about halfway the posterior margin of the carapace. The posterior margin is straight or slightly convex with broadly rounded angles.

The pterygostomian area of the carapace bears a dense pubescence and shows tubercles in the distal part. The lower orbital margin shows a deep incision in the outer half; between this incision and the exorbital tooth the margin forms a rounded lobe. The entire margin is crenulate. The ventral inner orbital angle is triangular.

The antennulae are folded transversely. The antennal peduncle fills the gap between the ventral inner orbital angle and the front.

The epistome is short and very wide, with the posterior margin only slightly convex.

The merus of the third maxilliped is wider than long; the inner margin is short, and the palp is implanted on the oblique antero-internal margin, which is more than twice as long as the inner margin. The anterior margin of the merus is slightly oblique and ends in the external anterolateral lobe, which is broadly rounded and produced beyond the outer margin of the merus; this outer margin is slightly longer than the anterior margin. The lower surface of the merus has a shallow depressed area in the inner half. The ischium is longer than the merus, slightly produced antero-internally and with a deep longitudinal groove in the inner half of the lower surface.

The first pereiopods are asymmetrical. The large chela, sometimes the right, sometimes the left, has the teeth of the cutting edges of the fingers distinct, the basic portunid pattern of one large tooth flanked by two smaller is not very distinct, especially not in large specimens. The dactylus bears the usual large, molar-like high tooth in the basal part of the cutting edge; it is opposed on the fixed finger by two low, broad teeth, which are placed side by side. The

dactylus shows seven longitudinal ridges, viz., one dorsal and three on either lateral surface. These ridges are very distinct and characteristically granulated. The grooves between the ridges are filled with a short pubescence. The tips of the fingers as well as the entire cutting edges are black. The palm and the fixed finger also show distinct granulated ridges. The dorsal ridge of the palm ends anteriorly in a sharp elevated tooth. The ventral ridge is broad and continues onto the fixed finger, which, like the dactylus, has in addition two carinae on each lateral surface. The lower carina of the outer surface of the fixed finger continues as a strong carina on the palm; it runs parallel to the ventral carina. The outer surface of the palm has two more longitudinal carinae, one in the upper half ending near the base of the dactylus, and one over the middle, which ends near the gap between the two fingers and slightly overlaps the posterior end of the upper carina of the outer surface of the fixed finger. The inner surface of the palm has a similar median carina. All carinae are densely granulated; the granules of the widest part of the large carinae are arranged in more or less distinct transverse rows. Between the carinae the surface of the chela is pubescent. The dorsal part of the anterior margin of the palm is crenulate. The smaller chela differs from the larger in that it is more slender and lacks the molar-like teeth on the cutting edges of the fingers; the carinae and their arrangement are very similar to those of the large chela.

The carpus of the cheliped shows small, elevated, granulated areas on the dorsal surface; the anterior margin is denticulated with a very strong and sharp antero-internal tooth; a small but sharp tooth is present in the distal part of the outer margin. The lower surface of the merus is granular, the lateral surfaces show transverse rugae, those of the outer surface often ending in granules.

The dactylus of the walking legs (P2-P4) have three distinct longitudinal sharp ridges on each lateral surface, dorsally and ventrally there is a groove; the ridges are smooth and not granular. The grooves between the ridges are filled with a short pubescence, except the ventral groove and the upper inner groove which show a fringe of longer hairs. The propodus also has a deep dorsal groove flanked by two longitudinal ridges, furthermore there is a less distinct median ridge on either lateral surface. The lateral surfaces show a short pubescence; the lower margin bears a ridge and a fringe of long hairs. In P3 and P4 the inner surface of the propodus shows a second carina just above the distal part of the ventral margin. The carpus shows two dorsal ridges and a lower outer ridge. The merus is roughly granular dorsally with the granules arranged to transverse rugae, below which there is a longitudinal ridge on both outer and inner surface, the outer ridge being the most distinct. There are two marginal ridges on the lower surface of the merus; the space

between the ridges is filled with a short pubescence. The anterior margin of the merus is minutely crenulate, the crenulation sometimes being indistinct. The last pereiopod has the dactylus paddle-shaped and sharply pointed; on either surface there are a dorsal, a ventral and a median ridge which all are very distinct, also because of the velvety pubescence between these ridges. The propodus has two lateral ridges on either surface in addition to the dorsal and ventral ridges. The carpus has an upper, a lower and a median ridge on the outer surface; the inner surface is entirely covered by a velvety pubescence, the outer has such a pubescence between the ridges. The merus has an upper, two lower and two outer ridges; there are, like in the carpus, no carinae on the inner surface. The upper posterior margin of the merus is smooth and ends distally in a rectangularly rounded angle. None of the carinae of pereiopods 2 to 5 is granular, all are smooth and surrounded by pubescence.

The male abdomen is triangular with straight sides, regularly tapering towards the apex. The male pleopods are simple, with the distal part curved outside.

Good illustrations of the various characters are provided by Palmer (1927: 883, fig. 3).

Necora can immediately be distinguished from all members of the genus *Liocarcinus* by the front, which is incised in the middle and does not bear a median tooth. Also the denticulated front is not found in any species of *Liocarcinus* or *Macropipus*. By the hirsute carapace, the granulated ridges on the chelae, the black colour of the tips and cutting edges of the fingers, the ridges over the dactyli of the last pereiopods and the triangular shape of the male abdomen it can be distinguished immediately from *Liocarcinus* s.s. (i.e., *L. holsatus, L. marmoreus, L. vernalis, L. bolivari,* and *L. depurator*) as well as of the group around *L. pusillus*. The new genus comes closest to *Liocarcinus corrugatus*, which has likewise a pubescent carapace, a minutely crenulated frontal margin, black fingertips, and the dactyli of the last pair of pereiopods with a median carina. But the trilobed front of *L. corrugatus*, its convex and strigillate carapace as well as the shape of the ridges on the chelipeds and the shape of the male abdomen immediately distinguish *L. corrugatus* from *Necora*.

The type and only species known at present in *Necora* is *Cancer puber* Linnaeus, 1767, as characterized by the neotype selection made below.

Fig. 1. *Necora puber* (Linnaeus), ♀ neotype of *Cancer puber* Linnaeus, 1767, from Martiques, Golfe de Fos, W. of Marseilles, S. France, 21 December 1979, leg. H. Zibrowius. Frontal view (upper figure), and dorsal view (lower figure). About natural size.

Necora puber (Linnaeus, 1767)

? *Cancer puber* Linnaeus, 1767: 1046.
Cancer Velutinus Pennant, 1777: 5, pl. 4 fig. 8.
Not *Portunus puber* – Fabricius, 1798: 365.
Not *Cancer puber* – Olivier, 1791: 171.
Portunus velutinus – Bosc, 1801-1802: 217.
Portunus puber – Latreille, 1802-1803: 10.

Etymology. — The word puber is considered here to be a noun, so that its ending does not change by its transfer from a combination with a masculine generic name to that with a feminine generic name.

Identity of *Cancer puber* L. — Linnaeus' (1767: 1046) original description of *Cancer puber* is as follows:

"puber. 40. C[ancer]. brachyurus, thorace rugoso villoso utrinque quinquedentato, palmis posticis ovatis.

Habitat in M. Adriatico. *D. Wilke*".

This description is very vague and unsatisfactory. The statement "palmis posticis ovatis" points to a swimming crab. The presence of five anterolateral teeth makes its identity with a species of Polybiinae most likely. The carapace ("thorax") is described as hairy ("villoso") and "rugoso" which in Henderson & Henderson (1963: 515) is translated as "with many wrinkles or ridges". If Linnaeus meant to describe the presence of ridges on the carapace, the material before him could hardly have been anything but *Liocarcinus corrugatus*. However, if "rugoso" is taken in a much wider sense, as "rough" or "uneven", the species could be the one which at present usually is indicated as *L. puber*, namely the one that Pennant (1777) unmistakably described and figured under the name *Cancer velutinus*. Most other European Polybiinae are not both hairy and rugose.

Another argument that *Cancer puber* L. might be based on material of *L. corrugatus* rather than on *Cancer velutinus* is the fact that the latter seems to be absent from the Adriatic, while *L. corrugatus* is quite common there. G. von Martens (1824: 487, footnote) already remarked: "Es ist ein blosses Versehen, wenn Herbst I, pag. 234 ausser dem Depurator auch noch den Cancer puber L. im adriatischen Meer leben lässt". Heller (1863: 83) made the following remark about *"Portunus puber"*: "Im Mittelmeer seltener (A. Edwards). Im adriatischen Meer noch nicht gefunden". Pesta (1918) in his well known "Die Decapodenfauna der Adria" does not mention *"Portunus puber"* at all, neither under the species known from the Adriatic, nor in his chapter "Species incertae. Findlinge" (p. 457-459). I do not know of any later record of *Portunus* (or *Macropipus*, or *Liocarcinus*) *puber*, in the sense of *Cancer velutinus*, from the Adriatic.

An effort to find out whether Linnaeus' type material of *Cancer puber* might have been mislabelled as to the locality met with no success. Of the collector of this material "D[ominus]. Wilke", I have not been able to find any information. He is not listed in the introduction to Volume I of Linnaeus' (1767) book, where on the fourth page Linnaeus enumerated his disciples who collected material. There are two Wilcke's (of both the name is spelled with ck) connected with Linnaeus, namely S.G. and H.C.D. Wilcke. Samuel Gustav Wilcke wrote "Caroli de Linné Nomina Insectorum in usum auditorum", published in Greifswald, Germany in 1763 (see Soulsby, 1933: 11, no. 68), but I could find no more information about him. H. Christ. Daniel Wilcke was a pupil of Linnaeus and defended a thesis "Dissertatio academica de Politia Naturae" on 29 March 1760 under the presidium of Linnaeus (see Soulsby, 1933: 136, no. 2104); this thesis was also published in Linnaeus' Amoenitates Academicae, vol. 6, pp. 17-39 (Soulsby, 1933: 101, no. 1307, sub 102). According to the index to Soulsby's work (Tate Regan, 1936: 57) H.C.D. Wilcke is the same as "Herr Lector Wilcke", who made annotations to Elisabet Christina Linnaea's paper "Om Indianska Krassens blickande" (see Soulsby, 1933: 47, no. 563, and p. 242, no. 3802). Although it seems possible that this H.C.D. Wilcke is the same as D. Wilke who collected the type material of *Cancer puber*, proof is entirely lacking. The only other species that I find mentioned in the 12th edition of Linnaeus' Systema Naturae as collected by Wilke is *Cancer hastatus* L., 1767, described just before *C. puber* and also reported by Linnaeus from the Adriatic. *Portunus hastatus* (L., 1767) indeed occurs there. There are no indications therefore that the type locality of *C. puber* is not the Adriatic Sea.

The first record of *Cancer puber* after the original description is by Fabricius (1775: 408), who described the species as follows:

> "puber. 44. C[ancer]. thorace hirto, cordato, utrinque quinquedentato, manibus unidentatis, apice nigris.
>
> [Then follows Linnaeus' diagnosis verbatim].
>
> Habitat in mari mediterraneo.
>
> Statura C. Grapsus, at paulo major. Frons dentibus tribus obtusis, crenatis. Testa rugosa, fusca, pilis rufis hirta. Carpi manusque unidentati. Pedes postici compressi, ovati".

There can be no doubt from this description that Fabricius' animal was *Liocarcinus corrugatus*. The front with three blunt crenulated teeth as described by Fabricius shows that his material certainly is not *P. puber* auct. (= *Cancer velutinus*), but such a front is found in *L. corrugatus*. The description of the rugose carapace and the black finger tips are typical of *L. corrugatus* and are not found in other species of the genus *Liocarcinus* (that is if "rugosa" is translated as being with transverse ridges).

It seems likely that Linnaeus' *Cancer puber* is the same as *L. corrugatus*, and it is certain that Fabricius interpreted Linnaeus' species as such.

Pennant (1777: 5) was the first to deal with both species. Under the name *Cancer corrugatus* he described the species known at present as *Liocarcinus corrugatus* (Pennant, 1777); the other species, which is dealt with in the present paper as *Necora puber* (L.), was described by Pennant as new under the name *Cancer velutinus*. Pennant's descriptions and figures leave no doubt about the identities of his two species; he did not mention *Cancer puber*. Herbst (1783: 151) followed Pennant and recognized *Cancer corrugatus* and *Cancer velutinus*, treating *Cancer puber* as a somewhat doubtful species among the spider crabs; he expressed doubt as to whether Fabricius' *Cancer puber* was the same as that of Linnaeus. The first author to definitely place one of Pennant's species in the synonymy of *Cancer puber* L. was Olivier (1791: 171), who cited all published references to *Cancer corrugatus* and those to *Cancer puber* in the synonymy of the latter species. *Cancer velutinus* was considered by Olivier to be a good distinct species. Fabricius (1798: 365), when placing *Cancer puber* L. in the genus *Portunus*, cited his own (1775) definition of that species; he evidently was not acquainted with Pennant's species as these are not mentioned by him. Bosc (1801-1802: 216) under *Portunus puber* cited a French translation of Fabricius' (1775) diagnosis and gave an illustration (pl. 5 fig. 2), which clearly shows his specimen to be *L. corrugatus*. Thus until 1802 all recognizable references to *Cancer puber* L. identified that species with *L. corrugatus*.

The first author to identify Linnaeus' species with *Cancer velutinus* Pennant was Latreille (1802-1803: 10), who under *Portunus puber* gave the following definition: "Têt un peu duveté, ayant cinq dents de chaque côté; front très-finement dentelé; mains sillonnées, unidentées en dessus; carpes bidentés". Het cited *Cancer velutinus* Pennant as a synonym and considered *C. corrugatus* a distinct species, of which he evidently had seen no material as he ignored it in the rest of his account. From Latreille's diagnosis (front très-finement dentelé) and his references there can be no doubt of the identity of his *Portunus puber* with *Cancer velutinus*. For some reason Latreille's probably incorrect conclusion and not Olivier's probably correct one was accepted by practically all later authorities, like Leach (1816: pl. 6), A.G. Desmarest (1825: 93), H. Milne Edwards (1834: 441), Bell (1844: 90), Heller (1863: 82), to mention some of the early authors. Since then the correctness of synonymizing *Cancer puber* and *C. velutinus* has never been questioned and the discrepancies in the original description clearly escaped the attention of authors entirely. Even the authors who treated the carcinological fauna of the Adriatic completely ignored the fact that the Adriatic Sea is the type locality of *Cancer puber*.

Although lacking in the Adriatic, *Cancer velutinus* (or *Portunus puber* sensu Latreille) does occur in the Mediterranean, be it that it is found only in the extreme western part and that it may have extended its range recently. Most of the older records of *"Portunus puber"* from the Mediterranean are either vague and without detailed information (like A. Milne Edwards, 1861: 398, who reported if from "Nos côtes océaniques et la mer Méditerranée"), or the identification cannot fully be trusted. However, the species was reported from Malaga, S. Spain by De Miranda (1921: 187; 1933: 46) and by Garcia (1984: 107); these records can be fully trusted as both authors were well acquainted with the species. Zariquiey Alvarez (1968: 371) mentioned the species from Barcelona and Cadaqués (N.E. Spain). The Barcelona record may rest on specimens found on the Barcelona fishmarket and brought there from Galicia (see Zariquiey Alvarez, 1968: 372). The material from Cadaqués most likely has been collected there by Dr. Zariquiey himself as that area was his main hunting ground. The find of the species at Cadaqués must have happened after 1961 as it is not mentioned in Zariquiey's (1956, 1959, 1962 and 1963) lists of the Decapoda that he had observed in the Cadaqués region before 1962. Dr. Zariquiey died January 1965.

The Rijksmuseum van Natuurlijke Historie possesses the following material from the Western Mediterranean:

Llansá, prov. Gerona, N.E. Spain; washed ashore on the beach; 7 October 1974; leg. R.B. Manning, J.A.G. Delfos, J. Immink, I.J. Smit and L.B. Holthuis. — fragments of a specimen, cl. 29 mm, cb. 35 mm (RMNH Crust. D. 36592).

Ponteau Martiques, Golfe de Fos, about 50 km W. of Marseilles, S. France; near a pier of an electrical plant of the EdF (= Electricité de France); depth 3-5 m; 21 December 1979; leg. H. Zibrowius. — 2 ovigerous females, cl. 65 and 71 mm, cb. 80 and 92 mm (RMNH Crust. D. 32741), 1 non-ovigerous female neotype, cl. 56 mm, cb. 73 mm (RMNH Crust. D. 36591).

Concerning the lot from near Marseilles, Dr. Zibrowius wrote to me (letter of 8 January 1980): *"Macropipus puber* is now a common species in the Marseilles area which it has apparently not been some years ago". The species, which is quite common on the Atlantic coasts of Europe and the extreme N.W. of Africa (S.W. Norway to Morocco), may have entered the Mediterranean through the Strait of Gibraltar some time before 1921 and very recently expanded its range there to the North and East. In the N.E. of Spain (Cadaqués and Llansá), notwithstanding the extremely thorough and continuous collecting and study of the Decapoda there by father and son Zariquiey since 1935, the species was only found there between 1961 and 1965 (Cadaqués) and in 1974 (Llansá). For the Marseilles area we have the observation by Dr. Zibrowius that the species only has become common there recently.

All the above shows that there is severe doubt, both on morphological and

geographical grounds, that *Cancer puber* L., 1767 is an older synonym of *Cancer velutinus* Pennant, 1777. No type specimen of *Cancer puber* does exist. As shown by Holthuis (1962: 53), the Decapod Crustacea kept with the Linnean collections in Burlington House, London, are not part of the Linnean material. The Linnean collections at Uppsala do not contain *Cancer puber* either (Holm, 1957), and the type material must be considered lost. The only way to solve the present problem therefore seems to be the selection of a neotype.

As the specific name *puber* has been used for *Cancer velutinus* almost consistently since the beginning of the 19th century; and as we cannot prove with certainty (nor disprove it) that *Cancer puber* and *Cancer corrugatus* are synonyms, it seems best, in the interest of stability, to chose as neotype for *Cancer puber* a specimen of *Cancer velutinus*.

The above listed non-ovigerous female specimen of the species from Ponteau Martiques near Marseilles is now selected the neotype for *Cancer puber* L., 1767. It is chosen for several reasons: (1) its locality is the closest known to the original type locality, (2) it is a perfect specimen (the two larger specimens lack one or more legs) and agrees fully with the description of *Portunus puber* as given by Leach (1816: pl. 6 and accompanying text) and Palmer (1927: 883, fig. 3), (3) it fulfils all the conditions set by Art. 75(d) of the International Code of Zoological Nomenclature. It is preserved in the collection of the Rijksmuseum van Natuurlijke Historie, Leiden under register number Crust. D. 36591.

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