

Von Siebold and Natural History of Japan, Crustacea

T. Yamaguchi, editor

CRUSTACEA VOLUME
SPRINGER-VERLAG
RETURN TO W-119

**The non-Japanese new Species established
by W. de Haan in the Crustacea Volume
of Fauna Japonica (1833-1850)**

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The non-Japanese new Species established by W. de Haan in the Crustacea Volume of Fauna Japonica (1833-1850)

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The Crustacea volume of *Fauna Japonica* is not just a report on the extensive crustacean collections brought together in Japan by Ph. F. von Siebold and H. Bürger. In view of the many new Japanese species described and figured in it, such an enumeration in itself would have formed a major contribution to carcinology. But De Haan wanted more, he intended to give in this volume a revised classification of Crustacea, not only based on the external morphology but also on the configuration of the mouth parts. Long before he had seen any Japanese crustaceans and before he had ever published on the group, De Haan in 1826, in a report of the journey that he made in that year to visit various German musea, wrote as follows (free translation from the Dutch): "The director of the Berlin Museum, Mr. Lichtenstein (= Martin Hinrich Carl Lichtenstein, 1780-1857), has provided me with the opportunity to lay the foundation for a "Species Crustaceorum," an undertaking which is only possible in Berlin, because of the extent of the collection there, which is especially important by the presence of the original specimens described by Herbst. Apart from the study of this collection I had also the privilege to use the manuscripts of Prince Maurits (= Johan Maurits van Nassau (1604-1679), who was governor of Dutch Brazil (1637-1644) and brought home numerous animal paintings, part of which were used for Marcgraaf's (1648) treatise on the natural history of Brazil), Mentzelius and Daldorff (Ingobert Karl Daldorff collected in India from 1790 to 1793; his Crustacean material was studied by J. C. Fabricius and J. F. W. Herbst)." This early interest in Crustacea explains why De Haan, when the extensive and beautifully preserved collections of Japanese Crustacea brought together by von Siebold and Bürger arrived in Leiden, could not resist the temptation to start his study of the Japanese Invertebrates with the Crustacea, putting the study of the Insects and the non-Arthropoda off until later, a "later" which unfortunately would never materialize for him.

In his volume of *Fauna Japonica*, De Haan, when starting the text of a family, first gave an enumeration of all the genera and subgenera of that family known to him. In the earlier fascicles or "Decades" of the work (these fascicles were called "Decas" because each contained exactly 10 plates and a variable amount of text), De Haan also

listed in each subgenus the species known to him, including undescribed ones. Such new species had their name followed by either (1) the indication "Faun. Jap." indicating they were Japanese and would be described in the text that followed, or (2) the indication "Nob." or "nov. spec." in the case of new species originating from outside Japan. Such new species sometimes are mentioned only in the enumeration without more data and thus the name remained a nomen nudum and not available (like in the case of *Cancer (Menippe) parvulus* n. sp." on p. 21). Sometimes the name is provided with an indication, either in the enumeration itself (e.g., a reference to a previously published figure) or in the descriptive text of the volume (e.g., when its characters are compared to those of a Japanese species described in the text). In a number of cases the mouth parts of such species are figured on the plates, which likewise makes the name available. In a few instances the plates show the mouth parts of species which are not further mentioned in the text; in the case of such new species, the figure makes the accompanying name available. There are quite a few instances in this volume of Fauna Japonica where new non-Japanese species are established available, but are often so hidden that they have overlooked by subsequent authors. It is the purpose of the present paper to bring those names to light and to discuss their taxonomic and nomenclatural status.

In this discussion the account of each species is headed by the currently accepted valid name for it. In the synonymy that follows, references are given (1) to the pages and plates in Fauna Japonica where the species is mentioned or shown, (2) to Herklots' (1861) catalogue of the Crustacea of the Leiden Museum, in which catalogue several of these new names are still being used, sometimes with more information than is found in Fauna Japonica, and (3) to other places in the literature where such names are discussed. After these references follows an enumeration of the extant type material of the species, and a verbatim citation of the inscriptions on the original labels, or other old labels, if relevant. In most instances, De Haan when studying the new species took out the mouth parts and had those glued to a narrow strip of stiff cardboard. On the cardboard below the mouth parts the name of the species is written in a contemporary hand (but not that of De Haan, perhaps of his technical assistant Cornelis Overdijk). The presence of those mouth parts carrying strips of cardboard, and that of specimens from which the mouth parts are dissected out, is a sure sign that the lot was studied by De Haan. The labels with the material are of three kinds: (1) The "Temminckian" labels, these are very old-fashioned pieces of white paper about 1.8 by 4.8 cm in size, bordered by an orange-brown margin of a double line, the outer line being broad, consisting of very closely placed parallel lines of orange-brown, and a narrow inner line of the same colour, separated from the outer line by a short interval. In the lower right hand corner is printed (also in orange-brown) "Cabinet Temminck." Coenraad Jacob Temminck (1778-1858) was the first director (from 1820 to 1858) of the Museum. He owned a splendid collection of vertebrates which he donated to the country for a National Museum on the condition that he would be its first director. Loth to waste good material, his old labels were used first before new ones were printed. To expel any doubts of propriety, the labels were used upside down so that the inscription "Cabinet Temminck" appeared upside

down in the upper left hand corner. (2) Later exactly the same labels were printed but without the reference to Temminck's cabinet, they are indicated in the following text as "old labels." (3) Sometimes the name of the species and its data are written on a piece of plain white paper, which judging by the paper and the handwriting must be quite old; such labels are indicated as "plain labels."

The study of these obscure names leads to interesting results. The greater part of them proved to be available nomenclaturally, as they are accompanied by a figure, a short description or an indication. Some have been adopted in modern carcinology, some are either junior homonyms or junior synonyms and do no harm, of very few we have too little information for a positive identification and those have to be considered nomina dubia. In a single case, *Inachoides lambriformis*, a currently used name has to be replaced by a name introduced by De Haan, which so far has been overlooked.

The sources for De Haan's material of non-Japanese Decapoda are not many, because, when De Haan started his work on the Crustacea around 1830, the Museum existed a mere 10 years. All of De Haan's non-Japanese material, so far as known, was collected between 1815 and 1836. Some information concerning its sources is provided here:

1. Casper Georg Carl Reinwardt (1773-1854) was professor of Natural History in Amsterdam, when in 1815, after the fall of Napoleon and the liberation of the Netherlands, he was sent out by the Dutch government to the East Indies as Director of Agriculture. Reinwardt stayed in the Indies from 1815 to 1822, when he was appointed Professor of Natural History in Leiden. During his stay in the tropics Reinwardt made extensive zoological collections, mostly in Java, but also during a voyage (February 1821-January 1822) to the eastern part of the Malay Archipelago (Moluccas, Celebes). Part of the material that he sent to the Netherlands was shipwrecked, but that from his 1821-1822 voyage arrived safely, and still forms part of the present collection.

2. Natural History Commission. Almost simultaneous with the foundation of the Rijksmuseum van Natuurlijke Historie, in 1820, a "Natuurkundige Commissie voor Nederlandsch Indië" (Natural History Commission for the Netherlands Indies) was installed for the purpose of studying the natural history of the Dutch East Indies and to make zoological and botanical collections there. The Commission was planned to consist of two scientists, one artist and one technician. Between 1820 and 1836 the following zoologists of the Commission collected material dealt with by De Haan: Heinrich Kuhl (1797-1821) and Johan Coenraad van Hasselt (1797-1823) were sent out as the first scientists to the Commission and arrived in Java in December 1820; Kuhl was a young German zoologist who studied in Groningen, the Netherlands, and Van Hasselt was a Dutch zoologist. The two always worked together and their labels always mention Kuhl & Van Hasselt, or K. V. H. Kuhl died in West Java less than 9 months after his arrival, only 24 years old, Van Hasselt died two years later, aged 26. Notwithstanding their short stay in Java, they amassed large well preserved collections, which reached the Netherlands safely. They were succeeded in 1826 by the German zoologists Heinrich Boie (1794-1827) and Heinrich Christian Macklot (1799-1832), who before being sent out on the Commission had been employed by the Leiden Museum. Boie died in West Java slightly

more than one year after arrival; Macklot was killed in 1832 during a Chinese uprising in West Java. When they arrived in Java they had with them as a technician a young German, Salomon Müller (1804-1864), who developed himself as a talented zoologist and was the only zoologist of the Commission to return to the Netherlands (in 1837), where he continued and published his studies on the Vertebrata of the East Indies. The members of the Commission spent most of their time in West Java. In the period reported upon here (1820-1836) only two collecting trips outside the island were made: Macklot and Müller took part in a journey (from March 1828 to October 1829) to the Moluccas, New Guinea and Timor. From June 1833 to January 1836 Müller (accompanied by Heinrich Bürger, who was not an official member of the Commission) visited the east coast of Sumatra where excellent collections were made, mostly in the area of Padang.

3. H. B. van Horstok (ca. 1794-1838) was a Dutch physician who settled in Capetown, South Africa in 1826 and made large zoological collections for the Leiden Museum until about 1834, when he left South Africa to return to the Netherlands.

4. Jean Louis Florent Polydore Roux (born Marseilles, 19 July 1792, died either in Bombay, 12 April 1833 or in Egypt, 6 August 1833, according to different sources; he signed himself usually Polydore Roux) was a marine "Maler und Conservator des Museums der Naturgeschichte zu Marseille" (Gistel, 1846: 61). He is the author of the beautifully illustrated (by himself) "Crustacés de la Méditerranée et de son littoral" (1828-1830). Before going on a journey to Egypt (and India?) (1831-1833), "Hr. P. Roux, bot 1831 schon eine, in 230 vergoldeten, 18 Zoll breiten und 13 Zoll hohen Glasschränken, aufgestellt, sehr reich ausgestattete Sammlung zum Verkauf, die alle Insekten im Linné'schen Sinn (d.h. Crustaceen, Arachniden und eigentliche Insekten) in sich begreift, und aus etwa 15,000 Arten und 32,000 Exemplaren, und zwar zum dritten Theil exotischen besteht" (Gistel, 1846: 264). Roux's collection was evidently bought (entirely or partly) by the firm Marguier in Paris, from whom the Leiden Museum acquired several of Roux's Crustacea. The type material of *Cymopolia caronii* P. Roux dealt with below, was obtained in 1837, and in the same year Roux's holotype of *Latreillia elegans* was bought (teste De Haan, 1839: 108: "*Latreillia elegans*, Roux... cuius specimen femineum ab laudato auctore descriptum, ex ipsius collectione in Museo adest").

5. Jean Victor Audouin (1797-1841) was in charge of the Crustacean collections of the Muséum National d'Histoire Naturelle in Paris and a correspondent of W. de Haan. At an exchange made by the two Musea in 1838 Audouin sent to the Leiden Museum 38 species of Brachyura in 46 specimens. A list of this shipment is present in the archives of the Leiden Museum. Four of the species sent were then still unpublished, and in the list their names are followed by "Aud. (inédit.)"; all four were collected by Alcide d'Orbigny in Peru (Callao) or Chile. These four species are *Leptopodia modesta* (from Callao), *Eurypodius Cuvieri* (from Chile), *Leucippa ensinadae* (from "Côtes de Chili"), and *Cyrnus microrhynchus* (from Callao), all four represented by a single specimen. As all these genera (except *Leptopodia* [= *Stenorhynchus*]) were not otherwise available to De Haan, he used this material for his study of the mouth parts of these taxa. He published his drawings of these mouth parts on pls. G and H of Fauna Japonica under Audouin's manuscript names, not realizing that future rules of nomenclature would make himself

the legal author of those names. Audouin, namely, did not publish his account of Orbigny's Crustacea, and when he died in 1841, only 44 years old, the task of dealing with that collection was entrusted to H. Milne Edwards and H. Lucas, who published the results of their study in 1842. The four just mentioned species were named by them *Leptopodia sagittaria* (Fabricius), *Eurypodius Audouinii* nov., *Leucippa Ensenadae* nov., and *Inachoides microrhynchus* nov., respectively. The name *Leptopodia modesta* was not used at all by De Haan, but Herklots (1861: 136) listed it, as *Inachus (Leptopodia) Modesta* Aud., in his list of the Crustacea of the Leiden Museum, but as a nomen nudum. The name *modesta* for the species was first made available by A. Milne Edwards (1878: 173), but by that time it was a junior synonym of *Stenorhynchus debilis* (Smith, 1871). The other three names were made available by De Haan and are discussed below.

Not included in the present paper are the non-Japanese species that were mistakenly labelled "Japan" and which De Haan treated as Japanese species. They are treated in the part of this volume dealing with the Japanese specimens of the von Siebold-Bürger collection.

For the photographs of De Haan's material I am greatly indebted to Dr. T. Yamaguchi of Aitsu Marine Biological Station, who also took great pains in arranging the outlay of this paper. Dr. Yamaguchi's unrelenting efforts greatly increased the knowledge of Ph. F. von Siebold's zoological activities in Japan. The present paper may be considered a kind of appendix to the revision by Drs. Yamaguchi and K. Baba of the still existing collections of Japanese Crustacea collected by Ph. F. von Siebold and H. Bürger and studied by W. de Haan.

Brachyura

Calappidae

***Mursia cristata* H. Milne Edwards, 1837**

Figure 1

Mursia Desmarest, 1823: 231; Desmarest, 1825: 108.

Mursie Mains-en-crête Desmarest, 1823: pl. [9] fig. 3; Desmarest, 1825: pl. 9 fig. 3.

Mursie en crête Latreille, 1831: 352.

Mursia Cristiata H. Milne Edwards, 1837 (1 July): 109.

Mursia cristimanus De Haan, 1837 (16 August): 70.

Mursia cristimana De Haan, 1837 (16 August): pl. E; De Haan, 1839: 73. .

Mursie custata: H. Milne Edwards, 1840: (Index) 627.

Mursia cristata: H. Milne Edwards, 1840a: (Explication des planches) 17.

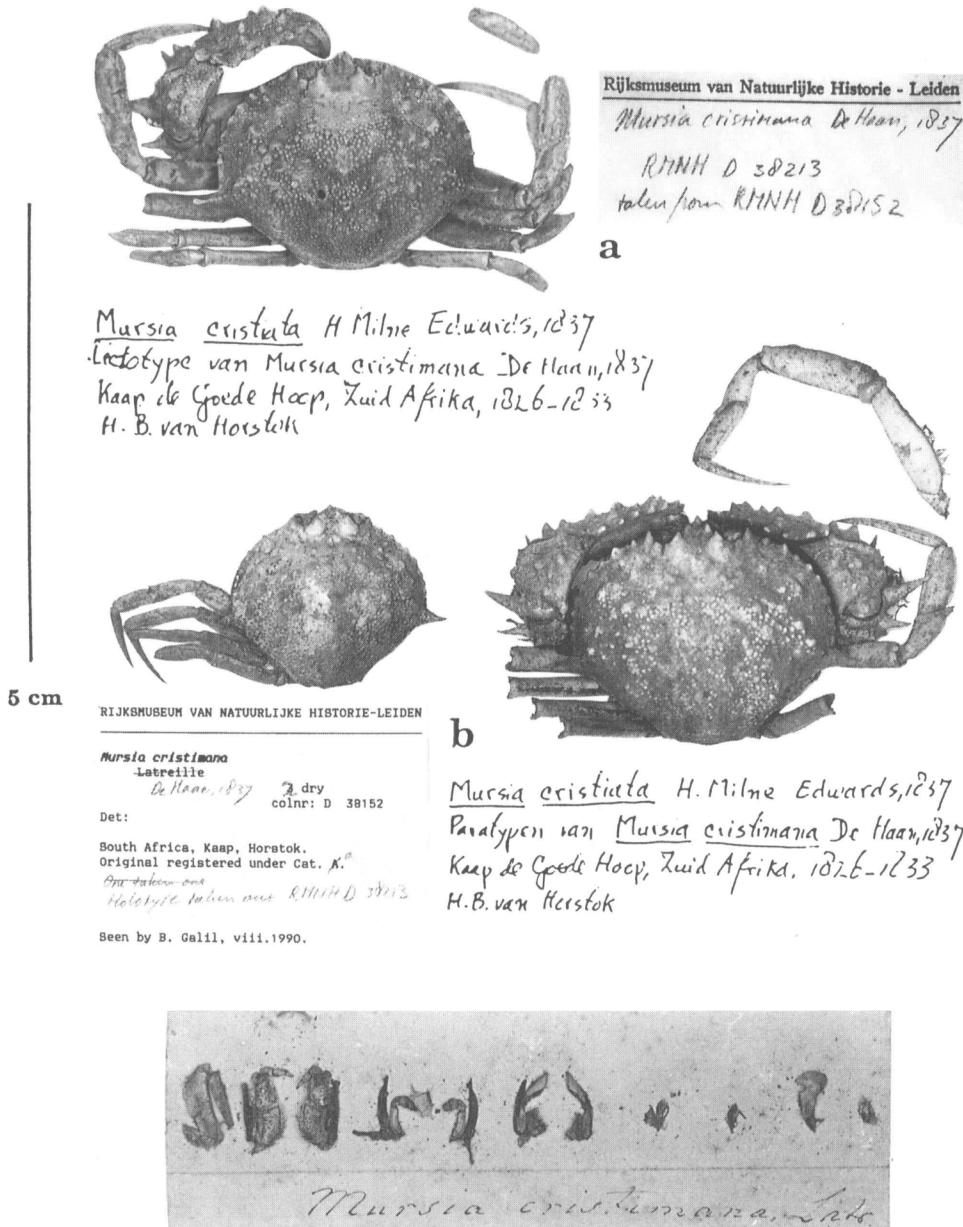
Mursica cristata: H. Milne Edwards, 1843: pl. 13 fig. 1.

Mursia Cristata: H. Milne Edwards, 1861: 139 (with reference to "*Cristimana*").

Mursia cristimanus: Stebbing, 1900: 22.

Material. — Cape of Good Hope, South Africa, 1826-1833, H. B. van Horstok, 1 dry ♂ lectotype (CW: 34 mm) (a) of *Mursia cristimana* De Haan, 1837; mouth parts of this lectotype (c); 2 paratypes (dry males, CW: 25 mm & 35 mm) (b).

Fig. 1



Mursia cristimana, Lectotype
Mandibulae van Lectotype van *Mursia cristimana* De Haan, 1837.
Kaap de Goede Hoop, Zuid Afrika, 1826-1833
H. B. van Horstok

Unintentionally De Haan (1837) became the author of the name *Mursia cristimana*. The complicated nomenclatural history of the generic and specific name is as follows.

The generic name *Mursia* was coined, but never published, by W. E. Leach. It was accepted by P. A. Latreille but not published by him either until 1829 (Latreille, 1829: 39), in the mean time Latreille used the name on labels of the material in the collection of the Paris Museum. It was Desmarest (1823), who first published the Latin generic name *Mursia* with sufficient indications to make that name available. In his text Desmarest (1823) did not mention any species for *Mursia*, but on pl. [9] fig. 3 he figured "Mursie Mains-en-crête," without a Latin name. The correct name for the genus thus is *Mursia* Desmarest, 1823, and it is a genus established without included nominal species.

It is the correct name of the type species of *Mursia* that causes the most difficulties. Until 1837 that species was either not mentioned at all or indicated with vernacular names: "Mursie Mains-en-crête" (Desmarest, 1823, 1825) or "Mursie en crête" (Latreille, 1831).

H. Milne Edwards (1837: 109) was the first to use a Latin name for the species, namely *Mursia Cristiata*. *Cristiata* possibly is an erroneous spelling of *cristata*, a name later used by H. Milne Edwards (1840a: 17; 1843, pl. 13 fig. 1) for the species. But according to Art. 32(c) (ii) of the International Code of Zoological Nomenclature, *cristiata* has to be accepted as the correct original spelling as in the original publication itself there is no clear evidence that the spelling *cristiata* is an inadvertent error. In the (1840) index to the three volumes of H. Milne Edwards (1834-1840) "Histoire Naturelle des Crustacés" the name is again differently spelled, this time as *custata*. The correct spelling of H. Milne Edwards' species thus is *Mursia cristata*; all other spellings have to be considered as erroneous subsequent spellings. Also the spelling *Mursica* for the generic name, used by H. Milne Edwards, 1843, in the explanation of pl. 13 is an erroneous spelling of *Mursia*.

De Haan (1837: 70), in the same year that H. Milne Edwards published his *Mursia cristata*, also gave a scientific name to the species, namely "*Mursia cristimanus*, Desmarest," being the latin translation of Desmarest's "Mursie Mains-en-crête." De Haan did this in the text of the third Decas of the Crustacea volume of Fauna Japonica, but he did not provide the name with a description. However, in the same Decas, on pl. E, he published figures of the mouth parts of the species which he named there *Mursia cristimana*. In the next Decas De Haan (1839: 73) gave descriptive characters of the species (as *Mursia cristimana*). The fact that De Haan (1837) published the name *Mursia cristimana* with a figure, makes the name available.

Since that time both the names *cristata* and *cristimana* have been used for the species, which is South African and does not occur in Japan. So Herklots (1861) in his catalogue of the Crustacea of the Leiden Museum referred to De Haan's type material under "*Mursia Cristata*," mentioning De Haan's use of the name *cristimana*. In 1900 Stebbing (1900: 22) reviewed the situation and advised to use the name *Mursia cristimanus* De Haan, 1837 for the species: "It may no longer be possible to decide the question of priority between De Haan and Milne-Edwards, their respective works having both been published in 1837, but that being the case, it would be absurd to give such a

form as *cristiata* preference over *cristimanus*." Since that time the name *Mursia cristimana* was generally accepted for the species.

Stebbing's surmise that the dates of publication of H. Milne Edwards' and De Haan's names could not be further narrowed down proved to be incorrect. Holthuis (1979: 290-291, 295) showed that vol. 2 of H. Milne Edwards' *Histoire Naturelles des Crustacés* was published on or before 1 July 1837 and that with the available evidence that date had to be accepted as the date of the new names published in H. Milne Edwards' volume. The date of publication of Decas III of De Haan's *Crustacea* volume so far was only known as 1837 (Holthuis & Sakai, 1970: 72). Thanks to the cooperation received from Mrs. F. van Anrooij and Mr. J. H. Kompagnie of the *Algemeen Rijksarchief* (General National Archives) in The Hague, it was possible to more accurately fix the date of publication of Decas III mentioned above. As pointed out by Holthuis & Sakai (1970: 72), the Dutch Government, through the Department of Internal Affairs, subscribed to 10 copies of *Fauna Japonica*, as a kind of subsidy to the publication of that work. These 10 copies were sent out to 10 Dutch public libraries. The date on which the various fascicles were received by the Department was noted in many instances. A query to the *Rijksarchief* about that date for Decas III was kindly answered by Mrs. van Anrooij, who indicated that this was received by the Department of Internal Affairs on 16 August 1837 and must have been published a very short time before that; for purposes of zoological nomenclature 16 August 1837 has to be accepted as the date of publication of *Mursia cristimana* De Haan. It is clear therefore that *Mursia cristiata* H. Milne Edwards has priority over *Mursia cristimana* De Haan.

Mursia cristiata is a South African species, whose range extends from Saldanha Bay in the West to Durban in the East; it inhabits depths of 16 to 330 m.

Leucosiidae

Leucosia perlata De Haan, 1841

Figure 2

Leucosia perlata De Haan, 1841: 134.

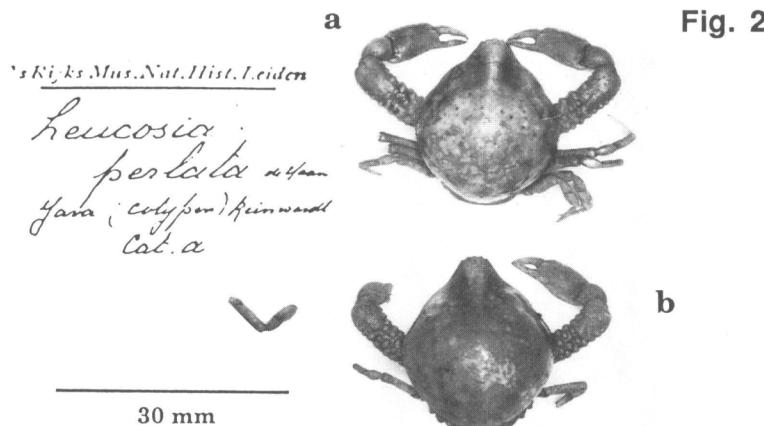
Leucosia Perlata: Herklots, 1861: 140.

Leucosia perlata: De Man, 1881: 124.

Leucosia perlata: Tyndale-Biscoe & George, 1962: 84.

Material. — Java, Indonesia, 1816-1822, C. G. C. Reinwardt, 1 dry lectotype ♂ (CW: 21.9 mm) (a) and 1 dry paralectotype ♀ of *Leucosia perlata* De Haan (old label: "perlata F. Jap. M. Reinwardt Java") (b); no mouth parts taken out.

Rather hidden, near the end of the text of *Leucosia rhomboidalis* n. sp., on p. 134 of *Fauna Japonica*, De Haan gave a five line description of a new "species Moluccensis, (*L. perlata* n.)." No illustrations were provided. De Haan's indication that the type material



came from the Moluccas evidently rests on an error: both Herklots (1861) and the type lot itself indicate the locality as "Java."

De Man (1881) unearthed De Haan's description and types, and showed *Leucosia perlata* De Haan, 1841, to be a senior synonym of *Leucosia pallida* Bell, 1855, a conclusion with which Tyndale-Biscoe & George (1962) concur. The name *L. perlata* is now generally accepted for the species.

Corystidae

Nautilocorystes ocellatus (Gray, 1831)

Figure 3

Corystes (Dicera) 8-dentata De Haan, 1833: 15, pl. 15, pl. A.

Corystes (Dicera) Ocellata: Herklots, 1861: 120.

Nautilocorystes ocellatus: Stebbing, 1914: 264.

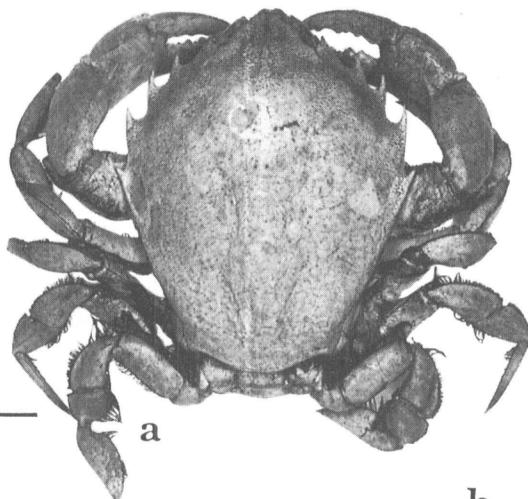
Material. — Cape of Good Hope, South Africa, 1826-1833, leg. H. B. van Horstok, 1 dry ♂ (CW: 38.3 mm) holotype of *Corystes (Dicera) octodentata* De Haan, 1833 (with plain label "Nautilocorystes (Dicera) ocellata M. Edw. Horstok. Cap") (a) and mouth parts ("Coristes (Dicera) 8-dentata n. sp. Pr. B. Sp. [= Promontorio Bonae Spei]") (b).

De Haan (1833: 14, 15) gave an extensive description of the new subgenus *Dicera* of the genus *Corystes*. In this subgenus he placed as only species *C. (D.) octodentata* which thus is its type by monotypy. The mouth parts of the species are figured on pl. A. The figure, and also the description of the subgenus make the name *octodentata* (written by De Haan as *8-dentata*) an available name. Herklots (1861: 120) used the specific name *ocellata* H. Milne Edwards, 1837, for the species rather than *octodentata* De Haan, 1833, probably in the erroneous belief that Milne Edwards' name had priority. Later authors, realizing that De Haan's name is the older, turned back to *octodentata*. But Stebbing (1914) showed that there is a still older name for the species, viz., *Corystes ocellata* Gray,

Fig. 3

Nautilocystes ocellatus
(Gray, 1831)
type van *Corystes* (*Dicera*)
ocellata De Haan, 1833
Kaap de Geda Heep, Z. Afrika
1826-1833 · H. B. van Heek

5 cm



a

b

Nautilocystes ocellatus
(Gray, 1831)
mondelden van hek-type van
Corystes (*Dicera*) *ocellata* De Haan,
Kaap de Geda Heep, Z. Afrika, 1826-1833
H. B. van Heek



5 cm

1831, and that the name *ocellata*, be it with Gray (1831) rather than H. Milne Edwards (1837) as author, has to be used for it.

The generic name *Dicera* De Haan, 1833, although a senior synonym of *Nautilocystes* H. Milne Edwards, 1837, cannot be used for the genus as it is a junior homonym of *Dicera* Germar, 1817 (Hymenoptera). Gistel (1848) replaced the preoccupied *Dicera* De Haan, 1833 by a new name *Alyptes* Gistel, 1848, but that is a junior synonym of *Nautilocystes*. So neither De Haan's new generic name, nor his new specific name can be used for the species.

Portunidae

Charybdis anisodon (De Haan, 1835)

Figures 4-A & 4-B

Portunus (Thalamita) anisodon De Haan, 1833: 10.

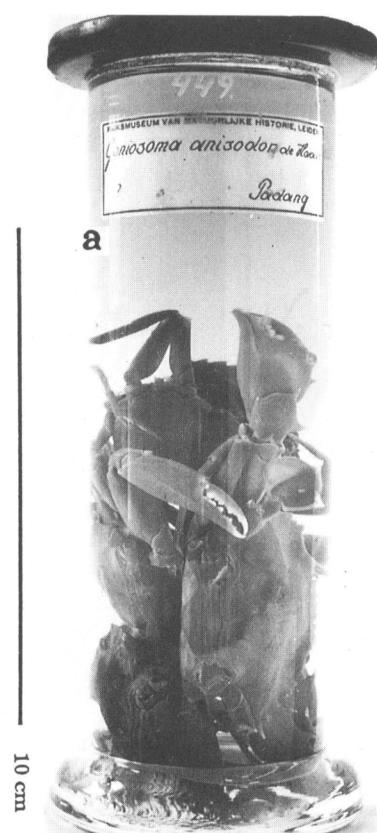
Portunus anisodon: De Haan, 1835: 42.

Portunus (Thalamita) Anisodon: Herklots, 1861: 119.

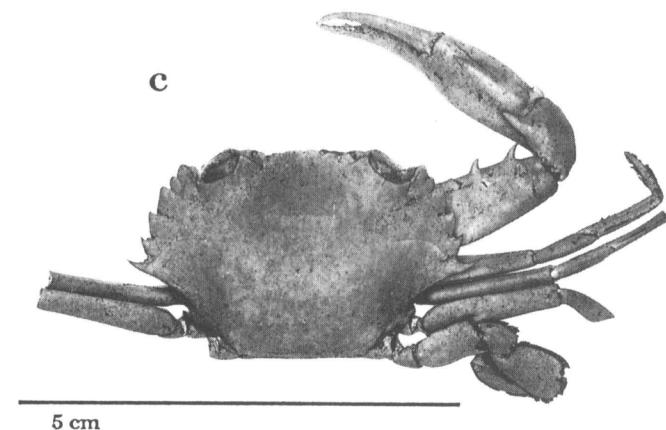
Charybdis (Charybdis) anisodon: Leene, 1938: 64, figs. 29, 30.

Material. – Timor, Indonesia (probably 1828-1829, H. C. Macklot and S. Müller), 1 ♂

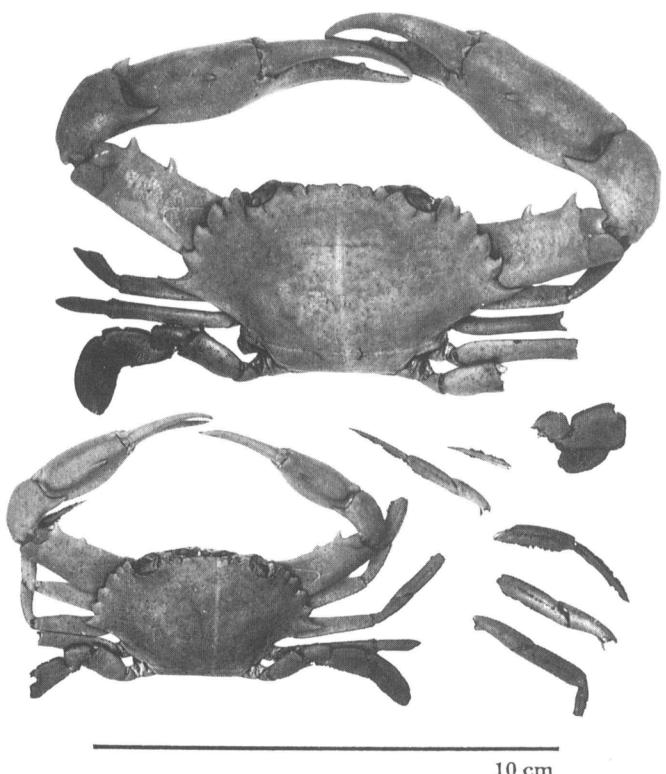
Fig. 4-A



Charybdis anisodon (De Haan, 1835)
Lectotype van *Portunus anisodon* De
Haan, 1835.
Molukken, Indonesia 1828 H.C. Macklot



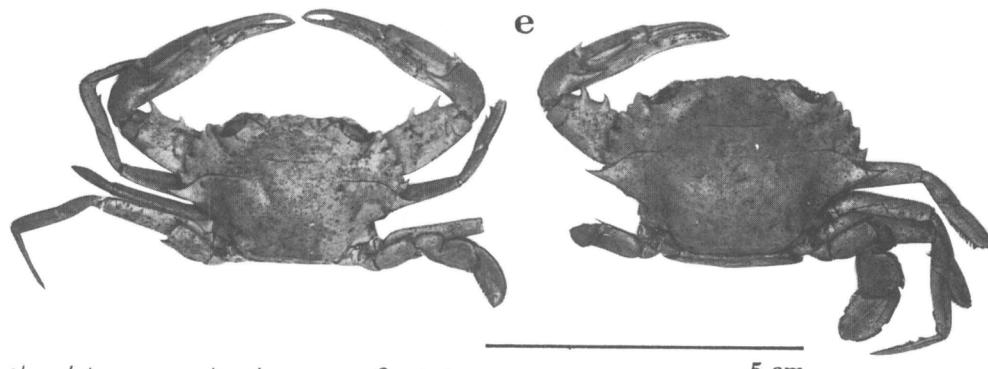
Charybdis anisodon (De Haan, 1835)
Paralectotypen van *Portunus anisodon*
De Haan, 1835
Java, Indonesia 1820-1823 H. Hahl & J.C.
van Hasselt.



paralectotype, in alcohol, reg. no. D. 450 (**b**). Padang, east coast of Sumatra, Indonesia (probably 1833-1835, S. Müller), 3 ♂ and 1 ♀ paralectotypes, in alcohol, reg. no. D 449 (**a**). Java, Indonesia, 1820-1823, H. Kuhl and J. C. van Hasselt, 2 dry ♂ paralectotypes (CW: 75.1 & 51.8 mm)(the larger with mouth parts removed) (**d**). Moluccas, Indonesia, 1828, H. C. Macklot, 1 dry ♂ (CW: 38.8 mm) lectotype (**c**) and 1 dry ♂ and 1 dry ♀ paralectotypes (all with mouth parts in situ) (plain label: "*Portunus (Thalamita) anisodon* n. Macklot Molucq.") (**e**). Mouth parts of paralectotype, Java, Indonesia, 1820-1823, H. Kuhl and J. C. van Hasselt (**f**).

Charybdis anisodon (De Haan, 1835)
~~Paratypus~~
Synatypes van Portunus anisodon De Haan, 1835.
 Molukken, Indië 1820 H.C. Macklot

Fig. 4-B



Charybdis anisodon (De Haan, 1835)?
 Mandibelen onder de naam van *Portunus*
~~(Thalamita)~~ *crassichela* n. in de collectie
 Vindplaats onbekend 1832 H.C. Macklot
 Mogelijk de mandibelen van de eerste ♂ van *Ch.*
~~anisodon~~ van Java, leg H. Kuhl & J.C. van Hasselt
 Doch hiervoor geen zekerheid.



In 1833 De Haan in an enumeration of the species of the subgenus *Thalamita* listed (on p. 10) "anisodon n. sp. Macklot ex *Insulis Moluccensibus*." No more information of the species is found there and *Portunus (Thalamita) anisodon* De Haan, 1833, is a nomen nudum. In the next Decas, De Haan (1835: 42) changed his mind and placed the species in the subgenus *Charybdis*, and in his treatment of *Portunus (Charybdis) variegatus*, Fabr. from Japan, he gave an enumeration of the differences between that species and his new *Portunus anisodon*. This description of *P. anisodon* makes that name available as from 1835. The locality of the new species was said in 1835 to be "ex Mari Indico." The specific name *anisodon* has been generally accepted for the species by later authors (see Leene, 1938).

In the collection of the Leiden Museum there are quite a number of specimens of *Charybdis anisodon* that could be types of the species. They are enumerated above. The lot from the Moluccas collected by Macklot certainly is type material. The fact that in 1835 De Haan extended the locality to Mari Indico (with which usually all localities in the Malay Archipelago were indicated), shows that he included more material in the species in 1835 than he did in 1833. Herklots (1861) still placed the species in the subgenus *Thalamita* and gave Java as the locality. In the old catalogues of the alcohol material the Padang specimens are indicated as types.

It seems best to select the largest male of the lot from the Moluccas as the lectotype of the species.

In the collection is a set of dry mouth parts, glued in the usual way to a strip of cardboard with the inscription "*Portunus (Thalamita) crassichela* n. Macklot." *P. crassichela* evidently is an unpublished manuscript name by De Haan, and it is tempting to think that these mouth parts originate from the large specimen from Java in which they have been dissected out. Supporting this supposition is the fact that the specimen is a large male in which the chelae are conspicuously enlarged and somewhat swollen, so that the name "*crassichela*" is very apt. But as the Javanese specimens are not collected by Macklot, the theory becomes a little shaky.

Lupella forceps (Fabricius, 1793)

Figure 5

Portunus (Lupa) Leachii De Haan, 1833: pl. A.

Portunus (Lupa) forceps: De Haan, 1833: 11.

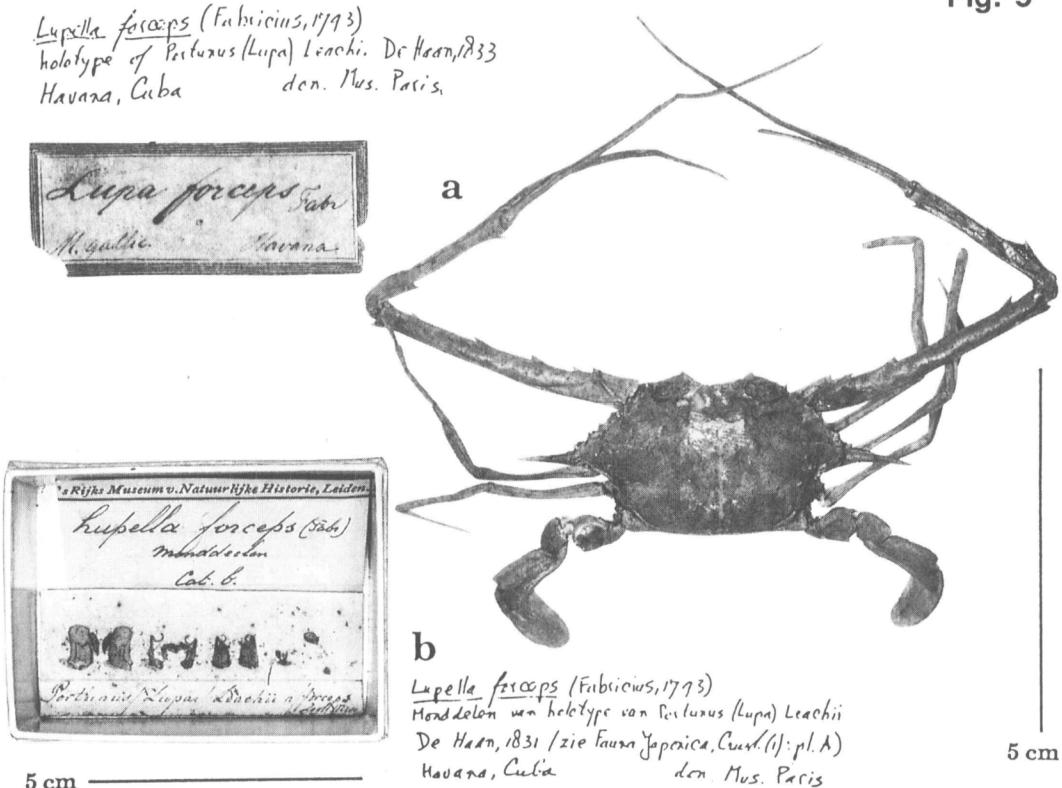
Portunus (Lupa) Forceps: Herklots, 1861: 119.

Material. — Havana, Cuba, don. Mus. Paris, 1 dry ♂ (CW: 53.5 mm) holotype of *Lupa leachii* De Haan, 1833 (old label: "Lupa forceps Fabr. M. Gallic. Havana") (a), and mouth parts ("*Portunus (Lupa) Leachii* n. - forceps Zool. Misc.") (b).

The specific name *leachii* De Haan, 1833, is an available name, as it was accompanied by a figure when it was established. The words "Zool. Misc." on the label refer to Leach's (1815) "The Zoological Miscellany," where the species is described and figured in vol. 1, p. 123, pl. 54.

The specimen is one of the oldest in the Museum and existed already when the Museum was founded in 1820. It formed part of a collection received from the Paris Museum in 1815 in exchange for a part of the collection of the Dutch Royal family that the French had confiscated in 1795. Most of this collection of the Orange family was returned to Holland in 1815, but at the very urgent request (mainly of Lamarck) part was kept in Paris; in exchange for this part a large collection of duplicates of the Paris Museum was offered to the Dutch. The 24 Crustacea (in 15 species) of this duplicate

Fig. 5



collection formed the basis of the Crustacean collection of the Leiden Museum. The list of this material contains the item "*Lupa* n. sp.," which is the present specimen.

The name *Portunus (Lupa) leachii* De Haan is a completely forgotten name, I have not been able to find any reference to it, not even in Sherborn's Index Animalium. The name, although available, is invalid as it is a junior synonym of *Portunus forceps* Fabricius, 1793 and a junior homonym of *Portunus leachii* Risso, 1827 (= *Liocarcinus corrugatus* (Pennant, 1777)).

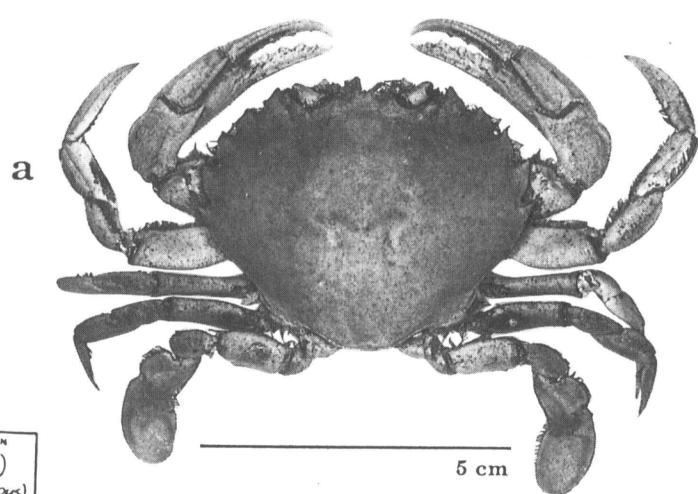
Ovalipes trimaculatus (De Haan, 1833)

Figure 6

Corystes (Anisopus) trimaculata De Haan, 1833: 13.
Corystes (Anisopus) Trimaculata: Herklots, 1861: 120.
Ovalipes trimaculata: Stephenson & Rees, 1968: 220.

Material. - Cape of Good Hope, South Africa, 1826-1833, H. B. van Horstok, 1 dry ♂ (CW: 46.9 mm) lectotype, (a). 2 dry ♂ (largest; CW: 65.9 mm × CL: 51.5 mm) and 8 dry ♀ paralectotypes (old label: "*Platyonychus bipustulatus*. Horstok Pr. B. Spei") (b) and 1 set of mouth parts ("*Corijstes (Anisopus) 3maculata* n. sp. Pr. B. Sp.") (c).

Fig. 6



c

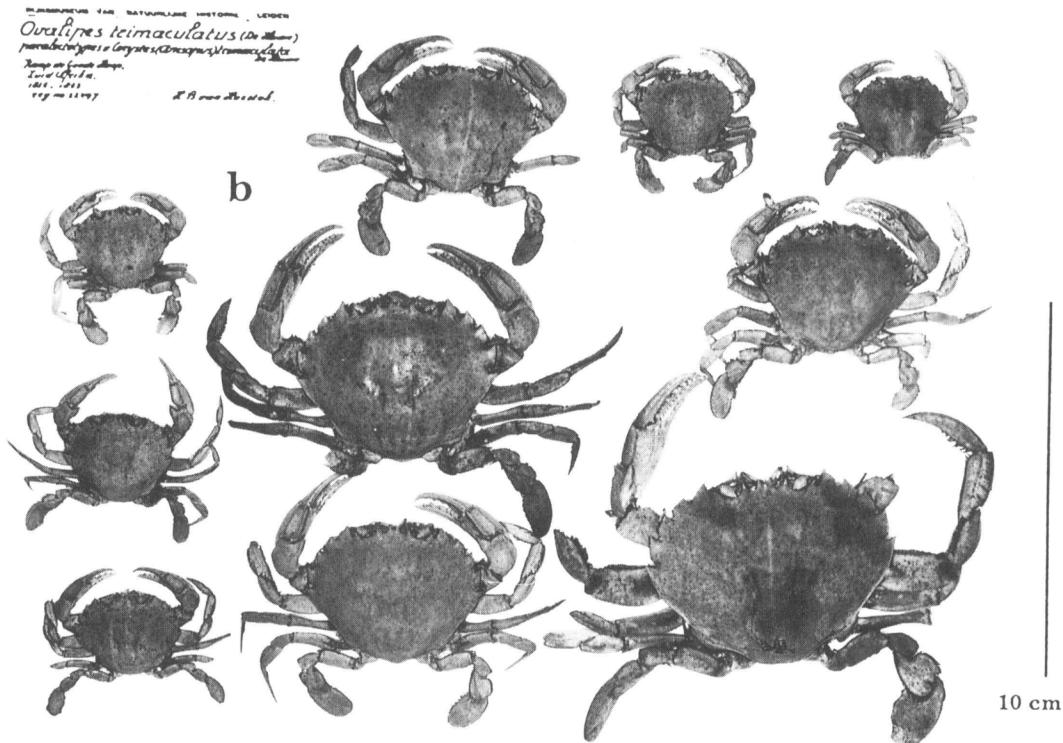
RIJKSMUSEUM VAN NATUURLIJKE HISTORIE, LEIDEN
Ovalipes trimaculatus (De Haan)
 paralectotype van *Coryistes (Anisopus) trimaculata* De Haan
Ovalipes trimaculatus De Haan H.B.van Hoestek
 Kaap de Goede Hoop, Zuid Afrika 1825-1833



RIJKSMUSEUM VAN NATUURLIJKE HISTORIE LEIDEN

Ovalipes trimaculatus (De Haan)
 Lectotype of *Coryistes (Anisopus) trimaculata* De Haan
 Kaap de Goede Hoop,
 1825 - 1833.
 reg. no. 19484. H.B. van Hoestek

b



As De Haan's name *Corystes (Anisopus) trimaculatus* was published with a reference to a published figure (viz., to Seba., 1759: 3, pl. 18 fig. 9), it is an available name. The type material consists of the above 11 specimens from the Cape of Good Hope (= Promontorio Bonae Spei = Pr. B. Sp.) and the specimen illustrated by Seba (belonging to *Liocarcinus holsatus* (Fabr.)). A lectotype was selected by Holthuis & Sivertsen (1967: 3), viz., the above mentioned male from Cape of Good Hope (Reg. no. D. 19484).

Both the names *trimaculatus* De Haan, 1833, and *bipustulatus* H. Milne Edwards, 1834 have been used for the present species, but De Haan's name, being the older of the two, has priority, and is now generally accepted.

Portunus convexus De Haan, 1833

Figure 7

Portunus (Pontus) convexus De Haan, 1833: 9.

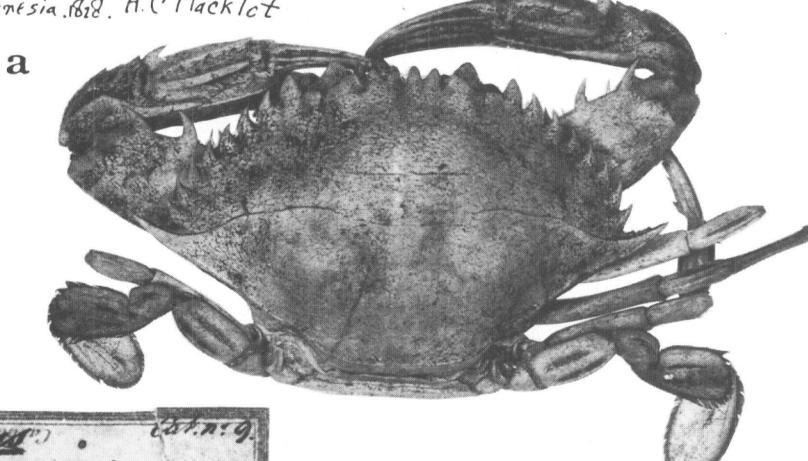
Portunus (Pontus) Convexus: Herklots, 1861: 118.

Neptunus convexus: De Man, 1883: 150.

Portunus convexus: Crosnier, 1962: 47, text-figs. 60, 64-66, 69, 70, pl. 2 fig. 2.

Portunus convexus De Haan, 1833
Lectotype van Portunus (Pontus) convexus De Haan, 1833
= Lupa pubescens Dana, 1852
= Neptunus sieboldi A. Milne Edwards, 1861
Molukken, Indonesia, 1818. H.C. Macklot

Fig. 7



3 cm



Portunus convexus De Haan, 1833
Hondelen van lectotype
Molukken, Indonesia, 1818 H.C. Macklot

5 cm

Material. — Moluccas, Indonesia, 1828, H. C. Macklot, 1 dry holotype ♂ (CW: 38.5 mm) (a) (Temminckian label: "*Pontus convexus* n. sp. Macklot, I. Molucc. Cat. nr. 9" over the name is written in pencil "*Nept. Sieboldii* A. Milne E.") and 1 set of mouth parts ("*Portunus (Pontus) gibbosus* n. sp. I. Moluc. Mackl.") (b).

De Haan (1833: 9) described the new subgenus *Pontus*, and referred a single species to it: *Portunus (Pontus) convexus*. This becomes the type of *Pontus* through monotypy. The description makes both *Pontus* and *convexus* available names. The mouth parts, although dissected, are not figured by De Haan. These mouth parts are provided with the specific name *gibbosus*, which De Haan evidently changed later to *convexus*. This is another sign that it took De Haan a long time and many changes of mind before he hit on a satisfactory name for his taxa.

As shown by De Man (1883) and later confirmed by Crosnier (1962), *Portunus convexus* De Haan, 1833 is synonymous with *Neptunus sieboldi* A. Milne Edwards, 1861. There is a possibility that also the well known species *Portunus pubescens* Dana, 1852, is a synonym. In any case the name *convexus* De Haan, 1833, being the oldest of the three has to be used. The name *Pontus* De Haan, 1833, at present is considered a junior synonym of *Portunus* Weber, 1795.

Xanthidae

Atergatis dilatatus (De Haan, 1835)

Figure 8

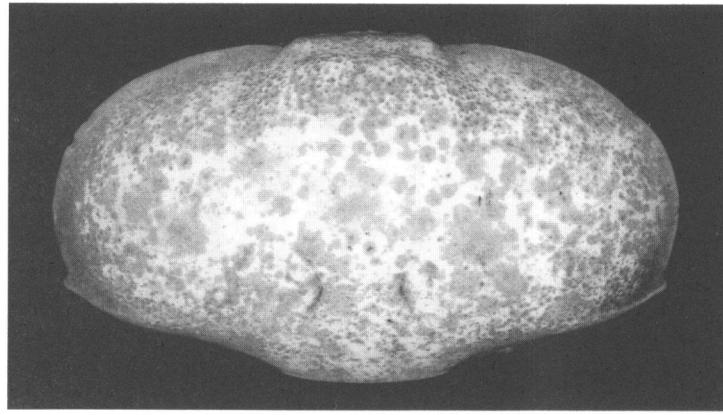
Cancer (Atergatis) dilatatus De Haan, 1835: 46, pl. 14 fig. 2.

Cancer (Atergatis) Dilatatus: Herklots, 1861: 121.

Atergatis dilatatus: Buitendijk, 1960: 267.

Material. — Chinese Sea, 1 dry carapace of holotype.

Fig. 8



The illustrations given by De Haan of this species are excellent, and there never has been any doubt as to the identity of the species, for which the name *dilatatus* has been generally used.

This species and the next (*A. frontalis*) are the only species of non-Japanese Crustacea of which De Haan provided illustrations other than those of the mouth parts.

The locality "ex Mari Chinensi originem ducunt," is quite vague and gives no clue as to how the material was procured by the Museum, and from whom. Herklots's (1861) indication "Mer de Chine" gives no further information.

The dry carapaces of *Atergatis intergerrimus* (Lamarck), found in the box with the holotype and reported upon by Buitendijk (1960), obviously got in there by mistake. The specimen at present is removed to a separate box with a label explaining the situation.

Atergatis frontalis (De Haan, 1835)

Figure 9

Cancer (Atergatis) frontalis De Haan, 1835: 46, pl. 14 fig. 3.

Cancer (Atergatis) frontalis: Herklots, 1861: 121.

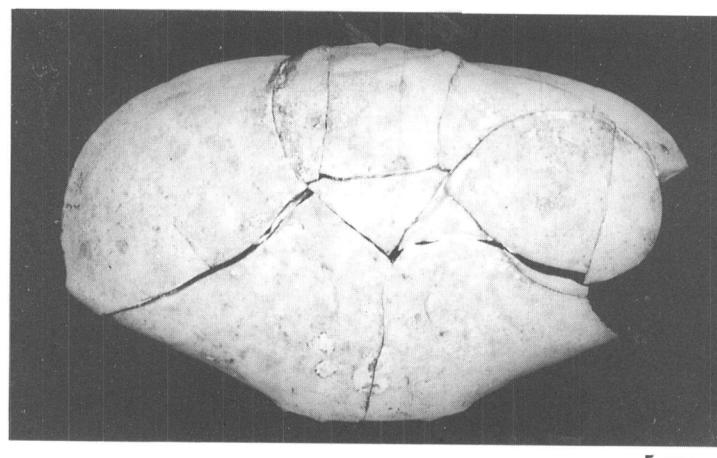
Atergatis frontalis: Buitendijk, 1960: 271.

Material. - Chinese Sea, 1 broken dry carapace of holotype (plain label: "*Cancer frontalis* De Haan").

The description and figures provided by De Haan are sufficiently clear to identify the species and there never has been any doubt about its identity. The name *frontalis* is, and always has been, accepted for it. With *A. dilatatus* this is the only non-Japanese species of which De Haan illustrated any part other than the mouth parts.

Atergatis frontalis (De Haan, 1835)
holotype
Chinese Sea

Fig. 9



The species has the same type locality as *A. dilatatus* (see there).

Like with the type of *A. dilatatus* a slight mix-up occurred here also with the material. In the collection Miss A. M. Buitendijk found a dry carapace of *Carpilius convexus* (Forskal) with the label "Atergatis? frontalis de Hn Mer de Chine." She corrected the identification and added a label explaining the situation.

Banareia parvula (Krauss, 1843)

Figure 10

Cancer (Menippe) parvulus De Haan, 1833: 21.

Cancer (Menippe) parvulus Krauss, 1843: 34, pl. 2 fig. 2.

Cancer (Menippe) Parvulus: Herklots, 1861: 125.

Banareia (?) parvula: Guinot, 1976: 179, figs. 43C, 44D, pl. 14 fig. 4.

Material. — Cape of Good Hope, South Africa, 1826-1833, H. B. van Horstok, one cardboard strip with mouth parts ("parvulus n. sp. P. B. Sp.": P. B. Sp. stands for Promontorio Bonae Spei).

Banareia parvula (Krauss, 1843)
Keer te Goede Hoep 1826-1833 H. B. van Horstok
Syntype van *Cancer (Menippe) parvulus*
Krauss, 1843 (en van *Cancer (Menippe) parvulus* De Haan, 1833 nom. nud.)

Fig. 10



5 cm

De Haan, 1833, listed among the species of his new subgenus *Menippe* the following species: "*parvulus* n. sp. Horstok e Promontorio Bonae Spei."

De Haan gave no more information on the species in his *Fauna Japonica*, and the name *Cancer (Menippe) parvulus* De Haan, 1833 is a nomen nudum.

The first available usage of the name is by F. Krauss (1843) in his "Die Südafrikanischen Crustaceen." Krauss had collected his material during a journey (1838-1840) to South Africa. As shown by his acknowledgement, he had sent his material of the present species to De Haan for identification. De Haan recognized it as identical with his *Cancer (Menippe) parvulus*. Krauss adopted this name and provided an extensive description and a figure of the species, also referring to De Haan's use of the name in *Fauna Japonica*. Through this action the name becomes available as from 1843 and with Krauss as the author.

Of De Haan's original material, only the mouth parts could be located.

Guinot (1976: 179) gave the most up to date account of the species which she referred (with some doubt) to the genus *Banareia*. The specific name *parvulus* has been used for the species by practically all authors.

Cymo melanodactylus Dana, 1852

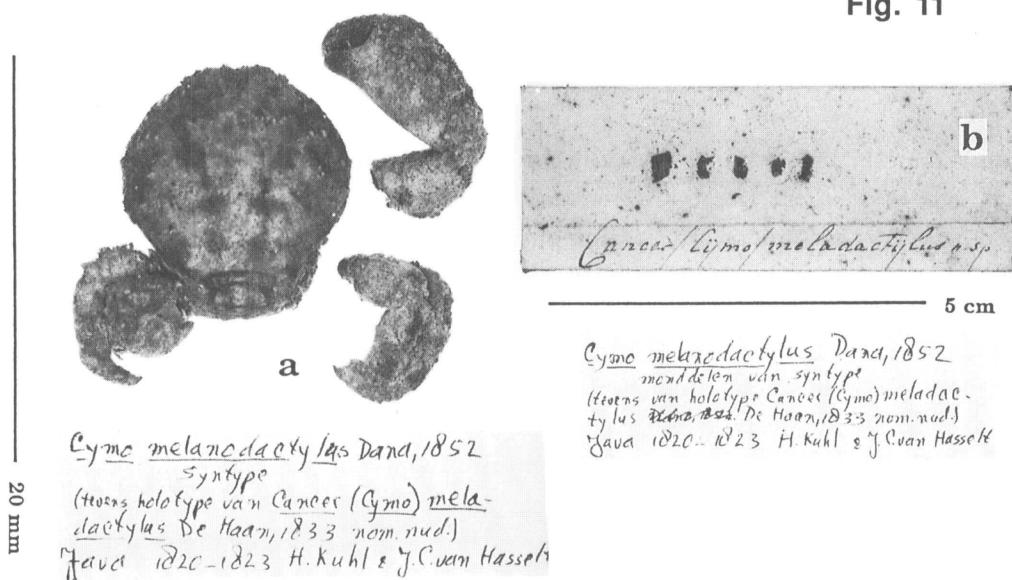
Figure 11

Cancer (Cymo) meladactylus De Haan, 1833: 22.
Cymo melanodactylus Dana, 1852: 225, pl. 13 fig. 1.
Cancer (Cymo) Meladactylus: Herklots, 1861: 125.

Material. — Java, Indonesia, 1820-1823, H. Kuhl & J. C. Hasselt, 1 dry syntype specimen of *Cymo melanodactylus* Dana, 1852 and holotype of *Cancer (Cymo) meladactylus* De Haan (Temminckian label: "Cymo meladactylus n. K. V. H. Java") (a), and a set of mouth parts ("Cancer (Cijmo) meladactylus n. sp.") (b).

De Haan listed this new species among those that he assigned to the subgenus *Cymo* as follows: "meladactylus n. sp. Clar. Kuhl et Van Hasselt, ex insula Java". No other information is given about this species in *Fauna Japonica* and the name has to be considered a nomen nudum. Dana (1852), when describing the species *Cymo melanodactylus* gave De Haan as the author. Either Dana must have had correspondence with De Haan about the species, or he must have thought that a *Cymo* with black fingers, like the one before him, must be De Haan's *C. meladactyla* only on account of that character. Dana's reference to De Haan's text makes the specimen from Java a syntype. The lectotype should, however, be chosen from Dana's material if still extant.

Fig. 11



Oziidae

The present family is often indicated as Menippidae Ortmann, 1893, but as the family contains both the genera *Menippe* and *Ozius*, the correct family name is Oziidae Dana, 1852.

Menippe rumphii (Fabricius, 1798)

Figures 12-A & 12-B

Cancer (Menippe) affinis De Haan, 1833: 21.
Cancer (Menippe) Affinis: Herklots, 1861: 125.

Material. — Java, Indonesia, 1820-1823, H. Kuhl and J. C. van Hasselt, 1 dry ♂ (CW: 74.8 mm), 1 dry ♀ (CW: 48.7 mm), both syntypes of *Cancer (Menippe) affinis* De Haan (2 Temminckian labels: (1) "Rumphii Herbst K. V. H. Java," (2) "Bellangeri M. Edw. affinis n. sp. K. V. H. Java") (b) and one set of mouth parts ("*Cancer (Menippe) affinis* n. sp. Java") (c). - Moluccas, Indonesia, 1828, H. C. Macklot, 1 dry ♂ (CW: 59.9 mm) (syntype?) (no old labels) (a).

De Haan (1833) gave as only information of his *Cancer (Menippe) affinis*, "ex iisdem insulis," meaning the Moluccan Islands, while Herklots also gave only "Iles moluques." The name thus is a nomen nudum and unavailable. The specimens prove to belong to *Menippe rumphii* (Fabricius).

It is not fully certain that the specimens are the true types of De Haan's species, as those labelled positively *C. (M.) affinis* are from Java, while the locality given both by De Haan and Herklots is Moluccas. It is possible that the Macklot specimen from the Moluccas is the true type, but it is not labelled as such. The question is rather academic as the name *affinis* is unavailable and furthermore would have been a junior synonym of *rumphii* Fabricius, 1798.

Fig. 12-A

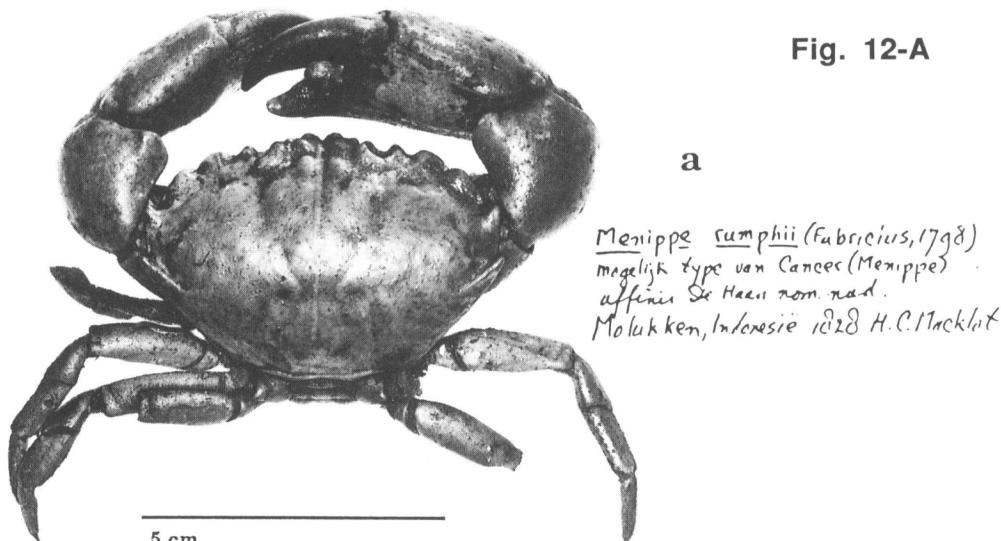
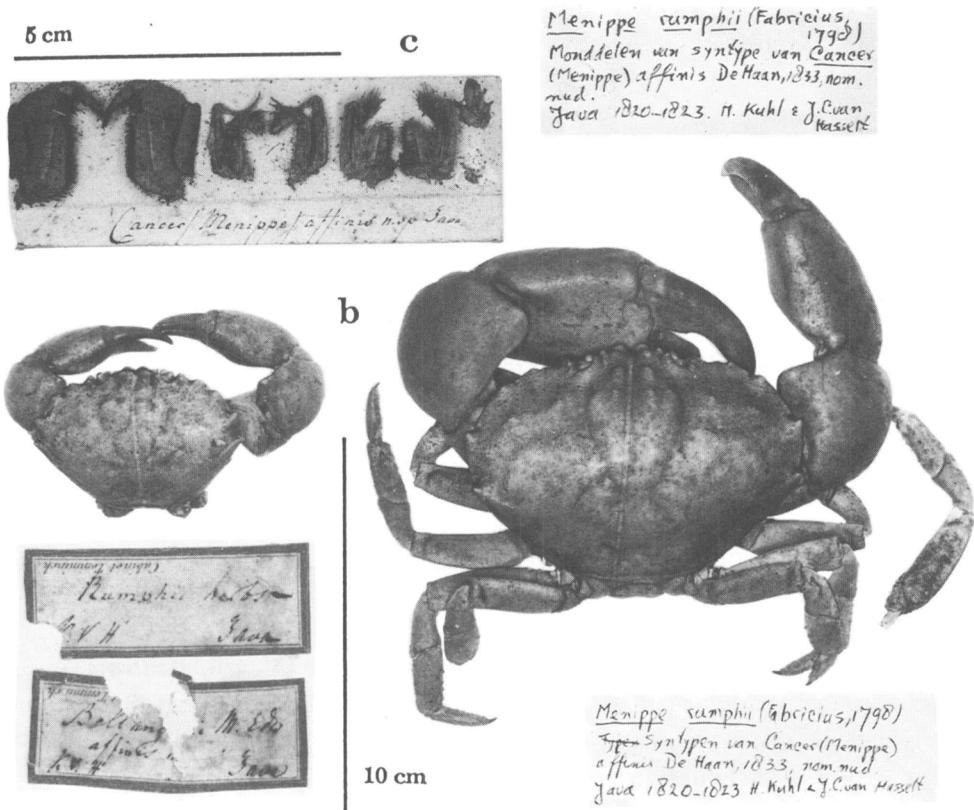


Fig. 12-B



Myomenippe fornasinii (Bianconi, 1851)

Figure 13

Cancer (Menippe) dentatus De Haan, 1833: pl. B.

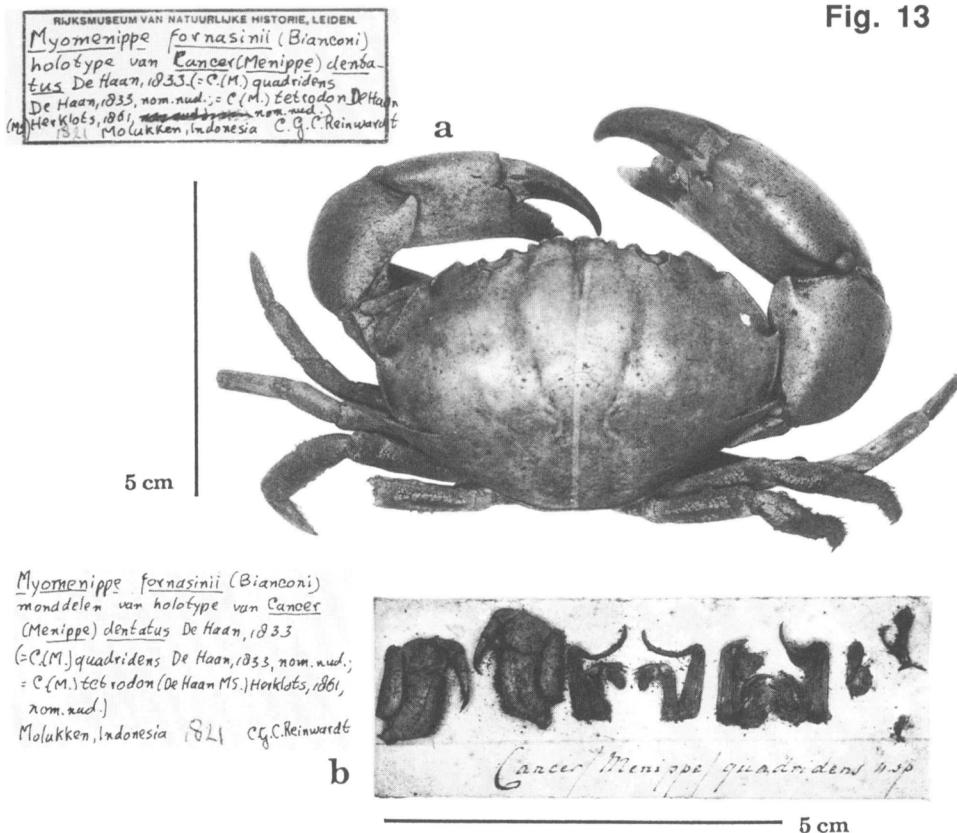
Cancer (Menippe) quadridens De Haan, 1833: 21 (p.p.).

Cancer (Menippe) Quadridens: Herklots, 1861: 124.

Material. — Moluccas, Indonesia, 1821, C. G. C. Reinwardt, 1 dry ♀ (CW: 60.2 mm) holotype of *Cancer (Menippe) dentatus* De Haan, 1833 and lectotype of *Cancer (Menippe) quadridens* De Haan, 1833 (Temminckian label: "tetrodon n. sp. Reinwardt Moluc. Ins.") (a), one set of mouth parts ("*Cancer (Menippe) quadridens* n. sp.") (b).

The situation here is rather confusing. De Haan on pl. B of Fauna Japonica figured the mouth parts of what he named "*Cancer (Menippe) dentatus*," but he did not mention such a species in the text under *Menippe*. In that subgenus he listed (p. 21) 4 species: "*Cancer (Menippe) rumphii* Herbst. - *quadridens* n. sp. Macklot ab Insulis Moluccensis. - *affinis* n. sp. ex iisdem insulis. - *parvulus* n. sp. Horstok e Promontorio Bonae Spei". It is most likely that *C. (M.) dentatus* and *C. (M.) quadridens* are the same species and that De Haan (as so often) changed his mind as to how to name it. *C. (M.)*

Fig. 13



affinis and *C. (M.) parvulus* are different species, see respectively under *Menippe rumphii* and *Banareia parvulus* above. A third name, *Cancer (Menippe) tetrodon*, although not listed by De Haan also plays a role here: Herklots (1861) lists this name next to *C. (M.) quadridentens*; he does not mention *dentatus* at all.

The above mentioned mouth parts, with the inscription "*Cancer (Menippe) quadridentens* n. sp." resemble those figured as *C. (M.) dentatus* and they obviously belong to a dry ♀ specimen in the Museum collection collected in the Moluccas by C. G. C. Reinwardt. Therefore it seems sensible to consider this female specimen as the holotype of *C. (M.) dentatus* and the lectotype of *C. (M.) quadridentens*. The manuscript name *tetrodon* might also belong here, as the label of the female type specimen bears that name; it might be an other substitute name for *dentatus* used by De Haan, as the name itself is the Greek equivalent of the Latin *quadridentens*. Some other specimens in the dry collection, also labelled *Cancer (Menippe) tetrodon* prove to belong to a different species (see below under *Myomenippe hardwickii*), so that it is likely that De Haan had confused two species under the name *tetrodon* (or *quadridentens*). The present material proves to belong to *Myomenippe fornasinii* (Bianconi, 1851). Although De Haan's names for the present species are older than that of Bianconi, they cannot be used. *Cancer (Menippe) tetrodon* is a manuscript name and therefore not available. *Cancer (Menippe) quadridentens* De Haan, 1833, is a nomen nudum, and a junior homonym of *Cancer quadridentens* Fabricius, 1793. *Cancer (Menippe) dentatus*, though an available name, is invalid as a primary junior homonym of *Cancer dentatus* Herbst, 1785.

Myomenippe hardwickii (Gray, 1831)

Figure 14

Cancer (Menippe) quadridens De Haan, 1833: 21 (p.p.).

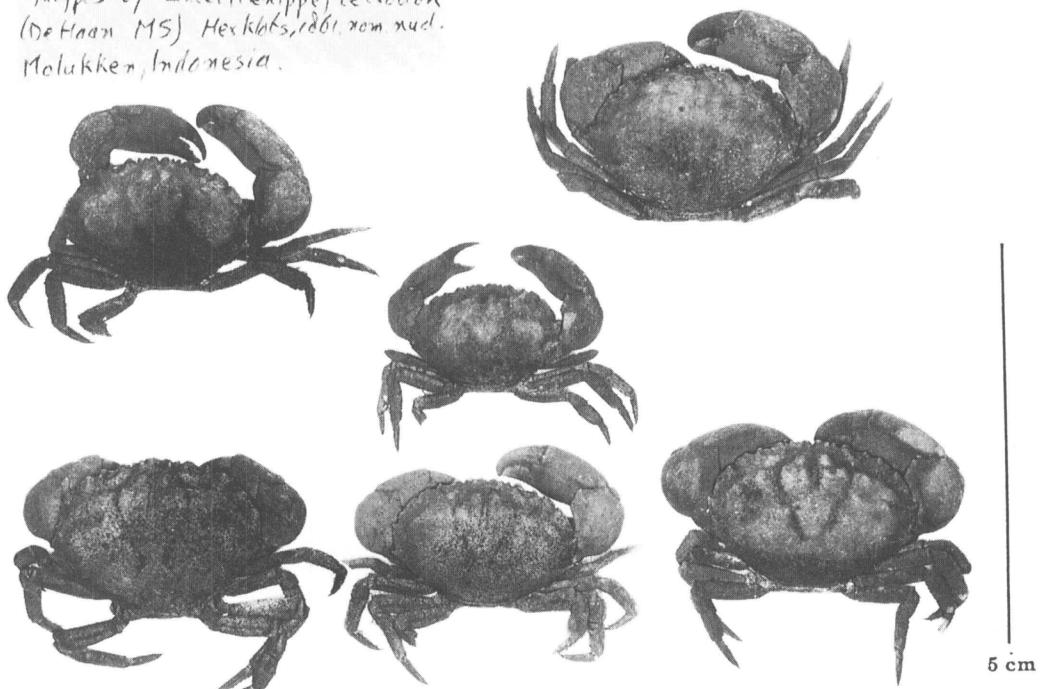
Cancer (Menippe) Tetrodon Herklots, 1861: 124.

Material.- Moluccas, Indonesia, 2 dry ♂ (CW: 46.6 & 41.3 mm) and 4 dry ♀ (CW: 46. - 33.9 mm)(plain label: "Cancer Menippe cf. tetrodon dH Moluc. Ins. cat. no. 124").

The above material is the lot Herklots (1861) reported as *Cancer (Menippe) Tetrodon* under catalogue number 124, which number also is given on the label with the lot. All specimens still have their mouth parts in situ. The specimens prove to belong to *Myomenippe hardwickii* (Gray). It seems most probable that De Haan included this lot with that listed under the previous species and included all specimens in his *Cancer dentatus* (= *C. quadridens*, = *C. tetrodon*). Herklots may have realized that two species are involved and used the specific name *quadridens* for *M. fornasinii*, and that of *tetrodon* for *M. hardwickii*. How careless at that time labelling was done is shown by the fact that De Haan (1833) gave H. C. Macklot as the collector of *C. quadridens*, while the label of the material says C. G. C. Reinwardt; both had the locality as Moluccas (where both gentlemen collected). Herklots (1861) listed the lot of *C. (M.) tetrodon* as from "Iles moluques" without mentioning the collector, agreeing in this perfectly with the label of the *M. hardwickii* lot.

Fig. 14

Myomenippe hardwickii (Gray)
Sintypes of *Cancer (Menippe) tetrodon*
(De Haan MS) Herklots, 1861, nom. nud.
Molukken, Indonesia.



The specific names *quadridens* De Haan, 1833 and *tetrodon* Herklots, 1861, both are nomina nuda and thus unavailable.

Ozius guttatus H. Milne Edwards, 1834

Figure 15

Cancer (Eudora) incisus De Haan, 1833: 23.

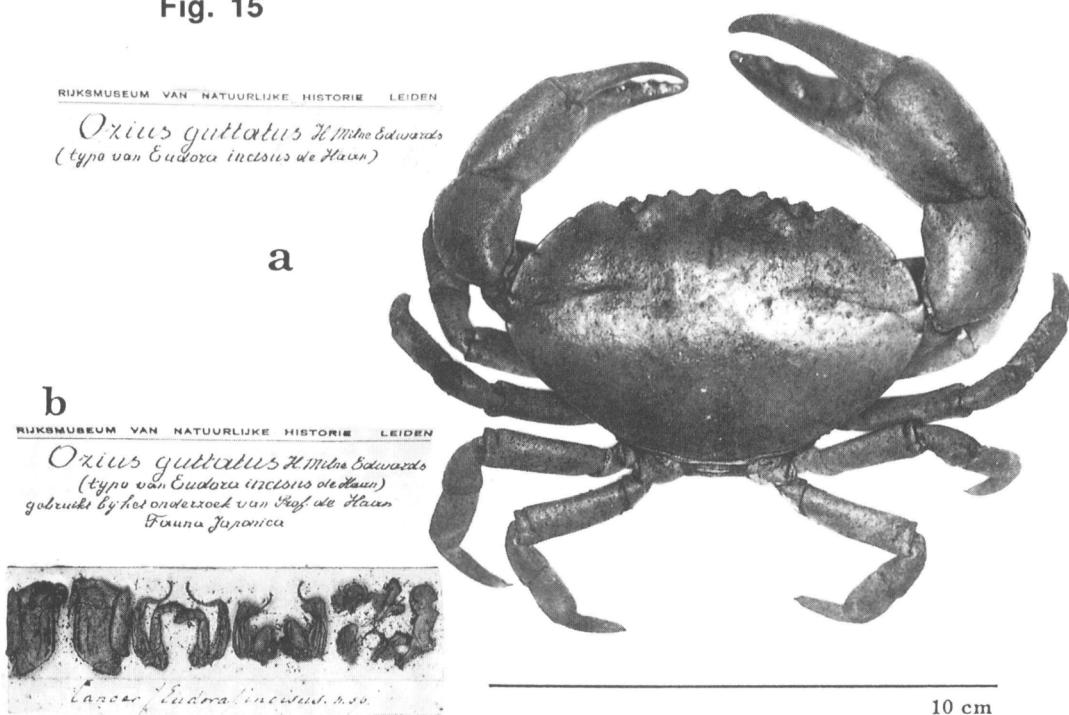
Cancer (Eudora) Incisus: Herklots, 1861: 125.

Ozius guttatus: Buitendijk, 1945: 37.

Material. — Locality unknown, 1 dry holotype ♂ (CW: 67.2 mm) of *Cancer (Eudora) incisus* De Haan (Temminckian label: "Eudora incisus n. sp. ?" (a) and 1 set of mouth parts ("Cancer (Eudora) incisus n. sp.") (b).

When erecting his new subgenus *Eudora* in the genus *Cancer*, De Haan (1833: 22-23) included in it 3 species: "*Canc. (Eudora) tenax* Rüppell. - *impressus* Lamarck n. 9. - *incisus*. n. sp. Mus. Reg. Bat." The name *Eudora* De Haan, 1833, is preoccupied by *Eudora* Péron & Lesueur, 1810 for a genus of Medusae. A replacement name for *Eudora* De Haan was proposed by Gistel, 1848, namely *Lydia*. So far as I know no type species has ever been selected for either *Eudora* De Haan, 1833, or for *Lydia* Gistel, 1848. Therefore I now select as such *Cancer tenax* Rüppell, 1830, in line with the customary use of the name *Lydia*. *Cancer impressus* Lamarck, 1818, is the type of the genus

Fig. 15



Neoxanthias Ward, 1932 (by original designation). As shown by Buitendijk (1945: 37) De Haan's specimens identified by him as *Cancer (Eudora) impressus* Lamarck are not that species, but belong to *Ozius rugulosus* Stimpson, 1858.

De Haan's third species of the subgenus *Eudora*, *C. (E.) incisus* belongs to *Ozius guttatus* H. Milne Edwards, 1834, as shown by Buitendijk (1945: 37) and confirmed by the holotype which is still extant. The name *Cancer (Eudora) incisus* is a nomen nudum and therefore no threat to H. Milne Edwards' name *Ozius guttatus*. The type locality of *Cancer (Eudora) incisus* is unknown.

Palicidae

Palicus caronii (P. Roux, 1828)

Figure 16

Cymopolia Caronii: De Haan, 1841: 113.

Cymopolia Rissoana De Haan, 1844: pl. J [recte pl. I].

Doclea (Cymopolia) Caronii: Herklots, 1861: 135.

Material. — Sicily, Italy, P. Roux collection, 1 dry male (CW: 14.6 mm) holotype of *Cymopolia rissoana* De Haan, 1844 (a), and lectotype of *Cymopolia caronii* P. Roux, 1828; one set of mouth parts ("*Doclea (Cymopolia) Rissoana* Roux") (b).

Palicus caronii (P. Roux, 1828)
Lectotype van Cymopolia caronii
Roux, 1828.
Holotype van Cymopolia rissoana
De Haan, 1844
Sicilië coll. P. Roux
Gekocht in 1837 van Marguier, Parijs

a

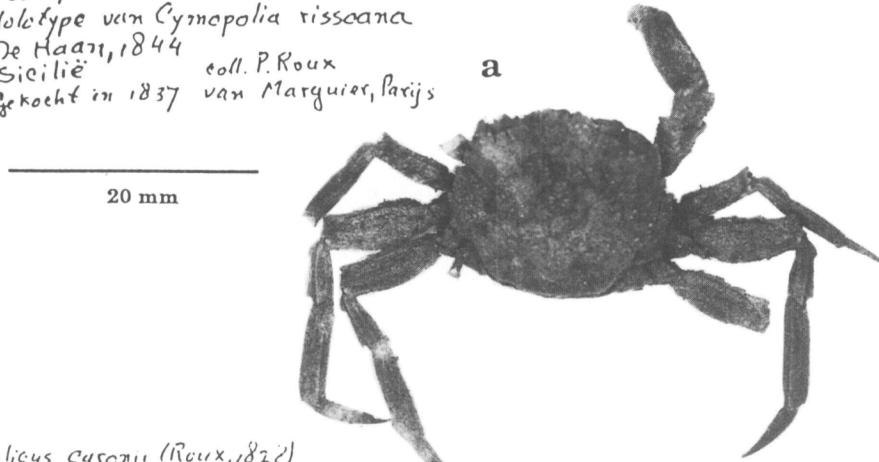


Fig. 16

Palicus caronii (Roux, 1828)
monddelen van de holotype Cymopolia
caronii P. Roux, 1828 en van Cymopolia
rissoana De Haan, 1844
Sicilië coll. P. Roux

b



5 cm

Although in the text De Haan referred correctly to "*Cymopolia Caronii*, Roux," on pl. J (this should be pl. I) he figured the mouth parts of "*Cymopolia Rissoana*, Roux." It is practically certain that this was a slip on the part of De Haan and that *Rissoana* is just an error for *Caronii*, the more so as in both cases he cited Roux as the author, and no *Cymopolia rissoana* has ever been published by Roux. De Haan's material furthermore is a true *Cymopolia caronii*, it even is a syntype of that species. The present specimen of *Palicus caronii*, is the only syntype that I know to exist and therefore is made here the lectotype of the species. *Cymopolia rissoana* De Haan thus becomes an objective synonym of *Cymopolia caronii*.

Mictyridae

Mictyris longicarpus Latreille, 1806

Figures 17-A & 17-B

Ocypode (Mictyris) deflexifrons De Haan, 1835: 25, pl. C.

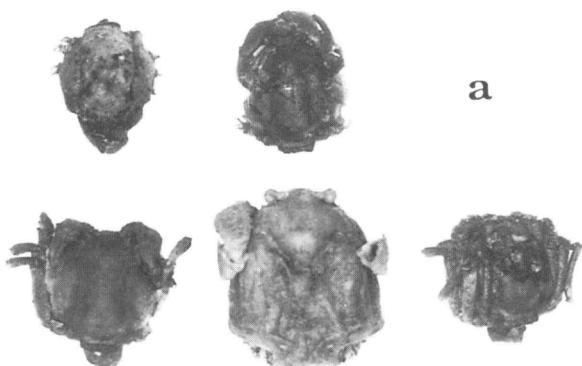
Ocypode (Mictyris) Deflexifrons: Herklots, 1861: 127.

Myctiris longicarpus: De Man, 1890: 83.

Material. — Moluccas, Indonesia, 1821, C. G. C. Reinwardt, 5 dry syntypes of *Ocypode (Mictyris) deflexifrons* De Haan, all with the mouth parts in situ (Temminckian label: "deflexifrons n. sp. Reinwardt I. Moluc.") (a). — Moluccas, Indonesia, 1828, H. C. Macklot, 34 dry syntypes of *O. (M.) deflexifrons* De Haan from at least two of which the mouth parts have been taken out (plain label: "Myctiris deflexifrons DH. Macklot Moluques") (b). One set of mouth parts ("*Ocypode (Mictyris) deflexifrons* n. sp. Java") (c).

De Haan (1835) published the name *Ocypode (Mictyris) deflexifrons* without descriptive text, he just listed it as "deflexifrons n. sp. Illustr. Reinwardt ex Insulis

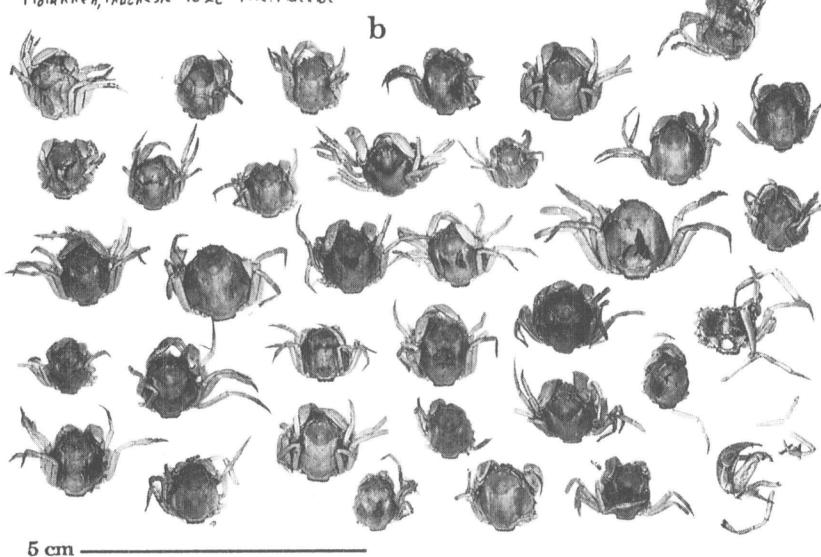
Fig. 17-A



Mictyris longicarpus Latreille,
1806
Synatypes van *Ocypode (Mictyris)*
deflexifrons De Haan, 1835
Molukken (Indonesia), 1821, C.G.C. Rein-
wardt

Fig. 17-B

Mictyris longicarpus Latreille, 1806
synonym van *Ocypode* (*Mictyris*) *deflexifrons* De Haan, 1835.
Malukken, Indonesië 1828 H.C. Macklot.



Mictyris longicarpus Latreille 1806
Manedelen van syntypes van
Mictyris deflexifrons De Haan, 1835.
Java (esc. pro. Molukken?)



Moluccensisbus." However, as he figured the mouth parts of the species (on pl. C), the name *deflexifrons* is an available name. De Haan thought the species to be different from *Mictyris longicarpus*, but De Man (1890: 83) synonymized the two. Also Tesch (1918: 42) who examined De Haan's types came to the conclusion that *M. deflexifrons* has to enter into the synonymy of *M. longicarpus*.

Ocypodidae

Ocypode kuhlii De Haan, 1835

Figure 18

Ocypode (*Ocypode*) *Kuhlii* De Haan, 1835: 29, 58.

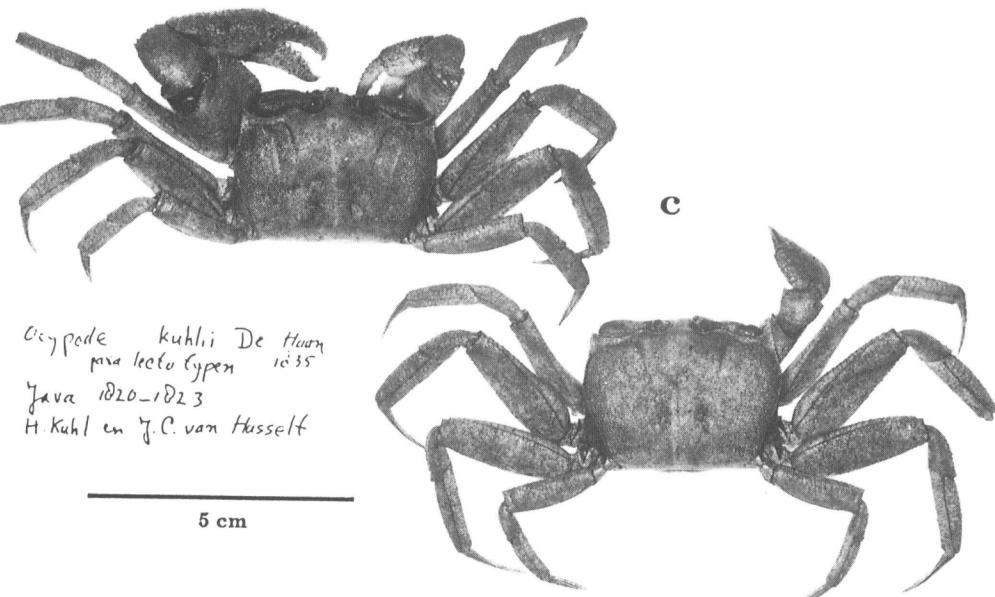
Ocypode (*Ocypode*) *Kuhlii*: Herklots, 1861: 128.

Ocypode kuhlii: De Man, 1881 a: 250-253.

Material. - Java, Indonesia, 1820-1823, H. Kuhl and J. C. van Hasselt, 3 lots with the same data: 1 lectotype male in alcohol (Reg. no. D. 217) (a-1 & a-2), 1 paralectotype male in alcohol (Reg. no. D. 216) (b), 2 dry paralectotype males (CW: 35.7 & 36.3 mm)

(Temminckian label: "Kuhlii n. sp. K. V. H. Java") (c). Of the larger dry specimen the mouth parts are taken out, but have evidently gotten lost as they can no longer be found.

Fig. 18



De Haan (1835) on p. 29 just listed the species ("*Kuhlii* Nob."), but on p. 58 gave a short, 3-line description, making thereby the specific name available.

De Man (1881a) in a long description of the type material made the species better known, and since then the name *kuhlii* has been generally accepted.

Grapsidae

Pachygrapsus marmoratus (Fabricius, 1787)

Grapsus (Grapsus) Savignyi De Haan, 1835: 32, 59.

Grapsus (Grapsus) Savignyi: Herklots, 1861: 130.

Pachygrapsus marmoratus: Holthuis, 1977: 157.

De Haan (1835: 32, 59) proposed a new name *Grapsus (Grapsus) Savignyi* for the species figured on pl. 2 fig. 4 of the Crustacea section of Savigny's Description de l'Egypte. According to Audouin (1826, 1827), in his explanation of Savigny's plates, the species shown on pl. 2 fig. 4 "a des rapports avec le *grapsus varius*, Latr.: ne connaissant pas ses couleurs, nous l'y rapportons provisoirement." De Haan evidently thought the species different from *Grapsus varius* Latreille, 1803 (= *Pachygrapsus marmoratus* (Fabricius, 1787)) and proposed the new name *Grapsus savignyi* for it.

However, Savigny's figure clearly shows the common Mediterranean species with which Audouin provisionally identified it. *Grapsus savignyi* De Haan, 1835, thus falls as a junior synonym of *Cancer marmoratus* Fabricius, 1787.

As already pointed out by Herklots (1861) and Holthuis (1977), De Haan on p. 32 referred to Savigny's pl. 2 fig. 4 and on p. 59 to pl. 2 fig. 3. The last figure (3) is incorrect and should be 4.

De Haan did not assign any material before him to *G. savignyi*, it is merely a replacement name, and the specimen figured by Savigny is the holotype.

Plagusia chabrus (Linnaeus, 1758)

Figure 19

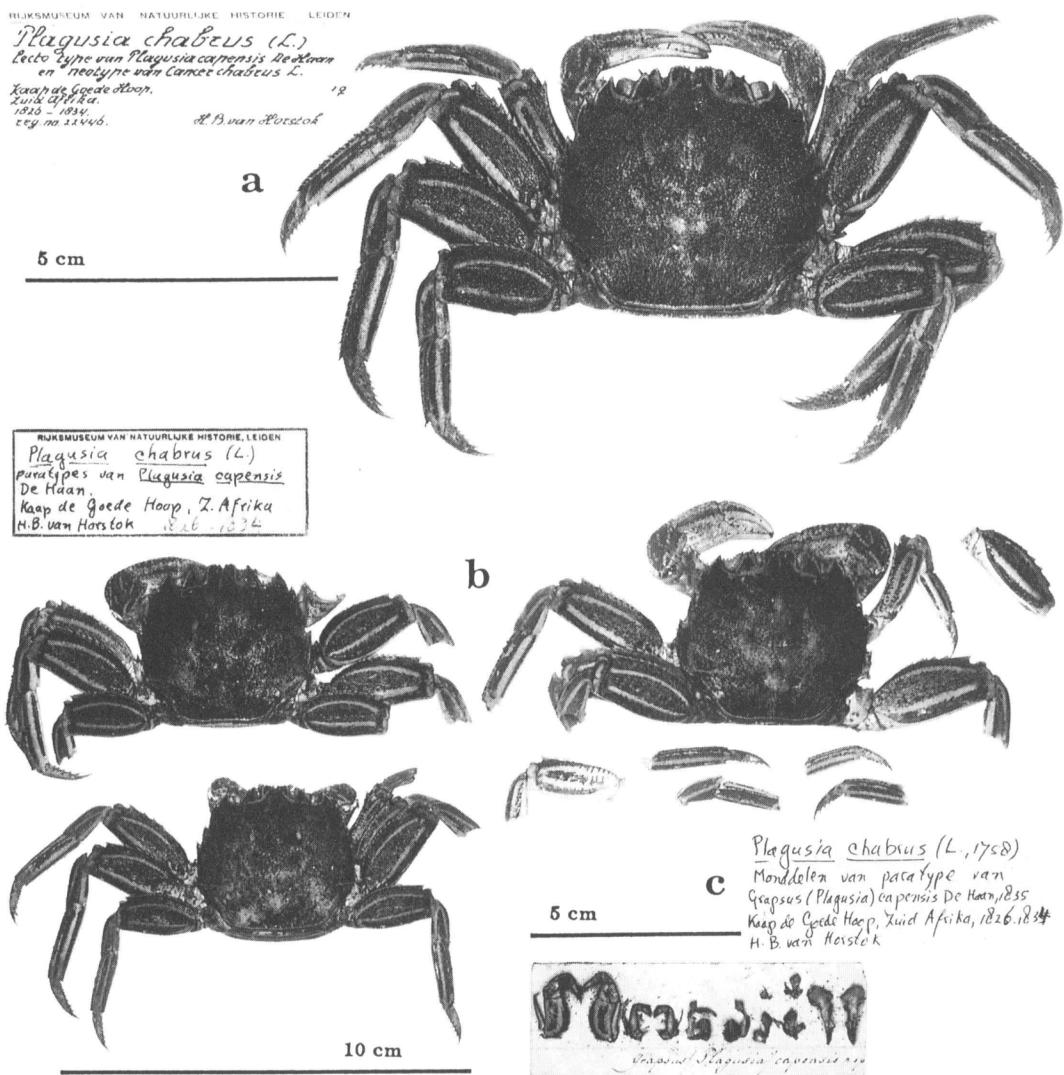
Grapsus (Plagusia) capensis De Haan, 1835: 31, 58.

Grapsus (Plagusia) Tomentosus: Herklots, 1861: 129.

Plagusia chabrus: Griffin, 1968: 212, pl. 1.

Material. - Cape of Good Hope, South Africa, 1826-1834, H. B. van Horstok, 1 dry female (CW: 43.4 mm) lectotype of *Grapsus (Plagusia) capensis* De Haan, 1835 and neotype of *Cancer chabrus* Linnaeus, 1758 (Reg. no. D 22446) (a), 2 dry ♂ (CW: 46.1 & 43.0 mm) and 1 dry ♀ (CW: 36.8 mm) paralectotypes of *Grapsus (Plagusia) capensis* De Haan (old label: "tomentosa Edw. V. Horstok Cap d. B. Esp.") (b), and a set of mouth parts (taken from a ♂ paratype) ("*Grapsus (Plagusia) capensis* n. sp.") (c).

Fig. 19



De Haan's name *capensis* is available as, on p. 58, it was published with a, be it very short, description: "*Plagusia capensis*, n. sp. a Promontorio Bonae Spei femora offert margine anteriore inaequaliter 10-dentata, frontis processum medium margine granulatum".

The specific names used for the present species were *chabrus* L., 1758, *capensis* De Haan, 1835 and *tomentosus* H. Milne Edwards, 1837. Linnaeus' description of *Cancer chabrus* was not fully clear and some authors preferred to treat it as a nomen dubium. Griffin (1968) finally ended the uncertainty by selecting the lectotype of *Grapsus (Plagusia) capensis* De Haan to be the neotype of *Cancer chabrus* L. Thereby the name *Plagusia chabrus* (L., 1758) definitely became the valid name for the species and *P. capensis* De Haan, 1835 and *P. tomentosus* H. Milne Edwards, 1837 fell as, respectively objective and subjective, junior synonyms.

Majidae

Doclea armata De Haan, 1839

Figure 20

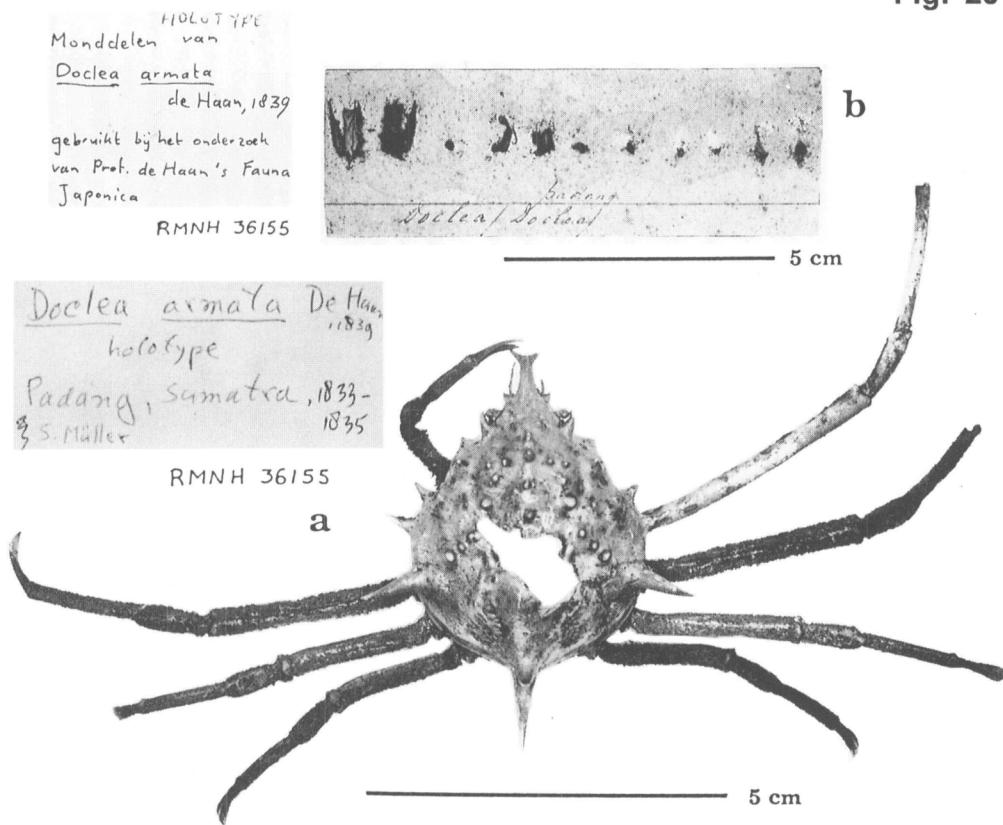
Doclea (Doclea) armata De Haan, 1839: pl. G.

Doclea (Doclea) Armata: Herklots, 1861: 135.

Doclea armata: Wagner, 1986: 908, text-fig. 12-15, pls. 4, 5.

Material. — Padang, Sumatra, Indonesia, 1833-1835, S. Müller, 1 dry holotype ♀ (CW: 44.1 mm), Reg. no. D. 36155 (old label: "Doclea armata DH S. Müller Padang") (a) and a set of mouth parts ("Doclea (Doclea) Padang") (b).

Fig. 20



On his pl. G, De Haan figured the mouth parts of three species of *Doclea* one of which was new and was named *Doclea (Doclea) armata*, n. sp. by him. The presence of figures (of the first and third maxillipeds) makes the accompanying name *armata* an available one, even though the name is mentioned nowhere in De Haan's text.

The type specimen from which the mouth parts were taken still is present in the collection of the Leiden Museum and proves to be a specimen of the species that in the literature has been indicated with either the name *Doclea calcitrata* White, 1847, or

Doclea tetraptera Walker, 1887. The name *armata* has priority over the other two and has to be used for the species, as has been pointed out for the first time by Wagner (1986).

De Haan just provided the name and the figures, and gave no information on locality, collectors etc. of the specimen. Herklots (1861) gave the type locality "Padang," but that, until 1986, was all the printed information on the species. Wagner (1986) gave an extensive redescription and figures of the species, partly based on De Haan's type.

Eurypodius latreillii Guérin, 1828

Figure 21

Inachus (Eurypodius) Cuvieri De Haan, 1839: pl. H.

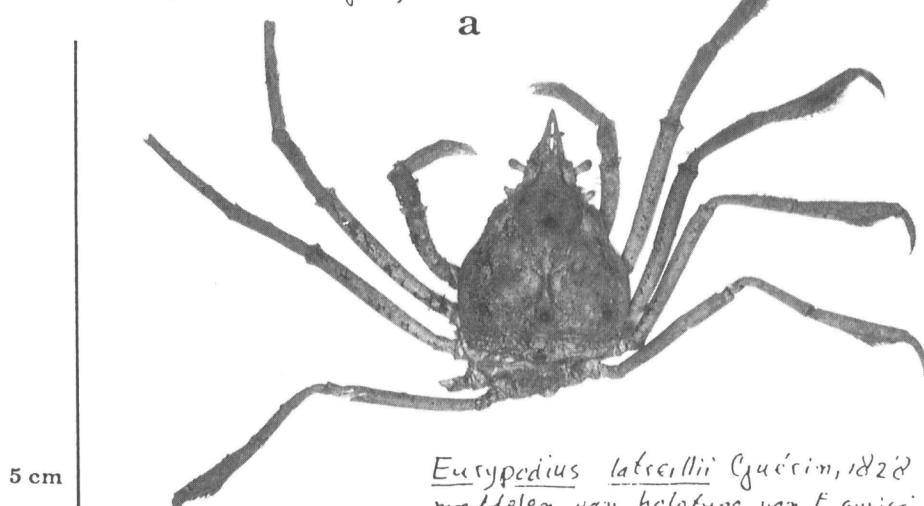
Eurypodius Audouinii H. Milne Edwards & Lucas, 1842: 3, pl. 1 fig. 1.

Inachus (Eurypodius) Cuvierii: Herklots, 1861: 136.

Eurypodius latreillei: Garth, 1957: 19; Garth, 1958: 40.

Fig. 21

Eurypodius latreillii Guérin, 1828
holotype van Eurypodus Cuvieri De
Haan, 1839
Chili 1826-1833 A. d'Orbigny
Ontvangen in 1837 van Mus Parijs via
V. Audouin (zie lijst van deze verzameling, nr. 2)



Eurypodius latreillii Guérin, 1828
monddelen van holotype van E. cuvieri
De Haan, 1839.
Chili 1826-1833 A. d'Orbigny



b

3 cm

Material. - Chile, 1826-1833, leg. A. d'Orbigny (received in 1838 from Paris Museum through J. V. Audouin), 1 dry ♀ holotype of *Inachus (Euryopodius) cuvieri* De Haan (with a modern label "*Euryopodius latreillei*" written by Dr. J. J. Tesch) (**a**), and a set of mouth parts ("*Inachus (Euryopodius) Cuvieri*, Aud.") (**b**).

The species is nowhere mentioned in the text of *Fauna Japonica*; it only occurs on pl. H, where the first and third maxillipeds are figured with the accompanying name "*Inachus (Euryopodius) Cuvieri*, Audouin," which makes that name available as from 1839 with De Haan as the author.

This is one of the four species collected by A. d'Orbigny and received in 1838 by the Leiden Museum from the Paris Museum under manuscript names given to them by J. V. Audouin (see p. 4). The manuscript name *Euryopodius cuvieri*, made available by De Haan in 1839, was not adopted by H. Milne Edwards & Lucas (1842) when, after the death of Audouin, they published their study of d'Orbigny's Decapoda. They did consider the species to be new and proposed for it the name *Euryopodius Audouinii*, evidently unaware of the existence (or availability) of *E. cuvieri* De Haan.

In modern literature (cf. Garth, 1957, 1958) both *E. audouinii* and *E. cuvieri* are sunk in the synonymy of *E. latreillii* Guérin, 1828. So far as I know, the specific name *cuvieri* De Haan, 1839, has never been used for this species except by De Haan himself. Garth (1957, 1958) noted its existence.

Inachoides lambriformis (De Haan, 1839)

Figure 22

Inachus (Microrhynchus) "(Cyrnus, Audouin in litt.)" De Haan, 1839: 86.

Inachus (Microrhynchus) lambriformis De Haan, 1839: pl. H.

Inachus (Microrhynchus) Microrhynchus: Herklots, 1861: 135.

Inachoides microrhynchus H. Milne Edwards & Lucas, 1842: 5, pl. 4 fig. 2.

Inachoides microrhynchus: Garth, 1957: 18; Garth, 1958: 96, pl. E. fig. 9, pl. 6 fig. 3.

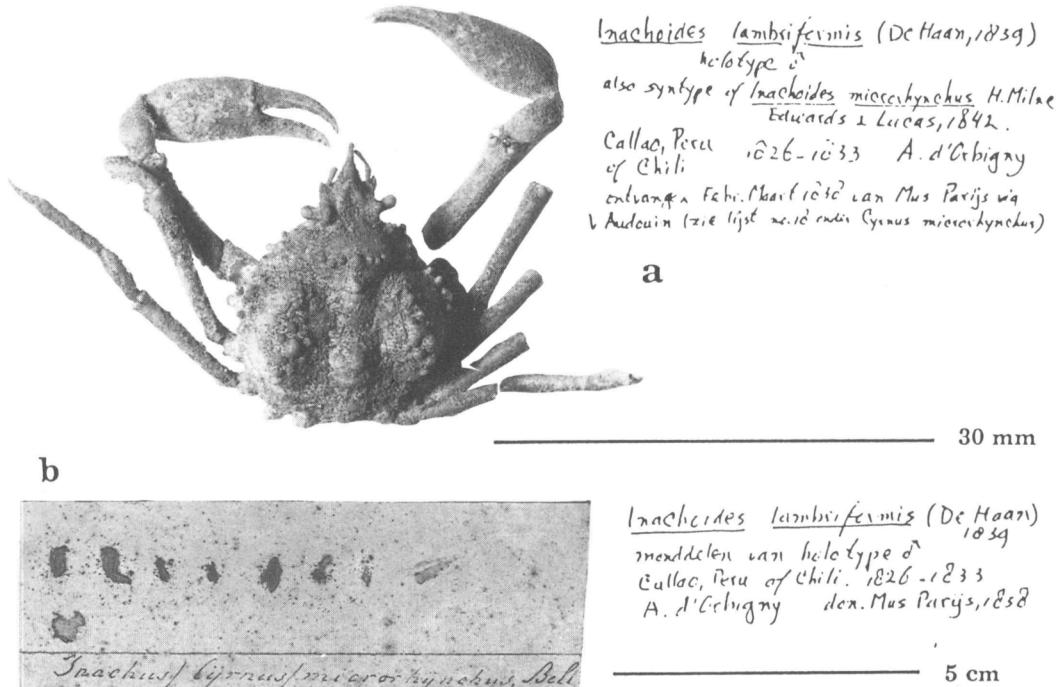
Material. - Chile, 1826-1833, A. d'Orbigny (received 1838 from Paris Museum through J. V. Audouin), 1 dry male holotype of *Inachus (Microrhynchus) lambriformis* De Haan, 1839 (**a**), and a set of mouth parts ("*Inachus (Cyrnus) microrhynchus* Bell") (**b**).

The species *Inachus (Microrhynchus) lambriformis* was not mentioned by De Haan in the text of his book, but he figured the mouth parts (first and third maxillipeds) under the name *Inachus (Microrhynchus) lambriformis*, n. sp. The name *lambriformis* De Haan, 1839 thereby is an available name. The type specimen was received by the Leiden Museum in 1838 from the Paris Museum through J. V. Audouin under the name "*Cyrnus microrhynchus*, Aud. (inédit) Callao" (see p. 4). De Haan (1839: 86) accepted the subgenus *Microrhynchus* Bell, 1835 and cited "*Cyrnus*, Audouin in litt." as a synonym.

It is obvious therefore that he assigned *Cyrnus microrhynchus* Aud. to the genus *Microrhynchus*. It is not clear why he gave the species a new specific name. Possibly he did so to avoid the tautonymy of *Inachus (Microrhynchus) microrhynchus*, but, on the other hand, he evidently did not consider tautonymy illegal, since on p. 29 of his work he used the name "*Ocypode (Uca) uca*, Linn."

H. Milne Edwards & Lucas (1842) described the species as new and placed it in a new

Fig. 22



genus. They used Audouin's old specific name *microrhynchus* for the species and the new name *Inachoides* for the genus. The specific name *microrhynchus* H. Milne Edwards & Lucas, 1842, now proves to be a junior synonym of *lambriformis* De Haan, 1839, and has to make way for De Haan's name, which thus has to be used for the species.

It is not clear whether the name *Cyrnus* De Haan, 1839, is an available name. It was published by De Haan in the synonymy of *Microrhynchus* Bell, 1835. According to Art. 11e of the International Code of Zoological Nomenclature the name *Cyrnus* De Haan would only be available if before 1961 it has been treated as an available name and either adopted as the name of a taxon or treated as a senior homonym. Now *Cyrnus* De Haan, 1839, has been listed as a normal generic name in the nomenclators by Sherborn (1925, Index Anim., (7): 1767) and Neave (1939, Nomencl. Zool., 1: 946), but it is debatable whether this can be considered to be "adopted as the name of a taxon". I do not know of any use of *Cyrnus* De Haan in a taxonomic paper as the valid name for a genus. Fortunately this problem is purely academic, as *Cyrnus* De Haan, 1839, is preoccupied by

Cyrnus Stephens, 1836, for a genus of Trichoptera.

Leucippa pentagona H. Milne Edwards, 1833

Figure 23

Pisa (Leucippe) Ensinadae De Haan, 1839: pl. G.

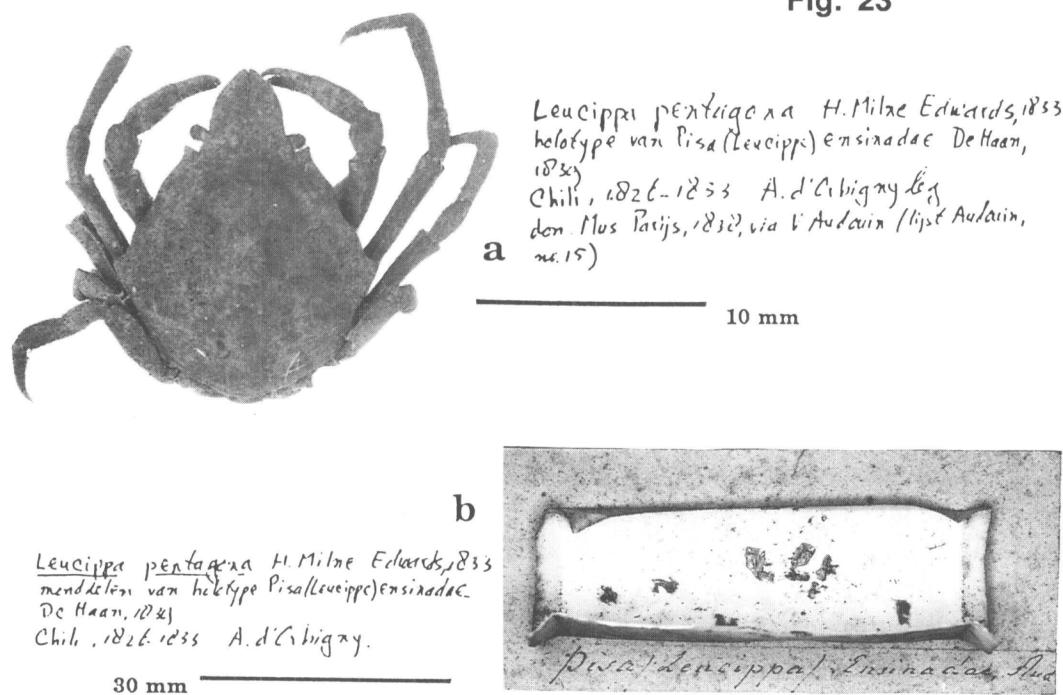
Leucippa Ensenadae H. Milne Edwards & Lucas, 1842: 9, pl. 5 fig. 3.

Pisa (Leucippe) Ensinadae: Herklots, 1861: 134.

Leucippa pentagona: Garth, 1957: 26; Garth, 1958: 220, pl. O fig. 2, pl. 25 fig. 4.

Material. - Chile, 1826-1833, A. d'Orbigny (received 1838 from Paris Museum through J. V. Audouin), 1 dry ♀ holotype of *Pisa (Leucippe) Ensinadae* De Haan (old label: "Ensinadae Aud. Audouin Chili") (a), and one set of mouth parts ("*Pisa (Leucippe) Ensinadae*, Aud.") (b).

Fig. 23



This species, like the previous, belongs to the 4 species received in 1838 by the Leiden Museum from the Paris Museum through J. V. Audouin, and which all four carried a manuscript name given by Audouin (see p. 4).

In dealing with the subgenus *Leucippa* H. Milne Edwards, 1833 (which he incorrectly spelled *Leucippe*), De Haan (1839: 85) did not mention any species; on his pl. G, however, he figured the first and third maxillipedes of what he named "*Pisa (Leucippe) Ensinadae* Audouin." Hereby Audouin's manuscript name *ensinadae* became an

available name with De Haan, 1839 as the author. The species was probably described for the first time by H. Milne Edwards & Lucas (1842: 9, pl. 5 fig. 3), who named it *Leucippa ensinadae*. The specific name *ensinadae* De Haan, 1839 has priority over *ensenadae* H. Milne Edwards & Lucas, 1842, and should be used in its stead. At present, however, *Leucippa ensinadae* is considered a junior synonym of *Leucippa pentagona* H. Milne Edwards, 1833 (see Garth, 1957, 1958).

Maja tuberculata De Haan, 1839

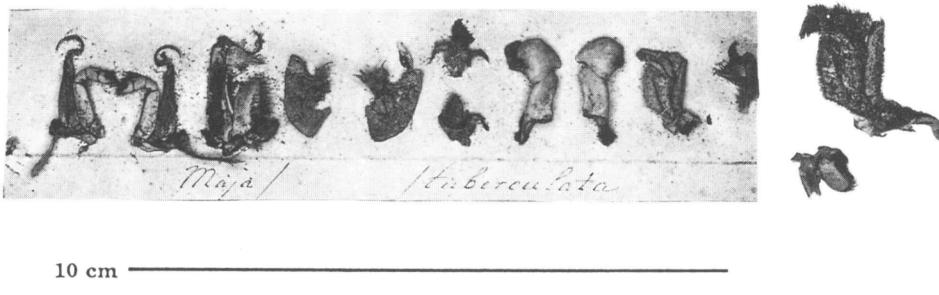
Figure 24

Maja (Maja) tuberculata De Haan, 1839: pl. F.
? *Maia (Maia)* - nov. spec. Herklots, 1861: 132.

Material. — mouth parts of holotype ("*Maja () tuberculata*"). Locality unknown.

Maja tuberculata De Haan, 1839.
norddelen van holotype
Identiteit onbekend. Vondplaats eveneens
onbekend, misschien Molukken. Herklots
(1861, Tijdsche Entomol., 4, 132) vermeldt nuw's xc.
243 en "Maja (Maia)" - nov. spec. Iles moluques
want meest lijk deze scrips.

Fig. 24



De Haan (1839: pl. F) figured the first and third maxilliped of a species that he indicated as *Maja (Maja) tuberculata*. Nowhere else in his book this name is mentioned.

In the collection of the Leiden museum the mouth parts of the specimen are present, but there is no trace of the specimen from which the mouth parts have been taken. The mouth parts in themselves are not sufficient to identify the species, which, however, must be quite large as the third maxilliped is about 18 mm long (De Haan's figures prove to be natural size).

Herklots (1861: 132) in his enumeration of the Crustacea of the Leiden Museum listed under *Maia (Maia)*, apart from three known species, the following: "243. - nov. spec. Iles moluques." This lot might be the elusive *Maja tuberculata*, but even that is not certain. The identity of *Maja tuberculata* De Haan, 1839 (a species with an available name) probably will remain an unsolved puzzle.

Tiarinia cornigera (Latreille, 1825)

Figures 25-A & 25-B

Pisa (Menaethius) tuberculata De Haan, 1839: pl. G.

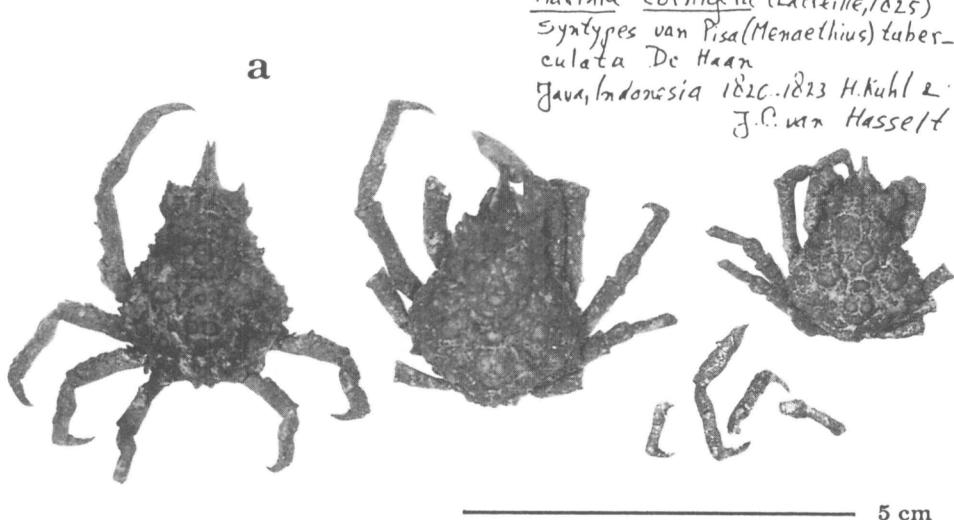
Menoethii tuberculati De Haan, 1839: 84.

Periceram cornigeram: De Haan, 1839: 84.

Pisa (Pericera) cornigera: Herklots, 1861: 133.

Material. - Java, Indonesia, 1820-1823, H. Kuhl and J. C. van Hasselt, 3 dry ♂ (CW: 18.6 - 13.6 mm) syntypes of *Pisa (Menaethius) tuberculata* De Haan (old label: "cornigera Latr. Kuhl, Van Hasselt Java") (a) and two sets of mouth parts ("*Pisa (Pericera) tuberculata* DH Java") (b), and "*Pisa (Menaethius) tuberculatus* DH" (c); the last one (c) is somewhat dubious, it consists only a third maxillipede, which is far larger than that of any of the specimens.

Fig. 25-A



On pl. G of *Fauna Japonica* De Haan figured the first and third maxillipeds of "*Pisa (Menaethius) tuberculata*, n. sp.." After pl. G was finished and no changes could be made in it anymore, but before the text of Decas IV was printed, De Haan realized that what he had named *Menaethius tuberculatus* is nothing else than *Pericera cornigera* (Latreille, 1825), a species at present placed in the genus *Tiarinia*. De Haan made the following corrections in the text on p. 84. Under *Menaethius* he wrote: "Respectu Menoethii tuberculati n. in tabula partium manductionis conferantur supra ad Periceram memorata." And under *Pericera* he made the following remark: "Loco Menaethii tuberculati in tabula partium manductionis G. lege Periceram cornigeram, Latreille."

The three syntypes of De Haan's species show that he was correct in his reidentification. The available name *Pisa (Menaethius) tuberculata* De Haan, 1839, now thus disappears in the synonymy of *Tiarinia cornigera* (Latreille, 1825).

Fig. 25-B

Tiarinia cornigera (Latreille, 1825)
 mandibelen van syntype van *Pisa* (*Menaethius*)
tuberculata De Haan, 1830
 Java, Indonesia 1820-1823
 H. Kuhl e G. van Hasselt

b

5 cm

Tiarinia cornigera (Latreille, 1825)?
 Beide msp van mogelijk *Pisa* (*Menaethius*)
tuberculata De Haan, (1830)
 Java, Indonesia 1820-1823 H. Kuhl e G. van Hasselt
 Dit materiaal is wat dubieus. Het is
 scheef opgeplakt en te groot voor een
 van de 3 exemplaren van no.
 Mogelijk van een verloren gegane ex.?

3 cm

c

Macrura Reptantia

Callianassidae

Callianassa celebica De Haan, 1844

Callianassa celebica De Haan, 1844, pl. N.

The fact that the name *Callianassa celebica* was published with figures of the species makes it available as from 1844 with De Haan as its author. The figures represent the mouth parts (maxillula, maxilla and first to third maxillipeds). Nowhere in the text of *Fauna Japonica* the species is mentioned. No material of the type specimen is extant anymore. The fact that Herklots (1861: 144) does not list any material of *Callianassa* as being present in the collection of the Leiden Museum makes it likely that the type was lost somewhere between 1844 and 1861. It is not likely that the figures of the mouth parts in themselves would make it possible to identify the species. Judging by the specific name the species was collected in Celebes (= Sulawesi, Indonesia).

In the iconographic collection of the Division of Crustacea of the Leiden Museum is a beautiful water colour sketch of an Axiid from Timor made in April 1829 by G. van Raalten. On this sketch is written in pencil, possibly in the handwriting of H. Schlegel, who from 1858 to 1884 was director of the Museum, the words: "? *Callianassa celebica*." This identification is most unlikely as the specimen is not a Callianassid and does not originate from Celebes. The problem of the identity of *Callianassa celebica* seems to be insoluble.

Macrura Natantia

Atyidae

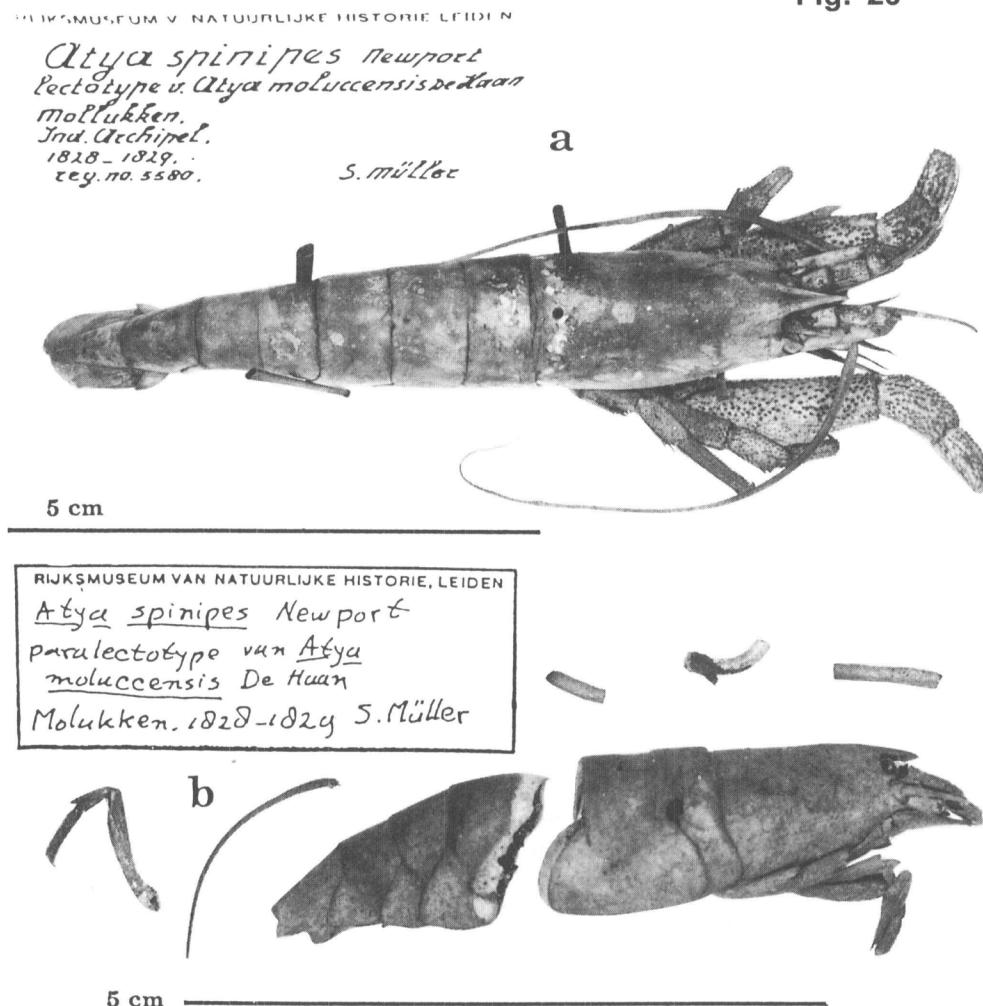
Atyopsis moluccensis (De Haan, 1849)

Figure 26

Atya moluccensis De Haan, 1849: 186, pl. O.
Atya Moluccensis: Herklots, 1861: 147.
Atya moluccensis: Miers, 1880: 382, pl. 15 figs. 3, 4.
Atyopsis moluccensis: Chace, 1983: 27, figs. 16-19.

Material. — Moluccas, Indonesia, 1828, S. Müller. - 1 dry ♂ lectotype (Reg. no. D 5580) (a) and 1 dry ♀ paralectotype (Reg. no. D 21090) of *Atya moluccensis* De Haan (b).

Fig. 26



De Haan (1849) gave a short description of the species (p. 186) and figured the mouth parts (pl. O). Miers (1880) noted the similarity between *Atya moluccensis* and *Atya spinipes* Newport, 1847, but thought the species distinct. Many subsequent authors adopted the name *moluccensis* for the species, and it was the commonly accepted name until about 1932. Cowles (1915: 147-151) and J. Roux (1925: 145-154) came to the conclusion that the two names *moluccensis* and *spinipes* were synonymous, but nevertheless continued to use *moluccensis*, the junior of the two. Only as late as 1928 J. Roux took the logical step and substituted the name *moluccensis* by *spinipes*. He was followed in this by most subsequent authors, until in 1983 Chace made clear that there are consistent differences between the two and he treated them as distinct species, for which he established the new genus *Atyopsis*. The valid name for the present species is *Atyopsis moluccensis* (De Haan, 1849).

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Figure 27; Portraits of four naturalists, mentioned in the present paper.



(a) Casper Georg Carl Reinwardt (1773-1854)



(b) Jean Victor Audouin (1797-1841)



(c) Heinrich Kuhl (1797-1821)



(d) Heinrich Boie (1794-1827)