

Annotated type-catalogue of Brachyura
(Crustacea, Decapoda) of the Muséum national
d'Histoire naturelle, Paris. Part II. Gecarcinidae and
Grapsidae (Thoracotremata, Grapsoidea),
with an Appendix of pre-1900 collectors

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ABSTRACT

An annotated catalogue of the type specimens of two thoracotreme crab families, Gecarcinidae H. Milne Edwards, 1837 and Grapsidae MacLeay, 1838 (Crustacea, Decapoda, Brachyura, Thoracotremata, Grapsoidea) deposited in the collection of the Muséum national d'Histoire naturelle (MNHN), Paris, is provided. The Appendix lists the pre-1900 collectors, naturalists and donators mentioned in the text with the dates of expeditions or collecting trips and main countries visited. This provides valuable information on the sources of crustacean material in the MNHN historical collection. Neotypes are designated for the taxa: *Gecarcinus lateralis* Fréminville in Guérin-Méneville, 1832; *Grapsus cruentatus* Latreille, 1803; *Grapsus pictus* Latreille, 1803; *Grapsus varius* Latreille, 1803. Lectotypes are designated for the taxa: *Cardisoma urvillei* H. Milne Edwards, 1853; *Discoplax longipes* A. Milne-Edwards, 1867; *Gecarcinus lagostoma* H. Milne Edwards, 1837; *Pelocarcinus marchei* A. Milne-Edwards, 1890; *Thelphusa rotunda* Quoy & Gaimard, 1824; *Grapsus brevipes* H. Milne Edwards, 1853; *Grapsus fourmanoiri*

KEY WORDS
Type specimen,
nomenclature,
scientific collections,
pre-1900 collectors,
holotype,
neotypification,
lectotypification.

MOTS CLÉS
Spécimen type,
nomenclature,
collections scientifiques,
collecteurs avant 1900,
holotype,
néotypification,
lectotypification.

Crosnier, 1965; *Grapsus gracilipes* H. Milne Edwards, 1853; *Grapsus granulatus* H. Milne Edwards, 1853; *Grapsus grayi* H. Milne Edwards, 1853; *Grapsus lividus* H. Milne Edwards, 1837; *Grapsus maculatus* H. Milne Edwards, 1853; *Grapsus maurus* Lucas, 1846; *Grapsus oceanicus* H. Jacquinot in Hombron & H. Jacquinot, 1846; *Grapsus ornatus* H. Milne Edwards, 1853; *Grapsus peroni* H. Milne Edwards, 1853; *Grapsus pharaonis* H. Milne Edwards, 1853; *Grapsus plicatus* H. Milne Edwards, 1837; *Grapsus webbi* H. Milne Edwards, 1853; *Leptograpsus ansoni* H. Milne Edwards, 1853; *Leptograpsus bertheloti* H. Milne Edwards, 1853; *Leptograpsus gayi* H. Milne Edwards, 1853; *Leptograpsus rugulosus* H. Milne Edwards, 1853; *Leptograpsus verreauxi* H. Milne Edwards, 1853; *Metopograpsus eydouxi* H. Milne Edwards, 1853; *Metopograpsus gracilis* Saussure, 1858; *Metopograpsus intermedius* H. Milne Edwards, 1853; *Metopograpsus maculatus* H. Milne Edwards, 1853; *Metopograpsus miniatus* Saussure, 1858; *Metopograpsus pictus* A. Milne-Edwards, 1867; *Pachygrapsus minutus* A. Milne-Edwards, 1873; *Pachygrapsus striatus* A. Milne-Edwards, 1873.

RÉSUMÉ

Catalogue critique des types de Brachyura (Crustacea, Decapoda) du Muséum national d'Histoire naturelle, Paris. Partie II. Gecarcinidae et Grapsidae (Thoracotremata, Grapsoidea), avec un Appendice des collecteurs avant 1900.

Un catalogue critique des spécimens types de deux familles de crabes thoracotrèmes, Gecarcinidae H. Milne-Edwards, 1837 et Grapsidae MacLeay, 1838 (Crustacea, Decapoda, Brachyura, Thoracotremata, Grapsoidea) déposés dans la collection du Muséum national d'Histoire naturelle (MNHN), Paris, est présenté. Dans l'Appendice, les collecteurs, naturalistes et donateurs avant 1900 mentionnés dans le texte sont listés, avec la date des expéditions ou voyages entrepris et les principaux pays visités, ce qui fournit des informations précieuses sur la source du matériel crustacé de la collection historique du MNHN. Des néotypes sont désignés pour les taxa : *Gecarcinus lateralis* Fréminville in Guérin-Ménéville, 1832; *Grapsus cruentatus* Latreille, 1803; *Grapsus pictus* Latreille, 1803; *Grapsus varius* Latreille, 1803. Des lectotypes sont désignés pour les taxa : *Cardisoma urvillei* H. Milne Edwards, 1853; *Discoplax longipes* A. Milne-Edwards, 1867; *Gecarcinus lagostoma* H. Milne Edwards, 1837; *Pelocarcinus marchei* A. Milne-Edwards, 1890; *Thelphusa rotunda* Quoy & Gaimard, 1824; *Grapsus brevipes* H. Milne Edwards, 1853; *Grapsus fourmanoiri* Crosnier, 1965; *Grapsus gracilipes* H. Milne Edwards, 1853; *Grapsus granulatus* H. Milne Edwards, 1853; *Grapsus grayi* H. Milne Edwards, 1853; *Grapsus lividus* H. Milne Edwards, 1837; *Grapsus maculatus* H. Milne Edwards, 1853; *Grapsus maurus* Lucas, 1846; *Grapsus oceanicus* H. Jacquinot in Hombron & H. Jacquinot, 1846; *Grapsus ornatus* H. Milne Edwards, 1853; *Grapsus peroni* H. Milne Edwards, 1853; *Grapsus pharaonis* H. Milne Edwards, 1853; *Grapsus plicatus* H. Milne Edwards, 1837; *Grapsus webbi* H. Milne Edwards, 1853; *Leptograpsus ansoni* H. Milne Edwards, 1853; *Leptograpsus bertheloti* H. Milne Edwards, 1853; *Leptograpsus gayi* H. Milne Edwards, 1853; *Leptograpsus rugulosus* H. Milne Edwards, 1853; *Leptograpsus verreauxi* H. Milne Edwards, 1853; *Metopograpsus eydouxi* H. Milne Edwards, 1853; *Metopograpsus gracilis* Saussure, 1858; *Metopograpsus intermedius* H. Milne Edwards, 1853; *Metopograpsus maculatus* H. Milne Edwards, 1853; *Metopograpsus miniatus* Saussure, 1858; *Metopograpsus pictus* A. Milne-Edwards, 1867; *Pachygrapsus minutus* A. Milne-Edwards, 1873; *Pachygrapsus striatus* A. Milne-Edwards, 1873.

INTRODUCTION

In response to the urgency to inventory the world's fauna and provide solid, reliable support for taxonomic research and for the knowledge of the biodiversity, an essential task is to accurately identify the specimens upon which taxa have been established, i.e., the types that are name-bearing or onomatophores (Simpson 1940; Dubois 2000, 2005; Dubois & Nemésio 2007; Dubois *et al.* 2014). The purpose of this work is to clarify the taxonomic status of the nominal taxa, the nomen of a taxon being attached to a type specimen and type locality as stated by the *International Code of Zoological Nomenclature* (ICZN 1999, Chapter 16), referred to as the “Code” throughout this text. The Code (Recommendation 72F.4) recommends that every institution publishes “lists of

name-bearing types in its possession or custody”, following strict rules of typification. This requires that experts explore on which original specimens the binominal scientific names were based since the *Systema Naturae* of Linnaeus (1758).

The practice of clearly highlighting the type material was not followed until relatively recent times when implementation and special attention were given to particular individuals or samples that were supposed or suspected to represent type material. This applies mainly to the dry and historical collection of Crustaceans and to early papers at a period where the designation of types was not in use. In these cases, identification of the type specimens is particularly difficult, which may lead to incorrect designation and misapplication of the Code.

There may be several major problems with historical collections preserved in dry condition. One significant obstacle

to unequivocal interpretation is the fact that the original collectors and authors did not label the specimens included (i.e., original, handwritten labels or inscriptions have not survived, apart from exceptional cases). This contributes to uncertainty regarding typification issues (see Material and Methods).

The *Code* (Art. 72.4.1) states that “The type series of a nominal species-group taxon consists of all the specimens included by the author in the new nominal taxon”, thus our first step was to identify this material. The most crucial task was to decide which sample, whether labelled as “type”, “cotype” or “syntype”, or not labelled as such, actually represents the material upon which the original author based the description of a new nominal species and thus representing the type or belonging to the type series. The decision that a particular specimen is actually the original one used in the description of the species must be made after detailed historical and scientific investigations of the material in question. This critical examination is finally based on the labels of subsequent workers (researchers and curators). In the absence of any explicit designation, the selection of the type specimen is based on a presumption (“presumed” type). Although impossible to state, evidence may be obtained by carefully examining the labels, specimen presentation (glue, wire- or wood-stick remnants), or using reliable sources, i.e., the locality, name of the collector, date of the supposed collection, and the original publication in which measurements and figures were possibly provided, and additionally a review of the relevant literature.

According to the *Code* (Art. 72.4.1.1; 73.1.1; 74.6), for a nominal species or subspecies established before 2000, any evidence, published or unpublished, may be taken into account to determine which specimens constitute the type series. If the nominal species-group taxon was based on a single specimen, either so stated or implied in the original publication, that specimen is the holotype fixed by monotypy. If the number of specimens was not clearly specified in the original publication, with the description perhaps based on several specimens, a lectotype is selected as unique bearer of the name of the nominal species-group taxon, whether only one specimen or more than one has been found in the collection; the remaining syntype(s) become(s) paralectotype(s).

Fixation of lectotype by inference of “holotype” or “type” is a particular case where the first author to have published (before 2000) the assumption that the species was based upon a single type specimen (holotype by monotypy), instead of being based on more than one specimen or without mention of the number of examined specimens, is deemed to have designated that specimen as the lectotype (*Code*, Art. 74.6). In cases where it was impossible to determine with certainty whether any of the extant specimens from the type locality in the collection corresponds to the type material, the holotype is regarded as lost, and a neotype must be designated. Conversely, in cases where specimens indicated as types have been prove to be incorrectly labelled or published as types, a well-argued correction or reappraisal is necessary.

Further investigations sometimes show that specimen(s) presumed to be the single known presumed holotype or syntypes was (were) not the only one(s) belonging to the type series. It

may be found that one or more samples existed, being deposited in another institution, a current data not yet recorded. Some subsequent type designations, largely overlooked, have thus been already made through gifts or exchanges of original material, of syntypes. For example, some syntypes donated to the RMNH or exchanged through H. Milne Edwards and V. Audouin led to the publication of new names by W. de Haan in the *Fauna Japonica* (see Fransen *et al.* 1997). Duplicates were also later exchanged by A. Milne-Edwards with the RMNH. See other examples in Cleva *et al.* (2007: 6).

An important source for the identification of the type series material is the name of the collector that sometimes appears on the “original label” (see Material and Methods) and may give a valuable indication of the period when the specimen(s) was(were) collected. The Appendix included herein provides information on the voyager-naturalists, collectors and donators mentioned in the text, the dates of their voyages or collecting trips and the main countries visited. This provides useful information on sources of crustacean material in the Muséum national d’Histoire naturelle (here referred to as “the Muséum”, or MNHN) historical collection. This list is restricted to those persons that contributed specimens in the two families studied here, but will be useful to all taxonomists. The same collectors supplied material not only in all other brachyuran families, but also of all kinds of animals and plants collected during their voyages.

Another precious source of information is the “Catalogue of Articulated animals: Crustaceans, Arachnids, Insects, received, donated, exchanged or bought” (“*Catalogue des Animaux articulés: Crustacés, Arachnides, Insectes, reçus, donnés, échangés ou achetés*”) (called CAA). It consists of a series of handwritten hard-bound books dating from 1826. Deposited in the Entomology Collection, it records the entry date of the arthropods in the MNHN and includes various data, such as date and number of the entry, geographical origin, collector, donator, exchanges, identification, and sometimes number of specimens and other details (Fig. 1A). It was developed at a time when crustaceans and insects (and also worms) belonged to the same chair. It represents one of the oldest catalogues dealing with the Crustacea housed in the MNHN. The two CAA numbers for each sample correspond to the entry number and year of entry into the MNHN, respectively: e.g. for 225-63 the second number designates 1863.

Two other historical catalogues are those handwritten by P. A. Latreille himself, with bookbindings dated 1807 and 1814. They are deposited in the Entomology Library and herein designated as “LC1807” and “LC1814” (Cleva *et al.* 2007: figs 3, 4). The parts concerning the Crustacea collection list the content of the various “cadres” that referred to the showcases of the Muséum galleries at that time.

Furthermore, hard-copy registers listing the entirety of the crustacean material are deposited in the Crustacea section of the “Direction générale déléguée aux Collections” [General Directorate Delegated to the Collections], MNHN. They were instituted during the 1960s in the MNHN laboratory called at the time “Vers & Crustacés [Worms & Crustaceans]”. Between 2000 and 2008, two research Departments,

“Systématique et Évolution [Systematics and Evolution]” and “Milieux et peuplements aquatiques [Aquatic environments and populations]”, have been fully committed to the task at hand. Since 2008, with the creation of the Direction des Collections [Directorate of Collections], the Crustacea Section continues to dedicate all efforts and expertise to fulfill this mission.

The MNHN has started an inventory of all its contents, the collation of all data and the registration of the entire collection, with a new numbering system (see Material and methods). One of the ultimate purposes is the typification of all the species.

The first annotated catalogue of brachyuran type specimens preserved in the MNHN collection was carried out on the section Podotremata Guinot, 1977 (crabs with male and female coxal gonopores, and spermathecae) and published by Cleva *et al.* (2007). Therein, the types of 104 nominal species are listed and photographed. Experience has shown that an important part of the surviving brachyuran material collected during the numerous voyages and renowned expeditions of the French naturalists and travellers (“voyagers-naturalists”, see Laissus 1981; Bauchot *et al.* 1990, 1997) from the mid-18th and 19th centuries has been preserved until today.

The present catalogue focuses on the brachyuran name-bearing type specimens of the section Thoracotremata Guinot, 1977 (crabs with male and female sternal gonopores). In an initial phase, the types of nominal species of two families of Grapsoidea MacLeay, 1838, the Gecarcinidae H. Milne-Edwards, 1837 and Grapsidae MacLeay, 1838, are listed.

Identification and allocation of the type material are fundamental today for the objective identification of names. In order to preserve stability of nomenclature there is a need to fix the status of species for comprehensive taxonomic revision and phylogenetic analyses of family-group taxa. Since the development of molecular techniques has shown the existence of cryptic species that far exceed earlier expectations using traditional approaches, the selection of a neotype, even for presently non-valid species, is required to stabilize the use of the names.

MATERIAL AND METHODS

The present paper follows Cleva *et al.* (2007), with only minor modifications. The names of the taxa are presented here in their original combination; genera and species are listed in alphabetical order for each family. Type specimens of currently invalid species (as junior synonyms, junior homonyms, unjustified emendations, unnecessary substitute names, or suppressed names) are also listed. The current status is specified, as far as known. This annotated catalogue has benefited from the contribution of three scientists who were able to verify the identifications, the conformity between the labels and crabs, and the current status of species. The authors are well versed to check and discuss nomenclatural problems.

The original published description of each species is cited. The publication in which holotype, lectotype or neotype have

been selected is likewise provided. No synonyms are provided. Other information is placed in the remarks, based on official published sources, often with the citation of the most recent reference providing a complete description of the type(s).

The occurrence of multiple labels for a single sample is very frequent, most labels not being signed. They are all cited in our text, as “Original label” and “Additional label(s)”. In the case of the historical dry collection, there is practically never an available label handwritten by the author; thus, what we refer to as the “original label” is what we suppose to be the first label, with all the data transcribed verbatim in the original script (generally in French), and in writing in italics all the taxa names. The historical boxes had either glass sides supported by a metallic frame or were constructed of orange cardboard sides fixed to a glass top, with the crabs glued on to a white cardboard by their ventral surface, often with a piece of elder (Cleva *et al.* 2007: fig. 1A, B). They contained the “original data” meticulously calligraphed in black ink italics (“fixed labels”), probably produced during an extensive curatorial reorganisation and reconditioning of the whole collection, the date of which is as yet unknown. The geographical name that is written on the label is cited as in use when the specimen was collected. In the past, the provenance was frequently a country rather than a precise locality, often without indication of the collector and without any date. The mention “Coll. A. Milne Edw. 1903” on the labels of some historical dry or in alcohol specimens does not mean that the material was collected by A. Milne-Edwards in 1903 but must be interpreted as “Collection of A. Milne-Edwards, 1903”, indicating, to the best of our knowledge, that the material was included in the MNHN collection at this date, perhaps during its reorganisation. These old boxes have been progressively replaced by easier-to-open, all-plastic boxes; the specimens were separated from the old glue, most being now fixed onto a corkboard by pins (Cleva *et al.* 2007: fig. 1C, D). The old cardboard was either kept to ensure safeguarding of the information or, when impossible, the data were carefully rewritten, becoming the “original label”. After the collection was partly flooded in 1991, a long process of restoration of damaged specimens began in 1993, and a part of the dry historical collection of brachyurans has been treated with acetone and rhodopas. After almost two centuries (and surviving world wars and natural disasters), the dry material of the MNHN historical Crustaceans collection can be considered well preserved, with specimens being generally complete and in good condition, together with their corresponding labels. Special care is taken to maintain it in good condition for other several hundred years.

A new registration method has been implemented in the early 2000s for all MNHN collections in order to build a collective database. A unique alphanumeric registration number is attributed to each sample; for the Crustacean collection, this new registration number consists of MNHN followed by IU (for Invertebrates, Crustacea), a year and an incrementing number, i.e., “MNHN-IU-20XX-XXXX”. The old registration number for brachyuran crabs consisted of MNHN followed by B (for Brachyura) and an incremented number, i.e., “MNHN-BXXXX”. Presently, both the new and the old

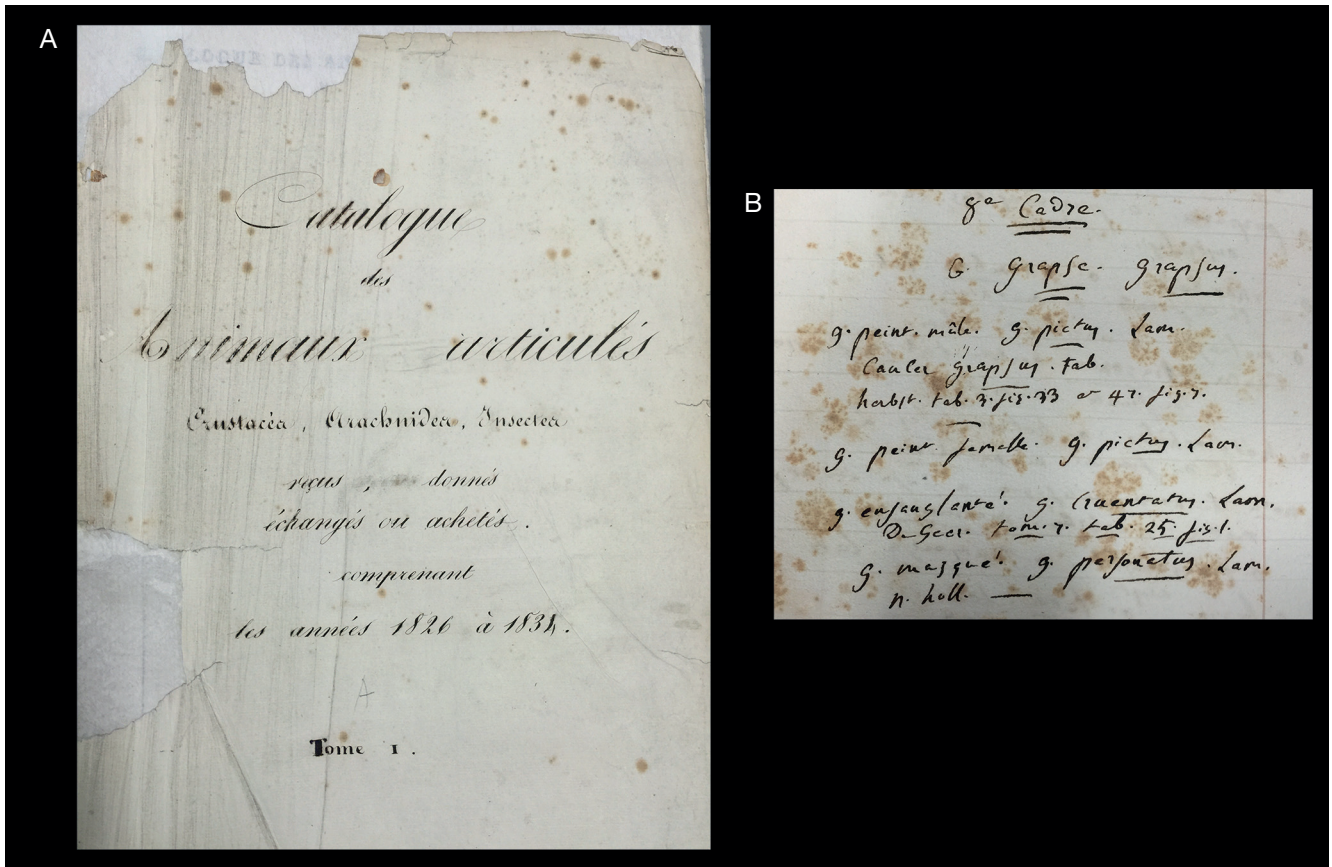


FIG. 1. — **A**, First page of the handwritten “Catalogue of Articulated animals: Crustaceans, Arachnids, Insects, received, donated, exchanged or bought” (CAA), volume 1, with entries from 1826 to 1834; **B**, text of the page about *Grapsus pictus* Latreille, 1803 in the “Catalogue of Crustaceans, Arachnids and Insects exhibited in the gallery of the Muséum d’histoire naturelle de Paris” by P. A. Latreille 1814 (LC1814).

registration numbers are strictly connected and both are valid, e.g. MNHN-IU-2014-11214 (= MNHN-B26950). All the registered material is available online (<https://science.mnhn.fr>). Internet access to this material will further increase the value of the collection and benefit researchers and naturalists worldwide.

When a lectotype is designated from the syntype series in one sample, it is separated with the original registration number, and a new registration number is assigned to the remaining individuals of the sample.

The condition of samples is noted as “Preservation”: dry or in alcohol (= ethanol 75%), completely or variably damaged; the absence of information means that the specimen(s) is (are) in a good state of conservation and whole. A few dry specimens have been rehydrated, sometimes only partly (gonopods), for research purposes.

When the type material is not held by the MNHN or if a part is known to be deposited elsewhere, the institution where it is preserved is indicated. Information on type data and depository institutions have been carefully provided by Davie (2002: 11), an asterisk (*) meaning this has not been verified by him, and the statement ‘probable depository institution’ meaning uncertainty: some data proved to be accurate and have only been supplemented here; others required correction.

A number of original specimens supposedly preserved in the MNHN collection, i.e., those that are recorded in the original publication or subsequent literature as being described by French scientists such as Lamarck, Latreille, Guérin, H. Milne Edwards and A. Milne-Edwards, could not be traced at the present time. They are not included in this catalogue. A listing of all the species that might be expected to be represented in MNHN collections could lead to hazardous or erroneous results, the discovery of forgotten specimens always being possible. One such case is the type material of two Gecarcinidae (*Cardisoma hirtipes* Dana, 1851 and *Cardisoma obesum* Dana, 1851) which were recently found in old boxes in the dried collection of the U.S. National Museum of Natural History (USNM), Smithsonian Institution (Ng 2017).

The types of 42 species cited herein are deposited at the MNHN, with one exception: *Grapsus albolineatus* Lamarck, 1818. The type material of this species is no longer extant in our Collection but, since the specific name raises a nomenclatural problem, a discussion about this controversial topic is included.

Most type specimens are illustrated (Figs 2-7, photographs by N. Mollaret). Measurements are reported in millimetres (mm) as carapace length (cl) × width (cw), taken at its maximum (including teeth or spines if present).

ABBREVIATIONS AND SYMBOLS

| | |
|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CAA | “Catalogue of Articulated animals: Crustaceans, Arachnids, Insects, received, donated, exchanged or bought” (<i>Catalogue des Animaux articulés: Crustacés, Arachnides, Insectes, reçus, donnés, échangés ou achetés</i>), housed in the MNHN Entomology Collection (first page: Fig. 1A); |
| C.M. | “Collection of the Muséum”, a terminology previously used, in particular by H. Milne Edwards (1834: xxxiv; 1837; 1840) and replaced by MNHN; |
| coll. | collected by; |
| det. | identified by; |
| G1 | first male pleopod (or first gonopod); |
| G2 | second male pleopod (or second gonopod); |
| juv. | juvenile; |
| L | left side of the crab in dorsal view; |
| LC1807 | “Catalogue of Crustaceans, Arachnids and Insects exhibited in the gallery of the Natural History Museum, Paris” (<i>Catalogue des Crustacés, des Arachnides et des Insectes exposés aux galeries du Muséum d’histoire naturelle de Paris</i> ”, by P. A. Latreille, dated 1807 (Entomology Library, referenced A54.1); |
| LC1814 | “Catalogue of Crustaceans, Arachnids and Insects exhibited in the gallery of the Natural History Museum, Paris” (<i>Catalogue des Crustacés, des Arachnides et des Insectes exposés dans les galeries du Muséum d’histoire naturelle de Paris</i> ”, by P. A. Latreille, dated 1814 (Entomology Library, referenced A53.1); |
| leg. | donated by; |
| LP | left pereopods, numbered from 1 to 5; |
| mxp3 | third maxilliped; |
| ovig. | ovigerous; |
| P1-P5 | first to fifth pereopods, respectively; |
| R | right side of the crab in dorsal view; |
| RP | right pereopods, numbered from 1 to 5; |
| Stn | station; |
| ♀ | female; |
| ♂ | male. |

Institutional abbreviations

| | |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANSP | Academy of Natural Sciences of Philadelphia; |
| LACM | Natural History Museum of Los Angeles County, Los Angeles; |
| MCZ | Museum of Comparative Zoology, Harvard University, Massachusetts; |
| MHNG | Muséum d’histoire naturelle de Genève; |
| MNHN | Muséum national d’Histoire naturelle, Paris (occasionally as MB, Paris Museum); |
| MZS | Musée Zoologique, Strasbourg; |
| MZUT | Museo Regionale di Scienze Naturali, Torino; |
| NHM | The Natural History Museum, previously The British Museum (Natural History), London; |
| NSM | Department of Zoology, National Museum of Nature and Science, Tsukuba; |
| QM | Queensland Museum, Brisbane; |
| RMNH | Naturalis Biodiversity Center, ex Nationaal Natuurhistorisch Museum, Leiden; |
| SMF | Natur-Museum Senckenberg, Frankfurt am Main; |
| USNM | National Museum of Natural History, Smithsonian Institution, Washington, DC; |
| USC | University of San Carlos, Cebu City; |
| WAM | Western Australian Museum, Perth; |
| YMP | Peabody Museum of Natural History, Yale University, New Haven, CT; |
| ZMB | Museum für Naturkunde, Berlin; |
| ZRC | Zoological Reference Collection (ZRC) of the Raffles Museum of Biodiversity Research, now Lee Kong Chian Natural History Museum, National University of Singapore. |

ANNOTATED CATALOGUE OF BRACHYURAN TYPE SPECIMENS IN THE MNHN

Subphylum CRUSTACEA Pennant, 1777
 Order DECAPODA Latreille, 1802
 Infraorder BRACHYURA Latreille, 1802
 Subsection THORACOTREMATA Guinot, 1977
 Superfamily GRAPSOIDEA MacLeay, 1838
 Family GECARCINIDAE H. Milne Edwards, 1837

Cardisoma urvillei H. Milne Edwards, 1853
 (Fig. 2A)

Cardisoma Urvillei H. Milne Edwards, 1853: 170 [204].

CURRENT TAXONOMIC STATUS. — Junior subjective synonym of *Cardisoma carnifex* (Herbst, 1796) (see Türkay 1974a: 969).

LECTOTYPE (by inference of holotype by Türkay 1974a: 969). — MNHN-IU-2000-3735 (= MNHN-B3735), ♂ 72.8 × 88.1 mm, Samoa, ‘Astrolabe’ Exp., presumed Type, D. Guinot 1972. — Original label: “*Cardisoma urvillei* Edw., ♂, *C. obesum* Dana?, Samoa, Exp. de l’ ‘Astrolabe’ ”; on the right chela: “*C. urvillei*, Samoa”. — Additional label: “Type présumé, D. Guinot 1972”.

PRESERVATION. — Dry. Carapace with a crack on right gastric/cardiac region; RP2, RP3 missing.

REMARKS

Türkay (1974a: 969, 973) considered the specimen MNHN-IU-2000-3735 (= MNHN-B3735) the only type specimen and regarded it as the holotype. Henri Milne Edwards (1853) mentioned that the chelae changed according to the age, a sentence suggesting that several individuals had been seen and the description not based on a unique specimen. Since the original description was based on more than one specimen, a holotype could not be assumed. By inference that the specimen was a holotype, Türkay (1974a) can be deemed to have designated that specimen as the lectotype (*Code*, Art. 74.6). The *Astrolabe* Expedition (1826-1829) directed by Dumont d’Urville visited Samoa: in the CAA, 1829 is the entry date for material collected during this exploration by “Quoy & Gaimard” (see Appendix).

The holotype of *Cardisoma obesum* Dana, 1851, another junior subjective synonym of *C. carnifex*, was recently discovered in the USNM (USNM 2356). This dried holotype now consists of only the carapace and a part of the cephalothorax only, so its sex cannot be determined (Ng 2017: 5, figs 4, 5).

Discoplax gracilipes Ng & Guinot, 2001
 (Fig. 2B)

Discoplax gracilipes Ng & Guinot, 2001: 324, figs 9-11, 12B, 14-16.

CURRENT TAXONOMIC STATUS. — *Discoplax gracilipes* Ng & Guinot, 2001. See Guinot *et al.* 2018.

PARATYPES (by original designation). — MNHN-IU-2014-11214 (= MNHN-B26950), 1 ♀ 22.1 × 25.7 mm, station 85-062, Tuala Cave, Panglao Island, Bohol, 0-1m depth, mud bottom, in dark



FIG. 2. — **A**, *Cardisoma urvillei* H. Milne Edwards, 1853, MNHN-IU-2000-3735 (= MNHN-B3735), lectotype, ♂; **B**, *Discoplax gracilipes* Ng & Guinot, 2001, MNHN-IU-2014-11214 (= MNHN-B26950), paratype, ♀; **C**, *Discoplax longipes* A. Milne-Edwards, 1867, MNHN-IU-2000-3763 (= MNHN-B3763), lectotype, ♂; **D**, *Gecarcinus digueti* Bouvier, 1895, MNHN-IU-2000-10951 (= MNHN-B10951), holotype, ♂; **E**, *Gecarcinus lagostoma* H. Milne Edwards, 1837, MNHN-IU-2000-3750 (= MNHN-B3750), lectotype, ♂; **F**, *Gecarcinus lateralis* Fréminville in Guérin-Méneville, 1832, MNHN-IU-2000-3758 (= MNHN-B3758), neotype, ♂; **G**, *Gecarcinus nobilii* Perger & Wall, 2014, MNHN-IU-2014-11211 (= MNHN-B12314), paratype, ♀; **H**, *Pelocarcinus cailloti* A. Milne-Edwards, 1890, MNHN-IU-2000-3751 (= MNHN-B3751), holotype, ♂. Scale bars: A, E, 5 cm; B-D, F-H, 2 cm.

section, salinity 4ppt., with dip net, coll. T. M. Iliffe, 3.IV.1985. — MNHN-IU-2014-11215 (= MNHN-B26951), 1 ♂ 15.5 × 17.7 mm, station 85-067, Calingob Cave, Panglao Island, Bohol, 1 m depth, bottom rocks, with dip net, coll. T. M. Iliffe, 6.IV.1985. — MNHN-IU-2014-11216 (= MNHN-B26952), 1 ♂ 15.8 × 18.0 mm, station 85-077, Underpass Cave, Panglao Island, Bohol, 1 m depth, salinity 8 ppt, coll. T. M. Iliffe, 8.IV.1985. — MNHN-IU-2014-11217 (= MNHN-B27770), 1 ♂ 26.3 × 29.6 mm, 1 ♀ 19.9 × 22.7 mm, Tawala Cave, in pools near entrance, Tawala, Panglao Island, Bohol, Philippines, coll. L. Liao *et al.*, 17.XII.2000. — MNHN-IU-2014-11218 (= MNHN-B27771), 2 ♂ 30.9 × 35.6 mm, 40.6 × 46.9 mm, Virata Cave, Libaong, Panglao Island, Bohol, Philippines, coll. local villagers, 18.XII.2000.

PRESERVATION. — In alcohol.

REMARKS

The holotype, a male 45.9 × 53.1 mm, Virata Cave, Libaong, Panglao Island, Bohol, Philippines, coll. local villagers, 18.XII.2000, is deposited at USC, Philippines. Other paratypes are deposited at NSM, USC and ZRC.

Discoplax longipes A. Milne-Edwards, 1867 (Fig. 2C)

Discoplax longipes A. Milne-Edwards, 1867: 284; 1873a: 294, pl. 15.

CURRENT TAXONOMIC STATUS. — *Discoplax longipes* A. Milne-Edwards, 1867 (see Ng & Guinot 2001: 317; Guinot *et al.* 2018: 563).

LECTOTYPE (by inference of holotype by Türkay 1974c: 259, as *Cardisoma longipes*; Ng & Guinot 2001: 317). — MNHN-IU-2000-3763 (= MNHN-B3763), ♂ 54.0 × 55.0 mm, New Caledonia; presumed type, D. Guinot 1972; *Discoplax longipes* A. Edw., B3763, det. Guinot & Ng 2001. — Original label: “*Cardisoma longipes*, A. M. Edw. (= *Discoplax longipes* A. Edw.), Nouvelle-Calédonie”. Additional labels: “*Cardisoma longipes* A. M. Edw. (= *Discoplax longipes* A. M. Edw.). Nelle Calédonie”. “Type présumé, D. Guinot 1972”. “*Cardisoma longipes* (A. Milne-Edwards 1873), Révision M. Türkay VI.1972”; “*Discoplax longipes* A. Edw., B3763, det. Guinot et Ng 2001”.

PRESERVATION. — Dry. LP3, RP3 dactyli missing.

REMARKS

This specimen, the only one under this name in the MNHN collections, was regarded as the holotype by Türkay (1974c: 259, as *Cardisoma longipes*, with measurements 54.0 × 49 mm); on account of the measurements similar to those noted by A. Milne-Edwards (1867), it was considered the holotype by monotypy by Ng & Guinot (2001: 317, with measurements 54.0 by 55.0 mm) and also by Ng & Shih (2015: 383, but with measurements 54.6 × 48.5 mm). In the absence of mention of several specimens in the original description, it is considered the lectotype. Ng & Shih (2015: figs 1A-D, 11C, D) reproduced the figures of A. Milne-Edwards (1873a: pl. 15) and figured the gonopods of this specimen.

Alphonse Milne-Edwards (1873a: 294) regarded *Discoplax longipes* as “very rare” in New Caledonia. The specimen was simply labelled as from “New Caledonia”, without any other indication as is often the case in old descriptions and records, but the presence of the species on the main

island of New Caledonia is doubtful. It seems that, since A. Milne-Edwards (1867), no specimens of *D. longipes* have been collected from the main Island where the species is not known locally (Ng & Guinot 2001). The specimen on which A. Milne-Edwards (1867) based his description, i.e., the present lectotype, may have actually been collected from the nearby Loyalty Islands where *D. longipes* is not uncommon (see Ng & Shih 2014).

Gecarcinus digueti Bouvier, 1895 (Fig. 2D)

Gecarcinus Diguetti Bouvier, 1895: 8; 1898: 372.

CURRENT TAXONOMIC STATUS. — Junior subjective synonym of *Jobnargathia planata* (Stimpson, 1860) (see Bouvier 1898: 372).

HOLOTYPE (by monotypy, see Rathbun 1899). — MNHN-IU-2000-10951 (= MNHN-B10951), ♂ 46.3 × 69.0 mm, Baja California, coll. M. Diguët, E.-L. Bouvier det. — Original label: “*Gecarcinus planatus* Stimpson, Basse-Californie, M. Diguët, (1898), E.-L. Bouvier det.”.

PRESERVATION. — Dry.

REMARKS

The species is known based on a short description by Bouvier (1895: 8) for a unique specimen brought by Diguët from Baja California in Mexico in 1894 (“Basse-Californie” in Bouvier 1895: 6). This specimen MNHN-IU-2000-10951 (= MNHN-B10951), a male specimen, dry, 67.0 mm cw according to Bouvier (1898: 372), can be considered the holotype by monotypy of *Gecarcinus digueti*. Rathbun (1899: 73), who wrote “The type and only specimen hitherto collected is from Lower California and is in the Paris Museum”, provided several measurements of body parts of this specimen, notably for the carapace 46.3 × 69.0 mm (measurements presently verified). The species was redescribed by Bouvier (1898: 372) with more detail (but not figured) based on another specimen collected in 1897 by Diguët in the same region, a male MNHN-IU-2016-8892 (= MNHN-B16029), now preserved in alcohol. This second specimen was not taken into account by Rathbun (1899: 73; 1918: 359, under *Gecarcinus planatus* Stimpson, 1860).

Perger *et al.* (2011: 58, 59), based on information from the MNHN, agreed that the male MNHN-IU-2000-10951 (= MNHN-B10951) was most likely the holotype of *Gecarcinus digueti*, being “the only specimen in the MNHN concordant with the type specimen of *G. digueti* described by Bouvier (1895) and subsequently reported by Rathbun (1899) [...]”. Rathbun (1899) recognised *G. digueti* as a distinct species, recording it from María Cleofa Island [i.e., Cleofas Island] in the Gulf of California, and apparently examined the type in the Paris Museum which she stated was a male measuring 69.0 by 46.3 mm [...]. On the basis of the available data, this MNHN specimen is almost certainly the holotype of *G. digueti* Bouvier, 1895.”

Diguet is known for his trips in Mexico (see Appendix); “Basse-Californie” of Bouvier (1895; 1898) and on the MNHN label corresponds to Baja California, Mexico (not Southern California, United States).

Gecarcinus digueti was synonymised with *G. planatus* Stimpson, 1860 by Bouvier (1898: 372), Rathbun (1918: 359), Türkay (1970: 346, as *Gecarcinus (Johngarthia)*), and by Perger *et al.* (2011: 59, as *Johngarthia*) who concluded: “The presumptive holotype of *G. digueti* has all the diagnostic characters which we here identify with *J. planatus* and we are confident they are conspecific.”

Gecarcinus lagostoma H. Milne Edwards, 1837
(Fig. 2E)

Gecarcinus lagostoma H. Milne Edwards, 1837: 27 (see Remarks). — H. Milne Edwards in Fréminville, 1835 (footnote): 218 (*nomen nudum*).

CURRENT TAXONOMIC STATUS. — *Johngarthia lagostoma* (H. Milne Edwards, 1837) (see Türkay 1970: 345), accepted recombination.

LECTOTYPE (designated by Türkay 1973: 96). — MNHN-IU-2000-3750 (= MNHN-B3750), ♂ 63.7 × 82.4 mm (measurements by Türkay 63 × 81 mm), ?Australia (inaccurate locality; in fact, Brazil, see Remarks), coll. Quoy and Gaimard, M. Türkay revision VI.1972. — Original label: “*Gecarcinus lagostoma* M. Edwards, ?Australie, MM. Quoy et Gaimard”. Additional label: “Lectotype! *Gecarcinus (Johngarthia) lagostoma* H. Milne-Edw., 1837, ♂, Révision M. Türkay VI.1972”.

PRESERVATION OF THE LECTOTYPE. — Dry. Carapace with a fissure radiating from the cardiac region to hepatic region.

PARALECTOTYPES (designated by Türkay 1973: 96). — MNHN-IU-2000-3748 (= MNHN-B3748), 1 ♀ 73.9 × 95.5 mm, same data as lectotype. — MNHN-IU-2000-3749 (= MNHN-B3749), 1 ♀ 73.4 × 97.2 mm, same data as lectotype.

PRESERVATION OF THE PARALECTOTYPES. — Dry.

REMARKS

The binomen *Gecarcinus lagostoma* introduced in a footnote by H. Milne Edwards in Fréminville (1835: 218) is a *nomen nudum* since it is not accompanied by a description or indication of the taxon it represents. Later, H. Milne Edwards (1837: 27) recorded that the specimen of *Gecarcinus lagostoma* was collected by Quoy & Gaimard in “Australasia” (and not in Australia), and he (H. Milne Edwards 1837: 25) described in the same paper *Gecarcoidea lalandii* from Brazil. Ortmann (1894: 739, as *G. lalandei*) considered inexact the origin of *Gecarcoidea lalandii*, whereas Ortmann (1897: 338) and then Bouvier (1907: 498) considered inexact the type locality of *Gecarcinus lagostoma* (see also Tesch 1918; Tweedie 1947; Tavares 1989; Lai *et al.* 2017). As effectively *Johngarthia lagostoma* and *G. lalandii* were currently known from islands of the southern Atlantic Ocean and from the Indo-West Pacific regions, respectively, Türkay (1970: 346) concluded that H. Milne Edwards (1837) switched the

collecting records of *Gecarcinus lagostoma* and *Gecarcoidea lalandii*, or, perhaps, the labels were exchanged during the same expedition. The diagnosis of *G. lagostoma* conforms, however, with the specimens of the type series (see also Rathbun 1918: 361, under *Gecarcinus lagostoma*; 1918: 365, under ?*Gecarcoidea lalandii*; Türkay 1973: 96). Thus, the locality “Australasia” of the lectotype and paralectotypes must be recognised as inaccurate, and Brazil must be considered the type locality of *Gecarcinus lagostoma*, whereas “Australasia” is the original type locality of *Gecarcoidea lalandii*. Lai *et al.* (2017: 410, 416, figs 5E, 9D) have recently selected a fresh male specimen 64.2 × 88.8 mm from Quang Nam, central Vietnam collected in 2009, as the neotype of *G. lalandii* (ZRC 2010.0321).

Johngarthia lagostoma is only known from Ascension Island in the South Atlantic and from three islands off Brazil (Trinidad, Fernando de Noronha, Atol das Rocas), western Atlantic (Melo 1996; Hartnoll *et al.* 2006; Hartnoll *et al.* 2010: fig. 1).

The differences between the measurements by Türkay (63.0 × 81.0 mm) and ours (63.7 × 82.4 mm) are due to the restoration of the lectotype in the 1990s.

Gecarcinus lateralis Fréminville in Guérin, 1832
(Fig. 2F)

“*Gecarcinus lateralis*. Fréminville” Guérin, 1832 (1829-1837): 7; “*Gecarcinus lateralis* Fréminv.” Guérin, 1832 (1829-1837): caption of pl. 5, fig. 1.

Ocypoda lateralis – Fréminville 1835: 224.

Gecarcinus lateralis – H. Milne Edwards 1837: 27; Atlas, pl. 18, figs 1-6.

CURRENT TAXONOMIC STATUS. — *Gecarcinus lateralis* Fréminville in Guérin, 1832 (see Low *et al.* 2013: 104).

NEOTYPE (by present designation). — MNHN-IU-2000-3758 (= MNHN-B3758), ♂ 36.7 × 47.2 mm, Guadeloupe, coll. Beaupertuis. — Original label: “*Gecarcinus lateralis*, Fréminv., Guadeloupe, Mr Beaupertuis”. — Additional labels: “Lectotype. J.F. [J. Forest] 1.3.69”; “*Gecarcinus lateralis* Fréminville, Guadeloupe, M. Beaupertuis, Lectotype”; “*Gecarcinus (Gecarcinus) lateralis lateralis* (Fréminville, 1835), Révision M. Türkay, VI.1972”.

PRESERVATION. — Dry. Specimen complete, mounted on cardboard.

REMARKS

Two assertions previously published in the literature, related to the authorship and the type material of *Gecarcinus lateralis* need to be corrected.

The authorship of *G. lateralis* is traditionally attributed to Fréminville (1835) (e.g. H. Milne Edwards 1837; Chace & Hobbs 1969; Türkay 1970, 1974a; Bliss *et al.* 1978; Hartnoll 1988; Ng & Guinot 2001; Ng *et al.* 2008; Perger & Wall 2014). Low *et al.* (2013) stated that Guérin (1832 in Guérin 1829-1837) must take precedence. Fréminville (1835) described *Ocypoda lateralis* from La Désirade, Guadeloupe, Marie-Galante, Martinique, Les Saintes in the West Indies,

based on specimens that he has probably himself collected (see Appendix). In the introduction of this paper (1835: 213, footnote), the editor of the volume, actually H. Milne Edwards, indicates about Fréminville's "tourlourou": "son *Ocypoda lateralis* est une espèce de Gécarcin bien distincte et dont j'ai donné une figure dans mon *Histoire naturelle des Crustacés*. M. Guérin l'a également figuré dans son *Iconographie du règne animal*" ["his *Ocypoda lateralis* is a clearly distinct species of 'Gécarcin' and to which I have given a figure in my *Histoire naturelle des Crustacés*. M. Guérin has also figured it in his *Iconographie du règne animal*"]. Guérin (1832, in Guérin 1829-1837: 7) had previously used the name "*Gecarcinus lateralis* Fréminville" and illustrated what is clearly the same species. It is very likely that Guérin used the same material as Fréminville and that he was aware of the future species by Fréminville. According to the official dates, Guérin's plate has been published before the description by Fréminville in 1835. According to Low *et al.* (2013) the authorship of *G. lateralis* must be credited to Guérin (1832). But, as Fréminville is solely responsible for the species name in a way satisfying the criteria of availability (*Code*, Art. 50.1.1), the authorship of *G. lateralis* should be credited to Fréminville in Guérin (1832).

Türkay (1970), based on erroneous indications given by J. Forest, the curator of Crustacea Collection in the MNHN at the time, regarded as the type series of *G. lateralis* material collected by two French naturalists, Beaupertuis and Bélanger, and deposited in this institution. Türkay (1970: 337) selected as lectotype of *Gecarcinus (Gecarcinus) lateralis* a specimen from Guadeloupe collected by Beaupertuis. Türkay (1974a: 974, 975) then designated as paralectotypes one male and one female from Guadeloupe MNHN-IU-2000-3757 (= MNHN-B3757), and two males and one female collected by Bélanger from Martinique (MNHN-IU-2000-3755 [= MNHN-B3755], MNHN-IU-2000-3756 [= MNHN-B3756]). A colour figure of the lectotype was published by Perger & Wall (2014: fig. 6A-C). However, Beaupertuis and Bélanger's specimens are likely to not have been collected during this period (i.e., before 1832), these two naturalists having traveled in the Antilles later on as shown by the entry dates of their material in the CAA (Beaupertuis: 1839 from Guadeloupe; Bélanger: 1859, 1860, 1864 from Martinique) (see Appendix), and cannot constitute the original material seen by Guérin (1832).

According to the *Code* (Art. 74.2), "the name-bearing type of any nominal taxon, once fixed in conformity with the provisions of the *Code*, is not subject to change" except if the lectotype is "found not to have been a syntype". Thus, "if it is demonstrated that a specimen designated as a lectotype was not a syntype, it loses its status of lectotype". A neotype of *G. lateralis* must be fixed. Having been previously referred to, although unsupported, as the lectotype for the species by Türkay (1970), then by Perger & Wall (2014), and considering its locality, the specimen from Guadeloupe registered MNHN-IU-2000-3758 (= MNHN-B3758) is eligible for neotype designation: it is hereby selected as the neotype of *Gecarcinus lateralis* Guérin, 1832.

Gecarcinus nobilii Perger & Wall, 2014
(Fig. 2G)

Gecarcinus nobilii Perger & Wall, 2014: 97, fig. 3D-F.

CURRENT TAXONOMIC STATUS. — *Gecarcinus nobilii* Perger & Wall, 2014.

PARATYPE. — MNHN-IU-2014-11211 (= MNHN-B12314), 1 ♀ 36.6 × 44.3 mm Ecuador, St. Elena, Festa coll. — Original label: "*Gecarcinus Festae* Nob. (cotype), St Helena, Festa, Ecuador, Nobili 1901, Muséum Paris".

PRESERVATION. — In alcohol.

REMARKS

Actually Nobili never published a description of *Gecarcinus festae*. In 1901 he described *Sesarma festae* and *Uca festae* and in the same paper referred to two specimens of *Gecarcinus* collected in Ecuador as *Gecarcinus ruricola*, a species restricted to western Atlantic islands (Türkay 1970; Perger & Wall 2014). The abovementioned specimen, with the name of Nobili (1901) on the label, was likely collected by Enrico Festa during his 1895-1898 trip to Ecuador (*Viaggio del Dr. Enrico Festa nella Repubblica dell'Ecuador et regioni vicine*), then studied by Nobili who probably first considered it as new and dedicated to Festa as "*Gecarcinus festae*" without finally establishing it. The unpublished binomen *Gecarcinus festae* is a *nomen nudum*. The MNHN specimen examined by Nobili and selected as paratype of the new species *Gecarcinus nobilii* dedicated to Nobili by Perger & Wall (2014) is figured in their fig. 3D-F. The holotype is preserved in LACM.

Furthermore, Pacific *Gecarcinus (Gecarcinus) lateralis quadratus sensu* Türkay (1970: 338; see Prahel & Manjarrés 1984: 155) and *Gecarcinus lateralis sensu* Türkay 1987 (: 147, fig. 7) have been referred to as *Gecarcinus nobilii* Perger & Wall, 2014. Note that *Gecarcinus quadratus* Saussure, 1853 was recently recognised as a valid species (Toledano Carrasco & Villalobos Hiriart 2018).

Pelocarcinus cailloti A. Milne-Edwards, 1890
(Fig. 2H)

Pelocarcinus Cailloti A. Milne-Edwards, 1890: 174, pl. 13.

CURRENT TAXONOMIC STATUS. — Junior subjective synonym of *Gecarcoidea lalandii* H. Milne Edwards, 1837 (see Rathbun 1918: 364).

HOLOTYPE (by monotypy, see Türkay 1974a: 973). — MNHN-IU-2000-3751 (= MNHN-B3751), ♂ 54.0 × 75.0 mm, Loyalty Islands, coll. M. Caillot, Type. — Original labels: "*Pelocarcinus cailloti*"; "*Pelocarcinus cailloti* A. M. Edw. (Type), I. Loyauté, Caillot, 2523-86"; with "2523 86" on a small label stuck onto the carapace of the specimen. Additional label: "Type présumé (Holotype) de *Pelocarcinus cailloti* A. Milne Edwards 1890; *Gecarcoidea lalandii* H. Milne Edwards 1837, Révision M. Türkay VI.1972".

PRESERVATION. — Dry. Carapace cracked; LP1, LP5 missing.

REMARKS

Alphonse Milne-Edwards (1890: 175) clearly indicated that the species in his hands was represented by a unique speci-

men, so it is a holotype by monotypy, which corroborates Türkay's (1974a: 972) inference of the holotype. The mention 2523-86 on the label corresponds to the information recorded in the CAA.

Pelocarcinus marcheii A. Milne-Edwards, 1890
(Fig. 3A)

Pelocarcinus Marcheii A. Milne-Edwards, 1890: 173, pl. 12.

CURRENT TAXONOMIC STATUS. — Junior subjective synonym of *Gecarcoidea lalandii* H. Milne Edwards, 1837 (see Türkay 1974a: 974).

LECTOTYPE (designation by Türkay 1974a: 973). — MNHN-IU-2000-3752 (= MNHN-B3752), ♂ 51.5 × 70.9 mm (measurements by Türkay: 54.0 × 70.0 mm), Dos Hermanas Islands, Philippines, coll. Alfred Marche. — Original labels: "*Pelocarcinus Marcheii*", "*Pelocarcinus Marcheii* A. M. Edw., no 942, 5 crabes, île des Deux Sœurs, Iles Philippines, Alf. Marche". Additional labels: "*Pelocarcinus Marcheii* A. M. Edw. (d'après A. M. Edwards), *Gecarcoidea Lalandei* Edw. (d'après Ortman), Iles Philippines, Ile des Deux Sœurs, Marche, 2725-1882"; "*Gecarcoidea lalandii* H. M. Edwards 1837, Révision M. Türkay; VI-1972. Lectotype de *Pelocarcinus marcheii* A. Milne-Edw. 1890".

PRESERVATION OF THE LECTOTYPE. — Dry. RP1, LP1, LP4 missing.

PARALECTOTYPES (designation by Türkay 1974a: 974). — MNHN-IU-2000-3753 (= MNHN-B3753), 1 ♂ 57.0 × 79.1 mm, 3 ♀ 47.6 × 63.3 mm, 48.1 × 61.4 mm, ca 57.5 × c. 73.7 mm, same data as lectotype.

PRESERVATION OF THE PARALECTOTYPES. — Dry. 1 ♂ and 1 ♀ in good condition but pereopods detached; 2 ♀ in bad condition.

REMARKS

Türkay (1974a: 973) gave the carapace measurements as 54.0 × 70.0 mm, but presently the specimen measures 51.5 × 70.9 mm.

The mention 2725-1882 on the label corresponds to the information recorded in the CAA.

Thelphusa rotunda Quoy & Gaimard, 1824
(Fig. 3B)

Thelphusa rotunda Quoy & Gaimard, 1824: 527, pl. 77, fig. 1.

Cardisoma frontalis H. Milne Edwards, 1853: 170 [204].

CURRENT TAXONOMIC STATUS. — *Tuerkayana rotundum* (Quoy & Gaimard, 1824), see Guinot *et al.* (2018: 564, 566, table 1).

LECTOTYPE (by present designation). — MNHN-IU-2000-3745 (= MNHN-B3745), ♂ 50.0 × 63.0 mm, Oceania, M. Guérin. — Original label: "*Cardisoma rotundum* (Quoy & Gaimard 1824), Océanie, M. Guérin". Additional labels: "*Cardisoma rotundum* (Quoy & Gaimard 1824), Type présumé de *C. frontalis* H. Milne-Edw. (1853) (Holotype), Rev. M. Türkay VI.1972".

PRESERVATION. — Dry. Specimen stuck onto corkboard; carapace cracked on posterior region; two pereopods missing; pleon detached; G1 rehydrated, in alcohol.

REMARKS

The species, described by Quoy & Gaimard (1824: 527, pl. 77, fig. 1) and originating from the banks of rivers in Guam, Mariana Islands, was collected during the Expedition of L. de Freycinet on the *Uranie* (1817-1820) (see Appendix). Quoy & Gaimard (1824: 527) did not explicitly mention if the taxon was based on a single individual, but their description provides information on the behaviour of several crabs: "ces animaux extrêmement défiants" ["these extremely challenging animals"], an indication that numerous specimens were probably collected in Guam. "Océanie" is a large area that can include Guam, thus the MNHN specimen such labelled may constitute a part of the type material.

Türkay (1974a: 971, 972; pers comm., Jan. 2013) did not consider any specimen as type of *Thelphusa rotunda*, assuming the species was a synonym of *Cardisoma frontalis* H. Milne Edwards, 1853, and regarded the specimen of Quoy & Gaimard (1824) from Guam as the holotype of *C. frontalis*, instead of *T. rotunda*; Türkay (1974b: 236) confirmed this choice (see Opinion 1205).

In the description of *C. frontalis*, H. Milne Edwards (1853: 170 [204]) stated that the locality of *C. frontalis* was not known. Although Davie (2002: 185) mentions under "Type data" of *Cardisoma frontalis* that "syntypes" are most probably deposited at the MNHN, the type material could not be traced in the MNHN collections and may be considered no longer extant. Since the description and illustration of *Thelphusa rotunda* Quoy & Gaimard, 1824 (1824: pl. 77, fig. 1) from Guam in the Mariana Islands (being considered good enough to identify the species) correctly corresponded with *Cardisoma frontalis* and the identity of the two species was not doubted, Türkay (1974a) judged the designation of a neotype for *C. frontalis* superfluous. He selected the specimen MNHN-IU-2000-3745 (= MNHN-B3745) labelled "*Cardisoma rotundum* (Quoy & Gaimard 1824)" as the holotype of *Cardisoma frontalis*. By that action Türkay (1974b: 234-236, fig. 14) considered Guam the type locality of *C. rotundum*. But such an act by Türkay (1974a) is unwarranted (see Code, Art. 73.1.3), and the label in question actually concerns the type of *Thelphusa rotunda* Quoy & Gaimard, 1824.

The statements that the type of *Thelphusa rotunda* was 'in all likelihood' lost and that *Cardisoma frontalis* was the junior synonym of *C. rotunda* are unjustified, with unsatisfactory arguments. Ng & Guinot (2001: 333), regarding *Discoplax* A. Milne-Edwards, 1867 as a distinct genus (see Guinot 1988, 1994), treated *Cardisoma frontalis* as the junior synonym of *Discoplax rotunda*. Even though the two species are synonymous, the specimen of Quoy & Gaimard (1824) from Guam is not the type of *C. frontalis* but, instead, that of *Tuerkayana rotundum* (Quoy & Gaimard, 1824). The MNHN specimen labelled "Océanie" and regarded as the holotype of *C. frontalis* by Türkay (1974a, b) is eligible to be designated as the lectotype of *Tuerkayana rotundum* (Quoy & Gaimard, 1824), see Guinot *et al.* (2018).

Family GRAPSIDAE MacLeay, 1838

Grapsus albolineatus Lamarck, 1818

Grapsus albo-lineatus Lamarck, 1818: 249.

CURRENT TAXONOMIC STATUS. — *Grapsus albolineatus* Lamarck, 1818.

TYPE MATERIAL. — None extant.

REMARKS

The binomen “*Grapse albo-lineatus*” (“grapse rayé de blanc” or white-striped grapse) has been introduced by Latreille, in Milbert (1812: 275) but *Grapsus albolineatus* is usually credited to Lamarck (1818: 249, as *Grapsus albo-lineatus*, “grapse raies-blanches”). As is often the case, Latreille in Milbert (1812) and Lamarck (1818) were based on the same material, namely a crab collected by Mathieu from Mauritius (= Île de France; see also Latreille 1825: 148), and referred to the same species. Latreille in Milbert (1812: 275) wrote “*grapse*” (“Ce sont les *grapses* de M. Lamarck” [These are the *grapses* of M. Lamarck]). Although “*G. albo-lineatus*” is a binominal combination with latinised species names, the absence of any diagnosis makes it not available (see the discussion below). The genus name *Grapsus* belongs to Lamarck (1801: 150), with *Cancer grapsus* Linnaeus, 1758 as type species by tautonymy (see also designation by Latreille 1810: 422).

Grapsid species cited in Latreille in Milbert (1812: 275), i.e., *Grapsus albolineatus*, *G. erythrocheles*, *G. tuberculatus* and *G. tessellatus*, correspond to two different nomenclatural situations. *Grapsus tessellatus* “grapse damier” (“checkered grapse”) is described in a few lines: this constitutes a diagnosis making the name available: consequently, it can be credited to Latreille in Milbert (1812) as *Lybia tessellata* (see Guinot 1976).

The case is different for the three other “*grapses*”: *G. albolineatus* “grapse rayé de blanc” (white-striped grapse); *G. erythrocheles* “grapse à pinces rouges” (grapse with red claws), *G. tuberculatus* “grapse tuberculé” (tuberculated grapse).

In most French and German scientific works at this time, the Latin name was accompanied by its translation in French (e.g. Latreille 1806; Lamarck 1818; H. Milne Edwards 1834, 1837), or in German, (e.g. Herbst 1782-1804). These specific spellings are only the latinisation of the names depicting morphological (shape, colour, ornamentation), behavioural, geographical and other features, by simple juxtaposition of both names. This simple translation of the names is not enough to constitute a diagnosis and to make the taxa available, and does not correspond to a brief description. These names cannot satisfy the requirement of Article 12.1 of the *Code* stipulating that (for the names published before 1931) to be available a taxon must be accompanied by a description (even if only the colour) or a definition of the taxon that it denotes, or by an indication. According to Ng *et al.* (2008: 22) these three species were “defined by their colour or shape”, but this is not the case and these names are not available.

Moreover, Ng *et al.* (2008: 22) have treated the three above-mentioned *grapses* in the same manner as the case of *Grapsus tessellatus*, and credited *Grapsus albolineatus*, *Grapsus*

erythrocheles and *Grapsus tuberculatus*, like *G. tessellatus*, to Latreille in Milbert (1812). It is an erroneous generalisation: *G. tessellatus* is an available name with the authorship of Latreille in Milbert (1812), whereas the other three names are clearly *nomina nuda*. *Grapsus albolineatus* belongs to Lamarck, 1818, *G. erythrocheles* is not available (or at least corresponds to a *species inquirenda*); *G. tuberculatus* must be credited to Lamarck (1818: 247, as *Plagusia tuberculata*) (Schubart & Ng 2000: 327, 334, fig. 3A).

To avoid ambiguity, a point that requires discussion is the meaning of “vernacular”. According to the English glossary of the *Code* (ICZN 1999: 110) a vernacular name is “A name of an animal or animals in a language used for general purposes as opposed to a name proposed only for zoological nomenclature”, whereas a zoological name is “The scientific name of an animal taxon in binominal nomenclature”. Thus in French scientific works at the period of Henri Milne Edwards (1834, 1837), the new taxa are proposed in a scientific context and are not vernacular names, conversely to the views of most carcinologists (including Ng *et al.* 2008: 20).

The type material from Mauritius collected by Mathieu was not found in the MNHN collection. A neotype should be fixed for *Grapsus albolineatus*, preferably from the type locality, Mauritius or its proximity (*Code*, Art. 75.3.6), as it is considered the senior synonym of numerous species (see Banerjee 1960: 147, 154; Holthuis 1977: 145, 147), such as *G. strigosus* (Herbst, 1799), from the Indian Ocean; *G. (Goniopsis) flavipes* MacLeay, 1838, from Cape of Good Hope; *G. peroni* H. Milne Edwards, 1853, from Australia (see below); and *G. longipes* Stimpson, 1858, from Kikaishima, southern Japan, and Hong Kong (Davie 2002). The type locality “les mers de l’Île-de-France” and the occurrence of this species on the east coast of Africa was questioned by Crosnier (1965: 17) but according to Holthuis (1977: 147) it is one on the most common and conspicuous crabs of the Red Sea.

A neotype designation is unfortunately not possible at this time because the MNHN collection does not possess any material from Mauritius or a nearby locality (*Code*, Art. 75.3.6).

Grapsus granulatus H. Milne Edwards, 1853, from the Red Sea, identified as *G. albolineatus* by some authors (e.g. Banerjee 1960; Davie 2002), is regarded as distinct by others (e.g. Crosnier 1965; Holthuis 1977; Vannini & Valmori 1981; Zaouali *et al.* 2007; Ng *et al.* 2008); see below.

Grapsus brevipes H. Milne Edwards, 1853
(Fig. 3C)

Grapsus brevipes H. Milne Edwards, 1853: 136 [170].

CURRENT TAXONOMIC STATUS. — Junior subjective synonym of *Geograpsus lividus* (H. Milne Edwards, 1837) (see Kingsley 1880: 195).

LECTOTYPE (by present designation). — MNHN-IU-2000-10978 (= MNHN-B10978), ♂ 28.5 × 36.0 mm, patria ignota. — Original label: “*Grapsus brevipes* M. Edw.”.

PRESERVATION. — Dry. Specimen stuck to cardboard; a crack on the left branchial region of the carapace.



FIG. 3. — **A**, *Pelocarcinus marchei* A. Milne-Edwards, 1890, MNHN-IU-2000-3752 (= MNHN-B3752), lectotype, ♂; **B**, *Thelphusa rotunda* Quoy & Gaimard, 1824, MNHN-IU-2000-3745 (= MNHN-B3745), lectotype, ♂; **C**, *Grapsus brevipes* H. Milne Edwards, 1853, MNHN-IU-2000-10978 (= MNHN-B10978), lectotype, ♂; **D**, *Grapsus cruentatus* Latreille, 1803, MNHN-IU-2000-3407 (= MNHN-B3407), neotype, ♂; **E**, *Grapsus fourmanoiri* Crosnier, 1965, MNHN-IU-2008-10635 (= MNHN-B11803), lectotype, ♂; **F**, *Grapsus gracilipes* H. Milne Edwards, 1853, MNHN-IU-2000-3411 (= MNHN-B3411), lectotype, ♂; **G**, *Grapsus granulatus* H. Milne Edwards, 1853, MNHN-IU-2000-3417 (= MNHN-B3417), lectotype, ♂; **H**, *Grapsus grayi* H. Milne Edwards, 1853, MNHN-IU-2000-3421 (= MNHN-B3421), lectotype, ♀. Scale bars: A-D, F, H, 2 cm; E, 10 mm; G, 5 cm.

REMARKS

The description did not mention how many specimens were examined to diagnose the species. Only one specimen was found in the MNHN collection but, as there is no assumption it is a holotype (i.e., fixed by monotypy), it is designated here as lectotype (*Code*, Recommendation 73F).

Grapsus cruentatus Latreille, 1803
(Fig. 3D)

Grapsus cruentatus Latreille, 1803: 70.

CURRENT TAXONOMIC STATUS. — *Goniopsis cruentata* (Latreille, 1803), accepted recombination (see Kinglsey 1880: 190).

NEOTYPE (by present designation). — MNHN-IU-2000-3407 (= MNHN-B3407), ♂ 40.9 × 49.8 mm, Martinique, coll. M. Plée. — Original label: “*Grapsus cruentatus* Latreille, Martinique, M. Plée”; “Plée, Martinique, 1826, n°28” is written with Chinese ink directly on the left cheliped.

PRESERVATION. — Dry. LP4, RP5 dactylus, right eye missing, LP2 detached.

REMARKS

Latreille (1803: 70) described this species from the islands of South America (“îles de l’Amérique méridionale”), imprecise information (as it was common in the past) indicating the geographical origin. Henri Milne Edwards (1837: 85) has added two localities, Brazil and Antilles, based on specimens present at that time in the collection of the MNHN (as “C.M.”). Today, the MNHN collection contains several samples of dry specimens labelled *Grapsus* or *Goniopsis cruentatus*, from Brazil, Mexico, French Guiana and Martinique. They were all collected too late to belong to the type series; moreover, some of the localities cannot be considered “islands of South America”. For example: (1) the sample with one specimen MNHN-IU-2000-3406 (= MNHN-B3406) collected from Brazil by Delalande in 1816 (see Appendix), a date that is too late to have enabled Latreille (1803) to examine the material; (2) the sample with one specimen MNHN-IU-2000-3403 (= MNHN-B3403) labelled “Brésil, (Destero), M. Müller” (with a note by “Monod 1953”, indicating this specimen as being a new species of *Metopograpsus*).

Concerning the sample from Martinique in the MNHN collection, which could correspond to the type locality, consisting of two males collected by M. Plée, it cannot belong to the type series: the material of Plée was collected after 1820 (Bauchot *et al.* 1990: 117; see Appendix), and this is confirmed by the entry date “1826” of Plée’s material in the CAA. Since no MNHN material conforms to a presumed syntype and no name-bearing type is believed to be extant, a neotype should be designated. The more complete male of the MNHN-B3406 sample has been selected as neotype, MNHN-IU-2000-3407 (= MNHN-B3407). The slightly smaller male specimen has been separated and is registered as MNHN-IU-2000-1109 (= MNHN-B3407).

Grapsus fourmanoiri Crosnier, 1965
(Fig. 3E)

Grapsus fourmanoiri Crosnier, 1965: 12-17, figs 4-6, pl. 3, fig. 1, table p. 16.

CURRENT TAXONOMIC STATUS. — *Grapsus fourmanoiri* Crosnier, 1965.

LECTOTYPE (by present designation). — MNHN-IU-2008-10635 (= MNHN-B11803), ♂ 28.0 × 31.7 mm, Nosy Bé, Madagascar, coll. and det. A. Crosnier.

PRESERVATION OF THE LECTOTYPE. — In alcohol. RP1 missing.

PARALECTOTYPES. — MNHN-IU-2014-11212 (= MNHN-B11531), 3 ♂ 22.6 × 25.2 – 24.2 × 27.8 mm, 1 ♀ 21.2 × 24.4 mm, 2 ovig. ♀ 24.1 × 28.6 – 29.5 × 33.4 mm, same data as lectotype.

PRESERVATION OF THE PARALECTOTYPES. — In alcohol.

REMARKS

Crosnier (1965: 14, table p. 16) has based the species on several specimens from Nosy Bé, Madagascar, but he did not expressly mention any type specimens in his publication. He mentions in the text a large specimen (length: 34.1; width: 37.7 mm) and provides measurements of five males and two females in a table (Crosnier 1965: 16). Two lots of specimens deposited at the Muséum, MNHN-IU-2008-10635 (= MNHN-B11803) and MNHN-IU-2014-11212 (= MNHN-B11531) are labelled “Syntypes”. Our measurements of most of the specimens do not correspond to the dimensions provided by Crosnier (1965: 16), except for one male MNHN-IU-2008-10635 (= MNHN-B11803), 28.0 × 31.7 mm. This discrepancy can be easily accounted for by how the specimens were measured. The largest specimen (length: 34.1; width: 37.7 mm) could not be located. The next largest male specimen MNHN-IU-2008-10635 (= MNHN-B11803) is here designated as lectotype of *G. fourmanoiri*. The other specimens from the type series become paralectotypes. It is very likely that Crosnier (1965) has collected and examined more than eight specimens belonging to his type series. Actually, one specimen was donated to Leiden Museum by Crosnier in 1966 (RMNH D 22683, male 23.7 × 27.0 mm, Nosy Bé, Madagascar, coll. and det. A. Crosnier): it is indicated as syntype in the Catalogue of the Types of the Nationaal Natuurhistorisch Museum, Leiden, by Fransen *et al.* (1997: 123) and shows the same ‘type and form’ of label as the labels of the MNHN jars. This RMNH sample also becomes paralectotype.

Fransen *et al.* (1997: 123, footnote) regarded two additional samples as syntypes of *G. fourmanoiri*, but this mention corresponds to an erroneous statement. Crosnier (1965: 17, footnote) wrote: “At Leiden, we have reexamined specimens from Banerjee (1960: 149) from Durban and Reunion Rocks, initially identified as *Grapsus albolineatus*”. According to Fransen (pers. comm., December 2012), two samples (RMNH D3210, one female 32.5 × 35.0 mm, South Africa, Reunion Rocks, 28.X.1938, leg. L. D. Brongersma; RMNH D3250, 2 males 10.8-16.9 × 13.0-19.6 mm, South

Africa, Durban, 10-11.XI.1938, leg. H. Engel) have been deemed by Crosnier as suitable syntypes of his *G. fourmanoiri*. However, despite the *Code's* Recommendation (Art. 74E) about the verification of locality (“When selecting a lectotype, the author should, if possible, verify the accuracy of the locality ascribed to it”), it is obvious that these two samples, RMNH D3250 from Durban and RMNH D3210 from Reunion Rocks, have not been collected from Nosy Bé, Madagascar by A. Crosnier. It is likely that they were only subsequently identified by him as *G. fourmanoiri* and, therefore, they cannot be considered syntypes, even if they correspond to *G. fourmanoiri*.

Grapsus gracilipes H. Milne Edwards, 1853
(Fig. 3F)

Grapsus gracilipes H. Milne Edwards, 1853: 134 [168].

CURRENT TAXONOMIC STATUS. — Junior subjective synonym of *Grapsus tenuicrustatus* (Herbst, 1783) (see Banerjee 1960: 134; Ng *et al.* 2008: 217).

LECTOTYPE (by present designation). — MNHN-IU-2000-3411 (= MNHN-B3411), ♂ 24.6 × 27.2 mm, East Indies. — Original label: “*Grapsus grapsus* Linné = *Grapsus gracilipes* Edw., Indes Orientales”.

PRESERVATION OF THE LECTOTYPE. — Dry. LP3, RP3, RP5 dactyli, RP4, LP2 meri and dactyli missing.

PARALECTOTYPES. — MNHN-IU-2000-3408 (= MNHN-B3408), 1 ♀ 27.1 × 30.1 mm, same data as lectotype. — MNHN-IU-2000-10767 (= MNHN-B10767), 1 ♂ 23.3 × 27.1 mm, same data as lectotype. — MNHN-IU-2000-10769 (= MNHN-B10769), 1 ♀ 29.0 × 32.2 mm, same data as lectotype.

PRESERVATION OF THE PARALECTOTYPES. — Dry.

REMARKS

In the published description by H. Milne Edwards (1853) a locality is mentioned, i.e., “Mers de Chine, Taoranne”. A quick check with Dr Tran Anh Duc and M. Nguyen Thanh Son (Vietnam National University-University of Science) regarding “Taoranne” has revealed that the locality should be Tourane, the French name of Da Nang, a port city in Vietnam. The term “Indes Orientales”, or East Indies, was used in colonial times to designate the territories of South and Southeast Asia, including countries like Iran, Pakistan, India, Nepal, Bhutan, Bangladesh, Myanmar, Sri Lanka, Maldives, Thailand, Malaysia, Vietnam, Cambodia, Laos, the Philippines, Brunei, Singapore, East Timor, and Indonesia. It is thus possible to consider that “Indes Orientales” may correspond to “Mers de Chine”, and “Taoranne” the type locality.

The type status was suspected unknown according to Davie (2002: 214). Four samples of dry *Grapsus gracilipes* are actually present in the MNHN collection and hereby designated as lectotype and paralectotypes, respectively.

Grapsus granulosis H. Milne Edwards, 1853
(Fig. 3G)

Grapsus granulosis H. Milne Edwards, 1853: 135 [169].

CURRENT TAXONOMIC STATUS. — *Grapsus granulosis* H. Milne Edwards, 1853.

LECTOTYPE (by present designation). — MNHN-IU-2000-3417 (= MNHN-B3417), ♂ 64.2 × 71.9 mm, Red Sea, coll. M. Roux. — Original label: “*Grapsus granulosis*, Mer Rouge, M. Roux”.

PRESERVATION OF THE LECTOTYPE. — Dry. Carapace with a vertical crack on the right, a small chip off on the right posterior margin.

PARALECTOTYPES. — MNHN-IU-2000-3455 (= MNHN-B3455), 1 ♂ 61.8 × 67.0 mm, same data as lectotype. — MNHN-IU-2000-10937 (= MNHN-B10937), 1 ♂ 60.4 × 68.4 mm, 1 ♀ 54.1 × 59.2 mm, same data as lectotype.

PRESERVATION OF THE PARALECTOTYPES. — Dry.

REMARKS

The type locality is the Red Sea, and the collector “M. Roux” that is indicated on the label is likely J. L. F. P. Roux who collected material in the Mediterranean Sea and in the Near East (Bauchot *et al.* 1990, 1997; see Appendix). Material brought from the Red Sea by Roux has 1835 as entry date in the CAA. Thus, these samples unambiguously belong to the type series, and a lectotype can be designated.

According to Ng *et al.* (2008: 216, 218), *Grapsus granulosis* was often regarded as a junior synonym of *Grapsus albolineatus* (e.g. Banerjee 1960: 147, 153-154; Davie 2002: 213), but Crosnier (1965: 15, pl. 2, fig. 1) and Holthuis (1977: 147, 148) commented that it is a distinct species (see also Vanini & Valmori 1981; Zaouali *et al.* 2007).

Grapsus grayi H. Milne Edwards, 1853
(Fig. 3H)

Grapsus Grayi H. Milne Edwards, 1853: 136 [170].

CURRENT TAXONOMIC STATUS. — *Geograpsus grayi* (H. Milne Edwards, 1853), accepted recombination (see A. Milne-Edwards 1873a: 288)

LECTOTYPE (by present designation). — MNHN-IU-2000-3421 (= MNHN-B3421), ♀ 34.1 × 42.1 mm, Australia. — Original label: “*Grapsus grayi* Edw., Australie, Museum Britannique!”.

PRESERVATION. — Dry. Carapace cracked on the gastric, cardiac regions; RP2 dactylus, RP3, RP4 meri and dactyli, LP2-LP4 carpi, meri and dactyli missing; pleonal somites 5, 6 damaged; telson missing.

REMARKS

Davie (2002: 213) indicated that the type status was uncertain. There is no doubt, however, that the above-mentioned female specimen was identified by H. Milne Edwards and corresponds to the type material. The mention on the label “Museum Britannique!” punctuated by an exclamation mark corresponds to the indication in the CAA of an exchange with the British Museum in 1849. According to Recommendation 73F of the *Code*, this specimen is hereby designated as lectotype.

Grapsus lividus H. Milne Edwards, 1837
(Fig. 4A)

Grapsus lividus H. Milne Edwards, 1837: 85.

CURRENT TAXONOMIC STATUS. — *Geograpsus lividus* (H. Milne Edwards, 1837), accepted recombination (see Stimpson 1858: 101).

LECTOTYPE (by present designation). — MNHN-IU-2000-3426 (= MNHN-B3426), ♂ 16.4 × 19.1 mm, Antilles, Martinique, coll. M. Plée. — Original label: “*Grapsus lividus* Edw. Martinique, M. Plée”.

PRESERVATION OF THE LECTOTYPE. — Dry. RP2 missing.

PARALECTOTYPES. — MNHN-IU-2000-1100 (= MNHN-B3426), 1 ♀ 13.7 × 15.8 mm, same data as lectotype. — MNHN-IU-2000-3427 (= MNHN-B3427), 1 ovig. ♀ 14.7 × 15.8 mm, 1 ♀ 13.0 × 16.9 mm, same data as lectotype.

PRESERVATION OF THE PARALECTOTYPES. — Dry.

REMARKS

Henri Milne Edwards (1837) indicated that the species was from the Antilles. His description mentioning at least two colour morphs (yellow with red marks; and almost entirely red) reveals that he has examined several specimens. The material collected by Plée in Martinique, his country of birth, most likely belongs to the type series according to the entry date “1826” of Plée’s material mentioned in the CAA (see also Bauchot *et al.* 1990: 117; Appendix). The specimen of “14 lignes” (1 ligne = 0.2255 cm), thus measuring 31.5 mm carapace length, cited by H. Milne Edwards (1837: 85) is no longer present in the MNHN collection, and all the MNHN specimens are smaller. The only male in the Plée material was selected as lectotype.

Grapsus maculatus H. Milne Edwards, 1853
(Fig. 4B)

Grapsus maculatus H. Milne Edwards, 1853: 133 [167], pl. 6, fig. 1.

CURRENT TAXONOMIC STATUS. — Junior subjective synonym of *Grapsus grapsus* (Linnaeus, 1758, *pro parte*) (H. Milne Edwards 1853: 133 [167]; A. Milne-Edwards & Bouvier 1900: 111; Alcock 1900: 392; Manning & Chace 1990: 64).

LECTOTYPE (by present designation). — MNHN-IU-2000-3414 (= MNHN-B3414), ♂ 36.5 × 40.0 mm, Haiti, coll. M. Ricord. — Original label: “*Grapsus grapsus* (= *Grapsus pictus*, *Grapsus maculatus*), M. Ricord, Haiti”.

PRESERVATION OF THE LECTOTYPE. — Dry. LP23, RP12, RP5 missing.

PARALECTOTYPE. — MNHN-IU-2000-1102 (= MNHN-B3414), 1 ♂ 29.2 × 32.7 mm, same data as lectotype.

PRESERVATION OF THE PARALECTOTYPE. — Dry.

REMARKS

The origin of the species is the Antilles. The original sample MNHN-B3414 with two dry specimens (2 males) from Haiti is presumed to belong to the type series, the collector Ricord being known to have collected material in this

region and sent to the MNHN. In the CAA, Ricord (see Appendix) is listed as a collector of material from Cuba with two entries in 1833.

Grapsus maurus Lucas, 1846
(Fig. 4C)

Grapsus maurus Lucas, 1846 (1846-1849): 20, pl. 2, fig. 5 (see Evenhuis 2012: 38).

Leptograpsus maurus – H. Milne Edwards 1853: 173 (Algeria).

CURRENT TAXONOMIC STATUS. — *Pachygrapsus maurus* (Lucas, 1846), accepted recombination (see Heller 1863: 112).

LECTOTYPE (by present designation). — MNHN-IU-2000-3523 (= MNHN-B3523), ♂ 17.0 × 19.5 mm, Oran, northwestern coast of Algeria, M. Deshayes, M. Lucas. — Original label: “*Leptograpsus maurus* Edw., Oran, M. Lucas”.

PRESERVATION. — Dry. Specimen attached onto cardboard by a stub; RP5 missing.

REMARKS

The species described by Lucas (1846: 20) was based on two male specimens, one measuring 17.0 × 19.5 mm, collected by Deshayes at Oran, located on the northwestern coast of Algeria. Lucas (1846) noted: “This species, of which I have only two male individuals, was found during the summer, in Oran harbour, by M. Deshayes” (“*Cette espèce, dont je ne possède que deux individus mâles, a été rencontrée pendant l’été, dans la rade d’Oran, par M. Deshayes*”). Rathbun (1918: 244) indicated that the ‘type’ was in the “Paris Museum”, but Poupin *et al.* (2005: 28) noted that “the first author was unable to locate it” in the MNHN. A sample MNHN-IU-2000-3523 (= MNHN-B3523), with only one male specimen labelled “Oran, M. Lucas”, thus from the type locality and obviously collected and identified by Lucas, fully corresponds to the male specimen described and measured by Lucas (1846). It is hereby designated as lectotype. The second specimen of the type series is missing.

Grapsus oceanicus H. Jacquinet *in* Hombron &
H. Jacquinet, 1846
(Fig. 4D)

Grapsus oceanicus H. Jacquinet *in* Hombron & H. Jacquinet, 1846: pl. 6, figs 9, 1.

Metopograpsus (Grapsus) oceanicus – H. Jacquinet *in* H. Jacquinet & Lucas 1853: 73.

CURRENT TAXONOMIC STATUS. — *Metopograpsus oceanicus* H. Jacquinet *in* Hombron & H. Jacquinet, 1846, accepted recombination (see H. Milne Edwards 1853: 132 [166]; Banerjee 1960: 189; Ng *et al.* 2008: 217).

LECTOTYPE (designated by Castro 2011: 115). — MNHN-IU-2000-10992 (= MNHN-B10992), ♂ 32.5 × 38.1 mm, Poulo Han (= Hon Island, Papua New Guinea), coll. Hombron & Jacquinet. — Original label: “*Metopograpsus oceanicus* Hombr. & Jacq., MM. Hombron & Jacquinet, Poulo Han”.

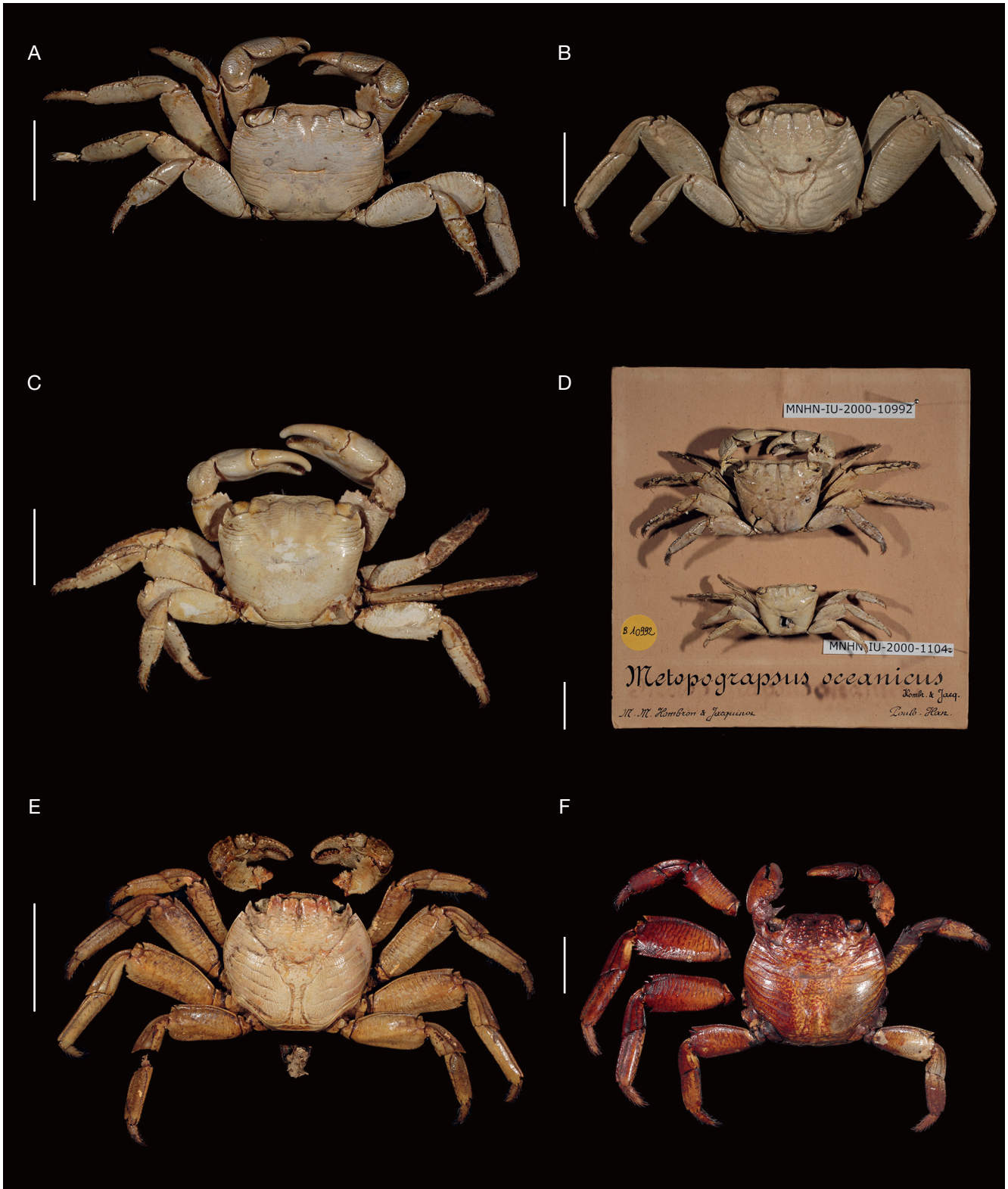


FIG. 4. — **A**, *Grapsus lividus* H. Milne Edwards, 1837, MNHN-IU-2000-3426 (= MNHN-B3426), lectotype, ♂; **B**, *Grapsus maculatus* H. Milne Edwards, 1853, MNHN-IU-2000-3414 (= MNHN-B3414), lectotype, ♂; **C**, *Grapsus maurus* Lucas, 1846, MNHN-IU-2000-3523 (= MNHN-B3523), lectotype, ♂; **D**, *Grapsus oceanicus* H. Jacquinot in Hombron & H. Jacquinot 1846, MNHN-IU-2000-10992 (= MNHN-B10992), lectotype, ♂, & MNHN-IU-2000-1104 (= MNHN-B10992), paralectotype, ♂; **E**, *Grapsus ornatus* H. Milne Edwards, 1853, MNHN-IU-2000-3415 (= MNHN-B3415), lectotype, ♂; **F**, *Grapsus pelagicus* H. Milne Edwards, 1853, MNHN-IU-2000-3450 (= MNHN-B3450), holotype, ♀. Scale bars: A, C, 10 mm; B, D, F, 2 cm; E, 5 cm.

PRESERVATION OF THE LECTOTYPE. — Dry.

PARALECTOTYPE. — MNHN-IU-2000-1104 (= MNHN-B10992), 1 ♂ 23.0 × 26.9 mm, same data as lectotype.

PRESERVATION OF THE PARALECTOTYPE. — Dry.

REMARKS

For authorities as cited on the plate captions or in the text of the Crustacea collected during the *Voyage au Pôle Sud (1842-1854)* [Voyage to the South Pole], see Clark & Crosnier 2000: table 4; Holthuis 2002: 422.

Grapsus ornatus H. Milne Edwards, 1853 (Fig. 4E)

Grapsus ornatus H. Milne Edwards, 1853: 134 [168].

CURRENT TAXONOMIC STATUS. — Junior subjective synonym of *Grapsus grapsus* (Linnaeus, 1758) (see Alcock 1900: 392; A. Milne-Edwards & Bouvier 1900: 111; Ng *et al.* 2008: 216, with reservation).

LECTOTYPE (by present designation). — MNHN-IU-2000-3415 (= MNHN-B3415), ♂ 64.1 × 69.0 mm, Chile, coll. M. Fontaine. — Original label: “*Grapsus grapsus* Linné (= *Grapsus ornatus* M. Edw.), M. Fontaine, Chili”.

PRESERVATION OF THE LECTOTYPE. — Dry.

PARALECTOTYPES. — MNHN-IU-2000-3429 (= MNHN-B3429), 1 ♂ 65.5 × 73.5 mm, Chile, coll. M. Fontaine. — MNHN-IU-2000-3431 (= MNHN-B3431), 1 ♂ 69.9 × 78.0 mm, Chile.

PRESERVATION OF THE PARALECTOTYPES. — Dry. All specimens are incomplete.

REMARKS

The two data, the type locality and the name of Fontaine, who is known as a collector of crustaceans in South America (see Guinot & Cleva 2002; Appendix), ensure recognition of type series material and justify such a lectotype designation. The entry of material from Chile collected by Fontaine in the CAA is dated 1834.

Grapsus pelagicus H. Milne Edwards, 1853 (Fig. 4F)

Grapsus pelagicus H. Milne Edwards, 1853: 135 [169].

CURRENT TAXONOMIC STATUS. — Junior subjective synonym of *Grapsus albolineatus* Lamarck, 1818 (not Latreille *in* Milbert, 1812: 275; see above).

HOLOTYPE (by monotypy, present paper). — MNHN-IU-2000-3450 (= MNHN-B3450), ♀ 45.8 × 49.9 mm, Stephen Island, Torres Strait. — Original label: “*Grapsus strigosus* Herbst (= *Grapsus pelagicus* M. Edwards), Ile Stephen, Détroit de Torrès”.

PRESERVATION. — Dry. Only RP2, RP5 attached, LP3 missing.

REMARKS

Henri Milne Edwards (1853) described *Grapsus pelagicus* as a new species from the Torres Strait. This species has two senior

secondary homonyms: *Grapsus pelagicus* Roux, 1830 from the Mediterranean Sea (see under this name) and *Grapsus pelagicus* Say, 1818 (Say 1818: 442) from the Gulf Stream, both synonymised under *Planes minutus* (Linnaeus, 1758) (see Chace 1951: 81; Manning & Holthuis 1981: 236). Although the species-group name *Grapsus pelagicus* H. Milne Edwards, 1853 is a junior secondary homonym, it was no longer considered congeneric with its two homonyms and has never been replaced, the junior name not having to be rejected since these species are placed in a different genera (*Code*, Art. 59.2).

The only specimen of H. Milne Edwards' (1853) species MNHN-IU-2000-3450 (= MNHN-B3450) deposited at the MNHN labelled “*Grapsus strigosus* (= *Grapsus pelagicus*), Ile Stephen, Détroit de Torrès” is certainly the type specimen of *Grapsus pelagicus* H. Milne Edwards, 1853. Our examination confirms that the specimen is indeed *Grapsus albolineatus*.

Alcock (1900: 394) has synonymised *Grapsus granulatus*, *G. pelagicus* and *G. peroni* under *Grapsus strigosus* (Herbst) without providing any treatment. The specific nomen *strigosus* Herbst, 1799, as published in the combination *Cancer strigosus*, is not available because it is a junior homonym of *Cancer strigosus*, which is actually *Galathea strigosa* (Linnaeus, 1761), but many authors continued to record *Grapsus albolineatus* under the name *Grapsus strigosus* (see Banerjee 1960: 153). *Grapsus strigosus* has been determined to be the junior synonym of *Grapsus albolineatus*, e.g. by Banerjee (1960: 147, 154), Sakai (1976: 630), and Ng *et al.* (2008: 323).

Grapsus peroni H. Milne Edwards, 1853 (Fig. 5A)

Grapsus Peroni H. Milne Edwards, 1853: 135 [169].

CURRENT TAXONOMIC STATUS. — Junior subjective synonym of *Grapsus albolineatus* Lamarck, 1818 (Banerjee 1960: 147, 154; Davie 2002: 213; credited to Latreille *in* Milbert, 1812 by Ng *et al.* 2008: 216; see above).

LECTOTYPE (by present designation). — MNHN-IU-2000-10934 (= MNHN-B10934), ♂ 44.8 × 48.9 mm, Australia, coll. Péron & Lesueur. — Original label: “*Grapsus strigosus* Herbst (= *Grapsus Peroni* Edw.), Nouvelle-Hollande, MM. Péron & Lesueur”.

PRESERVATION. — Dry.

REMARKS

Grapsus peroni was dedicated to François Péron, who attended the Baudin Expedition to the “*Terres Australes*” (1800-1804) (Baudin 1974), i.e., the southern coast of Australia, at that time “Nouvelle-Hollande [New Holland]”. The other name on the original label refers to Charles-Alexandre Lesueur, also a member of the Baudin Expedition (see Appendix).

Crosnier (1965: 17) could not find the type of this species in the MNHN collection. Davie (2002: 213), however, presumed the presence of syntypes, but a single specimen was found in the MNHN.



FIG. 5. — **A**, *Grapsus peroni* H. Milne Edwards, 1853, MNHN-IU-2000-10934 (= MNHN-B10934), lectotype, ♂; **B**, *Grapsus pharaonis* H. Milne Edwards, 1853, MNHN-IU-2000-3439 (= MNHN-B3439), lectotype, ♂; **C**, *Grapsus pictus* Latreille 1803, MNHN-IU-2000-3409 (= MNHN-B3409), neotype, ♀; **D**, *Grapsus plicatus* H. Milne Edwards, 1837, MNHN-IU-2000-3585 (= MNHN-B3585), lectotype, ♀; **E**, *Grapsus rudis* H. Milne Edwards, 1837, MNHN-IU-2000-10875 (= MNHN-B10875), holotype, ♂; **F**, *Grapsus webbi* H. Milne Edwards, 1853, MNHN-IU-2000-3457 (= MNHN-B3457), lectotype, ♂. Scale bars: A, F, 2 cm; B, E, 5 cm; C, D, 10 mm.

Grapsus pharaonis H. Milne Edwards, 1853
(Fig. 5B)

Grapsus pharaonis H. Milne Edwards, 1853: 134 [168].

CURRENT TAXONOMIC STATUS. — Junior subjective synonym of *Grapsus tenuicrustatus* (Herbst, 1783) (see Banerjee 1960: 134).

LECTOTYPE (by present designation). — MNHN-IU-2000-3439 (= MNHN-B3439), ♂ 55.0 × 57.4 mm, Red Sea, coll. M. Roux. — Original label: “*Grapsus pharaonis* Edw., Mer Rouge, M. Roux”.

PRESERVATION OF THE LECTOTYPE. — Dry.

PARALECTOTYPES. — MNHN-IU-2000-3438 (= MNHN-B3438), 2 ♀ 58.3 × 59.5 mm, 60.2 × 60.9 mm, same data as lectotype.

PRESERVATION OF THE PARALECTOTYPES. — Dry.

REMARKS

“M. Roux” on the label is J. L. F. P. Roux who collected material in the Mediterranean Sea, Red Sea and in the Near East (Bauchot *et al.* 1990; Appendix) and published the volume *Crustacés de la Méditerranée et de son littoral, décrits et lithographiés* (Roux 1828-1830). *Grapsus pharaonis* was synonymised with *Grapsus grapsus* (Linnaeus, 1758) by A. Milne-Edwards & Bouvier (1900: 111) and, subsequently, with *Grapsus tenuicrustatus* (Herbst, 1783) by Banerjee (1960), see Ng *et al.* 2008: 217. In the CAA, material collected by Roux in the Red Sea has 1835 as entry date.

Grapsus pictus Latreille, 1803
(Fig. 5C)

Grapsus pictus Latreille, 1803: 69, pl. 47, fig. 2; 1806: 33. — Lamarck 1801: 150 (*nomen nudum*); 1818: 248.

CURRENT TAXONOMIC STATUS. — Junior subjective synonym of *Grapsus grapsus* (Linnaeus, 1758) (see A. Milne-Edwards & Bouvier 1900: 111; Rathbun 1918: 227; Banerjee 1960: 153; Griffin 1973: 423; Ng *et al.* 2008: 216).

NEOTYPE (by present designation). — MNHN-IU-2000-3409 (= MNHN-B3409), mature ♀ 31.6 × 33.3 mm, *Grapsus grapsus* Linné (= *Grapsus pictus* Latr.), attacked by bopyrids, Martinique, coll. M. Rivière. — Original label: “*Grapsus grapsus* Linné (= *Grapsus pictus* Latr.), attaqué par les Bopyres, Martinique, M. Rivière”.

PRESERVATION. — Dry. All pereopods detached.

REMARKS

The specific name *pictus* was introduced by Lamarck (1801: 150) when he established the new generic name *Grapsus* (its etymology is related to the ancient Greek *grapsaios* that means “crab”) in indicating “*Grapsus pictus*. n. *Cancer grapsus*. Lin.”, i.e., *Cancer grapsus* of Linnaeus (1758). As a specific description is lacking and there is no mention of any material or locality, the specific name *pictus* of Lamarck (1801) is a *nomen nudum*. Later, Lamarck (1818: 248) provided a description and a geographical origin “mers de l’Amérique méridionale” (seas of South America), still considering it a nomen for *Cancer grapsus*, now *Grapsus grapsus* (Linnaeus, 1758). Meanwhile, based on the same material as Lamarck (1818), Latreille (1803: 69, pl. 47, fig. 2) used the name *Grapsus pictus* in giving a short diagnosis and a figure of a specimen from the “îles de l’Amérique méridionale” (islands of South America) that he likewise referred to as the *Cancer grapsus* of Linnaeus. Therefore, the authorship of *G. pictus* is not Lamarck (1801) but Latreille (1803). Note that in his list of genera with the indication of their type species, called ‘genotypes’ (“*Tableau des genres avec l’indication de l’espèce qui leur sert de type*”), Latreille (1810: 422) quoted *Cancer grapsus* as the type (onomatophore) of the genus *Grapsus*, and not *G. pictus* (see also H. Milne Edwards 1836-1844: pl. 22). *G. grapsus* (Linnaeus, 1758) is the type species of *Grapsus* by tautonomy (Manning & Holthuis 1981; Ng *et al.* 2008).

Grapsus pictus of Latreille (1803) was considered an available nomen by most authors (Saussure 1853: 362; Alcock 1900:

392; A. Milne-Edwards & Bouvier 1900: 111; Rathbun 1918: 227; Banerjee 1960: 153; Boyko 2000: 128; Ng *et al.* 2008: 216) who regarded the species as a junior subjective synonym of *Grapsus grapsus*. *Grapsus pictus* from Guam figured by Quoy & Gaimard (1824: 523, pl. 76, fig. 2) is *Grapsus rudis* H. Milne Edwards, 1837 (see below under this name).

The MNHN collection contains a sample with two specimens: a preadult female 26.2 × 32.4 mm, MNHN-IU-2000-1101 (= MNHN-B3409); and a mature female 31.6 × 33.3 mm, MNHN-IU-2000-3409 (= MNHN-B3409), dry, labelled “*Grapsus grapsus* Linné (= *Grapsus pictus* Latr.), attaqué par les Bopyres, Martinique, M. Rivière” [this collector is unknown according to the available information and thus is not included in the Appendix]. These individuals are parasitised by bopyrids, the preadult female on both sides and the mature female on the right side.

In the handwritten Catalogues of Crustacea by Latreille (LC1807, LC1814), two specimens, a male and a female, are cited without locality, date or collector: there is no mention of bopyrids (Fig. 1B). The figure of *Grapsus pictus* in Latreille (1803: pl. 47, fig. 2) does not show any deformation of the carapace by a parasite but such an unnatural shape was perhaps not taken into account by the drawer. Even if Latreille (1803) could have confused the preadult female with a male, we do not have enough objective proof to consider that these specimens belong to the type series of *Grapsus pictus*. Consequently, for clarification purposes the designation of a neotype is justified.

Grapsus plicatus H. Milne Edwards, 1837
(Fig. 5D)

Grapsus plicatus H. Milne Edwards, 1837: 89.

CURRENT TAXONOMIC STATUS. — *Pachygrapsus plicatus* (H. Milne Edwards, 1837), accepted recombination (see Kingsley 1880: 200; Poupin *et al.* 2005: 37, 38; Castro 2011: 117).

LECTOTYPE (designated by Poupin *et al.* 2005: 37, 38). — MNHN-IU-2000-3585 (= MNHN-B3585), ♀ 15.0 × 19.0 mm, Sandwich Islands [Hawaiian Is.], coll. Louis Claude de Saulces de Freycinet, 1817-1820. — Original labels: “*Pachygrapsus plicatus* (Stimp.), *Grapsus plicatus* Edw., Type, Iles Sandwich, M. Freycinet” and on the back of the cardboard box “Type de *Grapsus plicatus* (M. Edw.), c’est un *Metopograpsus*” (“Type of *Grapsus plicatus* (M. Edw.), it is a *Metopograpsus*”).

PRESERVATION OF THE LECTOTYPE. — Dry. Carapace with a crack on the left cardiac/branchial region; RP1, LP3 missing; pleon damaged.

PARALECTOTYPE (designated by Poupin *et al.* 2005: 37, 38). — MNHN-IU-2000-1103 (= MNHN-B3585), 1 ♀ 12.0 × 16.5 mm, same data as lectotype.

PRESERVATION OF THE PARALECTOTYPE. — Dry. Left side of carapace cracked, intestinal region with a gap; LP1, LP3, LP2 dactylus missing; only coxa LP4; pleon intact.

REMARKS

Based on the examination of the two MNHN female syntypes from Hawaiian Islands, the lectotype and paralectotype designation by Poupin (2005) (see also Castro 2011: 117) for the

lot MNHN-IU-2000-1103 (= MNHN-B3585) is valid. Previously, Fransen *et al.* (1997: 126) recorded the RMHN D 42256 specimen from Indonesia as a type of *P. plicatus*, which actually refers to a *nomen nudum* of Herklots (1861). Similarly, the Indonesian specimens RMHN D 42234, D 42235, D 45029, and D 45030 that are indicated as “types of *Grapsus plicatus* (de Haan, MS) Herklots, 1861, *nomen nudum*” by Fransen *et al.* (1997: 125, under *Metopograpsus frontalis* Miers, 1880) are not in any way part of the type material of *P. plicatus*; this was confirmed by C. Fransen (pers comm., December 2012). These erroneous data from Fransen *et al.* (1997) were confusing for Davie (2002: 218) and Castro (2011: 117) who presumed that a part of the type material of *P. plicatus* could be in the RMHN. We are unsure as to what Castro (2011: 117) is referring when he mentions in the synonymy of *Pachygrapsus plicatus* “Poupin *et al.* 2005: 37, figs 11, 14e, 15e [type material, O’ahu]”, the mention of the island O’ahu not being cited anywhere in the original publication.

Grapsus rudis H. Milne Edwards, 1837
(Fig. 5E)

Grapse rude H. Milne Edwards, 1837: 86, 87.

Grapsus rudis – H. Milne Edwards 1853: 134[168]. — Gibbes 1850: 17.

CURRENT TAXONOMIC STATUS. — Junior subjective synonym of *Grapsus tenuicrustatus* (Herbst, 1783) (see Rathbun 1906: 838).

HOLOTYPE (by monotypy, see Castro 2011: 114). — MNHN-IU-2000-10875 (= MNHN-B10875), ♂ 47.5 × 49.8 mm, Sandwich Islands [Hawaiian Is.], coll. Quoy & Gaimard. — Original label: “*Grapsus rudis* Edw., Iles Sandwich, MM. Quoy & Gaimard”.

PRESERVATION. — Dry. Carapace stuck with elderberry stub onto cardboard; hairline cracks on the intestinal/branchial regions; RP5, LP3 missing.

REMARKS

Henri Milne Edwards (1837: 86, 87) briefly described a new species for a single specimen that was “brought from the Sandwich Islands [the Hawaiian Islands] by Quoy & Gaimard”, in writing “GRAPSE RUDE” (i.e., written in small capital letters), not followed in this case by a Latin nomen. Later, H. Milne Edwards (1853: 134 [168]) used the Latin nomen *Grapsus rudis*. The French name GRAPSE RUDE, not “used for general purposes”, is not a vernacular name (see Kottelat 2001). Gibbes (1850: 17) had latinised the name for the first time but, since several carcinologists (Rathbun 1906: 838; Banerjee 1960: 134; Paulson 1875: 68 [reprinted 1961: 74]; Ng *et al.* 2008: 217) including Gibbes himself (1850) have attributed the taxon to H. Milne Edwards, it is clear that the authorship of H. Milne Edwards with the date 1837 can be retained for *Grapsus rudis* (Code, Art. 50.1.1).

The MNHN collection contains one specimen, a male labelled “*Grapsus rudis*, Sandwich Islands, Quoy & Gaimard” with the mention “Type” on the back of the cardboard box (MNHN-B10875). Castro (2011: 114) in his catalogue of

Brachyura from the Hawaiian Islands regarded it as the holotype of *G. rudis*, actually a holotype by monotypy.

Presently, *G. rudis* is regarded as a junior synonym of *G. tenuicrustatus* (Herbst, 1783) (Rathbun 1906: 838; Banerjee 1960: 134; Griffin 1973: 423; Ng *et al.* 2008: 217; Castro 2011: 114). Griffin (1973: 423) stated that the *Grapsus pictus* of Quoy & Gaimard (1824: 523, pl. 76, fig. 2) from Guam was synonym of *Grapsus rudis*, itself a synonym of *Grapsus tenuicrustatus*, as previously stated by several authors, notably Banerjee (1960: 143) (see under *Grapsus pictus*).

Grapsus varius Latreille, 1803
(Fig. 7H)

Grapsus varius Latreille, 1803: 67.

Grapsus Varius – Risso 1816: 21.

CURRENT TAXONOMIC STATUS. — Junior subjective synonym of *Pachygrapsus marmoratus* (Fabricius, 1787) (see Latreille 1829: 52; A. Milne-Edwards & Bouvier 1900: 109).

NEOTYPE (by present designation). — MNHN-IU-2000-3526 (= MNHN-B3526), ♂ 24.0 × 27.1 mm, Mediterranean Sea. — Original label: “*Leptograpsus marmoratus* Fabr., Méditerranée”.

PRESERVATION. — Dry. RP5 missing.

REMARKS

Latreille (1803: 67, 68, and footnote) stated the material was given to him by a young naturalist, Marcel Serres, who had collected it near Montpellier, on the coast of the Mediterranean Sea; and the species closely resembled *Cancer marmoratus* (Fabricius, 1787). Henri Milne Edwards (1837: 88) examined the material deposited in the MNHN collection, noting this species was very common along the rocky areas of Bretagne (Brittany), France, Italy, etc. Alphonse Milne-Edwards & Bouvier (1900: 109) synonymised *Grapsus varius* with *Pachygrapsus marmoratus* Fabricius, 1787, the type locality of which is unknown (Fabricius 1787: 319). From the original sample MNHN-B3526, with one male and one female, from the Mediterranean Sea, the male is hereby selected as the neotype of *Grapsus varius* Latreille, 1803, MNHN-IU-2000-3526 (= MNHN-B3526). The female is registered as MNHN-IU-2000-1108 (= MNHN-B3526).

Grapsus webbi H. Milne Edwards, 1853
(Fig. 5F)

Grapsus Webbi H. Milne Edwards, 1853: 133 [167].

Grapsus strigosus – Brullé 1839: 15. Non *Grapsus strigosus* (Herbst, 1799) (see under *Grapsus pelagicus*).

CURRENT TAXONOMIC STATUS. — Junior subjective synonym of *Grapsus adscensionis* (Osbeck, 1765) (see Türkay 1982: 122; Manning & Chace 1990: 64).

LECTOTYPE (by present designation). — MNHN-IU-2000-3457 (= MNHN-B3457), ♂ 28.4 × 31.0 mm, Canary Islands, coll.

M. Berthelot. *Grapsus webbi* H. Milne Edwards, 1853, syntype, revid. M. Türkay, IV-1977. — Original label: “*Grapsus Webbi* Edw. *maculatus* Catesby, Iles Canaries, M. Berthelot”. Additional label: “*Grapsus webbi* H. Milne Edwards, 1853, syntype, revid. M. Türkay, IV-1977”.

PRESERVATION OF THE LECTOTYPE. — Dry. RP1, RP5 missing.

PARALECTOTYPES. — MNHN-IU-2000-10979 (= MNHN-B10979), 1 ♂ 54.6 × 62.2 mm, 1 ♀ 32.6 × 38.5 mm, Canary Islands, coll. M. Berthelot. *Grapsus webbi* H. Milne Edwards, 1853. — Original label: “*Grapsus grapsus* Linné (*Grapsus Webbi* Edw.), Iles Canaries, M. Berthelot”.

PRESERVATION OF THE PARALECTOTYPES. — Dry.

REMARKS

Henri Milne Edwards (1853) described this species based on the material collected by Webb & Berthelot who are well known for their exploration of the Canary Islands where they have gathered a considerable amount of material of all kinds (see Appendix). In their masterpiece “*Histoire naturelle des îles Canaries*”, the part Crustacea has been authored by G. A. Brullé, and this crab was identified as *Grapsus strigosus* by Brullé (1839: 15), before it was recognised as new by H. Milne Edwards, (1853: 133 [167]) and dedicated to Webb, then synonymised to *Grapsus adscensionis* (Osbeck, 1765).

Leptograpsus ansoni H. Milne Edwards, 1853 (Fig. 6A)

Leptograpsus Ansoni H. Milne Edwards, 1853: 138 [172].

CURRENT TAXONOMIC STATUS. — Junior subjective synonym of *Leptograpsus variegatus* (Fabricius, 1793) (Griffin 1973: 418, 423; Davie 2002: 216; Ng *et al.* 2008: 217).

LECTOTYPE (by present designation). — MNHN-IU-2000-4023 (= MNHN-B4023), ♂ 19.8 × 23.9 mm, Juan Fernández Islands, Chile. — Original label: “*Leptograpsus Ansoni* H. M. Edwards, syntypes, Juan Fernandez”.

PRESERVATION OF THE LECTOTYPE. — Dry. Carapace with a small crack on left cardiac region; LP3, RP4 missing.

PARALECTOTYPES. — MNHN-IU-2000-1105 (= MNHN-B4023), 1 juv. 10.3 × 12.1 mm, same data as lectotype. — MNHN-IU-2000-3519 (= MNHN-B3519), 1 ♂ 19.6 × 23.2 mm, same data as lectotype.

PRESERVATION OF THE PARALECTOTYPES. — Incomplete specimens.

REMARKS

The original samples MNHN-B4023 and MNHN-B3519 have an additional label by D. Guinot in 1972 with the indication “presumed syntypes”. This was cited by Griffin (1973: 418), who mentioned “three syntypes” in the MNHN when he recognised the species as a junior synonym of *Leptograpsus variegatus*. The specific name *ansoni* refers to the Commodore George Anson, famous for his Voyage around the world to disrupt or capture Spain’s Pacific possessions, reaching the Juan Fernández Archipelago in 1741.

Leptograpsus bertheloti H. Milne Edwards, 1853 (Fig. 6B)

Leptograpsus Bertheloti H. Milne Edwards, 1853: 138 [172].

CURRENT TAXONOMIC STATUS. — Junior subjective synonym of *Pachygrapsus marmoratus* (Fabricius, 1787).

LECTOTYPE (by present designation). — MNHN-IU-2000-10944 (= MNHN-B10944), ♀ 38.0 × 43.2 mm, Canary Islands, coll. MM. Webb & Berthelot. — Original label: “*Leptograpsus Bertheloti* M. Edw., MM. Webb et Berthelot, Iles Canaries”.

PRESERVATION. — Dry.

REMARKS

Alphonse Milne-Edwards & Bouvier (1894: 48) wrote under *Leptograpsus marmoratus*: “Ce Crabe, que l’on trouve communément sur les côtes océaniques de la France, semble avoir une large dissémination géographique, il se trouve à Madère, aux îles Canaries, et nous avons lieu de penser qu’il ne diffère pas spécifiquement des formes décrites sous les noms de *Leptograpsus variegatus* Fabricius et de *L. Bertheloti* H. Milne Edwards.” [“This crab, commonly found on the oceanic coasts of France, seems to have a widespread geographical distribution, it is found in Madeira, the Canary Islands, and there may be reason to believe that it does not differ specifically from the forms described under the names *Leptograpsus variegatus* Fabricius and *L. Bertheloti* H. Milne Edwards”].

Kingsley (1880: 196) placed many species in the synonymy of *L. variegatus* including *L. bertheloti*, but Griffin (1973: 423), who also gave a long list of synonyms, did not recognise *L. bertheloti* as a synonym of *L. variegatus* [considering instead a possible synonymy with *Pachygrapsus marmoratus* (Fabricius)], both without giving an explanation of their statements. Rathbun (1918: 250) and Ng *et al.* (2008: 217) placed *Leptograpsus bertheloti*, with reservation, in the synonymy of *Pachygrapsus marmoratus*, a species found in the Mediterranean Sea and on the Atlantic coast of Europe, from Brittany to Morocco, including Madeira, the Azores, and the Canary Islands (Manning & Holthuis 1981: 225; d’Udekem d’Acoz 1989: 255).

Our examination of the specimen MNHN-IU-2000-10944 (= MNHN-B10944) has confirmed that *Leptograpsus bertheloti* is indeed *Pachygrapsus marmoratus*, and not *Leptograpsus variegatus* (Fabricius, 1793) as stated by Kingsley (1980). Recent publication on the phylogeography of *Pachygrapsus marmoratus* from the African Mediterranean coast (Deli *et al.* 2016) has revealed a genetic homogeneity across the Siculo-Tunisian Strait.

Leptograpsus gayi H. Milne Edwards, 1853 (Fig. 6C)

Leptograpsus Gayi H. Milne Edwards, 1853: 138 [172].

CURRENT TAXONOMIC STATUS. — Junior subjective synonym of *Leptograpsus variegatus* (Fabricius, 1793) (see Griffin 1973: 418, 423; Ng *et al.* 2008: 217).



FIG. 6. — **A**, *Leptograpsus ansoni* H. Milne Edwards, 1853, MNHN-IU-2000-4023 (= MNHN-B4023), lectotype, ♂; **B**, *Leptograpsus bertheloti* H. Milne Edwards, 1853, MNHN-IU-2000-10944 (= MNHN-B10944), lectotype, ♀; **C**, *Leptograpsus gayi* H. Milne Edwards, 1853, MNHN-IU-2000-3531 (= MNHN-B3531), lectotype, ♂; **D**, *Leptograpsus rugulosus* H. Milne Edwards, 1853, MNHN-IU-2000-3534 (= MNHN-B3534), lectotype, ♂; **E**, *Leptograpsus verreauxi* H. Milne Edwards, 1853, MNHN-IU-2000-4024 (= MNHN-B4024), lectotype, ♂; **F**, *Metopograpsus eydouxi* H. Milne Edwards, 1853, MNHN-IU-2000-3547 (= MNHN-B3547), lectotype, ♂. Scale bars: A, D, F, 10 mm; B, C, E, 2 cm.

LECTOTYPE (by present designation). — MNHN-IU-2000-3531 (= MNHN-B3531), ♂ 22.6 × 25.6 mm, Valparaiso, Chile, coll. C. Gay, 1828-1832. — Original labels: “*Leptograpsus planifrons* Dana, Valparaiso, M. Gay, 1828-1832”; “*L. planifrons* (= *Leptograpsus gayi*, Edw. Type)”.

PRESERVATION. — Dry. LP3 missing.

REMARKS

Henri Milne Edwards (1853) dedicated this species to Claude Gay, who collected material in Chile (see Appendix). Previously, Nicolet in Gay (1849: 167) in the *Historia de Chile* identified their material from Chile as *Grapsus variegatus* (Fabricius, 1793). Griffin (1973: 418, 423), based on the

inaccurate information provided by D. Guinot, stated that the type of *L. gayi* was not extant, and he synonymised this species with *L. variegatus*. According to Davie (2002: 216) the holotype of *L. gayi* was deposited at the MNHN, and indeed, one specimen, MNHN-IU-2000-3531 (= MNHN-B3531), from Valparaiso, Chile, with the name of Gay and labelled “Type” has been found in the MNHN dry collection. It is designated here as the lectotype of *Leptograpsus gayi*.

Leptograpsus rugulosus H. Milne Edwards, 1853
(Fig. 6D)

Leptograpsus rugulosus H. Milne Edwards, 1853: 138 [172].

CURRENT TAXONOMIC STATUS. — Junior subjective synonym of *Pachygrapsus transversus* (Gibbes, 1850) (see Poupin *et al.* 2005: 44).

LECTOTYPE (present designation). — MNHN-IU-2000-3534 (= MNHN-B3534), ♂ 12.9 × 16.1 mm, Brazil, coll. Gaudichaud. — Original label: “*Leptograpsus rugulosus* Lamk., Brésil, M. Gaudichaud”.

PRESERVATION. — Dry. RP2-3, LP1, RP5 propodus and dactylus missing; LP4-5 carpus, merus and dactylus missing; ventral surface with elder stub.

REMARKS

Rathbun (1918: 245) mentioned that the type was in “Paris Museum” but without listing any material. Although *Leptograpsus rugulosus* was recognised by Kingsley (1880), it is the junior synonym of *Pachygrapsus transversus* (Gibbes, 1850) according to Poupin *et al.* (2005: 44).

The MNHN collection contains two samples that could have been seen by H. Milne Edwards in 1853: a complete and dry female specimen MNHN-IU-2000-3535 (= MNHN-B3535), collected from Rio de Janeiro by Peter Claussen (see Appendix), and a specimen MNHN-IU-2000-3534 (= MNHN-B3534) from Brasil collected by Charles Gaudichaud-Beaupré, who was a well-known, extremely active collector at that time in the MNHN (see Appendix). The first entry in the MNHN of South American material collected by Gaudichaud is from 1832, as indicated in the CAA. Henri Milne Edwards was used to mention the localities in accordance with the information provided by the collector, thus the type locality is “Brésil” and not “Rio de Janeiro”. The specimen MNHN-IU-2000-3534 (= MNHN-B3534) of Gaudichaud is selected as lectotype.

Leptograpsus verreauxi H. Milne Edwards, 1853
(Fig. 6E)

Leptograpsus Verreauxi H. Milne Edwards, 1853: 138 [172].

CURRENT TAXONOMIC STATUS. — Junior subjective synonym of *Leptograpsus variegatus* (Fabricius, 1793) (Griffin 1973: 418, 423; Davie 2002: 216; Ng *et al.* 2008: 217).

LECTOTYPE (by present designation). — MNHN-IU-2000-4024 (= MNHN-B4024), ♂ 34.9 × 39.6 mm, Australia, coll. J. P. Ver-

reaux, 1842. Presumed Syntype, D. Guinot 1972. — Original label: “*Leptograpsus Verreauxi* H. M. Edwards, Syntype, Australie, M. Verreaux”. Additional label: “Syntype présumé, D. Guinot 1972”.

PRESERVATION OF THE LECTOTYPE. — Dry. Pleon with a small crack; telson folded inwards.

PARALECTOTYPE. — MNHN-IU-2000-3546 (= MNHN-B3546), 1 ♂ 30.7 × 34.1 mm, same data as lectotype. — Additional label: “Presumed Syntype, D. Guinot 1972”.

PRESERVATION OF THE PARALECTOTYPE. — Dry.

REMARKS

In 1972 Guinot wrote a new label “presumed syntypes” for the samples MNHN-IU-2000-4024 (= MNHN-B4024) and MNHN-IU-2000-3546 (= MNHN-B3546) collected by Verreaux in Australia. Based on this information, Griffin (1973: 418, 423) mentioned that two syntypes were deposited at the MNHN when he recognised the species as a junior synonym of *Leptograpsus variegatus*. The larger male from the type series is selected here as lectotype. The entry date in the CAA of a considerable material of the Verreaux collection from Tasmania, Australia is 1847, which corroborates the hypothesis that H. Milne Edwards has established his new species after this Verreaux material (see Appendix).

Metopograpsus eydouxi H. Milne Edwards, 1853
(Fig. 6F)

Metopograpsus Eydouxi H. Milne Edwards, 1853: 131 [165].

CURRENT TAXONOMIC STATUS. — Junior subjective synonym of *Metopograpsus thukubar* (Owen, 1839) (Tweedie 1949: 469; Davie 2002: 217).

LECTOTYPE (by present designation). — MNHN-IU-2000-3547 (= MNHN-B3547), ♂ 16.6 × 20.1 mm, Sandwich Islands [Hawaiian Is.], Type, coll. J.T. Eydoux & L.F.A. Souleyet. — Original label: “*Metopograpsus eydouxi* Edw., Type. Iles Sandwich, MM. Eydoux et Souleyet”.

PRESERVATION. — Dry. RP1-3, 5, LP4 missing.

REMARKS

Davie (2002: 217) wrote “type status unknown MNHP*”, thus only a probable MNHN depository. The sample MNHN-IU-2000-3547 (= MNHN-B3547) was collected from the type locality, the Sandwich Islands, i.e., the Hawaiian Is., by the well-known scientists Eydoux and Souleyet who visited these islands, notably during the Expedition of the Bonite (1836-1837) (see Appendix). Their names are inscribed on the original label, so this material is here selected as lectotype. In contrast, the dry sample MNHN-IU-2000-3551 (= MNHN-B3551) from the Sandwich Islands, with two specimens, 1 ♂ and 1 ♀, was collected later as shown by the label “788-66” corresponding to the entry in 1866 listed in the CAA as material purchased from “M. Robson, London”.

Metopograpsus gracilis Saussure, 1858
(Fig. 7A)

Metopograpsus gracilis Saussure, 1858a: 443, pl. 2, fig. 15, 15a-c; 1858b: 27, pl. 2, fig. 15, 15a-c.

CURRENT TAXONOMIC STATUS. — *Pachygrapsus gracilis* (Saussure, 1858), accepted recombination (see Poupin *et al.* 2005: 15).

LECTOTYPE (by inference from holotype designation by Türkay 1974c). — MHNG, ♀ 16.0 × 21.0 mm, St Thomas, Virgin Is.

PARALECTOTYPE. — MNHN-IU-2000-10991 (= MNHN-B10991), 1 ♀ 8.4 × 11.1 mm, Saint Thomas, coll. M. de Saussure. — Original label: “*Pachygrapsus gracilis* Saussure, ♀, St Thomas, M. de Saussure”; on the back of the cardboard “*Metopograpsus gracilis* Sauss., ♀, St Thomas = *Pachygrapsus*, M. de Saussure, 270.58”.

PRESERVATION. — Carapace cracked on right side at cardiac region, RP4 missing.

REMARKS

Saussure (1858a: 443, pl. 2, fig. 15, 15a-c) established this species from a specimen measuring 16.0 × 21.0 mm collected from St Thomas, Virgin Islands (see Appendix), but his description did not explicitly mention how many specimens were examined. A female, 16.0 × 21.0 mm, in the MHNG was regarded as holotype by Türkay (1974c: 144, pl. 1, figs 5, 6) in his paper on the Grapsidae deposited at the MHNG: it is a dry specimen (P. Schwendinger, pers. comm., Dec. 2012). In assuming a holotype rather than designating a lectotype, Türkay (1974b: 145) proceeded as though syntypes did not exist. But there is a specimen, a dry female, collected by Saussure from the same locality, St Thomas, deposited in the MNHN collection, MNHN-IU-2000-10991 (= MNHN-B10991), as confirmed by the mention in the CAA of an exchange between Saussure and the MNHN in 1858, entry 270, corresponding to “270.58” on the original label. We may consider that this specimen has been collected at the same time as the holotype and could belong to the syntype series. Therefore, Türkay (1974c), who has published the assumption that the species-group taxon was based upon a single type specimen, is deemed to have designated that specimen as the lectotype (*Code*, Art. 74.6: Fixation of lectotype by inference of “holotype”). The female MNHN-IU-2000-10991 (= MNHN-B10991) may be considered paralectotype.

Metopograpsus intermedius H. Milne Edwards, 1853
(Fig. 7B)

Metopograpsus intermedius H. Milne Edwards, 1853: 131 [165].

CURRENT TAXONOMIC STATUS. — Junior subjective synonym of *Metopograpsus thukuhar* (Owen, 1839) (Tweedie 1954: 128; Banerjee 1960: 186; Davie 2002: 217).

LECTOTYPE (designated by Tweedie 1954: 128). — MNHN-IU-2014-11210 (= MNHN-B12888), ♂ 18.0 × 23.2 mm, Type, patria ignota. “*Metopograpsus thukuhar* (Owen) after M. Tweedie 1948 who has examined the pleopods drawn by Miss I. Gordon” [*“Metopograpsus thukuhar* (Owen, 1839) *selon M. Tweedie 1948 qui a examiné les pléopodes dessinés par Miss I. Gordon*”]. — Original label: “*Metopograpsus intermedius* Edw. (type)”.

PRESERVATION. — Alcohol. Six pereopods detached from the body.

REMARKS

De Man (1888: 359) then Tweedie (1949: 470) suspected a problem with the identity of *Metopograpsus intermedius*. Upon Tweedie’s request, Isabella Gordon examined the type material at the MNHN. According to Tweedie (1949: 470), Gordon found two specimens in the MNHN labelled as “cotypes”, patria ignota, but her sketches of the G1 of each of these two “cotypes” revealed that they belonged to two different species. Tweedie (1954: 127, 128, under *M. gracilipes*) stated the name *M. intermedius* could not be used because it was ‘composite’, and his first opinion was that the bigger specimen MNHN-IU-2014-11880 (= MNHN-B12856) could be selected as the lectotype of *M. intermedius*, a species that he recognised to be a senior synonym of *M. gracilipes* De Man, 1891. Nevertheless, in order to preserve stability of nomenclature Tweedie (1954: 127) has accepted the recommendation of I. Gordon and L. B. Holthuis in writing: “The two authorities whom I consulted [Gordon and Holthuis] have suggested that *gracilipes* would be established as a valid name if the smaller of Milne Edwards’ cotypes were designated as lectotype of his species *M. intermedius*”. Tweedie (1954) finally selected the smaller specimen MNHN-IU-2014-11210 (= MNHN-B12888) as lectotype of *M. intermedius*, on which *M. thukuhar* (Owen, 1839) has priority (see Banerjee 1960: 186; Ng *et al.* 2008: 217).

The bigger specimen MNHN-IU-2014-11880 (= MNHN-B12856) belonging to the syntype material of *Metopograpsus intermedius* (see *Code*, Art. 72.4.4) is *M. gracilipes* De Man, 1891, presently a synonym of *M. frontalis* Miers, 1880 (Banerjee 1960: 182; Davie 2002: 216; Ng *et al.* 2008: 217). It is a male, 22.1 × 30.2 mm, in alcohol, with ten detached pereopods, pleon absent. — Original label: “*Metopograpsus intermedius* Edw. (Type)”. Additional labels: “*Metopograpsus gracilipes* de Man emend. according to M. Tweedie 1948 who has examined the pleopods drawn by Miss I. Gordon [*Metopograpsus gracilipes* de Man emend., d’après M. Tweedie 1948 qui a examiné les pléopodes dessinés par Mlle I. Gordon]”.

Metopograpsus maculatus H. Milne Edwards, 1853
(Fig. 7C)

Metopograpsus maculatus H. Milne Edwards, 1853: 131 [165].

CURRENT TAXONOMIC STATUS. — Junior subjective synonym of *Metopograpsus latifrons* (White, 1847) (Tesch 1918: 80; Tweedie 1949: 468; Banerjee 1960: 177; Davie 2002: 217; Ng *et al.* 2008: 217).

LECTOTYPE (by present designation). — MNHN-IU-2000-3554 (= MNHN-B3554), ♂ 31.2 × 35.3 mm, Batavia [Jakarta], coll. M. Meder. — Original label: “*Metopograpsus maculatus* Edw., Type, Batavia, M. Meder”.

PRESERVATION OF THE LECTOTYPE. — Dry. Right region of pleonal somite 6 and telson missing.

PARALECTOTYPES. — MNHN-IU-2000-3553 (= MNHN-B3553), 1 ♂ 24.8 × 27.7 mm, 1 ♀ 27.5 × 30.7 mm, same data as lectotype. — MNHN-IU-2000-1106 (= MNHN-B3554), 2 ♂ 28.9 × 32.0 mm, 30.3 × 33.2 mm, same data as lectotype.

PRESERVATION OF THE PARALECTOTYPES. — Dry.

REMARKS

Meder is a well-known collector in this region (see Appendix).

Metopograpsus miniatus Saussure, 1858
(Fig. 7D)

Metopograpsus miniatus Saussure, 1858a: 444, pl. 2, fig. 17, 17a-c; 1858b: 28, pl. 2, fig. 17, 17a-c.

CURRENT TAXONOMIC STATUS. — Junior subjective synonym of *Pachygrapsus transversus* (Gibbes, 1850) (Poupin *et al.* 2005: 44).

LECTOTYPE (by inference of holotype by Türkay 1974c). — MHNG, ♂, St Thomas, Virgin Is.

PRESERVATION OF THE LECTOTYPE. — Carapace with sides distended by a bopyrid (see below); RP2-3, 5 and LP2-4 missing.

PARALECTOTYPE. — MNHN-IU-2000-10994 (= MNHN-B10994), 1 ♂ 10.4 × 14.2 mm, Saint Thomas, coll. M. de Saussure. — Original label: “*Metopograpsus miniatus* Saussure, St Thomas, M. de Saussure”.

PRESERVATION OF THE PARALECTOTYPE. — Dry. Left side distended by a parasite. RP1-2, RP5 missing, RP3, 4 detached.

REMARKS

Saussure (1858a: 444, pl. 2, fig. 17, 17a-c) described a crab collected from St Thomas, Virgin Is., measuring 12.0 × 16.0 mm as *Metopograpsus miniatus*, but did not explicitly mention how many specimens he had examined. Rathbun (1918: 244, 245), who synonymised *M. miniatus* with *Pachygrapsus transversus*, wrote that the type of *M. miniatus* was deposited at the MHNG and “its sides [carapace] are distended by a parasite, one side more than the other”. She probably received this information from Zehntner, the Swiss scientist who took care of the MHNG collections at the end of the 19th century (see Appendix). In his paper on the Grapsidae deposited in the MHNG, Türkay (1974c: 142, figs 1, 2, pl. 1, figs 1, 2) regarded this specimen, a male, as holotype of *M. miniatus*; he figured the G1 and provided a note written on a label by Zehntner signaling the presence of a parasite on the branchial regions. The holotype photographed by Türkay (1974c: 143, pl. 1, figs 1, 2) shows a slightly swollen left branchial region, while neither the description nor the figure of Saussure (1858a: 444, pl. 2, fig. 17) indicates the presence of a parasite deforming the carapace.

In assuming a holotype rather than selecting a lectotype, Türkay (1974c: 142, 143) proceeded as though other syntypes did not exist. But we have found supplementary material, a male MNHN-IU-2000-10994 (= MNHN-B10994), collected by Saussure from St Thomas, presumably at the same time, as confirmed by the mention in the CAA of an exchange between Saussure and the MNHN in 1858, corresponding to the entry “262.58”. This specimen likewise shows a deformation of the carapace. The fact that both specimens are similarly parasitised may be an indication that they should be from the same lot and, presumably, they belong to the syntype series, despite there being no indication of swelling on the carapace in Saussure’s paper. It is reasonable to expect that the original

description was based on more than one specimen. Therefore, Türkay (1974c), who published the assumption that the species-group taxon was based upon a single type specimen in recognising a holotype, is deemed to have designated that specimen as the lectotype (*Code*, Art 74.6). The male MNHN-IU-2000-10994 (= MNHN-B10994) may be considered a paralectotype. It is also the case with *Metopograpsus gracilis* Saussure, 1858, also from Saint Thomas (see above).

Metopograpsus pictus A. Milne-Edwards, 1867
(Fig. 7E)

Metopograpsus pictus A. Milne-Edwards, 1867: 283; 1873a: 289, pl. 13, fig. 2.

CURRENT TAXONOMIC STATUS. — Junior subjective synonym of *Metopograpsus latifrons* (White, 1847) (De Man 1879: 68; Ortmann 1894: 703; Tesch 1918: 81; Banerjee 1960: 12; Davie 2002: 217; Poupin 2010: 6; Ng *et al.* 2008: 217).

LECTOTYPE (by inference of holotype by Davie (2002: 217). — MZUT, Cr. 1026, New Caledonia.

PARALECTOTYPES. — MNHN-IU-2000-3573 (= MNHN-B3573), 1 ♂ 28.2 × 31.8 mm, New Caledonia. — Original label: “*Metopograpsus pictus* A. M. Edw., cat. du Muséum 225-63, Nlle Calédonie”. — MNHN-IU-2000-10893 (= MNHN-B10893), 1 ♂ 24.2 × 28.1 mm, 1 ♀ 24.4 × 24.9 mm, Nlle Calédonie, M. Beaudouin; “369-65” is written with Chinese ink directly on the carapaces of both specimens. — MNHN-IU-2000-3572 (= MNHN-B3572), 1 ♂ 17.2 × 20.6 mm, New Caledonia, coll. Beaudouin.

PRESERVATION. — Dry. LP5 missing, RP4-5 dactyli missing for male MNHN-IU-2000-3573; LP2 missing for female of MNHN-IU-2000-10893; most of pereopods missing for male MNHN-IU-2000-3572.

REMARKS

Davie (2002: 217) stated that the holotype of *Metopograpsus pictus* as “MZUT Cr. 1026” was deposited at the Museo Regionale di Scienze Naturali, Torino, Italy (MRSN). The previous curator of this institution has confirmed that a “holotype, MZUT Cr. 1026” was present in their collection (Alberto Chiarle, pers. comm., Dec. 2012). It must be treated as the lectotype.

According to the CAA, the entry 225-63 designates the sample MNHN-IU-2000-3573 (= MNHN-B3573) that was collected by M. De Planche (although not mentioned on the original label) in New Caledonia and given to the Muséum by M. Aubry-Lecomte, director of the Musée des Colonies. The entry 369-65 designates the samples MNHN-IU-2000-10893 (= MNHN-B10893) and MNHN-IU-2000-3572 (= MNHN-B3572) collected in New Caledonia and given to the Muséum by M. Beaudouin (Navy Captain, see Appendix). They could be considered paralectotypes (*Code*, Art. 72.4).

A dry specimen labelled *Metopograpsus pictus* deposited at the Peabody Museum of Natural History in Yale University (YPM IZ001463) does not belong to the type series: it was collected from Dominica, West Indies, by A. E. Verrill’s sons, George and Alpheus, and sent over by A. Milne-Edwards in 1873, according to the information that we received (E. A. Lazo-Wasem, pers comm. Dec 2012).



FIG. 7. – **A**, *Metopograpsus gracilis* Saussure, 1858, MNHN-IU-2000-10991 (= MNHN-B10991), paralectotype, ♀; **B**, *Metopograpsus intermedius* H. Milne Edwards, 1853, MNHN-IU-2014-11210 (= MNHN-B12888), lectotype, ♂; **C**, *Metopograpsus maculatus* H. Milne Edwards, 1853, MNHN-IU-2000-3554 (= MNHN-B3554), lectotype, ♂; **D**, *Metopograpsus miniatus* Saussure, 1858, MNHN-IU-2000-10994 (= MNHN-B10994), paralectotype, ♂; **E**, *Metopograpsus pictus* A. Milne-Edwards, 1867, MNHN-IU-2000-3573 (= MNHN-B3573), paralectotype, ♂; **F**, *Pachygrapsus minutus* A. Milne-Edwards, 1873, MNHN-IU-2000-3582 (= MNHN-B3582), lectotype, ♂, & MNHN-IU-2000-1107 (= MNHN-B3582), paralectotypes, 4 ♂; **G**, *Pachygrapsus striatus* A. Milne-Edwards, 1873, MNHN-IU-2000-3586 (= MNHN-B3586), lectotype, ♂; **H**, *Grapsus varius* Latreille, 1803, MNHN-IU-2000-3526 (= MNHN-B3526), neotype, ♂. Scale bars: A, 5 mm; B, D, F, G, 10 mm; C, E, H, 2 cm.

Pachygrapsus minutus A. Milne-Edwards, 1873
(Fig. 7F)

Pachygrapsus minutus A. Milne-Edwards, 1873a: 292, pl. 14, fig. 2.

CURRENT TAXONOMIC STATUS. — *Pachygrapsus minutus* A. Milne-Edwards, 1873.

LECTOTYPE (designated by Poupin *et al.* 2005: 31). — MNHN-IU-2000-3582 (= MNHN-B3582), ♂ 7.6 × 10.4 mm, coll. M. Balansa, New Caledonia. — Original label: “*Pachygrapsus minutus* A. Edw., Nelle Calédonie, M. Balansa”.

PRESERVATION OF THE LECTOTYPE. — Dry.

PARALECTOTYPES. — MNHN-IU-2000-1107 (= MNHN-B3582), 4 ♂ 5.5 × 7.7 – 7.3 × 10.0 mm, same data as lectotype.

PRESERVATION OF THE PARALECTOTYPES. — All are dry specimens.

REMARK

Balansa collected much carcinological material from New Caledonia (see Appendix).

Pachygrapsus striatus A. Milne-Edwards, 1873
(Fig. 7G)

Pachygrapsus striatus A. Milne-Edwards, 1873b: 82[6].

CURRENT TAXONOMIC STATUS. — Junior subjective synonym of *Pachygrapsus plicatus* (H. Milne Edwards, 1837) (see Kingsley 1880: 200), see above under *Grapsus plicatus*.

LECTOTYPE (by present designation). — MNHN-IU-2000-3586 (= MNHN-B3586), ♂ 13.5 × 16.0 mm, Sandwich Islands [Hawaiian Is.], coll. M. Ballieu. — Original label: “*Pachygrapsus striatus* A. M. Edw., M. Ballieu, îles Sandwich; *P. striatus* = *Grapsus striatus* Edw.”.

PRESERVATION OF THE LECTOTYPE. — Dry.

PARALECTOTYPES. — MNHN-IU-2000-1110 (= MNHN-B3586), 1 ♂ 12.1 × 15.1 mm and 1 ♂ with carapace cl 12.3 mm, same data as lectotype. MNHN-IU-2000-3583 (= MNHN-3583), 1 ♀ female 13.5 × 10.4 mm, Upolu — Other label: “*Pachygrapsus plicatus* A. M. Edwards, Upolu (Samoa), 73-70”.

PRESERVATION OF THE PARALECTOTYPES. — MNHN-IU-2000-1110 (= MNHN-B3586), both dry, the larger one with damaged carapace, LP1, RP5 detached. MNHN-IU-2000-3583 (= MNHN-3583), dry, RP2 missing, LP1 detached.

REMARKS

In a paper dealing with the crabs from the Museum of M. C. Godeffroy, a private museum in Hamburg, Germany, which existed from 1861 to 1885 (see Appendix at Godeffroy Museum), A. Milne-Edwards (1873b) described as *Pachygrapsus striatus* material collected in the Sandwich Islands and in Samoa at Upolu: he quotes the number 5806 and cites a specimen measuring 14.0 × 11.0 mm. The species was synonymised to *P. plicatus* by Kingsley (1880), Ortmann (1894) and Tesch (1918: 77). This synonymy was recognised by Poupin *et al.* (2005: 38, 42) but not mentioned by Castro (2011: 114) in his Catalogue of Brachyura from the Hawaiian Islands.

The original sample MNHN-B3586, with three males, from Sandwich Islands, collected by M. Ballieu (poorly handwritten on the label, thus erroneously cited as “Baillien” by Poupin 2005: 38) (see Appendix) presumably belongs to the type series, as stated by Poupin *et al.* (2005: 42).

Even though the original sample MNHN-B3583 is labelled as *P. plicatus*, in the CAA entry data 73-70 (thus corresponding to 1870), it is registered as *P. striatus*. Thus it could have been examined by A. Milne Edwards and belong to the type series.

Ortmann (1894: 708, see footnote n°3) recorded a male and a female of *P. plicatus* from Upolu, as “Mus. Godeffroy (vend.)” and with a footnote that mentions the same number 5806 [“Vend.” could indicated that the material was sold by the Godeffroy trading company]. Thus the *P. plicatus* of Ortmann (1894) could correspond to the *P. striatus* material of A. Milne Edwards (1873b).

The MZS handles one sample (MZS Cru 0742) labelled as “*Pachygrapsus plicatus* Upolu, Godeffroy Mus., 1888”, with one male (with all pereopods detached) and one female (with LP1-P5, RP1, RP4-5 detached) in the alcool collection (M.-D. Wandhammer, Chief Curator of MZS, personal communication, September 2017). Although there is no mention on the label of the number 5806 quoted by A. Milne-Edwards (1873b) and Ortmann (1894), this sample could belong to the type series, and the two specimens can be considered paralectotypes.

Poupin (2005: 39) recorded a dry sample of *P. plicatus* A. M. Edwards, Upolu, God. 88 (MZS Cru 1210), but this catalogue number deals with *Orithyia sinica* (Linnaeus, 1771) in the catalogue of the Strasbourg Museum (M.-D. Wandhammer, pers. comm., December 2017).

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APPENDIX

INFORMATION ON THE VOYAGER-NATURALISTS, COLLECTORS AND DONATORS BEFORE 1900
(for the relevant bibliography, see above References)

Previously, missionary, colonising, commercial, and military concerns were the sole aim of maritime expeditions. However, with the voyage of Louis Antoine de Bougainville (1766-1769) around the world, a desire for research and study developed in several domains, particularly natural history and ethology. For the first time scientists were added to the marine officer and medical staffs. The naturalist voyagers (see Laissus 1981) received arduous instruction at the Muséum d'histoire naturelle before being sent out in the field by the institution. Here they became government employees charged with missions or worked under contract as assistant naturalists or as artists and illustrators. To train the future explorers, the Muséum declared in 1818 the creation of a school for voyagers, and great names such as Cuvier, d'Orbigny, Geoffroy Saint-Hilaire, and von Humboldt participated in this education. In 1824, the professors of the Muséum published a brochure, which was re-edited in 1827, 1829, 1848, and 1860: "Instruction pour les voyageurs et pour les employés dans les colonies sur la manière de recueillir, de conserver et d'envoyer les objets d'histoire naturelle, Rédigée sur l'invitation de Son Excellence le Ministre de la Marine et des Colonies, par l'administration du Muséum Royal d'histoire naturelle" ["Instructions for the voyagers and employees in the colonies on the manner of collecting, preserving, and shipping natural history objects, Written upon the invitation of His Excellency the Minister of the Navy and the Colonies, by the administration of the Royal Museum of Natural History"] (see under Anonymous 1829). Naval physicians, surgeons, and pharmacists became excellent naturalists and collectors.

Balansa, Gaspard Joseph Benedict (1825-1890). More commonly known as Benjamin Balansa, was a French botanist and explorer. On behalf of the Muséum d'histoire naturelle, he made several collecting trips to Africa, Eastern Europe, Paraguay and Asia Minor. He stayed in New Caledonia from 1868 to 1872, and, as the Director of the Jardin d'Acclimatation of Noumea, he collected valuable carcinological material from New Caledonia, including the Loyalty Islands. This was mentioned in the introduction of *Recherches sur la faune carcinologique de la Nouvelle-Calédonie* (A. Milne-Edwards 1872: 230). The crabs were studied by A. Milne-Edwards (1872, 1873a). Duplicates were exchanged between A. Milne-Edwards and the Leiden Museum in 1878. Balansa died in Hanoi, Vietnam, during his expedition to the Gulf of Tonkin (Guillaumin 1911; Fransen *et al.* 1997; Morat 2010).

Ballieu, Pierre Etienne Theodore (1828-1885). French Consul in Honolulu from 1869 to 1878, was a well-respected amateur scientist who collected animals in the Hawaii Is., such that fishes and birds were named in his honour (Mearns & Mearns 1992).

Beaudouin, A. (1824-?), also spelled Baudouin. The name of 'Beaudouin' is indicated on the labels of numerous samples collected from New Caledonia and deposited in the dry Collection of the MNHN. The CAA allows us to trace the deposit of crabs collected from New Caledonia into the MNHN by Beaudouin. Here they appear with the entry date of 1865 under the heading "*Crustacés provenant de Nouvelle-Calédonie donnés au Muséum par M. Beaudouin, Capitaine d'Infanterie de Marine*" [Crustaceans originating from New Caledonia donated to the Muséum by Mr Beaudouin, Navy Infantry Captain]. He is a collector often cited by A. Milne-Edwards (1872, 1873a) in his papers on the New Caledonian fauna. In his introduction, A. Milne-Edwards (1872: 230) wrote "Baudouin", whereas the spelling "Beaudouin" is generally used on the labels of the MNHN samples (Guinot & Cleva 2009: 28). A Navy Infantry Captain spelled "Baudouin", present in New Caledonia between 1864 and 1868, is cited by Morat (2010).

Another collector named Beaudoin, also known as a captain, deposited in the MNHN numerous crabs, often in dry condition, collected from the Red Sea and the Mediterranean. This is significant for knowledge of Egyptian carcinology: they can be also traced in the CAA, with 1866 as the entry date (Guinot & Cleva 2009: 28).

Beaupertuis, Louis Daniel de (1807-1871). Also known as Luis Daniel Beaupertuis, often indicated as "Beaupertuis" on the labels, was born in Guadeloupe and died in Guiana. Since childhood, he was in contact with nature. In 1838, he was sent as a naturalist voyager by the Muséum d'histoire naturelle at Paris, to Venezuela where he collected a huge number of specimens (reptiles, fishes, molluscs, crustaceans, plants, etc.), now deposited at the MNHN. In 1853 he discovered that yellow fever is transmitted by mosquitoes and not through the air. (Bauchot *et al.* 1990, 1997).

Bélangier, Charles Paulus (1805-1881). He was a French explorer and naturalist. In 1825, he was commissioned to create the botanical garden in Pondicherry, India, where he arrived in 1826 after a fourteen-month voyage! Along the way, he collected many documents and valuable ethnographic material. Bélangier made three more trips, especially one in Java, Indonesia. In 1850, he was appointed as the director of the botanical garden in Martinique which rapidly turned into a scientifically important institute: the garden quickly became a valuable storehouse of many rare plants and the only one in the French colonies. During his stay in Martinique, Bélangier continued to enrich the collections of the MNHN (Broc 1992; Bauchot *et al.* 1990, 1997). In the CAA, entries of material collected by Bélangier as "*botaniste du roi à Pondichéry*" ["the king's botanist at Pondicherry"], are mentioned for 1828 without origin, then for 1859, 1860 and 1864 from Martinique.

Berthelot, Sabin (1794-1880). A French naturalist and ethnologist, who resided in the Canary Islands for part of his life. After the Napoleonic Wars, he joined the merchant fleet, travelling between Marseille and the Antilles. He first visited the Canary Islands in 1820, which he considered a paradise for naturalists. He taught in Tenerife, managed the botanical gardens in Orotava and studied the natural history of the Canary Islands. He was joined by Philip Barker Webb (see under this name) in 1828, and by 1830 they had collected sufficient information to publish the first volume of *L'Histoire Naturelle des Îles Canaries* [The Natural History of the Canary Islands] in Geneva in 1835. Berthelot focussed on the ethnography, history and geography of the islands, while Webb completed the natural history sections (Mearns & Mearns 1988; Bauchot *et al.* 1990, 1997).

Caillot, Eugène Auguste Charles (1866-1938). Initially a musician, he was a traveler and historian of Polynesia. After lessons in natural history by the Muséum in 1894, he was appointed to collect natural history material. He travelled extensively around the world, in Australia, New Zealand, South America and finally Polynesia to which he devoted the main part of his life, producing two volumes to its civilisation. In 1912-1914, he embarked on a trip to Oceania. He returned to Paris in July 1914, with many documents, and published several contributions dedicated to the history, traditions, religions and culture of Polynesians (Aimès 1952).

Claussen, Peter (1804-c. 1855). He was a Danish natural history collector, born in Copenhagen, but obliged to leave his country, joining the Brazilian army. He bought a farm in Minas Gerais, where he established a veritable museum and maintained natural history collections. He collected numerous plants, fossils and mineral specimens and sold them to the British Museum and the MNHN (Bauchot *et al.* 1990, 1997).

Delalande, also known as Lalande, Pierre Antoine de (1787-1823). French naturalist and explorer. After studying painting, at the age of 13 he entered the Muséum d'histoire naturelle, where his father was a taxidermist. As an assistant naturalist to E. Geoffroy Saint-Hilaire, he accompanied Auguste de Saint-Hilaire (see under this name) on a trip to Brazil in 1816. Here they collected samples of many animal species in the region of Rio de Janeiro. In April 1816, Auguste de Saint-Hilaire and Pierre-Antoine de Lalande left France aboard the frigate *L'Hermione* towards Brazil but in December 1816, for health reasons, Delalande returned to France carrying the specimens. In 1818, he began an expedition to South Africa with his nephew Jules Verreaux who was around 12 years old. They travelled and collected natural history material in South Africa for three years. On their return in 1821, they brought an astounding number (131 405) of specimens, mostly plant material, but including 288 mammals, 2205 birds, 322 reptiles, 265 fish, 3875 shellfish, and various human skulls and skeletons. After the Restoration (1814-1830) he changed his name from Lalande to Delalande. His nephew (see under

Verreaux) continued his work for about fifteen years before undertaking the sorting of his collections at the Muséum (Bauchot *et al.* 1990, 1997).

Deshayes, Gérard Paul (1795-1875). He was a French geologist and malacologist. After studies in medicine, he devoted himself to natural history. In 1869 he was appointed professor of natural history at the Muséum d'histoire naturelle, Paris. He is well known for his research on the fossil molluscs of the Paris Basin and other areas, and for his palaeontological contributions. On behalf of the Académie des Sciences [Academy of Sciences], Deshayes explored Algeria from 1840 to 1842 (Evenhuis 2012).

Diguet, Léon (1859-1926). A French naturalist and explorer: he completed his graduate studies at the Muséum national d'Histoire naturelle, Paris, where he obtained the title of chemical engineer. During his studies, he met the zoologist Alphonse Milne-Edwards and the anthropologist Ernest Hamy, who had a great influence on his career. As a chemical engineer, Diguet made his first visit to Santa Rosalia (Baja California Sur, Mexico) from 1889 to 1892, devoting his free time to the natural sciences and investigations on botany, geology, zoology, archaeology, ethnology, geography, and hydrography. Léon Diguet explored the country and collected natural history material that he regularly sent to the MNHN, Paris. He returned to France and, with the support of Alphonse Milne-Edwards, he was sent back to Mexico and employed as a full-time explorer and collector. From 1893 to 1914 Diguet made six scientific missions to Mexico and two to the United States (Beloens *et al.* 2011; Laylander 2014).

Dumont d'Urville, Jules Sébastien César (1790-1842). He was an explorer, cartographer, botanist, linguist and writer. In 1807, at the age of 17, he joined the navy. In 1820, he was sent on a voyage to the eastern Mediterranean Sea on board the *Cheurette*. In 1822, he set off on the first of his scientific discovery voyages with the *Coquille*, which sailed from Toulon, with Louis Isidore Duperrey as commanding officer and Dumont d'Urville as second in command. The voyage lasted 31 months. Dumont d'Urville visited New Zealand for the first time in 1824. In 1826, after being promoted to the rank of commanding officer, he sailed from Toulon on another voyage that took him to New Zealand. His ship, the *Coquille*, was rechristened as *Astrolabe* in honour of one of La Pérouse's ships. Many important botanical and entomological investigations were carried out during that voyage by Dumont d'Urville, Jean René Constant Quay, Joseph Paul Gaimard (see under these names) and Pierre Adolphe Lesson. The *Astrolabe* arrived back in Marseille in 1829 where the precious cargo of specimens was unloaded before the final docking in Toulon. Dumont d'Urville was commanded to publish an account of the *Astrolabe's* voyage, which comprises 12 volumes and five albums; it was completed in 1835. In 1837, Dumont d'Urville left Toulon for his third voyage to the southern oceans. He had two ships, the *Astrolabe*, which he commanded personally, and the *Zélée*, under the command of Captain Charles

Hector Jacquinot (see under this name). He received a royal command from King Louis-Philippe to publish an account of the voyage. Many islands and places have been named in honour of his valuable chartings (Bauchot *et al.* 1990, 1997; Clark & Crosnier 2000; Dunmore 2007; Duyker 2014). See also under Hombron, Jacques Bernard.

Eydoux, Joseph Fortuné Théodore (1802-1841). A French naturalist, Doctor of Medicine, he was surgeon and naturalist on the corvette *La Favorite* that made a circumnavigation in 1830-1832 captained by Cyrille Pierre Théodore Laplace. In 1836-1837, with Louis François Auguste Souleyet (see under this name), he voyaged on *La Bonite* captained by Auguste Nicolas Vaillant. *La Bonite* sailed from Toulon and visited many places, including Rio de Janeiro, Valparaiso, Peru, the Sandwich Islands, the Philippines, Macao, Vietnam, Singapore, India, Réunion Island and the Cape. The collections brought back surpassed the hopes of the professors at the Muséum. Eydoux was nominated “correspondant du Muséum” in 1840, to which he donated his numerous collections. When he was just beginning to write the zoological part of this journey, Eydoux was sent to Martinique where he died of yellow fever. The results of the collected material were published with Louis Souleyet (see under this name) in the *Voyage autour du monde [...] sur la corvette La Bonite* [Voyage around the world [...] on the corvette *La Bonite*], and, after Eydoux’s death, Souleyet continued its publication, with Eydoux as co-author. The publication comprises 18 volumes and three atlases, from 1840 to 1866 (Bauchot *et al.* 1990, 1997).

Fontaine, P. A. Little is known about him except that several natural history specimens brought to the Muséum by Alcide d’Orbigny from his voyage of exploration in South America (1826-1834), were collected by Fontaine in Chile and Peru and that he was of a great help for d’Orbigny. Many crab species are labelled with his name, either on its own or along with those of Gay, d’Orbigny, or Gaudichaud (Guinot & Cleva 2002). Several invertebrate species were dedicated to him, e.g. *Octopus fontanianus* d’Orbigny, 1834.

Fréminville, Christophe Paulin de La Poix de (1787-1848). Known as Chevalier de Fréminville, he devoted his life to the French Navy. Performing archeology and natural history surveys, he served on the frigate *Néréide* off Western Africa. In mid-1822, the *Néréide* sailed to the Caribbean, visiting Martinique, Guadeloupe, and along the coast of the Islands of the Saints (“îles des Saintes”). In 1832 he described *Eryon caribensis*, a curious crab from Martinique that is actually a synonym of *Symethis variolosa* (Fabricius, 1793), and in 1835 he published a paper on the land crabs from the French Antilles that he had collected himself and given to the MNHN (Herpin 1913; Low *et al.* 2013).

Freycinet, Louis Claude de Saulces de (1779-1841). Simply known as Louis de Freycinet, he was a French navigator, who entered the French navy in 1794. He and his older brother (Louis Henri de Freycinet) joined an expedition to explore

the south and southwestern coasts of Australia in 1800 and set out under the stewardship of Nicolas Baudin on the *Naturaliste* and the *Géographe*. He wrote the narrative of the expedition, and the whole work appeared under the title *Voyage de découvertes aux terres australes* (Paris, 1807-1816). Freycinet circumnavigated the earth, and in 1811 published the first map of the coastline of Australia. In 1817, he commanded the *Uranie*, went to Rio de Janeiro, and collected natural history specimens. For three years, Freycinet visited Australia, the Mariana Islands, Hawaiian Islands and other Pacific islands, South America, and other places. Despite the loss of the *Uranie* on the Falkland Islands during the return voyage, he returned to France with fine collections in all departments of natural history and with voluminous notes and drawings. The results of this voyage were published under Freycinet’s supervision, with the title of *Voyage autour du monde fait par ordre du Roi sur les corvettes de S. M. l’Uranie et la Physicienne, pendant les années 1817, 1818, 1819 et 1820*, in 13 text volumes and 4 volumes of plates and maps (Cap 1854; Bauchot *et al.* 1990, 1997).

Gaimard, Joseph Paul (1796-1858). A French naval surgeon and naturalist. Along with Jean René Constant Quoy (see under this name), he participated in expeditions on the ships the *Uranie* (1817-1820) commanded by Louis de Freycinet, and the *Astrolabe* (1826-1829) commanded by Dumont d’Urville. He visited many places, including Australia, Mariana and Hawaiian Islands. The *Voyage autour du monde ... exécuté sur les corvettes de S. M. l’Uranie et la Physicienne pendant les années 1817, 1818, 1819 et 1820* was published with J. Quoy. He was elected “correspondant du Muséum” in 1825. As scientific leader on *Recherche* during two expeditions (1835 and 1836) to the Arctic Sea, Gaimard made voyages to coastal Iceland and Greenland. From these trips, he published nine volumes *Voyage en Islande et au Groënland*. From 1838 to 1840, he was on board the *Recherche* again as the leader of a scientific expedition to Scandinavia, Lapland, Spitsbergen, and the Faroe Islands. He brought large collections gathered during his numerous cruises back to the Muséum (Bauchot 1994; Bauchot *et al.* 1990, 1997).

Gaudichaud-Beaupré, Charles (1789-1854). A French botanist, he studied pharmacology, chemistry and botany, and in 1810 became appointed dispenser in the French navy. He was chosen by J. Quoy (see under this name) to join the scientific team for the circumnavigation on the ships the *Uranie* and the *Physicienne* (1817-1820) commanded by L. de Freycinet (see under this name). He was elected “correspondant du Muséum” in 1830. Between 1830-1833, Gaudichaud sailed on the *Herminie* to both the east and west coast of South America, visiting Brazil (Bahia, Rio de Janeiro, São Paulo, Santa Catarina) and several ports in Chile (Valparaiso, Cobija). In 1836-1837 he undertook a third circumnavigation voyage on *La Bonite*, via the Cape of Good Hope and Mauritius to the Malay Archipelago, Australia, Polynesia, Cape Horn and finally to the Falkland Islands, where, having been wrecked, it was replaced by the *Physicienne*, which travelled

via the east coast of South America back home to France. From Toulon in 1836, *La Bonite* sailed along the east coast of South America (Rio de Janeiro, Brazil; Montevideo, Uruguay) rounding Cape Horn, up the coast of Chile (Valparaiso, Cobija), Peru (Callao, Paita), and Ecuador (Guayaquil); then it crossed the Pacific via Hawaii to the Philippines and China and went via Singapore, India and the Cape of Good Hope back to France (Brest). The results were published in 18 volumes by H. Milne Edwards & Lucas (1842-1844) in their study of A. d'Orbigny's collection under the title *Voyage autour du monde exécuté pendant les années 1836 et 1837 sur la Bonite [...]*. After his return, Gaudichaud became a professor of pharmacy in Paris, was made member of the Institut de France and was attached to the Muséum (Fransen *et al.* 1997; Bauchot *et al.* 1990, 1997). In the CAA, there are three entries. One entry in 1832 refers to material collected from both Pacific and Atlantic South America (Callao, Chile, Brazil). There are two entries in 1837: the first indicates "Expedition of La Bonite, different localities"; and the second refers to China.

Gay, Claude (1800-1873). He started to study medicine and pharmacy in Paris, but soon devoted himself entirely to natural history. In 1828, he received training and guidance from the Muséum. Gay left France in 1828 for Chile where he was offered a position as a natural history teacher in the Colegio de Santiago; he was charged to explore and study the natural history and topography of Chile. Between 1831 and 1842 he collected intensively in many parts of Chile. On March 1832 he returned to France to obtain equipment for his work, and he deposited his collections in the MNHN. He returned to Chile in 1834 and became a researcher for the Chilean government. In 1838, his collections were stored in a museum in Chile specially build for that purpose. He also travelled to Peru in 1839. In 1849 he published the *Historia física y política de Chile*. With the help of several specialists, 28 volumes were printed and published in Paris. Having spent his free time collecting plants and animals, he donated much material to the Muséum (Laissus 1981; Fransen *et al.* 1997; Bauchot *et al.* 1990, 1997).

"Godeffroy Museum" (1861-1885). The first members of the Godeffroy family were Huguenots from La Rochelle, France, who fled to Germany after the repeal of the Nantes Edict. Johann Cesar VI Godeffroy (1813-1885), grandson of the founder of the company, had acquired scientific material, which in 1860 and 1861, at his request, was arranged by Dr Graeffe to form the Godeffroy Museum, a private museum in Hamburg. The trading company Jean Cesar (later Johann Cesar) Godeffroy & Son founded in 1766 became an important shipping company in the 19th century, with its ships found on many seas, notably on the Pacific Ocean, and the east and west coast of America. His expert collectors and captains brought back to Hamburg zoological, botanical and ethnographic material, the captains of the various ships of the company being instructed to collect material wherever possible. In addition, private persons were sent out as collectors,

for example E. Graeffe to Samoa. In this way a considerable collection was built up. The Museum had its own journal *Journal des Muséum Godeffroy, Geographische, ethnographische und naturwissenschaftliche Mittheilungen*, of which 6 volumes (in 17 parts) appeared between 1873 and 1910. This journal contained scientific papers on the material in the collection: for example, a paper on the Crustacea by A. Milne-Edwards (1873a). The Godeffroy Museum also published price catalogues (nine in all) of its duplicate material that was for sale, such that Godeffroy material can be found in many museums. In the 1870's the Godeffroy Company experienced financial trouble, resulting in its liquidation in 1879. The Museum was maintained for a time, but in 1886 the zoological section was sold to the Zoological Museum of Hamburg. A large number of exhibits and specimens survive today in many museums, as gifts or acquisitions: Strasbourg, Leipzig, Hamburg, Berlin, Leiden, Oxford, Paris, Trieste, Vienna, Melbourne (Hertz 1922; Fransen *et al.* 1997).

Hombron, Jacques Bernard (1798-1852). He was a French naval surgeon and naturalist. He served on the French voyages of the *Astrolabe* and the *Zélée* between 1837 and 1840 to investigate the perimeter of Antarctica. Two ships sailed from Toulon in 1837: the *Astrolabe* commanded by Dumont d'Urville, and the *Zélée* under Captain Charles Jacquinot (see under this name). Hombron was appointed as surgeon and botanist on Dumont d'Urville's vessel, and Honoré Jacquinot (Charles' younger brother) as junior surgeon on the *Zélée*. Hombron and Honoré Jacquinot were in charge of zoology and botany. Sailing through Tenerife, Rio de Janeiro and Patagonia to the Antarctic Ocean, both ships were trapped in pack ice in the early part of 1838, so that in March 1838 Dumont d'Urville gave up on penetrating any further south, and the expedition withdrew north to Polynesia via Talcahuano and Valparaiso in Chile. They explored the Pacific and East Indies and reached Hobart, Tasmania, in December 1839. Being sick, Hombron was left in Tasmania, whereas the expedition then set its course for home via the Torres Strait, Réunion Island and the Cape of Good Hope, landing back at Toulon in November 1840. On his return to Paris, Hombron was employed at the Muséum from 1840 to 1848 to take care of the collections brought back by the expedition. Hombron and Honoré Jacquinot supervised the official account *Voyage au Pôle Sud et dans l'Océanie sur les corvettes l'Astrolabe et la Zélée* which, composed of 23 volumes and seven atlases, took until 1854 (Bauchot *et al.* 1990, 1997; Clark & Crosnier 2000).

Jacquinot, Charles Hector (1796-1879). He served as ensign on *La Coquille* on Duperrey's expedition (1822-1825), then as second in command under Dumont d'Urville (see under this name) on the *Astrolabe* (1826-1829) and commanding officer of the *Zélée* on Dumont d'Urville's second expedition (1837-1840). After the death of Dumont d'Urville, Jacquinot was appointed as his successor on the Editorial Committee for the publication of the voyage of the *Astrolabe* and the *Zélée*. Most of the 'livraisons' of the *Atlas d'Histoire Naturelle*

Zoologie of the Voyage au Pôle Sud were published “under the superior direction of Mr [C. H.] Jacquinot, Commander, Captain of the *Zéléé*” (Bauchot *et al.* 1990, 1997; Clark & Crosnier 2000).

Jacquinot, Honoré (1815-1887). Younger brother of the naval officer Charles Hector Jacquinot (see under this name), was a French naval surgeon and zoologist. He served as an assistant to J. B. Hombron (see above) on the voyage to the South Pole and Oceania on the *Astrolabe* under the command of Dumont d’Urville (1837-1840). He was in charge of writing the scientific part of the expedition (Bauchot *et al.* 1990, 1997; Clark & Crosnier 2000).

Lesueur, Charles Alexandre (1778-1846). A French naturalist, artist and explorer. In 1801, he embarked as simple gunner’s aide on Captain Nicolas Baudin’s the famous “*Expédition aux Terres Australes*” on the corvettes the *Géographe* and the *Naturaliste* (1800-1804) to map the coast of New Holland, i.e., Australia. He revealed his remarkable talent for drawing such that Baudin relieved him of his military duties and gave him the title of artist of the expedition. With his friend François Péron (see under this name), they collected over 100 000 zoological specimens. Back in France Lesueur devoted his time to the atlas that illustrates the first edition of *Voyage de découvertes aux Terres australes* published in 1807 by Péron (see under this name). The Crustacea of the Baudin expedition were not dealt with as a whole until the publication of Bonnemains & Jones (1990) which is a compilation of the published data, notebooks and diaries collected during this expedition; many original illustrations of brachyuran crabs are reproduced in their paper. Extensive manuscript notes, catalogues, accurate sketches and fine colour paintings by Péron and Lesueur are currently preserved in the Muséum d’Histoire naturelle du Havre, France. Between 1815-1837, Lesueur lived in the United States, where he made several shipments to the Muséum. He returned to Paris in 1837. He continued his scholarly studies and activities in France, where he resumed his occupation of naturalist artist and began to catalogue his extensive research and artwork. In 1846, Lesueur was appointed as director of the Muséum d’Histoire naturelle du Havre. In the 1900s, his work was finally published by the Muséum, totalling over 60 books, including reports of his zoological, geological, historical and archaeological research, as well as studies of his life (Laissus 1981; Bauchot *et al.* 1990, 1997).

Lucas, Pierre Hippolyte (1815-1899). Assistant naturalist at the Muséum d’histoire naturelle, Paris, and invertebrate zoologist, specialising primarily in Lepidoptera, Coleoptera, and Crustacea. He was a member of the “*Commission d’Exploration scientifique d’Algérie* [Commission for the Scientific Exploration of Algeria]”, participated in collecting from a wide variety of localities from 1839 to 1841, often accompanying the French military during their troop movements. Upon his return to Paris in 1842, he coordinated the publication of the *Histoire naturelle des Animaux articulés* (Evenhuis 2012).

Marche, Antoine-Alfred (1844-1898). A French naturalist and explorer having visited Africa, the Philippines and the Mariana Islands. He was involved in three expeditions to western Africa, accompanying Savorgnan de Brazza on his third trip (1875-1877). He collected numerous zoological specimens that were sold to other naturalists in Paris (e.g. Jules Verreaux, E.-L. Bouvier, etc.) to help finance his shipments. From 1880 onwards, he devoted several years to conducting naturalist studies in the Philippines, publishing *Luçon et Palaouan, six années de voyages aux Philippines* (Marche 1887).

Meder, Johann Christiaan (-1845). He is a relatively unknown collector, except that he was born in The Netherlands. He was the director of the Batavian Society of Arts and Sciences in Batavia (presently Jakarta, Indonesia). He was known as a “Zealous friend to Conchology”. He collected two specimens of *Nautilus pompilius* Linnaeus, 1758 from Molucca Islands that he donated to the Museum of Natural History of Leiden and the Muséum d’histoire naturelle, Paris, respectively. His collection (or only a part) was sold in 1852 to the Muséum, the preface of the sale catalogue stating that a Committee of Naturalists appointed by the Muséum had classified the collection in 1845 (Bentham Jutting 1939).

Péron, François (1775-1810). Destined for priesthood, he began to study medicine and natural science. He convinced the “Citizen Professors of the School of Medicine” of the importance of sending an anthropologist on Nicolas Thomas Baudin’s expedition to the “Terres Australes” (1800-1804) (see Bauchot 1974), in order to explore and map the ‘unknown’ southern parts of the Eastern Hemisphere, notably the southern coast of Australia, at the time “Nouvelle-Hollande”. Thanks to Cuvier and Jussieu’s support, he embarked on the *Géographe*, as anthropologist but also as medicinal botanist and zoologist. During the voyage, Péron met Charles-Alexandre Lesueur (see under this name) and they became life-long friends and colleagues. Together, Péron and Lesueur amassed and illustrated the first significant collection of Australian crustaceans. *Pseudocarcinus gigas*, the largest brachyuran crab (called “Tasmanian giant crab”) collected in 1802 on Maria Island, Tasmania, and documented by Péron in his *Voyage de découvertes aux Terres australes* (first volume published in 1807), was described by Lamarck (1818), the dry syntypes being currently preserved in the MNHN. Many of the decapods were later described by Henri Milne Edwards (1834, 1837) (Plomley *et al.* 1990; Bauchot *et al.* 1990, 1997; Davie 2002).

Plée, Auguste (1787-1825). A French naturalist who collected plants in the West Indies and Venezuela for the Muséum. After beginning his career in administration, he applied himself to natural history with enthusiasm and became a naturalist voyager, receiving proper training from the first class of the school that opened at the Muséum in 1819. After 1820, he set off for the Antilles (Martinique, Guadeloupe, St Thomas, Ste Lucia, St Barthélemy, Puerto Rico), the United States and along the coast of Venezuela from Cumana to Maracaibo, hired by the Muséum to ex-

plore the continent. He collected plants and other organisms everywhere. Numerous brachyuran crabs he collected are deposited at the MNHN (Bauchot *et al.* 1990, 1997). The entry date “1826” for Plée’s material is mentioned in the CAA, in which Plée is mentioned as “voyageur du Muséum” (“traveller of the Muséum”).

Quoy, Jean René Constant (1790-1869). A French naval surgeon, zoologist and anatomist. He was born in Vendée in a family that counted no less than ten surgeons in three generations (even his grandmother). In 1806 he began his medical studies at the famous *École de Médecine navale* of Rochefort. Serving as assistant surgeon, he sailed on a trip to the Antilles (1808-1809). After earning his medical doctorate in 1814 at Montpellier, he was surgeon-major on a journey to Réunion Island (1814-1815). After several months of instruction at the Muséum, in contact with Lamarck and Cuvier, he served, with Joseph Claude Gaimard (see under this name), as naturalist and surgeon aboard the *Uranie* and the *Physicienne* under the command of Louis de Freycinet (see under this name), bringing on board a microscope, 1000 glass jars and a working library. Quoy and Gaimard visited the Mediterranean Sea, Teneriffé, Rio de Janeiro, Cape of Good Hope, Western and South Australia, Timor, Moluccas, the Carolines, Hawaii, Mauritius, Tierra del Fuego and again Rio de Janeiro. Then, Quoy served on the *Astrolabe* (1826-1829) under the command of Jules Dumont d’Urville (see under this name) for a circumnavigation (1817-1820) in various parts of the world, including Tongatabu, Fiji, New Zealand, Vanikoro, Tasmania, the Loyalty Is., New Ireland, Guam, Ambon, Celebes, and Batavia: a considerable collection of objects and drawings was brought back to the Muséum. Quoy wrote the zoology part of the voyage of the *Astrolabe*. The manuscripts by Quoy and Gaimard (see under this name) regarding the zoology of the *Astrolabe*, containing five working memories and more than 500 plates (6000 drawings, many from Quoy himself), are deposited in the “Bibliothèque centrale” [Central Library] of the MNHN. Along with his skills as a naturalist, being one of the greatest naturalist voyagers of his time, Quoy was acclaimed for his talent as an artist. Unsuccessful as a candidate for a chair in Zoology at the Muséum in 1832, he pursued his career at the “École navale” of Rochefort, and at the naval hospitals in Toulon (1835-1837) then Brest (1838-1848), and became general inspector of the “Service de santé de la Marine” (1848-1858). He was named correspondent of the “Académie des Sciences” in 1830 and “correspondant du Muséum” in 1844 (Bauchot 1994; Bauchot *et al.* 1990, 1997).

Ricord, Alexandre (1798-1876). Graduated doctor of medicine in 1824, Alexandre Ricord took lessons from Cuvier in 1824, travelled as a “correspondant du Muséum” in 1827, and then became a surgeon in the Navy at Saint-Domingue (Santo Domingo, Haiti), Cuba, where he conducted studies on natural history and collected zoological material (Bauchot *et al.* 1990, 1997). Two entries in 1833 of arthropod material collected by Ricord from Cuba are indicated in the CAA.

Roux, Jean Louis Florent Polydore (1792-1833). He was a French painter and naturalist. Since his youth, Roux intended to follow his father’s career as an oil dealer, but since his childhood he was interested in natural history, gathering a large insect collection. Latreille and Cuvier taught him at the “Académie des Sciences de l’Institut de France” [Academy of Science of the French Institute] in Paris. In 1819, he obtained the position of curator of the Muséum of Marseille at the time of its creation. In 1820 he published a catalogue on insects found in Provence, in 1828 the *Natural History of Shellfish from the Mediterranean* and in 1828-1830 a book *Crustacés de la Méditerranée et de son littoral* with 45 coloured plates made by his own hand. He left France in 1831 to visit many places with Baron von Hügel including the Red Sea, India, Ceylon, Asia, Australia and New Zealand. Many brachyuran crabs collected by Roux are deposited at the MNHN, especially from the Red Sea when he explored Upper and Lower Egypt and crossed over to Arabia. A collection of about 15 000 species and 32 000 specimens of insects, arachnids and crustaceans was sold, partly or entirely, to the dealer Marguier in Paris, from whom the Leiden Museum obtained several of its Crustacea. Roux bequeathed his rich personal collections to his hometown and the Muséum of Marseille (Bauchot *et al.* 1990, 1997; Franssen *et al.* 1997).

Saint-Hilaire, Auguste or Augustin François César Prouvençal, de (1779-1853). French botanist and explorer, credited with important discoveries in botany. Between 1816 and 1822 and again in 1830, he travelled in South America, especially in south and central Brazil. On his first voyage, from 1816 to 1822, he explored the Brazilian backlands, traveling *c.* 9000 km, from Northeast Brazil to Rio de la Plata. He gathered 24 000 specimens of plants, 2000 birds, 16 000 insects and 135 mammals and many other animals, most of these species being new to science. During his trip to Brazil in 1816 he was accompanied by Pierre Antoine Delalande (see under this name), and both collected samples of many animal species in the region of Rio de Janeiro; but in December 1816, for health reasons, Delalande left him and returned to France carrying the samples for the Muséum. In the following years he devoted himself to the study, classification, description and publication of his vast material, being impaired by his ill health, due to diseases contracted during his tropical travels.

Saussure, Henri Louis Frédéric de (1829-1905). Swiss mineralogist and entomologist, who became a prolific taxonomist. At the University of Geneva he studied entomology. After several years of study, he received a licenciate degree from the Faculty of Paris. In 1854, he travelled to the West Indies, then to Mexico and the United States of America where he met Louis Agassiz. He published several articles on the crustaceans of the Antilles and Mexico. He returned to Switzerland in 1856 with collections of American insects, myriapods, crustaceans, birds and mammals. Interested in geography, geology and ethnology, he co-founded the Geographical Society of Geneva in 1858. He was a member of

the managing committee of the “Muséum d’histoire naturelle de Genève”, and its collections of Hymenoptera and Orthoptera became one of the best in the world (Hauser 1972). The CAA mentions exchanges between Saussure (MHNG) and the MNHN in 1858.

Souleyet, Louis François Auguste (1811-1852). A French zoologist, malacologist and naval surgeon. He participated as naturalist and assistant surgeon on the voyage of *La Bonite*, which circumnavigated the globe (1836-1837) under the command of Auguste Nicolas Vaillant. After the death of Joseph Fortuné Théodore Eydoux (see under this name) in 1841, Souleyet spent ten years in Paris in order to himself complete the famous Eydoux et Souleyet’s *Voyage autour du monde [...] de la Bonite*. Souleyet died of yellow fever in Martinique (Laius 1981; Bauchot *et al.* 1990, 1997).

Verreaux, Jules Pierre (1807-1873). French botanist and ornithologist and also a professional collector and trader in natural history specimens. He worked for the family business, Maison Verreaux, established by his father, Jacques Philippe Verreaux, at the Place des Vosges in Paris. It was the earliest known company specialising in natural history objects. The company, which funded numerous collection expeditions to various parts of the world, sold many specimens to the Muséum. In 1818, at the age of twelve, J. P. Verreaux accompanied his uncle Pierre Antoine Delalande (see under this name) on an expedition to the Cape of Good Hope, from where he brought back more than 131 000 specimens after three years of efforts. From 1820 to 1825 he received a proper scientific education at the Muséum, then returned to South Africa from 1825 to 1837. From 1842 to 1847, he carried out a long mission to Australia and Tasmania as an assistant naturalist for the Muséum, where he constantly collected samples. In 1864 he took over from Florent Prévot as assistant naturalist at the Muséum

(Bauchot *et al.* 1990, 1997; Molina 2002). The name of various members of the Verreaux family appears in the CAA: in 1837, “Verreaux” for material from Mauritius and Cape of Good Hope; in 1847, for a “lot of Verreaux collection from Tasmania, Australia (insects)”; “C. Verreaux” in 1865 for material from Gabon and for material from the coast of Africa near the Cape “given by E. Verreaux”.

Webb, Philip Barker (1793-1854). An English botanist coming from an aristocratic family. He studied languages, botany, and geology at Harrow and Oxford. He collected plants in Italy, Spain, and Portugal, and was the first person to collect in the Tetuan Mountains of Morocco. En route to Brazil, he made what was intended to be a brief visit to the Canary Islands, but ended up stopping for a considerable time, returning after his Brazil expedition. Accompanied by Sabin Berthelot (see under this name), Webb collected specimens in the Canary Islands between 1828 and 1830. The results can be seen in the nine volumes of *L’Histoire Naturelle des Iles Canaries*, which he co-authored with Berthelot (see under this name), with contributions from other scientists (e.g. G. A. Brullé for the Crustacea). The text of this masterpiece took 20 years to be completed (Bauchot *et al.* 1990, 1997).

Zehntner, Leo (1864-1961). He was a Swiss naturalist. He studied natural sciences at Basel and Bern, after obtaining his doctorate in philosophy in 1890 from the “Muséum d’histoire naturelle de Genève” as assistant entomologist to Henri de Saussure (see under this name). In 1894, he went to Java, from where he sent many insect specimens to Geneva. After a brief return to Switzerland, still as a collaborator with Saussure, he returned to Java in 1901, then visited Ceylon (now Sri Lanka). From 1912 to 1916, he led a forest research station in Juazeiro, Bahia, Brazil, where he conducted botanical excursions (Hauser 1972).