A catalogue of types of the smaller taxa of Proctotrupoidea (Hymenoptera) in the Muséum national d'Histoire naturelle, Paris, with notes on the history of the insect collection of L. A. G. Bosc d'Antic

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Proctotrupidae,
Platygastroidea,
Scelionidae.

ABSTRACT
The types of 23 nominal species of Diapriidae (Ambositrinae and Ismarinae), Heloridae, Monomachidae and Proctotrupidae, in the collection of the Muséum national d'Histoire naturelle, Paris, are catalogued. Lectotypes are designated for two taxa (*Serphus* (*Phaenoserphus*) *micrurus* Kieffer, 1908 and *S.* (*P.*) *viator* var. *testaceicornis* Kieffer, 1908) and some previous lectotype designations are reviewed. *Proctotrupes indivisus* (Kieffer, 1908) is removed from synonymy with *P. gravidator* (Linnaeus, 1758). Brief notes are provided on the history of the insect collection of Louis Augustin Guillaume Bosc d'Antic.

MOTS CLÉS
Insecta,
Hymenoptera,
Proctotrupoidea,
Diapriidae,
Ambositrinae,
Ismarinae,
Heloridae,
Monomachidae,
Proctotrupidae,
Platygastroidea,
Scelionidae.

RÉSUMÉ
Catalogue des types des petits taxons de Proctotrupoidea (Hymenoptera) du Muséum national d'Histoire naturelle, Paris, et histoire de la collection d'insectes de L. A. G. Bosc d'Antic.
Les types de 23 espèces nominales de Diapriidae (Ambositrinae et Ismarinae), Heloridae, Monomachidae et Proctotrupidae, de la collection du Muséum national d'Histoire naturelle de Paris, ont été catalogués. Des lectotypes sont désignés pour deux taxons : *Serphus* (*Phaenoserphus*) *micrurus* Kieffer, 1908 et *S.* (*P.*) *viator* var. *testaceicornis* Kieffer, 1908 tandis que la désignation antérieure de plusieurs autres lectotypes est évaluée. La synonymie entre *Proctotrupes indivisus* (Kieffer, 1908) et *P. gravidator* (Linnaeus, 1758) est rejetée. L'histoire de la collection d'insectes de Louis Augustin Guillaume Bosc d'Antic fait l'objet d'un bref rappel.

INTRODUCTION

Proctotrupoidea Haliday, 1833 is a cosmopolitan and diverse superfamily of parasitic wasps including about 2500 described species. These wasps live as endoparasitoids of the larvae or pupae of other insects, usually Diptera or Coleoptera, and are often a major component of the hymenopteran fauna in a range of habitats.

A recent visit to the entomology unit of the Muséum national d'Histoire naturelle, Paris, showed that many uncatalogued types were present belonging to this group. A major part of these, the Diapriidae Haliday, 1833 subfamily Diapriinae Haliday, 1833, have been catalogued in a previous paper (Notton 2004). The current paper covers the types belonging to the smaller taxa of Proctotrupoidea: Diapriidae subfamilies Ambositrinae Masner, 1961 and Ismarinae Haliday, 1835, Heloridae Latreille, 1802, Monomachidae Ashmead, 1902 and Proctotrupidae Haliday, 1833. The only Proctotrupoidea types at the MNHN now uncatalogued belong to the Diapriidae subfamily Belytinae Förster, 1856. The location and recognition of such types is a necessary preliminary to revisionary studies, which, in order that they have lasting value, must be based on knowledge of the species described already. This problem is particularly severe for neglected groups such as Proctotrupoidea which have a large fragmented literature. Some original descriptions are unhelpful when the type repository is not mentioned. Previous works locating types at the MNHN concern: Diapriidae (Masner 1961); Heloridae (Risbec 1950; Townes 1977); Monomachidae (Schulz 1911; Musetti & Johnson 2004); Proctotrupidae (Risbec 1950; Kelner-Pillault 1958; Townes & Townes 1981). However, published information is incomplete and sometimes erroneous, and there is no single critical list of the types held by the Muséum, although published information has been usefully referenced by Johnson (1992). Consequently the current study aims to catalogue all the smaller taxa of Proctotrupoidea at the MNHN, and set them in the current classificatory scheme, and in the context of the history of this collection, in order to make them comprehensible and accessible to future workers and assist the future reorganisation of the collection at the MNHN. The history of the types of J.-J. Kieffer has already been outlined (Notton 2004; see also Evenhuis 1997); the historical context is further expanded in this paper with notes on the collection of L. A. G. Bosc d'Antic.

THE INSECT COLLECTION OF L. A. G. BOSC D'ANTIC (1759-1828)

The involvement of Louis Augustin Guillaume Bosc d'Antic with the French postal and diplomatic services and his part in the French revolution are well known (Greiner *et al.* 1989) but his work as one of the best French natural historians of his era is no less important (Cuvier 1829, 1831; Dutrouilh 1829; Silvestre 1829; Prevost & d'Amat 1954; Zimsen 1964), especially his publications on invertebrates, including insects, and the practical application of his knowledge of plants and insects to agronomy, horticulture and oenology (e.g., Bosc 1792, 1802a-c, 1803, 1813, 1817, 1818; see also references in Cuvier 1829, Royal Society of London 1867 and Greiner *et al.* 1989).

Bosc's insect collection was acquired at the time of his death in 1828 by the MNHN and is still there today. Small amounts of Bosc's insect material may also exist elsewhere, for example, possible Cynipidae types in the Muséum d'Histoire naturelle, Geneva (Bernhard Merz pers. comm.); and Coleoptera in the L. A. A. Chevrolat collection, according to a copy of a notebook in the manuscript collection of the BMNH (MSS. CHE A 1:1). The Chevrolat collection was sold and dispersed, however parts of it are known to have passed to the BMNH and the MNHN (Sharon Schute pers. comm.). Bosc's insect collection at the MNHN is important as a rare survival of such an early collection, particularly because it contains much type material of contemporary authors. This was a result of diligent collecting by Bosc, and his habit of making his collection available for study by other entomologists.

The surviving part of Bosc's collection at the MNHN has been divided into small lots dispersed amongst the rest of the insect collection, although these can still be recognized from the distinctive cabinet labels. During this project it was possible

to examine a fragment of the collection, which contained parasitic Hymenoptera now regarded as Bethylidae Haliday, 1839, Platygastridae Haliday, 1833, Proctotrupidae, and Scelionidae Haliday, 1839, in order to look for types of Proctotrupoidea. Bosc's specimens originally had no specimen labels but were pinned into a cabinet with distinctive, black-edged cabinet labels handwritten by Bosc himself (an example is figured by Horn & Kahle 1935-1937). Following rearrangement at some time the cabinet labels have been pinned onto the first specimen of each series. The handwriting may be confidently attributed to Bosc and deciphered by comparison with the facsimile letter and parallel text in Greiner *et al.* (1989). The text on the cabinet labels generally comprises: at the top, the Latin name of the species concerned; at the bottom left, the locality; and at the bottom right, either the author of the Latin name, or the name of the person from whom the specimen originated, for example, the fragment of the Bosc collection seen contained specimens obtained from L. Jurine and J. B. G. de Brébisson.

The interpretation of the locality details written on Bosc's cabinet labels is of great significance in the assessment of types. A number of Bosc labels bear the locality "Falaise" and although there are a number of places of this name in France, the presence of the name "[de] Brebiss[on]" on two of these labels (those for *Bethylus cenopterus* and *Proctotrupes pallipes*) shows this is most likely Falaise in Normandy, the locality of various late 18th century-early 19th century naturalists belonging to that family (Prevost & d'Amat 1956). Almost certainly this was Jean Baptiste Gilles de Brébisson (1760-1832) a contemporary of Bosc, who published many papers on invertebrates including Hymenoptera (Anonymous 1832; Brébisson 1807, 1818, 1825, 1827; Brébisson *in* Lepeletier de Saint Fargeau & Audinet-Serville 1825; Brébisson *in* Blot 1827), and not his son Louis-Alphonse de Brébisson (1798-1872) whose dates are somewhat later and whose natural history interests were mainly botanical and especially algal. The link between J. B. G. de Brébisson and Bosc is also supported by their both belonging to the Société philomathique de Paris at the same time. The membership lists published in the *Bulletin* and the *Nouveau Bulletin des Sciences de la Société philomathique de Paris* show that Bosc was a member from "An 3" to 1826 and Brébisson from 1808 to 1832. Also, both belonged to the Linnean Society of Normandy in 1827 according to the membership lists published in the *Mémoires de la Société linnéenne de Normandie* (Anonymous 1827). Consequently all material labelled by Bosc as from "Falaise" is interpreted here as from Falaise in Normandy.

Examination of the Bosc collection revealed putative type material belonging to Proctotrupidae, Platygastridae and Scelionidae. Discussion of the status of putative types of Proctotrupidae is presented in the catalogue below; Platygastridae will be presented in a later paper cataloguing this family. Detailed comment on the type status of the Scelionidae is outside the scope of the current work, however, it is worth noting in passing that putative types of *Scelio rugosulus* Latreille, 1805 and *Sparasion frontalis* Latreille, 1805 in the Bosc collection are not actually types. There are three specimens labelled as *Scelio rugosulus*, of which two specimens are associated with a Bosc cabinet label "S. rugosulus Latreille, H. [?Hors de] Falaise". However, neither of these two specimens can be a type, since the locality "Falaise" indicates that they are most likely to have come from Falaise in Normandy, more than 100 km from Paris, thus disagreeing with the type locality "aux environs de Paris". In addition one of these two has the pterostigma opaque greyish-white disagreeing with the original description, which says the pterostigma is black (this could not be confirmed for the other specimen which has lost both fore wings, but it appears to be the same species). A third specimen labelled as *Scelio rugosulus* and discovered in the Chalcidoidea collection at the MNHN is clearly not a type since it belongs to the Perilampidae (Norman Johnson pers. comm.) and so does not agree with the description. Similarly the single specimen labelled as *Sparasion frontalis* (cabinet label "S. frontale, H. [?Hors de] Falaise, Latreille") cannot be a type, again as discussed above, the locality "Falaise" indicates that it is most likely to have come from Falaise in Normandy, thus disagreeing with the type locality "Saint-Germain-en-Laye, près de Paris". Also this specimen is a female with

clubbed antennae, and disagrees with the original description, which says the antennae are filiform, so the type(s) should be male.

As noted above, the assessment of types in this section of the Bosc collection was difficult, sometimes requiring detailed historical study. If this is reflected throughout the whole of the Bosc material in the MNHN, much further reassessment of types in other sections of the collection may be needed. This kind of work is unfortunately hampered by the dispersal of the Bosc collection, so much so that its true extent is unclear (Zimsen 1964) and it is recommended here that: 1) the Bosc insect collection is, so far as possible, reassembled in one place and housed in a cabinet instead of boxes; 2) the individual specimens are all labelled so it is clear they come from the Bosc collection; 3) the distinctive but fragile cabinet labels, some of which are damaged, should be conserved; and 4) the whole should be assessed critically for type material and published. This is particularly important given the early date of the collection and the potential for widespread instability of nomenclature that could be caused by reassessment and recognition of types.

MATERIAL AND METHODS

Notes on the recognition of type material and the arrangement and the format of the catalogue

Over 60 putative type specimens representing 24 nominal species were examined and evaluated, being all that could be found during the time available. This is certainly almost all that were present, however, the possibility that others exist unrecognised cannot be discounted. Methods for assessment of types and cataloguing follow Notton (2004). Generic assignments follow the most recent revisionary work in most cases. Attribution of nomenclatural acts published in Townes & Townes (1981) is to (Henry) Townes *in* Townes & Townes (1981) in the case of new generic and specific taxa and to Townes & Townes (1981) for everything else. Dating of the works of P. A. Latreille follows Evenhuis (1997), and of C. G. Thomson follows Notton (2005).

List of repositories

BMNH Natural History Museum, London;
ISNB Institut Royal des Sciences naturelles de Belgique, Bruxelles;
MCSN Museo Civico di Storia Naturale "Giacomo Doria", Genoa;
MNHN Muséum national d'Histoire naturelle, Paris;
MRAC Musée royal de l'Afrique Centrale, Tervuren;
NMPC National Museum (Natural History), Prague.

TYPE CATALOGUE

Family Diapriidae Haliday, 1833

Ambositra famosa Masner, 1961

Ambositra famosa Masner, 1961: 294, figs 3-11.

Current status. — *Ambositra famosa* Masner, 1961.

Holotype (by original designation). — Madagascar, Ambositra, ♀ (MNHN).

Paratypes. — Democratic Republic of the Congo (formerly Belgian Congo), 4 ♀♀; 1 ♂ (MRAC/NMPC/ISNB).
Madagascar, Ambositra, 1 ♀ (MNHN). — Mandraka, 1 ♂ ("allotype") (MNHN); 4 ♀♀ (MNHN). — Montagne d'Ambre, 1 "♂" (= ♀) (BMNH). — Madagascar, 6 ♀♀; 2♂♂ (MRAC/NMPC/ISNB).
South Africa, Pondoland, Port Saint Johns, 2 ♀♀; 1 ♂ (BMNH).

Labels. — Coll. Mus. Congo/ Madagascar: Ambositra/ II-1944/ A. Seyrig; Ambositra ♀/ famosa n. g. n. s./ det. L. Masner, 1958; holotype [holotype ♀].

Remarks

The holotype is card pointed on its venter, and is entire. Masner (1965) catalogued the paratypes at the BMNH.

Ismarus neesii Förster, 1850

Ismarus neesii Förster, 1850: 286.

Current status. — *Ismarus dorsiger* (Haliday *in* Curtis, 1831).

Remarks

One pin, without a specimen, was found with Förster's label "Ismarus/Neesii m." and a more recent

type label, however, this is not a type specimen as the name *Ismarus neesii* Förster, 1850 is an unnecessary replacement name for *Belyta anomala* Nees, 1834 and as such it is based on the same type material as that of *B. anomala* (ICZN 1999: arts 67.8, 72.7). The synonymy established by Haliday (1857) is followed here.

Family Heloridae Latreille, 1802

Helorus elgoni Risbec, 1950

Helorus elgoni Risbec, 1950: 514, figs 1, 2.

Current status. — *Helorus elgoni* Risbec, 1950.

Holotype (by monotypy). — Kenya, Mount Elgon, Elgon Sawmill, ♀ (MNHN).

Remarks

This type was not seen. It was borrowed from MNHN by Lars Ove Hansen (Zoologisk Museum, Oslo) in 1995, and unfortunately could not be made available during the present study. Although Risbec's figure is captioned as a male, this is probably an error as the description is of a female.

Helorus flavipes Kieffer, 1907

Helorus flavipes Kieffer, 1907: 267.

Current status. — *Helorus ruficornis* Förster, 1856.

Lectotype (designated by Townes 1977). — France, Chaville, ♂ (MNHN).

Paralectotype. — France, Rouen, ♂ (MNHN).

Labels. — Chaville/ 24-6-83; Helorus/ flavipes; type; Muséum Paris/ Coll. J. de Gaulle 1919; lectotype/ Helorus/ flavipes/ Tow'75 Kf. [lectotype ♂].

Remarks

The lectotype is pinned and has the right flagellum and left fore wing missing. The paralectotype was labelled by Kieffer as a female in error but is actually a male, and so is not excluded from the type series. The synonymy established by Masner (1957) is followed here.

Family Monomachidae Ashmead, 1902

Monomachus ruficeps Brullé, 1846

Monomachus ruficeps Brullé, 1846: 535.

Current status. — *Monomachus fuscator* (Perty, 1833).

Lectotype (designated by Schulz 1911). — Brazil, São Paulo province, north of São Paulo, ♀ (MNHN).

Labels. — Muséum Paris/ Nord Capit'e/ de St Paul; Monomachus/ ruficeps Br.; Du Nord/ de la capit/ de St Paul; type; Holotype/ Monomachus ruficeps/ Brullé, fide Musetti & Johnson 2000 [lectotype ♀].

Remarks

There is no conclusive evidence that the original description was based on a single specimen, and so there is not a holotype. Schulz (1911) may be considered to have designated a lectotype (ICZN 1999: Art. 74.5) when he wrote: "Nach Ansicht des typischen ♀ von *ruficeps* Brullé im Museum Paris" [= From an examination of the typical female of *ruficeps* Brullé in Paris Museum]. The lectotype is pinned, and slightly mouldy, with the left flagellum missing after the first segment, the right flagellum missing after the third segment, the right fore wing and both hind wings a little broken, and the apex of the left mid tarsus missing. The synonymy established by Schulz (1904), and recently confirmed by Musetti & Johnson (2004), is followed here.

Family Proctotrupidae Haliday, 1833

Disogmus carinatus Kieffer, 1907

Disogmus carinatus Kieffer, 1907: 282.

Current status. — *Disogmus areolator* (Haliday, 1839).

Syntype. — France, La Ferté-Milon, ♂ (MNHN).

Labels. — Ferté Milon/ 19-5-96; Disogmus/ carinatus K.; type; Muséum Paris/ coll. J. de Gaulle 1919 [syntype ♂].

Remarks

The syntype is pinned and entire. The synonymy established by Townes & Townes (1981) is followed here.

Disogmus carinatus var. *fuscitarsis* Kieffer, 1907

Disogmus carinatus var. *fuscitarsis* Kieffer, 1907: 282.

CURRENT STATUS. — *Disogmus basalis* (Thomson, 1858).

SYNTYPE. — Switzerland, Valais, Berisal, ♂ (MNHN).

LABELS. — Berisal/ 7-07; Disogmus/ fuscitarsis K.; type; Muséum Paris/ Coll. J. de Gaulle 1919 [syntype ♂].

REMARKS

Although described as a variety, the name *Disogmus carinatus* var. *fuscitarsis* is made available at subspecific rank from the date of its original publication as it was published before 1961, the author expressly used the term "var." and it was adopted as the valid name of a species before 1985, as *Disogmus fuscitarsis* by Kieffer (1914) (ICZN 1999: arts 45.6.4, 45.6.4.1). The syntype was originally pinned on a long pin that has been subsequently cut down and the specimen substaged. The apex of the right hind tarsus is missing, the left flagellum is missing beyond the fourth segment and the right flagellum is missing beyond the third segment. Kieffer (1907) recorded the type locality as Berisal in France, however, the country is not mentioned on the data label and it seems Kieffer was mistaken. It is most likely that the type came from the famous entomological collecting locality Berisal in the Simplon Pass in Switzerland. The synonymy of Townes & Townes (1981) is followed here.

Exallonyx alticola Kieffer, 1913

Exallonyx alticola Kieffer, 1913: 20.

CURRENT STATUS. — *Exallonyx alticola* Kieffer, 1913.

LECTOTYPE (designated by Townes & Townes 1981). — Kenya (formerly British East Africa), Naivasha, ♂ (MNHN).

PARALECTOTYPE. — Same data as lectotype, ♂.

LABELS. — Afr. or. Angl. (Rift Valley)/ Naivasha/ Alluaud et Jeannel/ Dec. 1911-1900 m – St. 14; Exallonyx/ alticola; Lectotype/ Exallonyx/ alticola/ Tow'75 Kf [lectotype ♂].

REMARKS

As well as the lectotype, there is a second specimen standing over the name *Exallonyx alticola* with the same collection data, which was originally syntypic, and hence is now a paralectotype following the lectotype designation by Townes & Townes (1981). The lectotype is carded on its right side, and has the left flagellum missing, the left fore leg broken off and mounted on the same card, and the wings dirty and crumpled.

Exallonyx alticola var. *parva* Risbec, 1950

Exallonyx alticola var. *parva* Risbec, 1950: 517.

CURRENT STATUS. — *Exallonyx parvus* Risbec, 1950.

LECTOTYPE (designated by Townes & Townes 1981). — Kenya, Forest of [Mount] Elgon, ♂ (lost, formerly in MNHN).

PARALECTOTYPES. — Madagascar, Tananarive, 2 ♂♂ (MNHN).

LABELS. — Kenya/ Forêt de l'Elgon/ versant est/ 2,700-2,800 m; Muséum de Paris/ Mission de l'Omo/ C. Arambourg/ P.-A. Chappuis & R. Jeannel/ 1932-33; lectotype/ Exallonyx/ alticola var. / parva/ Tow'75 Risbec [labels on former mount of lectotype ♂].

REMARKS

Although described as a variety, the name *Exallonyx alticola* var. *parva* is made available at subspecific rank from the date of its original publication as it was published before 1961, the author expressly used the term "var." and it was adopted as the valid name of a species before 1985, as *Exallonyx* (*Exallonyx*) *parvus* by Townes & Townes (1981) (ICZN 1999: arts 45.6.4, 45.6.4.1). The lectotype, apparently last seen by Townes & Townes (1981), had been micro-pinned and substaged, but the specimen was not found and only the mount remains. A search was made in the box, but it could not be found, so it is presumed to have been destroyed.

Exallonyx alticola var. *seyrigi* Risbec, 1950

Exallonyx alticola var. *seyrigi* Risbec, 1950: 516, figs 3, 6.

CURRENT STATUS. — *Exallonyx seyrigi* Risbec, 1950.

LECTOTYPE (designated by Townes & Townes 1981). — Madagascar, Tananarive, ♂ (MNHN).

PARALECTOTYPES. — Madagascar, Tananarive, 6 ♂♂. — Tananarive district, 2 ♂♂ (all MNHN). — Tananarive, 3 ♂♂ (lost).

LABEL. — Madagascar/ Tananarive/ 3.III.32/ A. Seyrig [lectotype ♂].

REMARKS

Although described as a variety, the name *Exallonyx alticola* var. *seyrigi* is made available at subspecific rank from the date of its original publication as it was published before 1961, the author expressly used the term "var." and it was adopted as the valid name of a species before 1985, as *Exallonyx* (*Exallonyx*) *seyrigi* by Townes & Townes (1981) (ICZN 1999: arts 45.6.4, 45.6.4.1). The lectotype is micro-pinned, substaged and is entire. Three of the syntypes mentioned in the original description, which should have been in the MNHN according to Risbec (1950), could not be found.

Exallonyx fumipennis Kieffer, 1908

Exallonyx fumipennis Kieffer, 1908: 339.

CURRENT STATUS. — *Exallonyx crenicornis* (Nees von Esenbeck, 1834).

SYNTYPE. — Italy (formerly Austria), Trieste, ♂ (MNHN).

LABELS. — Trieste/ (Graeffe)/ teste Benoit; holotypus; Exallonyx/ fumipennis K./ m; Muséum Paris/ 1957/ coll. Kieffer [syntype ♂].

REMARKS

Kelner-Pillault (1958) stated this specimen was a holotype but there is no evidence that it is. The syntype is micro-pinned and substaged, is a little mouldy, has the head and prothorax almost severed from the rest of the body, the genital capsule extruded, and the apex of the left hind wing missing. The synonymy established by Townes & Townes (1981) is followed here.

Exallonyx fumipennis var. ***donisthorpei*** Kieffer, 1908

Exallonyx fumipennis var. *donisthorpei* Kieffer, 1908: 339.

CURRENT STATUS. — *Exallonyx crenicornis* (Nees von Esenbeck, 1834).

LECTOTYPE (designated by Nixon 1938). — England, Wallasey, ♂ (BMNH).

PARALECTOTYPE. — France, Nogent-sur-Marne, ♂ (MNHN).

LABELS. — Nogent-s-Marne; Exallonyx/ fumipennis K./ var. donisthorpei K.; Muséum Paris/ Collection/ Ernest André/ 1914; cotype [paralectotype ♂].

REMARKS

Although described as a variety, the name *Exallonyx fumipennis* var. *donisthorpei* is made available at subspecific rank from the date of its original publication as it was published before 1961, the author expressly used the term "var." and it was adopted as the valid name of a subspecies before 1985, as *Exallonyx fumipennis donisthorpei* by Kieffer (1914) (ICZN 1999: arts 45.6.4, 45.6.4.1). The paralectotype is pinned and has the right flagellum and left mid leg missing. Townes & Townes (1981) noted that Masner (1965) designated a lectotype, however this is incorrect as Masner actually catalogued the lectotype which had already been designated by Nixon (1938). The synonymy established by Townes & Townes (1981) is followed here.

Exallonyx microcerus Kieffer, 1908

Exallonyx microcerus Kieffer, 1908: 343.

CURRENT STATUS. — *Exallonyx microcerus* Kieffer, 1908.

LECTOTYPE (designated by Townes & Townes 1981). — France, Megève, Haute-Savoie, ♀ (MNHN).

PARALECTOTYPES. — France, Bas Meudon, 1 ♀. — St Cloud, 1 ♀. — Mesnil-le-Roi, 2 ♀♀. — Dieppe, 6 ♀♀ (all MNHN).

LABELS. — Mégève/ H'te Savoie/ 24-7-56; Exallonyx/ microcerus; lectotype/ Exallonyx/ microcerus/ Tow'75 Kf. [lectotype ♀].

REMARKS

The lectotype is pinned, with the left flagellum missing beyond the sixth segment, the left hind leg missing and the wings stuck together.

Exallonyx subserratus Kieffer, 1908

Exallonyx subserratus Kieffer, 1908: 336.

CURRENT STATUS. — *Exallonyx subserratus* Kieffer, 1908.

SYNTYPE. — France, Lorraine, Bitche, ♀ (MNHN).

LABELS. — Bitche/ teste Benoit; holotypus; Exallonyx/ subserratus; Muséum Paris/ 1957/ coll. Kieffer [syntype ♀].

REMARKS

Kelner-Pillault (1958) stated this specimen was a holotype, but there is no evidence that it is. The original description suggests that there may have been a syntype series since it says: "Obtenu en juin de pupes de *Phora rufipes*" [= Obtained in June from pupae of *Phora rufipes*]. The syntype is carded on its right side and is a little mouldy, with its left wings crumpled, left fore leg broken but still present, and the tip of the right hind tarsus missing.

Exallonyx subserratus var. *hyalinipennis* Kieffer, 1908

Exallonyx subserratus var. *hyalinipennis* Kieffer, 1908: 336.

CURRENT STATUS. — *Exallonyx microcerus* Kieffer, 1908.

SYNTYPE. — France, Lorraine, Bitche, ♀ (MNHN).

LABELS. — Bitche/ teste Benoit; holotypus; Exallonyx/ hyalinipennis; Exallonyx/ subserratus var. / hyalinipennis Kieffer/ holotype ♀/ P. L. G. Benoit det. 1956 [syntype ♀].

REMARKS

Although described as a variety, the name *Exallonyx subserratus* var. *hyalinipennis* is made available at subspecific rank from the date of its original publication as it was published before 1961, the author expressly used the term "var." and it was adopted as the valid name of a subspecies before 1985, as *Exallonyx subserratus hyalinipennis* by Kieffer (1914) (ICZN 1999: arts 45.6.4, 45.6.4.1). Kelner-Pillault (1958) stated this specimen was a holotype, but there is no evidence that it is. The syntype is carded on its left side and is entire but dirty. The synonymy established by Townes & Townes (1981) is followed here.

Proctotrupes brevipennis Latreille, 1802

Proctotrupes brevipennis Latreille, 1802b: 309.

CURRENT STATUS. — *Proctotrupes brachypterus* (Schrank, 1780).

SYNTYPES. — France, Paris district, 1 ♀ (MNHN). — Southern France ("au midi de la France"), ♀ (lost).

LABELS. — P. brevipennis/ H. P. [?Hors de Paris], Latreille; Muséum Paris/ 1828/ coll. L. A. G. Bosc d'Antic [syntype ♀].

REMARKS

The syntype is pinned and is very mouldy, with both antennae lost except for one scape, the right hind leg is lost, and the apex of the gaster beyond the large sclerites is lost. The link between Bosc and P. A. Latreille is well established. They were almost exact contemporaries, Bosc being just three years older, and Latreille died only five years after Bosc. Both Cuvier (1829) and Silvestre (1829) recorded that Bosc gave a collection of American reptiles to Latreille in about 1800; Latreille (1802a) refered to Bosc as his friend; both belonged to the Société philomathique de Paris at the same time (Bosc from "An 3" to 1826 and Latreille from "An 4" to 1832 according to the membership lists published in the bulletin of the society); and most significantly Dutrouilh (1829) noted that Fabricius and Latreille found a large number of unpublished species in Bosc's collection, the descriptions of which they used to enrich their works. Consequently type specimens of Latreille's species are to be expected in Bosc's collection. The survival of Hymenoptera type material of Latreille is especially significant since, despite Horn & Kahle (1935-1937) who recorded that Latreille's Hymenoptera were passed to the Muséum d'Histoire naturelle, Geneva (via B. E. de Romand and H. de Saussure), these are not recognisable in that collection today (Bernhard Metz pers. comm.) although it is possible some of Latreille's types may still exist in the Spinola collection (Casolari & Moreno 1978,

1979a, b). The synonymy established by Haliday (1833) and repeated by Townes & Townes (1981) is followed here but may need to be re-evaluated when the newly discovered syntype is revised.

Serphus (*Cryptoserphus*) *longicalcar* Kieffer, 1908

Serphus (*Cryptoserphus*) *longicalcar* Kieffer, 1908: 317.

CURRENT STATUS. — *Cryptoserphus flavipes* (Provancher, 1881).

SYNTYPES. — France, Lorraine, Bitche, 1 ♀ (MNHN). Italy, Alpe di Frontero, ♀ (lost) (number of specimens not specified in original description). A lectotype designation cited by Townes & Townes (1981) is invalid.

LABELS. — Bitche/ teste Benoit; holotypus; Proctotrupes/ longicalcar; Serphus/ (Cryptoserphus)/ longicalcar Kieffer/ holotype ♀/ P. L. G. Benoit teste 1956; Muséum Paris/ 1957/ coll. Kieffer [syntype ♀].

REMARKS
The original description clearly implies there was a syntype series since no holotype is indicated and two localities and two collection dates are given. Hence Kelner-Pillault (1958) is wrong to suggest that there was a holotype. Although Townes & Townes (1981) considered Kelner-Pillault (1958) to have designated a lectotype, this cannot be supported either under Article 74.5 (ICZN 1999) since there is no explicit indication by Kelner-Pillault that she was selecting from a type series (no other specimens are mentioned), or under Article 74.6 (ICZN 1999) since it is clear a syntype series had existed. The syntype is pinned, dirty and has the right flagellum missing beyond the fourth segment and most of the legs on the left side missing. The synonymy established by Townes & Townes (1981) is followed here.

Serphus (*Cryptoserphus*) *longitarsis* var. *ruficauda* Kieffer, 1908

Serphus (*Cryptoserphus*) *longitarsis* var. *ruficauda* Kieffer, 1908: 320.

CURRENT STATUS. — *Cryptoserphus flavipes* (Provancher, 1881).

SYNTYPE. — France, Mesnil-le-Roi, ♀ (MNHN).

LABELS. — Mesn. Le R/ 5-10-84; C; Cryptoserphus/ longitarsis/ var. ruficauda; type; Muséum Paris/ Coll. J. de Gaulle 1919 [syntype ♀].

REMARKS
Although described as a variety, the name *Serphus* (*Cryptoserphus*) *longitarsis* var. *ruficauda* is made available at subspecific rank from the date of its original publication as it was published before 1961, the author expressly used the term "var." and it was adopted as the valid name of a species before 1985, as *Cryptoserphus ruficauda* by Kieffer (1914) (ICZN 1999: arts 45.6.4, 45.6.4.1). The syntype is carded on its left side, and has the head and antennae broken off and glued on the same card. The head is in two pieces, parts of both antennae are missing, and the right hind wing is torn. The synonymy established by Townes & Townes (1981) is followed here.

Serphus (*Cryptoserphus*) *nigricauda* Kieffer, 1908

Serphus (*Cryptoserphus*) *nigricauda* Kieffer, 1908: 324.

CURRENT STATUS. — *Tretoserphus laricis* (Haliday, 1839).

SYNTYPE. — France, Clamart, ♀ (MNHN).

LABELS. — Clamart/ 15-5-87; Microserphus/ nigricauda K.; type; Muséum Paris/ coll. J. de Gaulle 1919; Cryptoserphus/ ♀ laricis Hal. / Maneval det 39 [syntype ♀].

REMARKS
The syntype is carded on its left side, is mouldy and has the apex of the left antenna and the apex of the right hind tarsus missing, and the right fore wing is broken but still present. The synonymy established by Townes & Townes (1981) is followed here.

Serphus (*Phaenoserphus*) *calcar* var. *areolatus* Kieffer, 1908

Serphus (*Phaenoserphus*) *calcar* var. *areolatus* Kieffer, 1908: 306.

CURRENT STATUS. — *Phaneroserphus calcar* (Haliday, 1839).

SYNTYPE. — France, Maisons-Laffite, ♂ (MNHN).

LABELS. — Maisons/ Laff. 20-9; Serphus/ calcar Hal./ var. areolatus; type; type/ Phaenoserphus/ calcar var./ areolatus Kf./ Tow. 1975 [syntype ♂].

REMARKS

Although described as a variety, the name *Serphus* (*Phaenoserphus*) *calcar* var. *areolatus* is made available at subspecific rank from the date of its original publication as it was published before 1961, the author expressly used the term "var." and it was adopted as the valid name of a subspecies before 1985, as *Phaenoserphus calcar areolatus* by Kieffer (1914) (ICZN 1999: arts 45.6.4, 45.6.4.1). The syntype is pinned and entire. The synonymy established by Townes & Townes (1981) is followed here.

Serphus (*Phaenoserphus*) *micrurus* Kieffer, 1908

Serphus (*Phaenoserphus*) *micrurus* Kieffer, 1908: 312.

CURRENT STATUS. — *Exallonyx longicornis* (Nees von Esenbeck, 1834).

LECTOTYPE (by present designation). — Portugal, São Fiel, ♀ (MNHN). A lectotype designation cited by Townes & Townes (1981) is invalid.

PARALECTOTYPES. — Portugal, São Fiel, 1 ♀, 1 ♂. France, Sèvres, 1 ♀ (all MNHN).

LABELS. — Port.; holotypus; Serphus/ micrura; Muséum Paris/ 1957/ coll. Kieffer; lectotype/ Serphus/ micrurus/ Tow'75 Kf. [lectotype ♀].

REMARKS

The original description clearly implies there is a syntype series since no holotype is indicated and both sexes and two localities are given. Hence Kelner-Pillault (1958) is wrong to suggest that there was a holotype. Although Townes & Townes (1981) considered Kelner-Pillault (1958) to have designated a lectotype, this cannot be supported either under Article 74.5 (ICZN 1999) since there is no explicit indication by Kelner-Pillault that she was selecting from a type series, or under Article 74.6 (ICZN 1999) since it is clear a syntype series exists. Since four syntypes were found, to avoid future confusion and to conserve the usage established by Townes & Townes (1981) the specimen erroneously considered to be a holotype by Kelner-Pillault (1958) and erroneously considered to be a lectotype by Townes & Townes (1981) is here designated as a lectotype. The lectotype is carded on its venter, is dirty, and has the ends of the mid and hind tarsi missing. The synonymy established by Townes & Townes (1981) is followed here.

Serphus (*Phaenoserphus*) *ruficeps* Kieffer, 1908

Serphus (*Phaenoserphus*) *ruficeps* Kieffer, 1908: 301.

CURRENT STATUS. — *Exallonyx ruficeps* (Kieffer, 1908).

LECTOTYPE (designated by Townes & Townes 1981). — Syria, Damascus, ♀ (?MCSN).

PARALECTOTYPE. — Syria, Damascus, ♂ (?MCSN).

REMARKS

There is some confusion over the location of the type of this species. Johnson (1992) noted the MNHN was the type repository of this species, presumably basing this information on Townes & Townes (1981). Townes & Townes (1981) noted the lectotype was both in the MNHN and in MCSN. Since it cannot be in two places at once and it was not found in the MNHN, it is most probably at the MCSN. The current generic placement follows that established by Townes & Townes (1981).

Serphus (*Phaenoserphus*) *viator* var. *testaceicornis* Kieffer, 1908

Serphus (*Phaenoserphus*) *viator* var. *testaceicornis* Kieffer, 1908: 311.

CURRENT STATUS. — *Phaenoserphus pallipes* (Jurine, 1807).

LECTOTYPE (by present designation). — Slovenia, in the region of Logatec and Kranj (formerly Austria, Loitsch-Krain), ♀ (MNHN). A lectotype designation cited by Townes & Townes (1981) is invalid.

PARALECTOTYPES. — France, Cannes, 1 ♀ (MNHN). — Chaville, sex? (lost). — Dieppe, 4 ♀♀ (MNHN). — Fontainebleau, 1 ♀ (MNHN). — Mesnil-le-Roi, 1 ♀; 2 ♂♂ (MNHN). — Nyons, sex? (lost). — Paris, sex? (lost). — Sceaux, 3 ♀♀ (MNHN). — Seine-et-Oise, sex? (lost).
Italy (formerly Austria), Trieste, 1 ♂ (MNHN).
Croatia, Mount Učka (formerly Austria, Monte Maggiore) 2 ♀♀; 1 ♂ (MNHN).
Locality unknown, 1 ♂ (MNHN).

LABELS. — Loitsch-Krain/ vii-viii; holotypus Serphus/ testaceicornis K.; Serphus (Phaenoserphus)/ viator var./ testaceicornis Kieffer/ holotype ♀/ P. L. G. Benoit det., 1956; Muséum Paris/ 1957/ coll. Kieffer [lectotype ♀].

REMARKS
Although described as a variety, the name *Serphus* (*Phaenoserphus*) *viator* var. *testaceicornis* is made available at subspecific rank from the date of its original publication as it was published before 1961, the author expressly used the term "var." and it was adopted as the valid name of a subspecies before 1985, as *Phaenoserphus viator testaceicornis* by Kieffer (1914) (ICZN 1999: arts 45.6.4, 45.6.4.1). The original description clearly implies there is a syntype series since no holotype is indicated and both sexes and a range of specimen lengths, collection dates and localities are given. Hence Kelner-Pillault (1958) was wrong to suggest that there was a holotype. Although Townes & Townes (1981) considered Kelner-Pillault (1958) to have designated a lectotype, this cannot be supported either under Article 74.5 (ICZN 1999) since there is no explicit indication by Kelner-Pillault that she was selecting from a type series, or under Article 74.6 (ICZN 1999) since it is clear a syntype series exists. Numerous syntypes were found agreeing with the localities mentioned by Kieffer (1908). Three further specimens labelled as *Serphus testaceicornis* but with localities not mentioned by Kieffer (1908) are excluded from the type series. Since the syntype series is large and certainly contains more than one species, to avoid future confusion and to conserve the usage established by Townes & Townes (1981) the specimen erroneously regarded as a holotype by Kelner-Pillault (1958) and erroneously regarded as a lectotype by Townes & Townes (1981), is here designated as a lectotype. The lectotype is micropinned and substaged, is missing the right hind leg and is slightly mouldy. The synonymy established by Townes & Townes (1981) is followed here.

Serphus (***Serphus***) ***gravidator*** var. ***indivisus*** Kieffer, 1908

Serphus (*Serphus*) *gravidator* var. *indivisus* Kieffer, 1908: 298.

CURRENT STATUS. — *Proctotrupes indivisus* (Kieffer, 1908) n. stat.

SYNTYPE(S). — Europe, sex? (lost). Lectotype designation by Townes & Townes (1981) invalid.

REMARKS
Although described as a variety, the name *Serphus* (*Serphus*) *gravidator* var. *indivisus* is made available at subspecific rank from the date of its original publication as it was published before 1961, the author expressly used the term "var." and it was adopted as the valid name of a subspecies before 1985, as *Serphus gravidator indivisus* by Kieffer (1914) (ICZN 1999: arts 45.6.4, 45.6.4.1). The type was not located. A specimen was found with Henry Townes' lectotype label, however, it did not agree with Kieffer's description and so cannot be a type. This specimen is excluded from the type series because it did not show the only character mentioned by Kieffer as distinctive of this taxon, that is, "segment médian sans arête longitudinale" (propodeum without a longitudinal carina), in fact the propodeum does have a distinct longitudinal carina over the front 2/3, as much as many of the males in this group which Kieffer describes as having such a carina. Nor does this specimen have a label to say that it is *indivisus*, it was only labelled by Kieffer as an unnamed variety "Serphus/ gravidator/ variété". Since it is not a syntype, it cannot become a lectotype and so the lectotype designation of Townes & Townes (1981) is invalid. Since there is no known type material of this species available, its identity must for now rely on the description, which says that the propodeum does not have a keel, unlike *Proctotrupes gravidator* (Linnaeus, 1758) with which Townes & Townes (1981) had synonymized it. It is therefore removed from synonymy with *P. gravidator*.

NOMENCLATURAL SUMMARY

The following summary is a list of all the taxa covered in the above catalogue, relating all taxa to currently valid names. More complete synonymy is to be found in Johnson (1992) and Musetti & Johnson (2004): notes are given above where synonymies differ from these works.

Family DIAPRIIDAE Haliday, 1833
Subfamily AMBOSITRINAE Masner, 1961
Ambositra Masner, 1961
A. famosa Masner, 1961

Subfamily ISMARINAE Thomson, 1858
Ismarus Haliday, 1835
I. dorsiger (Haliday *in* Curtis, 1831)
syn. *I. anomalus* (Nees, 1834)
syn. *I. neesii* Förster, 1850

Family HELORIDAE Latreille, 1802
Helorus Latreille, 1802
H. elgoni Risbec, 1950
H. ruficornis Förster, 1856
syn. *H. flavipes* Kieffer, 1907

Family MONOMACHIDAE Ashmead, 1902
Monomachus Klug, 1841
M. fuscator (Perty, 1833)
syn. *M. ruficeps* Brullé, 1846

Family PROCTOTRUPIDAE Haliday, 1833
Cryptoserphus Kieffer, 1908
C. flavipes (Provancher, 1881)
syn. *C. longicalcar* (Kieffer, 1908)
syn. *C. ruficauda* (Kieffer, 1908)
Disogmus Förster, 1856
D. areolator (Haliday, 1839)
syn. *D. carinatus* Kieffer, 1907
D. basalis (Thomson, 1858)
syn. *D. fuscitarsis* Kieffer, 1907
Exallonyx Kieffer, 1904
E. alticola Kieffer, 1913
E. crenicornis (Nees von Esenbeck, 1834)
syn. *E. fumipennis* Kieffer, 1908
syn. *E. donisthorpei* Kieffer, 1908
E. longicornis (Nees von Esenbeck, 1834)
syn. *E. micrurus* (Kieffer, 1908)
E. microcerus Kieffer, 1908
syn. *E. hyalinipennis* Kieffer, 1908
E. parvus Risbec, 1950
E. ruficeps (Kieffer, 1908)
E. seyrigi Risbec, 1950
E. subserratus Kieffer, 1908
Phaenoserphus Kieffer, 1908
P. pallipes (Jurine, 1807)
syn. *P. testaceicornis* (Kieffer, 1908)
Phaneroserphus Pschorn-Walcher, 1958
P. calcar (Haliday, 1839)
syn. *P. areolatus* (Kieffer, 1908)
Proctotrupes Latreille, 1796
P. brachypterus (Schrank, 1780)
syn. *P. brevipennis* Latreille, 1802
P. indivisus (Kieffer, 1908) n. stat.
Tretoserphus Townes *in* Townes & Townes, 1981
T. laricis (Haliday, 1839)
syn. *T. nigricauda* (Kieffer, 1908)

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