

The species of Passalidae (Insecta: Coleoptera) described by Johann Jakob Kaup: Historical overview and critical catalogue, with the description of four new species

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Abstract

A historical overview of the monographic work of Johann Jakob Kaup (1803–1873) on the bess beetles (Coleoptera: Passalidae) is given. Kaup's collection at the Hessian State Museum at Darmstadt (Germany) and nearly all the type specimens of the 76 species described by Kaup, preserved at Darmstadt and four other museums (Paris, London, Berlin and Munich), have been studied. A critical catalogue of these species is compiled with listing of type specimens, designations of lectotypes and notes on their history, systematics and chorology. Four new combinations and two new synonymies are proposed, while six species previously synonymized are reinstated as valid: *Leptaulax eschscholtzi* Kaup, 1868 stat. rev., *Pelopides mniszehi* (Kaup, 1868) stat. rev., *Labienuus crassus* (Kaup, 1868) stat. rev., *Plesthenus quadricornis* (Kaup, 1868) n. syn. of *P. lottini* (Boisduval, 1835), *Publius concretus* (Kaup, 1868) stat. rev., *Petrejoides haagii* (Kaup, 1868) n. comb., *Petrejoides wagneri* (Kaup, 1868) n. comb., *Petrejoides klingelhoeferi* (Kaup, 1869) n. comb., *Passalus (Petrejus) obtusidens* (Kaup, 1869) stat. rev., *Petrejoides tau* (Kaup, 1869) n. comb., *Aulacocyclus macleayi* (Kaup, 1871) n. syn. of *A. edentulus* (MacLeay, 1827), *Protomocoelus salomonis* (Kaup, 1871) stat. rev. Four new species dedicated to the memory of J.J. Kaup are described and illustrated: *Passalus kaupi* n. sp. (Andes of Ecuador), *Spasalus kaupi* n. sp. (Andes of Peru; one of the smallest neotropical passalids) and *Pentalobus kaupi* n. sp. (São Tomé Island; endemic and only *Pentalobus* species known from the island) in the subfamily Passalinae; and *Comacupes kaupi* n. sp. (endemic and first species of the subfamily known from Andaman and Nicobar Islands, India) in the subfamily Aulacocyclinae.

Kurzfassung

Eine Übersicht der monographischen Bearbeitung der Zuckerkäfer (Coleoptera: Passalidae) durch Johann Jakob Kaup (1803–1873) wird vorgestellt. Kaup's Sammlung am Hessischen Landesmuseum Darmstadt und fast alle Typusexemplare der 76 von ihm beschriebenen Arten, welche sich zum Teil an vier anderen Museen (Paris, London, Berlin und München) befinden, wurden untersucht. Ein Katalog dieser Arten wurde zusammengestellt, welcher eine Auflistung der Typusexemplare, Designierung von Lectotypen und Anmerkungen zu Geschichte, Systematik und Chorologie umfasst. Vier neue Kombinationen und zwei neue Synonymien werden vorgeschlagen, während sechs von nachfolgenden Autoren synonymisierte Arten als valid erkannt werden: *Leptaulax eschscholtzi* Kaup, 1868 stat. rev., *Pelopides mniszehi* (Kaup, 1868) stat. rev., *Labienuus crassus* (Kaup, 1868) stat. rev., *Plesthenus quadricornis* (Kaup, 1868) n. syn. von *P. lottini* (Boisduval, 1835), *Publius concretus* (Kaup, 1868) stat. rev., *Petrejoides haagii* (Kaup, 1868) n. comb., *Petrejoides wagneri* (Kaup, 1868) n. comb., *Petrejoides klingelhoeferi* (Kaup, 1869) n. comb., *Passalus (Petrejus) obtusidens* (Kaup, 1869) stat. rev., *Petrejoides tau* (Kaup, 1869) n. comb., *Aulacocyclus macleayi* (Kaup, 1871) n. syn. von *A. edentulus* (MacLeay, 1827), *Protomocoelus salomonis* (Kaup, 1871) stat. rev. Es werden vier neue Arten beschrieben und der Erinnerung an J.J. Kaup gewidmet: *Passalus kaupi* n. sp. (Anden von Ecuador), *Spasalus kaupi* n. sp. (Anden von Peru; eine der kleinsten neotropischen Passaliden-Arten) und *Pentalobus kaupi* n. sp. (São Tomé; endemisch und die einzige von dieser Insel bekannte Art der Gattung) in der Unterfamilie Passalinae; sowie *Comacupes kaupi* n. sp. in der Unterfamilie Aulacocyclinae (endemisch auf den Andamanen- und Nicobaren-Inseln, Indien und die erste dort gefundene Art der Unterfamilie).

Introduction

The Passalids

The Passalidae Leach, 1815, or bess beetles (»Scarabées Sucre« in French, »Zuckerkäfer« in German), are a pantropical family with about 800 described species. They are distinguished within the Coleoptera by two peculiar characteristics.

One is their extremely homogeneous morphology. All are shining black, strongly sclerotized, with a robust habitus, convex to depressed, the elytra visibly striated and the striae punctated. The prothorax is separated from the elytra by a long and exposed mesonotum. Legs are rather short. The prognathous head has powerful crushing mandibles, a long and large labrum and a sclerotized labium. The antennae are very mobile and lamellate, with extensions to a various number of terminal segments. On the dorsal surface of the head, more or less marked integumentary structures are present (»ridges« and »tubercles«), symmetrical or not, mostly of excellent taxonomic value. However, the current difficulties in establishing homologies among these structures are still responsible for widespread systematic confusion. Sexual dimorphism is rare and intraspecific polymorphism very poorly marked, often not yet demonstrated.

The second special feature of the Passalidae is their subsocial behaviour. Species live in family groups and inhabit and eat decaying tree trunks. In the wood, they construct galleries and chambers with their strong mandibles. Each family group comprises a parental pair with one or more lineages of larvae and immature adults. Individuals communicate with one another through sounds produced by stridulatory organs situated on the thorax. Primarily, subsocial behaviour of passalids seems to have been a consequence of nutritive and protective relationships of adults to both larvae and immatures. Adults transmit to their offspring intestinal microorganisms which produce cellulolytic components essential for the beetles' digestion.

Kaup and the Passalids

The homogeneous morphology of all Passalidae is one of the reasons why it has been historically so difficult to study the systematics of the family. First important pioneering works, in which external characters were described and discussed for many species, are those of ESCHSCHOLTZ (1829), PERCHERON (1835, 1841, 1844), BURMEISTER (1847) and TRUQUI (1857). These authors still included almost all species then known in the one pantropical genus *Passalus* Fabricius, 1801. KAUP (1868a, 1868b, 1869, 1871) was the first to propose an important subdivision of the family on a global scale, including numerous supra-specific taxa in relation to the morphological and geographical diversity of species groups.

Johann Jakob Kaup (1803–1873), an eclectic naturalist, published only few entomological works, all towards the end of his life (see HELDMANN 1955; KRAUSE 1972; SCHNEIDER, this volume; ZOMPRO, this volume), four of which being dedicated to the Passalidae. Writing on this matter, MACLEAY (1873) had the following appropriate comment: »Kaup has made the Passalidae the object of his study for some time«. Notwithstanding, Kaup's studies remain fundamental in the systematic knowledge of the family. Great parts of Kaup's typological classification were approved of and used by all subsequent authors. That indicates the phylogenetic relevance of many of his observations. Probably, if Kaup had lived a few years longer, he would have rectified many of his more conspicuous errors (as is indicated by some of his hand-written notes in his own copy of his »Monographie der Passaliden«, see below). Yet, a major criticism directed towards the works of Kaup is his extensive adherence to Mac Leay's quinary system of classification (MAC LEAY 1819). This peculiar concept (based on the five fingers of God) was discussed by KAUP (1849) himself (for a recent and concise summary on quinarism, see DI GREGORIO 1996). It is noteworthy that MacLeay is the one naturalist to whom Kaup dedicated two species of passalids (see in the following, species 19. and 61.). In the taxonomic practice of the quinary system adopted by Kaup, each taxon obligatorily contains five taxa of the next lower category. Therefore, each one of the five subfamilies described by Kaup must contain five genera (or five »groups« with five genera each in the case of two of the subfamilies), and each genus five species in his system. That is the reason why some of Kaup's taxonomic tables are incomplete: if there were fewer than the five compulsory lower taxa, he supposed that the missing ones had not yet been discovered.

Undoubtedly, Kaup opened alone, and with sharp vision, the way to the knowledge of many of the natural lineages of the Passalidae. He also left, in the same works, the deep impressions of his philosophical concept of biological sciences. After his death, Kaup has been criticized on this matter by some of the passalidologists, especially KUWERT (1896), ARROW (1907) and GRAVELY (1918).

Species described by Kaup and the Kaup collection

Abbreviations used for institutions

HLMD	Hessisches Landesmuseum, Darmstadt
MNHN	Muséum National d'Histoire Naturelle, Paris
ZMHB	Museum für Naturkunde, Humboldt-Universität, Berlin
MZUF	Museo Zoologico »La Specola«, Università Degli Studi, Florence
BMNH	The Natural History Museum, London
QCAZ	Museo de Zoología, Pontificia Universidad Católica, Quito
UMOH	Hope Entomological Collections, University Museum, Oxford
CUMZ	University Museum of Zoology, Cambridge
ZSMC	Zoologische Staatssammlung, Munich

Kaup's species: descriptions and depositories of types

KAUP (1868 a, 1868 b, 1869, 1871) described 76 species of Passalidae out of a total of 171 he recognized in the family. He thus described twice as many species as PERCHERON (1835, 1841, 1844) or BURMEISTER (1847). Thanks to the large number of species at his disposal, Kaup was the first to gain a world-wide overview of the family. Almost every supraspecific taxon he created contained one or more new species, except for the African and Malagasy faunas (with only four new species described, one of which was later shown to be of American origin). Moreover, almost all the species described by Kaup were discovered by him, only KIRSCH, in KAUP (1871), described a species in possible collaboration with Kaup.

Kaup described his species with relative precision, for his time. Most of them are nonetheless in need of a re-examination of type specimens for positive identification. Moreover, in contrast to PERCHERON (1835, 1841, 1844), iconography is not present for all species. Only the «Monographie der Passaliden» (KAUP 1871) was accompanied by five plates (Fig. 1) depicting habitus and morphological details. These plates represent less than forty species, a good number of them not newly described. In return, the figures drawn by Th. Compton (Winscombe) are excellent. The journal print included black-and-white plates, but in the rare offprints, pl. V, showing the giant species of *Proculus* Kaup, was coloured.

The specimens examined by Kaup originated from a wide array of collections. Almost all are mentioned in the foreword of the «Monographie». Examined museum collections were in Germany (Darmstadt, Berlin, Munich) and the British Isles (London, Oxford, Cambridge, Dublin). Private collections and insect dealers, much more numerous, were in central Europe (R. van Duivenbode, E. F. Germar, G. J. Haag-Rutenberg, H. Hagen, G. F. Klingelhöfer, H. von Rosenberg, F. Sarg, L. Stein, G. Thorey), France (H. Deyrolle, G. de Mniszech) and Great Britain (L. Agassiz, E. Janson, F. Moore, F. J. Parry). Among the private collections, that of Mniszech, in Paris, was of great importance for Kaup's work. According to FAUVEL (1873) and various other authors, the Mniszech collection was considered at that time as one of the most important and beautiful in «Lucanids» (which included passalids). Kaup studied the Passalidae of Mniszech on several occasions, in the end almost all of them. That is the reason why about half of Kaup's types are in this collection. The Mniszech collection, including the Passalidae, was acquired by R. Oberthür (Rennes) and together with most of the Oberthür collection was transferred to the MNHN in 1952.

The Kaup collection today

Since Kaup's death, his passalids along with the other insect collections assembled by him have been preserved at the «Großherzogliches Museum» at Darmstadt, later renamed «Hessisches Landesmuseum Darmstadt». Some passalidologists have examined specimens from the collection: A. Kuwert (in 1890, according to archived correspondence), R. Zang

(who spent some time working in Darmstadt) and G. J. Arrow (both around 1900), F. H. Gravely (around 1912) and maybe W. D. Hincks, too (around 1930). According to the literature, these specialists have seen specimens from the Kaup collection. Only labels by Zang and Gravely have been detected, attached to a few specimens.

The Kaup collection of Passalidae is composed of four large wooden insect boxes (about 56 x 42 cm but varying somewhat, originally used by Kaup, Fig. 2), the first of which also contains some of the Lucanidae. The species are no longer arranged following the author's classification. Most specimens bear two kinds of labels (Figs. 3–7): an original hand-written label by Kaup, including the species name and the geographical and/or collectional origin of the specimen; and a later hand-written locality label by G. Heldmann (according to H. Feustel and R. Klinger). Heldmann was zoological curator at the HLMD from 1945 to 1947 and again from 1953 to 1960. Heldmann's labels being written with a point-ball pen, they were probably made during his second curatorial period. The museum archives contain material showing that Heldmann undertook extensive museological research on the Kaup collection during the 1950s. A problem originating from Kaup's handling of his insect collection is that he mostly wrote out only one label for a series of specimens, which he placed on a pin close to the series and not directly on a specimen. This is still evident in other parts of the insect collection. Heldmann transferred Kaup's labels to the specimens proper, in case of series with several specimens there is thus mostly only one bearing an original label. Heldmann attached his locality labels to almost all specimens, but did not add identification labels. The identification (almost always by Kaup) in the case of specimens without original labels is indicated by the species name cards next to which the specimens were placed by Heldmann, using the systematic arrangement prevalent at his time.

In addition to the species described by Kaup, there are three other categories of specimens in the collection:

1. Specimens identified by Kaup as already published species (about 340 specimens belonging to 91 species as identified by Kaup). It was noted above that the number of Passalidae species recognized by Kaup was 171. Kaup having described 76 new species, he had therefore 167 species in his collection. At that time, this number was almost the number of species known in the whole world.
2. Specimens labeled by Kaup with new species names which were not published. Most of these manuscript names are also mentioned in the hand-written notes in Kaup's hand-copy of the «Monographie der Passaliden» (see below). None of these manuscript names would be regarded as valid nowadays had they been published. In these cases, either Kaup eventually recognized the synonymies, or had no time to publish the names (especially in case of specimens from the Sarg collection, see below).

3. Unidentified specimens, most of them from America and from the Sarg collection. The Darmstadt Museum acquiring this collection in 1869 or 1870, it seems that Kaup lacked time for a complete examination of it. Only one of Kaup's species is based on specimens from Sarg, *Oileus sargi* (Kaup, 1871), 76. in the catalogue given below, which was published in the new genus *Rimor* Kaup, no longer considered valid. It is contained in an addendum to KAUP (1871) which was finished in time to be included in the publication (pp. 117–120). Sarg's collection contains some species which are still new to science. One of them, *Passalus kaupi* n. sp., is described in the present paper. Others need more study to be established.

In the Kaup archive at the HLMD a copy of the »Monographie der Passaliden« (KAUP 1871) is kept, with numerous hand-written notes by the author (in black ink) as well as some others by Heldmann (in blue).

Localization, recognition and designation of type specimens

Almost all of Kaup's descriptions include the collecting localities of specimens (as far as indicated by collectors) and the collections in which they resided, in case of specimens acquired for the Darmstadt Museum also the original collection. These indications being the same on the labels, they turn out to the revisor's advantage. However, in case of species described in KAUP (1868 a, 1868 b, 1869) and then redescribed in KAUP (1871), the indications in the latter work are often completed, sometimes modified, with regard to those in the earlier publications.

Kaup described his species from various collections. The precise localization of specimens and the recognition of hand-written labels and manuscripts required the help and courtesy of the curatorial staff of several institutions. Some bibliographical references were also useful, specifically PERCHERON (1837), HORN & SCHENKLING (1928), HORN & KAHLE (1935) and HORN et al. (1990). Curiously, Kaup is not cited in the two last references. The catalogue of R. Oberthür's collection (autograph from 1933, kept at the entomological library of the MNHN) could be used on several occasions to locate and recognize Mniszech's specimens.

After the recognition of type specimens (holo- and syntypes), following the indications given in the original descriptions, redescrptions by KAUP (1871), and the chronology of these indications, lectotypes are designated if necessary for taxonomic clarification, meeting requirements and recommendations of the »International Code of Zoological Nomenclature« (ICZN 1999).

Except for the type specimens of the species 29. and 71. in the catalogue listing below, and some of those of the species 68., all of Kaup's passalid types were located in five public institutions: HLMD (with specimens from Agassiz, Germar, Klingelhöfer, Parry, von Rosenberg, Thorey; and the Sarg collection), MNHN (with specimens from Parry, von Rosenberg, Thorey,

Moore; and the Mniszech collection), ZMHB (with specimens from Germar, Haag), BMNH (with specimens from Bowring, Cantor, Janson, Moore) and ZSMC (the Wagner collection).

Critical catalogue of the species

Preliminary notes

To facilitate research, the 76 species are listed in the order they were described by KAUP (1868a, 1868b, 1869, 1871), but current combinations are used in the species headings. Species names currently regarded as valid are rendered in bold type.

For each species, type specimens are listed and label data of the located types are given. Texts of individual labels are separated by the sign »/«. Size and condition is indicated for primary types. Total length of specimens given here is taken from the anterior border of the extended labrum to the apex of the elytra (a method apparently used by Kaup). If judged useful or necessary, complementary historical and systematic data are given.

Specimens »compared with type« have been so labelled in the MNHN in case of species not represented by type specimens in said institution.

1. *Taeniocerus pygmaeus* (Kaup, 1868)

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Described in the genus *Aulacocyclus* Kaup based on one specimen from »Malacca« in the Mniszech collection.

Holotype (sex indet.): »*Aulacocyclus* [cross-bared], *Taeniocerus pygmaeus* Kp., Malais., Mnisz. [Kaup]/Collection Mniszech/Ex-Musaeo Van Lansberge/ex Coll. R. Oberthür 1952« (MNHN). Total length: 16.5 mm. Lacking left antenna and left anterior leg.

The Kaup collection contains an immature specimen, identified by Kaup: »*Taeniocerus pygmaeus* Kp., Malacca [Kaup], D [= Deyrolle]/Malacca [Heldmann]« (HLMD-Col-1051). It is cited by KAUP (1871: 20) with the indication: »Geschenk von Hrn. Deyrolle«.

2. *Taeniocerus bicuspis* (Kaup, 1868)

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Described in the genus *Aulacocyclus*, based on three specimens from »Malacca«, two obtained from von Rosenberg and one in the Mniszech collection. BOUCHER (1998) has shown that the type locality is erroneous. *T. bicuspis* is restricted to the South-Eastern Himalayas (Assam, Sikkim, Buthan, Darjeeling). It is absent from the Malayan Peninsula.

Lectotype, hereby designated (sex indet.): »*Taeniocerus bicuspis* Kp. [Kaup] / Malacca [Heldmann]« (HLMD-Col-1054-LT).

Total length: 21 mm. Specimen in good condition.

Paralectotypes (sex indet.): idem (HLMD-Col-1054-PLT); »*Aulacocyclus* [cross-bared], *Taeniocerus bicuspis* Kp., Malacca [Kaup]/Collection Mniszech/Ex-Musaeo Van Lansberge/ex Coll. R. Oberthür 1952« (MNHN,1).

The Kaup collection contains two other specimens identified by Kaup: »*bicuspis* Kp. [Kaup]/Assam [Heldmann]« (HLMD-Col-1055). KAUP (1871: 21) refers to the specimens at Darmstadt as follows: »Assam und Malacca. Ex. aus der Germar'schen Sammlung und Geschenke von Hrn. Deyrolle«. In the Sédillot and the Deyrolle collections there is a series of ten specimens, also identified by Kaup, from Assam (MNHN).

3. *Taeniocerus platypus* (Kaup, 1868)

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Described in the genus *Aulacocyclus*, based on three specimens from »Borneo«: one at Darmstadt, from Thorey, and two in the Mniszech collection.

Lectotype, hereby designated (sex indet.): »*Taeniocerus platypus* Kp., Borneo, Thor. [= Thorey] [Kaup] / Borneo [Heldmann]« (HLMD-Col-1053-LT). Total length: 21 mm. Immature but in good condition.

Paralectotypes (♀♀): »*Aulac.* [cross-bared] *Taeniocerus platypus* Kp., Borneo [Kaup] / Collection Mniszech / Ex-Musaeo Van Lansberge / ex Coll. R. Oberthür 1952 / *Taeniocerus platypus* (Kaup), det. Reyes-Castillo 1984« (MNHN, 2).

4. *Comacupes cavicornis* (Kaup, 1868)

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Described in the genus *Aulacocyclus*, with Burmeister cited as author (but not published by him), based on one specimen from »Penang« originating from the Germar collection.

Holotype (sex indet.): »Penang [Heldmann]« (HLMD-Col-1048-HT). An original label by Kaup is not present. Total length: 28 mm. Specimen in good condition.

The Kaup collection contains two other specimens identified by Kaup: »*Comacupes cavicornis* [Kaup] / Malacca [Heldmann]« (HLMD-Col-1049-PLT1 and -PLT2, the latter only with Heldmann's label). These are paralectotypes of *Aulacocyclus laevicornis* Kaup, synonymized with *C. cavicornis* by KAUP (1871), see below.

5. *Comacupes laevicornis* (Kaup, 1868)

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junior subjective synonym of *Comacupes cavicornis* (Kaup, 1868): KAUP 1871

Described in the genus *Aulacocyclus*, based on an unstated number of specimens from »Malacca« obtained from von Rosenberg.

Lectotype, hereby designated (sex indet.): »Type C. Mnz. [= Coll. Mniszech] [Kaup?] / Malacca / Collection Mniszech / Ex-Musaeo Van Lansberge / ex Coll. R. Oberthür 1952 / *Comacupes cavicornis* (Kaup), det. Reyes-Castillo 1972« (MNHN). Specimen in good condition. Total length: 25 mm. Paralectotype (sex indet.): idem (MNHN); two further paralectotypes later determined as *C. cavicornis* are at HLMD, see above.

6. *Aulacocyclus tricuspis* Kaup, 1868

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The description was said to be based on one specimen from »Neu-Caledonia« in the Mniszech collection, but a hand-written note by Kaup in his copy of the »Prodromus« (KAUP 1868 a) and the fact that a specimen was donated to the Darmstadt Museum by Mniszech (KAUP 1871: 18) show that in fact two specimens were present. KAUP (1871: 18) erroneously transferred this species to the genus *Comacupes* Kaup.

Lectotype, hereby designated (sex indet.): »*Aulacocyclus* [cross-bared], *Comacupes tricuspis* Kp., N. Caledonia, Mn. [= Mniszech] [Kaup] / Collection Mniszech / Ex-Musaeo Van Lansberge / ex Coll. R. Oberthür 1952« (MNHN). Total length: 25 mm. Specimen in good condition. Paralectotype (sex indet.): »*Comacupes tricuspis* Kp., N. Cal., Mn [Kaup] / Neu Caledonien [Heldmann]« (HLMD-Col-1045-PLT).

7. *Aulacocyclus rosenbergii* Kaup, 1868

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Description based on one specimen from »Niasinsel« obtained from von Rosenberg. This locality is erroneous because the species is endemic to Australia.

Holotype (sex indet.): »*Rosenbergii* Kp., Ins. Nias, v. R. [= von Rosenberg] [Kaup] / Insel Nias [Heldmann]« (HLMD-Col-1039-HT). Total length: 23 mm. Immature, in good condition. The Kaup collection contains three other specimens identified and cited by Kaup (1871: 16) with the indication »Neuholland durch Deyrolle«: »*Aulacocyclus Rosenbergii, Percheronii* [Kaup] / Neu-Holland [Heldmann]« (HLMD-Col-1040, 1); idem but »Brisban, Nd-Austrl. [Heldmann]« (HLMD-Col-1041, 2). It is probable that one of the latter is the paralectotype of *A. percheroni*, see below.

8. *Aulacocyclus perlatus* Kaup, 1868

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Description based on one specimen from »Neu-Guinea« in the Mniszech collection.

Holotype (sex indet.): »*perlatus* [oval label; Mniszech?] / Type Kaup C. Mnz. [= Coll. Mniszech] [Kaup?] / Collection Mniszech / Ex-Musaeo Van Lansberge / ex Coll. R. Oberthür 1952« (MNHN). Total length: 21.5 mm. Specimen in good condition. The Kaup collection does contain another specimen identified by him, even though it is not cited in KAUP (1871): »*perlatus* K. [Kaup] / Neu Guinea [Heldmann]« (HLMD-Col-1034).

9. *Taeniocerus deyrollei* (Kaup, 1868)

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Described in the genus *Aulacocyclus*, based on three specimens from »St. Denis auf Réunion« in the Mniszech collection (2) and at Darmstadt (1, from Deyrolle). The erroneous type locality was discussed and rectified by ARROW (1907).

Lectotype, hereby designated (sex indet.): »*Aulacocyclus* [cross-bared], *Taeniocerus Deyrollei* Kp., St. Denis [modified by Arrow to:] Australie, Port Denison [Kaup] / Collection Mniszech / Ex-Musaeo Van Lansberge / G.J. Arrow, Trans. Ent. Soc., 1906, p. 347 [Oberthür] / ex Coll. R. Oberthür 1952« (MNHN). Total length: 22.5 mm. Specimen in good condition. Paralectotypes (sex indet.): idem but »*Aulacocyclus deyrollei* Kaup, det. Reyes-Castillo 1986« (MNHN, 1); »*Taeniocerus Deyrollei* Kp., St. Denis, HD [= H. Deyrolle] [Kaup] / St. Denis [Heldmann]« (HLMD-Col-1050-PLT).

The Kaup collection contains two other specimens identified by him which obviously also stem from Deyrolle: »St. Denis [Heldmann]« (HLMD-Col-1050). Existence of these further specimens was indicated by KAUP (1871: 20): »St. Denis. Mehre-re Ex. als Geschenke von H. Deyrolle«.

10. *Aulacocyclus parryi* Kaup, 1868

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Description based on two specimens from »Ceram« at Darmstadt and in the Mniszech collection, from von Rosenberg.

Lectotype, hereby designated (sex indet.): »*Parryi* Kp. [Kaup] / Ceram [Heldmann]« (HLMD-Col-1036-LT). Total length: 26 mm. Specimen in good condition.

Paralectotype (sex indet.): »*Aulacocyclus Parryi* Kp., Ceram, Mn [= Mniszech] [Kaup] / Collection Mniszech / Ex-Musaeo Van Lansberge / ex Coll. R. Oberthür 1952« (MNHN).

The Kaup collection contains another specimen identified by him which appears to come from von Rosenberg: »Neu Holland [Heldmann]« (HLMD-Col-1037). This specimen was probably cited by Kaup (1871: 16) with the indication »(? Neuholland), durch Herm. v. Rosenberg«. *A. parryi* is, however, absent from Australia. A third specimen is present at HLMD: »Parryi Kp. [Kaup] / Halmaheira [Heldmann]« (HLMD-Col-1038).

11. *Aulacocyclus percheroni* Kaup, 1868

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junior subjective synonym of *Aulacocyclus rosenbergii* Kaup, 1868: KAUP 1871

Description based on two specimens from »Trisbane [= Brisbane] in Neuholland« in the Mniszech and Haag collections. The latter has not been identified, but it is likely that it was in the series of *A. rosenbergii* received by Kaup from Deyrolle, see above. As proposed by KAUP (1871: 16), the species is a synonym of *A. rosenbergii*.

Lectotype, hereby designated (sex indet.): »Brisbane [Mniszech?]/*Aulacocyclus Percheroni* Kp., Brisbane, N.H. [= Neu Holland] [Kaup] / Collection Mniszech / Ex-Musaeo Van Lansberge / ex Coll. R. Oberthür 1952 / *Aulacocyclus rosenbergii* Kaup, det. Reyes-Castillo 1986« (MNHN). Total length: 24.5 mm. Specimen in good condition.

12. *Comacupes comatus* (Kaup, 1868)

Coleopterologische Hefte 3: 9

junior subjective synonym of *Comacupes basalis* (Smith, 1852): KAUP 1869

Described in the genus *Aulacocyclus*, based on an unstated number of specimens from the »Philippinen« in the Mniszech and Thorey collections.

Lectotype, hereby designated (sex indet.): »Type C. Mnz. [= Coll. Mniszech] [Kaup?] / Collection Mniszech / Ex-Musaeo Van Lansberge / ex Coll. R. Oberthür 1952 / *comatus* Kaup, Lectotype [Reyes-Castillo, 1972] / *Comacupes basalis* (Smith), det. Reyes-Castillo 1972« (MNHN). Total length: 31 mm. Specimen in good condition.

Paralectotypes (sex indet.): idem, less the first label (MNHN); »*Comacupes basalis* Smit, Philipp., Th [= Thorey] [Kaup] / Philippinen [Heldmann]« (HLMD-Col-1046-PLT). There is a second specimen at HLMD, also identified as *C. basalis* and with the same labelling, except for »Pa [= Parry]« instead of »Th« (HLMD-Col-1047).

13. *Didimus punctipectus* (Kaup, 1868)

Coleopterologische Hefte 3: 11

Described in the genus *Leptaulax* Kaup based on two specimens without locality information (though the genus was stated to be African) in the Mniszech collection and at Darmstadt. The latter obviously was donated by Mniszech. KAUP (1871: 30) stated the more precise geographical origin »Guinea«.

Lectotype, hereby designated (sex indet.): »*Leptaulax* [cross-bared] *Didimus punctipectus* Kp., Guinea [Kaup] / Collection Mniszech / Ex-Musaeo Van Lansberge / ex Coll. R. Oberthür 1952« (MNHN). Total length: 19 mm. Specimen in good condition. Paralectotype (sex indet.): »*Didimus punctipectus* Kp., Guinea, Mn [= Mniszech] [Kaup] / Guinea [Heldmann]« (HLMD-Col-1064-PLT).

The Kaup collection contains another specimen labelled by Kaup »Guinea« (HLMD-Col-1065).

14. *Didimus klugii* (Kaup, 1868)

Coleopterologische Hefte 3: 12

junior subjective synonym of *Didimus africanus* (Percheron, 1844): HINCKS 1933

Described in the genus *Leptaulax* based on one specimen from »Afrika« (no detail), donated by Parry. KAUP (1871: 31) modified a little the geographical origin to »? Westafrika«. HINCKS (1933) transferred the species to the genus *Didimus* Kaup as a synonym of *D. africanus* (Percheron, 1844). This synonymy is not certain and should be revised by comparison with the type series of *D. africanus*.

Holotype (sex indet.): »*Didimus Klugii* Kp., Afr., Parry [Kaup]« (HLMD-Col-1069-HT). Total length: 23 mm. Specimen in bad condition, very old and partially damaged.

15. *Trichostigmus thoreyi* (Kaup, 1868)

Coleopterologische Hefte 3: 13

Described in the genus *Leptaulax* based on one specimen from the »Philippinen«, from Thorey. In a revision of *Trichostigmus*, BOUCHER (1992) designated a neotype (deposited at HLMD), following the information given by GRAVELY (1914, 1918) on the disappeared type in the museum at Hamburg. However, this latter assertion has meanwhile proved incorrect. KAUP (1871: 31) stated: »Geschenk von Hrn. Thorey, welchem ich so viele Arten verdanke«, and a specimen which is certainly the holotype was discovered in the Kaup collection at HLMD. *T. thoreyi* is endemic to the island of Luzon.

Holotype (sex indet.): »*Trichostigmus thoreyi* Kp, Philippinen [Kaup] / Philippinen [Heldmann]« (HLMD-Col-1070-HT). Total length: 23 mm. Specimen in good condition. Former neotype, now losing its status as such: »Philip. [Thorey] / Ex. Musaeo Thorey / ex Coll. R. Oberthür 1952 / *Trichostigmus thoreyi* (Kaup, 1868), néotype femelle, dés. S. Boucher 1992« (♂, HLMD-Col-1071).

16. *Leptaulax eschscholtzi* Kaup, 1868 stat. rev.

Coleopterologische Hefte 3: 14

Description based on one specimen from »Insel Nias«, from von Rosenberg. GRAVELY (1914) synonymized the species erroneously with *L. bicolor* (Fabricius, 1801). *L. eschscholtzi* is well distinct, larger and longer, the habitus being more strongly depressed and the pronotum much less punctate and more transverse. It may be an endemic species from Nias and neighbouring islands, but it has to be kept in mind that locality data of von Rosenberg's samples at the HLMD have turned out to be unreliable in all taxonomic groups.

Holotype (sex indet.): »*Eschscholtzii* Kp., Nias inseln [Kaup] / Insel Nias [Heldmann]« (HLMD-Col-1073-HT). Specimen in good condition. Total length: 25 mm.

17. *Macrolinus weberi* Kaup, 1868

Coleopterologische Hefte 3: 19

Description based on an unstated number of specimens from the »Philippinen« at Darmstadt Museum, donated by Thorey.

Lectotype, hereby designated (sex indet.): »*Macrolinus Weberi* Kp., Philippinen [Kaup] / Philippinen [Heldmann]« (HLMD-Col-1115-LT). Total length: 27 mm. Immature and in good condition.

18. *Macrolinus duivenbodei* Kaup, 1868

Coleopterologische Hefte 3: 19

Description based on an unstated number of specimens from »Celebes« at Darmstadt Museum and in the Mniszech collection, sent by van Duivenbode. It is thus highly likely that the restricted type locality is the Manado region of the Minahasa Peninsula, northern Sulawesi.

Lectotype, hereby designated (sex indet.): »*Duivenbodei* Kp., Celebes [Kaup] / Celebes [Heldmann]« (HLMD-Col-1111-LT). Total length: 27 mm. Specimen in good condition.

Paralectotype (sex indet.): »*Macrolinus Duivenbodei* Kp., Celebes [Kaup] / Collection Mniszech / Ex-Musaeo Van Lansberge / *Macrolinus duivenbodei*, F.H. Gravely det. / ex Coll. R. Oberthür 1952« (MNHN).

19. *Mastachilus macleayi* Kaup, 1868

Coleopterologische Hefte 3: 20

junior subjective synonym of *Mastochilus australasicus* (Percheron, 1841): KAUP 1871

Description based on one specimen from »Neuholland« in the Mniszech collection.

KAUP (1871: 47) justifiedly synonymized the species with *M. australasicus* (Percheron, 1841).

Holotype (sex indet.): »*Mastachilus Mac Leayi* Kp., N. Holl. [Kaup] / Collection Mniszech / Ex-Musaeo Van Lansberge / ex Coll. R. Oberthür 1952« (MNHN). Total length: 41 mm. Specimen in good condition.

No specimen identified as *M. macleayi* is in the Kaup collection. Two specimens correctly identified as »*australasicus* Perch.« (HLMD-Col-1112) were detected.

20. *Pelopides mniszechi* (Kaup, 1868) stat. rev.

Coleopterologische Hefte 3: 22

Described in the genus *Eriocnemis* Kaup based on one specimen from »Nias-Insel« received from von Rosenberg. KAUP (1871: 41) added: »vielleicht auch auf Sumatra«. GRAVELY (1914) synonymized this species with *P. tridens* (Wiedmann, 1823), then HINCKS & DIBB (1935) with *P. burmeisteri* (Kaup, 1868). *P. mniszechi* is in fact a species well distinct from both *P. tridens* and *P. burmeisteri*. Its occurrence on Sumatra, but not on Nias, can be confirmed. Note that locality data originating from von Rosenberg are doubtful. A detailed redescription should be undertaken in the future.

Holotype (sex indet.): »*Eriocnemis Mniszechi* Kp., Niasins., R. [= Rosenberg] [Kaup] / Nias Insel [Heldmann]« (HLMD-Col-1105-HT). Total length: 49 mm. Specimen in good condition.

21. *Pelopides burmeisteri* (Kaup, 1868)

Coleopterologische Hefte 3: 22

Described in the genus *Eriocnemis* based on an unstated number of specimens from »Java« in the Darmstadt and Mniszech collections, sent by von Rosenberg.

Lectotype, hereby designated (sex indet.): »*Burmeisteri* Kp., Java [Kaup] / Java [Heldmann]« (HLMD-Col-1106-LT). Total length: 45 mm. Specimen in good condition.

Paralectotypes (sex indet.): »*Burmeisteri*, Java, R. [= Rosenberg] [Kaup]« (HLMD-Col-1106-PLT1 and -PLT2); »*Eriocnemis Burmeisteri* Kp., Java [Kaup] / Collection Mniszech / Ex-Musaeo

Van Lansberge / ex Coll. R. Oberthür 1952« (MNHN, 2); »Java, Kaup [det.] / *Burmeisteri* Kp., Typ. [Haag] / Coll. Thieme / Type [Gravely]« (ZMHB, 1).

There is a further specimen identified by Kaup in the Mniszech collection (MNHN), but it is from Sumatra. The species was never cited by Kaup from anywhere else than Java.

22. *Labienus gigas* (Kaup, 1868)

Coleopterologische Hefte 3: 23

Described in the genus *Eriocnemis* based on one specimen from »Ternate« in the Mniszech collection. *L. gigas* is a giant species endemic to the Moluccas, like the closely allied *L. moluccanus* (Percheron, 1835) and *L. crassus* (Kaup, 1868).

Holotype (sex indet.): »Ternate / *Eriocnemis* [cross-bared] *Vellejus gigas* Kp., Ternate [Kaup] / Collection Mniszech / Ex-Musaeo Van Lansberge / ex Coll. R. Oberthür 1952« (MNHN). Total length: 63 mm. Specimen in good condition.

This species is not represented in the Kaup collection.

23. *Labienus crassus* (Kaup, 1868) stat. rev.

Coleopterologische Hefte 3: 23

Described in the genus *Eriocnemis* based on three specimens from »Batchian«: two in the Mniszech collection (one of which was offered by him to the Darmstadt museum) and one in the Haag collection. KAUP (1871: 37) cited only those of Mniszech. GRAVELY (1918) relegated *L. crassus* to synonymy with *L. gigas*. It is, however, a good species, slightly different exteriorly, but well distinct regarding the male genitalia. A redescription of both species will be undertaken in the future.

Lectotype, hereby designated (sex indet.): »*Eriocnemis* [cross-bared] *Vellejus crassus* Kp., Batchian, Mn. [= Mniszech] [Kaup] / Collection Mniszech / Ex-Musaeo Van Lansberge / ex Coll. R. Oberthür 1952« (MNHN). Total length: 62 mm. Specimen in good condition.

Paralectotypes (sex indet.): »*Vellejus crassus* Kp., Batchian, Mn. [= Mniszech] [Kaup] / Batschian [Heldmann]« (HLMD-Col-1100-PLT); »Batshian, Deyrolle / *crassus* Kp., Typ. [Haag] / Coll. Thieme« (ZMHB, 1).

24. *Labienus ptox* (Kaup, 1868)

Coleopterologische Hefte 3: 25

Described in the genus *Eriocnemis* based on two specimens from the »Aruinsel« in the Mniszech and Haag collections. A specimen found at ZMHB is believed to be the one cited by Kaup even though the locality given on the label is Waigeo.

Lectotype, hereby designated (sex indet.): »*Eriocnemys* [cross-bared] *Labienus ptox* Kp., Aru, Mn. [= Mniszech] [Kaup] / Collection Mniszech / Ex-Musaeo Van Lansberge / ex Coll. R. Oberthür 1952« (MNHN). Total length: 52 mm. Specimen in good condition.

Paralectotype (sex indet.): »I. Vaigiou, Deyrolle / *ptox* Kp., Typ. [Haag] / Coll. Thieme« (ZMHB).

KAUP (1871: 39) indicated the species in the BMNH. Two specimens seen by him have been found there and are labelled »*Eriocnemis ptox* Kaup [Kaup] / Aru Isl«. The Kaup collection contains two specimens as well, labelled »*Labienus Ptox* Kp. [Kaup] / Aru Insl. [Heldmann]« (HLMD-Col-1102).

25. *Plethenus quadricornis* (Kaup, 1868)

Coleopterologische Hefte 3: 26

junior objective synonym of *Plethenus lottini* (Boisduval, 1835): n. syn.

Described in the genus *Eriocnemis* based on an unstated number of specimens from »Neuholland« in the Mniszech collection with an old labelling: »*Passalus Lottini* Dupont«. This label, written by Dupont (according to BOISDUVAL 1835), has disappeared on the specimen found. Dupont kept the species undescribed. KAUP (1871: 40) replaced »Dupont« by »Boisduval«. It is now clear that the present type is also the type of *P. lottini* (Boisduval, 1835), a conclusion considered possible by KAUP (1868a) himself. The genus *Plethenus* Kaup is endemic to Sulawesi and the Philippines, and *P. lottini* is endemic to Sulawesi. Therefore, as some other Passalidae described by Boisduval, this specimen was in fact not collected during the expedition of the corvette »Astrolabe« (1826–1829, under the authority of Dumont d'Urville). A new objective synonymy is thus recognized and the erroneous type locality corrected.

Lectotype, hereby designated (sex indet.): »*Eriocnymis* [cross-bared] *Plethenus 4cornis* Kp., under d. Namen *Lottini*, Dup., Austral., Mniszech Coll. [Kaup] / Collection Mniszech / Ex-Musaeo Van Lansberge / ex Coll. R. Oberthür 1952« (MNHN). Total length: 50 mm. Specimen in good condition. This species is not represented in the Kaup collection.

26. *Episphenus comptoni* (Kaup, 1868)

Coleopterologische Hefte 3: 28

Described in the genus *Aceraius* Kaup based on an unstated number of specimens (»viele«) from »Ceylon« provided by both Parry and Germar. Eight of these specimens were found, and they belong to two sympatric species of different size. KAUP (1871: 49) gave the total length as 29–40 mm in his redescription, indicating the confusion. The lectotype selected here belongs to the larger species. The smaller species is closely allied to *E. flachi* (Kuwert, 1891).

Lectotype, hereby designated (sex indet.): »*Aceraius* [cross-bared] *Episphenus Comptoni* Kp., Ceylon, M. [= Major] Parry [Kaup] / Collection Mniszech / Ex-Musaeo Van Lansberge / ex Coll. R. Oberthür 1952« (MNHN). Total length: 42 mm. Specimen in good condition.

Paralectotypes (sex indet.): »*Comptoni* Kp., Ceylon, G.S. [= Germar Sammlung] [Kaup] / Ex Musaeo E. Harold / ex Coll. R. Oberthür 1952« (MNHN, 1); »*Comptoni* Kp., Ceylon [Kaup] / Ceylon [Heldmann]« (HLMD-Col-1124-PLT1); »*Laches Comptoni* Kp. [Kaup] / Ceylon [Heldmann]« (HLMD-Col-1124-PLT2 and -PLT3); »*Aceraius comptoni* Kp., Ceylon [Kaup] [ex coll. Parry?] / Ceylon 54.38« (BMNH, 1).

The Kaup collection contains, in addition, two paralectotypes of *A. comptoni* in fact belonging to the smaller species:

»*L. Comptoni* Kp., Ceylon [Kaup] / Ceylon [Heldmann]« (HLMD-Col-1125-PLT1 and -PLT2).

27. *Cetejus sodalis* (Kaup, 1868)

Coleopterologische Hefte 3: 29

Described in the genus *Aceraius* based on an unstated number of specimens from »Ternate« in the Haag collection. KAUP (1868a, 1871) indicated a label handwritten by Deyrolle »*P. sodalis* Deyrolle«. Besides one from Ternate, several other specimens of this species at MNHN are also so labelled by Deyrolle, but the lectotype in ZMHB designated here has lost that label.

Lectotype, hereby designated (sex indet.): »Ternate, Deyrolle / *Aceraius* Kp. [Haag] / *sodalis* Kp., Typ. [Haag] / Coll. Thieme« (ZMHB). Total length: 27 mm. Specimen in good condition. Paralectotype (sex indet.): »Ternate [Deyrolle] / *Sodalis* Deyr. [Deyrolle] / ex Coll. R. Oberthür 1952« (MNHN).

This species is not represented in the Kaup collection.

28. *Gonatas germari* (Kaup, 1868)

Coleopterologische Hefte 3: 30

Described in the genus *Aceraius* based on an unstated number of specimens »without name nor origin«, but »probably from the Asian mainland«, in the Germar collection. KAUP (1871: 51) added to have identified the species from the Lizard Islands in the BMNH, but no specimens were found there. It must be suspected that Kaup added this locality information to the Germar specimens even though it might not be correct for them.

Lectotype, hereby designated (sex indet.): »*Gonatas Germari* Kp., Lizards' i., Germ. [= Germar] [Kaup] / Germar coll. [Kaup] / Lizard Inseln [Heldmann]« (HLMD-Col-1128-LT). Total length: 27 mm. Specimen in good condition.

Paralectotype (sex indet.): »*Gonatas Germari* Kp., Lizard Ins. [Kaup] / Lizard Inseln [Heldmann]« (HLMD-Col-1128-PLT).

29. *Pleurarius pilipes* Kaup, 1868

Coleopterologische Hefte 4: 1

Description based on one specimen from »Sumatra, Fort Mangala, Gambong District« in the Munich Museum. Files of the ZSMC show that the holotype has been present at some time but it can no longer be found (G. Scherer pers. com., 1993). No other specimen determined by Kaup was detected, and no other specimen has ever been mentioned in the literature. Currently accepted nomenclature for the genus *Pleurarius* Kaup includes *P. pilipes* as a valid species (HINCKS & DIBB 1958). The figures given by KAUP (1871: pl. IV, Figs. 1, 1a) show that it is indeed a *Pleurarius*, but the geographical origin must be erroneous because the genus is endemic to the Western Ghats (India). As believed by GRAVELY (1914, 1918), it is highly likely that *P. pilipes* is the same species as the common *P. brachyphyllus* Stolizska, 1873.

30. *Ophrygonius infantilis* (Kaup, 1868)

Coleopterologische Hefte 4: 4

junior subjective synonym of *Ophrygonius neelgherriensis* (Percheron, 1841): GRAVELY 1914

Described in the genus *Aceraius* based on an unstated number of specimens from »Vanicoor« in the Mniszech collection. The unique specimen found bears no hand-written identification label by Kaup, only by Mniszech or Dupont. This specimen was identified by Gravelly (around 1912, while in the Oberthür collection) under the name *Basilianus neelgherriensis* (Percheron, 1841), and published by GRAVELY (1914) in the genus *Episphenus* Kaup.

Lately, *E. neelgherriensis* was transferred to the genus *Ophrygonius* Zang by BOUCHER (1993). *O. infantilis* is indeed a synonym of *O. neelgherriensis*, so the type locality is erroneous as the species is an endemic of the Indian Peninsula. Moreover, Vanikoro Island in the Santa Cruz Archipelago (Melanesia) seems to be occupied only by the genus *Gonatas* Kaup (BOUCHER 1991), specifically *Gonatas naviculator* (Percheron, 1844). GRAVELY (1914, 1918) noted the ambiguous geographical repartition published for *O. neelgherriensis*.

Lectotype, hereby designated (sex indet.): »*Naviculator* Burm., I. de Vanikoro, Type [Mniszech?] / Collection Mniszech / Ex-Musaeo Van Lansberge / *Basilianus neelgherriensis*, Gravelly det. / ex Coll. R. Oberthür 1952« (MNHN). Total length: 27 mm. Specimen in good condition.

The Kaup collection contains no specimen identified as *infantilis*, but there are three *O. neelgherriensis* determined by Gravelly, two from West Africa (an erroneous locality, HLMD-Col-1139) and one from Malabar (HLMD-Col-1140). KAUP (1871: 56) cited a specimen of *O. neelgherriensis* from Malabar, donated by Mniszech.

31. *Cetejus virginalis* (Kaup, 1868)

Coleopterologische Hefte 4: 5

Described in the genus *Aceraius* from the »Südsee« based on an unstated number of specimens in the Darmstadt Museum, but KAUP (1871: 54) supplemented these data by: »1 Ex. Geschenk von Hrn. Thorey«. This species is known to me by other specimens, all from the Palau Islands (Western Micronesia).

Holotype (sex indet.): »*Cetejus virginalis* Kp., Süd See [Kaup] / Süd-See [Heldmann]« (HLMD-Col-1137-HT). Total length: 25 mm. Specimen in good condition.

32. *Cetejus peltostictus* (Kaup, 1868)

Coleopterologische Hefte 4: 5

Described in the genus *Aceraius* based on an unstated number of specimens from the »Aru-Insel« originating from von Rosenberg.

Lectotype, hereby designated (sex indet.): »*Cetejus* 10 [= 22 mm] *peltostictus* Kp., Aru, v. R. [= von Rosenberg] [Kaup] / Aru Inseln [Heldmann]« (HLMD-Col-1138-LT). Total length: 22.5 mm. Specimen in good condition.

33. *Gonatas pumilio* (Kaup, 1868)

Coleopterologische Hefte 4: 6

Described in the genus *Aceraius* based on an unstated number of specimens from »Amboina« in the Darmstadt and Mniszech collections, received from von Rosenberg. KAUP (1871: 50) indicated »3 Exemplare durch Herm. v. Rosenberg«. According to HORN & KAHLE (1936), some of von Rosenberg's material from Amboina was deposited in the ZMHB, but no specimens have been found there.

Lectotype, hereby designated (sex indet.): »*Gonatas pumilio* Kp., Amb. [Kaup] / Amboina [Heldmann]« (HLMD-Col-1127-LT). Total length: 20.5 mm. Specimen in good condition.

Paralectotypes (sex indet.): idem (HLMD-Col-1127-PLT);

»Amb. / *Aceraius* [cross-bared] *Gonatas pumilio* Kp., Amb., v. R. [= von Rosenberg] [Kaup] / Collection Mniszech / Ex-Musaeo Van Lansberge / ex Coll. R. Oberthür 1952« (MNHN, 1).

34. *Ophrygonius puerilis* (Kaup, 1868)

Coleopterologische Hefte 4: 6

junior subjective synonym of *Ophrygonius neelgherriensis*

(Percheron, 1841): GRAVELY 1914

Described in the genus *Aceraius* based on two specimens from »Aru« at Darmstadt and in the Mniszech collection, from von Rosenberg. KAUP (1871: 48) transferred the species to the genus *Laches* Kaup. GRAVELY (1914), who examined at least one of the syntypes, correctly synonymized the species with *Basilianus neelgherriensis* (Percheron, 1841). Lately, BOUCHER (1993) transferred this species to the genus *Ophrygonius*. As in the synonymous species 30. above, the type locality is erroneous.

Lectotype, hereby designated (sex indet.): »*Laches puerilis* Kp., Aru, v. R. [= von Rosenberg] [Kaup] / Aru Inseln [Heldmann]« (HLMD-Col-1123-LT). Total length: 24 mm. Specimen in good condition.

Paralectotype (sex indet.): »*Aceraius* [cross-bared] *Laches puerilis* Kp., Aru, v. Rosenb. [Kaup] / Collection Mniszech / Ex-Musaeo Van Lansberge / *Basilianus neelgherriensis*, F.H. Gravelly det. / ex Coll. R. Oberthür 1952« (MNHN).

35. *Proculus mniszechi* Kaup, 1868

Coleopterologische Hefte 4: 8, 11

Description based on an unstated number of specimens from »Guatemala« in the Mniszech collection, in the MNHN, in the Thomson collection, »etc.«. KAUP (1871: 68) indicated as present at the museum in Darmstadt: »1 Exemplar. Geschenk des Grafen Mniszech«.

Lectotype, hereby designated (sex indet.): »*Proculus Mniszechi*, Guatemala [Kaup] / Collection Mniszech / Ex-Musaeo Van Lansberge / ex Coll. R. Oberthür 1952« (MNHN). Total length: 65 mm (thus a small specimen). Specimen in good condition. Paralectotypes (sex indet.): idem, without label by Kaup (MNHN, 8).

There are also some specimens in the old material of the MNHN, which includes the Thomson collection, but paralectotypes cannot now be distinguished from possible non-type specimens. Likewise, the paralectotype at HLMD, if still there, is no longer recognizable as there are altogether 11 specimens, all from Guatemala (HLMD-Col-1154). Three of these are labelled »*Proculus mniszechi* Kaup [or Kp.], Guat., Sarg [or Sg] [Kaup] / Guatemala [Heldmann]«, the others only have the Heldmann label. KAUP (1871: 118) stated that he received 15 specimens (19 according to Kaup's hand-written note on p. 68 of his copy of the »Monographie«) with the Sarg collection, acquired by the HLMD between 1869 and 1870, therefore the HLMD has given away some specimens of this attractive and rather common species over the years, which may or may not have included the paralectotype.

36. *Publius concretus* (Kaup, 1868) stat. rev.

Coleopterologische Hefte 4: 8, 11

Described in the genus *Proculejus* Kaup based on three specimens from »Columbia« in the Mniszech (2) and Darmstadt (1) collections, the latter from Parry. KAUP (1871: 70) synonymized the species with *Publius crassus* (Smith, 1852), a view adopted by all subsequent authors. The ongoing revision of *Publius* Kaup (BOUCHER in prep.) shows that two species were confused within the type series. Only one of Mniszech's specimens indeed belongs to the true *P. crassus*. The second specimen of Mniszech and that

of Parry belong to another species for which no senior synonym exists. Both species are inhabiting the Andes of Colombia, where they are endemic and sympatric. This suggests that the two non-conspicuous specimens of Mniszech were probably collected nevertheless at the same place by the same collector. In order to clarify the taxonomic status of *P. concretus* and re-establish it as a good species, the specimen of Mniszech which does not belong to *P. crassus* is here designated as lectotype.

Lectotype, hereby designated (♂): »*Proculejus concretus* Kp., Perch. [= Percheron] [cross-bared] *Publius crassus* Smith, Col. [= Colombia], Mnisz. [Kaup] / Collection Mniszech / Ex-Musaeo Van Lansberge / ex Coll. R. Oberthür 1952« (MNHN). Total length: 41 mm. Specimen in good condition, but without left antenna and median left tibia.

Paralectotypes (sex indet.): »*Proculejus* [cross-bared] *concretus* Kp., *Publius crassus* Smith, Col., Mnisz. [Kaup] / Collection Mniszech / Ex-Musaeo Van Lansberge / ex Coll. R. Oberthür 1952« (MNHN) - this specimen is identified as *P. crassus* (Smith); »*Publius crassus* F.S. [= Father Smith], Columbia, Mag. Parry [Kaup] / Columbien [Heldmann]« (HLMD-Col-1156-PLT).

37. *Ogyges laevissimus* (Kaup, 1868)

Coleopterologische Hefte 4:15

Described in the genus *Proculejus* based on an unstated number of specimens from »Guatemala« at the Munich Museum, collected by M. Wagner. REYES-CASTILLO (1970) erroneously gave as depository of »the type« the Oberthür collection at MNHN. Then, SCHUSTER & REYES-CASTILLO (1990) cited the species as present at ZSMC, but without having seen it.

Lectotype, hereby designated (sex indet.): »M. Wagner [Kaup] / Guatemala, *Proc. laevissimus* Kaup [Kaup]« (ZSMC). Total length: 36 mm. Specimen in good condition.

This species is not represented in the Kaup collection.

38. *Veturius laevior* (Kaup, 1868)

Coleopterologische Hefte 4:15

Described in the genus *Proculejus* based on an unstated number of specimens from »Central-America« at Munich, collected by Wagner. KAUP (1871: 70) added: »wahrscheinlich aus Guatemala oder Columbien«. SCHUSTER, CANO & BOUCHER (in press) transferred the species to *Veturius* Kaup. Based on currently known specimens it is endemic to Costa Rica.

Lectotype, hereby designated (sex indet.): »M. Wagner [Kaup] / Guatemala, *Proc. laevior* Kaup [Kaup] / *Veturius laevior* (Kaup, 1868), S. Boucher dét. 1998 / lectotype, Schuster, Cano & Boucher des. 2001« (ZSMC). Total length: 29 mm. Specimen in bad condition (genitalia destroyed, right antenna and right posterior leg lacking).

This rare species is not represented in the Kaup collection.

39. *Proculejus truquii* Kaup, 1868

Coleopterologische Hefte 4:16

Description based on one specimen from »Mexico« in the Mniszech collection.

Holotype (sex indet.): »*Proculejus Truquii* Kp., Mex., Mnisz. [Kaup] / Collection Mniszech / Ex-Musaeo Van Lansberge / ex Coll. R. Oberthür 1952« (MNHN). Total length: 31 mm. Specimen in good condition (lacking left antenna).

Two other *Proculejus* from Mexico were identified later as »*Truquii*« by Kaup, in his collection (HLMD-Col-1150). In fact these specimens belong to *P. championi* Bates, 1886, a closely allied and only slightly distinct species. Thus, the true *truquii* is not represented in the Kaup collection.

40. *Proculejus sartorii* Kaup, 1868

Coleopterologische Hefte 4:17

Description based on an unstated number of specimens from »Mexico« collected by Sartorius. Kaup (1871: 65) stated as locality: »Miradore«. REYES-CASTILLO (1970) erroneously gave as depository of »the type« the Oberthür collection at MNHN, probably based on a specimen identified by Kuwert, in his collection, also from »Miradore«.

Lectotype, hereby designated (sex indet.): »*Proculejus Sartorii* Kp., Mex. [Kaup] / Mexico [Heldmann]« (HLMD-Col-1151-LT). Total length: 29 mm. Specimen in medium condition.

41. *Petrejoides haagii* (Kaup, 1868) n. comb.

Coleopterologische Hefte 4:21

Described in the genus *Passalus* based on one specimen from »Mexico« in the Haag collection. KAUP (1871: 107) allocated the species to the genus *Soranus* Kaup, later synonymized by HINCKS & DIBB (1935) with *Popilius* Kaup. The study of the type showed that it is not a *Popilius*, and it is here transferred to *Petrejoides* Kaup (sensu KAUP 1871 and CASTILLO & REYES-CASTILLO 1984).

Holotype (sex indet.): »Mexico, Klghf [= Klingelhöfer] / *Haagi* Kp., Typ! [Haag] / Coll. Thieme« (ZMHB). Total length: 21 mm. Immature stage in good condition.

This species is not represented in the Kaup collection.

42. *Veturius heydenii* (Kaup, 1868)

Coleopterologische Hefte 4:27

Described in the genus *Passalus* based on one specimen from »Brasilien?« in the Mniszech collection. KAUP (1871: 111) gave differing information: »Mexico. Mniszech's, Darmstädter und Janson's Collection. In letzterer viele Ex.«. BOUCHER (1988) believed Colombia to be the probable origin of the species, but during the ongoing revision of *Veturius* (BOUCHER in prep.) it eventually surfaced that *V. heydenii* is endemic to Venezuela, and that it was confused with several species by KAUP (1871) and subsequent authors.

Holotype (sex indet.): »*Passalus* [cross-bared] *Veturius Heydenii* Kp., ? Bras., Mn. [= Mniszech] [Kaup] / collection Mniszech / ex. Musaeo Van Lansberge / *Heydeni* Kaup, Type! [Oberthür] / ex Coll. R. Oberthür 1952« (MNHN). Total length: 36 mm. Specimen in good condition (lacking median left leg). The Kaup collection contains one of Janson's specimens, labelled »Mex., Gesch. V.H. Janson / *V. heydeni* Kp. [Kaup] / Mexiko [Heldmann]« (HLMD-Col-1261). This specimen probably belongs to the same collecting series as the type. No specimen seen by Kaup has been found in BMNH.

43. *Petrejoides wagneri* (Kaup, 1868) n. comb.

Coleopterologische Hefte 4: 30

Described in the genus *Passalus* based on an unstated number of specimens from »Guatemala« from Wagner (collector) and Thorey. KAUP (1871: 108) transferred the species to the genus *Soranus* with new indications: »2 Ex. Eins von Nicaragua durch Herrn Thorey, das andre von Chontales durch Herrn Janson in London geschenkt; in der Sammlung des Letzteren viele Exemplare«. This species has been relegated to the genus *Heliscus* Kaup (REYES-CASTILLO 1970), but it is in fact a *Petrejoides* (sensu KAUP 1871 and CASTILLO & REYES-CASTILLO 1984).

Lectotype, hereby designated (sex indet.): »*Soranus Wagneri* Kp., Nicaragua [Kaup] / Nicaragua [Heldmann]« (HLMD-Col-1258-LT). Total length: 23.5 mm. Specimen in medium condition. The Janson collection at BMNH contains several specimens seen by Kaup, and the Kaup collection the mentioned one received from Janson (HLMD-Col-1259), though it is only indicated as from Nicaragua.

44. *Passalus (Pertinax) expositus* (Kaup, 1869)

Coleopterologische Hefte 5: 4

Described in the genus *Oileus* based on an unstated number of specimens from »Mexico?«, with the depository not indicated. KAUP (1871: 77) transferred the species to the genus *Popilius* Kaup and wrote: »Ich habe ihn muthmaßlich nach Mexico versetzt«. REYES-CASTILLO (1970) studied the specimen mentioned below and found it to be a *Passalus*.

As indicated by a hand-written addition on the label made by Oberthür, the type locality is erroneous. *P. expositus* is an endemic from south-eastern Brasil. It still remains little known and rare in the collections.

Lectotype, hereby designated (sex indet.): »*Oileus* [cross-bared] *expositus* Kp., ? Mexico [Kaup], Brésil [Oberthür] / collection Mniszech / ex. Musaeo Van Lansberge / G.J. Arrow vidit 1906 [Oberthür] / ex Coll. R. Oberthür 1952« (MNHN). Total length: 23 mm. Specimen in good condition.

This species is not represented in the Kaup collection.

45. *Petrejoides klingelhoeferi* (Kaup, 1869) n. comb.

Coleopterologische Hefte 5: 5

Described in the genus *Oileus* Kaup based on an unstated number of specimens from »Mexico« given by Klingelhöfer to the Darmstadt collection, but KAUP (1871: 76) added that it was only one specimen and gave a new combination in *Popilius*. This species is in fact a *Petrejoides* (sensu KAUP 1871, CASTILLO & REYES-CASTILLO 1984), probably synonymous with *P. haagii* (species 41. above).

Holotype (sex indet.): »*Popilius Klingelhoeferi* Kp., Mexico [Kaup] / Mexico [Heldmann]« (HLMD-Col-1165-HT). Total length: 22 mm. Immature but in good condition.

The Kaup collection contains three other specimens (HLMD-Col-1166) and the Mniszech collection at MNHN one, all from Guatemala, identified by Kaup and originally from the Sarg collection.

46. *Passalus (Pertinax) guatemalensis* (Kaup, 1869)

Coleopterologische Hefte 5: 6

Described in the genus *Oileus* based on two specimens from »Guatemala«, at Darmstadt and in the Mniszech collection. For this species, too, KAUP (1871: 92) gave a new generic combination, in

Rhodocanthopus Kaup. GRAVELY's (1918) transfer to the subgenus *Passalus* (*Pertinax*) Kaup was justified. A genus »*Morosophus*«, noted by Kaup on the label, was not described by him, but there is a diagnosis of it hand-written by him on p. 91 of his hand-copy of the »Monographie«. KUWERT (1896), who received the Darmstadt specimen of *P. (P.) guatemalensis* on loan as proven by archived correspondence, did describe a genus *Morosophus* from America.

Lectotype, hereby designated (sex indet.): »*Morosophus guatemalensis* Kp. [Kaup] / Guatemala [Heldmann]« (HLMD-Col-1212-LT). Total length: 20 mm. Specimen in good condition. Paralectotype (sex indet.): »*Rh. guatemalensis* Kp. [Kaup] / collection Mniszech / ex. Musaeo Van Lansberge / ex Coll. R. Oberthür 1952« (MNHN).

The Kaup collection contains four other specimens seen by him (HLMD-Col-1213), the Mniszech collection a second specimen apparently not seen by Kaup, and the ZMHB one specimen identified by Kaup which is labelled »*Rh. guatemalensis* Kp. [Kaup] / 60810«. For this last specimen the box-label and the register-book entry at ZMHB are followed by an asterisk [*] indicating it as a type specimen. But this is an error, because Kaup saw the specimen after 1869.

47. *Didimus stellaris* (Kaup, 1869)

Coleopterologische Hefte 5: 8

junior subjective synonym of *Didimus africanus* (Percheron, 1844): BOUCHER 1989

Described in the genus *Stephanocephalus* Kaup based on an unstated number of specimens from »Mexico« in the Mniszech collection. BOUCHER (1989) synonymized the species and corrected the erroneous type locality: *Didimus* is an exclusively African genus.

Lectotype, hereby designated (sex indet.): »*Stephanocephalus stellaris* Kaup, Mex., L. 10''' [= ca. 22 mm] [Kaup] / collection Mniszech / ex. Musaeo Van Lansberge / ex Coll. R. Oberthür 1952 / *Didimus africanus* (Percheron, 1844), S. Boucher dét., comb., syn., 1989« (MNHN). Total length: 24 mm. Specimen in good condition (lacking median left leg).

This species is not represented in the Kaup collection, nor are there other specimens of *D. africanus* (Percheron).

48. *Passalus (Phoroneus) denticollis* Kaup, 1869

Coleopterologische Hefte 5: 11

Description based on one specimen from »Brasilien« found »unter dem Namen *P. denticollis* Dup. [= Dupont]« in the Mniszech collection. No other specimen has ever been mentioned in the literature. It was figured by KAUP (1871: pl. VI, Fig. 6) and later (figure republished) by LUEDERWALDT (1931). Probably all specialists, among them Kaup, were surprised by the very peculiar pronotal shape of the species. This enigma is presently resolved as the species is only a teratological specimen of the common species known as *Passalus alius* Kuwert, 1898, an endemic from south-eastern Brasil.

Holotype (sex indet.): »*Denticollis* Dup., Brésil [Mniszech], Long. 15''' [= ca. 33 mm], *Phoroneus*, Mn. [= Mniszech] [Kaup] / collection Mniszech / ex. Musaeo Van Lansberge / ex Coll. R. Oberthür 1952« (MNHN). Total length: 36 mm. Specimen in medium condition (lacking right antenna and right posterior leg).

49. *Passalus (Mitrorhinus) lunaris* (Kaup, 1869)

Coleopterologische Hefte 5: 12

Described in the genus *Phoroneus* Kaup based on an unstated number of specimens from »Brasilien«, sent by Thorey to Kaup. KAUP (1871: 103) transferred the species to the genus *Eumelus* Kaup, a synonym of the subgenus *Passalus (Mitrorhinus)* Kaup (and preoccupied by *Eumelus* Rafinesque, 1820).

Lectotype, hereby designated (sex indet.): »*Eumelus lunaris* Kp., Bras., Thorey [Kaup] / Brasilien [Heldmann]« (HLMD-Col-1245-LT). Total length: 31 mm. Specimen in good condition.

50. *Passalus (Petrejus) obtusidens* (Kaup, 1869)

stat. rev.

Coleopterologische Hefte 5: 14

Described in the genus *Phoroneus* based on one specimen from »Brasilien« in Kaup's collection, from Thorey. KAUP (1871: 101) synonymized the species with *Phoroneus aduncus* (Erichson, 1847), described from Peru. It is unclear how Kaup arrived at this decision, but regarding the differences between the fauna of the Peruvian Andes and that of south-eastern Brasil, it was evidently not justified. The Brazilian species, here again instated as valid, should be restudied in the future.

Holotype (sex indet.): »Brasilien [Heldmann]« (HLMD-Col-1182-HT). Total length: 30.5 mm. Specimen in good condition. The synonymy proposed by KAUP (1871) probably explains the absence of a hand-written label by Kaup.

51. *Passalus (Phoroneus) rugifrons* (Kaup, 1869)

Coleopterologische Hefte 5: 15

junior subjective synonym of *Passalus occipitalis* Eschscholtz, 1829: HINCKS & DIBB 1935

Described in the genus *Phoroneus* based on an unstated number of specimens from »Brasilien« at the Darmstadt Museum, received from Thorey. One specimen from this series was acquired by Mniszech. The study of the type of *P. occipitalis* Eschscholtz confirms the synonymy proposed by HINCKS & DIBB (1935).

Lectotype, hereby designated (sex indet.): »*Phoroneus rugifrons* Kp., Bras., Thorey [Kaup] / Brasilien [Heldmann]« (HLMD-Col-1240-LT). Total length: 32 mm. Specimen in good condition. Paralectotype (sex indet.): »*Phoroneus rugifrons* Kp., Bras., Thorey [Kaup] / collection Mniszech / ex. Musaeo Van Lansberge / ex Coll. R. Oberthür 1952« (MNHN).

52. *Passalus (Phoroneus) perplexus* (Kaup, 1869)

Coleopterologische Hefte 5: 16

Described in the genus *Phoroneus* based on one specimen from »Brasilien« in the Mniszech collection. KAUP (1871: 99) transferred the species to the genus *Epiphanus* Kaup and mentioned a second specimen in his collection. This species, endemic to south-eastern Brasil, is maintained provisionally in the subgenus *Passalus (Phoroneus)*.

Holotype (sex indet.): »*Phoroneus* [cross-bared] *Epiphanus perplexus* Dej. [= Dejean] Kp., Brésil [Mniszech] / collection Mniszech / ex. Musaeo Van Lansberge / ex Coll. R. Oberthür 1952« (MNHN). Total length: 26 mm. Specimen in medium condition.

The Kaup collection contains the specimen cited in KAUP (1871) which comes from Agassiz: »*Epiphanus perplexus* Kp., Bras., Ag. [= Agassiz] [Kaup] / Brasilien [Heldmann]« (HLMD-Col-1238).

53. *Passalus (Phoroneus) paxilloides* (Kaup, 1869)

Coleopterologische Hefte 5: 19

junior subjective synonym of *Passalus glaberrimus*

Eschscholtz, 1829: HINCKS & DIBB 1935

Described in the genus *Phoroneus* Kaup based on an unstated number of specimens from »Brasilien« in Kaup's collection. KAUP (1871: 98) added: »Gemar'sche Sammlung«. The study of the type of *P. glaberrimus* Eschscholtz confirms the synonymy proposed by HINCKS & DIBB (1935). This species, too, is maintained provisionally in *Passalus (Phoroneus)*.

Lectotype, hereby designated (sex indet.): »Brasilien [Heldmann]« (HLMD-Col-1236-LT). Total length: 19 mm. Specimen in good condition. No hand-written label by Kaup. The Kaup collection contains four other specimens from Brasil, correctly identified *glaberrimus* Eschscholtz by Kaup (HLMD-Col-1235).

54. *Passalus (Pertinax) pertyi* Kaup, 1869

Coleopterologische Hefte 5: 22

Description based on an unstated number of specimens with the indication: »Cuba. Nicht selten in den Sammlungen«. *P. pertyi* is the only species of Passalidae known as endemic to Cuba.

Lectotype, hereby designated (sex indet.): »*Pertinax Pertyi* Kp., Cuba [Kaup] / Cuba [Heldmann]« (HLMD-Col-1228-LT). Total length: 41 mm. Immature stage in medium condition. Paralectotypes (sex indet.): idem (HLMD-Col-1228-PLT); »*Pertinax Pertyi* Kp., Cuba [Kaup] / collection Mniszech / ex. Musaeo Van Lansberge / ex Coll. R. Oberthür 1952« (MNHN, 2).

55. *Petrejoides tau* (Kaup, 1869) n. comb.

Coleopterologische Hefte 5: 26

Described in the genus *Pertinax* based on one specimen from »Columbien« in the Mniszech collection. KAUP (1871: 75) transferred the species to the genus *Popilius*. This assignment has generally been accepted, but the species must in fact be placed in *Petrejoides* (sensu KAUP 1871, CASTILLO & REYES-CASTILLO 1984). *P. tau* ranges from western Colombia to southern Central America. It has generally been confused with several other species.

Holotype (sex indet.): »*Popilius tau* Kp., Columbia [Kaup] / collection Mniszech / ex. Musaeo Van Lansberge / type ! [Oberthür] / ex Coll. R. Oberthür 1952« (MNHN). Total length: 21 mm. Immature stage in medium condition (lacking median right leg).

The Kaup collection contains no specimen under this name.

56. *Passalus (Neleus) laborator* Kaup, 1869

Coleopterologische Hefte 5: 32

junior subjective synonym of *Passalus punctatissimus*

Eschscholtz, 1829: KAUP 1871

Description based on an unstated number of specimens from »Brasilien« in the Gemar collection with the indication: »als fragliche Art«. KAUP (1871: 89) synonymized the species with *P. punctatissimus* Eschscholtz, but did not state how many specimens he had in his collection. The Kaup collection contains seven specimens from Brasil correctly identified by him as »*P. punctatissimus*«, but none identified as »*P. laborator*«. The synonymy proposed by Kaup himself seems to explain the absence of a label »*laborator*«

on one or more specimens among the seven mentioned above. Kaup's descriptions agree well with that of Eschscholtz's species. Therefore, it seems justified to designate a lectotype of *P. laborator* from the series of *P. punctatissimus* at the HLMD, even if it is not certain that Kaup had all these specimens at his disposal for the description. *P. punctatissimus* has long been regarded as a synonym of *P. punctiger* Lepeletier & Serville, 1825. It is, however, a well distinct species in need to be revised.

Lectotype, hereby designated (sex indet.): »*Passalus punctatissimus* Esch., Bras. [Kaup] / Brasilien [Heldmann]« (HLMD-Col-1202-LT). Total length: 31 mm. Specimen in good condition. As explained above, the other six specimens of this series (HLMD-Col-1202) may or may not be paralectotypes, they are thus not labelled as such.

57. *Passalus (Pertinax) multispinosus* (Kaup, 1869)

Coleopterologische Hefte 5:34

junior subjective synonym of *Pertinax incertus* (Percheron, 1841): KAUP 1871

Described in the genus *Neleides* Kaup based on one specimen from »Columbien« in the Mniszech collection. KAUP (1871: 87) synonymized the species with *Pertinax incertus* (Percheron). A comparative study of the present type with that of *P. incertus* at MNHN confirms this synonymy. *P. incertus* is only known from the northern Andes.

Holotype (sex indet.): »*Neleides multispinosus* Kp., *incertus* P., Columb. [Kaup] / collection Mniszech / ex. Musaeo Van Lansberge / ex Coll. R. Oberthür 1952« (MNHN). Total length: 22 mm. Specimen in medium condition (lacking median left leg, posterior legs and left antenna).

The Kaup collection contains no specimen under this name, but there is a specimen from Colombia correctly identified by Kaup »*incertus*« (HLMD-Col-1199). This specimen most probably KAUP (1871: 87) referred to as: »Geschenk des Grafen Mniszech.«

58. *Passalus (Pertinax) punctulatus* (Kaup, 1869)

Coleopterologische Hefte 5:35

Described in the genus *Neleides* based on one specimen from »Panama« in the Germar collection. This species is endemic to Central America. It is little known and commonly confused, especially with the closely allied *P. incertus*.

Holotype (sex indet.): »*Neleides punctulatus* Kp., 19M [= 19 mm], Panama [Kaup] / Panama [Heldmann]« (HLMD-Col-1200-HT). Total length: 19 mm. Specimen in good condition.

59. *Passalus (Petrejus) curtus* (Kaup, 1869)

Coleopterologische Hefte 5:38

Description based on one specimen from »Columbien« in the Mniszech collection.

Holotype (sex indet.): »*Petrejus curtus* Kp., Columb., Mn. [= Mniszech] [Kaup] / collection Mniszech / ex. Musaeo Van Lansberge / ex Coll. R. Oberthür 1952« (MNHN). Total length: 24 mm. Specimen in good condition.

This species endemic to the Andes of Colombia is not represented in the Kaup collection.

60. *Passalus (Petrejus) gracilis* (Kaup, 1869)

Coleopterologische Hefte 5(4):38

Description based on an unstated number of specimens from »Columbien« in the Mniszech and Kaup collections. KAUP (1871: 84) indicated in his collection: »1 Ex. Geschenk des Grafen Mniszech«. *P. gracilis* is restricted to the Andes of Colombia and Venezuela.

Lectotype, hereby designated (sex indet.): »*Petrejus gracilis* Kp., Col. [= Colombia], ex Mnisz. [Kaup] / collection Mniszech / ex. Musaeo Van Lansberge / ex Coll. R. Oberthür 1952« (MNHN). Total length: 20.5 mm. Specimen in good condition (lacking median right leg).

Paralectotype (sex indet.): »Columbia [Heldmann]« (HLMD-Col-1183-PLT). The hand-written label of Kaup disappeared from this specimen.

61. *Aulacocyclus macleayi* (Kaup, 1871)

Berliner Entomologische Zeitschrift 15(4):22

junior subjective synonym of *Aulacocyclus edentulus* (Mac Leay, 1827): n. syn.

Described in the genus *Caulifer* Kaup based on an unstated number of specimens from »Sidney«, donated from Parry who received it out of the Stevens collection. This species is represented by a unique specimen, a teratological form of *A. edentulus* Mac Leay. DIBB (1938) wrote: »It is doubtful whether *A. macleayi* has been recognised since it was described«.

A. edentulus is endemic to south-eastern Australia.

Lectotype, hereby designated (sex indet.): »*Caulifer Mc Leayi* Kp., Sydney, Maj. [= Major] Parry [Kaup]« (HLMD-Col-1056-LT). Total length: 27 mm. Immature stage in medium condition.

62. *Veturius trapezoides* (Kaup, 1871)

Berliner Entomologische Zeitschrift 15(4):26

junior subjective synonym of *Veturius transversus* (Dalman, 1817): HINCKS & DIBB 1935

Described in the monotypic genus *Pleurostylus* Kaup based on an unstated number of specimens from »?Afrika« in the BMNH. ARROW (1907) transferred this species to the genus *Veturius*, then LUEDERWALDT (1931) synonymized it with *V. transversus trituberculatus* (Eschscholtz, 1829), and HINCKS & DIBB (1935) with *V. transversus transversus* (Dalman). According to ARROW (1907), »the type« originates from the collecting of the Italian naturalist Lacerda in Bahia (Brasil), at the beginning of the 19th century. I do not know the origin of this assertion, but the ongoing revision of *Veturius* (BOUCHER in prep.) confirms the synonymy with *V. transversus*, an endemic from south-eastern Brasil.

Lectotype, hereby designated (sex indet.): »*Pleurostylus trapezoides* Kp. [Kaup] / Type / 60–15 E.I.C.« (BMNH). Total length: 37 mm. Specimen in good condition.

The Kaup collection contains no specimen under this name, but there is one *V. transversus* from Brasil (no other data), correctly identified by Kaup (HLMD-Col-1272).

63. *Semiclytus grayi* Kaup, 1871

Berliner Entomologische Zeitschrift 15(4):28

Description based on an unstated number of specimens without geographical origin (»Vaterland?«) in the British Museum. Only one specimen with a label by Kaup has been found.

Lectotype, hereby designated (sex indet.): »*Semicyclus grayi* Kp. [Kaup] / Type« (BMNH). Total length: 39 mm. Specimen in good condition.

Curiously, this common species, easily recognizable and endemic to Madagascar, is not represented in the Kaup collection.

64. *Protomocoelus salomonis* (Kaup, 1871) stat. rev.

Berliner Entomologische Zeitschrift 15(4): 39

Described in the genus *Pelops* Kaup based on four specimens from the »Salomons-Inseln« in the British Museum (3) and in Janson's collection (1). No specimen with a label by Kaup has been found in Janson's material and just one in BMNH. Contrary to the opinion of GRAVELY (1918), this species is well distinct from *Protomocoelus australis* (Boisduval, 1835). It is, in particular, much more massive and longer, some specimens nearly reaching 50 mm. *P. australis* seems to be absent from the Solomon Islands and is only known from New Guinea. Apparently the opposite is true for *P. salomonis*.

Lectotype, hereby designated (sex indet.): »Salo. Isl., 55-69 / *Eriocnemis salomonis* Kaup, Type [Kaup] / Type« (BMNH). Total length: 47 mm. Specimen in good condition.

The species is not represented in the Kaup and in the Mniszech collections, but both contain specimens of *P. australis*, all identified by Kaup, three of these in his collection (HLMD-Col-1101).

65. *Pelopides dorsalis* (Kaup, 1871)

Berliner Entomologische Zeitschrift 15(4): 41

Described in the genus *Eriocnemis* based on an unstated number of specimens from »Java«, received from von Rosenberg. Only one specimen with a label by Kaup has been found.

Lectotype, hereby designated (sex indet.): »*Eriocnemis dorsalis* Kp., 35 mm, Java, v. R. [= von Rosenberg] [Kaup] / Java [Heldmann]« (HLMD-Col-1104-LT). Total length: 35 mm. Immature stage in medium condition.

66. *Macrolinus waterhousei* Kaup, 1871

Berliner Entomologische Zeitschrift 15(4): 43

Description based on an unstated number of specimens from »Ceylon« in the Germar collection and the British Museum. There was no locality information for Germar's specimen or specimens originally, the indication of »Ceylon« on the label of the one type detected having been added by Kaup based on the information from the London specimens. These latter could not be found. This rare species, endemic to Sri Lanka, is closely allied to *M. rotundifrons* Kaup (species 67., below).

Lectotype, hereby designated (sex indet.): »*Macrolinus Waterhousei* Kp., Ceylon [Kaup] / Ceylon [Heldmann]« (HLMD-Col-1114-LT). Total length: 35 mm. Specimen in medium condition.

67. *Macrolinus rotundifrons* Kaup, 1871

Berliner Entomologische Zeitschrift 15(4): 44

Description based on an unstated number of specimens from »Ceylon« donated by Moore, and also from »China« in the British Museum (»nach Dr. Cantor«). It is likely that the Chinese specimens, not located in BMNH, belong to *M. sikkimensis* (Stolizska, 1873). Consequently, only Ceylon should

be conserved as the type locality. This common species, possibly confused with the closely allied *M. waterhousei* (species 66., above), is also an endemic from Sri Lanka.

Lectotype, hereby designated (sex indet.): »*Macrolinus rotundifrons*, Ceylon, Moore [Kaup] / Ceylon [Heldmann]« (HLMD-Col-1116-LT). Total length: 30.5 mm. Specimen in good condition.

Paralectotypes (sex indet.): idem, less the indication »Moore« (HLMD-Col-1116-PLT); »*Macrolinus rotundifrons*, Ceylon, Kaup [Moore] / Ex-Musaeo Fred Moore 1891 / ex Coll. R. Oberthür 1952« (MNHN, 2).

68. *Episphenus moorei* Kaup, 1871

Berliner Entomologische Zeitschrift 15(4): 45

Description based on an unstated number of specimens from »Ceylon« received by Kaup from Cambridge Museum and from Moore. Apparently Kaup donated a specimen to Mniszech's collection. The species is endemic to Sri Lanka.

Lectotype, hereby designated (sex indet.): »*Episphenus moorei*, Ceyl. [Kaup], type [Oberthür] / *Episphenus moorei* Kaup, Ceylon [Kaup] / Ex-Musaeo Fred Moore 1891 / ex Coll. R. Oberthür 1952« (MNHN). Total length: 35.5 mm. Specimen in good condition.

Paralectotypes (sex indet.): »*Episphenus moorei* Kp., Ceylon [Kaup] / Ceylon [Heldmann]« (HLMD-Col-1117-PLT); idem, with the indication »Ag.« [= Agassiz] (HLMD-Col-1118-PLT).

69. *Aceraius borneanus* Kaup, 1871

Berliner Entomologische Zeitschrift 15(4): 52

Description based on 15 specimens from »Borneo« in the British Museum, from Bowring. These specimens, of which 10 could be located, were probably not seen by GRAVELY (1914, 1918).

Lectotype, hereby designated (sex indet.): »*Aceraius borneanus* Kp., Borneo. [Kaup] / Bowring coll.« (BMNH). Total length: 29 mm. Specimen in good condition.

Paralectotypes (sex indet.): idem, without label by Kaup (BMNH, 9).

The Kaup collection contains no specimen under this name (see *A. percheronii*, below).

70. *Aceraius percheronii* Kaup, 1871

Berliner Entomologische Zeitschrift 15(4): 53

junior subjective synonym of *Aceraius borneanus* Kaup, 1871: GRAVELY 1914

Description based on an unstated number of specimens from »Java«, from von Rosenberg. The currently accepted synonymy with *A. borneanus* needs to be confirmed.

Lectotype, hereby designated (sex indet.): »*Aceraius Percheronii* Kp., Java, v. Rosenberg [Kaup] / Java [Heldmann]« (HLMD-Col-1135-LT). Total length: 25 mm. Specimen in medium condition.

71. *Cetejus halmaheirae* Kaup, 1871

Berliner Entomologische Zeitschrift 15(4): 54

Description based on an unstated number of specimens, whose origin is given as: »Oxford Collection, durch das Leydener Museum«. No specimen identified by Kaup has been found at UMOH or elsewhere, and no other specimens have been cited in the literature. The name of the species suggests Halmahera (Moluccas) as the geographical origin, though none is expressly stated. The original description shows that this species does belong to the genus *Cetejus* Kaup, but several closely allied species of this genus seem to be sympatric in the Moluccas Archipelago.

72. *Passalus (Pertinax) quitensis* (Kaup, 1871)

Berliner Entomologische Zeitschrift 15(4): 63

Described in the genus *Proculejus* based on two specimens from »Quito« in the British Museum.

Lectotype, hereby designated (sex indet.): »*Proculejus quitensis* Kp., Br. Mus. [Kaup] / Quito, 46-62 / Type« (BMNH). Total length: 32 mm. Specimen in good condition.

Paralectotype (sex indet.): idem, with the indication »Co-Type« (BMNH).

This species endemic to the Andes of Ecuador is not represented in the Kaup collection.

73. *Publius agassizi* (Kaup, 1871)

Berliner Entomologische Zeitschrift 15(4): 114

Described in the monospecific genus *Sertorius* Kaup based on two specimens from »Guatemala« received from Agassiz.

Lectotype, hereby designated (sex indet.): »*Sertorius Agassizi* Kp., Guat., Agass. [Kaup] / Guatemala [Heldmann]« (HLMD-Col-1273-LT). Total length: 32 mm. Specimen in good condition.

Paralectotype (sex indet.): idem (HLMD-Col-1273-PLT).

74. *Verres intermedius* Kaup, 1871

Berliner Entomologische Zeitschrift 15(4): 115

Description based on an unstated number of specimens from »Mexico« in the British Museum.

Lectotype, hereby designated (sex indet.): »*Verres intermedius* Kp., Mex. [Kaup]« (BMNH). Total length: 48 mm. Specimen in good condition.

This species endemic to Mexico is not represented in the Kaup collection.

75. *Verres hagenii* Kaup, 1871

Berliner Entomologische Zeitschrift 15(4): 116

Description based on an unstated number of specimens (»viele«) from »Guatemala« donated to Kaup by Agassiz. There are presently 12 of these at HLMD and one at MNHN.

Lectotype, hereby designated (sex indet.): »*Hagenii* Kp., Guat., Ag. [= Agassiz] [Kaup] / Guatemala [Heldmann]« (HLMD-Col-1276-LT). Total length: 35 mm. Specimen in good condition.

Paralectotypes (sex indet.): idem (HLMD-Col-1276-PLT1 to -PLT11); »*Hagenii* Kp., Guatemala [Kaup] / Agassiz / collection Mniszch / ex. Musaeo Van Lansberge / ex Coll. R. Oberthür 1952« (MNHN, 1).

76. *Oileus sargii* (Kaup, 1871)

Berliner Entomologische Zeitschrift 15(4): 119

Described in the genus *Rimor* based on an unstated number of specimens from »Guatemala« (locality only cited in the genus diagnosis) received with the Sarg collection.

Lectotype, hereby designated (sex indet.): »*Rimor Sargi* Kp., Guat., F. Sarg [Kaup] / Guatemala [Heldmann]« (HLMD-Col-1161-LT). Total length: 32 mm. Specimen in good condition.

Paralectotypes (sex indet.): idem (HLMD-Col-1161-PLT1 to -PLT8).

There are three further specimens in this series (HLMD-Col-1161) which Kaup mistook for a different new species, labelling them: »*Passalus sperans* Kp., Guat., Sarg [Kaup] / Guatemala [Heldmann]«. He did not publish the name »*Passalus sperans*«.

In memoriam: new species dedicated to J.J. Kaup

The current nomenclature of the family Passalidae contains two genera and two species dedicated to Kaup. *Kaupiolus* Zang, 1903 (nom. nov. pro *Vellejus* Kaup, preoccupied by *Vellejus* Mannerheim, 1830) and *Kaupioloides* Gravely, 1913, both from New Guinea, are justified synonyms of *Labienus* Kaup (GRAVELY 1918). *Aceraius kaupii* Kirsch (in KAUP 1871: 52), from Borneo, is a synonym of *A. borneanus* Kaup (species 69. above). At least, *Aulacocyclus kaupii* MacLeay, 1873 from Australia is a valid species.

The present special issue being an opportunity to reflect honour to the research by Kaup on the Passalidae, four new species are described in memory of the naturalist. These species belong to four genera and to the two known subfamilies. Moreover, species have been chosen inhabiting the biogeographical regions from where no species was dedicated to Kaup previously: three species of Passalinae (a *Pentalobus* Kaup from Africa, a *Passalus* and a *Spasalus* Kaup from America), and within the Aulacocyclinae a *Comacupes* from Indo-Malayan islands.

The terminology used in the descriptions is adapted from GRAVELY (1914, 1918) and REYES-CASTILLO (1970) and follows that of the recent papers on the family hereafter referenced.

***Passalus kaupii* n. sp. (Figs. 6–8)**

Holotype (♂): Ecuador, Occidente, prov. Pichincha, Sto Domingo, II.1983 (donated to the HLMD, HLMD-Col-1281-HT). **Paratypes** (80):

Ecuador (without precision): [no further data] (HLMD-Col-1282-PT, coll. Kaup, before 1870); [no further data] (1 ex., MNHN, before 1950); leg. V. Fritsch (1 ex., ZMHB, before 1950). Ecuador, Occidente, prov. Pichincha: Quito (1 ex., MNHN, ex Musaeo H.W. Bates 1892); Sto Domingo, Tinalandia, 650 m, III–IV.1972–1973, leg. N. Vénédictoff (3 ex., QCAZ); Sto Domingo, 650 m, V.1977–I.1979, leg. G. Honoré (4 ex., author's coll., ex coll. G. Minet 1990); Sto Domingo, VI.1982, leg. G. Honoré (7 ♂♂, 14 ♀♀, author's coll., ex coll. Ph. Moretto 1998); same collecting data as holotype (1 ♂, 4 ♀♀, MNHN); Puerto Quito, 700–750 m, V–XII.1983–I.1984, leg. J. Fiallo, M. García, M. Larrea, R. León, G. Paz, L. Santamaría, J. Woolfson, V. Zak (9 ex., QCAZ); Tinalandia, 800 m, XI.1984, leg. P. Moret (1 ex., author's coll.); Las Pampas Argentinas, 1300–1500 m, IV–X.1988, leg. P. Casares, S. Cazar, J. Cordova, M. Grijalva,

A. Rodríguez (18 ex., QCAZ); via Quito - Los Bancos, rio Pachizal, IV.1988, leg. S. Carrión (1 ex., QCAZ); Tandapi, 900 m, VI.1991, leg. V. Pérez (1 ex., QCAZ); Sto Domingo, 1150 m, XI.1992, leg. I. Pallaros (2 ex., QCAZ); Sto Domingo, 550 m, I.1993, leg. Miroya (1 ex., QCAZ); Nanegalito, 1000–1700 m, I.1992–1993, leg. L. de la Torre, C. Sevia, D. Villagómez (3 ex., QCAZ).

Ecuador, Occidente, prov. Cotopaxi: Las Pampas [San Francisco, ca. 1300 m], V.1985, leg. G. Onoré (2 ex., MZUF).

Ecuador, Occidente, prov. Cañar: Rte La Troncal, 1200 m, III.1989, leg. P. & L. Arnaud (2 ex., author's coll., ex coll. G. Minet 1990).

Ecuador, Oriente, prov. Tungurahua: Baños [ca. 1700 m], 1895, leg. I. Blanc (3 ex., MNHN).

Description

Habitus much like *P. interstitialis* Eschscholtz, 1829, but rather larger, more convex and less pubescent. Macropterous. Whole body and appendages shining black.

Dimensions: Total length 30–36 mm. Greatest width 10.5–12 mm over elytrae.

Head (Fig. 6): Central tubercle short, conical and regular, directed upwards, the apex being very obtuse. Parietal tubercles well marked but small, almost sharp and separated from the central tubercle by a smooth depression. Frontal ridges straight, high and frayed between the central tubercle and the inner tubercles, then disappearing between the inner tubercles and the frontal tubercles. Inner tubercles little distinct and confounded with the frontal ridges. Angle of the frontal ridges straight or weakly obtuse, with a slight central convexity. Frontal area rather large, almost plane, dotted near the frontal border with numerous round small punctations. External and secondary tubercles fused, high and smooth; the first ones smaller and behind the latter. Frontal border with two well developed paramedian tubercles; these tubercles of the size of the secondary tubercles and connected by a high ridge. Latero-frontal areas striated and punctate throughout. Anterior angles of the head almost pointed and prominent. Ocular canthus short, strait, shorter than the eyes. Eyes almost globular. Supra-occipital ridge quite deep and complete. Disk of mentum convex and glabrous; lateral scars developed but straight, granular. Antennal clubs rather short and squat.

Pronotum rather straight (Fig. 6). Sides more or less strongly punctate throughout, especially anteriorly and near the lateral scars. Pro-episternal setae short and little distinct in dorsal view of the insect.

Mesosternum (Fig. 7) glabrous; lateral scars well marked, large, especially anteriorly, and very finely granular throughout; posterior median area almost entirely mat, elsewhere polished to shining.

Metasternum: Anterior median area finely punctate with rather long pubescence. Lateral scars well marked, almost sharply defined, straight posteriorly, punctate and pubescent. Posterior margin of the disk and posterior median area as a whole dotted with more or less strong, polymorphic punctations.

Elytrae glabrous, except for humeral angles, along the anterior pleural margins for less than a quarter of their length, and interstriae I; setae rather short and quite dense. Striae well marked throughout; dorsal

striae (I–IV) smooth, not punctate; lateral striae (V–X) with round, fine punctations, of equal distinctness throughout.

Legs: Protibiae straight, with 3–5 rather short spines before the apical fork. Mesotibiae with 1–2 short post-median spines, and a rather short and thin pubescence; superior crest obsolete. Metatibiae as mesotibiae, but pubescence even sparser. Superior spolons (mobil spines) of meso- and metatibiae rather long, straight and sharp.

Abdomen glabrous. Marginal groove of sternite VII marked but incomplete (2/3 of apical length); sides of sternite VII quite finely rugose, but shining; sternites II–VI much as VII.

Aedeagus (Fig. 8) of the *Neleus* type. Length 3 mm. Habitus massive, squat, well sclerotized, the phallus globular. Parameres and phallobase separated by a membranous suture only dorsally. Dorsal view: phallus with a straight marginal sclerotization; parameres large, with a straight and hyaline surface near the basal area; phallobase triangular on each side of the membranous axial area. Ventral view: phallus slightly asymmetrical, with two strong paramedian lunule-shaped scars; parameres and phallobase rounded as a whole and widely opened at the anterior margin. Other external characters are closely similar to *P. interstitialis*.

Morphological affinities

P. kaupi shows great affinities with the well-known and very widely distributed *P. interstitialis*. Nevertheless, the new species is distinguished by the following principal characters, all being well visible and largely invariant: dimensions superior; thorax and elytrae more convex; body and legs less pubescent, with the setae shorter, more widely spaced and less extended; antennal clubs shorter; frontal tubercles more prominent but shorter, connected by a high ridge; external tubercles much less developed than the secondary ones (vice versa in *P. interstitialis*); anterior frontal ridges shorter; latero-frontal areas more ridged and more strongly punctate; mesosternal scars larger but less defined, especially at the posterior margin; superior mobil spines (spolons) of meso- and metatibiae longer; dorsal elytral striae unpunctated throughout; apical sides of sternite VII shining. Aedeagus: habitus less transverse; sclerotization of the phallobase and parameres dorsally more extended; phallus ventrally asymmetrical; anterior opening of the ventral phallobase twice as large as in *P. interstitialis*.

Geographical range and biotope

P. kaupi is only known from the Andes of Ecuador (Occidente: provinces Pichincha, Cotopaxi, Cañar, and Oriente: province Tungurahua). It is probably endemic to the Andean region of Ecuador and south-western Colombia. Biotopes are occupied by evergreen moist closed forests of upper lowland to lower montane elevations (500–1500 m). A sympatry with *P. interstitialis* is conceivable for a large part of this territory, especially at lower altitudes.

Remarks

P. kaupi belongs to the systematic complex *Neleus* Kaup, sensu KAUP (1869) and LUEDERWALDT (1931), which contains numerous species historically confused and in strong need to be revised. Despite its geographical endemism the species has been probably confused in the literature and in collections with *P. interstitialis* (which is very widely distributed in the tropical moist forests of America). Moreover, among the type series of the new species old specimens are rare. That is a common situation for the Passalidae restricted to sub-montane or montane areas. Intensive collecting by G. Onoré and collaborators (QCAZ), since about twenty years, has made *P. kaupi* much better known.

Spasalus kaupi n. sp. (Fig. 9)

Holotype (♀): Peru, dept. San Martín, Moyobamba [ca. 1200 m], 1887, leg. M. de Mathan (MNHN, ex coll. R. Oberthür 1952).

Description

Habitus glabrous, slender and very small. Macropterous. Unique specimen is immature, shining dark brown.

Dimensions: Total length 12 mm. Greatest width 4 mm over elytrae.

Head (Fig. 9): Central tubercle short, conical, directed upwards but stretched posteriorly, the apex obtuse and smooth. Parietal tubercles weakly marked by a smooth convexity. Frontal ridges straight near the central tubercle, thinly defined, low and reaching the inner tubercles; then almost invisible between the inner tubercles and the frontal border. Inner tubercles developed, directed slightly anteriorly and fused with the anterior frontal ridges. Angle of the frontal ridges right, almost polished and with a small anterior convexity. Frontal area plane, with rounded punctations scattered throughout, most of them large and very finely rugose. Frontal tubercles developed, large, pointed and directed anteriorly and upwards, marginally disposed and connected with the anterior frontal ridges through a minute fine crest. Frontal border punctate, almost straight except at the base of the marginal tubercles. Lateral frontal areas shallow, with some well-marked and deep punctations among other much more extended and smaller punctations. These last also reach the frontal ridges and the supra-ocular crest. Anterior angles of the head very short, very obtuse and smooth. Ocular canthus short and straight, rounded, shorter than the eyes. Eyes large and fully globular. Supra-occipital ridge deep, complete and well marked throughout. Disk of mentum long, a little convex and glabrous; lateral scars well marked and large, rugose and punctate. Mandibles rather short, well rounded externally, with three apical teeth. Antennal clubs pentaphyllous, articles all very long and straight.

Pronotum rather straight (Fig. 9). Anterior border sharply undulating. Anterior angles very prominent and straight. Tegument entirely covered with visible micropunctations, and laterally with numerous, large and deep rounded depressions, some of them reaching the paramedian areas. Lateral scars marked but

confounded among large punctations. Pro-episternal setae invisible in dorsal view of the insect.

Mesosternum glabrous; lateral scars not very marked but large, rugose to granular especially anteriorly; posterior lateral areas mat, elsewhere more or less rugose to polished and shining.

Metasternum entirely glabrous. Anterior median area with little defined, but not so small, punctations near the coxae. Lateral scars marked, straight, almost parallel and quite granulous throughout. Margins of the disk little defined. Posterior median area with some widely spaced small punctations, well visible though. Elytrae glabrous. Striae well marked only laterally (striae V–X), but all the striae have strong rounded punctations; on the sides these are larger and deep, sometimes rectangular.

Legs: Protibiae straight, with 3 small and smooth spines before the apical fork. Mesotibiae with one principal fine median spine, a few shorter spined undulations in front and behind the former; setae short and very widely spaced; crest regular and almost complete, but not well marked. Metatibiae as mesotibiae, but with fewer setae. Superior spolons (mobil spines) of meso- and metatibiae short, straight and sharp.

Abdomen glabrous. Sternites II–VII largely granulous or rugose; elsewhere polished and shining; the seventh almost entirely granulous except on the disk. Marginal groove of sternite VII almost obsolete.

Morphological affinities

S. kaupi is one of the smallest neotropical Passalidae. In size it can only be compared with a few other species of *Spasalus*, and with some *Passalus* of the *Rhodocanthopus*-group. On the other hand, no *Paxillus* Kaup of such small size is known. Within *Spasalus*, *S. balachowskyi* Reyes-Castillo, 1973 from the Guyanas is the only species which has similarly long and well developed antennal clubs, but its body length is much greater (19–20.5 mm). Therefore, the combination of these two easily visible characters already excludes a confusion between *S. kaupi* and the other species of *Spasalus*.

Geographical range and biotope

There is little doubt about the endemism of the species in the north-eastern Andes of Peru (eastern slope of the Marañón basin). The biotope at about 1200 m in altitude, near Moyobamba, is occupied by lower montane evergreen moist closed forest.

Pentalobus kaupi n. sp. (Figs. 10–12)

Holotype (♂): São Tomé and Príncipe, São Tomé Isl., 500–1200 m, I. 2002, leg. J. & Cl. Pierre, light trap (MNHN). Paratypes (25):

São Tomé and Príncipe, São Tomé Isl.:

1920, leg. H. Havel (14 ex., MNHN); idem (donated to the HLMD, HLMD-Col-1283-PT); Monte Café, 1100 m, 1998, leg.

G. Robiche, light trap (1 ♀, author's coll.); same collecting data as holotype (4 ♀♀, MNHN); 2000, leg. Ph. Oremans (2 ♂♂, 2 ♀♀, author's coll.); idem (1 ♀, donated to the HLMD, HLMD-Col-1284-PT).

Diagnostic characters

A species very closely allied and similar to *P. barbatus* (Fabricius, 1801), but from which it is easily distinguished by the following characters:

Habitus more massive and more transverse.

Dimensions: Total length 30–37 mm (2–6 mm less in *P. barbatus*). Greatest width 10.5–13 mm over elytrae.

Head (Fig. 10): Frontal tubercles smaller and larger. Antennal clubs longer, the articles straighter, especially segments 7 to 10.

Mesosternum (Fig. 12): Lateral scars larger, but less extended anteriorly and posteriorly.

Legs: Ventral anterior margin of profemora with some punctation (absent in *P. barbatus*); these depressions well marked and large, rugose and arranged linearly. Mesotibiae (dorsal view) stronger.

Abdomen: Posterior median area of sternite VII polished, without extended micropunctation (present in *P. barbatus*).

Aedeagus (Fig. 11) not obviously different, except for the length of 3 mm (2.7 mm in *P. barbatus*).

Geographical range and biotope

P. kaupi is endemic to São Tomé Island (Gulf of Guinea). It is also the only species of *Pentalobus* known on this land (*P. barbatus* is exclusively continental; see below). Specimens with precise locality information come from evergreen moist forests of lower mountains (700–1100 m in altitude).

Remarks

P. kaupi was probably mentioned for the only time by CIAT (1921), from São Tomé Island, Uba-Budo, under the name of »*P. barbatus*« (det. B. P. Uvarov). It was indicated as living in decayed woods of cacao plantations. The altitudinal range in which cacao is cultivated on São Tomé coincides with the altitudes of recent collecting of *P. kaupi* in natural forests. The species seems to be not rare or localized, and probably some collections contain specimens misidentified as *P. barbatus*. It is noteworthy that no passalid species has been described from the Afrotropical region since more than 60 years (since BÁGUENA CORELLA 1941).

Comacupes kaupi n. sp. (Figs. 13–14)

Holotype (♂): India, Andaman and Nicobar Islands, »Andaman« (MNHN, ex coll. R. Oberthür 1952).

Paratypes: India, Andaman and Nicobar Islands, »Nicobar« (1 ♂, 1 ♀, MNHN, ex coll. R. Oberthür 1952).

Description

Habitus very close to *C. cylindraceus* (Perty, 1831), glabrous. Macropterous. Whole body and appendages shining black.

Dimensions: Total length 30–31 mm. Greatest width 12–12.5 mm over elytrae.

Head (Fig. 13): Central tubercle slender but long and very prominently turned upwards; superior crest straight, slightly inclined posteriorly; apex free but short and smooth, concave in the upper part, the inferior convexity a bit longer than the superior one.

Clypeus smooth and rounded anteriorly, almost straight or very slightly concave. Inner tubercles obsolete. Median frontal area smooth and bulging. Lateral frontal areas entirely covered with fine and hairy spaced punctations, the setae being long. Anterior angles of head very obtuse and smooth. Supra-ocular crests high and straight, almost sharp, the posterior apex not prominent and forming a right to obtuse angle. Between each supra-ocular crest and the central tubercle is a smooth and bulging rounded area. Ocular canthus developed, high, almost quadratic, the anterior apex right to obtuse and shorter than the eyes. Eyes reduced. Post-ocular areas entirely hairy and punctate as the lateral frontal areas. Post-occipital area not punctate; limited anteriorly by a very deep, smooth and straight depression on each side near the central tubercle. Labrum quadratic; anterior border slightly concave and thin. Mandibles tall and high; apex with three developed teeth; dorsal teeth long and slender, with the crest smooth. Antenna short; club with three lamellae, segment 8 being shortest.

Pronotum transverse (Fig. 13). Anterior border slightly undulating. Anterior angles very rounded, large and prominent. Marginal groove straight throughout, deep, with very few small punctations. Pro-episternal setae long, spaced, somewhat visible in dorsal view of the insect.

Mesosternum shining and wholly covered with hairy and spaced punctations.

Metasternum: Anterior median and lateral areas with weak hairy punctation throughout, the setae long and spaced. Posterior median area glabrous, not punctate, polished. Lateral scars almost unmarked or defined inwards and posteriorly, but large, with hairy punctations.

Elytrae glabrous, except for the anterior border, humeral angles and half of the basal portion of the first lateral interstriae with spaced but well distinct and rather long setae. Striae finely but distinctly punctate throughout.

Legs: Protibiae robust, enlarged, with 3–4 short and large spines before the apical fork. Mesotibiae with a strong post-median spine; pubescence rather short and dense; superior crest almost obsolete; apical fork short but enlarged. Metatibiae as mesotibiae, but the spine and the setae shorter.

Abdomen glabrous and very smooth, except for sternite III which has fine and widely spaced setae. Marginal groove of sternite VII well marked, deep but straight, smooth and thinning at apex.

Aedeagus (Fig. 14): Length 2 mm. Habitus elongate, very smooth, well sclerotized throughout. Parameres and phallobase entirely fused dorso-ventrally forming a phallosome. Phallus and phallosome of same size. Ventral view: posterior border of the phallobase slightly concave.

Morphological affinities

C. kaupi and *C. cylindraceus* are probably sister species. However, the first is easily distinguished by the following characters: central tubercle smaller and shorter; dorsal crest of mandibles almost smooth and straight throughout (granular and a little enlarged in *C. cylindraceus*); anterior marginal groove of pronotum thinner, less punctate and smooth; pubescence of lateral interstriae I more extended and denser; posterior intermediate areas of metasternum glabrous and polished (with extended to marginal hairy punctations in *C. cylindraceus*); marginal groove of sternite VII straight, smooth and thinning near the apex (larger, not thinning and punctate in *C. cylindraceus*); parameres somewhat longer and straighter.

Geographical range and biotope

C. kaupi is endemic and the first *Comacupes* known from the Andaman and Nicobar Islands (India). No information on the biotope of the species is available. Until now, the genus *Comacupes* has been known from Sumatra and from the Malayan Peninsula.

Remarks

C. kaupi is also the first species of the subfamily Aulacocyclusinae known from the Andaman and Nicobar Islands. Nevertheless, the present specimens were doubtlessly collected more than a hundred years ago.

Conclusion

Johann Jakob Kaup was a famous scientist, naturalist, thinker, as well as an entomologist who tackled the systematics of a difficult group of beetles, the Passalidae. Within this special issue prepared to his memory, I wish to honour his pioneer work on this family with the new species presented. In addition, with a considerable increase of newly described passalid taxa during the last decades, it becomes more and more necessary to present basic data of the old types. Localization and identification of historic type specimens serve complementary fields of modern systematic work: nomenclature and museology. As the available information on Kaup's passalid types is revised, they should no longer cause nomenclatural and museological confusion. These type specimens should be now more easily accessible for in-depth taxonomic revisions. It is hoped that similar studies on the work of other important authors dealing with Passalidae will follow.

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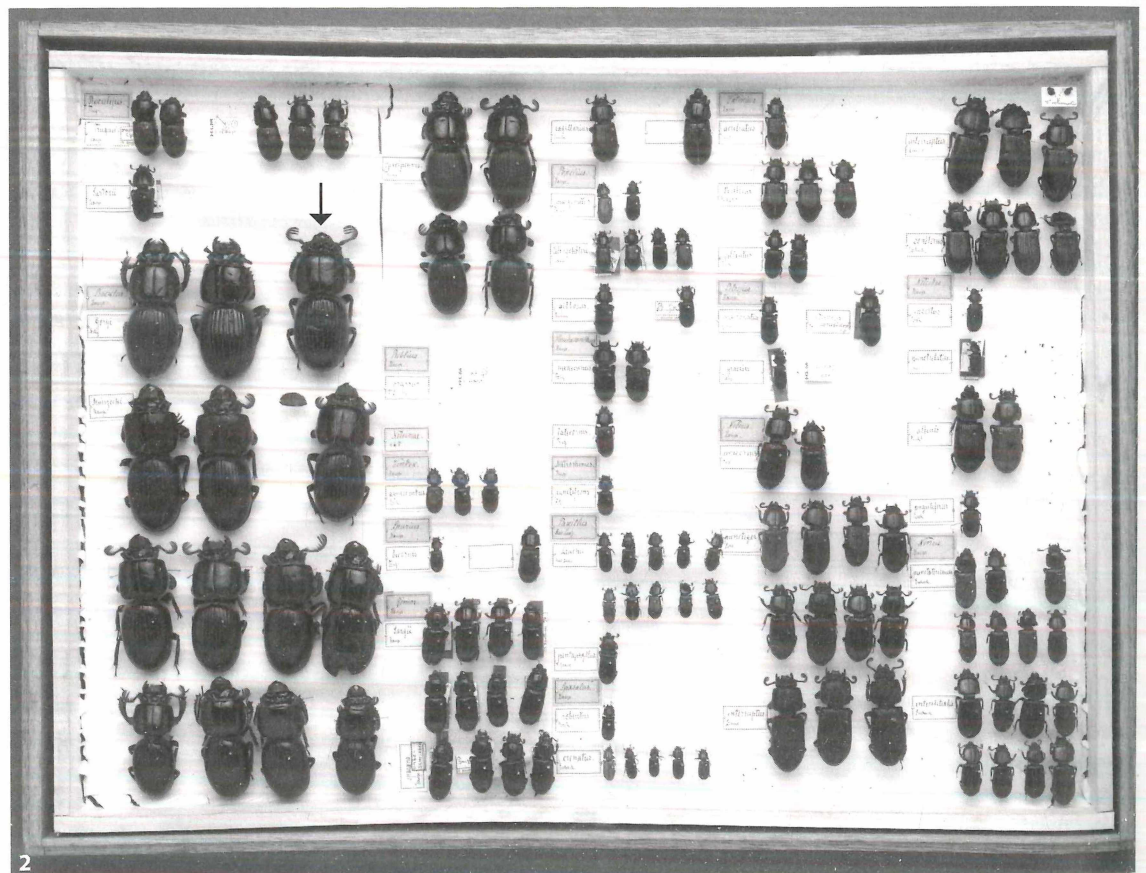
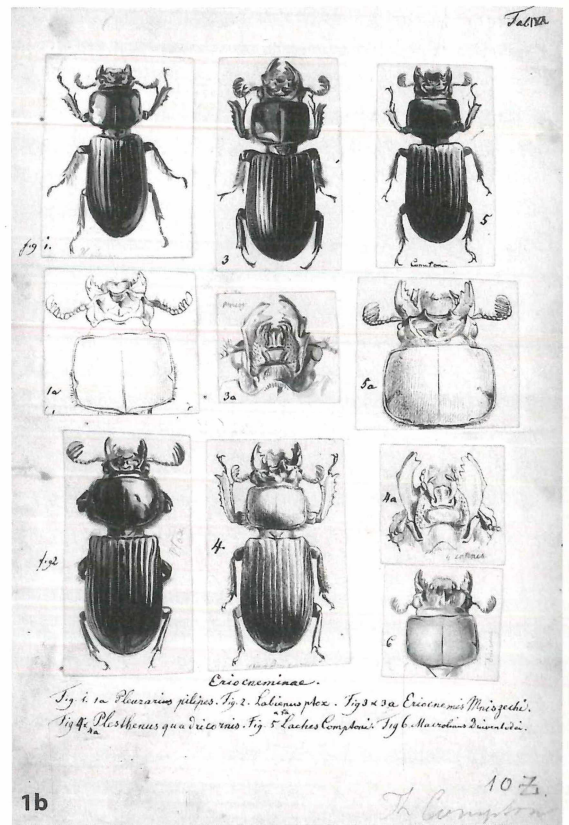
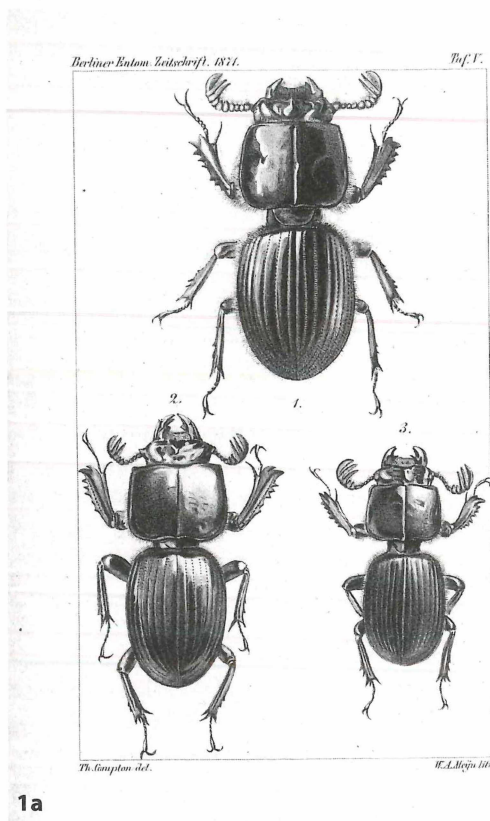
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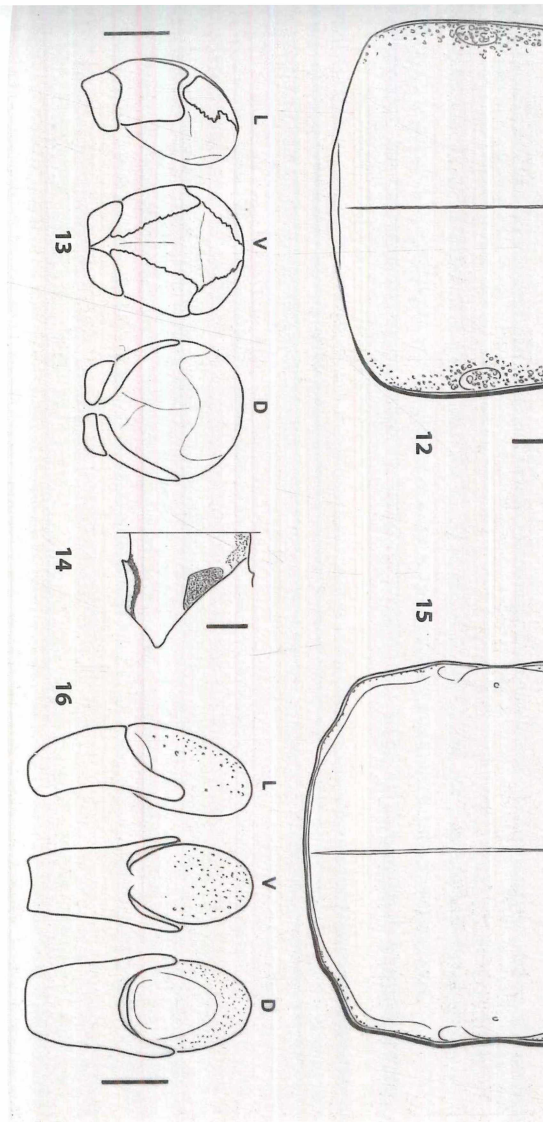
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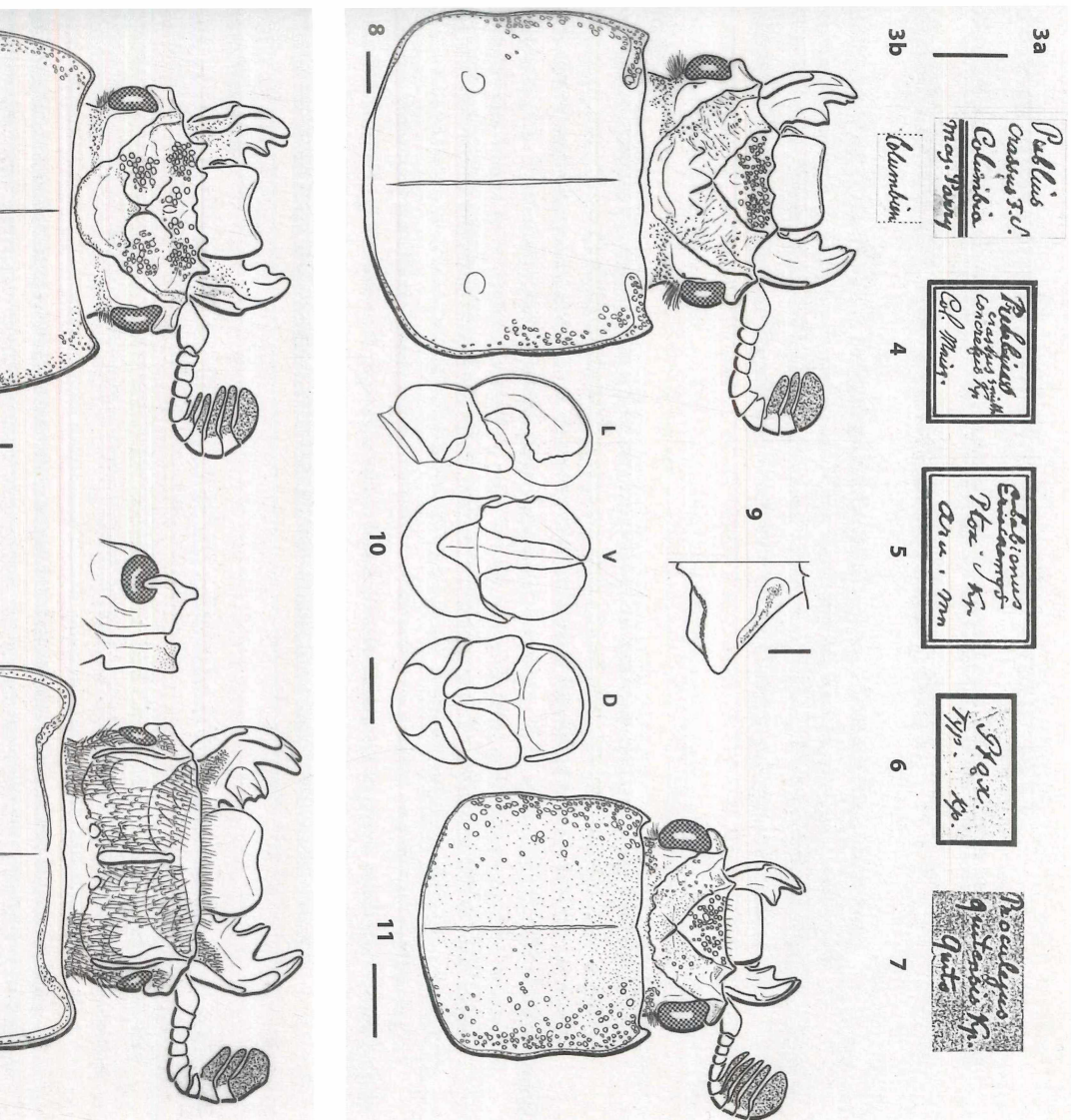
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Fig. 1: Printed plate and original artwork for KAUP (1871). a. pl. V, depicting three giant species of the Neotropical genus *Proculus* Kaup (incl. *P. goryi* (Melly, 1833) on top). b. Original drawings by Th. Compton preserved in the Hessisches Landesmuseum Darmstadt (HLMD) archives, in an arrangement largely corresponding to pl. IV.

Fig. 2: One of the drawers (56 x 42 cm) at the Hessisches Landesmuseum Darmstadt (HLMD) containing the Passalidae of the Kaup collection. Arrow indicates the specimen of *Proculus goryi* drawn by Th. Compton for pl. V in KAUP (1871).







Figs. 3-11: 3-7. Hand-written labels attached to Kaup's type specimens: 3a, 4, 5, 7. by Kaup; 3b. by Heldmann; 6. by Haag-3-4. *Publius concretus* (3). Kaup coll. at HLMG; 4. Mitszech coll. at MNHN; see species 36. in text); 5-6. *Labiellus ptoax* (5). Mitszech coll. at MNHN; 6. Haag coll. at ZMHB; see species 24. in text); 7. *Passalus (Perrinox) quitensis* (BMNH; see species 72. in text); scale bar: 1 cm. 8-10. *Passalus kaupi* n. sp. 8. Head and pronotum (dorsal; setae of labrum, mandibles and antenna not figured); 9. Mesosternum (ventral; right side); 10. Aedeagus (L: lateral; V: ventral; D: dorsal); scale bars: 1 mm. 11. *Spadulus kaupi* n. sp., head and pronotum (dorsal; setae of labrum, mandibles and antenna not figured); scale bar: 1 mm.

Figs. 12-16: 12-14. *Pentalobus kaupi* n. sp. 12. Head and pronotum (dorsal; setae of labrum, mandibles and antenna not figured); 13. Aedeagus (L: lateral; V: ventral; D: dorsal); 14. Mesosternum (ventral; right side); scale bars: 1 mm.

15-16. *Comacupes kaupi* n. sp. 15. Head and pronotum (dorsal; setae of labrum, mandibles and antenna not figured); 16. Aedeagus (L: lateral; V: ventral; D: dorsal); scale bars: 1 mm (for 15, same scale bar as 12.).