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Catalogue of *Mycotretus* Lacordaire, 1842 (Coleoptera: Erotylidae: Tritomini): an annotated, illustrated and historical approach

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Abstract. The New World genus *Mycotretus* Lacordaire, 1842 (Erotylidae: Erotylinae: Tritomini) is the second most speciose genus within Erotylidae and is found mainly in the Neotropical region. Currently, the genus includes 231 available names, of which 204 are valid. Accurate species identification is hampered by the lack of taxonomic revisions, identification keys or an illustrated catalogue for *Mycotretus*. To correct this problem and to allow further studies, the objective in this paper is to provide an illustrated catalogue for *Mycotretus* and propose some taxonomic acts promoting taxonomic stability within the genus. The present catalogue is the result of more than six years of morphological studies and careful comparisons of specimens, including research in several scientific collections throughout America and Europe, searching for identified specimens and types of available names of *Mycotretus*. The historical literature was examined and all available names listed in the catalogue of Blackwelder (1945) are included here, along with updated information from the catalogue of Alvarenga (1994). Our main results are: (i) examination of types of 216 former available names within *Mycotretus*, including 74 types previously not examined or not located by Alvarenga (1994); (ii) lectotype designations for 143 available names of *Mycotretus*; (iii) proposal of 41 new synonyms and three new combinations; (iv) the number of valid species of *Mycotretus* is reduced from 204 to 174; (v) plates providing images (most of them types) of specimens representing most available names within *Mycotretus*. The present work is the first major step towards a nomenclatural stability that will allow further revisionary and phylogenetic studies on *Mycotretus*.

Keywords. Pleasing fungus beetles, species inventory, Neotropical region, Erotylinae, Erotyloidea.

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Introduction

Mycotretus Lacordaire, 1842 (Erotylidae: Erotylinae: Tritomini) currently includes 231 available names, of which 204 are valid (Gorham 1888; Blackwelder 1945; Alvarenga 1994; Pecci-Maddalena & Lopes-Andrade 2017, 2018a, 2018b; Skelley & Powell 2018; Pecci-Maddalena *et al.* 2021a). The genus is mostly Neotropical and is the second most speciose within Erotylidae Latreille, 1802, after *Iphichlus* Chevrolat, 1836 with more than 300 described species (Alvarenga 1994). Both larval and adult individuals of *Mycotretus* feed on basidiomycete fungi, although data on host fungi are scarce and records are too few to discuss host fungus specialization (Pecci-Maddalena & Lopes-Andrade 2018b). Despite the lack of phylogenetic and revisionary works, morphological and molecular evidence suggest that *Mycotretus* is not a monophyletic group and should be divided to form natural genera (Robertson *et al.* 2004; Pecci-Maddalena *et al.* 2021a, 2021b). Indeed, *Mycotretus* is a large conglomerate of highly diverse species (Skelley & Powell 2018) and its unresolved taxonomy makes any scientific study difficult to carry out.

The present catalogue is the result of more than six years of efforts, including morphological and taxonomical studies (e.g., Pecci-Maddalena & Lopes-Andrade 2017, 2018a, 2018b; Pecci-Maddalena *et al.* 2021a, 2021b), and research visits to scientific institutions to find and study primary types of *Mycotretus*. Historical literature on Erotylidae was consulted (e.g., Duponchel 1825; Lacordaire 1842; Crotch 1876; Gemminger & Harold 1876: 465; Kuhnt 1909: 76, 1911: 52, and others) and all available names listed in the catalogues of Blackwelder (1945) and Alvarenga (1994) are included here, with annotations on their current status. The main achievements of the present catalogue are: (i) examination of 216 types of available names within *Mycotretus*, including 74 types previously not located by Alvarenga (1994); (ii) lectotype designations for 143 available names of *Mycotretus*; (iii) proposal of 41 new synonyms, two new generic and one new specific combinations; (iv) the number of valid species of *Mycotretus* is reduced from 204 to 174; (v) plates providing images of specimens (most of them types) representing most available names within *Mycotretus*. The present work is the first major step towards a nomenclatural stability that will allow further revisionary and phylogenetic studies on *Mycotretus*.

Taxonomic history of the genus *Mycotretus* Lacordaire, 1842

The first described members of *Mycotretus* were originally placed under *Erotylus* Fabricius, 1775, as follows: *Erotylus maculatus* Olivier, 1792 and *E. tigrinus* Olivier, 1792, from Suriname; and *E. conspersus* Germar, 1824, *E. humeralis* Germar, 1824 and *E. ocellatus* Germar, 1824, from Brazil. After these works, Duponchel (1825) published the *Monographie du genre Erotyle*, containing almost all Erotylinae Latreille, 1802 as presently interpreted (Węgrzynowicz 2002), and described ten species of *Erotylus* later transferred to *Mycotretus* (one of them was recently placed in *Mycomystes* Gorham, 1888; Pecci-Maddalena *et al.* 2021b). Ten years after Duponchel's work, Chevrolat (1835) described *Erotylus lesueuri* from Mexico. The name *Mycotretus* was originally proposed by Dejean (1836) and its authorship was attributed to Chevrolat. In that work, 49 species names under *Mycotretus* are cited, but without descriptions or diagnoses for the genus and its species. Dejean's catalogue were simply checklists of his collection in which many generic and specific names were presented. Because Dejean names lacked descriptions, they were often disregarded as valid names by early taxonomists (Skelley 1998a). In 1841, Guérin-Méneville described *Erotylus (Brachymerus) cinctellus* (currently in *Mycomystes*, see Pecci-Maddalena *et al.* (2021b)), *Erotylus (Brachymerus) sobrinus* and *Erotylus (Mycotretus) Chevrolat) fallax*, the latter case using the name "*Mycotretus*" as a subgroup of *Erotylus*.

Jean Théodore Lacordaire (1801–1870) – in his historical monograph of the Erotylidae world fauna (Lacordaire 1842) – was the first author to provide a description for *Mycotretus*, describing and including within this genus about half of the *Mycotretus*, most of the "*Lybas* Chevrolat" and a few of the "*Brachymerus* Chevrolat" listed by Dejean (1836). However, it is worth noting that Lacordaire did not designate a type species for *Mycotretus*, which was subsequently made by Boyle (1956), who

designated *Mycotretus lesueuri* (Chevrolat, 1835) as generotype. Today, the authorship of *Mycotretus* is attributed to Lacordaire and the validity of *M. lesueuri* as the type species of the genus was fixed by the International Commission of Zoological Nomenclature (see Skelley & Goodrich 1994; ICZN 1996; Pecci-Maddalena & Lopes-Andrade 2017). Lacordaire (1842) also described several new species in many early collections (e.g., those from Buquet, Dejean, Dupont, Reiche, etc.). Additionally, Lacordaire moved many previously described species into *Mycotretus* (for instance, the aforementioned “*Erotylus*”). In total, he recognized 90 species of *Mycotretus*: 32 from Brazil, 22 from Cayenne (French Guiana), one from Bolivia, 27 from Colombia and eight from Mexico (Lacordaire 1842).

Lacordaire also proposed a subgeneric classification for *Mycotretus* and split the genus into two, as follows: (1) the first division included 89 species with an antennal club of four antennomeres and was subdivided into the groups “A” (“Menton coupé plus ou moins obliquement de chaque côté de son bord antérieur.”, Lacordaire (1842: 134)) and “B” (“Menton arrondi à son bord antérieur.”, Lacordaire (1842: 163)). Each of these groups was, in turn, split into two others based on the expansion of the apical maxillary palpomere (i.e., very expanded or slightly expanded); (2) the second division included a single species (*Mycotretus tesserarius* Lacordaire, 1842) with an antennal club of three antennomeres. Despite his purpose, Lacordaire stated the inclusion of this latter species in *Mycotretus* was controversial (translated by us): “(...) In a single species (*M. tesserarius*), which I have not thought it necessary to reject from the genus, the club is composed of only three transverse articles, and therefore resembles that of the *Ischyryus*. This difference did not seem to me sufficient for the proposition of a genus. (...)”. Lacordaire’s divisions are noteworthy as the first attempt to organize species of *Mycotretus*, although his ideas were not followed by any subsequent author. For instance, according to Crotch (1876: 145): “Lacordaire has divided this genus into two sections according to the shape of the mentum, but I find this very difficult to ascertain: he is certainly in error in many cases.”

Soon after Lacordaire’s work had been published and before the publication of the monographic studies of Crotch (1876) and Gorham (1888), the following authors included species in *Mycotretus*: Guérin-Méneville (1844), Fauvel (1860), Kirsch (1865), each describing a single species; Taschenberg (1870), six new species; Crotch (1873b), one species; and Kirsch (1876), five species. Chevrolat (1843) transferred *Tritoma fasciatus* Fabricius, 1801 to *Mycotretus*, which Alvarenga (1994) listed under *Mycotretus* on his catalogue. However, it belongs to the genus *Epopterus* Chevrolat, 1844 (Coleoptera: Endomychidae) and should not be counted among the number of available names within *Mycotretus* (see Blackwelder 1945; Alvarenga 1994; Strohecker 1997).

After Lacordaire, the two authors who described the most species of *Mycotretus* were George Robert Crotch (1842–1874) and Henry Stephen Gorham (1839–1920). The former built his Erotylidae collection by donation, exchange, or purchase, but in 1874 (after contracting tuberculosis in the United States) he died before seeing his major manuscript, *A Revision of the Coleopterous Family Erotylidae*, published. In 1876, Crotch’s work was posthumously published by E.W. Janson (Skelley 1998b). In that work – a catalogue of all species known at that time, with descriptions of new taxa (Węgrzynowicz 2002) – several new species of *Mycotretus* were described, making Crotch the author to describe the second greatest number of *Mycotretus* in a single work (surpassed only by Lacordaire). A few years after Crotch’s revision, Gorham (1888) published the seventh volume of *Biologia Centrali-Americana*, which was the third study to describe a great number of *Mycotretus* and one of the major contributions to our knowledge of the Central American erotylids.

Through the 20th century, a few additional *Mycotretus* descriptions were made by the following authors: Arrow (1909), Kuhnt (1909, 1910, 1911), Casey (1916), Delkeskamp (1939, 1957), Mader (1940, 1942, 1955), Deelder (1942), Guérin (1949a, 1949b, 1956), Boyle (1954), and Alvarenga (1983, 1989). After Alvarenga (1989), no species was included in *Mycotretus* until recently, when *Mycophorus peruvianus*

Kirsch, 1876 was transferred to *Mycotretus* by Skelley & Powell (2018) (currently *M. peruvianus* is under *Mycomystes*, see Pecci-Maddalena *et al.* 2021b) and *Mycotretus alvarengai* Pecci-Maddalena & Lopes-Andrade, 2018 was described from North Brazil. That description was based on a single adult male, originally from the private collection of the late Moacyr Alvarenga (1915–2010). The species name was a tribute to his important contributions to the knowledge on Neotropical Erotylidae, including the *Catalogue of Neotropical Erotylidae* (Alvarenga 1994) and a valuable collection of hundreds of worldwide erotylids, deposited in several Brazilian museums after his death (Pecci-Maddalena & Lopes-Andrade 2018a).

Material and methods

Acronyms of scientific collections

ANSP	=	Academy of Natural Sciences, Philadelphia, PA, USA
BMNH	=	The Natural History Museum, London, UK
CAMB	=	Coleção Ayr de Moura Bello, Rio de Janeiro, Brazil
CELC	=	Coleção Entomológica do Laboratório de Sistemática e Biologia de Coleoptera, Viçosa, Minas Gerais, Brazil
DZUP	=	Coleção Entomológica Padre Jesus Santiago Moure, Universidade Federal do Paraná, Curitiba, Brazil
FSCA	=	Florida State Collection of Arthropods, Gainesville, FL, USA
IFML	=	Fundacion Miguel Lillo, Tucuman, Argentina
MACN	=	Museo Argentino de Ciencias Naturales “Bernardino Rivadavia”, Buenos Aires, Argentina
MCNZ	=	Museu de Ciências Naturais da Fundação Zoobotânica do Rio Grande do Sul, Porto Alegre, Brazil
MFN	=	Museum für Naturkunde Berlin, Berlin, Germany
MIZ	=	Museum and Institute of Zoology, Polish Academy of Sciences, Warsaw, Poland
MNHN	=	Muséum national d’histoire naturelle, Paris, France
MNRJ	=	Museu Nacional, Universidade Federal do Rio de Janeiro, Brazil
MRSN	=	Museo Regionale di Scienze Naturali, Torino, Italy
MZSP	=	Museu de Zoologia, Universidade de São Paulo, São Paulo, Brazil
NHMD	=	Natural History Museum of Denmark (previously Zoological Museum, ZMUC), Copenhagen, Denmark
NMBS	=	Naturhistorisches Museum Basel, Basel, Switzerland
NMNH	=	National Museum of Natural History, Washington D.C., USA
RBINS	=	Royal Belgian Institute of Natural Sciences, Brussels, Belgium
RMNH	=	Naturalis Nationaal Natuurhistorische Museum, Leiden, Netherlands
SDEI	=	Senckenberg Deutsches Entomologisches Institut, Müncheberg, Germany
SNSD	=	Senckenberg Naturhistorischen Sammlungen Dresden, Dresden, Germany
UMZC	=	University Museum of Zoology Cambridge, Cambridge, UK
ZNS	=	Zentralmagazin Naturwissenschaftlicher Sammlungen, Halle, Germany
ZSBS	=	Zoologische Sammlung des Bayerischen Staates, München, Germany

Format of the catalogue

A lectotype is designated for species clearly based on syntypes, but also in the cases when a single specimen was located, and the author of the species name did not state whether there was one or more specimens in the type series. A specimen was considered to be the holotype only when the author clearly stated the description was based on a single specimen. In most cases, a red label was placed on the specimen chosen to be the lectotype.

Most specimens were labelled by the senior author, but when visits to institutions were not possible, we asked curators to label the specimens (e.g., specimens from MFN, ZNS and others). Aside from that, the types of the following species are currently unlabelled and their labels will be sent to the appropriate curator of the institutions to be placed on specimens: the types from Kirsch (SNSD); *Mycotretus argus* Lacordaire, 1842 (MRSN) – lectotype; *Mycotretus coccidulinus* Gorham, 1888 (BMNH) – paralectotype from Belize; *Mycotretus cognatus* Lacordaire, 1842 (RBINS) – lectotype; *Mycotretus durius* Lacordaire, 1842 (MRSN) – lectotype; *Mycotretus figuratus* Lacordaire, 1842 (MRSN) – lectotype; *Mycotretus leopardus* Crotch, 1876 (UMZC) – lectotype; *Mycotretus maculosus* (Duponchel, 1825) (MRSN) – lectotype; *Mycotretus nigropunctatus* (Duponchel, 1825) (MRSN) – lectotype; *Mycotretus nubifer* Casey, 1916 (USNM) – lectotype; *Mycotretus partitus* Lacordaire, 1842 (RBINS) – lectotype; *Mycotretus pecari* Lacordaire, 1842 (MRSN) – holotype; *Mycotretus polyophthalmus* Lacordaire, 1842 (MRSN) – lectotype.

It was noted that all descriptions provided by Kirsch (1876) did not state whether there was one or more specimens in the type series. The types of this author are housed in SNSD and all of them have a red label written “Holotypus” or “Syntypus” which, probably, were not placed by Kirsch (Figs 22F, 23A–E; images were made available to us by Ester Helena de Oliveira and Olaf Jäger, see Acknowledgments). Since such specimens are the primary types of Kirsch, in the present study they were designated as lectotypes. Such specimens were not also labelled as lectotypes and the labels will be sent to the curator to be placed on them. Species accounts are organized in alphabetical order first by author surname (preceded by Roman numbers) and then alphabetically by the available species names (preceded by Arabic numbers). Only species names currently included in *Mycotretus* are numbered, each number is unique and the count is continuous. The division of the present catalogue, based on authors, instead of a simple list of species alphabetically organized is due to: (i) the authors’ contribution to the study and description of new species of *Mycotretus* was very asymmetric (see Introduction) and, therefore, a historical approach is herein adopted; (ii) there are patterns in the deposition of type specimens, format of specimens labels and other historical information related to each author (e.g., Gorham’s types are in BMNH, Lacordaire’s types are in MRSN and MNHN, etc.) and, in order to reflect these patterns, the data are consistently arranged by authors’ surnames.

Whenever possible, a specimen of the type series representing each available name was photographed and shown in plates (Figs 2–40). When the type was not located, or the available image was not in a resolution suitable for publication, an image of another named specimen was used. Each plate contains six or seven images of specimens in dorsal view, marked with letters (A–F or A–G), and under those are their respective labels marked with letters followed by an apostrophe (e.g., Fig. 1A’–F’). This format was chosen to facilitate our work and make easier any search by author name.

Terms for external morphology and photographs

Transcription of label data and dissection of specimens followed Pecci-Maddalena & Lopes-Andrade (2017). Terms for external morphology follow McHugh *et al.* (1997) and Lawrence *et al.* (2011), and those for colour pattern follow Skelley (1998a). The “penile flagellum” refers to a male genitalia structure with two interconnected elements: “head” and “virga” (Węgrzynowicz 2002; Pecci-Maddalena & Lopes-Andrade 2018a, 2018b; Pecci-Maddalena *et al.* 2021a). Higher taxonomic classification follows Cai *et al.* (2022).

Photography methods for Figures 2, 3A, 13A, E, 26C, E, 28A, 29B, 30B, 31E, 32D, 33F–G, 36A, 39E, G, 40A, E followed Pecci-Maddalena & Lopes-Andrade (2017). Other specimens were photographed in the institutions where they are housed, under the available conditions, which were not always ideal. For instance, the MRSN was closed to the public, due to an accidental explosion in 2013 (Andreone *et al.* 2014); by the time the senior author visited, he had only a few hours for locating, photographing



Fig. 1. The largest historical collections of Neotropical Erotylidae Latreille, 1802. **A–C.** Museum national d’histoire naturelle (MNHN, Paris, France). **A.** Part of the MNHN Erotylidae collection. **B–C.** Drawer from Oberthür collection containing several *Mycotretus* Lacordaire, 1842 primary types. **D–E.** Natural History Museum (BMNH, London, UK). **D.** Drawer containing part of the Gorham collection including several *Mycotretus* described in the *Biologia Centrali-Americana*. **E.** The type specimen of *Mycotretus hirudo* Gorham, 1888. **F.** Cabinet of the Crotch Erotylidae Collection from University Museum of Zoology (UMZC, Cambridge, UK), one of the most representative Erotylidae collections of the world. **G.** Drawer of the Brême collection from Museo Regionale di Scienze Naturali (MRSN, Torino, Italy), containing especially Duponchel and Lacordaire primary types.

and labelling specimens. It was not possible to visit the institutions ANSP, IFML, MCNZ, MFN, MIZ, NMBS, NMNH, RBINS, RMNH, SDEI, SNSD, ZNS or ZSBS and, in these cases, their curators generously made available images of specimens or lent specimens to us (MCNZ). Therefore, it was not possible to standardise photographic techniques, equipment and conditions, and thus image quality is variable and, unfortunately, in some cases it was not possible to include a scale bar (e.g., Fig. 25).

Morphological comparisons and synonymies

Synonymies were provided in the following cases: (1) “obvious synonyms”, i.e., based on those representatives of supposedly different species that are morphologically almost identical and usually have a congruent geographical distribution; (2) the cases where only a few specimens were required for dissections in order to confirm the synonymy. Other more complicated cases of potential synonyms (e.g., “red” representatives of Central American species, members of many species groups, etc.) are beyond the scope of this work and were not treated here. They will be examined in the future revisionary studies on *Mycotretus*, along with keys, species diagnoses, redescriptions, etc.

The protocol for morphological examination of specimens was, whenever possible, the following: (i) dorsal and ventral photographs were taken for comparisons of external characters; (ii) specimens were directly examined and compared under stereo microscope; (iii) specimens (usually males) were dissected, the genitalic characters photographed and compared. As noted previously, the penile flagellum is a taxonomically powerful structure used to distinguish species in Erotylidae (Boyle 1956; Pecci-Maddalena *et al.* 2021a) and, in most cases, it was used here to support proposals of new synonyms, along with dorsal and ventral morphological similarities, geographical distribution congruences, and other characteristics. Colour pattern variations, among conspecific individuals, are common in the Erotylidae and may be related to clinal factors, differences in the teneral vs fully pigmented adults or some unknown genetic mechanism (Pecci-Maddalena & Lopes-Andrade 2018b; Powell & Skelley 2021; Pecci-Maddalena *et al.* 2021b). Most of these variations consist of differences in the degree of fusion of the colour marks, the absence of spots in tenerals that usually are present in fully pigmented specimens, etc. We noted that several species of *Mycotretus* described in the past are colour variations of a broadly distributed species. When such variations were detected, they are mentioned in the species Remarks.

Only three primary types (the holotypes of *M. tucuruensis* Alvarenga, 1983, *M. bistriloculatus* Alvarenga 1983 and *M. lopesi* Alvarenga, 1989) had to be dissected. All other primary types were left intact, and paratypes, paralectotypes and other named specimens compared with types were dissected. The majority of dissected specimens belong to the collection of the late Moacyr Alvarenga, housed in the MNRJ (see comments under Locating types) and DZUP, which includes representatives of several species of *Mycotretus*.

Names of species listed in the present catalogue

The present work includes only the extant species of *Mycotretus*. The single fossil record for the genus, “*Mycotretus binotatus* Scudder, 1878”, from the Eocene, was not examined and it was not listed here. Taxonomic works of Lacordaire (1842), Crotch (1876), Gemminger & Harold (1876), Gorham (1888) and Kuhnt (1909, 1910, 1911) were consulted and all available names of *Mycotretus* mentioned in the catalogues of Alvarenga (1994) and Blackwelder (1945) are listed here, including valid names and synonyms. Exceptions to this rule are the following: (i) *Mycotretus fasciatus* (Fabricius, 1801), which was incorrectly listed in *Mycotretus* by Alvarenga (1994: 25), is an Endomychidae Leach, 1815 (Strohecker 1997: 166), type in NHMD (images made available by curator); (ii) the invalid names “*Mycotretus bruchi* Bruch, 1915” and “*M. unguicularis* Bruch, 1915” listed under *Mycotretus* by Blackwelder (1945). Bruch (1914) mentioned those names followed by the statement “Kuhnt, in litteris”, without description or diagnosis. Kuhnt never formally described these species and, therefore, *M. bruchi* and *M. unguicularis*

are considered to be *nomina nuda*. Images of specimens in the Kuhnt collection (MFN) and the Bruch collection (MACN) identified as “*M. bruchi* Kuhnt”, were made available to us. Those specimens are *M. trifasciatus* Guérin, 1956.

We did not designate a lectotype for any species originally described in *Mycotretus* that is currently included in a different genus. These are:

(1) *Mycotretus chrysomelinus* Lacordaire, 1842 (listed in Lacordaire 1842; currently under *Cyclomorphus* Hope, 1841); (2) *Mycotretus dissimulator* Crotch, 1873 (listed in Crotch 1873a, 1876; current combination *Triplax dissimulator* (Crotch, 1873)); (3) “*Mycotretus hieroglyphicus* Dej.” (listed in Dejean 1836; current combination *Callischyrus hieroglyphicus* (Duponchel, 1825)); (4) “*Mycotretus laetus* Dej.” (listed in Dejean 1836; current combination *Ischyryus laetus* (Lacordaire, 1842)); (5) “*Mycotretus scriptus* Olivier” and “*Mycotretus affinis* Dej.” (listed and placed in synonymy in Dejean 1836; current combination *Ischyryus scriptus* (Olivier, 1807) and *Ischyryus affinis* (Duponchel, 1825), synonym of *I. scriptus*); (6) “*Mycotretus variabilis* Dej.” (listed in Dejean 1836; current combination *Ischyryus variabilis* (Duponchel, 1825)); (7) “*Mycotretus incertus* Dej.” (listed in Dejean 1836; current combination *Ischyryus incertus* (Lacordaire, 1842)); (8) “*Mycotretus interruptus* Dej.” (listed in Dejean 1836; current combination *Ischyryus interruptus* (Duponchel, 1825)); (9) “*Mycotretus patruelis* Dej.” and “*Mycotretus similis* Chevrolat” (listed and placed in synonymy in Dejean 1836; current combination *Ischyryus patruelis* (Lacordaire, 1842) and *M. similis* Chevrolat is a *nomen nudum*); (10) “*Mycotretus subcylindricus* Chevrolat” and “*Mycotretus variegata* Dej.” (listed and placed in synonymy in Dejean 1836; current combination *Ischyryus subcylindricus* (Lacordaire, 1842), synonym of *Ischyryus quadripunctatus quadripunctatus* (Olivier, 1792), *M. variegata* Dej. is a *nomen nudum*); (11) “*Mycotretus quadripunctatus* Olivier” and “*Mycotretus humeralis* Chevrolat” (listed and placed in synonymy in Dejean 1836; current combination *Ischyryus quadripunctatus quadripunctatus* (Olivier, 1792), *M. humeralis* Chevrolat is a *nomen nudum*); (12) “*Mycotretus flavitarsis* Sturm.”, “*Mycotretus signaticollis* Klug.” and “*Mycotretus thoracica* Dej.” (listed and placed in synonymy in Dejean 1836; current combination *Notaepytyus flavitarsis* (Lacordaire, 1842), “*M. signaticollis* Klug.” and “*M. thoracica* Dej.” are *nomina nuda*); (13) “*Mycotretus modestus* Olivier” (listed in Dejean 1836; current combination *Notaepytyus modestus* (Olivier, 1807)); (14) *Mycotretus triplacoides* Crotch, 1876 (current combination *Triplax triplacoides* (Crotch, 1876)).

The species of *Mycomystes* Gorham, 1888 listed here were placed in *Mycotretus* and were recently transferred to *Mycomystes* in Pecci-Maddalena *et al.* (2021b). Due to their historical positioning under *Mycotretus*, these taxa (unnumbered) are cited in the present catalogue along with their current combinations.

The “varieties” of species described by Crotch (1876), Kuhnt (1910) and Deelder (1942) were here considered “subspecies”, according to the International Code of Zoological Nomenclature (ICZN 1999) (Article 45.6.4) “(…) it [a taxon] is subspecific if first published before 1961 and its author expressly used one of the terms “variety” or “form” (including use of the terms “var.”, “forma”, “v.” and “f.”), unless its author also expressly gave it infrasubspecific rank, or the content of the work unambiguously reveals that the name was proposed for an infrasubspecific entity, in which case it is infrasubspecific [see also Art. 45.6.1]”. Exceptions not considered subspecies were the six secondary assignments of the term “var.”, made by Kuhnt (1909, 1910), for a few taxa originally described at a species-level rank by early authors (e.g., Duponchel 1825; Lacordaire 1842). Probably, following a chronological order of events, Alvarenga (1994) repeated Kuhnt and listed such names as “varieties”. In addition, we noted that all these names had been placed in synonymy with other species of *Mycotretus* by early authors (e.g., Crotch 1876 and Gorham 1888) and, therefore, they are considered synonymies in our species count of Alvarenga’s catalogue (see below).

Two species shown on the plates here were originally treated as “aberrations” (or “ab”) by Mader (1942): ab. *luteobifasciatus* (aberration of *M. quadripunctatus* Crotch, 1876, Fig. 38C) and ab. *posticenigrum* Mader, 1942 (aberration of *M. opalizans* Mader, 1942, Fig. 38F). According to the ICZN (1999) (Article 45.6.2) “(...) it is deemed to be infrasubspecific if its author used one of the terms “aberration”, “ab.” or “morph””, but also see the ICZN (1999) Glossary: “**aberration**, *n.* (...) A name which explicitly refers to an aberration unequivocally treated as an infrasubspecific entity (*q.v.*) is unavailable”. Images of those two specimens are included here to illustrate their phenotypic variation.

Format of species accounts

Valid species accounts are more detailed than those of synonyms and are arranged as follows:

Heading. Contains the species name considered to be available in the catalogue of Alvarenga (1994). This is followed by bibliographic citation of the original description, type locality, and all the citations listed in Alvarenga’s catalogue and any works published after Alvarenga (1994).

Synonymy. When applicable, includes previous or new synonyms and combinations.

Primary type. The acronym of the type depository is indicated, followed by its figure number and label data. When the type was not located, we clearly state it and, whenever possible, provide an image of a non-type specimen. These “non-type” specimens were identified based on their original descriptions, early redescrptions or comparisons with series of specimens from several museums. In a few cases, when the available images of primary types were in a poor resolution, we preferred to show images of “non-type” specimens (e.g., Fig. 40A, E). When neither primary type nor any other named specimen was available we repeated information provided by Alvarenga (1994).

Other specimens examined. Label data of type series, historical materials and dissected specimens are listed here. Label data for all individuals examined are not included, being outside the scope of this work. These data will be included in future revisionary works.

Distribution. Distribution data follows mostly Alvarenga (1994).

Remarks. This section includes comments on morphologically similar species within *Mycotretus*, historical information, general taxonomic notes, and, if applicable, statements to support synonymies.

Species accounts for names in synonymy with other species only present important data for that name and are arranged as follows:

Heading. This is the species name considered to be available in the catalogue of Alvarenga (1994), listed there as a synonym or being synonymized in this work.

Primary type. The format follows that for valid names.

Remarks. This section states the current taxonomic status of the name. Further information on the valid name can be found under those species accounts.

Locating types

The works of Horn *et al.* (1990a, 1990b), Alvarenga (1994) and Skelley (1998a, 1998b, 2009) were used to locate type material. Type specimens of the majority of American Erotylidae are located in four scientific institutions: MNHN; the Crotch Erotylidae Collection (UMZC); BMNH; and MRSN (Skelley 1998a, 2009). A minor number of type specimens are deposited in other museums (see the list of depositories of type material above).

Many erotylids studied by Duponchel (1825) and Lacordaire (1842) came from the Dejean collection and, currently, most of those specimens are housed in the MNHN, MRSN and UMCZ. In fact, we found syntypes of almost all species studied by Duponchel and Lacordaire in those institutions, except for a few specimens, like those originally from the Buquet collection (see Lacordaire 1842), which were not located by us. Many of Lacordaire's species were also from the Dupont collection. Skelley (1994) pointed out: "Horn & Kahle indicate that the Dupont collection was divided with some of the material being deposited in the collections of G. V. Mniszech and R. Oberthur" (MNHN). In fact, specimens of *Mycotretus* labelled "Type" were found in those latter two collections and their morphology and label data matched information cited in the original descriptions, supporting they belong to the type series.

Currently, the holotypes of species of *Mycotretus* described by Alvarenga (1983, 1989) and the examined paratypes belonging to MNRJ are provisionally housed in the CELC collection. They correspond to a small sample of specimens that were not consumed by the fire that destroyed the main building of the MNRJ in 2018 (see Kury *et al.* 2018). The destroyed paratypes of species of *Mycotretus* are the following: 1 paratype of *Mycotretus bistriloculatus* Alvarenga, 1983; 1 paratype of *Mycotretus luizi* Alvarenga, 1983; 9 paratypes of *Mycotretus quadrioculatus* Alvarenga, 1983.

Results

Taxonomic synopsis

Order Coleoptera
Series Cucujiformia Lameere, 1938
Superfamily Erotyloidea Latreille, 1802
Family Erotylidae Latreille, 1802
Subfamily Erotylinae Latreille, 1802
Tribe Tritomini Curtis, 1834

Genus *Mycotretus* Lacordaire, 1842

Mycotretus Lacordaire, 1842: 132. Type species: *Erotylus lesueuri* Chevrolat, 1835. Designated by Boyle (1956), fixed by Skelley & Goodrich (1994); ICZN (1996).

Mycotretus Chevrolat in Dejean 1836: 428.

Mycotretus Lacordaire – Crotch 1873b: 144. — Gemminger & Harold 1876: 3691. — Gorham 1888: 46. — Deelder 1942: 54. — Mader 1951: 210. — Guérin 1953: 77. — Boyle 1956: 137.

Mycotretus Chevrolat, Dejean – Lacordaire 1842: 132. — Crotch 1873a: 354; 1876: 437. — Chapuis 1876: 32. — Kuhnt 1909: 70 [*"Mycotretus Dejean"*]. — Casey 1916: 158. — Alvarenga 1965: 87; 1994: 20. — Skelley & Goodrich 1994: 130. — ICZN 1996: 55 [suppression of the names *Mycotretus* Chevrolat and *Mycotretus* Dejean].

Included species

Mycotretus adalioides Crotch, 1876 (Fig. 4A)
Mycotretus aegrotus Gorham, 1888 (Fig. 14E)
Mycotretus aestuans Lacordaire, 1842 (Fig. 26C)
Mycotretus alvarengai Pecci-Maddalena & Lopes-Andrade, 2018 (Fig. 39G)
Mycotretus ambulator Lacordaire, 1842 (Fig. 26D)
Mycotretus anchoralis Guérin, 1956 (Fig. 21D)
Mycotretus arcuatus Lacordaire, 1842
Mycotretus argus Lacordaire, 1842 (Fig. 26F)
Mycotretus atricaudatus Gorham, 1888 (Fig. 15A)

- Mycotretus badius* Gorham, 1888 (Fig. 15B)
Mycotretus balteatus Crotch, 1876 (Fig. 4B)
Mycotretus bicolor Taschenberg, 1870 (Fig. 40A)
Mycotretus monrosi Guérin, 1949 (Fig. 21F) **syn. nov.**
Mycotretus bicoloratus Kuhnt, 1911 (Fig. 23E)
Mycotretus bipunctatus Gorham, 1888 (Fig. 15C)
Mycotretus bistrigatus Lacordaire, 1842 (Fig. 27A)
Mycotretus bistrioculatus Alvarenga, 1983 (Fig. 2A)
Mycotretus brasiliensis Crotch, 1876 (Fig. 4E)
Mycotretus brevis Gorham, 1888 (Fig. 15D)
Mycotretus centralis Arrow, 1909 (Fig. 3B)
Mycotretus cercyonoides Gorham, 1888 (Fig. 15E)
Mycotretus chilensis Crotch, 1876 (Fig. 4F)
Mycotretus bicinctus Guérin, 1949a (Fig. 21E)
Mycotretus cinctiger Crotch, 1876 (Fig. 5B)
Mycotretus luizi Alvarenga, 1983 (Fig. 2D) **syn. nov.**
Mycotretus clitelliger Lacordaire, 1842 (Fig. 27B)
Mycotretus coccidulinus Gorham, 1888 (Fig. 15F)
Mycotretus coelestinus Lacordaire, 1842 (Fig. 27D)
Mycotretus consanguineus Gorham, 1888 (Fig. 16A)
Mycotretus cordiger Crotch, 1876 (Fig. 5D)
Mycotretus zischkai Delkeskamp, 1957 (Fig. 12F) **syn. nov.**
Mycotretus cribratus Gorham, 1888 (Fig. 16B)
Mycotretus cruciger Crotch, 1876 (Fig. 5E)
Mycotretus crudus Gorham, 1888 (Fig. 16C)
Mycotretus cruentus Gorham, 1888 (Fig. 16D)
Mycotretus cunctans Mader, 1942 (Fig. 38B)
Mycotretus cyanopterus Lacordaire, 1842 (Fig. 27F)
Mycotretus decoratus (Duponchel, 1825) (Fig. 13B)
Mycotretus decorus Crotch, 1876 (Fig. 5F)
Mycotretus deyrollei Crotch, 1876 (Fig. 6A)
Mycotretus discipennis discipennis Kuhnt, 1910 (Fig. 24A) **syn. nov.**
Mycotretus discipennis conductus Kuhnt, 1910 (Fig. 24B) **syn. nov.**
Mycotretus sexlineatus Kuhnt, 1910 (Fig. 25D) **syn. nov.**
Mycotretus dichrous Kirsch, 1876 (Fig. 22F)
Mycotretus dimidiatus Taschenberg, 1870 (Fig. 40C)
Mycotretus distigma Lacordaire, 1842 (Fig. 28B)
Mycotretus distinguendus Arrow, 1909 (Fig. 3C)
Mycotretus dorsofasciatus Lacordaire, 1842 (Fig. 28C)
Mycotretus nugator Lacordaire, 1842 (Fig. 33G) **syn. nov.**
Mycotretus dorsonotatus Lacordaire, 1842 (Fig. 28D)
Mycotretus alternans Gorham, 1888 (Fig. 14F) **syn. nov.**
Mycotretus quadristriolatus Kuhnt, 1910 (Fig. 25C) **syn. nov.**
Mycotretus duodecimguttatus duodecimguttatus (Duponchel, 1825) (Fig. 13C)
Mycotretus duodecimguttatus consociatus (Kuhnt, 1910) **comb. nov.**
Mycotretus durius Lacordaire, 1842 (Fig. 28F)
Mycotretus dytiscoides Lacordaire, 1842 (Fig. 29A)
Mycotretus egae Crotch, 1876 (Fig. 6C)
Mycotretus basalis Crotch, 1876 (Fig. 4C) **syn. nov.**
Mycotretus elegans Gorham, 1888 (Fig. 16E)

- Mycotretus episcaphoides* Crotch, 1876 (Fig. 6D)
Mycotretus episcopalis Lacordaire, 1842 (Fig. 29B)
Mycotretus epopterus Gorham, 1888 (Fig. 16F)
Mycotretus erraticus Gorham, 1898 (Fig. 17A)
Mycotretus expressus Kuhnt, 1910 (Fig. 24C)
Mycotretus fallax (Guérin-Méneville, 1841) (Fig. 22C)
Mycotretus fasciolatus Lacordaire, 1842 (Fig. 29C)
Mycotretus fascipennis Kuhnt, 1910 (Fig. 24D)
Mycotretus fidelis Delkeskamp, 1939 (Fig. 12C)
Mycotretus flavomarginatus Lacordaire, 1842 (Fig. 29E)
Mycotretus major Mader, 1955 (Fig. 38D) **syn. nov.**
Mycotretus floriger Lacordaire, 1842 (Fig. 29F)
Mycotretus fulviceps Crotch, 1876 (Fig. 6E)
Mycotretus fulvilabris Crotch, 1876 (Fig. 6F)
Mycotretus rastratus Crotch, 1876 (Fig. 10B) **syn. nov.**
Mycotretus geminus Gorham, 1888 (Fig. 17B)
Mycotretus guatemalae Crotch, 1876 (Fig. 7A)
Mycotretus haemapterus Gorham, 1888 (Fig. 17C)
Mycotretus haematicus Gorham, 1888 (Fig. 17D)
Mycotretus hepaticus Lacordaire, 1842 (Fig. 31A)
Mycotretus hilaris Lacordaire, 1842 (Fig. 31B)
Mycotretus hirudo Gorham, 1888 (Fig. 17E)
Mycotretus humeralis (Germar, 1824)
Mycotretus humilis Lacordaire, 1842
Mycotretus illustris Crotch, 1876 (Fig. 7B)
Mycotretus incarnatus Gorham, 1888 (Fig. 17F)
Mycotretus interstictus Gorham, 1888 (Fig. 18A)
Mycotretus interstitialis Kuhnt, 1910 (Fig. 25A) **syn. nov.**
Mycotretus jocosus Lacordaire, 1842 (Fig. 31D)
Mycotretus laccophilinus Gorham, 1888 (Fig. 18B)
Mycotretus lacertosus Lacordaire, 1842 (Fig. 31E)
Mycotretus laeviventris Crotch, 1876 (Fig. 7C)
Mycotretus lepidus Lacordaire, 1842 (Fig. 31F)
Mycotretus graniformis Lacordaire, 1842 (Fig. 30E) **syn. nov.**
Mycotretus chontalesi Crotch, 1873 (Fig. 5A) **syn. nov.**
Mycotretus leprosus Lacordaire, 1842 (Fig. 32A)
Mycotretus lesueuri (Chevrolat, 1835) (Fig. 3F)
Mycotretus savignyi Lacordaire, 1842 (Fig. 36C) **syn. nov.**
Mycotretus limbatus (Lacordaire, 1842) (Fig. 32B)
Mycotretus lissomoides Crotch, 1876 (Fig. 7D)
Mycotretus luteipes Lacordaire, 1842 (Fig. 32C)
Mycotretus luteolus Gorham, 1888 (Fig. 18C)
Mycotretus maculatus (Olivier, 1792) (Fig. 39E)
Mycotretus figuratus Lacordaire, 1842 (Fig. 29D)
Mycotretus mutabilis Crotch, 1876 (Fig. 7E) **syn. nov.**
Mycotretus magus Lacordaire, 1842 (Fig. 32D)
Mycotretus marginicollis Lacordaire, 1842 (Fig. 32E)
Mycotretus melanopterus Lacordaire, 1842 (Fig. 32F)
Mycotretus xanthosomus Lacordaire, 1842 (Fig. 37F)
Mycotretus melanotus Gorham, 1888 (Fig. 18D)

- Mycotretus miniatus* Lacordaire, 1842 (Fig. 33B)
Mycotretus minutus (Duponchel, 1825) (Fig. 13E)
 Mycotretus quadrinus Lacordaire, 1842 (Fig. 35D)
Mycotretus misellus Lacordaire, 1842 (Fig. 33C)
Mycotretus mycetophagoides mycetophagoides Crotch, 1876 (Fig. 7F)
Mycotretus mycetophagoides erythrocerus Crotch, 1876 (Fig. 8A)
Mycotretus mycetophiloides mycetophiloides Crotch, 1876 (Fig. 8B)
Mycotretus mycetophiloides careus Crotch, 1876 (Fig. 8C)
Mycotretus nigricollis Gorham, 1888 (Fig. 18E)
Mycotretus nigripes Gorham, 1888 (Fig. 18F)
Mycotretus nigrivittis Lacordaire, 1842 (Fig. 33D)
Mycotretus nigromaniscatus Boyle, 1954 (Fig. 3D)
Mycotretus nitescens Crotch, 1876 (Fig. 8E)
Mycotretus normalis Gorham, 1888 (Fig. 19A)
Mycotretus noterinus Gorham, 1888 (Fig. 19B)
Mycotretus octoculatus Alvarenga, 1983 (Fig. 2E)
Mycotretus opalescens Crotch, 1876 (Fig. 8F)
 Mycotretus pelliciens Kirsch, 1876 (Fig. 23A) **syn. nov.**
Mycotretus opalizans Mader, 1942 (Fig. 38E)
Mycotretus oppositipunctum Gorham, 1888 (Fig. 19C)
Mycotretus ornatus (Duponchel, 1825) (Fig. 14A)
 Mycotretus cognatus Lacordaire, 1842 (Fig. 27E) **syn. nov.**
 Erotylus coronatus Duponchel, 1825 (Fig. 13A) **syn. nov.**
 Mycotretus difficilis Lacordaire, 1842 (Fig. 28A) **syn. nov.**
 Mycotretus dispar Taschenberg, 1870 (Fig. 40E) **syn. nov.**
 Mycotretus dubius Lacordaire, 1842 (Fig. 28E) **syn. nov.**
 Mycotretus godarti Lacordaire, 1842 (Fig. 30D)
 Mycotretus graphoderus graphoderus Lacordaire, 1842 (Fig. 30F) **syn. nov.**
 Mycotretus graphoderus strigipennis Kuhnt, 1910 (Fig. 24E) **syn. nov.**
 Mycotretus graphoderus thoracicus Kuhnt, 1910 (Fig. 24F) **syn. nov.**
 Mycotretus intermedius Lacordaire, 1842 (Fig. 31C) **syn. nov.**
 Erotylus maculosus Duponchel, 1825 (Fig. 14B)
 Mycotretus melanostictus Lacordaire, 1842 (Fig. 33A)
 Erotylus nigropunctatus Duponchel, 1825 (Fig. 13F) **syn. nov.**
 Mycotretus ornatus partialis Deelder, 1942 (Fig. 12B) **syn. nov.**
 Mycotretus partialis Mader, 1940 (Fig. 39A) **syn. nov.**
 Mycotretus posticus Lacordaire, 1842 (Fig. 14A) **syn. nov.**
 Erotylus puncticollis Duponchel, 1825 **syn. nov.**
 Mycotretus terminalis Lacordaire, 1842 (Fig. 37C)
Mycotretus pallidior (Crotch, 1876) (Fig. 9A)
 Mycotretus nigrotinctus Crotch, 1876 (Fig. 8D)
Mycotretus palmiphilus Lacordaire, 1842 (Fig. 34A)
Mycotretus panamanus Gorham, 1888 (Fig. 19D)
Mycotretus parallelus Crotch, 1876 (Fig. 9B)
Mycotretus partitus Lacordaire, 1842 (Fig. 34B)
Mycotretus pebasensis Crotch, 1876 (Fig. 9C)
Mycotretus pecari Lacordaire, 1842 (Fig. 34C)
 Mycotretus quattuordecimguttatus conjunctus Crotch, 1876 (Fig. 10A) **syn. nov.**
Mycotretus peruae Crotch, 1876 (Fig. 9D)
Mycotretus pictopiceus Gorham, 1888 (Fig. 19E)

- Mycotretus planus* Gorham, 1888 (Fig. 19F)
Mycotretus polyophthalmus Lacordaire, 1842 (Fig. 34D)
Mycotretus prioteloides Mader, 1942 (Fig. 39B)
Mycotretus psittacus Lacordaire, 1842 (Fig. 34E)
Mycotretus psylloboroides Crotch, 1876 (Fig. 9E)
Mycotretus pulchellus Lacordaire, 1842 (Fig. 34F)
Mycotretus puncticeps Kirsch, 1865 (Fig. 23C)
Mycotretus pusillus Lacordaire, 1842 (Fig. 35B)
Mycotretus pygmaeus Lacordaire, 1842 (Fig. 35C)
Mycotretus quadrioculatus Alvarenga, 1983 (Fig. 2F)
Mycotretus quadripunctatus Crotch, 1876 (Fig. 9F)
Mycotretus quattuordecimguttatus Lacordaire, 1842 (Fig. 35E)
Mycotretus bisseptemguttatus Crotch, 1876 (Fig. 4D) **syn. nov.**
Mycotretus reticulatus Crotch, 1876 (Fig. 10C)
Mycotretus lopesi Alvarenga, 1989 (Fig. 2C) **syn. nov.**
Mycotretus rhodosomus Lacordaire, 1842 (Fig. 35F)
Brachysphaenus (Iphichus) nigromaculatus Kuhnt, 1909 (Fig. 25B) **syn. nov.**
Mycotretus rubidus Gorham, 1888 (Fig. 20A)
Mycotretus rufilabris (Lacordaire, 1842) (Fig. 36A)
Mycotretus rufipennis Gorham, 1888 (Fig. 20B)
Mycotretus sallaei Crotch, 1876 (Fig. 10D)
Mycotretus sandicatus Gorham, 1888 (Fig. 20C)
Mycotretus sanguineus (Duponchel, 1825) (Fig. 14C)
Mycotretus sannio Lacordaire, 1842 (Fig. 36B)
Mycotretus scalaris Lacordaire, 1842 (Fig. 36D)
Mycotretus scitulus Lacordaire, 1842 (Fig. 36E)
Mycotretus derasofasciatus Kuhnt, 1910 (Fig. 23F) **syn. nov.**
Mycotretus nubifer Casey, 1916 (Fig. 3E) **syn. nov.**
Mycotretus sedecimguttatus (Guérin-Méneville, 1844) (Fig. 22D)
Mycotretus seminiger Harold, 1876 (Fig. 6B)
Mycotretus separandus Crotch, 1876 (Fig. 10F)
Mycotretus sericeonitens sericeonitens Crotch, 1876 (Fig. 11A)
Mycotretus sericeonitens monticola Crotch, 1876
Mycotretus sexoculatus sexoculatus Lacordaire, 1842 (Fig. 36F)
Mycotretus sexoculatus chaparensis Delkeskamp, 1957 (Fig. 12D)
Mycotretus sexpunctatus Gorham, 1888 (Fig. 20D)
Mycotretus signatellus signatellus Crotch, 1876 (Fig. 11B)
Mycotretus signatellus imperfectus Crotch, 1876 (Fig. 11C) **syn. nov.**
Mycotretus fragosoi Alvarenga, 1983 (Fig. 2B) **syn. nov.**
Mycotretus singularis Lacordaire, 1842 (Fig. 37B)
Mycotretus sobrinus (Guérin-Méneville, 1841) (Fig. 22E)
Mycotretus silaceus Lacordaire, 1842 (Fig. 37A)
Mycotretus spadiceus Gorham, 1888 (Fig. 20E)
Mycotretus sticticollis Lacordaire, 1842
Mycotretus stillatus Kuhnt, 1910 (Fig. 25E)
Mycotretus stramineus Gorham, 1888 (Fig. 20F)
Mycotretus succinctus Crotch, 1876 (Fig. 11D)
Mycotretus suturalis Kirsch, 1876 (Fig. 23D)
Mycotretus ternotatus Gorham, 1888 (Fig. 21A)
Mycotretus tesserarius Lacordaire, 1842

Mycotretus thoracicus Kuhnt, 1910 (Fig. 24F)
Mycotretus tibialis Gorham, 1888 (Fig. 21B)
Mycotretus tigratus Lacordaire, 1842 (Fig. 37D)
 Mycotretus nigrocinctus Lacordaire, 1842 (Fig. 33E)
 Mycotretus trabeatus Lacordaire, 1842 (Fig. 37E) **syn. nov.**
Mycotretus tigrinoides Mader, 1942 (Fig. 39C)
Mycotretus tigrinus (Olivier, 1792) (Fig. 39F)
 Erotylus conspersus Germar, 1824
 Mycotretus leopardus Crotch, 1876
 Mycotretus multimaculatus Taschenberg, 1870 (Fig. 40F)
 Mycotretus tigrinus pardalis Crotch, 1876
Mycotretus tigripennis Mader, 1942 (Fig. 39D)
Mycotretus tricolor Crotch, 1876 (Fig. 11E)
Mycotretus trifasciatus Guérin, 1956 (Fig. 22A)
Mycotretus tucuruensis Alvarenga, 1983 (Fig. 3A)
Mycotretus vilis Lacordaire, 1842
Mycotretus vittatus Gorham, 1888 (Fig. 21C)
Mycotretus xanthomelas Crotch, 1876 (Fig. 12A)
Mycotretus ziczac ziczac Kuhnt, 1910 (Fig. 26B)
Mycotretus ziczac serenus Delkeskamp, 1957 (Fig. 12E)

Excluded species

Iphiclus virgatus (Kuhnt, 1910) **comb. nov.**
Mycolybas antesignatus (Mader, 1942) **comb. nov.**

Catalogue

I. Alvarenga, M. Figs 2A–F, 3A

1. *Mycotretus bistriloculatus* Alvarenga, 1983

Mycotretus bistriloculatus Alvarenga, 1983: 583. Type locality: “BRASIL, Amazonas, Estirão do Equador (coordenadas aproximadas, long 71°38’W e lat 4°33’S)”.

Mycotretus bistriloculatus – Alvarenga 1994: 21.

Primary type

Holotype (Fig. 2A)

BRAZIL • ♂ (dissected); “Coleção M. Alvarenga [printed] \ HOLOTIPO [red label, printed] \ Estirão do Equador, Amazonas, Brasil X.1979, M. Alvarenga [printed] \ M [printed] \ *Mycotretus bistriloculatus* m. [handwritten] M. Alvarenga det. [printed] 1983 [handwritten]”; MNRJ.

Other specimens examined

BRAZIL • 1 ♀ (dissected); “Coleção M. Alvarenga [printed] \ Paratipo [red label, printed] \ Estirão do Equador, Amazonas, Brasil X.1979, M. Alvarenga [printed] \ M [printed] \ *Mycotretus bistriloculatus* m. [handwritten] M. Alvarenga det. [printed] 1983 [handwritten]”; MNRJ.

Distribution

North Brazil.

Remarks

Penile flagellum elongated, thin, sclerotized at the anterior third of virga and with a desclerotized portion (approximately 2× the length of head) connecting virga and head. Head V-shaped, each arm separating from each other anteriorly and ending in two outer tips slightly bent laterally. *Mycotretus bistriloculatus* is similar to *M. argus* (Fig. 26F), *M. sexoculatus chaparensis* (Fig. 12D) and *M. pulchellus* (Fig. 34F) in body shape and arrangement of circular elytral spots. There are few morphological differences in the flagellar head (e.g., lateral borders more or less elongated, sclerotized). The status of these species requires examining more specimens, which will be studied in future research.

2. *Mycotretus fragosoi* Alvarenga, 1983

Mycotretus fragosoi Alvarenga, 1983: 587. Type locality: “BRASIL, Amazonas, Estirão do Equador (coordenadas aproximadas, long 71°38’W e lat 4°33’S)”.

Mycotretus fragosoi – Alvarenga 1994: 26.

Primary type

Holotype (Fig. 2B)

BRAZIL • “Coleção M. Alvarenga [printed] \ HOLOTIPO [red label, printed] \ Estirão do Equador, Amazonas, Brasil X.1979, M. Alvarenga [printed] \ M [printed] \ *Mycotretus fragosoi* m. [handwritten] M. Alvarenga det. [printed] 1983 [handwritten]”; MNRJ.

Remarks

New junior synonym of *M. signatellus* Crotch, 1876 (Fig. 11B, see below).

3. *Mycotretus lopesi* Alvarenga, 1989

Mycotretus lopesi Alvarenga, 1989: 35. Type locality: “BRASIL, Pará: Jacareacanga”.

Mycotretus lopesi – Alvarenga 1994: 28.

Primary type

Holotype (Fig. 2C)

BRAZIL • ♀ (dissected); “Coleção M. Alvarenga [printed] \ HOLOTIPO [red label, printed] \ Jacareacanga, Pará, Brasil, XII–1968, M. Alvarenga [printed] \ *Mycotretus lopesi* M. Alvarenga, 19 [handwritten]”; MNRJ.

Remarks

New junior synonym of *M. reticulatus* Crotch, 1876 (Fig. 10C, see below).

4. *Mycotretus luizi* Alvarenga, 1983

Mycotretus luizi Alvarenga, 1983: 588. Type locality: “BRASIL, Amazonas, Estirão do Equador (coordenadas aproximadas, long 71°38’W e lat 4°33’S)”.

Mycotretus luizi – Alvarenga 1994: 28.

Primary type

BRAZIL • Holotype (Fig. 2D); “Coleção M. Alvarenga [printed] \ HOLOTIPO [red label, printed] \ Estirão do Equador, Amazonas, Brasil X.1979, M. Alvarenga [printed] \ *Mycotretus luizi* m. [handwritten] M. Alvarenga det. [printed] 1983 [handwritten]”; MNRJ.

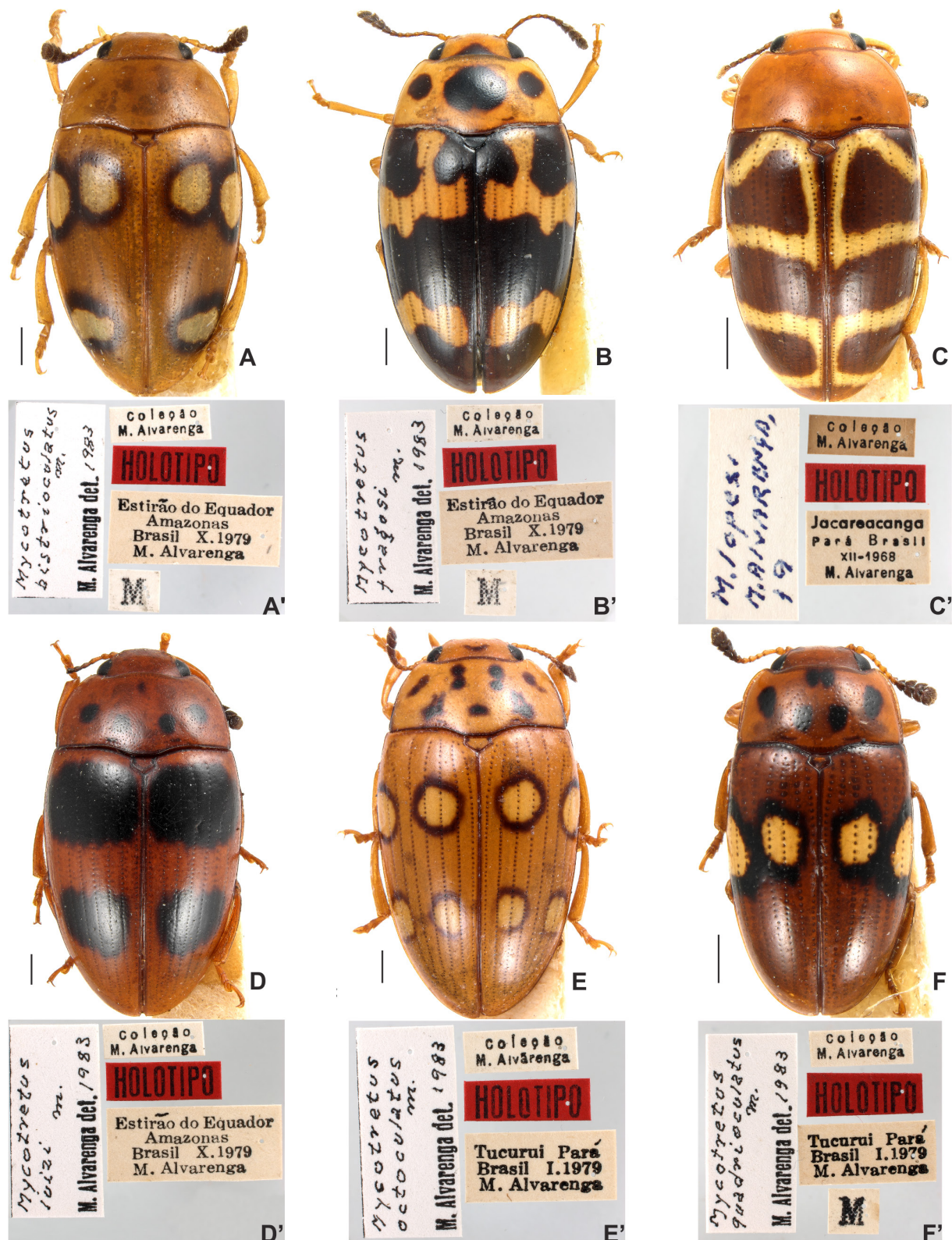


Fig. 2. Alvarenga holotypes (dorsal, labels). A–A'. *Mycotretus bistrioculatus* Alvarenga, 1983. B–B'. *M. fragosoi* Alvarenga, 1983. C–C'. *M. lopesi* Alvarenga, 1989. D–D'. *M. luizi* Alvarenga, 1983. E–E'. *M. octoculatus* Alvarenga, 1983. F–F'. *M. quadrioculatus* Alvarenga, 1983. Scale bars: A–B, D–F = 0.5 mm; C = 1 mm.

Remarks

New junior synonym of *M. cinctiger* Crotch, 1876 (Fig. 5B, see below).

5. *Mycotretus octoculatus* Alvarenga, 1983

Mycotretus octoculatus Alvarenga, 1983: 585. Type locality: “BRASIL, Pará, Tucuruí”.

Mycotretus octoculatus – Alvarenga 1994: 31.

Primary type

Holotype (Fig. 2E)

BRAZIL • “Coleção M. Alvarenga [printed] \ HOLOTIPO [red label, printed] \ Tucuruí Pará, Brasil, I.1979, M. Alvarenga [printed] \ *Mycotretus octoculatus* m. [handwritten] M. Alvarenga det. [printed] 1983 [handwritten]”; MNRJ.

Other specimens examined

BRAZIL • 1 ♀ (dissected); “Coleção M. Alvarenga [printed] \ Paratipo [red label, printed] \ Estirão do Equador, Amazonas, Brasil X.1979, M. Alvarenga [printed] \ M [printed] \ *Mycotretus octoculatus* m. [handwritten] M. Alvarenga det. [printed] 1983 [handwritten]”; MNRJ • 1 ♂ (dissected); “Coleção M. Alvarenga [printed] \ Brasil M. Gerais, Aguas Vermelhas, XII. 1983, M. Alvarenga [printed] \ *Mycotretus octoculatus* Alv. 1983 [handwritten] M. Alvarenga det. [printed] 1985 [handwritten]”; MNRJ.

Distribution

North and Southeast Brazil.

Remarks

Flagellar head U-shaped, similar to that in *M. alvarengai* (Fig. 39G), but with a desclerotization on virga approximately 3× as long as that in this latter species. Body length and genitalia of *M. octoculatus* are bigger than in *M. alvarengai*, and the colour pattern is remarkably distinct in both species (Figs 2E, 39G).

6. *Mycotretus quadrioculatus* Alvarenga, 1983

Mycotretus quadrioculatus Alvarenga, 1983: 585. Type locality: “BRASIL, Pará, Tucuruí”.

Mycotretus quadrioculatus – Alvarenga 1994: 33. — Pecci-Maddalena *et al.* 2021a: 955.

Primary type

Holotype (Fig. 2F)

BRAZIL • “Coleção M. Alvarenga [printed] \ HOLOTIPO [red label, printed] \ Tucuruí Pará, Brasil, I.1979, M. Alvarenga [printed] \ M [printed] \ *Mycotretus quadrioculatus* m. [handwritten] M. Alvarenga det. [printed] 1983 [handwritten]”; MNRJ.

Other specimens examined

BRAZIL • 1 ♂ (dissected); “Coleção M. Alvarenga [printed] \ Paratipo [red label, printed] \ Tucuruí Pará, Brasil, I.1979, M. Alvarenga [printed] \ M [printed] \ *Mycotretus quadrioculatus* m. [handwritten] M. Alvarenga det. [printed] 1983 [handwritten]”; MNRJ • 1 ♀ (dissected); “Coleção M. Alvarenga [printed] \ Paratipo [red label, printed] \ Tucuruí Pará, Brasil, I.1979, M. Alvarenga [printed] \ M [printed] \ *Mycotretus quadrioculatus* m. [handwritten] M. Alvarenga det. [printed] 1983 [handwritten]”; MNRJ.

Distribution

North Brazil (Alvarenga 1994).

Remarks

Type locality, additional data: Tucuruí, in the state of Pará, North Brazil.

7. *Mycotretus tucuruensis* Alvarenga, 1983

Mycotretus tucuruensis Alvarenga, 1983: 586. Type locality: “BRASIL, Pará, Tucuruí”.

Mycotretus tucuruensis – Alvarenga 1994: 37. — McHugh & Chaboo 2015: 278.

Primary type

Holotype (Fig. 3A)

BRAZIL • ♂ (dissected); “Coleção M. Alvarenga [printed] \ HOLOTIPO [red label, printed] \ Tucuruí Pará, Brasil, I.1979, M. Alvarenga [printed] \ *Mycotretus tucuruensis* m. [handwritten] M. Alvarenga det. [printed] 1983 [handwritten]”; MNRJ.

Distribution

North Brazil (Alvarenga 1994).

II. Arrow, G.J.

Fig. 3B–C

8. *Mycotretus centralis* Arrow, 1909

Mycotretus centralis Arrow, 1909: 196. Type locality: “Guatemala, San Gerónimo”.

Mycotretus centralis – Kuhnt 1911: 54. — Mader 1942: 174; 1951: 216. — Blackwelder 1945: 468. — Alvarenga 1994: 21. — Pecci-Maddalena & Lopes-Andrade 2018b: 8.

Primary type

Lectotype (Fig. 3B)

GUATEMALA • “Type [disc-shaped label, red/orange border, printed] \ S. Geronimo, Guatemala., Champion. [printed] \ Sp. figured. [printed] \ B.C.A., Col., VII. *Mycotretus* [printed], *tigrinus*, Oliv. [handwritten] \ *Mycotretus centralis*, type, arrow [handwritten] \ LECTOTYPE, *Mycotretus centralis* Arrow, 1909 [red label, printed]”; BMNH.

Other specimens examined

See Pecci-Maddalena & Lopes-Andrade (2018b).

Distribution

Mexico, Guatemala, South and Southeast Brazil.

Remarks

See Pecci-Maddalena & Lopes-Andrade (2018b).



Fig. 3. Primary types (dorsal, labels). A–A'. Holotype of *Mycotretus tucuriensis* Alvarenga, 1983. B–B'. Lectotype of *M. centralis* Arrow, 1909. C–C'. Lectotype of *M. distinguendus* Arrow, 1909. D–D'. Holotype of *M. nigromanicanus* Boyle, 1954. E–E'. Lectotype of *M. nubifer* Casey, 1916. F–F'. Lectotype of *M. lesueurii* (Chevrolat, 1835). Scale bars = 1 mm.

9. *Mycotretus distinguendus* Arrow, 1909

Mycotretus distinguendus Arrow, 1909: 196. Type locality: “Mexico, Toxpam” [apud Gorham 1888: 60]”.

Mycotretus distinguendus – Kuhnt 1911: 54. — Blackwelder 1945: 466. — Alvarenga 1994: 24.

Primary type

Lectotype, here designated (Fig. 3C)

MEXICO • “Type [disc-shaped label, red/orange border, printed] \ *Mycotretus distinguendus*, type, arrow [handwritten] \ *sobrinus*, Lac. [handwritten] \ B.C.A., Col., VII. *Mycotretus* [printed] \ Toxpam [printed] \ Mexico., Salle, Coll. \ LECTOTYPE, *Mycotretus distinguendus* Arrow, 1909 [red label, printed]”; BMNH.

Other specimens examined

Paralectotypes

MEXICO • 1 spec.; “Toxpam [handwritten], Mexico., Salle, Coll. [printed] \ *Mycotretus sobrinus* Guer, apud Sallé [handwritten] \ B.C.A., Col., VII. *Mycotretus* [printed] \ PARALECTOTYPE, *Mycotretus distinguendus* Arrow, 1909 [yellow label, printed]”; BMNH • 1 spec.; “Toxpam [handwritten], Mexico., Salle, Coll. [printed] \ 2409 [printed] \ *Mycotretus sobrinus* Guer, apud Sallé [handwritten] \ B.C.A., Col., VII. *Mycotretus* [printed] \ PARALECTOTYPE, *Mycotretus distinguendus* Arrow, 1909 [yellow label, printed]”; BMNH • 1 ♀ (dissected); “Mexico., Salle, Coll. [printed] \ Toxpam [printed] \ *Mycotretus sobrinus* Guer, apud Sallé [handwritten] \ B.C.A., Col., VII. *Mycotretus* [printed] \ PARALECTOTYPE, *Mycotretus distinguendus* Arrow, 1909 [yellow label, printed]”; BMNH.

Additional material

MEXICO • 1 ♂ (dissected); “Coleção M. Alvarenga [printed] \ Homeotipo [red label, printed] \ mex. [front] 56, 143 [back] [handwritten] \ 1680 [printed] \ Comparado com tipo [printed] *Mycotretus distinguendus* [sic] Arrow, 1909 [handwritten] M. Alvarenga det. 1971 [printed]”; MNRJ.

Distribution

Mexico.

Remarks

Mycotretus distinguendus was described by Arrow (1909) based on individuals first identified by Gorham (1888) as *M. sobrinus* Guérin-Méneville (Fig. 22F). According to Arrow (1909: 196) “The Mexican form recorded as *Mycotretus sobrinus*, Guer., by Mr. Gorham in the same work must similarly be distinguished from that Brazilian species. It is much smaller, relatively shorter, the knees blacker, and the abdominal lines more marked. It may be called *M. distinguendus*”. We compared the male genitalia of both *M. distinguendus* and *M. sobrinus* and observed that they are clearly separated species. We also noted that *M. distinguendus* differs from other *Mycotretus* in having the first antennomere of the antennal club conspicuously wider than succeeding antennomeres.

III. Boyle, W.W.

10. *Mycotretus nigromaniscus* Boyle, 1954

Mycotretus nigromaniscus Boyle, 1954: 48. Type locality: “Pinery Canyon (6000 ft.), Chiricahua Mts., Cochise County, Arizona” [Arizona, USA].

Mycotretus nigromaniscus – Boyle 1956: 138. — Alvarenga 1994: 30.

Primary type

Holotype (Fig. 3D)

USA • “HOLOTYPE, *Mycotretus nigromaniscatus* Boyle [red label, printed \ 10701, *Mycotretus nigromaniscatus* Boyle [handwritten] TYPE [printed] \ Cochise Co., Ariz [printed] VII-19-[handwritten] 1919 [printed] Witmer Stone [printed] \ Pinery Canyon 6000 feet Chiricahua Mts.”; ANSP.

Other specimens examined

USA • 1 ♂ (dissected); “Madera Cn., Santa Rita, 8-VIII-1963 Mts., Ariz. Vincent Vesterby [printed] \ *Mycotretus nigromaniscatus* Boyle det WW Boyle [printed] \ W. Boyle, US Coll’n Rec. 2016 [printed] \ *Mycotretus nigromaniscatus* Boyle [handwritten] det. P.E.Skelley [printed]”; CELC.

Distribution

Southwest USA and Mexico.

Remarks

Mycotretus nigromaniscatus resembles *M. bistrigatus* Lacordaire (Fig. 27A) in body shape and colour. It is possible these two species are closely related or even synonymous, but we had no male specimens of *M. bistrigatus* at hand for comparison.

IV. Casey, T.L.

11. *Mycotretus nubifer* Casey, 1916

Mycotretus nubifer Casey, 1916: 158. Type locality: “Guatemala (Quitché)” [= Department of Quiché, Guatemala].

Mycotretus nubifer – Blackwelder 1945: 467. — Alvarenga 1994: 31.

Primary type

Lectotype, here designated (Fig. 3E).

GUATEMALA • “Joyabaj, Quitché, Guatemala [handwritten] \ nubifer [handwritten], Csy. [name?, handwritten] \ CASEY, bequest, 1925 [printed] \ TYPE USNM [red label, printed], 48793 [handwritten]”; NMNH.

Remarks

New junior synonym of *M. scitulus* Lacordaire, 1842 (Fig. 36E, see below).

V. Chevrolat, L.A.A.

12. *Mycotretus lesueuri* (Chevrolat, 1835)

Erotylus lesueuri Chevrolat, 1835: 175, fasc. 8. Type locality: “Bocadelmonte” [Boca del Monte, in the state of Veracruz, Mexico].

Mycotretus savignyi Lacordaire, 1842: 156. Type locality: “Colombie” **syn. nov.** (Fig. 36C).

Mycotretus lesueuri – Lacordaire 1842: 155. — Crotch 1876: 455. — Gemminger & Harold 1876: 3693. — Gorham 1888: 59. — Kuhnt 1909: 73; 1911: 50. — Deelder 1942: 88. — Blackwelder 1945: 466. — Alvarenga 1994: 28. — Skelley & Goodrich 1994: 129. — Skelley 1998b: 17. — Pecci-Maddalena & Lopes-Andrade 2018b: 21. — Pecci-Maddalena *et al.* 2021a: 955.

Mycotretus savignyi – Crotch 1873b: 145; 1876: 455. — Gemminger & Harold 1876: 3695. — Gorham 1888: 60. — Kuhnt 1909: 72; 1911: 53. — Deelder 1942: 89. — Mader 1942: 172; 1951: 212. — Blackwelder 1945: 467. — Guérin 1948: 20. — Alvarenga 1994: 34. — Skelley 1998b: 17. — McHugh & Chaboo 2015: 278.

Primary type

Lectotype, here designated (Fig. 3F)

MEXICO • “TYPE [blue label, printed] \ TYPE. [printed], lesueuri Ch [handwritten] \ LECTOTYPE [printed], Erotylus lesueuri Chevrolat, 1835 [red label, handwritten] \ *Mycotretus lesueuri* (Chevrolat) [handwritten], det. I. Pecci-Maddalena 2017 [printed]”; UMZC.

Other specimens examined

Paralectotype

MEXICO • 1 spec.; “Chevr. [printed] \ PARATYPE [blue label, printed] \ PARALECTOTYPE [printed], Erotylus lesueuri Chevrolat, 1835 [yellow label, handwritten] \ *Mycotretus lesueuri* (Chevrolat) [handwritten], det. I. Pecci-Maddalena 2017 [printed]”; 1 specimen (UMZC) “mex. [handwritten]”; UMZC.

Additional material

BRAZIL • 1 spec.; “Braz [handwritten]”; UMZC.

MEXICO • 1 ♀ (dissected); BMNH • 1 spec.; “Toxpam [handwritten] Mexico. Salle Coll. [printed] \ 2405 [printed] \ B.C.A., Col., VII. *Mycotretus lesueuri*. [printed] \ *Mycotretus lesueuri* Chev apud Sallé [handwritten]”; UMZC • 1 ♀ (dissected); “Mexico. Salle Coll. [printed] \ Toxpam [printed] \ B.C.A., Col., VII. *Mycotretus lesueuri*. [printed] \ *Mycotretus lesueuri* Chev apud Sallé [handwritten]”; BMNH • 1 ♂ (dissected); “red label [unwritten] \ M. lesueuri Chev [handwritten] \ MUSEUM PARIS AMÉRIQUE CENTRALE (Coll du [?] Biol Central Amer) Godman 1908 [printed] \ Jalapa, Mexico. Hoege. [printed]”; MNHN • 1 ♀ (dissected); “Coleção M. Alvarenga [printed] \ Homeotipo [red label, printed] \ Coatepec, Ver. [handwritten] \ *Mycotretus lesueuri* Chevr. [handwritten] \ 1655 [printed] \ Comparado com tipo [printed] Erotylus lesueuri Chevr., 1835 [handwritten] M. Alvarenga det. 1971 [printed] \ *Mycotretus lesueuri* Coat. Chev. [handwritten] \ DZUP 132756 [printed]”; DZUP • 1 ♂ (dissected); “Apaneco, Ahuachapau, El Salvador, 16.VII. 1959, J. Bechyné [handwritten] \ DZUP 132757 [printed]”; DZUP • 1 ♂ (dissected); “Coleção M. Alvarenga [printed] \ I. [?] San Vicente Finca Lapaz El Salvador 3.VIII. 1959 [?] J. Bechyné [handwritten] \ 1653 [printed] \ lesueuri [?] Chevr. [handwritten] \ Homeotipo [red label, printed] \ lesueuri Chevr. 1835 [handwritten]”; MNRJ • 1 ♂ (dissected); “[red label, unwritten] \ M. savignyi [handwritten] \ MUSEUM PARIS AMÉRIQUE CENTRALE (Coll du [?] Biol Central Amer) Godman 1908 [printed] \ V. de Chiriqui, 25–4000 ft. Champion [printed]”; MNHN • 1 ♂ (dissected); “292, 39 [disc-shaped label, handwritten]”; MNHN • 1 spec.; “D. Lebas. [green label, handwritten]”; MRSN.

Distribution

Mexico, El Salvador, Colombia, North Brazil.

Remarks

The unique clear-cut difference between *M. lesueuri* and *M. savignyi* is the colour of the legs, which is black in the former and reddish-brown in the latter. There is no detectable morphological difference.

VI. Crotch, G.R.

Figs 4–11, 12A

13. *Mycotretus adalioides* Crotch, 1876

Mycotretus adalioides Crotch, 1876: 448. Type locality: “Peru”.

Mycotretus adalioides – Gemminger & Harold 1876: 3691. — Kuhnt 1909: 74; 1911: 47. — Mader 1942: 173; 1951: 214. — Blackwelder 1945: 465. — Alvarenga 1994: 20. — Skelley 1998b: 16. — McHugh & Chaboo 2015: 278. — Pecci-Maddalena *et al.* 2021b: 3099.

Primary type

Lectotype, here designated (Fig. 4A)

PERU • “TYPE [blue label, printed] \ TYPE [printed], adalioides Peru. Jans. [handwritten] \ LECTOTYPE [printed], *Mycotretus adalioides* Crotch, 1876 [red label, handwritten]”; UMZC.

Distribution

Unknown locality in Peru.

Remarks

Mycotretus adalioides resembles *Mycomystes apicalis* (Fig. 26E) in body colour and shape (Pecci-Maddalena *et al.* 2021b). More material and comparative genitalic studies are needed to verify whether *M. adalioides* must be transferred to *Mycomystes* or, on the other hand, considered a *Mycotretus* representative.

14. *Mycotretus balteatus* Crotch, 1876

Mycotretus balteatus Crotch, 1876: 445. Type locality: “Ega” [= Tefé, in the state of Amazonas, North Brazil].

Mycotretus balteatus – Gemminger & Harold 1876: 3692. — Kuhnt 1909: 74; 1911: 48. — Blackwelder 1945: 465. — Alvarenga 1994: 21. — Skelley 1998b: 16.

Primary type

Lectotype, here designated (Fig. 4B)

BRAZIL • “TYPE [blue label, printed] \ TYPE [printed], balteatus Ega Bates [handwritten] \ LECTOTYPE [printed], *Mycotretus balteatus* Crotch, 1876 [red label, handwritten]”; UMZC.

Other specimens examined

BRAZIL • 1 ♀ (dissected); “Homeotipo [red label, printed] \ Rio Cauaburi, Amazon, Brasil, 7-8.XII.1962, J. Bechyné col. [printed] \ Convênio DZSP-Goeldi [printed] \ Comparado com tipo [printed] *Mycotretus balteatus* Crotch, 1876 [handwritten] M. Alvarenga det. 1971 [printed] \ 1823-A [handwritten]”; MNRJ.

PERU • 1 ♂ (dissected); “PERU: Dept. Loreto, 1.5 km, N Teniente Lopez, 2°35.66’S, 76°06.92’W, 16 July 1993, 210–240 m, Richard Leschen #116, ex *Favolus brasiliensis* [printed] \ *Mycotretus balteatus* [handwritten] det. P.E.Skelley [printed]”; FSCA.

Distribution

North Brazil.

Remarks

1) The locality “Ega” mentioned by Crotch (1876) currently corresponds to “Tefé”, in the state of Amazonas, North Brazil (Alvarenga 1994), and we use the name Tefé, rather than Ega, throughout the text. 2) The penile flagellum of *Mycotretus balteatus* has a flagellar ring-shaped head, similar to that present in other *Mycotretus* (e.g., *M. pygmaeus*, *M. deyrollei*, *M. maculatus*).

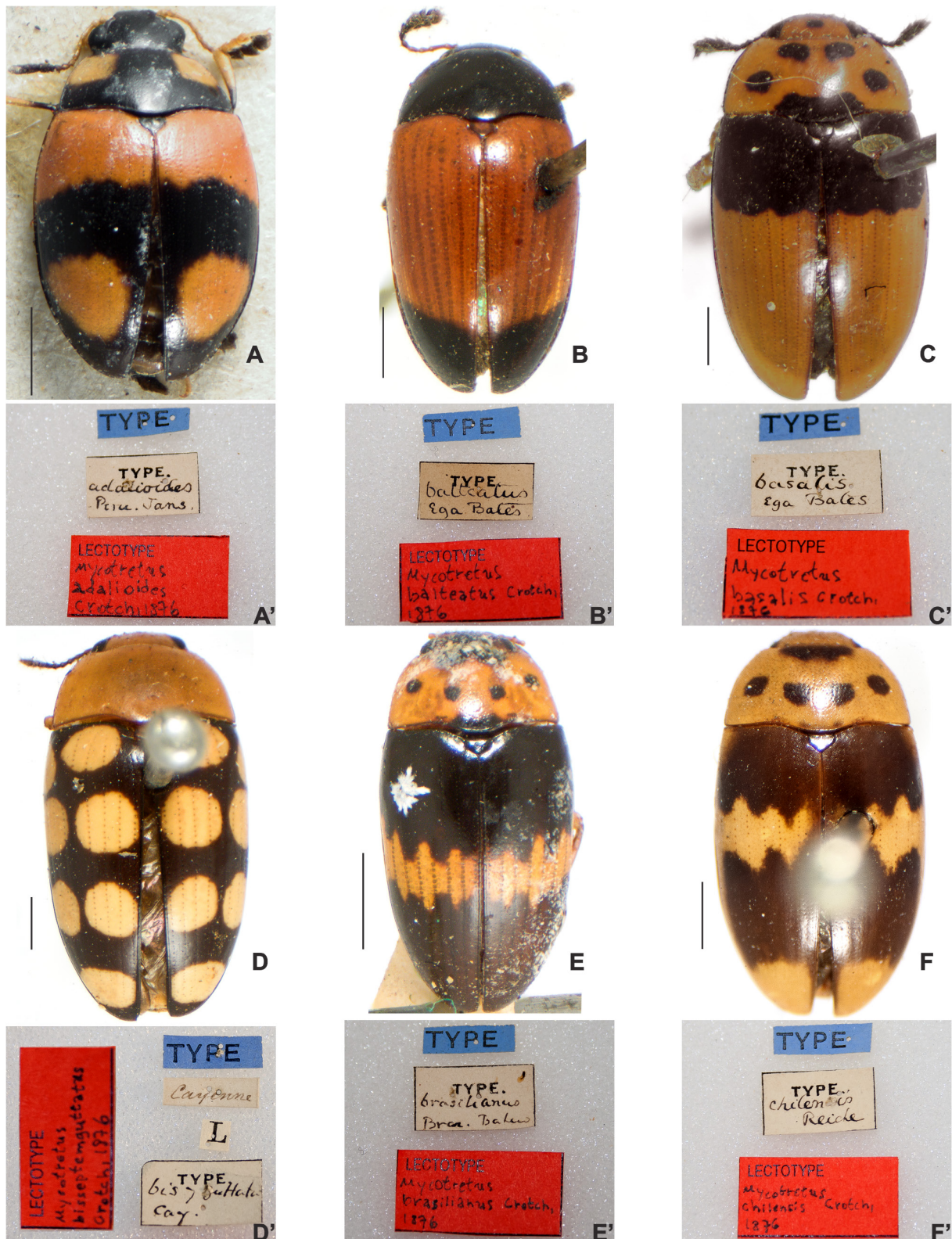


Fig. 4. Crotch primary types (dorsal, labels). **A–A'**. Lectotype of *Mycotretus adalioides* Crotch, 1876. **B–B'**. Lectotype of *M. balteatus* Crotch, 1876. **C–C'**. Lectotype of *M. basalis* Crotch, 1876. **D–D'**. Lectotype of *M. bisseptemguttatus* Crotch, 1876. **E–E'**. Lectotype of *M. brasilianus* Crotch, 1876. **F–F'**. Lectotype of *M. chilensis* Crotch, 1876. Scale bars = 1 mm.

15. *Mycotretus basalis* Crotch, 1876

Mycotretus basalis Crotch, 1876: 438. Type locality: “Ega” [= Tefé, in the state of Amazonas, North Brazil].

Mycotretus basalis – Crotch 1876: 438. — Gemminger & Harold 1876: 465. — Kuhnt 1909: 76; 1911: 52. — Alvarenga 1994: 21. — Skelley 1998b: 15.

Primary type

Lectotype, here designated (Fig. 4C)

BRAZIL • “TYPE [blue label, printed] \ TYPE [printed], basalis Ega Bates [handwritten] \ LECTOTYPE [printed], *Mycotretus basalis* Crotch, 1876 [red label, handwritten]”; UMZC.

Remarks

New junior synonym of *M. egae* Crotch, 1876 (Fig. 6C, see below).

16. *Mycotretus bisseptemguttatus* Crotch, 1876

Mycotretus bisseptemguttatus Crotch, 1876: 441. Type locality: “Cayenne” [Cayenne, French Guiana].

Mycotretus bisseptemguttatus – Gemminger & Harold 1876: 3692. — Kuhnt 1909: 71; 1911: 48. — Blackwelder 1945: 466. — Alvarenga 1994: 21. — Skelley 1998b: 15.

Primary type

Lectotype, here designated (Fig. 4D)

FRENCH GUIANA • “TYPE [blue label, printed] \ Cayenne [handwritten] \ L [printed] \ TYPE [printed], bis 7 guttata Cay. [handwritten] \ LECTOTYPE [printed], *Mycotretus bisseptemguttatus* Crotch, 1876 [red label, handwritten]”; UMZC.

Remarks

New junior synonym of *M. quattuordecimguttatus* Lacordaire, 1842 (Fig. 35E, see below).

17. *Mycotretus brasilianus* Crotch, 1876

Mycotretus brasilianus Crotch, 1876: 442. Type locality: “Brazil”.

Mycotretus brasilianus – Fleutiaux 1886: 223. — Kuhnt 1909: 74; 1911: 48. — Blackwelder 1945: 466. — Alvarenga 1994: 21. — Skelley 1998b: 15.

Primary type

Lectotype, here designated (Fig. 4E)

BRAZIL • “TYPE [blue label, printed] \ TYPE [printed], brasilianus Bras. Bates [handwritten] \ LECTOTYPE [printed], *Mycotretus brasilianus* Crotch, 1876 [red label, handwritten]”; UMZC.

Other specimens examined

BRAZIL • 1 ♀ (dissected); “Coleção M. Alvarenga [printed] \ Homeotipo [red label, printed] \ REPÊSARIO GRANDE, Guanabara BRASIL [printed] XI. 1966 [handwritten] F.M. Oliveira [printed] \ Comparado com tipo [printed] *Mycotretus brasilianus* Crotch, 1876 [handwritten] M. Alvarenga det. 1971 [printed] \ 1934 [printed] \ DZUP 136225 [printed]”; DZUP • 1 ♀ (dissected); “Montenegro, RS, II/VIII/77, A. Lise [handwritten], leg. [printed] \ Col MCN 23349 [?] [handwritten] \ *M. brasilianus*

[handwritten]”; MCNZ • 1 ♀ (dissected); “Triunfo, RS (Copesul), 6.I.2005, L. Schmidt col. [printed] \ Col. MCN 232833 [printed]”; MCNZ • 1 ♀ (dissected); “S Fco de Assis, RS, 25.IV.2009, I.Heydrich [printed] \ Col. MCN 238433 [printed]”; MCNZ.

Distribution

Southeast Brazil (Alvarenga 1994), South Brazil.

Remarks

Mycotretus brasiliensis resembles *M. magus* (Fig. 32D) in the colour pattern of the pronotum, the serrate elytral bands and in having a hexagonal black spot on the head, but *M. magus* is slightly more elongated than *M. brasiliensis*. It is possible these species are closely related or even conspecific. However, we studied only females and, therefore, we prefer not to synonymize them at this moment. The body coloration of *M. brasiliensis* also resembles that of *M. chilensis* (Fig. 4F), but there is no cephalic spot or mark in the latter.

18. *Mycotretus chilensis* Crotch, 1876

Mycotretus chilensis Crotch, 1876: 454. Type locality: “Chili” [= Chile, possibly mislabelled, see Pecci-Maddalena & Lopes-Andrade 2017: 147].

Mycotretus bicinctus Guérin, 1949a: 236 (Fig. 21E). Type locality: “Parque da Cantareira, São Paulo” [Parque da Cantareira, São Paulo, Southeast Brazil].

Mycotretus chilensis – Gemminger & Harold 1876: 3692. — Kuhnt 1909: 75; 1911: 48. — Blackwelder 1945: 466. — Guérin 1952: 182. — Alvarenga 1994: 22. — Skelley 1998b: 17. — Skelley & Cekalovic 2001: 221. — Pecci-Maddalena & Lopes-Andrade 2017: 147.

Mycotretus bicinctus – Alvarenga 1994: 21. — Campaner *et al.* 2008: 242. — Pecci-Maddalena & Lopes-Andrade 2017: 147 [junior synonym].

Primary type

Lectotype (Fig. 4F)

CHILE • “TYPE [blue label, printed] \ TYPE [printed], chilensis Reiche [handwritten] \ LECTOTYPE [printed], *Mycotretus chilensis* Crotch, 1876 [red label, handwritten]”; UMZC.

Other specimens examined

See Pecci-Maddalena & Lopes-Andrade (2017).

Distribution

South and Southeast Brazil and a doubtful record from an unknown locality in Chile (Pecci-Maddalena & Lopes-Andrade 2017).

19. *Mycotretus chontalesi* Crotch, 1873

Mycotretus chontalesi Crotch, 1873b: 145. Type locality: “Santo Domingo, Chontales, Nicaragua” [Department of Chontales, Nicaragua].

Mycotretus chontalesi – Gemminger & Harold 1876: 3692. — Gorham 1888: 70. — Kuhnt 1909: 72; 1911: 48. — Blackwelder 1945: 466. — Alvarenga 1994: 22.

Primary type

Lectotype, here designated (Fig. 5A)

NICARAGUA • “Type [disc-shaped label, red/orange border, printed] \ *Mycotretus chontalesi*, Type. Crotch [handwritten] \ CHONTALES, E.M. Janson [printed] \ TYPE [printed], chontalesi [handwritten] \ LECTOTYPE [printed], *Mycotretus chontalesi* Crotch, 1873 [red label, handwritten]”; BMNH.

Remarks

New junior synonym of *M. lepidus* Lacordaire, 1842 (Fig. 31F, see below).

20. *Mycotretus cinctiger* Crotch, 1876

Mycotretus cinctiger Crotch, 1876: 438. Type locality: “Santarém” [in the state of Pará, North Brazil]. *Mycotretus luizi* Alvarenga, 1983: 588. Type locality: “BRASIL, Rio Javari, Estirão do Equador (coordenadas aproximadas: long 71°38’W e lat 4°33’S)”, [Amazon, Brazil] **syn. nov.** (Fig. 2D).

Mycotretus cinctiger – Gemminger & Harold 1876: 3692. — Kuhnt 1909: 75; 1911: 48. — Mader 1942: 174; 1951: 218. — Blackwelder 1945: 466. — Alvarenga 1994: 22. — Skelley 1998b: 15.

Mycotretus luizi – Alvarenga 1994: 28.

Primary type

Lectotype, here designated (Fig. 5B)

BRAZIL • “TYPE [blue label, printed] \ TYPE [printed], cinctellus Santar. B [handwritten] \ LECTOTYPE [printed], *Mycotretus cinctiger* Crotch, 1876 [red label, handwritten]”; UMZC.

Other specimens examined

BRAZIL • 1 ♂ (dissected); “Coleção M. Alvarenga [printed] \ Homeotipo [red label, printed] \ Jacareacanga, Pará, Brasil [printed] X. 1969 [handwritten] F. R. Barbosa [printed] \ Comparado com tipo [printed] *Mycotretus cinctiger* Crotch, 1876 [handwritten] M. Alvarenga det. 1971 [printed] \ 1993 [printed] \ DZUP 136197 [printed]”; DZUP • 1 ♀ (dissected); “Paratipo [red label, printed] \ bôca do Cuminá-Miri, Oriximiná, PA, 16-26.I.1968, Exp. Perm. Amaz. [printed] \ *Mycotretus luizi* m. [handwritten] M. Alvarenga det. [printed] 1983 [handwritten]”; MNRJ • 1 ♂ (dissected); “Brasil: MS, Coxim, Próximo Rio Taquari: 18° 21’ 45’’S/54° 36’56’’W/ 309m”; 12–14.vi.2015, leg. Chamorro, J. [printed]”; CELC • 6 specs; “Brasil: MS, Coxim, Próximo Rio Taquari: 18° 21’ 45’’S/54° 36’56’’W/ 309m”; 12–14.vi.2015, leg. Chamorro, J. [printed]”; CELC • 1 spec.; “Ilha de Maracá RR, 4–12 / 12 [handwritten] / 19 [printed] 87 [handwritten], E. H. Buckup leg. [printed] \ Col. MCN 238456 [printed]”; MCNZ.

Distribution

North and Central-West Brazil.

Remarks

1) The lectotype of *M. cinctiger* seems to be teneral, and differs from *M. luizi* in the pronotal spots not being completely pigmented and the central elytral spot absent. Aside from these colour variations, there was no detectable difference in the morphology of male genitalia and other morphological attributes. 2) *Mycotretus tucuruensis* Alvarenga has a similar penile flagellum and is potentially related to *M. cinctiger*, but differs from it in the two elytral black bands being conspicuously “serrate” and in possessing a large black mark on the head (Fig. 3A). Aside from that, the examined specimen of *M. tucuruensis* has the outer edge of the prosternal process conspicuously convex, compared to that of the examined individuals of *M. cinctiger*.

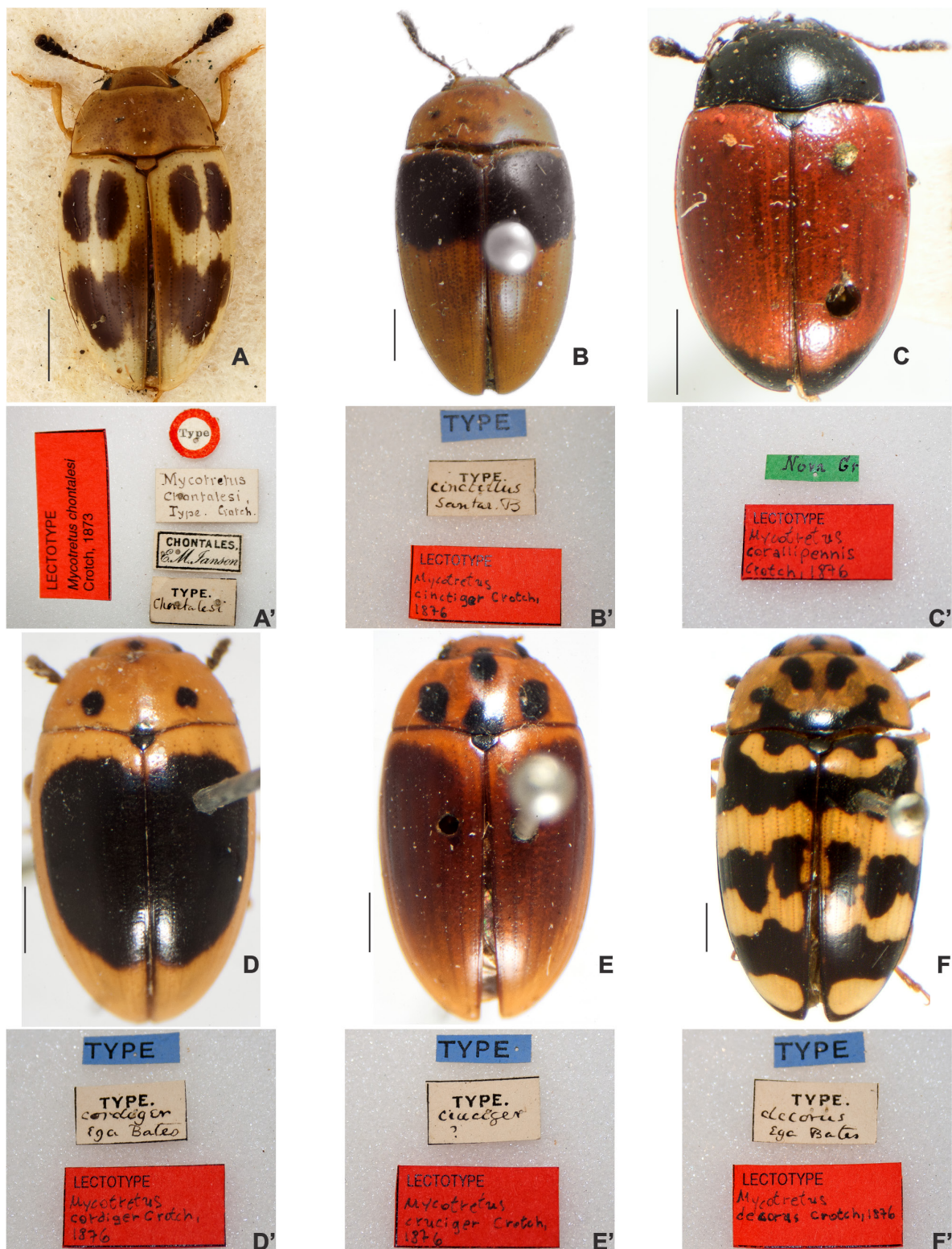


Fig. 5. Crotch primary types (dorsal, labels) cont. **A–A'**. Lectotype of *Mycotretus chontalesi* Crotch, 1873. **B–B'**. Lectotype of *M. cinctiger* Crotch, 1876. **C–C'**. Lectotype of *M. corallipennis* Crotch, 1876 [synonym of *Mycomystes apicalis* (Lacordaire, 1842)]. **D–D'**. Lectotype of *M. cordiger* Crotch, 1876. **E–E'**. Lectotype of *M. cruciger* Crotch, 1876. **F–F'**. Lectotype of *M. decorus* Crotch, 1876. Scale bars = 1 mm.

***Mycotretus corallipennis* Crotch, 1876**

Mycotretus corallipennis Crotch, 1876: 448. Type locality: “Venezuela, N. Granada.” [The old Viceroyalty of New Granada, which at various times included parts of Colombia, Panama, Ecuador and Venezuela].

Mycotretus corallipennis – Gemminger & Harold 1876: 3692. — Kuhnt 1909: 71; 1911: 48. — Blackwelder 1945: 466. — Alvarenga 1994: 22. — Skelley 1998b: 16. — Pecci-Maddalena *et al.* 2021b: 3078 [synonym of *Mycomystes apicalis*].

Primary type

Lectotype (Fig. 5C)

VENEZUELA • “Nova Gr [green label, handwritten] \ LECTOTYPE [printed], *Mycotretus corallipennis* Crotch, 1876 [red label, handwritten]”; UMZC.

Other specimens examined

See Pecci-Maddalena *et al.* (2021b).

Distribution

Unknown locality in Venezuela.

Remarks

Synonym of *Mycomystes apicalis* (Lacordaire, 1842), see Pecci-Maddalena *et al.* (2021b).

21. ***Mycotretus cordiger* Crotch, 1876**

Mycotretus cordiger Crotch, 1876: 455. Type locality: “Ega” [= Tefé, in the state of Amazonas, North Brazil].

Mycotretus zischkai Delkeskamp, 1957: 98, 112. Type locality: “Bolivien, Chapare-Gebiet, Oberer Rio Chipiriri, 400 m” [Río Chipiriri, Province of Chapare, Cochabamba, Bolivia] **syn. nov.** (Fig. 12F).

Mycotretus cordiger – Gemminger & Harold 1876: 3692. — Kuhnt 1909: 75; 1911: 48. — Blackwelder 1945: 466. — Alvarenga 1994: 23. — Skelley 1998b: 17. — McHugh & Chaboo 2015: 278.

Mycotretus zischkai – Alvarenga 1994: 38.

Primary type

Lectotype, here designated (Fig. 5D)

BRAZIL • “TYPE [blue label, printed] \ TYPE. [printed], *cordiger* Ega Bates [handwritten] \ LECTOTYPE [printed], *Mycotretus cordiger* Crotch, 1876 [red label, handwritten]”; UMZC.

Other specimens examined

Paralectotype

BRAZIL • 1 spec.; “PARATYPE [blue label, printed] \ green square [unwritten] \ Bates [printed] \ PARALECTOTYPE [printed], *Mycotretus cordiger* Crotch, 1876 [yellow label, handwritten]”; UMZC.

Additional material

BRAZIL • 2 ♂♂ (dissected); “BRASIL–Rondônia, Pimenta Bueno, X.1986 O. Roppa, P. Magno & J. Becker [printed]”; MNRJ • 1 spec.; “Paratype [disc-shaped label, printed] \ Paratypus Nr. [red label, printed] \ Bolivia trop. Region Chapare, 400 m Zischka, 10.VIII.1954 [green label, handwritten] \ Brit. Mus. [printed] 195[printed]8[?, handwritten]–272 [handwritten] \ *Mycotretus zischkai* m. [handwritten]

det. Delkeskamp 19[printed]57 [handwritten]”; BMNH • 1 ♀ (dissected); “MAI 1951 [printed] \ Bolivia-Region, Chapare-400m-leg. Zischka [printed] 2.V.51 [handwritten] \ PARATYPUS [red label, printed]”; MZSP • 1 ♀ (dissected); “BOLIVIA tropica, Region CHAPARÉ (400 Mtr.) DIRINGS [printed] \ Bolivia tropica, Region Chapara, 400 M.–Zischka [printed] \ Paratypus Nr. [red label, printed] \ Mycotretus zischkai m. [handwritten] det. Delkeskamp 19 [printed] 57 [handwritten]”; MZSP.

Distribution

North Brazil, Bolivia.

Remarks

There is no morphological difference between *M. cordiger* and *M. zischkai*. *Mycotretus cruciger* (Fig. 5E) is morphologically similar to *M. cordiger*, but their lectotypes show phenotypic differences, such as the comparatively larger pronotal and elytral spots in *M. cruciger*. Nevertheless, as we do not have males of *M. cruciger* at hand, we prefer not to synonymize it with *M. cordiger* at this moment.

22. *Mycotretus cruciger* Crotch, 1876

Mycotretus cruciger Crotch, 1876: 452. Type locality: Unknown.

Mycotretus cruciger – Gemminger & Harold 1876: 3692. — Kuhnt 1909:74; 1911:49. — Blackwelder 1945: 466. — Alvarenga 1994: 23. — Skelley 1998b: 17.

Primary type

Lectotype, here designated (Fig. 5E)

UNKNOWN COUNTRY • “TYPE [blue label, printed] \ TYPE. [printed], cruciger [?, handwritten] \ LECTOTYPE [printed], Mycotretus cruciger Crotch, 1876 [red label, handwritten]”; UMZC.

Other specimens examined

BRAZIL • 1 ♀ (dissected); “Coleção M. Alvarenga [printed] \ Homeotipo [red label, printed] \ Maturaca, AM, alto Rio Cauaburi, 12–17.XII.1962, J. Bechyné col. [printed] \ Comparado com tipo [printed] Mycotretus cruciger Crotch, 1876 [handwritten] M. Alvarenga det. 1971 [printed] \ 1750-A [handwritten]”; MNRJ • 1 ♀ (dissected); “Coleção M. Alvarenga [printed] \ Maturacá Rio Negro [printed] 14.12 [handwritten] -196[printed]2[handwritten] \ Brasil, A M, J.&B. Bechyne [printed] \ Mycotretus cruciger Crotch, 1876 [handwritten] M. Alvarenga det. [printed] 1984 [handwritten]”; MNRJ.

Distribution

Northern Brazil.

23. *Mycotretus decorus* Crotch, 1876

Mycotretus decorus Crotch, 1876: 442. Type locality: “Ega” [= Tefé, in the state of Amazonas, North Brazil].

Mycotretus decorus – Gemminger & Harold 1876: 3692. — Kuhnt 1909: 76; 1911: 49. — Blackwelder 1945: 466. — Alvarenga 1994: 23. — Skelley 1998b: 15.

Primary type

Lectotype, here designated (Fig. 5F)

BRAZIL • “TYPE [blue label, printed] \ TYPE. [printed], decorus Ega Bates [handwritten] \ LECTOTYPE [printed], Mycotretus decorus Crotch, 1876 [red label, handwritten]”; UMZC.

Other specimens examined

BRAZIL • 1 spec.; “Bates [printed] \ yellow square [unwritten] \ PARATYPE [blue label, printed] \ PARALECTOTYPE [printed], *Mycotretus decorus* Crotch, 1876 [yellow label, handwritten]”; UMZC.

Distribution

Northern Brazil.

24. *Mycotretus deyrollei* Crotch, 1876

Mycotretus deyrollei Crotch, 1876: 451. Type locality: “St Catharina” [state of Santa Catarina, South Brazil].

Mycotretus discipennis Kuhnt, 1910: 240. Type locality: “St. Catharina” [state of Santa Catarina, South Brazil] **syn. nov.** (Fig. 24A).

Mycotretus discipennis conductus Kuhnt, 1910: 240 [as a variety]. Type locality: “St. Catharina (Colonia Hansa)” [in the state of Santa Catarina, South Brazil] **syn. nov.** (Fig. 24B).

Mycotretus sexlineatus Kuhnt, 1910: 241. Type locality: “Brasilien” [Brazil] **syn. nov.** (Fig. 25D).

Mycotretus deyrollei – Gemminger & Harold 1876: 3692. — Kuhnt 1909: 75; 1911: 49. — Blackwelder 1945: 466. — Alvarenga 1994: 23. — Skelley 1998b: 17.

Mycotretus discipennis – Kuhnt 1911: 49. — Blackwelder 1945: 466. — Alvarenga 1994: 24.

Mycotretus discipennis conductus – Kuhnt 1911: 49. — Blackwelder 1945: 466. — Alvarenga 1994: 24.

Mycotretus sexlineatus – Kuhnt 1911: 53. — Blackwelder 1945: 467. — Guérin 1948: 20. — Alvarenga 1994: 35.

Primary type

Lectotype, here designated (Fig. 6A)

BRAZIL • “TYPE [blue label, printed] \ TYPE [printed], Deyrollii, St. Cath. [handwritten] \ LECTOTYPE [printed], *Mycotretus deyrollii* Crotch, 1876 [red label, handwritten]”; UMZC.

Other specimens examined

BRAZIL • 2 ♀♀ (dissected); “Porto Alegre [handwritten], R.G. do Sul. [printed], 10949 [handwritten] \ Coll. J. Guerin. S. Paulo. Brasil. [printed] 18197 [handwritten] \ *Mycotretus discipennis* Kuhnt [handwritten], J. Guerin. det. 19[printed]54[handwritten]”; MZSP • 1 ♀ (dissected); “BRASIL, Timbó, Sta. Catarina, Dirings [front, printed] out 1958 [printed]”; MZSP • 1 ♂ (dissected); “BRASIL, Timbó, Estº. Sta. Catar. Col.: DIRINGS [front, printed] out 1958 [printed]”; MZSP • 1 spec.; “BRASIL, Timbó, Sta. Catarina, Dirings [front, printed] out 1958 [printed]”; MZSP • 1 ♂ (dissected); “Rancho Queimado, SC, 8-11 / X [handwritten] /19[printed]94[handwritten] L. Moura [handwritten] leg. [printed] \ Col. MCN 232961 [printed]”; MCNZ • 1 ♀ (dissected); “Triunfo, RS (Copersul), 25/XI [handwritten]19[printed]94[handwritten], A. Franceschini [handwritten] \ Col. MCN 232960 [printed] \ *M. sexlineatus* [handwritten]”; MCNZ • 2 specs; “Curitibá, Paraná [printed] 10942 [handwritten] \ Coll. J. Guerin. S. Paulo. Brasil. [printed] 4180 [handwritten] \ *Mycotretus sexlineatus* Kuhnt. [handwritten] J. Guerin. det. 194[printed]5[handwritten]”; MCNZ.

Distribution

South Brazil.

Remarks

1) There was one unlabelled specimen close to the lectotype in the UMZC collection. However, we do not know whether it is a syntype. 2) The unique (and very small) difference between the lectotypes

of *M. discipennis* and *M. sexlineatus* is the length of the elytral stripes, which is shorter in the former than in the latter. Similarly, the central elytral spot of the lectotype of *M. deyrollei* is shorter than that of *M. discipennis conductus*. Aside from colour variation, there is no other external morphological difference in the examined specimens and the morphological pattern of their male genitalia is the same.

Mycotretus dimidiatus Crotch, 1876

Mycotretus dimidiatus Crotch, 1876: 444 [nec Taschenberg, 1870]. Type locality: “Ega” [= Tefé, in the state of Amazonas, Brazil].

Mycotretus dimidiatus – Harold 1876: 174. — Alvarenga 1994: 35. — Skelley 1998b: 16.

Remarks

Mycotretus dimidiatus Crotch, 1876 is a junior homonym of *M. dimidiatus* Taschenberg, 1870. Harold (1876: 174) proposed *M. seminiger* as a replacement name (see below).

25. *Mycotretus egae* Crotch, 1876

Mycotretus egae Crotch, 1876: 442. Type locality: “Ega” [= Tefé, in the state of Amazonas, North Brazil].

Mycotretus basalis Crotch, 1876: 438. Type locality: “Ega” [= Tefé, in the state of Amazonas, North Brazil] **syn. nov.** (Fig. 4C).

Mycotretus egae – Gemminger & Harold 1876: 3692. — Kuhnt 1909: 74; 1911: 49. — Blackwelder 1945: 466. — Alvarenga 1994: 25. — Skelley 1998b: 15.

Mycotretus basalis – Gemminger & Harold 1876: 465. — Kuhnt 1909: 76; 1911: 52. — Alvarenga 1994: 21. — Skelley 1998b: 15.

Primary type

Lectotype, here designated (Fig. 6C)

BRAZIL • “TYPE. [printed], Egae Bates Ega [handwritten] \ TYPE [blue label, printed] \ LECTOTYPE [printed], *Mycotretus egae* Crotch, 1876 [red label, handwritten]”; UMZC.

Other specimens examined

BRAZIL • 1 ♀ (dissected); “Coleção M. Alvarenga [printed] \ Homeotipo [red label, printed] \ TEFÉ, Amazonas, Brasil, XII-1961, F.M. Oliveira [printed] \ Comparado com tipo [printed] *Mycotretus basalis* Crotch, 1876 [handwritten] M. Alvarenga det. 1971 [printed]”; MNRJ • 1 ♀ (dissected); “Borba. Amazonas. [printed] 3.943 [handwritten] \ Coll. J. Guerin. S. Paulo. Brasil. [printed] 18974 [handwritten] \ BORBA, Amazonas, BRASIL [printed] III-1943 [handwritten] Alexandre PARKO [printed] \ *Mycotretus basalis* Crotch [handwritten] J. Guerin det. 19[printed] 53 [handwritten]”; MZSP.

Distribution

North Brazil (Alvarenga 1994).

Remarks

Mycotretus egae differs from *M. basalis* in the more elongated elytral band. However, such a small difference in body coloration is expected to occur in conspecific *Mycotretus* within the same locality.

26. *Mycotretus episcaphoides* Crotch, 1876

Mycotretus episcaphoides Crotch, 1876: 456. Type locality: “Ega” [= Tefé, in the state of Amazonas, North Brazil].

Mycotretus episcaphoides – Gemminger & Harold 1876: 3692. — Kuhnt 1909: 71; 1911: 49. — Blackwelder 1945: 466. — Alvarenga 1994: 25. — Skelley 1998b: 17.

Primary type

Lectotype, here designated (Fig. 6D)

BRAZIL • “TYPE [blue label, printed] \ TYPE. [printed], Episcaphoides Ega Bates [handwritten] \ LECTOTYPE [printed], Mycotretus episcaphoides Crotch, 1876 [red label, handwritten]”; UMZC.

Other specimens examined

ECUADOR • 1 ♂ (dissected); “ECUADOR [printed] Napo-cuyabeno, 230 m, nov 17/85 [?] [handwritten], Legit [printed] E. cotyiozo [?] [handwritten] \ Callischyrus n. sp. [handwritten]”; MNRJ.

Distribution

North Brazil (Alvarenga 1994).

Remarks

Mycotretus episcaphoides resembles *M. floriger* (Fig. 29F) in body shape and morphology of male genitalia. The penile flagellum of *M. episcaphoides* is less sclerotized than that of *M. floriger*. Male genitalia of both species have a sinuosity at the anterior one-third of the flagellum virga. That sinuosity is strongly sclerotized in *M. floriger* and desclerotized in the examined *M. episcaphoides*. This morphology of the penile flagellum resembles that observed in *M. chilensis* Crotch (Fig. 4F) and *M. trifasciatus* Guérin (Fig. 22A) (Pecci-Maddalena & Lopes-Andrade 2017).

27. *Mycotretus fulviceps* Crotch, 1876

Mycotretus fulviceps Crotch, 1876: 447. Type locality: “Santarem” [Santarém, in the state of Pará, North Brazil].

Mycotretus fulviceps – Gemminger & Harold 1876: 3693. — Kuhnt 1909: 73; 1911: 49. — Blackwelder 1945: 466. — Alvarenga 1994: 26. — Skelley 1998b: 16.

Primary type

Lectotype, here designated (Fig. 6E)

BRAZIL • “TYPE [blue label, printed] \ TYPE [printed], fulviceps Santar. Bates [handwritten] \ LECTOTYPE [printed], Mycotretus fulviceps Crotch, 1876 [red label, handwritten]”; UMZC.

Other specimens examined

BRAZIL • 1 ♂ (dissected); “Coleção M. Alvarenga [printed] \ Estirão do Equador, Amazonas, Brasil X. 1979, M. Alvarenga [printed] \ M [printed] \ Mycotretus [handwritten]”; MNRJ.

Distribution

North Brazil.



Fig. 6. Crotch primary types (dorsal, labels) cont. **A–A'**. Lectotype of *Mycotretus deyrollei* Crotch, 1876. **B–B'**. Lectotype of *M. dimidiatus* Crotch, 1876 [= *M. seminiger* Harold, 1876]. **C–C'**. Lectotype of *M. egae* Crotch, 1876. **D–D'**. Lectotype of *M. episcaphoides* Crotch, 1876. **E–E'**. Lectotype of *M. fulviceps* Crotch, 1876. **F–F'**. Lectotype of *M. fulvilabris* Crotch, 1876. Scale bars = 1 mm.

28. *Mycotretus fulvilabris* Crotch, 1876

Mycotretus fulvilabris Crotch, 1876: 447. Type locality: “S. Paulo” [São Paulo de Olivença, in the state of Amazonas, North Brazil].

Mycotretus rastratus Crotch, 1876: 445. Type locality: “S. Paulo” [São Paulo de Olivença, in the state of Amazonas, North Brazil] **syn. nov.** (Fig. 10B).

Mycotretus fulvilabris – Gemminger & Harold 1876: 3693. — Kuhnt 1909: 71; 1911: 49. — Blackwelder 1945: 466. — Alvarenga 1994: 26. — Skelley 1998b: 16.

Mycotretus rastratus – Gemminger & Harold 1876: 3694. — Kuhnt 1909: 72; 1911: 53. — Blackwelder 1945: 467. — Alvarenga 1994: 34. — Skelley 1998b: 16.

Primary type

Lectotype, here designated (Fig. 6F)

BRAZIL • “TYPE. [printed], fulvilabris S. Paulo Bates [handwritten] \ TYPE [blue label, printed] \ LECTOTYPE [printed], *Mycotretus fulvilabris* Crotch, 1876 [red label, handwritten]”; UMZC.

Other specimens examined

BRAZIL • 1 ♂ (dissected); “Coleção M. Alvarenga [printed] \ Estirão do Equador, Amazonas, Brasil X.1979, M. Alvarenga [printed] \ M [printed] \ *Mycotretus* ? *Haemetichytus* [?] [handwritten]”; MNRJ

• 1 ♂ (dissected); “Coleção M. Alvarenga [printed] \ Jacareacanga, Pará Brasil, XII-1968, M. Alvarenga [printed] \ 2040 [printed] \ *Mycotretus* 164 [handwritten] \ n. sp [handwritten]”; MNRJ.

Distribution

North Brazil (Alvarenga 1994).

Remarks

1) The locality “S. Paulo” mentioned on the labels of the lectotypes of *M. fulvilabris* and *M. rastratus* (Figs 6F’ and 10B’) refers to “São Paulo de Olivença” (in the state of Amazonas, North Brazil), where Henry Walter Bates collected specimens a few years before Crotch published his revision (Crotch 1876; Papavero 1973; Alvarenga 1994). 2) We examined the lectotype of *M. rastratus* in the Crotch collection and, excepted for its resemblance with a teneral (Fig. 10B), there is no morphological variation between it and the lectotype of *M. fulvilabris*. It is worth noting that the coloration observed in the lectotype of *M. rastratus* is typical of tenerals or not fully pigmented adults of Erotylidae.

29. *Mycotretus guatemalae* Crotch, 1876

Mycotretus guatemalae Crotch, 1876: 441. Type locality: “Guatemala”.

Mycotretus guatemalae – Gorham 1888: 55. — Kuhnt 1909: 72; 1911: 50. — Blackwelder 1945: 466. — Alvarenga 1994: 27. — Skelley 1998b: 15.

Primary type

Lectotype, here designated (Fig. 7A)

GUATEMALA • “TYPE. [printed], guatemala Shepp. [handwritten] \ TYPE [blue label, printed] \ LECTOTYPE [printed], *Mycotretus guatemalae* Crotch, 1876 [red label, handwritten]”; UMZC.

Other specimens examined

GUATEMALA • 1 ♀ (dissected); “Coleção M. Alvarenga [printed] \ Homeotipo [red label, printed] \ S. Salvador, El Salvador, 24.vi.1960, J. Bechyné [handwritten] \ *Mycotretus elegans* Gorham, 1888

[handwritten, misidentification] M. Alvarenga det. [printed] 1971 [handwritten] \ 1835-A [handwritten]”; MNRJ • 1 ♀ (dissected); “Coleção M. Alvarenga [printed] \ Rio Caurimare, Caracas, 900m, 8.ix.1963, Boroon [handwritten] \ 1826 [printed] \ Mycotretus 203 [handwritten] \ M. guatemalae ? [handwritten]”; MNRJ • 1 ♀ (dissected); “Coleção M. Alvarenga [printed] \ S. Salvador, El Salvador, 24.vi.1960, J. Bechyné [handwritten] \ DZUP 132850 [printed]”; DZUP.

Distribution

Guatemala, El Salvador, Venezuela.

30. *Mycotretus illustris* Crotch, 1876

Mycotretus illustris Crotch, 1876: 440. Type locality: “Mexico”.

Mycotretus illustris – Gemminger & Harold 1876: 3693. — Gorham 1888: 54. — Kuhnt 1909: 72; 1911: 50. — Blackwelder 1945: 466. — Alvarenga 1994: 27. — Skelley 1998b: 15.

Primary type

Lectotype, here designated (Fig. 7B)

MEXICO • “TYPE. [printed], *illustris* mex. Sallé [handwritten] \ TYPE [blue label, printed] \ LECTOTYPE [printed], *Mycotretus illustris* Crotch, 1876 [red label, handwritten]”; UMZC.

Other specimens examined

MEXICO • 1 ♀ (dissected); “Toxпам [printed] \ Mexico. Salle Coll. [printed] \ *Mycotretus illustris* Crotch = *confluens* Thom [?] apud Sallé [handwritten] \ B.C.A., Col., VII. *Mycotretus* [printed]”; BMNH.

Distribution

Mexico.

Remarks

According to Gorham (1888) it is “One of the largest and most beautiful species of this genus”.

31. *Mycotretus laeviventris* Crotch, 1876

Mycotretus laeviventris Crotch, 1876: 454. Type locality: “Mexico”.

Mycotretus laeviventris – Gemminger & Harold 1876: 3693. — Gorham 1888: 51. — Kuhnt 1909: 76; 1911: 50. — Blackwelder 1945: 466. — Alvarenga 1994: 28. — Skelley 1998b: 17.

Primary type

Lectotype, here designated (Fig. 7C)

MEXICO • “TYPE [blue label, printed] \ TYPE [printed], *laeviventris* Mex. [handwritten] \ LECTOTYPE [printed], *Mycotretus laeviventris* Crotch, 1876 [red label, handwritten]”; UMZC.

Other specimens examined

MEXICO • 1 ♀ (dissected); “Coleção M. Alvarenga [printed] \ Homeotipo [red label, printed] \ Volcán Sn. Martín, Ver. 29/v/51, Alfredo Barrera [handwritten] \ Volcán Sn. Martín, VER. 29–V–51, A. Barrera. [printed] \ Comparado com tipo [printed] *Mycotretus laeviventris* Crotch, 1876 [handwritten] M. Alvarenga det. 1971 [printed] \ 1766 [printed]”; MNRJ.

Distribution

Mexico.

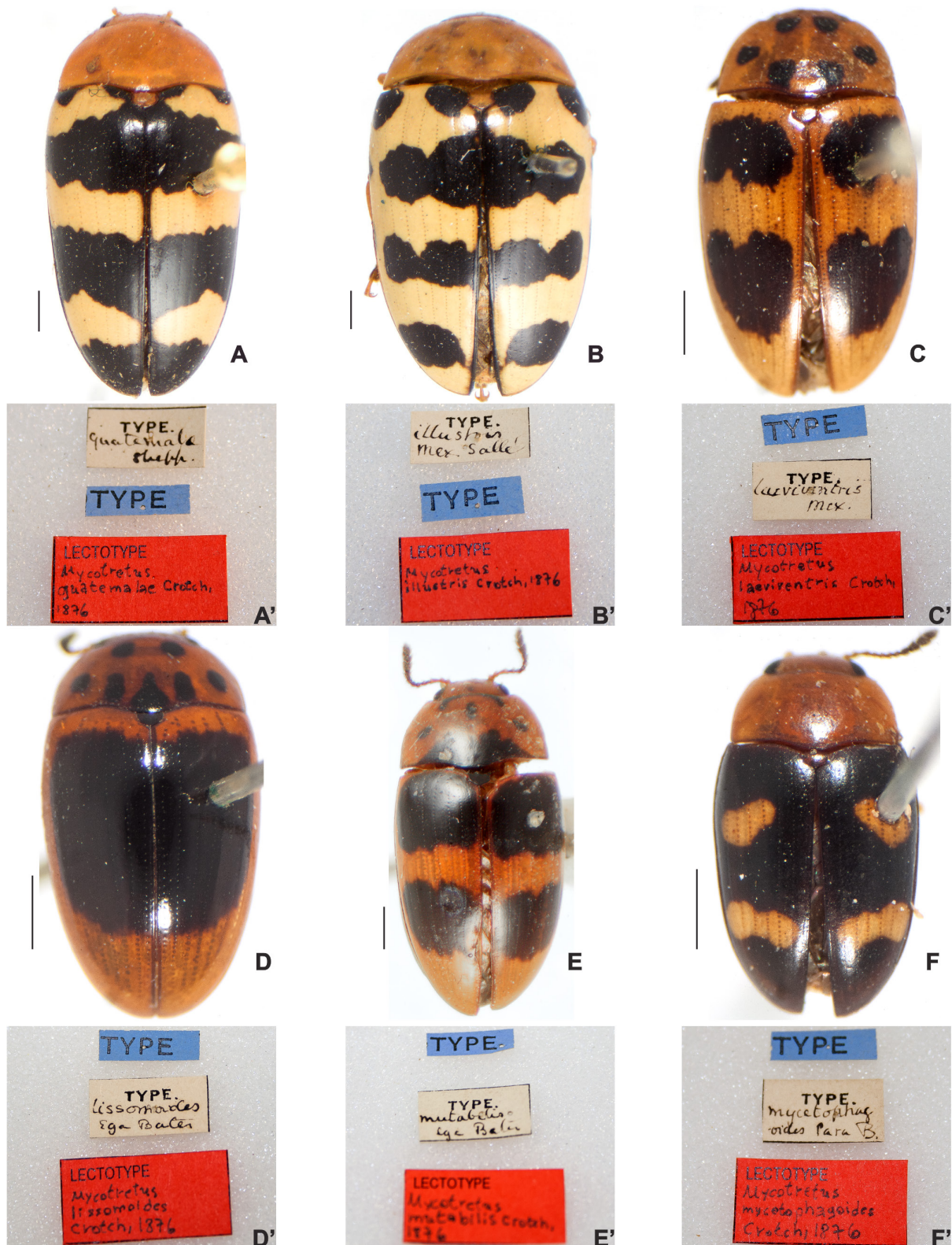


Fig. 7. Crotch primary types (dorsal, labels) cont. **A–A'**. Lectotype of *Mycotretus guatemalae* Crotch, 1876. **B–B'**. Lectotype of *M. illustris* Crotch, 1876. **C–C'**. Lectotype of *M. laeviventris* Crotch, 1876. **D–D'**. Lectotype of *M. lissomoides* Crotch, 1876. **E–E'**. Lectotype of *M. mutabilis* Crotch, 1876. **F–F'**. Lectotype of *M. mycetophagoides* Crotch, 1876. Scale bars = 1 mm.

32. *Mycotretus leopardus* Crotch, 1876

Mycotretus leopardus Crotch, 1876: 451. Type locality: “Peru”.

Mycotretus leopardus – Gorham 1888: 49. — Kuhnt 1911: 54 [synonym of *M. tigrinus*]. — Alvarenga 1994: 37. — Pecci-Maddalena & Lopes-Andrade 2018b: 4 [assignment of authorship to Crotch].

Primary type

Lectotype

PERU • “TYPE [blue label, printed] \ TYPE [printed] leopardus Peru [handwritten]”; UMZC.

Remarks

Junior synonym of *M. tigrinus* (Olivier, 1792) (see below). See discussion on the authorship of *M. leopardus* and other comments in Pecci-Maddalena & Lopes-Andrade (2018b).

33. *Mycotretus lissomoides* Crotch, 1876

Mycotretus lissomoides Crotch, 1876: 455. Type locality: “Ega” [= Tefé, in the state of Amazonas, North Brazil].

Mycotretus lissomoides – Gemminger & Harold 1876: 3693. — Kuhnt 1909: 75; 1911: 50. — Blackwelder 1945: 466. — Alvarenga 1994: 28. — Skelley 1998b: 17.

Primary type

Lectotype, here designated (Fig. 7D)

BRAZIL • “TYPE [blue label, printed] \ TYPE. [printed], lissomoides Ega Bates [handwritten] \ LECTOTYPE [printed], *Mycotretus lissomoides* Crotch, 1876 [red label, handwritten]”; UMZC.

Distribution

North Brazil.

34. *Mycotretus mutabilis* Crotch, 1876

Mycotretus mutabilis Crotch, 1876: 438. Type locality: “Ega” [= Tefé, in the state of Amazonas, North Brazil].

Mycotretus mutabilis – Gemminger & Harold 1876: 3694. — Kuhnt 1909: 76; 1911: 51. — Blackwelder 1945: 467. — Alvarenga 1994: 30. — Skelley 1998b: 15.

Primary type

Lectotype, here designated (Fig. 7E)

BRAZIL • “TYPE [blue label, printed] \ TYPE. [printed], mutabilis Ega Bates [handwritten] \ LECTOTYPE [printed], *Mycotretus mutabilis* Crotch, 1876 [red label, handwritten]”; UMZC.

Other specimens examined

Paralectotypes

BRAZIL • 3 specs; “PARATYPE [blue label, printed] \ green label unwritten \ Bates [printed] \ PARALECTOTYPE [printed], *Mycotretus mutabilis* Crotch, 1876 [yellow label, handwritten]”; UMZC • 1 spec.; “TYPE [blue label, printed] \ TYPE. [printed], tricornatus Ega Bates [handwritten] \ PARALECTOTYPE [printed] ?, *Mycotretus mutabilis* Crotch [yellow label, handwritten]”; UMZC.

Remarks

1) *Mycotretus mutabilis* is a new junior synonym of *M. maculatus* Olivier, 1792 (Fig. 39E, see below).
 2) Under the description of *M. mutabilis*, Crotch (1876: 438) stated the following: “(...) In one specimen (*M. tricinctus*), which may be distinct, there is a third supplementary subapical fascia. Sides of the metasternum very sparingly punctate”. Although Crotch had suggested the name “*M. tricinctus*”, he did not provide a description for this species and that name has never been published anywhere, being therefore a nomen nudum. The specimen labelled as “*M. tricinctus*” in UMZC is morphologically similar to those from the type series of *M. mutabilis* with a few differences in the colour pattern that may be an infraspecific variation. Based on Crotch’s description and our examination, the specimen labelled as “*M. tricinctus*” is here considered a paralectotype of *M. mutabilis*, but we included a question mark on its label.

35. *Mycotretus mycetophagoides mycetophagoides* Crotch, 1876

Mycotretus mycetophagoides Crotch, 1876: 457. Type locality: “Para” [State of Pará, Brazil].

Mycotretus mycetophagoides – Gemminger & Harold 1876: 3694. — Kuhnt 1909: 71; 1911: 51. — Blackwelder 1945: 467. — Alvarenga 1994: 30. — Skelley 1998b: 17.

Primary type

Lectotype, here designated (Fig. 7F)

BRAZIL • “TYPE [blue label, printed] \ TYPE. [printed], mycetophagoides Para B. [handwritten] \ LECTOTYPE [printed], *Mycotretus mycetophagoides* Crotch, 1876 [red label, handwritten]”; UMZC.

Distribution

North Brazil (Alvarenga 1994).

Remarks

Resembles *M. pulchellus* Lacordaire (Fig. 34F), but differs in having an entire yellow spot at the basal third of elytra, rather than a divided yellow spot. We have no specimen of *M. mycetophagoides* at hand, but comparison of their descriptions has shown they may be conspecific.

36. *Mycotretus mycetophagoides erythrocerus* Crotch, 1876

Mycotretus mycetophagoides erythrocerus Crotch, 1876: 457 [as a variety]. Type locality: “Tapagos” [= Tapajós, in the state of Pará, North Brazil].

Mycotretus mycetophagoides erythrocerus – Gemminger & Harold 1876: 3694. — Kuhnt 1909: 71; 1911: 51. — Blackwelder 1945: 467. — Alvarenga 1994: 30. — Skelley 1998b: 18.

Primary type

Lectotype, here designated (Fig. 8A)

BRAZIL • “TYPE [blue label, printed] \ TYPE. [printed], erythrocerus Tapajos B [handwritten] \ LECTOTYPE [printed], *Mycotretus mycetophagoides erythrocerus* Crotch, 1876 [red label, handwritten]”; UMZC.

Other specimens examined

BRAZIL • 1 ♂ (dissected); “Coleção M. Alvarenga [printed] \ Estirão do Equador, Amazonas, Brasil X. 1979, M. Alvarenga [printed] \ M [printed] \ *Mycotretus mycetophagoides* v. *erythrocerus* CR, 1876 [handwritten] M. Alvarenga det. [printed] 1989 [handwritten]”; MNRJ.

Distribution

North Brazil.

Remarks

We had no specimen of *M. mycetophagoides erythrocerus* for comparison with *M. mycetophagoides mycetophagoides*. The former may be an infraspecific variation of the latter, but we prefer not to synonymize it at this moment.

37. *Mycotretus mycetophiloides mycetophiloides* Crotch, 1876

Mycotretus mycetophiloides Crotch, 1876: 458. Type locality: “Ega” [= Tefé, in the state of Amazonas, North Brazil].

Mycotretus mycetophiloides – Gemminger & Harold 1876: 3694. — Kuhnt 1909: 74; 1911: 51. — Blackwelder 1945: 467. — Alvarenga 1994: 30. — Skelley 1998b: 18.

Primary type

Lectotype, here designated (Fig. 8B).

BRAZIL • “TYPE [blue label, printed] \ TYPE. [printed], mycetophiloides Ega B [handwritten] \ LECTOTYPE [printed], *Mycotretus mycetophiloides* Crotch, 1876 [red label, handwritten]”; UMZC.

Distribution

North Brazil.

38. *Mycotretus mycetophiloides careus* Crotch, 1876

Mycotretus mycetophiloides careus Crotch, 1876: 458 [as a variety]. Type locality: “Ega” [= Tefé, Amazonas, Brazil, type locality mentioned only on the type label].

Mycotretus mycetophiloides careus – Kuhnt 1909: 74; 1911: 51. — Blackwelder 1945: 467. — Alvarenga 1994: 30. — Skelley 1998b: 18.

Primary type

Lectotype, here designated (Fig. 8C)

BRAZIL • “TYPE [blue label, printed] \ TYPE. [printed], careus Ega B [handwritten] \ LECTOTYPE [printed], *Mycotretus mycetophiloides careus* Crotch, 1876 [red label, handwritten]”; UMZC.

Distribution

North Brazil.

Remarks

We have no specimen of *M. mycetophiloides careus* at hand, but it is probably only an infraspecific variation of *M. mycetophiloides*.

39. *Mycotretus nigrotinctus* Crotch, 1876

Mycotretus nigrotinctus Crotch, 1876: 454. Type locality: “Teapa” [state of Tabasco, Southeast Mexico].

Mycotretus nigrotinctus – Gorham 1888: 52 [synonym of *M. pallidior*]. — Alvarenga 1994: 32. — Skelley 1998b: 17.

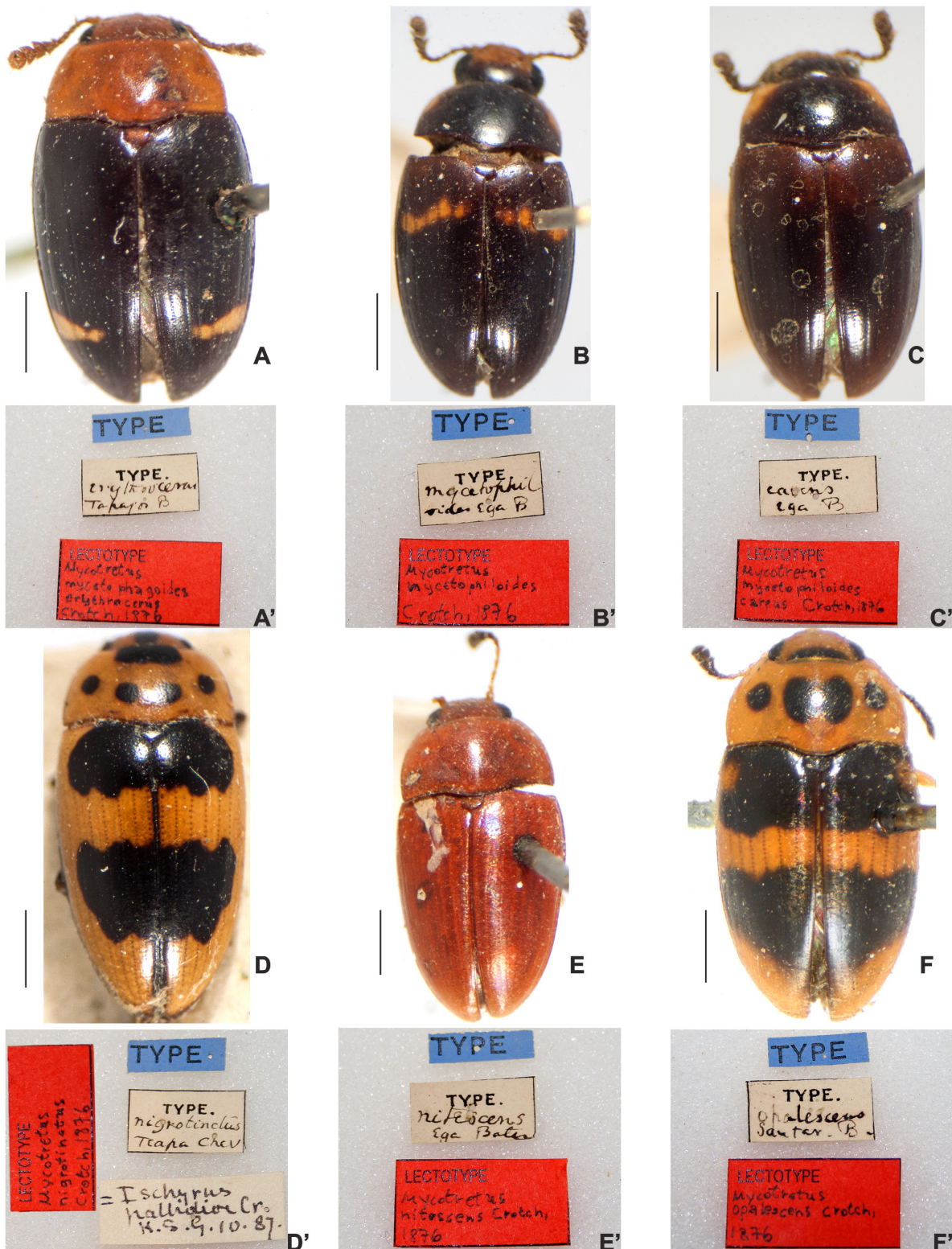


Fig. 8. Crotch primary types (dorsal, labels) cont. **A-A'**. Lectotype of *Mycotretus mycetophagoides erythrocerus* Crotch, 1876. **B-B'**. Lectotype of *M. mycetophiloides* Crotch, 1876;. **C-C'**. Lectotype of *M. mycetophiloides careus* Crotch, 1876. **D-D'**. Lectotype of *M. nigrotinctus* Crotch, 1876. **E-E'**. Lectotype of *M. nitescens* Crotch, 1876. **F-F'**. Lectotype of *M. opalescens* Crotch, 1876. Scale bars = 1 mm.

Primary type

Lectotype, here designated (Fig. 8D)

MEXICO • “TYPE [blue label, printed] \ TYPE. [printed], nigrotinctus Teapa Chev [handwritten] \ = Ischyryus pallidior Cr H (?). S. G.10. 87 [handwritten] \ LECTOTYPE [printed], Mycotretus nigrotinctus Crotch, 1876 [red label, handwritten]”; UMZC.

Remarks

Junior synonym of *M. pallidior* (Crotch, 1876) (Fig. 9A, see below).

40. *Mycotretus nitescens* Crotch, 1876

Mycotretus nitescens Crotch, 1876: 445. Type locality: “Ega” [= Tefé, in the state of Amazonas, North Brazil].

Mycotretus nitescens – Gemminger & Harold 1876: 3694. — Gorham 1888: 52. — Kuhnt 1909: 72; 1911: 51. — Blackwelder 1945: 467. — Alvarenga 1994: 30. — Skelley 1998b: 16.

Primary type

Lectotype, here designated (Fig. 8E)

BRAZIL • “TYPE [blue label, printed] \ TYPE. [printed], nitescens Ega Bates [handwritten] \ LECTOTYPE [printed], Mycotretus nitescens Crotch, 1876 [red label, handwritten]”; UMZC.

Other specimens examined

MEXICO • 1 ♂ (dissected); “Coleção M. Alvarenga [printed] \ Homeotipo [red label, printed] \ mex. [front] 56. 143 [back] [disc-shaped label, handwritten] \ Comparado com tipo [printed] Mycotretus nitescens Crotch, 1876 [handwritten] M. Alvarenga det. 1971 [printed] \ 1851 [printed] \ DZUP 132860 [printed]”; DZUP.

Distribution

Mexico, Guatemala, Panama, North Brazil.

41. *Mycotretus opalescens* Crotch, 1876

Mycotretus opalescens Crotch, 1876: 444. Type locality: “Santarem” [Santarém, in the state of Pará, North Brazil. Type locality not clearly separated from other localities in the original description, although it is unequivocally mentioned on the type label].

Mycotretus pelliciens Kirsch, 1876: 100. Type locality: “Peru” **syn. nov.** (Fig. 23A).

Mycotretus opalescens – Gemminger & Harold 1876: 3694. — Kuhnt 1909: 76; 1911: 51. — Blackwelder 1945: 467. — Delkeskamp 1957: 99. — Alvarenga 1994: 31. — Skelley 1998b: 16. — McHugh & Chaboo 2015: 278.

Mycotretus pelliciens – Gemminger & Harold 1876: 3694. — Kuhnt 1909: 76; 1911: 52. — Mader 1942: 174; 1951: 219. — Blackwelder 1945: 467. — Alvarenga 1994: 32. — McHugh & Chaboo 2015: 278.

Primary type

Lectotype, here designated (Fig. 8F)

BRAZIL • “TYPE [blue label, printed] \ TYPE. [printed], opalescens Santar. B. [handwritten] \ LECTOTYPE [printed], Mycotretus opalescens Crotch, 1876 [red label, handwritten]”; UMZC.

Other specimens examined

Paralectotypes

BRAZIL • 2 specs.; “blue square [unwritten] \ Bates [printed] \ PARATYPE [blue label, printed] \ PARALECTOTYPE [printed], *Mycotretus opalescens* Crotch, 1876 [yellow label, handwritten]”;
 UMZC • 1 spec.; “PARATYPE [blue label, printed] \ green square [unwritten] \ Bates [printed] \ PARALECTOTYPE [printed], *Mycotretus opalescens* Crotch, 1876 [yellow label, handwritten]”;
 UMZC • 1 spec.; “PARATYPE [blue label, printed] \ Bates [printed] \ PARALECTOTYPE [printed], *Mycotretus opalescens* Crotch, 1876 [yellow label, handwritten]”; UMZC.

Additional material

BRAZIL • 1 spec.; “Coleção M. Alvarenga [printed] \ Homeotipo [red label, printed] \ TEFÉ, Amazonas BRASIL, 27 a 31-VII-1956, M. Alvarenga legit [printed] \ Comparado com tipo [printed] *Mycotretus opalescens* Crotch, 1876 [handwritten] M. Alvarenga det. 1971 [printed] \ 1964 [printed] \ DZUP 136194 [printed]”;
 DZUP • 1 spec.; “Coleção M. Alvarenga [printed] \ Estirão do Equador, Amazonas, Brasil X.1979, M. Alvarenga [printed] \ M [printed] \ mycotr. 723 [handwritten] \ peliciens ? [handwritten]”;
 MNRJ • 1 spec.; “Coleção M. Alvarenga [printed] \ TEFÉ, Amazonas BRASIL, 27 a 31-VII-1956, M. Alvarenga legit [printed] \ DZUP 136195 [printed]”; DZUP.

BOLIVIA • 1 spec.; “BOLIVIA, tropica Region CHAPARÉ (400 mtr.) DIRINGS [front] JUN 1954 [back] [printed] \ *Mycotretus opalescens* Crotch [printed] \ *Mycotretus opalescens* [handwritten]”;
 MZSP • 1 spec.; “BOLIVIA, tropica Region CHAPARÉ (400 mtr.) DIRINGS [front] JUN 1954 [back] [printed] \ *Mycotretus opalescens* Crotch [printed]”; MZSP.

Distribution

Bolivia, North Brazil, Peru.

Remarks

Mycotretus opalescens differs from *M. peliciens* especially in the two central and elongated, barely separated pronotal spots and the basal elytral band with a small yellowish area close to the humeral angle. Aside from these small differences in coloration, which is expected to occur in conspecific *Mycotretus* from different localities, there is no morphological difference between these species to consider them separated entities.

42. *Mycotretus pallidior* (Crotch, 1876)

Ischyryus pallidior Crotch, 1876: 428. Type locality: “Mexico”.

Mycotretus nigroinctus Crotch, 1876: 454. Type locality: “Teapa” [state of Tabasco, Southeast Mexico].

Ischyryus pallidior – Gemminger & Harold 1876: 3691.

Mycotretus pallidior – Gorham 1888: 52. — Kuhnt 1909: 75; 1911: 52. — Blackwelder 1945: 467. — Alvarenga 1994: 32. — Skelley 1998b: 17.

Mycotretus nigroinctus – Gorham 1888: 52 [junior synonym]. — Alvarenga 1994: 32. — Skelley 1998b: 17.

Primary type

Lectotype, here designated (Fig. 9A)

MEXICO • “TYPE [blue label, printed] \ Mexico, Salle [green label, handwritten] \ Chevr. [printed] \ TYPE. [printed], pallidior [handwritten] \ LECTOTYPE [printed], *Ischyryus pallidior* Crotch, 1876 [red label, handwritten] \ *Mycotretus pallidior* (Crotch) [handwritten], det. I. Pecci-Maddalena 2017 [printed]”; UMZC.

Other specimens examined

MEXICO • 1 ♂ (dissected); “Coleção M. Alvarenga [printed] \ Mexico: Plan de Las Hayas, Edo. de Veracruz. 26–VI.1972, P. Reyes cols. [handwritten] \ Cafetal: Alt.-650-680 m. [handwritten] \ *Mycotretus pallidior* (Crotch, 1876) [handwritten] M. Alvarenga det. [printed] 1984 [handwritten]”; MNRJ.

HONDURAS • 1 spec.; “Coleção M. Alvarenga [printed] \ HONDURAS, Sta. B., 13 Km. SE. El Mochito, July 22, 1977 CW&L. O’Brien & Marshall [printed] \ mycotr. 715 [handwritten] \ *M. sexpunctatus* ? [handwritten] \ verificar o desenho na bca [handwritten]”; MNRJ.

Distribution

Mexico.

43. *Mycotretus parallelus* Crotch, 1876

Mycotretus parallelus Crotch, 1876: 453. Type locality: “Ega” [= Tefé, in the state of Amazonas, North Brazil].

Mycotretus parallelus – Gemminger & Harold 1876: 3694. — Kuhnt 1909: 73; 1911: 52. — Blackwelder 1945: 467. — Alvarenga 1994: 32. — Skelley 1998b: 17.

Primary type

Lectotype, here designated (Fig. 9B)

BRAZIL • “TYPE [blue label, printed] \ TYPE. [printed], *parallelus* Ega Bates [handwritten] \ LECTOTYPE [printed], *Mycotretus parallelus* Crotch, 1876 [red label, handwritten]”; UMZC.

Distribution

North Brazil.

44. *Mycotretus pebasensis* Crotch, 1876

Mycotretus pebasensis Crotch, 1876: 439. Type locality: “Pebas” [Peru].

Mycotretus pebasensis – Gemminger & Harold 1876: 3692. — Kuhnt 1909: 76; 1911: 52. — Mader 1942: 175; 1951: 223. — Blackwelder 1945: 467. — Alvarenga 1994: 32. — Skelley 1998b: 15. — McHugh & Chaboo 2015: 278.

Primary type

Lectotype, here designated (Fig. 9C)

PERU • “TYPE [blue label, printed] \ TYPE. [printed], *Pebasensis* Pebas [handwritten] \ LECTOTYPE [printed], *Mycotretus pebasensis* Crotch, 1876 [red label, handwritten]”; UMZC.

Other specimens examined

BRAZIL • 1 ♂ (dissected); “Coleção M. Alvarenga [printed] \ Homeotipo [red label, printed] \ Comparado com tipo [printed] *Mycotretus pebasensis* Crotch, 1876 [handwritten] M. Alvarenga det. 1971 [printed] \ TABATINGA [printed], Amazonas Brasil [printed] iv. 1958 [handwritten] E. S. Lima [printed] \ 2029 [printed] \ DZUP 136162 [printed]”; DZUP • 1 ♂ (dissected); “Coleção M. Alvarenga [printed] \ TABATINGA [printed], Amazonas Brasil [printed] v. 1957 [handwritten] E. Sousa Lima [printed] \ 2030 [printed] \ *Mycotretus* 033 [handwritten] \ DZUP 136164 [printed]”; DZUP • 1 ♀ (dissected); “Coleção M. Alvarenga [printed] \ TABATINGA [printed], Amazonas Brasil [printed] v. 1957 [handwritten] E. Sousa Lima [printed] \ 2031 [printed] \ *Mycotretus* 033 [handwritten] \ DZUP 136163 [printed]”; DZUP.



Fig. 9. Crotch primary types (dorsal, labels) cont. A–A'. Lectotype of *Ischyrus pallidior* Crotch, 1876 [currently *Mycotretus pallidior* (Crotch)]. B–B'. Lectotype of *Mycotretus parallelus* Crotch, 1876. C–C'. Lectotype of *M. pebasensis* Crotch, 1876. D–D'. Lectotype of *M. peruae* Crotch, 1876. E–E'. Lectotype of *M. psylloboroides* Crotch, 1876. F–F'. Lectotype of *M. quadripunctatus* Crotch, 1876. Scale bars = 1 mm.

Distribution

Peru, North Brazil.

Remarks

The dissected female of *M. pebasensis* has the pronotal black spot slightly “split”, resembling that of *M. separandus* (Fig. 10F). In fact, *M. pebasensis*, *M. separandus*, *M. egae* (Fig. 6C), *M. decoratus* (Fig. 13B) and *M. hilaris* (Fig. 31B) are morphologically similar, based on their colour pattern, body shape and morphology of male genitalia. However, we noted a few differences in the sclerotization of the penile flagellum and flagellar head morphology. These species may be synonyms, a decision that is not possible to take before examining more specimens and determining whether their variations are diagnostic for keeping species separated or constitute infraspecific variations of a single species.

45. *Mycotretus peruae* Crotch, 1876

Mycotretus peruae Crotch, 1876: 446. Type locality: “Peru”.

Mycotretus peruae – Gemminger & Harold 1876: 3694. — Kuhnt 1909: 73; 1911: 52. — Mader 1942: 172; 1951: 213. — Blackwelder 1945: 467. — Alvarenga 1994: 32. — Skelley 1998b: 16. — McHugh & Chaboo 2015: 278.

Primary type

Lectotype, here designated (Fig. 9D)

PARU • “TYPE [blue label, printed] \ TYPE. [printed], Peruae Peru Jans [handwritten] \ LECTOTYPE [printed], *Mycotretus peruae* Crotch, 1876 [red label, handwritten]”; UMZC.

Other specimens examined

Paralectotype

PERU • 1 spec.; “PARATYPE [blue label, printed] \ PARALECTOTYPE [printed] ?, *Mycotretus peruae* Crotch, 1876 [yellow label, handwritten]”; UMZC.

Distribution

Unknown locality in Peru.

Remarks

One specimen placed close to the lectotype in the museum drawer has a single label on which is written “PARATYPE”. In the Crotch collection, most specimens which appear to be types have an additional blue “TYPE” or “PARATYPE” label of unknown origin (Skelley 1998b). We considered this specimen a paralectotype of *M. peruae*, but included a question mark on its label. *Mycotretus peruae* is morphologically similar to *M. bicolor* (Fig. 40A).

46. *Mycotretus psylloroides* Crotch, 1876

Mycotretus psylloroides Crotch, 1876: 443. Type locality: “Ega” [= Tefé, in the state of Amazonas, North Brazil].

Mycotretus psylloroides – Gemminger & Harold 1876: 3694. — Kuhnt 1909: 72; 1911: 52. — Blackwelder 1945: 467. — Alvarenga 1994: 33. — Skelley 1998b: 16.

Primary type

Lectotype, here designated (Fig. 9E)

BRAZIL • “TYPE [blue label, printed] \ TYPE. [printed], psylloboroid. Ega Bates [handwritten] \ LECTOTYPE [printed], *Mycotretus psylloboroides* Crotch, 1876 [red label, handwritten]”; UMZC.

Other specimens examined

BRAZIL • 1 ♀ (dissected); “Coleção M. Alvarenga [printed] \ Homeotipo [red label, printed] \ TEFE, Amazonas BRASIL, 27 a 31–VII–1956, M. Alvarenga legit [printed] \ Comparado com tipo [printed] *Mycotretus psylloboroides* Crotch., 1876 [handwritten] M. Alvarenga det. 1971 [printed] \ 1838 [printed]”; MNRJ • 1 ♂ (dissected); “BRASIL Pará, Serra dos Carajas, II. 1988, Roppa & Magro [printed]”; MNRJ.

Distribution

North Brazil.

Remarks

The dissected male specimen has the central elytral spot split into two elongated spots, whereas in the dissected female the spot is undivided (as in the lectotype). It would be important to better compare additional males and females of the species and evaluate whether this is a sexual dimorphism.

47. *Mycotretus quadripunctatus* Crotch, 1876

Mycotretus quadripunctatus Crotch, 1876: 450. Type locality: “N. Peru” [Northern Peru, apud Alvarenga 1994].

Mycotretus quadripunctatus – Gemminger & Harold 1876: 3694. — Kuhnt 1909: 76; 1911: 52. — Mader 1942: 174; 1951: 219, 223. — Blackwelder 1945: 467. — Alvarenga 1994: 33. — Skelley 1998b: 17. — McHugh & Chaboo 2015: 278.

Primary type

Lectotype, here designated (Fig. 9F)

PERU • “TYPE [blue label, printed] \ TYPE. [printed], 4-punctatus N. Peru. Bates [handwritten] \ LECTOTYPE [printed], *Mycotretus quadripunctatus* Crotch, 1876 [red label, handwritten]”; UMZC.

Distribution

Colombia, Ecuador, Peru.

Remarks

As pointed out by Skelley (1998b), and confirmed here, the lectotype lacks prothorax and head.

48. *Mycotretus quattuordecimguttatus conjunctus* Crotch, 1876

Mycotretus quattuordecimguttatus conjunctus Crotch, 1876: 440 [as a variety]. Type locality: unknown.

Mycotretus quattuordecimguttatus conjunctus – Gemminger & Harold 1876: 3694. — Kuhnt 1909: 71; 1911: 53. — Blackwelder 1945: 467. — Alvarenga 1994: 34. — Skelley 1998b: 15.

Primary type

Lectotype, here designated (Fig. 10A)

UNKNOWN COUNTRY • “TYPE [printed], conjunctus Sheppard [handwritten] \ TYPE [blue label, printed] \ LECTOTYPE [printed], *Mycotretus quatuordecimguttatus conjunctus* Crotch, 1876 [red label, handwritten]”; UMZC.

Remarks

New junior synonym of *M. pecari* Lacordaire, 1842 (Fig. 34C, see below).

49. *Mycotretus rastratus* Crotch, 1876

Mycotretus rastratus Crotch, 1876: 445. Type locality: “S. Paulo” [São Paulo de Olivença, in the state of Amazonas, North Brazil].

Mycotretus rastratus – Gemminger & Harold 1876: 3694. — Kuhnt 1909: 72; 1911: 53. — Blackwelder 1945: 467. — Alvarenga 1994: 34. — Skelley 1998b: 16.

Primary type

Lectotype, here designated (Fig. 10B)

BRAZIL • “TYPE [blue label, printed] \ TYPE. [printed], *rastratus*, S. Paulo B. [handwritten] \ LECTOTYPE [printed], *Mycotretus rastratus* Crotch, 1876 [red label, handwritten]”; UMZC.

Remarks

New junior synonym of *M. fulvilabris* Crotch, 1876 (Fig. 6F, see above).

50. *Mycotretus reticulatus* Crotch, 1876

Mycotretus reticulatus Crotch, 1876: 443. Type locality: “Ega” [= Tefé, in the state of Amazonas, North Brazil].

Mycotretus lopesi Alvarenga, 1989: 35. Type locality: “BRASIL, Pará: Jacareacanga” [Jacareacanga, in the state of Pará, North Brazil] **syn. nov.** (Fig. 2C).

Mycotretus reticulatus – Gemminger & Harold 1876: 3694. — Kuhnt 1909: 71; 1911: 53. — Blackwelder 1945: 467. — Alvarenga 1994: 34; Skelley 1998b: 16.

Mycotretus lopesi – Alvarenga 1994: 28.

Primary type

Lectotype, here designated (Fig. 10C)

BRAZIL • “TYPE [blue label, printed] \ TYPE. [printed], *reticulatus* Ega Bates [handwritten] \ LECTOTYPE [printed], *Mycotretus reticulatus* Crotch, 1876 [red label, handwritten]”; UMZC.

Other specimens examined

BRAZIL • 1 ♂ (dissected); “Coleção M. Alvarenga [printed] \ Rio Branco, Terr. do Acre BRASIL [printed], I. 1963, M. Alvarenga [handwritten] \ DZUP 132806 [printed]”; DZUP • 1 ♂ (dissected); “Coleção M. Alvarenga [printed] \ Homeotipo [red label, printed] \ CRUZEIRO do SUL, Acre Brasil, II–1963, M. Alvarenga leg. [printed] \ 1832 [printed] \ *Mycotretus reticulatus* Crotch, 1876 [handwritten] M. Alvarenga det. [printed] 1971 [handwritten]”; MNRJ.

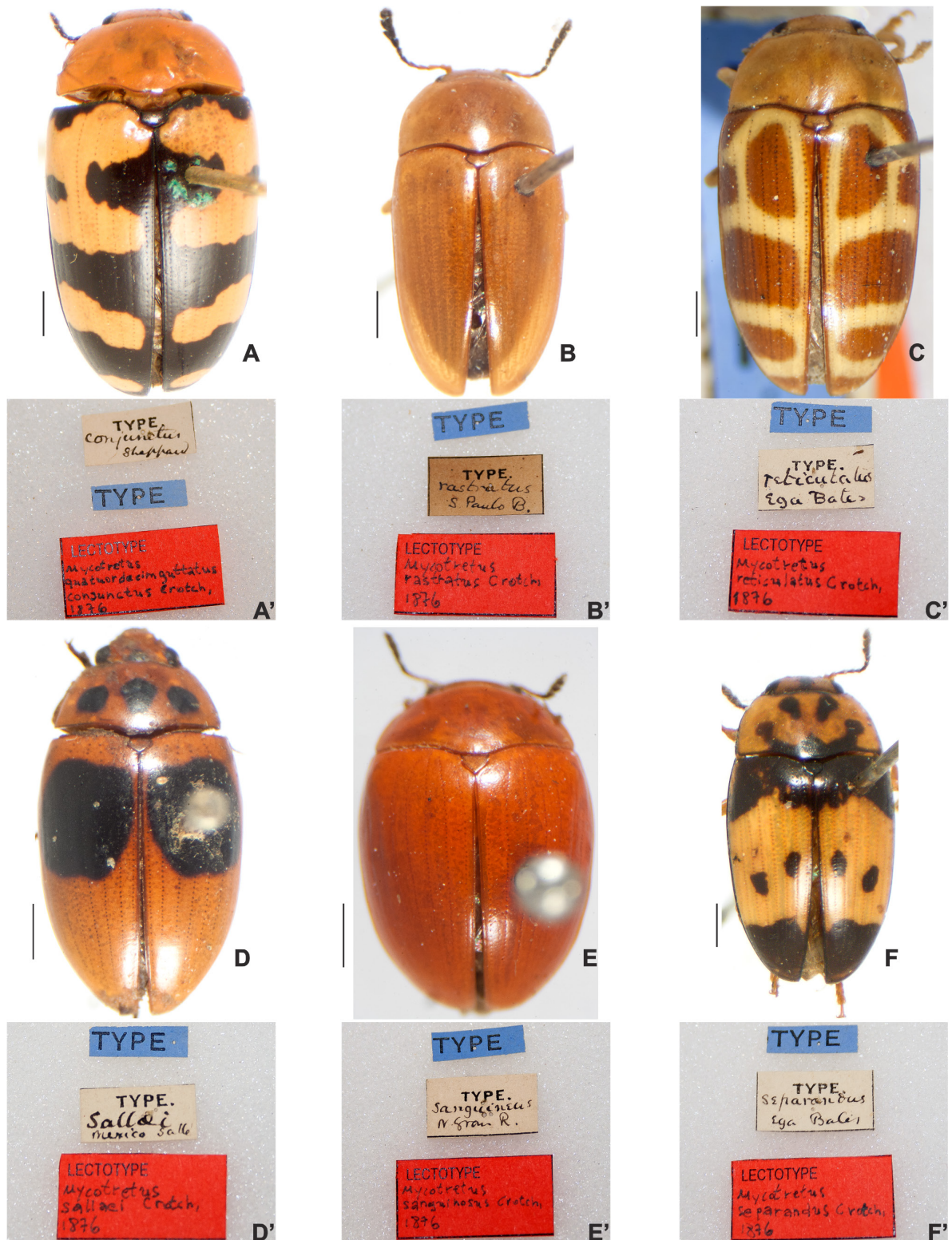


Fig. 10. Crotch primary types (dorsal, labels) cont. **A–A'**. Lectotype of *Mycotretus quatuordecimguttatus conjunctus* Crotch, 1876. **B–B'**. Lectotype of *M. rastratus* Crotch, 1876. **C–C'**. Lectotype of *M. reticulatus* Crotch, 1876. **D–D'**. Lectotype of *M. sallaei* Crotch, 1876. **E–E'**. Lectotype of *M. sanguinosus* Crotch, 1876 [synonym of *Mycomystes coccineus* (Lacordaire, 1842)]. **F–F'**. Lectotype of *M. separandus* Crotch, 1876. Scale bars = 1 mm.

Distribution

North Brazil.

Remarks

The examined specimens of *M. reticulatus* differ from the holotype of *M. lopesi* (Fig. 2C) only in having the basal elytral fascia interrupted and the body length slightly larger. Two dissected individuals have body colour similar to that of *M. reticulatus* and are males, whereas the holotype of *M. lopesi* is a female. It should be evaluated whether such a small variation in colour is a sexual dimorphism. A similar example of sexual dimorphism related to colour variation can be found in *M. chilensis* Crotch (see Pecci-Maddalena & Lopes-Andrade 2017).

51. *Mycotretus sallaei* Crotch, 1876

Mycotretus sallaei Crotch, 1876: 452. Type locality: “Mexico”.

Mycotretus sallaei – Gemminger & Harold 1876: 3695. — Gorham 1888: 53. — Kuhnt 1909: 75; 1911: 53. — Blackwelder 1945: 467. — Alvarenga 1994: 34. — Skelley 1998b: 17.

Primary type

Lectotype, here designated (Fig. 10D)

MEXICO • “TYPE [blue label, printed] \ TYPE. [printed], Sallaei Mexico Sallé [handwritten] \ LECTOTYPE [printed], *Mycotretus sallaei* Crotch, 1876 [red label, handwritten]”; UMZC.

Other specimens examined

MEXICO • 1 ♂ (dissected); “Sp. figured [printed] \ Mexico. Salle Coll. [printed] \ Toxpam [printed] \ B.C.A., Col., VII. *Mycotretus* [printed] \ *Mycotretus sallaei* Crotch, apud Sallé [handwritten]”; BMNH.

Distribution

Mexico.

Mycotretus sanguinosus Crotch, 1876

Mycotretus sanguinosus Crotch, 1876: 458. Type locality: “N. Granada” [The old Viceroyalty of New Granada, which at various times included parts of Colombia, Panama, Ecuador and Venezuela; without details of which country].

Mycotretus sanguinosus – Gemminger & Harold 1876: 3695. — Gorham 1888: 68. — Kuhnt 1909: 72; 1911: 53. — Blackwelder 1945: 467. — Alvarenga 1994: 34. — Skelley 1998b: 18. — Pecci-Maddalena *et al.* 2021b: 3080 [synonym of *Mycomystes coccineus*].

Primary type

Lectotype (Fig. 10E)

UNKNOWN COUNTRY • “TYPE [blue label, printed] \ TYPE. [printed] sanguineus N Gran R. [handwritten] \ LECTOTYPE [printed] *Mycotretus sanguinosus* Crotch, 1876 [handwritten]”; UMZC.

Remarks

Junior synonym of *Mycomystes coccineus* (Lacordaire, 1842) (Fig. 27C, see below), see Pecci-Maddalena *et al.* (2021b).

52. *Mycotretus separandus* Crotch, 1876

Mycotretus separandus Crotch, 1876: 442. Type locality: “Ega” [= Tefé, in the state of Amazonas, North Brazil].

Mycotretus separandus – Gemminger & Harold 1876: 3695. — Kuhnt 1909: 76; 1911: 53. — Blackwelder 1945: 467. — Alvarenga 1994: 35. — Skelley 1998b: 15.

Primary type

Lectotype, here designated (Fig. 10F)

BRAZIL • “TYPE [blue label, printed] \ TYPE. separandus Ega Bates [handwritten] \ LECTOTYPE [printed], *Mycotretus separandus* Crotch, 1876 [red label, handwritten]”; UMZC.

Other specimens examined

BRAZIL • 1 ♀ (dissected); “Coleção M. Alvarenga [printed] \ Estirão do Equador, Amazonas, Brasil X. 1979, M. Alvarenga [printed] \ *Mycotretus separandus* Crotch, 1876 [handwritten] M. Alvarenga det. [printed] 1984 [handwritten] \ M [printed]”; MNRJ.

Distribution

North Brazil.

53. *Mycotretus sericeonitens sericeonitens* Crotch, 1876

Mycotretus sericeonitens Crotch, 1876: 445. Type locality: “Ega” [= Tefé, in the state of Amazonas, North Brazil].

Mycotretus sericeonitens – Gemminger & Harold 1876: 3695. — Kuhnt 1909: 76; 1911: 53. — Mader 1942: 175; 1951: 223. — Blackwelder 1945: 467. — Delkeskamp 1957: 99. — Alvarenga 1994: 35. — Skelley 1998b: 16. — McHugh & Chaboo 2015: 278.

Primary type

Lectotype, here designated (Fig. 11A)

BRAZIL • “TYPE [blue label, printed] \ TYPE. [printed], sericeonitens Ega B [handwritten] \ LECTOTYPE [printed], *Mycotretus sericeonitens* Crotch, 1876 [red label, handwritten]”; UMZC.

Other specimen examined

Paralectotype

BRAZIL • 1 spec.; “PARATYPE [blue label, printed] \ green square [unwritten] \ Bates [printed] \ PARALECTOTYPE [printed], *Mycotretus sericeonitens* Crotch, 1876 [yellow label, handwritten]”; UMZC.

Distribution

Ecuador, Peru, Bolivia, North Brazil.

Remarks

Mycotretus sericeonitens resembles *M. signatellus* (Fig. 11B) in body colour and shape, and these species are morphologically similar.

54. *Mycotretus sericeonitens monticola* Crotch, 1876

Mycotretus sericeonitens monticola Crotch, 1876: 445 [as a variety]. Type locality: “Ecuador”.

Mycotretus sericeonitens monticola – Kuhnt 1909: 76; 1911: 53. — Blackwelder 1945: 467. — Mader 1951: 223. — Alvarenga 1994: 35. — Skelley 1998b: 16.

Type specimen

Not located.

Distribution

Unknown locality in Ecuador.

Remarks

As mentioned by Skelley (1998b), there is no *M. sericeonitens monticola* labeled in the Crotch collection. Recently, the senior author also examined that collection and did not find any *M. sericeonitens monticola* there.

55. *Mycotretus signatellus signatellus* Crotch, 1876

Mycotretus signatellus Crotch, 1876: 443. Type locality: “Ega” [= Tefé, in the state of Amazonas, North Brazil].

Mycotretus signatellus imperfectus Crotch, 1876: 443 [as a variety]: Type locality: “Para” [State of Pará, North Brazil] **syn. nov.** (Fig. 11C).

Mycotretus fragosoi Alvarenga, 1983: 587. Type locality: “BRASIL, Amazonas, Estirão do Equador (coordenadas aproximadas, long 71°38’W e lat 4°33’S)” [Rio Javari, Estirão do Equador, in the state of Amazonas, North Brazil] **syn. nov.** (Fig. 2B).

Mycotretus signatellus – Gemminger & Harold 1876: 3695. — Kuhnt 1909: 76; 1911: 53. — Blackwelder 1945: 467. — Alvarenga 1994: 35. — Skelley 1998b: 16.

Mycotretus signatellus imperfectus – Kuhnt 1909: 76; 1911: 53. — Blackwelder 1945: 467. — Alvarenga 1994: 35. — Skelley 1998b: 16 [“*imperfecta*”].

Mycotretus fragosoi – Alvarenga 1994: 26.

Primary type

Lectotype, here designated (Fig. 11B)

BRAZIL • “TYPE [blue label, printed] \ TYPE [printed], signatellus Ega Bates [handwritten] \ LECTOTYPE [printed], *Mycotretus signatellus* Crotch, 1876 [red label, handwritten]”; UMZC.

Other specimens examined

Paralecotype

BARZIL • 1 spec.; “Bates [printed] \ PARATYPE [blue label, printed] \ PARALECTOTYPE [printed], *Mycotretus signatellus* Crotch, 1876 [yellow label, handwritten]”; UMZC.

Additional material

BRAZIL • 1 ♀ (dissected); “Coleção M. Alvarenga [printed] \ Homeotipo [red label, printed] \ TEFE, Amazonas BRASIL, 27 a 31-VII-1956, M. Alvarenga legit [printed] \ signatellus Crotch [handwritten] \ 1779 [printed]”; MNRJ • 1 ♀ (dissected); “Coleção M. Alvarenga [printed] \ Homeotipo [red label, printed] \ TEFE, Amazonas BRASIL, 27 a 31-VII-1956, M. Alvarenga legit [printed] \ Comparado com tipo [printed] *Mycotretus signatellus* v. *imperfectus* Crotch, 1876 [handwritten] M. Alvarenga det. 1971

[printed] \ 1778 [printed]”; MNRJ • 1 ♂ (dissected); “Coleção M. Alvarenga [printed] \ Homeotipo [red label, printed] \ TEFE, Amazonas BRASIL, 27 a 31-VII-1956, M. Alvarenga legit [printed] \ Comparado com tipo [printed] *Mycotretus signatellus* Crotch, 1876 [handwritten] M. Alvarenga det. 1971 [printed] \ DZUP 132790 [printed]”; DZUP • 1 spec.; “Coleção M. Alvarenga [printed] \ TEFE, Amazonas BRASIL, 27 a 31-VII-1956, M. Alvarenga legit [printed] \ DZUP 132792 [printed]”; DZUP • 1 ♂ (dissected); “Marituba [printed] 24.10 [handwritten] -196 [printed] 1 [handwritten] \ Brasil, P A, J. & B. Bechyné [printed] \ MG [printed] \ 1772 [printed] \ *Mycotretus* 186 [handwritten]”; MNRJ.

Distribution

North Brazil.

Remarks

There is no morphological difference between the holotype of *M. fragosoi* (Fig. 2B) and the lectotype of *M. signatellus* (Fig. 11B). Despite small differences in body colour between *M. signatellus* and *M. signatellus imperfectus*, there are no conspicuous differences in the external morphology and the morphology of their male genitalia. We have also observed that *M. signatellus* is morphologically similar to *M. lacertosus* (Fig. 31E) based on similarities of their penile flagellum and body color.

56. *Mycotretus signatellus imperfectus* Crotch, 1876

Mycotretus signatellus imperfectus Crotch, 1876: 443 [as a variety]. Type locality: “Para” [State of Pará, North Brazil].

Mycotretus signatellus imperfectus – Kuhnt 1909: 76; 1911: 53. — Blackwelder 1945: 467. — Alvarenga 1994: 35. — Skelley 1998b: 16 [“*imperfecta*”].

Primary type

Lectotype, here designated (Fig. 11C)

BRAZIL • “TYPE [blue label, printed] \ TYPE [printed], Var imperfecta Para Bates [handwritten] \ LECTOTYPE [printed], *Mycotretus signatellus imperfecta* Crotch, 1876 [red label, handwritten]”; UMZC.

Remarks

New junior synonym of *Mycotretus signatellus* Crotch, 1876 (Fig. 11B, see above).

57. *Mycotretus succinctus* Crotch, 1876

Mycotretus succinctus Crotch, 1876: 452. Type locality: “N. Granada” [The old Viceroyalty of New Granada, which at various times included parts of Colombia, Panama, Ecuador and Venezuela; without details of which country].

Mycotretus succinctus – Gemminger & Harold 1876: 3695. — Kuhnt 1909: 74; 1911: 54. — Deelder 1942: 90. — Blackwelder 1945: 467. — Alvarenga 1994: 36. — Skelley 1998b: 17.

Primary type

Lectotype, here designated (Fig. 11D)

UNKNOWN COUNTRY or COLOMBIA • “TYPE [blue label, printed] \ TYPE. succinctus, N. Gran Reiche. [handwritten] \ LECTOTYPE [printed], *Mycotretus succinctus* Crotch, 1876 [red label, handwritten]”; UMZC.

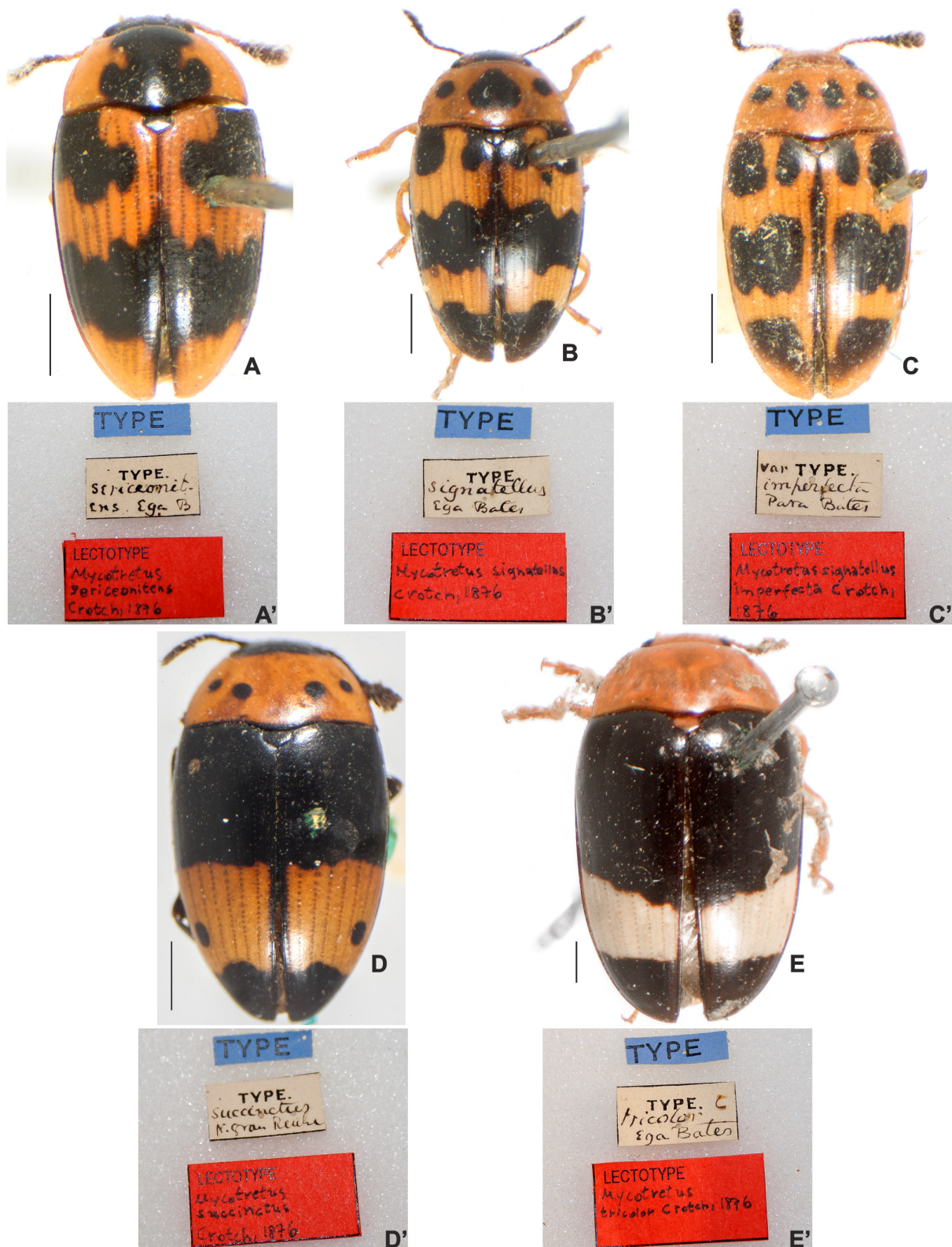


Fig. 11. Crotch primary types (dorsal, labels) cont. **A–A'**. Lectotype of *Mycotretus sericeonitens* Crotch, 1876. **B–B'**. Lectotype of *M. signatellus* Crotch, 1876. **C–C'**. Lectotype of *M. signatellus imperfectus* Crotch, 1876. **D–D'**. Lectotype of *M. succinctus* Crotch, 1876. **E–E'**. Lectotype of *M. tricolor* Crotch, 1876. Scale bars = 1 mm.

Other specimens examined

UNKNOWN COUNTRY • 1 spec.; “Col. [handwritten]”; UMZC.

Distribution

Colombia.

Remarks

In the UMZC drawer, there is one specimen placed close to the lectotype and labeled “Col.” (handwritten), but we do not know whether it is a syntype and prefer not to label it as a paralectotype.

58. *Mycotretus tigrinus pardalis* Crotch, 1876

Mycotretus tigrinus pardalis Crotch, 1876: 451 [as a variety]. Type locality: “Ecuador” [apud Alvarenga 1994].

Mycotretus tigrinus pardalis – Gemminger & Harold 1876: 3695. — Kuhnt 1909: 74; 1911: 54. — Mader 1942: 173; 1951: 216. — Blackwelder 1945: 468. — Alvarenga 1994: 37. — Pecci-Maddalena & Lopes-Andrade 2018b: 4 [synonym of *M. tigrinus*].

Type specimen

Not located.

Distribution

Peru, Ecuador, North Brazil.

Remarks

Junior synonym of *M. tigrinus* (Olivier, 1792) (Fig. 39F, see comments below). The type of *M. tigrinus pardalis* was not located in the Crotch collection.

59. *Mycotretus tricolor* Crotch, 1876

Mycotretus tricolor Crotch, 1876: 444. Type locality: “Ega” [= Tefé, in the state Amazonas, North Brazil].

Mycotretus tricolor – Gemminger & Harold 1876: 3695. — Kuhnt 1909: 71; 1911: 54. — Mader 1942: 172; 1951: 212. — Blackwelder 1945: 468. — Alvarenga 1994: 37. — Skelley 1998b: 16. — McHugh & Chaboo 2015: 278.

Primary type

Lectotype, here designated (Fig. 11E)

BRAZIL • “TYPE [blue label, printed] \ TYPE. tricolor Ega Bates [handwritten] \ LECTOTYPE [printed], *Mycotretus tricolor* Crotch, 1876 [red label, handwritten]”; UMZC.

Other specimens examined

BRAZIL • 1 ♀ (dissected); “Coleção M. Alvarenga [printed] \ Homeotipo [red label, printed] \ TABATINGA, Amazonas BRASIL [printed] X. 1958 [handwritten] F.M. Oliveira [printed] \ *Mycotretus tricolor* Crotch., 1876 [handwritten], M. Alvarenga det. [printed] 1971 [handwritten] \ PMMA [handwritten]”; MNRJ • 1 ♀ (dissected); “Coleção M. Alvarenga [printed] \ Homeotipo [red label, printed] \ TEFÉ, Amazonas Brasil [printed] VIII.1957 [handwritten] R. Carvalho [printed] \ Comparado com tipo [printed] *Mycotretus tricolor* Crotch, 1876 [handwritten] M. Alvarenga det. 1971 [printed] \ 1840 [printed] \ DZUP 132801 [printed]”; DZUP • 1 ♂ (dissected); “Coleção M. Alvarenga [printed] \

TABATINGA, Amazonas BRASIL [printed] Out. [handwritten]-1956 [printed], F.M.Oliveira [printed] \ 1839 [printed] \ DZUP 132802 [printed]”; DZUP.

Distribution

Peru, North Brazil.

60. *Mycotretus xanthomelas* Crotch, 1876

Mycotretus xanthomelas Crotch, 1876: 458. Type locality: “Para” [State of Pará, Brazil].

Mycotretus xanthomelas – Gemminger & Harold 1876: 3695. — Kuhnt 1909: 74; 1911: 54. — Blackwelder 1945: 468. — Alvarenga 1994: 37. — Skelley 1998b: 18.

Primary type

Lectotype, here designated (Fig. 12A)

BRAZIL • “TYPE [blue label, printed] \ TYPE. xanthomelas Para Chev [handwritten] \ LECTOTYPE [printed], *Mycotretus xanthomelas* Crotch, 1876 [red label, handwritten]”; UMZC.

Distribution

North Brazil.

Remarks

This is one of the largest *Mycotretus* that we examined.

VII. Deelder, C.L.

61. *Mycotretus ornatus partialis* Deelder, 1942

Mycotretus ornatus partialis Deelder, 1942: 88 [as a variety]. Type locality: “Cauca, Colombia” [Department of Cauca, Colombia].

Mycotretus ornatus partialis – Blackwelder 1945: 467. — Delkeskamp 1957: 113. — Alvarenga 1994: 32.

Primary type

Holotype (Fig. 12B)

COLOMBIA • “Cauca, Columb. [printed] \ Holotypus [green label, printed] \ Staudinger 1917 [printed] \ *Mycotretus partialis* [handwritten] \ MUSEUM LEIDEN [printed] *Mycotretus ornatus* Dup. [handwritten] Det. C. Deelder 1942 [printed] \ MUSEUM LEIDEN [printed] Var. *partialis*. Dldr. [handwritten] Det. C. Deelder 1942 [printed]”; RMNH.

Remarks

New junior synonym of *M. ornatus* (Duponchel, 1825) (Fig. 14A, see below).

VIII. Delkeskamp, K.

Fig. 12C–F

62. *Mycotretus fidelis* Delkeskamp, 1939

Brachysphaenus (Barytopus) parallelus Kuhnt, 1909: 30 [nec Crotch, 1876]. Type locality: “Peru”.

Mycotretus fidelis Delkeskamp, 1939: 27 [replacement name].

Brachysphaenus (Barytopus) parallelus – Kuhnt 1911: 18. — Mader 1938: 17; 1942: 171. — Blackwelder 1945: 459.

Mycotretus parallelus – Delkeskamp 1939: 27. — Alvarenga 1994: 25.

Mycotretus fidelis – Alvarenga 1994: 25. — McHugh & Chaboo 2015: 278.

Primary type

Holotype (Fig. 12C)

PERU • “79163 [printed] \ Perum [?] Khimia [?] [green label, handwritten] \ Coll. Thieme [printed] \ Type [red label, printed] \ *Barytopus parallelus* Kuhnt [handwritten] \ HOLOTYPE, *Brachysphaenus (Barytopus) parallelus* Kuhnt, 1909, labelled by I. Pecci-Maddalena 2017 [red label, printed] \ *Mycotretus fidelis* Delkeskamp, 1939, det. I. Pecci-Maddalena, 2017 [printed]”; MFN.

Distribution

Unknown locality in Peru.

Remarks

Mycotretus fidelis was described in *Brachysphaenus* Lacordaire (currently *Iphichlus* Chevrolat, apud Alvarenga 1994). Delkeskamp (1939) noted it belonged to *Mycotretus* and proposed the replacement name “*M. fidelis*” to resolve the homonymy with *M. parallelus* Crotch (Fig. 9B).

63. *Mycotretus sexoculatus chaparensis* Delkeskamp, 1957

Mycotretus sexoculatus chaparensis Delkeskamp, 1957: 98, 111. Type locality: “Bolivien, Chapare Gebiet, Oberer Rio Chipiriri, 400m” [Río Chipiriri, Province of Chapare, Cochabamba, Bolivia].

Mycotretus sexoculatus chaparensis – Alvarenga 1994: 35.

Primary type

Holotype (Fig. 12D)

BOLIVIA • “Chapare – Gebiet, Oberer Rio Chipiriri, 400 m [printed], 31.10.53 [handwritten] \ Bolivia 1954, leg. W. Forster [printed] \ Holotypus Nr.[red label, printed] \ *Mycotretus sexoculatus chaparensis* m. [handwritten], det. Delkeskamp 19 [printed] 57 [handwritten]”; ZSBS.

Other specimens examined

BOLIVIA • 1 ♂ (dissected); “Coleção M. Alvarenga [printed] \ Chapare – Gebiet, Oberer Rio Chipiriri, 400 m [printed] 31.10.53 [handwritten] \ *Mycotretus sexoculatus chaparensis* m. [handwritten] det. Delkeskamp 19 [printed] 57 [handwritten] \ Paratypus [red label, printed] \ Bolivia 1954, leg. W. Forster [printed] 1694-A [handwritten]”; MNRJ.

Distribution

Bolivia.

Remarks

Information on paratypes is available in the original description (Delkeskamp 1957) and are not repeated here.

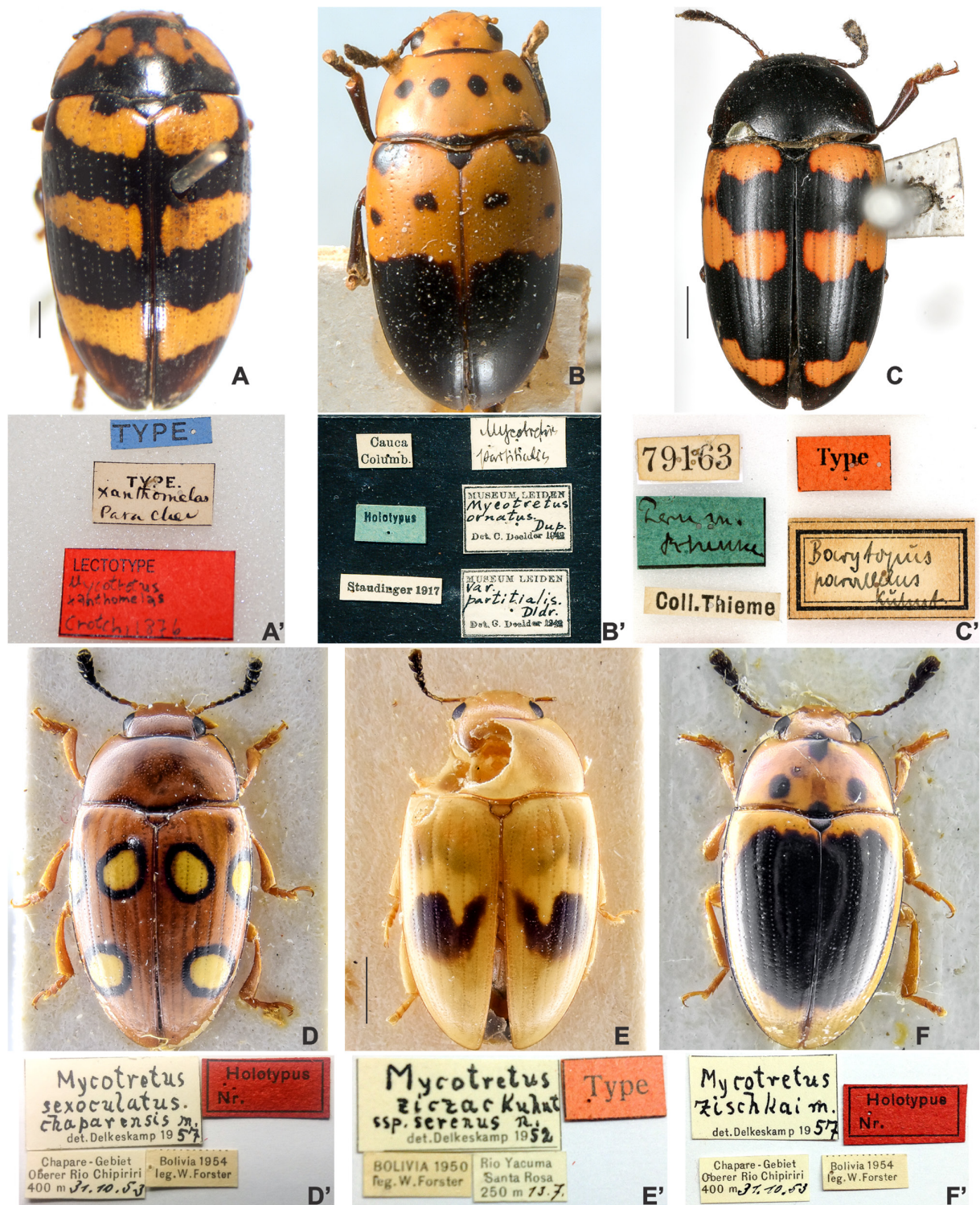


Fig. 12. Primary types (dorsal, labels). A–A'. Lectotype of *Mycotretus xanthomelas* Crotch, 1876. B–B'. Holotype of *M. ornatus partialis* Deelder, 1942. C–C'. Holotype of *M. fidelis* Deskeskamp, 1939 [= *Brachysphaenus (Barytopus) parallelus* Kuhnt, 1909]. D–D'. Holotype of *M. sexoculatus chaparensis* Delkeskamp, 1957. E–E'. Holotype of *M. ziczac serenus* Delkeskamp, 1957. F–F'. Holotype of *M. zischkai* Delkeskamp, 1957. Scale bars: A, C, E = 1 mm; B, D, F = see Remarks.

64. *Mycotretus ziczac serenus* Delkeskamp, 1957

Mycotretus ziczac serenus Delkeskamp, 1957: 99, 110. Type locality: “Bolivien, Rio Yacuma, Santa Rosa, 250 m” [village of Santa Rosa, Department of Beni, Bolivia].

Mycotretus ziczac serenus – Alvarenga 1994: 38.

Primary type

Holotype (Fig. 12E)

BOLIVIA • “Rio Yacuma, Santa Rosa, 250 m [printed], 13.7. [handwritten] \ BOLIVIA, 1950, leg. W. Forster [printed] \ Type [red label, printed] \ *Mycotretus ziczac* Kuhnt, ssp. *serenus* n. [?] [handwritten], det. Delkeskamp 19 [printed] 52 [handwritten]”; ZSBS.

Other specimens examined

BOLIVIA • 1 ♂ (dissected); “Coleção M. Alvarenga [printed] \ ACRE, Tarauacá, Werner col., XI-1956 [printed] \ *Mycotretus ziczac serenus* Delk. 1957 [handwritten] M. Alvarenga det. [printed] 1984 [handwritten]”; MNRJ.

Distribution

Bolivia.

65. *Mycotretus zischkai* Delkeskamp, 1957

Mycotretus zischkai Delkeskamp, 1957: 98, 112. Type locality: “Bolivien, Chapare-Gebiet, Oberer Rio Chipiriri, 400 m” [Río Chipiriri, Province of Chapare, Cochabamba, Bolivia].

Mycotretus zischkai – Alvarenga 1994: 38.

Primary type

Holotype (Fig. 12F)

BOLIVIA • “Chapare – Gebiet, Oberer Rio Chipiriri, 400 m [printed], 31.10.53 [handwritten] \ Bolivia 1954, leg. W. Forster [printed] \ Holotypus Nr. [red label, printed] \ *Mycotretus zischkai* m. [handwritten], det. Delkeskamp 19 [printed] 57 [handwritten]”; ZSBS.

Remarks

New junior synonym of *M. cordiger* Crotch, 1876 (Fig. 5D, see above).

IX. Duponchel, P.A.J.

Figs 13, 14A–C

66. *Mycotretus coronatus* (Duponchel, 1825)

Erotylus coronatus Duponchel, 1825: 50. Type locality: “Brésil”.

Mycotretus coronatus – Lacordaire 1842: 141. — Crotch 1876: 450. — Gemminger & Harold 1876: 3692. — Kuhnt 1909: 75; 1911: 48. — Blackwelder 1945: 466. — Alvarenga 1994: 23. — Skelley 1998b: 15.

Primary type

Lectotype, here designated (Fig. 13A)

BRAZIL • “Campos geraés [handwritten] \ coronatus [handwritten] \ *Mycotretus coronatus* Duponchel [handwritten] \ Lectotipo [red label, printed] \ *Mycotretus coronatus* (Duponchel) [handwritten] det. I. Pecci-Maddalena 2017 [printed]”; MNHN.

Remarks

New junior synonym of *M. ornatus* (Duponchel, 1825) (Fig. 14A, see below). The “Lectotipo” label is that used by Alvarenga, and was likely placed on the specimen when he studied it. We accept and validate that designation.

67. *Mycotretus decoratus* (Duponchel, 1825)

Erotylus decoratus Duponchel, 1825: 50. Type locality: “Brésil”.

Mycotretus decoratus – Lacordaire 1842: 172. — Crotch 1876: 442. — Gemminger & Harold 1876: 3692. — Kuhnt 1909: 76; 1911: 49. — Blackwelder 1945: 466. — Alvarenga 1994: 23.

Primary type

Lectotype, here designated (Fig. 13B)

BRAZIL • “D. Latreille [handwritten] \ LECTOTYPE [printed], *Erotylus decoratus* Duponchel, 1825 [red label, handwritten] \ *Mycotretus decoratus* Duponchel [handwritten], det. I. Pecci-Maddalena 2017 [printed]”; MRSN.

Other specimens examined

BRAZIL • 1 ♂ (dissected); “Coleção M. Alvarenga [printed] \ OBIDOS, Pará BRASIL [printed], I. 1962 [handwritten], F.M. Oliveira [printed] \ *Mycotretus decoratus* (Dup.) [handwritten] \ M. Alvarenga det. [printed] 1964 [handwritten] \ DZUP 136175 [printed]”; DZUP • 1 ♀ (dissected); “Coleção M. Alvarenga [printed] \ TABATINGA, Amazonas BRASIL [printed], Out. [handwritten] -1956 [printed], F.M. Oliveira [printed] \ DZUP 136177 [printed]”; DZUP.

Distribution

North Brazil.

Remarks

The lectotype is kept in the Collection of M. le marquis de Brême (MRSN) and has a green label “D. Latreille”. As pointed out by Duponchel (1825) “Cette espèce, qui n’avoit pas encore été décrite, fait partie de la collection de M. Latreille”.

68. *Mycotretus duodecimguttatus duodecimguttatus* (Duponchel, 1825)

Erotylus ocellatus Germar, 1824: 613 [nec Olivier, 1792]. Type locality: “Brasilia”.

Erotylus duodecimguttatus Duponchel, 1825: 53. Type locality: “Brésil”.

Mycotretus ocellatus – Lacordaire 1842: 164. — Crotch 1876: 441. — Gemminger & Harold 1876: 3694. — Kuhnt 1909: 74; 1911: 51. — Mader 1942: 173; 1951: 215. — Deelder 1942: 88. — Blackwelder 1945: 467. — Alvarenga 1994: 24. — Skelley 1998b: 15.

Mycotretus duodecimguttatus – Lacordaire 1842: 164. — Crotch 1876: 441. — Gemminger & Harold 1876: 3694. — Kuhnt 1909: 74; 1911: 51. — Blackwelder 1945: 467. — Alvarenga 1994: 24. — Skelley 1998b: 15. — McHugh & Chaboo 2015: 278.

Primary type

Lectotype, here designated (Fig. 13C)

BRAZIL • “polyomatus chevrolat [green label, handwritten] \ LECTOTYPE [printed], *Erotylus duodecimguttatus* Duponchel, 1825 [red label, handwritten] \ *Mycotretus duodecimguttatus* (Duponchel) [handwritten], det. I. Pecci-Maddalena 2017 [printed]”; MRSN.

Other specimens examined

BRAZIL • 1 ♀ (dissected); “Rondônia – BRASIL [printed], Ouro Preto do Oeste, X. 1983-Roppa e Silva [handwritten]”; MNRJ • 1 ♀ (dissected); “Coleção M. Alvarenga [printed] \ REPRÊSA RIO GRANDE, Guanabara BRASIL [printed], II. 1967 [handwritten], F.M. Oliveira [printed] \ *Mycotretus duodecimguttatus* (Dup. 1826) [handwritten], M. Alvarenga det. [printed] 1984 [handwritten]”; MNRJ • 1 ♂ (dissected); “Coleção M. Alvarenga [printed] \ REPRÊSA RIO GRANDE, Guanabara BRASIL [printed], XI. 1960 [handwritten], F.M. Oliveira [printed] \ DZUP 371288 [printed]”; DZUP.

Distribution

South, North and Southeast Brazil, Colombia and Peru.

Remarks

1) There is a historical taxonomic mess regarding the validity of the specific names “*duodecimguttatus* Duponchel” and “*ocellatus* Germar”. Here we clarify it, as follows: (i) Olivier (1792) described *Erotylus ocellatus*, transferring, in 1808, this species to *Eumorphus* Weber, 1801 (see Olivier 1808) and, currently, the species is under *Epopterus* Chevrolat, 1844 (Endomychidae); (ii) Germar (1824) described a different species with the name “*Erotylus ocellatus*”, creating a primary homonymy with *E. ocellatus* Olivier; (iii) One year later, Duponchel (1825) described “*Erotylus duodecimguttatus* Duponchel”; (iv) Lacordaire (1842) synonymized *Erotylus ocellatus* Germar with *Erotylus duodecimguttatus* Duponchel, transferred the species to *Mycotretus* and preserved Duponchel’s species name. He stated the following: “Je conserve à cette espèce le nom de 12-guttatus que lui a donné M. Duponchel, quoique auparavant M. Germar l’ait décrite sous d’*ocellatus*, attendu qu’Olivier (Encyc. méth. ins. VI, p. 437) a déjà employé ce nom pour une espèce qui m’est inconnue, mais qui appartient sans aucun doute à cette famille”; (v) After Lacordaire (1842), and before Alvarenga (1994), all authors considered “*ocellatus* Germar” the valid name, as follows: Gemminger & Harold (1876), Crotch (1876), Kuhnt (1909, 1911), and Blackwelder (1945) placed “*duodecimguttatus*” under “*ocellatus*”, and Mader (1942, 1951) and Deelder (1942) mentioned only the name “*ocellatus*”, with no reference to “*duodecimguttatus* Duponchel”; (vi) Thus, Alvarenga (1994), as well as Lacordaire (1842), placed the name “*ocellatus* Germar” under “*duodecimguttatus* Duponchel” stating “nom. praeoc.” for “*ocellatus* Germar”.

Here, we agree with Lacordaire and Alvarenga. Therefore, the name *Erotylus ocellatus* Germar, 1824 is considered a primary homonym of *Erotylus ocellatus* Olivier, 1792, based on articles 53 and 60 of the CODE: “53.3. Homonyms in the species group. Two or more available species group names having the same spelling are homonyms if they were originally established in combination with the same generic name (primary homonymy) (...)” and “60.1. Substitute names. A junior homonym [Art. 53] must be rejected and replaced either by an available and potentially valid synonym [Art. 23.3.5] or, for lack of such a name, by a new substitute name [Art. 60.3]”. Since *Mycotretus duodecimguttatus* (Duponchel, 1825) is an available synonym of *Mycotretus ocellatus* (Germar, 1824) – a primary homonym – the former must be the valid name. 2) The lectotype of *M. duodecimguttatus* (Duponchel) is kept in the

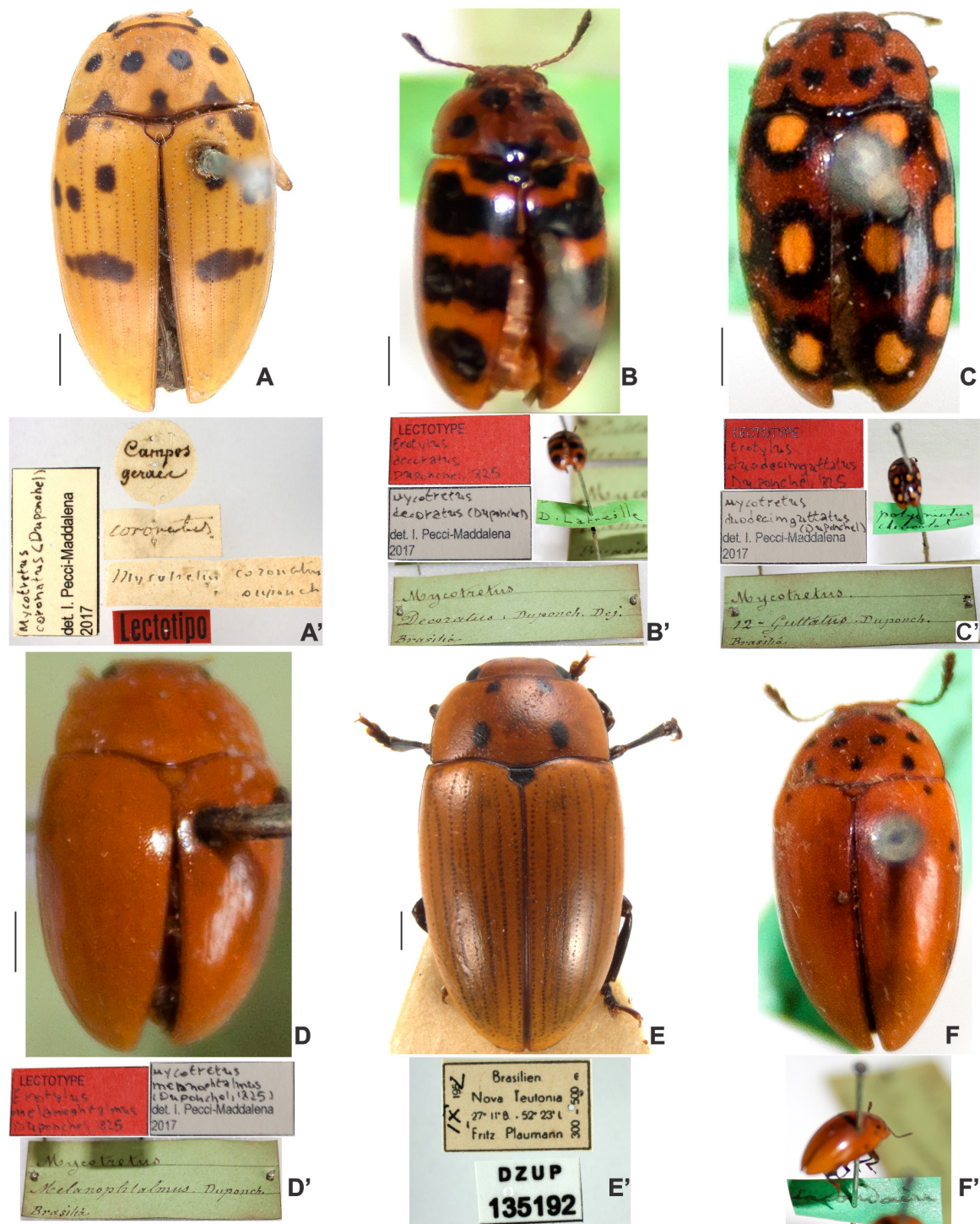


Fig. 13. A–D. Duponchel primary types (dorsal, labels). A–A'. Lectotype of *Erotylus coronatus* Duponchel, 1825 [currently *Mycotretus coronatus* (Duponchel)]. B–B'. Lectotype of *E. decoratus* Duponchel, 1825 [currently *M. decoratus* (Duponchel)]. C–C'. Lectotype of *E. duodecimguttatus* Duponchel, 1825 [currently *M. duodecimguttatus* (Duponchel)]. D–D'. Lectotype of *E. melanophthalmus* Duponchel, 1825 [currently *Micomystes melanophthalmus* (Duponchel)]. E–E'. Specimen of *M. minutus* (Duponchel, 1825) from the DZUP collection (Brazil). F–F'. Specimen of *M. nigropunctatus* (Duponchel, 1825) from the Brême collection (MRSN). Scale bars: A–D = 1 mm; E = 0.5 mm; F = see Material and methods.

Collection of M. le marquis de Brême (MRSN). Dejean (1836) indicated the synonymy of the specific name “*polyomatus chevrolat*” listed under the name “*Duodecimgutattus*. Dej.”, by placing both names within a single set of brackets. The name “*polyomatus*” is a *nomen nudum*, and appears only in the catalogue of Gemminger & Harold (1876) under the name “12-guttatus Duponch”, both names being synonyms of *M. ocellatus* Germar. We have only located that “*polyomatus*” specimen, among the Dejean specimens in the Brême collection. Duponchel (1825) did not mention Chevrolat’s name on his description of *M. duodecimguttatus*. However, it is known that Chevrolat exchanged specimens with notable entomologists throughout his life (Latreille, Duméril, Dejean and Guérin) (Reiche 1884). We considered that this “*polyomatus* specimen” was already kept in the Brême collection, along with many of Dejean’s specimens, by the time Duponchel (1825) made his descriptions. Therefore, we selected the “*polyomatus*” as the lectotype of *M. duodecimguttatus*.

***Mycomystes melanophthalmus* (Duponchel, 1825)**

Erotylus melanophthalmus Duponchel, 1825: 160 [description]. Type locality: “Brésil”.

Erotylus (Brachymerus) cinctellus Guérin-Méneville, 1841: 153 [description].

Mycotretus discoidalis Taschenberg, 1870: 199 [description].

Mycotretus melanophthalmus – Lacordaire 1842: 179. — Guérin-Méneville 1855: 610. — Crotch 1876: 448. — Gemminger & Harold 1876: 3693. — Kuhnt 1909: 72; 1911: 51. — Blackwelder 1945: 466. — Guérin 1948: 20. — Alvarenga 1994: 29. — Skelley 1998b: 16. — Pecci-Maddalena & Lopes-Andrade 2020: 585. — Pecci-Maddalena *et al.* 2021a: 955.

Mycotretus cinctellus – Lacordaire 1842: 178. — Crotch 1876: 447. — Gemminger & Harold 1876: 3692. — Kuhnt 1909: 71; 1911: 48. — Bruch 1914: 384. — Deelder 1942: 88. — Mader 1942: 172; 1951: 212. — Blackwelder 1945: 466. — Guérin-Méneville 1841: 153–154. — Alvarenga 1994: 22. — Skelley 1998b: 16. — McHugh & Chaboo 2015: 278. — Pecci-Maddalena *et al.* 2021b: 3090 [junior synonym of *Mycomystes melanophthalmus*].

Mycotretus discoidalis – Gemminger & Harold 1876: 3692. — Kuhnt 1909: 73; 1911: 49. — Mader 1942: 173; 1951: 214. — Blackwelder 1945: 466. — Alvarenga 1994: 24. — McHugh & Chaboo 2015: 278. — Pecci-Maddalena *et al.* 2021b: 3091 [junior synonym of *Mycomystes melanophthalmus*].

Mycomystes melanophthalmus – Pecci-Maddalena *et al.* 2021b: 3090.

Primary type

Lectotype (Fig. 13D)

BRAZIL • “LECTOTYPE [printed] *Erotylus melanophthalmus* Duponchel, 1825 [red label, handwritten] \ *Mycotretus melanophthalmus* (Duponchel, 1825) [handwritten] det. I. Pecci-Maddalena 2017 [printed]”; MRSN.

Other specimens examined

See Pecci-Maddalena *et al.* (2021b).

Distribution

From Central America to Argentina.

Remarks

See Pecci-Maddalena *et al.* (2021b).

69. *Mycotretus minutus* (Duponchel, 1825)

Erotylus minutus Duponchel, 1825: 54. Type locality: “Brésil”.

Mycotretus quadrinus Lacordaire, 1842: 155 (Fig. 35D). Type locality: “Brésil”.

Mycotretus minutus – Lacordaire 1842: 154. — Crotch 1876: 455. — Gemminger & Harold 1876: 3693. — Kuhnt 1909: 73; 1911: 51. — Blackwelder 1945: 466. — Guérin 1948: 20. — Alvarenga 1994: 29. — Skelley 1998b: 17.

Mycotretus quadrinus – Crotch 1876: 455 [junior synonym]. — Alvarenga 1994: 29. — Skelley 1998b: 17.

Type specimen

Not located.

Other specimens examined

BRAZIL • 1 ♂ spec. (dissected; Fig. 13E); “IX [handwritten] 195 [printed] 2 [handwritten] \ Brasilien, Nova Teutonia, 27°11′B [?].52°23′L, Fritz Plaumann, 300–500 m [printed] \ DZUP 135192 [printed]”; DZUP • 1 ♀ (dissected); “Canela, RS, Barragem dos Bugres, 23.XI.1998, Franceschini col [printed] \ Col. MCN [printed] 163.038 [handwritten] \ *M. minutus* [handwritten]”; MCNZ.

Distribution

South and Southeast Brazil.

Remarks

Mycotretus minutus resembles *M. pygmaeus* (Fig. 35C) in body shape and morphology of male genitalia. In the absence of a larger series of named specimens for comparison, we prefer not to synonymize these species. Duponchel (1825) stated that *M. minutus* “(...) fait partie de la collection de M. le comte Dejean, qui l’a nommée *minutus*”. In the Brême collection (MRSN), there is one specimen labeled “D. Gysselen”, a name that sometimes appears in Dejean’s catalogue (although not close to the name “*minutus*”). We are still in doubt whether that specimen would be the primary type or not; therefore, we prefer not to assign type status to it.

70. *Mycotretus nigropunctatus* (Duponchel, 1825)

Erotylus nigropunctatus Duponchel, 1825: 51. Type locality: “Brésil”.

Mycotretus nigropunctatus – Lacordaire 1842: 142. — Crotch 1876: 450. — Gemminger & Harold 1876: 3694. — Gorham 1888: 48. — Kuhnt 1909: 75; 1911: 51. — Bruch 1914: 384. — Deelder 1942: 88. — Blackwelder 1945: 467. — Guérin 1948: 20. — Alvarenga 1994: 30. — Skelley 1998b: 16.

Primary type

Lectotype, here designated (Fig. 13F).

BRAZIL • “Lacordaire [handwritten]”; MRSN.

Remarks

New junior synonym of *M. ornatus* (Duponchel, 1825) (Fig. 14A, see below). 1) Lacordaire (1842) provided a redescription of *M. nigropunctatus* stating the following: “Cette description du type de l’espèce est faite sur le même exemplaire qui a servi à M. Duponchel pour la sienne”. The examined specimen from MRSN has a label written “Lacordaire” and fits the description made by him and Duponchel. Therefore, this specimen is designated as the lectotype of *M. nigropunctatus*. 2) The name “*octopunctatus* Chevrolat” is a nomen nudum and appears in the Dejean Catalogue (1836) under *M. nigropunctatus*.

71. *Mycotretus ornatus* (Duponchel, 1825)

- Erotylus ornatus* Duponchel, 1825: 49. Type locality: “Brésil”.
- Erotylus coronatus* Duponchel, 1825: 50. Type locality: “Brésil” **syn. nov.** (Fig. 13A).
- Erotylus maculosus* Duponchel, 1825: 52 (Fig. 14B). Type locality: “Brésil”.
- Erotylus nigropunctatus* Duponchel, 1825: 51. Type locality: “Brésil” **syn. nov.** (Fig. 13F).
- Erotylus puncticollis* Duponchel, 1825: 54. Type locality: “Brésil” **syn. nov.**
- Mycotretus cognatus* Lacordaire, 1842: 145. Type locality: “Rio-janeiro” [= Rio de Janeiro, state? locality?, Southeast Brazil] **syn. nov.** (Fig. 27E).
- Mycotretus difficilis* Lacordaire, 1842: 136. Type locality: “Brésil” **syn. nov.** (Fig. 28A).
- Mycotretus dubius* Lacordaire, 1842: 141. Type locality: “Brésil” **syn. nov.** (Fig. 28E).
- Mycotretus godarti* Lacordaire, 1842: 146. Type locality: “Colombie” (Fig. 30D).
- Mycotretus graphoderus* Lacordaire, 1842: 144. Type locality: “Brésil” **syn. nov.** (Fig. 30F).
- Mycotretus intermedius* Lacordaire, 1842: 135. Type locality: “Rio-Janeiro” [= Rio de Janeiro, state? locality?, Southeast Brazil] **syn. nov.** (Fig. 31C).
- Mycotretus melanostictus* Lacordaire, 1842: 139 (Fig. 33A). Type locality: “Colombie”.
- Mycotretus posticus* Lacordaire, 1842: 147. Type locality: “Colombie” **syn. nov.**
- Mycotretus terminalis* Lacordaire, 1842: 134 (Fig. 37C). Type locality: “Rio-Janeiro” [= Rio de Janeiro, state? locality?, Southeast Brazil].
- Mycotretus graphoderus strigipennis* Kuhnt, 1910: 244 [as a variety]. Type locality: not mentioned [based on type label = “Brasilien”] **syn. nov.** (Fig. 24E).
- Mycotretus graphoderus thoracicus* Kuhnt, 1910: 244 [as a variety]. Type locality: not mentioned [based on type label = “Brasilien”] **syn. nov.** (Fig. 24F).
- Mycotretus dispar* Taschenberg, 1870: 197. Type locality: “Colombia” **syn. nov.** (Fig. 40E).
- Mycotretus partitialis* Mader, 1940: 12. Type locality: “Cauca in Colombien” [Department of Cauca, Colombia] **syn. nov.** (Fig. 39A).
- Mycotretus ornatus partitialis* Deelder, 1942: 88 [as a variety]. Type locality: “Cauca, Colombia” [Department of Cauca, Colombia] **syn. nov.** (Fig. 12B).
- Mycotretus ornatus* – Lacordaire 1842: 137. — Crotch 1876: 449. — Gemminger & Harold 1876: 3694. — Gorham 1888: 47; 1898: 253. — Kuhnt 1909: 76; 1911: 51. — Deelder 1942: 88. — Mader 1942: 175; 1951: 220. — Blackwelder 1945: 467. — Guérin 1948: 20. — Delkeskamp 1957: 99. — Alvarenga 1994: 31. — Skelley 1998b: 16. — Węgrzynowicz 2002: 450. — Drilling *et al.* 2013: 38. — McHugh & Chaboo 2015: 278. — Pecci-Maddalena *et al.* 2021a: 955.
- Mycotretus nigropunctatus* – Lacordaire 1842: 142. — Crotch 1876: 450. — Gemminger & Harold 1876: 3694. — Gorham 1888: 48. — Kuhnt 1909: 75; 1911: 51. — Bruch 1914: 384. — Deelder 1942: 88. — Blackwelder 1945: 467. — Guérin 1948: 20. — Alvarenga 1994: 30. — Skelley 1998b: 16.
- Mycotretus puncticollis* – Lacordaire 1842: 142 [junior synonym of *M. ornatus*]. — Alvarenga 1994: 30.
- Mycotretus cognatus* – Crotch 1876: 450. — Gemminger & Harold 1876: 3692. — Kuhnt 1909: 75; 1911: 48. — Blackwelder 1945: 466. — Alvarenga 1994: 22. — Skelley 1998b: 16.
- Mycotretus coronatus* – Crotch 1876: 450. — Gemminger & Harold 1876: 3692. — Kuhnt 1909: 75; 1911: 48. — Blackwelder 1945: 466. — Alvarenga 1994: 23 [error in type-locality].
- Mycotretus difficilis* – Crotch 1876: 449. — Gemminger & Harold 1876: 3692. — Kuhnt 1909: 76; 1911: 49. — Blackwelder 1945: 466. — Alvarenga 1994: 24.
- Mycotretus dubius* – Crotch 1876: 449. — Gemminger & Harold 1876: 3692. — Kuhnt 1909: 75; 1911: 49. — Blackwelder 1945: 466. — Alvarenga 1994: 24.
- Mycotretus godarti* – Crotch 1876: 450. — Gemminger & Harold 1876: 3693. — Gorham 1888: 47 [junior synonym of *M. ornatus*]. — Kuhnt 1909: 76 [variety of *M. ornatus*]; 1911: 52. — Deelder

- 1942: 88. — Mader 1942: 175; 1951: 218, 221. — Blackwelder 1945: 467. — Alvarenga 1994: 31. — Skelley 1998b: 17.
- Mycotretus graphoderus* – Crotch 1876: 450. — Gemminger & Harold 1876: 3693. — Kuhnt 1909: 76; 1911: 50. — Bruch 1914: 384. — Deelder 1942: 88. — Blackwelder 1945: 466. — Mader 1951: 220. — Alvarenga 1994: 26. — Skelley 1998b: 16.
- Mycotretus intermedius* – Crotch 1876: 449. — Gemminger & Harold 1876: 3693. — Kuhnt 1909: 76; 1911: 50. — Blackwelder 1945: 466. — Alvarenga 1994: 27.
- Mycotretus maculosus* – Crotch 1876: 449. — Gemminger & Harold 1876: 3693. — Gorham 1888: 47 [junior synonym of *M. ornatus*]. — Kuhnt 1909: 76 [variety of *M. ornatus*]; 1910: 238; 1911: 52. — Mader 1942: 175; 1951: 221. — Blackwelder 1945: 467. — Alvarenga 1994: 31. — Skelley 1998b: 16.
- Mycotretus melanostictus* – Crotch 1876: 450. — Gemminger & Harold 1876: 3693. — Gorham 1888: 47 [junior synonym of *M. ornatus*]. — Kuhnt 1909: 76 [variety of *M. ornatus*]; 1911: 52. — Mader 1942: 175; 1951: 221. — Blackwelder 1945: 467. — Guérin 1948: 20. — Alvarenga 1994: 31. — Skelley 1998b: 16.
- Mycotretus posticus* – Crotch 1876: 450 [junior synonym of *M. godarti* Lacordaire]. — Gemminger & Harold 1876: 3693. — Kuhnt 1909: 76 [variety of *M. ornatus*]; 1911: 52. — Mader 1942: 175; 1951: 218, 221. — Blackwelder 1945: 467. — Alvarenga 1994: 31.
- Mycotretus terminalis* – Crotch 1876: 449. — Gemminger & Harold 1876: 3695. — Gorham 1888: 47 [junior synonym of *M. ornatus*]. — Kuhnt 1909: 76 [variety of *M. ornatus*]; 1911: 52. — Deelder 1942: 88. — Mader 1942: 175; 1951: 221. — Blackwelder 1945: 467. — Alvarenga 1994: 32. — Skelley 1998b: 16.
- Mycotretus dispar* – Gemminger & Harold 1876: 3692. — Kuhnt 1909: 74; 1911: 49. — Deelder 1942: 88. — Mader 1942: 173; 1951: 215, 223. — Blackwelder 1945: 466. — Alvarenga 1994: 24. — McHugh & Chaboo 2015: 278.
- Mycotretus graphoderus strigipennis* – Kuhnt 1911: 50. — Bruch 1914: 384. — Blackwelder 1945: 466. — Guérin 1948: 20. — Mader 1951: 221. — Alvarenga 1994: 26.
- Mycotretus graphoderus thoracicus* – Kuhnt 1911: 50. — Bruch 1914: 384. — Blackwelder 1945: 466. — Guérin 1948: 19. — Mader 1951: 221. — Alvarenga 1994: 27.
- Mycotretus partialis* – Blackwelder 1945: 467. — Delkeskamp 1957: 113. — Alvarenga 1994: 32.
- Mycotretus ornatus partialis* – Delkeskamp 1957: 113. — Alvarenga 1994: 32.

Primary type

Lectotype, here designated (Fig. 14A)

BRAZIL • “Myc. Ornatus. Type [handwritten]” \ LECTOTYPE [printed] *Erotylus ornatus* Duponchel, 1825 [red label, handwritten] \ *Mycotretus ornatus* (Duponchel) [handwritten] det. I Pecci-Maddalena 2017 [printed]”; MRSN.

Other specimens examined

BRAZIL • 1 spec. (Fig. 28A); “Brasilien, Nova Teutonia, Santa Catharina [printed], 3.1935 [handwritten], B. Pohl [printed] \ *Mycotretus difficilis* lac. [handwritten]”; MZSP • 1 ♂ (dissected; Fig. 40E); “Santa Jnéz, (Ecuad.), R.Haensch S. [printed] \ *Mycotretus dispar* Tasch., 1870 [handwritten] M. Alvarenga det. 1971 [printed] \ Coleção M. Alvarenga [printed]”; MNRJ • 1 ♂ (dissected); “Rio Grande, RS, 17/X/76, ey. Becker. [handwritten] leg. [printed] \ Col MCN 26.759 [handwritten]”; MCNZ • 1 ♂ (dissected); “Coleção M. Alvarenga [printed] \ CORCOVADO, Guanabara BRASIL [printed], XII. 1967 [handwritten], Alvarenga & Seabra [printed] \ DZUP 135988 [printed]”; DZUP • 1 ♂ (dissected); “Coleção M. Alvarenga [printed] \ CORCOVADO, Guanabara BRASIL [printed], X. 1969 [handwritten], Alvarenga & Seabra [printed] \ DZUP 135987 [printed]”; DZUP • 1 ♂ (dissected); “Coleção M. Alvarenga [printed] \ Campos do Jordão, S. Paulo, Brasil, I–1969, W. Bokermann [printed] \ 2345 [printed] \

nigropunctatus Dup. [handwritten] \ DZUP 136014 [printed]”; DZUP • 1 ♂ (dissected); “Erotylidae [printed] \ BRASIL–MG, Viçosa–UFV [printed], 16/III/98 [handwritten], MARIANO, CSF [printed]”; CELC • 1 ♂ (dissected); “Col.MCN 26.760 [handwritten] \ Rio Grande, 17/X/76, ey. Becker. [handwritten] leg. [printed]”; MCNZ • 1 ♂ (dissected); “Triunfo/RS (Copesul), 03/V/2000, R. Araujo col. [printed] \ Col. MCN [printed] 167.259 [handwritten]”; MCNZ • 1 ♂ (dissected); “Coleção M. Alvarenga [printed] \ Inst. M. Lillo [printed] \ Cotomayo. Salta. R.A. 22.II.1960, R. Golbach [printed] \ 2274 [printed] \ DZUP 136349 [printed]”; DZUP • 1 ♂ (dissected); “Coleção M. Alvarenga [printed] \ Bra de Riquête [?], 1500 m P. Moreira, MG. XII. 1957 [handwritten] \ DZUP 136023 [printed]”; DZUP • 1 ♂ (dissected); “Coleção M. Alvarenga [printed] \ CAMPOS do JORDÃO, S. Paulo BRASIL, XI-1957, K. Lenko leg. [printed] \ DZUP 136094 [printed]”; DZUP • 1 ♂ (dissected); “Cambará do Sul, RS, 19-21/XII/ 1994, A. Franceschini [handwritten] \ Col. MCN 238412 [printed]”; MCNZ • 1 ♂ (dissected); “Coleção M. Alvarenga [printed] \ PARATYPUS [printed] \ Cauca, Columb. [printed] \ *Mycotretus partitialis* Mader, 1940 [handwritten]”; MNRJ • 1 ♀ (dissected); “Coleção M. Alvarenga [printed] \ Homeotipo [red label, printed] \ CAMPOS do JORDÃO, S. Paulo BRASIL, XI-1957, K. Lenko leg. [printed] \ Comparado com tipo [printed] *Mycotretus graphoderes* Lac., 1842 [handwritten] M. Alvarenga det. 1971 [printed] \ 2257 [printed] \ DZUP 136064 [printed]”; DZUP • 1 ♀ (dissected); “Coleção M. Alvarenga [printed] \ Homeotipo [red label, printed] \ CAMPOS do JORDÃO, S. Paulo BRASIL, XI-1957, K. Lenko leg. [printed] \ Comparado com tipo [printed] *Mycotretus graphoderes* v. *strigipennis* Kuhnt., 1910 [handwritten] M. Alvarenga det. 1971 [printed] \ 2251 [printed] \ DZUP 136065 [printed]”; DZUP • 1 ♀ (dissected); “Coleção M. Alvarenga [printed] \ PARATYPUS [printed] \ Cauca, Columb. [printed] \ *Mycotretus partitialis* Mader, 1940 [handwritten] \ DZUP 311170 [printed]”; DZUP.

Distribution

Neotropical region.

Remarks

1) As already pointed out by Gorham (1888), *M. ornatus* (Duponchel) “is one of the most variable species of the Erotylidae, hence descriptions founded upon colour alone are of little value”. Gorham (1888) synonymized five species under *M. ornatus* (see heading above), mentioning that “species cited as synonymous present absolutely no structural difference and probably several others described by Lacordaire are in the same position”. In fact, we dissected several male individuals phenotypically close to the species synonymized here, as well specimens showing other colour variations, and their genitalia have exactly the same morphological pattern. Aside from that, the ventral and dorsal morphologies follow the same pattern in all specimens, with no consistent and conspicuous differences among them. Therefore, eighteen synonyms are here included under *M. ornatus*. 2) We observed, based on colour pattern and structures of male genitalia, that *M. ornatus* is morphologically similar to *M. scitulus* Lacordaire (Fig. 36E), *M. expressus* Kuhnt (Fig. 24C), *M. dorsonotatus* Lacordaire (Fig. 28D), *M. fallax* (Guérin-Ménéville) (Fig. 22C) and *M. fasciolatus* Lacordaire (Fig. 29C). 3) The labels of the lectotype of *M. coronatus* (Duponchel) (Fig. 13A’, new synonym of *M. ornatus*) seem to preserve its full story: (i) the disc-shaped label has the name “Campos geraés” (Campos Gerais), which is one of the places that Augustin F.C.P de Saint-Hilaire (who collected that specimen (Duponchel 1825: 51)) visited during his expedition through Brazil from 1816 to 1822 (see Papavero 1971). The region of Campos Gerais corresponds to a place close to Curitiba, the capital of the state of Paraná in South Brazil (Pereira & Jegelski 2004), and the specimen may have been collected in 1820, the year in which Saint-Hilaire visited there (see Papavero 1971); (ii) The letter of the label “*coronatus*” resembles that of Saint-Hilaire who, probably, may have also suggested that name to Duponchel, the latter describing the species as “*Erotylus coronatus*” in 1825; (iii) The letter of the label “*Mycotretus coronatus* Duponchel” closely resembles that of Lacordaire (see Horn *et al.* 1990b: 507, an example of Lacordaire lettering). Lacordaire, transferred that species from *Erotylus* to *Mycotretus* (Lacordaire 1842: 141), and it is worth noting that he made

a mistake mentioning that the examined *M. coronatus* would have been collected in “Minas Geraes” (Minas Gerais), a state in Southeast Brazil; (iv) The printed label “Lectotipo” (in Portuguese) follows the pattern used by Moacyr Alvarenga, who visited some European natural history museums in the 1960s. Although Alvarenga may have labeled this specimen, he never published any lectotype designation; (v) The last label was recently added by the senior author and includes the current identification of the species. 4) Lacordaire (1842:137) synonymized *Mycotretus pectoralis*, a name that appears in the Dejean Catalogue (1836), with *M. ornatus*. However, the former species was never described and was mentioned in the literature only a few times (e.g., Gemminger & Harold 1876; Gorham 1888), being absent in the two main catalogues containing Neotropical Erotylidae (i.e., Blackwelder 1945; Alvarenga 1994). Furthermore, we did not locate its type in any of the examined collections. Therefore, here we considered the name *Mycotretus pectoralis* a nomen nudum.

72. *Mycotretus puncticollis* (Duponchel, 1825)

Erotylus puncticollis Duponchel, 1825: 54. Type locality: “Brésil”.

Mycotretus puncticollis – Lacordaire 1842: 142 [junior synonym of *M. ornatus*]. — Alvarenga 1994: 30.

Type specimen

Not located.

Remarks

New junior synonym of *M. ornatus* (Duponchel, 1825) (Fig. 14A, see above). Lacordaire (1842) synonymized *M. puncticollis* under *M. nigropunctatus* (one of the new junior synonyms of *M. ornatus* proposed here, see above). Based on the description and redescription of *M. puncticollis* (Duponchel 1825: 54 and Lacordaire 1842: 142), we’ve noted that this species is just another variation of *M. ornatus*.

73. *Mycotretus maculosus* (Duponchel, 1825)

Erotylus maculosus Duponchel, 1825: 52. Type locality: “Brésil”.

Mycotretus maculosus – Lacordaire 1842: 140. — Crotch 1876: 449. — Gemminger & Harold 1876: 3693. — Gorham 1888: 47 [junior synonym of *M. ornatus*]. — Kuhnt 1909: 76 [variety of *M. ornatus*]; 1910: 238; 1911: 52. — Mader 1942: 175; 1951: 221. — Blackwelder 1945: 467. — Alvarenga 1994: 31. — Skelley 1998b: 16.

Primary type

Lectotype, here designated (Fig. 14B)

BRAZIL • “maculifrons Chevrolat. [handwritten] \ femoratus Chevrolat. [handwritten]”; MRSN.

Remarks

New junior synonym of *M. ornatus* (Duponchel, 1825) (Fig. 14A, see above). The names “*maculifrons* Chevrolat” and “*femoratus* Chevrolat” are nomina nuda, and appear only in the catalogue of Gemminger & Harold (1876) under the name “*maculosus* Duponch”. We have located only the specimen with two labels (“*maculifrons* Chevrolat” and “*femoratus* Chevrolat”) among the Dejean specimens in the Brême collection (Fig. 14B) and selected it as the lectotype of *M. maculosus* (see the Remarks for *M. ocellatus* (Germar) above).

74. *Mycotretus sanguineus* (Duponchel, 1825)

Erotylus sanguineus Duponchel, 1825: 54. Type locality: “Brésil”.

Mycotretus sanguineus – Lacordaire 1842: 187. — Crotch 1876: 456. — Gemminger & Harold 1876: 3695. — Kuhnt 1909: 72; 1911: 53. — Blackwelder 1945: 467. — Guérin 1948: 20. — Alvarenga 1994: 34. — Skelley 1998b: 17.

Primary type

Lectotype, here designated (Fig. 14C)

BRAZIL • “ruidulus Chevrolat [handwritten] \ LECTOTYPE [printed] *Erotylus sanguineus* Duponchel, 1825 [red label, handwritten] \ *Mycotretus sanguineus* (Duponchel) [handwritten] det. I. Pecci-Maddalena 2017 [printed]”; MRSN.

Other specimens examined

BRAZIL • 1 ♀ (dissected); “Viamão, RS, 08/X/1997, L. Moura [handwritten] leg. [printed] \ Col. MCN 238468 [printed]”; MCNZ • 1 ♂ (dissected); “Corcovado [handwritten], Rio de Janeiro [printed], 21.10. [handwritten]1945[printed], WYGODZINSKY L. [printed] \ *Mycotretus sanguineus* Dup. [handwritten] J. Guerin. det. 194 [printed]8[handwritten] \ DZUP 132947 [printed]”; DZUP.

Distribution

Colombia. Southeast Brazil.

X. Fauvel, C.A.A.

Mycotretus unicolor Fauvel, 1860

Mycotretus unicolor Fauvel, 1860: 326. Type locality: “Cayenne” [French Guiana].

Mycotretus unicolor – Gemminger & Harold 1876: 3695. — Kuhnt 1911: 54. — Blackwelder 1945: 468. — Alvarenga 1994: 37. — Pecci-Maddalena *et al.* 2021b: 3080 [synonym of *Mycomystes coccineus*].

Type specimen

Not located.

Remarks

Junior synonym of *Mycomystes coccineus* (Lacordaire, 1842) (Fig. 27C, see below), see Pecci-Maddalena *et al.* (2021b). Part of Fauvel’s collection is now in the Royal Belgian Institute of Natural Sciences, RBINS (Horn *et al.* 1990a) and the specimen shown in Fig. 14D belongs to that collection. Although it is a “topotype”, we believe that this specimen is not that used by Fauvel on his description. According to Fauvel (1860: 326): “(...) Palpes, épistome et base des antennes tescés (...)” and after: “L’exemplaire unique que j’ai sous les yeux perdu ses antennes moins deux articles de chaque côté”. We did not examine the individual shown in the plate (Fig. 14D, image sent by the RBINS curator); however, it is possible to note that its right antennal club is present and, therefore, that specimen may not be Fauvel’s type.

XI. Germar, E.F.

75. *Mycotretus conspersus* (Germar, 1824)

Erotylus conspersus Germar, 1824: 614. Type locality: “Brasilia”.

Erotylus conspersus – Lacordaire 1842: 145 [junior synonym of *M. tigrinus* (Olivier, 1792), Fig. 39F, see below]. — Alvarenga 1994: 37. — Pecci-Maddalena & Lopes-Andrade 2018b: 4.

Type specimen

Not located.

Remarks

Junior synonym of *M. tigrinus* (Olivier, 1792) (see comments below).

76. *Mycotretus humeralis* (Germar, 1824)

Erotylus humeralis Germar, 1824: 614. Type locality: “Brasilia”.

Mycotretus humeralis – Lacordaire 1842: 189. — Crotch 1876: 457. — Gemminger & Harold 1876: 3693. — Kuhnt 1909: 74; 1911: 50. — Blackwelder 1945: 466. — Alvarenga 1994: 27.

Type specimen

Not located.

Distribution

Unknown locality in Brazil.

***Mycotretus ocellatus* (Germar, 1824)**

Erotylus ocellatus Germar, 1824: 613 [nec Olivier, 1792]. Type locality: “Brasilia”.

Erotylus duodecimguttatus Duponchel, 1825: 53. Type locality: “Brésil”.

Mycotretus ocellatus – Lacordaire 1842: 164. — Crotch 1876: 441. — Gemminger & Harold 1876: 3694. — Kuhnt 1909: 74; 1911: 51. — Mader 1942: 173; 1951: 215. — Deelder 1942: 88. — Blackwelder 1945: 467. — Alvarenga 1994: 24. — Skelley 1998b: 15.

Mycotretus duodecimguttatus – Lacordaire 1842: 164. — Crotch 1876: 441. — Gemminger & Harold 1876: 3694. — Kuhnt 1909: 74; 1911: 51. — Blackwelder 1945: 467. — Alvarenga 1994: 24. — Skelley 1998b: 15. — McHugh & Chaboo 2015: 278.

Type specimen

Not located.

Remarks

Mycotretus ocellatus (Germar, 1824) is a primary junior homonym and this species must be referred to as *Mycotretus duodecimguttatus* (Duponchel, 1825); see Remarks on *M. duodecimguttatus* above.



Fig. 14. A–C, E–F. Primary types (dorsal, labels). A–A'. Lectotype of *Erotylus ornatus* Duponchel [currently *Mycotretus ornatus* (Duponchel)]. B–B'. Lectotype of *E. maculosus* Duponchel, 1825 [currently *M. maculosus* (Duponchel)]. C–C'. Lectotype of *E. sanguineus* Duponchel, 1825 [currently *M. sanguineus* (Duponchel)]. D–D'. Topotype of *M. unicolor* Fauvel, 1860 from RBINS (Belgium) [synonym of *Mycomystes coccineus* (Lacordaire, 1842)]. E–E'. Lectotype of *M. aegrotus* Gorham, 1888. F–F'. Lectotype of *M. alternans* Gorham, 1888. Scale bars = 1 mm.

XII. Gorham, H.S.

Figs 14E–F, 15–20, 21A–C

77. *Mycotretus aegrotus* Gorham, 1888

Mycotretus aegrotus Gorham, 1888: 60. Type locality: “Costa Rica, Volcan de Irazu” [province of Cartago, Costa Rica].

Mycotretus aegrotus – Kuhnt 1909: 73; 1911: 47. — Blackwelder 1945: 465. — Alvarenga 1994: 20.

Primary type

Lectotype, here designated (Fig. 14E)

COSTA RICA • “B.C.A., Col., VII. *Mycotretus* [printed] \ Irazu, 6, 7000 ft., H. Rogers. [printed] \ aegrotus G. [handwritten] \ Type [disc-shaped label, printed] \ LECTOTYPE *Mycotretus aegrotus* Gorham, 1888 [red label, printed]”; BMNH.

Other specimens examined

Paralectotypes

COSTA RICA • 1 spec.; “Irazu, Costa Rica, Rogers [handwritten] \ aegrotus, G. [handwritten] \ B.C.A., Col., VII, *Mycotretus* [printed] \ PARALECTOTYPE *Mycotretus aegrotus* Gorham, 1888 [yellow label, printed]”; BMNH • 1 spec.; “Irazu, Costa Rica, Rogers [handwritten] \ *M. aegrotus*, G. [handwritten] \ B.C.A., Col., VII, *Mycotretus* [printed] \ PARALECTOTYPE *Mycotretus aegrotus* Gorham, 1888 [yellow label, printed]”; BMNH.

Distribution

Costa Rica.

Remarks

According to Gorham (1888), “Of six examples obtained, three are rather immature”. We have located only three syntypes in BMNH, including the one designated as the lectotype, which indeed also appears teneral.

78. *Mycotretus alternans* Gorham, 1888

Mycotretus alternans Gorham, 1888: 57. Type locality: “Panama, Bugaba”.

Mycotretus alternans – Kuhnt 1909: 75; 1911: 48. — Blackwelder 1945: 465. — Alvarenga 1994: 20.

Primary type

Lectotype, here designated (Fig. 14F)

PANAMA • “B.C.A., Col., VII. *Mycotretus* [printed] \ *Mycotretus alternans*, Gr. [handwritten] \ Bugaba, Panama. Champion. [printed] \ Type [disc-shaped label, printed] \ LECTOTYPE *Mycotretus alternans* Gorham, 1888 [red label, printed]”; BMNH.

Other specimens examined

Paralectotypes

PANAMA • 1 ♂ (dissected); “Bugaba, Panama. Champion. [printed] \ *Mycotretus alternans* [handwritten] \ B.C.A., Col., VII, *Mycotretus* [printed] \ PARALECTOTYPE *Mycotretus alternans* Gorham, 1888 [yellow label, printed]”; BMNH • 1 spec.; “Bugaba, 800–1500 ft. Champion. [printed] \ *Mycotretus alternans* [handwritten] \ B.C.A., Col., VII, *Mycotretus* [printed] \ PARALECTOTYPE *Mycotretus alternans* Gorham, 1888 [yellow label, printed]”; BMNH.

Remarks

New junior synonym of *M. dorsonotatus* Lacordaire, 1842 (Fig. 28D, see below).

79. *Mycotretus atricaudatus* Gorham, 1888

Mycotretus atricaudatus Gorham, 1888: 66. Type locality: “Panama, Volcan de Chiriqui, 300 feet”. [province of Chiriquí, Panama].

Mycotretus atricaudatus – Kuhnt 1909: 71; 1911: 48. — Blackwelder 1945: 465. — Alvarenga 1994: 21. — Pecci-Maddalena *et al.* 2021b: 3099.

Primary type

Holotype (Fig. 15A)

PANAMA • “B.C.A.,Col.,VII. *Mycotretus* [printed] \ *Mycotretus atricaudatus* [handwritten] \ V. de Chiriqui, below 4,000 ft, Champion [printed] \ Type. Sp. figured. [printed] \ Type [disc-shaped label, printed] \ HOLOTYPE *Mycotretus atricaudatus* Gorham, 1888 [red label, printed]”; BMNH.

Distribution

Panamá.

80. *Mycotretus badius* Gorham, 1888

Mycotretus badius Gorham, 1888: 70. Type locality: “Guatemala, San Juan in Vera Paz”.

Mycotretus badius – Kuhnt 1909: 71; 1911: 48. — Blackwelder 1945: 465. — Alvarenga 1994: 21. — Pecci-Maddalena *et al.* 2021b: 3099.

Primary type

Lectotype, here designated (Fig. 15B)

GUATEMALA • “B.C.A.,Col.,VII. *Mycotretus* [printed] \ *Mycotretus badius*, G. [handwritten] \ San Juan, Vera Paz. Champion. [printed] \ Type [disc-shaped label, printed] \ LECTOTYPE *Mycotretus badius* Gorham, 1888 [red label, printed]”; BMNH.

Distribution

Guatemala.

81. *Mycotretus bipunctatus* Gorham, 1888

Mycotretus bipunctatus Gorham, 1888: 58. Type locality: “Panama, Bugaba”.

Mycotretus bipunctatus – Kuhnt 1909: 73; 1911: 48. — Blackwelder 1945: 466. — Alvarenga 1994: 21.

Primary type

Lectotype, here designated (Fig. 15C)

PANAMA • “Bugaba, 800–1,500 ft. Champion. [printed] \ B.C.A.,Col.,VII. *Mycotretus* [printed] \ *Mycotretus bipunctatus*, Gor. [handwritten] \ Type [disc-shaped label, printed] \ LECTOTYPE *Mycotretus bipunctatus* Gorham, 1888 [red label, printed]”; BMNH.

Other specimens examined

Paralectotypes

PANAMA • 1 ♂ (dissected); “Bugaba, 800–1,500 ft. Champion. [printed] \ B.C.A., Col., VII. Mycotretus [printed] stramineus [handwritten] \ PARALECTOTYPE, Mycotretus bipunctatus Gorham, 1888 [yellow label, printed]”; BMNH • 1 spec.; “Bugaba, Panama. Champion. [printed] \ B.C.A., Col., VII. Mycotretus [printed] stramineus [handwritten] \ PARALECTOTYPE, Mycotretus bipunctatus Gorham, 1888 [yellow label, printed]”; BMNH.

Distribution

Panama.

Remarks

The lectotype is probably teneral.

82. *Mycotretus brevis* Gorham, 1888

Mycotretus brevis Gorham, 1888: 67. Type locality: “Panama, Bugaba”.

Mycotretus brevis – Kuhnt 1909: 71; 1911: 48. — Blackwelder 1945: 466. — Alvarenga 1994: 21. — Pecci-Maddalena *et al.* 2021b: 3099.

Primary type

Holotype (Fig. 15D)

PANAMA • “B.C.A., Col., VII. Mycotretus [printed] \ Mycotretus brevis Gr [handwritten] \ Bugaba, Panama. Champion. [printed] \ Type [disc-shaped label, printed] \ HOLOTYPE Mycotretus brevis Gorham, 1888 [red label, printed]”; BMNH.

Distribution

Panama.

83. *Mycotretus cercyonoides* Gorham, 1888

Mycotretus cercyonoides Gorham, 1888: 67. Type locality: “Panama, David” [province of Chiriquí, Panama].

Mycotretus cercyonoides – Kuhnt 1909: 74; 1911: 48. — Blackwelder 1945: 466. — Alvarenga 1994: 22. — Pecci-Maddalena *et al.* 2021b: 3099.

Primary type

Lectotype, here designated (Fig. 15E)

PANAMA • “B.C.A., Col., VII. Mycotretus [printed] \ Mycotretus cercyonoides [handwritten] \ David, Panama. Champion. [printed] \ Type [disc-shaped label, printed] \ LECTOTYPE Mycotretus cercyonoides Gorham, 1888 [printed] (left) [red label, handwritten]”; BMNH.

Other specimens examined

Paralectotype

PANAMA • 1 spec.; “B.C.A., Col., VII. Mycotretus [printed] \ Mycotretus cercyonoides [handwritten] \ David, Panama. Champion. [printed] \ Type [disc-shaped label, printed] \ PARALECTOTYPE Mycotretus cercyonoides Gorham, 1888 [printed] (right) [yellow label, handwritten]”; BMNH.

Distribution

Panama.

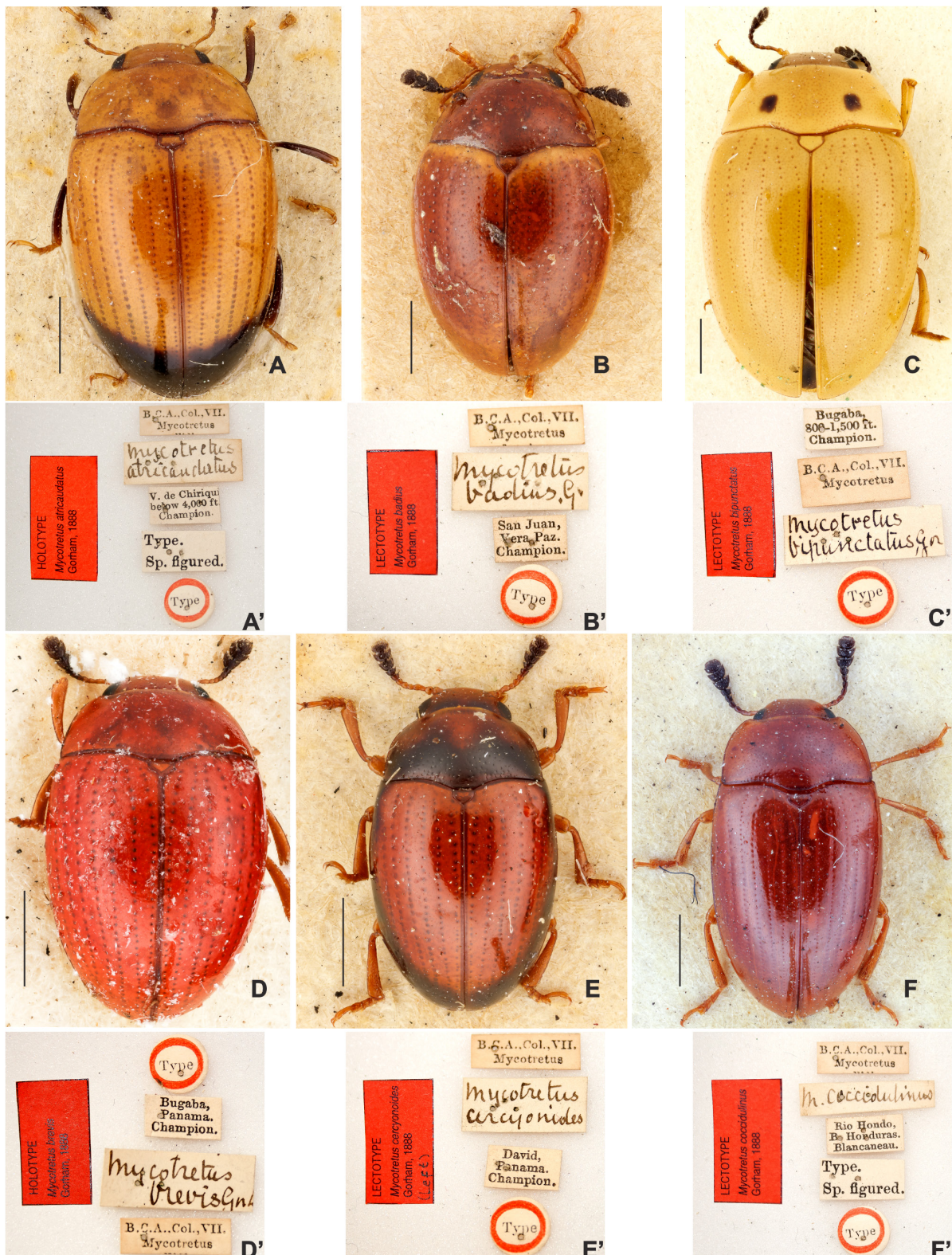


Fig. 15. Gorham primary types (dorsal, labels). **A–A'**. Holotype of *Mycotretus atricaudatus* Gorham, 1888. **B–B'**. Lectotype of *M. badius* Gorham, 1888. **C–C'**. Lectotype of *M. bipunctatus* Gorham, 1888. **D–D'**. Holotype of *M. brevis* Gorham, 1888. **E–E'**. Lectotype of *M. cercyonoides* Gorham, 1888. **F–F'**. Lectotype of *M. coccidulinus* Gorham, 1888. Scale bars = 1 mm.

Remarks

The lectotype and paralectotype are mounted on the same card and, therefore, we included their type labels on that same pin. The lectotype is the specimen on the left and the paralectotype is the specimen on the right side of the card. Only the lectotype is shown here (Fig. 15E).

84. *Mycotretus coccidulinus* Gorham, 1888

Mycotretus coccidulinus Gorham, 1888: 63. Type locality: “British Honduras, Belize, R. Hondo” [Hondo River, Belize].

Mycotretus coccidulinus – Kuhnt 1909: 72; 1911: 48. — Blackwelder 1945: 466. — Guérin 1946: 370. — Alvarenga 1994: 22.

Primary type

Lectotype, here designated (Fig. 15F)

BELIZE • “B.C.A.,Col.,VII. *Mycotretus* [printed] \ *M. coccidulinus* [handwritten] \ Rio Hondo, B Honduras., Blancaneau. [printed] \ Type. Sp. figured. [printed] \ Type [disc-shaped label, printed] \ LECTOTYPE *Mycotretus coccidulinus* Gorham, 1888 [red label, printed]”; BMNH.

Other specimens examined

Paralectotypes

GUATEMALA • 1 spec.; “Chiacaman, Vera Paz. Champion [printed] \ B.C.A.,Col.,VII. *Mycotretus* [printed] *coccidulinus* [handwritten] \ PARALECTOTYPE *Mycotretus coccidulinus* Gorham, 1888 [yellow label, printed]”; BMNH • 1 spec.; “Capetillo, Guatemala. C. Champion. [printed] \ B.C.A.,Col.,VII. *Mycotretus* [printed] *coccidulinus* [handwritten] \ PARALECTOTYPE *Mycotretus coccidulinus* Gorham, 1888 [yellow label, printed]”; BMNH.

Additional material

BELIZE • 1 spec.; “Belize. Blancaneaux. [printed] \ *coccidulinus* [handwritten] \ B.C.A., Col., VII. *Mycotretus* [printed]”; BMNH.

Distribution

Belize, Guatemala.

Remarks

The specimen labelled “Belize, Blancaneaux” is also a paralectotype, but due to a mistake it was not labelled by the senior author during his visit to the BMNH.

85. *Mycotretus consanguineus* Gorham, 1888

Mycotretus consanguineus Gorham, 1888: 61. Type locality: “Guatemala, Cubilguitz”.

Mycotretus consanguineus – Kuhnt 1909: 72; 1911: 48. — Blackwelder 1945: 466. — Alvarenga 1994: 22.

Primary type

Lectotype, here designated (Fig. 16A)

GUATEMALA • “B.C.A.,Col.,VII. *Mycotretus* [printed] \ *M. consanguineus* Gorham [handwritten] \ Cubilguitz, Vera Paz. Champion. [printed] \ Type. Sp. figured. [printed] \ Type [disc-shaped label, printed] \ LECTOTYPE *Mycotretus consanguineus* Gorham, 1888 [red label, printed]”; BMNH.

Other specimens examined

Paralectotype

PANAMA • 1 ♂ (dissected); “Bugaba, Panama. Champion. [printed] \ M. consanguineus [handwritten] \ B.C.A.,Col.,VII. Mycotretus [printed] \ PARALECTOTYPE Mycotretus consanguineus Gorham, 1888 [yellow label, printed]”; BMNH.

Distribution

Guatemala, Panama.

86. *Mycotretus cribratus* Gorham, 1888

Mycotretus cribratus Gorham, 1888: 64. Type locality: “Panama, Bugaba”.

Mycotretus cribratus – Kuhnt 1909: 73; 1911: 48. — Blackwelder 1945: 466. — Alvarenga 1994: 23.

Primary type

Lectotype, here designated (Fig. 16B)

PANAMA • “Bugaba, Panama. Champion. [printed] \ Mycotretus cribratus Gorh. [handwritten] \ B.C.A.,Col.,VII. Mycotretus [printed] \ Type [disc-shaped label, printed] \ LECTOTYPE Mycotretus cribratus Gorham, 1888 [red label, printed]”; BMNH.

Other specimens examined

Paralectotypes

PANAMA • 1 spec. (on left, on the same card as lectotype); “Bugaba, Panama. Champion. [printed] \ Mycotretus cribratus Gorh. [handwritten] \ B.C.A.,Col.,VII. Mycotretus [printed] \ Type [disc-shaped label, printed] \ PARALECTOTYPE Mycotretus cribratus Gorham, 1888 [yellow label, printed]”; BMNH
• 8 specs (two on each card); “Bugaba, Panama. Champion. [printed] \ B.C.A.,Col.,VII. Mycotretus [printed] \ PARALECTOTYPE Mycotretus cribratus Gorham, 1888 [yellow label, printed]”; BMNH.

Distribution

Guatemala, Panama.

Remarks

We observed individuals from Guatemala next to those from Panama, but we did not consider them as syntypes. According to Gorham (1888: 64): “The Guatemalan specimens are apparently referable to the same species; but I regard the Bugaba examples as typical, it being from them that the description is made”. The lectotype and one paralectotype are mounted on the same card and we designated the right-hand one (apparently better preserved, with its six legs intact) as the lectotype. Only the lectotype is shown here (Fig. 16B).

87. *Mycotretus crudus* Gorham, 1888

Mycotretus crudus Gorham, 1888: 63. Type locality: “Mexico, Atlisco in Puebla” [= Atlixco, in the state of Puebla].

Mycotretus crudus – Kuhnt 1909: 73; 1911: 49. — Blackwelder 1945: 466. — Alvarenga 1994: 23.

Primary type

Holotype (Fig. 16C)

MEXICO • “[?, Handwritten] \ B.C.A., Col., VII. Mycotretus [printed] \ M. crudus G. [handwritten] \ Atlisco, Puebla. Höge. [printed] \ Type [disc-shaped label, printed] \ HOLOTYPE Mycotretus crudus Gorham, 1888 [red label, printed]”; BMNH.

Distribution

Mexico.

88. *Mycotretus cruentus* Gorham, 1888

Mycotretus cruentus Gorham, 1888: 59. Type locality: “Guatemala, Zapote, San Juan in Vera Paz, Senahu”.

Mycotretus cruentus – Kuhnt 1909: 73; 1911: 49. — Blackwelder 1945: 466. — Alvarenga 1994: 23.

Primary type

Lectotype, here designated (Fig. 16D)

GUATEMALA • “B.C.A., Col., VII. Mycotretus [printed] \ M. cruentus [handwritten] \ Senahu, Vera Paz. Champion. [printed] \ Type. Sp. figured. [printed] \ Type [disc-shaped label] \ LECTOTYPE Mycotretus cruentus Gorham, 1888 [red label, printed]”; BMNH.

Other specimens examined

Paralectotype

GUATEMALA • 1 spec.; “San Juan, Vera Paz. Champion. [printed] \ Mycotretus cruentus G. [handwritten] \ B.C.A., Col., VII. Mycotretus [printed] \ PARALECTOTYPE Mycotretus cruentus Gorham, 1888 [yellow label, printed]”; BMNH.

Distribution

Guatemala.

89. *Mycotretus elegans* Gorham, 1888

Mycotretus elegans Gorham, 1888: 55. Type locality: “Guatemala, San Gerónimo”.

Mycotretus elegans – Kuhnt 1909: 71; 1911: 49. — Blackwelder 1945: 466. — Alvarenga 1994: 25.

Primary type

Lectotype, here designated (Fig. 16E)

GUATEMALA • “Mycotretus elegans, Gorch. [handwritten] \ S. Geronimo, Guatemala. Champion. [printed] \ Type. Sp. figured. [printed] \ Type [disc-shaped label, printed] \ LECTOTYPE Mycotretus elegans Gorham, 1888 [red label, printed]”; BMNH.

Other specimens examined

Paralectotypes

GUATEMALA • 1 ♀ (dissected); “S. Geronimo, Guatemala. Champion. [printed] \ B.C.A., Col., VII. Mycotretus [printed] elegans Gorch. [handwritten] \ PARALECTOTYPE Mycotretus elegans Gorham, 1888 [yellow label, printed]”; BMNH • 1 spec.; “San Geronimo, Vera Paz. Champion. [printed] \ B.C.A.,

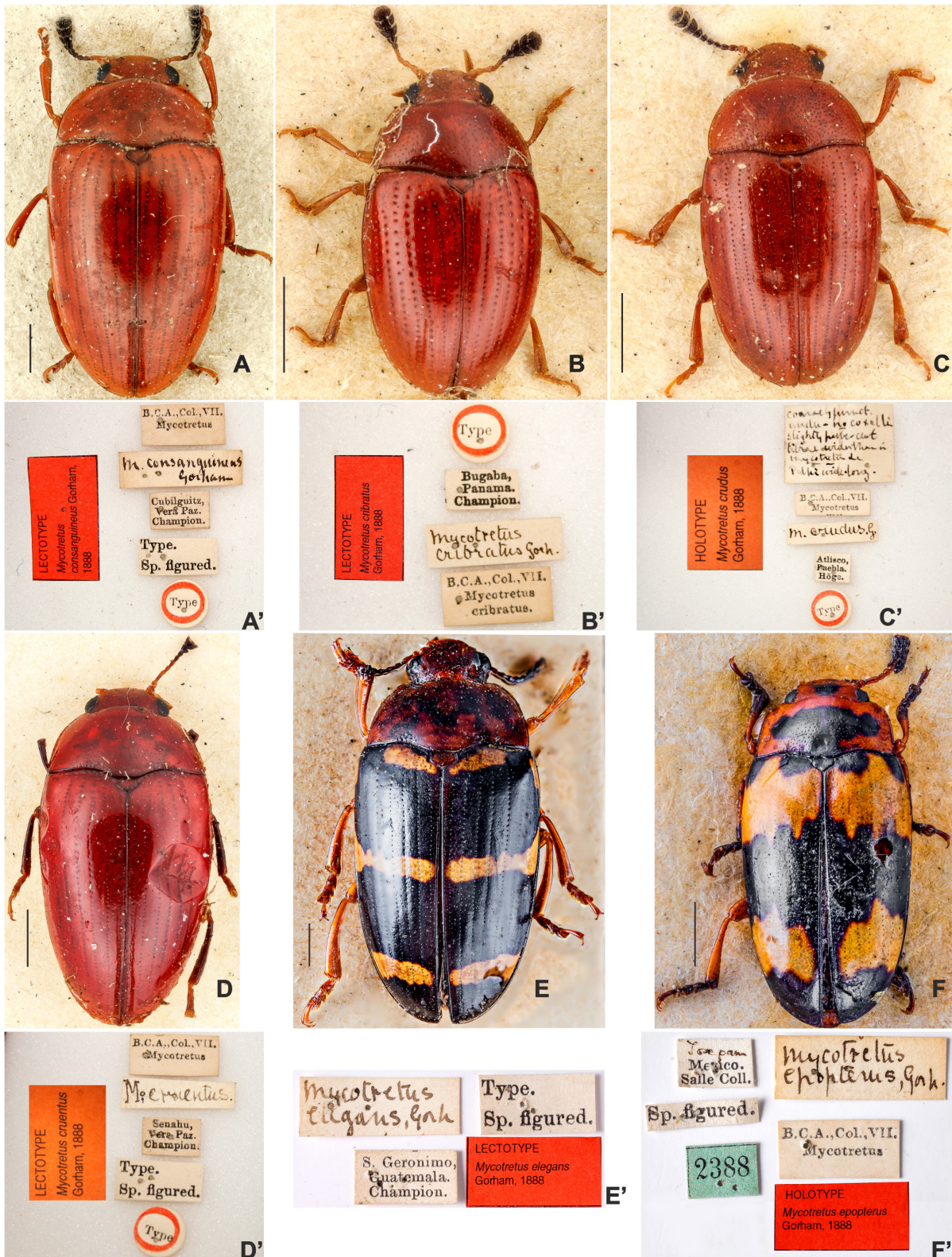


Fig. 16. Gorham primary types (dorsal, labels) cont. **A-A'**. Lectotype of *Mycotretus consanguineus* Gorham, 1888. **B-B'**. Lectotype of *M. cribratus* Gorham, 1888. **C-C'**. Holotype of *M. crudus* Gorham, 1888. **D-D'**. Lectotype of *M. cruentus* Gorham, 1888. **E-E'**. Lectotype of *M. elegans* Gorham, 1888. **F-F'**. Holotype of *M. epopterus* Gorham, 1888. Scale bars = 1 mm.

Col.,VII. *Mycotretus* [printed] *elegans* Gorh. [handwritten] \ PARALECTOTYPE *Mycotretus elegans* Gorham, 1888 [yellow label, printed]”; BMNH.

Distribution

Guatemala.

90. *Mycotretus eopterus* Gorham, 1888

Mycotretus eopterus Gorham, 1888: 69. Type locality: “Mexico, Toxpam”.

Mycotretus eopterus – Kuhnt 1909: 76; 1911: 49. — Blackwelder 1945: 466. — Alvarenga 1994: 25.

Primary type

Holotype (Fig. 16F)

MEXICO • “Toxpam [handwritten] Mexico. Salle Coll. [printed] \ Sp. figured. [printed] \ 2388 [printed] \ *Mycotretus eopterus*, Gorh. [handwritten] \ B.C.A.,Col.,VII. *Mycotretus* [printed] \ HOLOTYPE *Mycotretus eopterus* Gorham, 1888 [red label, printed]”; BMNH.

Distribution

Mexico.

91. *Mycotretus erraticus* Gorham, 1898

Mycotretus erraticus Gorham, 1888: 254. Type locality: “Mexico, Chilpancingo in Guerrero 4600 feet” [state of Guerrero, Mexico].

Mycotretus erraticus – Kuhnt 1909: 73; 1911: 49. — Blackwelder 1945: 466. — Alvarenga 1994: 25.

Primary type

Lectotype, here designated (Fig. 17A)

MEXICO • “B.C.A.,Col.,VII. *Mycotretus* [printed] \ *Mycotretus erraticus*, Gorh. [handwritten] \ Chilpancingo, Guerrero, 4600 ft. July. H.H. Smith. [printed] \ Type [disc-shaped label, printed] \ LECTOTYPE *Mycotretus erraticus* Gorham, 1888 [printed] (left) [red label, handwritten]”; BMNH.

Other specimens examined

Paralectotype

MEXICO • “B.C.A.,Col.,VII. *Mycotretus* [printed] \ *Mycotretus erraticus*, Gorh. [handwritten] \ Chilpancingo, Guerrero, 4600 ft. July. H.H. Smith. [printed] \ Type [disc-shaped label, printed] \ PARALECTOTYPE *Mycotretus erraticus* Gorham, 1888 [printed] (right) [yellow label, handwritten]”; BMNH

Distribution

Mexico.

Remarks

The lectotype and paralectotype are mounted on the same card on the left and right sides, respectively. Only the lectotype is shown here (Fig. 17A).

92. *Mycotretus geminus* Gorham, 1888

Mycotretus geminus Gorham, 1888: 50. Type locality: “Panama, Bugaba, David” [province of Chiriquí, Panama].

Mycotretus geminus – Kuhnt 1909: 75; 1911: 50. — Blackwelder 1945: 466. — Alvarenga 1994: 26.

Primary type

Lectotype, here designated (Fig. 17B)

PANAMA • “Type [disc-shaped label, printed] \ B.C.A.,Col.,VII. Mycotretus [printed] \ Bugaba, Panama. Champion [printed] \ Type. Sp. figured. [printed] \ [?, handwritten] \ Mycotretus geminus, Gorh [handwritten] \ LECTOTYPE Mycotretus geminus Gorham, 1888 [red label, printed]”; BMNH.

Other specimens examined

Paralectotype

PANAMA • 1 ♂ (dissected); “David, Chiriqui. Champion. [printed] \ geminus Gorh. [handwritten] \ B.C.A.,Col.,VII. Mycotretus [printed] \ PARALECTOTYPE Mycotretus geminus Gorham, 1888 [yellow label, printed]”; BMNH.

Distribution

Panama.

93. *Mycotretus haemapterus* Gorham, 1888

Mycotretus haemapterus Gorham, 1888: 68. Type locality: “Panama, Bugaba”.

Mycotretus haemapterus – Kuhnt 1909: 71; 1911: 50. — Blackwelder 1945: 466. — Alvarenga 1994: 27.

Primary type

Lectotype, here designated (Fig. 17C)

PANAMA • “Type [disc-shaped label, printed] \ B.C.A.,Col.,VII. Mycotretus [printed] \ Bugaba, Panama. Champion [printed] \ Type. Sp. figured. [printed] \ Mycotretus haemapterus, Gorh [handwritten] \ LECTOTYPE Mycotretus haemapterus Gorham, 1888 [red label, printed]”; BMNH.

Other specimens examined

Paralectotype

PANAMA • 1 spec.; “Bugaba, Panama. Champion [printed] \ B.C.A., Col., VII. [printed] Mycotr. haemapterus, Gor. [handwritten] \ PARALECTOTYPE Mycotretus haemapterus Gorham, 1888 [yellow label, printed]”; BMNH.

Distribution

Panama, North Brazil.

94. *Mycotretus haematicus* Gorham, 1888

Mycotretus haematicus Gorham, 1888: 61. Type locality: “Costa Rica”.

Mycotretus haematicus – Kuhnt 1909: 72; 1911: 50. — Deelder 1942: 88. — Blackwelder 1945: 466. — Alvarenga 1994: 27.

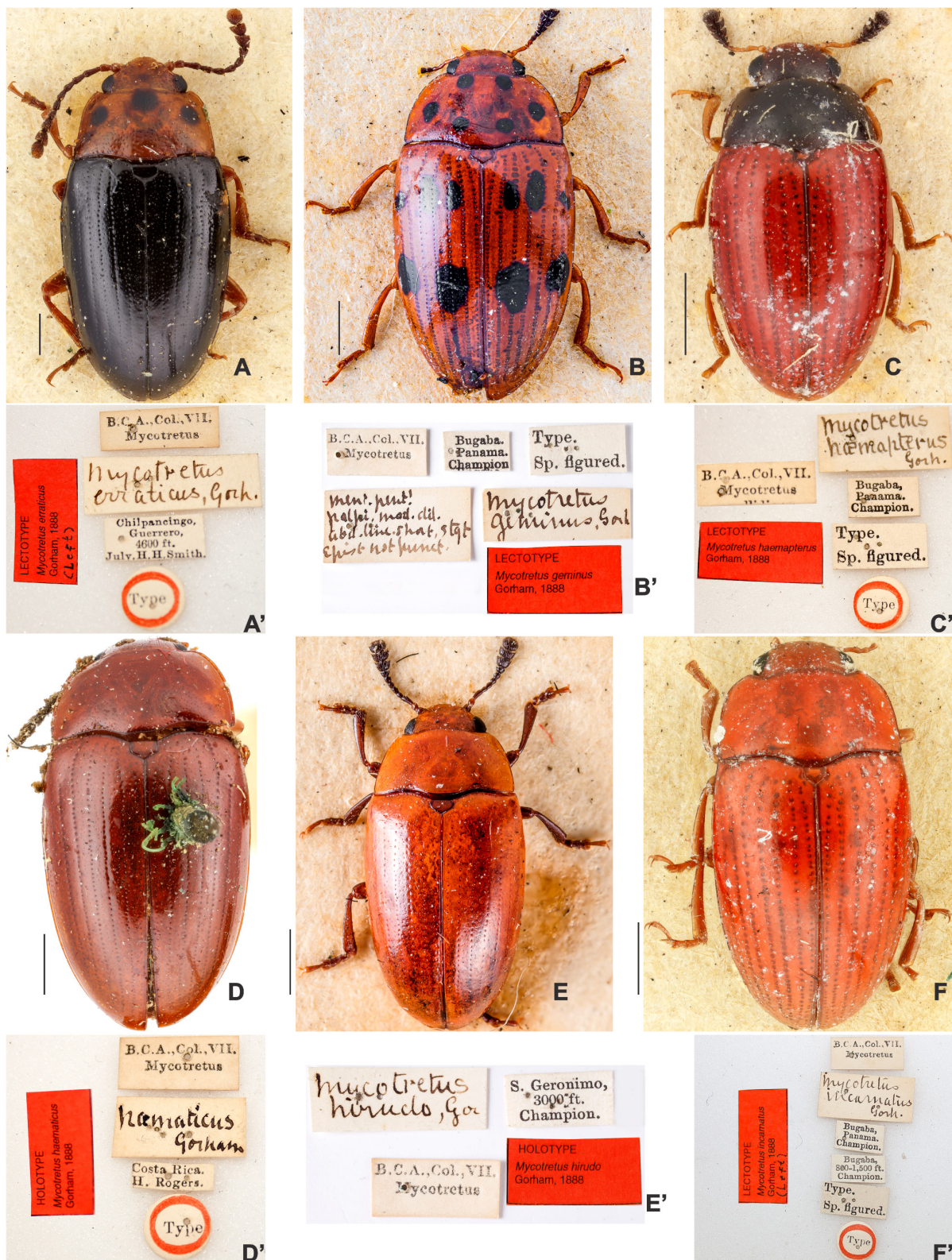


Fig. 17. Gorham primary types (dorsal, labels) cont. **A–A'**. Lectotype of *Mycotretus erraticus* Gorham, 1888. **B–B'**. Lectotype of *M. geminus* Gorham, 1888. **C–C'**. Lectotype of *M. haemapterus* Gorham, 1888. **D–D'**. Holotype of *M. haematicus* Gorham, 1888. **E–E'**. Holotype of *M. hirudo* Gorham, 1888. **F–F'**. Lectotype of *M. incarnatus* Gorham, 1888. Scale bars = 1 mm.

Primary type

Holotype (Fig. 17D)

COSTA RICA • “Type [disc-shaped label, printed] \ B.C.A., Col., VII. *Mycotretus* [printed] \ haematicus Gorham [handwritten] \ Costa Rica. H. Rogers. [printed] \ HOLOTYPE *Mycotretus haematicus* Gorham, 1888 [red label, printed]”; BMNH.

Distribution

Unknown locality in Costa Rica.

95. *Mycotretus hirudo* Gorham, 1888

Mycotretus hirudo Gorham, 1888: 59. Type locality: “Guatemala, San Gerónimo”.

Mycotretus hirudo – Kuhnt 1909: 73; 1911: 50. — Blackwelder 1945: 466. — Alvarenga 1994: 27.

Primary type

Holotype (Fig. 17E)

GUATEMLA • “Type [disc-shaped label, printed] \ B.C.A., Col., VII. *Mycotretus* [printed] \ *Mycotretus hirudo*, Gor. [handwritten] \ S. Geronimo, 3000 ft. Champion. [printed] \ HOLOTYPE *Mycotretus hirudo* Gorham, 1888 [red label, printed]”; BMNH.

Distribution

Guatemala.

96. *Mycotretus incarnatus* Gorham, 1888

Mycotretus incarnatus Gorham, 1888: 62. Type locality: “Panama, Bugaba, Volcan de Chiriquí” [province of Chiriquí, Panama].

Mycotretus incarnatus – Kuhnt 1909: 73; 1911: 50. — Blackwelder 1945: 466. — Alvarenga 1994: 27.

Primary type

Lectotype, here designated (Fig. 17F)

PANAMA • “Type [disc-shaped label, printed] \ Type. Sp. figured. [printed] \ Bugaba, 800–1,500 ft. Champion. [printed] \ Bugaba, Panama. Champion. [printed] \ *Mycotretus incarnatus* Gorh. [handwritten] \ B.C.A., Col., VII *Mycotretus* [printed] \ LECTOTYPE *Mycotretus incarnatus* Gorham, 1888 [red label, printed] left [handwritten]”; BMNH.

Other specimens examined

Paralectotypes

PANAMA • 1 spec.; “Type [disc-shaped label, printed] \ Type. Sp. figured. [printed] \ Bugaba, 800–1,500 ft. Champion. [printed] \ Bugaba, Panama. Champion. [printed] \ *Mycotretus incarnatus* Gorh. [handwritten] \ B.C.A., Col., VII *Mycotretus* [printed] \ PARALECTOTYPE *Mycotretus incarnatus* Gorham, 1888 [yellow label, printed] right [handwritten]”; BMNH • 1 ♂ (dissected); “Jalapa, Mexico. Hoege. [printed] \ *incarnatus* [handwritten] \ B.C.A., Col., VII *Mycotretus* [printed] \ PARALECTOTYPE *Mycotretus incarnatus* Gorham, 1888 [yellow label, printed]”; BMNH • 1 spec.; “Jalapa, Mexico. Hoege. \ B.C.A., Col., VII *Mycotretus* [printed] *incarnatus* [handwritten] \ PARALECTOTYPE *Mycotretus incarnatus* Gorham, 1888 [yellow label, printed]”; BMNH • 1 spec.; “Chontales. Nicaragua. T. Belt [printed] \ B.C.A., Col., VII *Mycotretus* [printed] *incarnatus* [handwritten] \ PARALECTOTYPE

Mycotretus incarnatus Gorham, 1888 [yellow label, printed]”; BMNH • 2 specs; “V. de Chiriqui, 25–4000 ft., Champion [printed] \ B.C.A.,Col.,VII *Mycotretus* [printed] *incarnatus* [handwritten] \ PARALECTOTYPE *Mycotretus incarnatus* Gorham, 1888 [yellow label, printed]”; BMNH • 1 ♂ (dissected); “Coleção M. Alvarenga [printed] \ Bugaba, Panama. Champion. [printed] \ B.C.A.,Col.,VII *Mycotretus* [printed] *incarnatus* [handwritten] \ 1660 [printed] \ PARALECTOTYPE *Mycotretus incarnatus* Gorham, 1888 [yellow label, printed]”; MNRJ • 1 spec.; “Coleção M. Alvarenga [printed] \ Panama [handwritten] \ B.C.A.,Col.,VII *Mycotretus* [printed] \ *incarnatus* [handwritten] \ 1659 [printed] \ DZUP 132761 [printed] \ PARALECTOTYPE *Mycotretus incarnatus* Gorham, 1888 [yellow label, printed]”; DZUP.

Distribution

Mexico and Central America.

Remarks

The lectotype and one paralectotype are mounted on the same card and we considered the left one as being the lectotype. Only the lectotype is shown here (Fig. 17F).

97. *Mycotretus interstictus* Gorham, 1888

Mycotretus interstictus Gorham, 1888: 50. Type locality: “Nicaragua, Chontales” [Department of Chontales, Nicaragua].

Mycotretus interstitialis Kuhnt, 1910: 239. Type locality: “Panama, Isthmus Mataschin” **syn. nov.** (Fig. 25A).

Mycotretus interstictus – Kuhnt 1909: 76; 1911: 50. — Blackwelder 1945: 466. — Alvarenga 1994: 27.

Mycotretus interstitialis – Kuhnt 1911: 50. — Blackwelder 1945: 466. — Alvarenga 1994: 27.

Primary type

Holotype (Fig. 18A)

NICARAGUA • “Type [disc-shaped label, printed] \ *Mycotretus interstictus* Gorham. [handwritten] \ Chontales. Nicaragua. T. Belt. [printed] \ B.C.A.,Col.,VII *Mycotretus* [printed] \ HOLOTYPE *Mycotretus interstictus* Gorham, 1888 [red label, printed]”; BMNH.

Distribution

Nicaragua and Panama.

Remarks

Mycotretus interstitialis Kuhnt, 1910 is almost identical to *M. interstictus* Gorham 1888, the single detectable difference being that a black cephalic spot is apparently absent on the former and present on *M. interstictus*. Based on general similarities and the proximity of their type localities (Nicaragua and Panama), we synonymize *M. interstitialis* under *M. interstictus*.

98. *Mycotretus laccophilinus* Gorham, 1888

Mycotretus laccophilinus Gorham, 1888: 57. Type locality: “Panama, Bugaba”.

Mycotretus laccophilinus – Kuhnt 1909: 71; 1911: 50. — Blackwelder 1945: 466. — Alvarenga 1994: 28. — Pecci-Maddalena *et al.* 2021b: 3099.

Primary type

Holotype (Fig. 18B)

PANAMA • “Type [disc-shaped label, printed] \ Bugaba, 800–1,500 ft. Champion. [printed] \ Sp. figured. [printed] \ B.C.A., Col., VII Mycotretus [printed] \ Mycotretus laccophylinus Gorh [handwritten; misspelling] \ HOLOTYPE Mycotretus laccophilinus Gorham, 1888 [red label, printed]”; BMNH.

Distribution

Panama.

99. *Mycotretus luteolus* Gorham, 1888

Mycotretus luteolus Gorham, 1888: 58. Type locality: “Panama, Volcan de Chiriqui” [province of Chiriquí, Panama].

Mycotretus luteolus – Kuhnt 1909: 73; 1911: 50. — Blackwelder 1945: 466. — Alvarenga 1994: 28.

Primary type

Lectotype, here designated (Fig. 18C)

PANAMA • “Type [disc-shaped label, printed] \ V. de Chiriqui, 25–4000 ft. Champion. [printed] \ M. luteolus G [handwritten] \ B.C.A., Col., VII Mycotretus [printed] \ LECTOTYPE Mycotretus luteolus Gorham, 1888 [red label, printed]”; BMNH.

Distribution

Panama.

100. *Mycotretus melanotus* Gorham, 1888

Mycotretus melanotus Gorham, 1888: 66. Type locality: “Panama, La Caldera in Chiriqui” [province of Chiriquí, Panama].

Mycotretus melanotus – Kuhnt 1909: 71; 1911: 51. — Blackwelder 1945: 466. — Alvarenga 1994: 29.

Primary type

Lectotype, here designated (Fig. 18D)

PANAMA • “Type [disc-shaped label, printed] \ Caldera, 1200 ft. Champion [printed] \ Mycotretus melanotus, G. [handwritten] \ B.C.A., Col., VII Mycotretus [printed] \ LECTOTYPE Mycotretus melanotus Gorham, 1888 [red label, printed]”; BMNH.

Distribution

Panama.

101. *Mycotretus nigricollis* Gorham, 1888

Mycotretus nigricollis Gorham, 1888: 70. Type locality: “Mexico, Toxpam”.

Mycotretus nigricollis – Kuhnt 1909: 71; 1911: 51. — Blackwelder 1945: 467. — Alvarenga 1994: 30. — Pecci-Maddalena *et al.* 2021b: 3099.

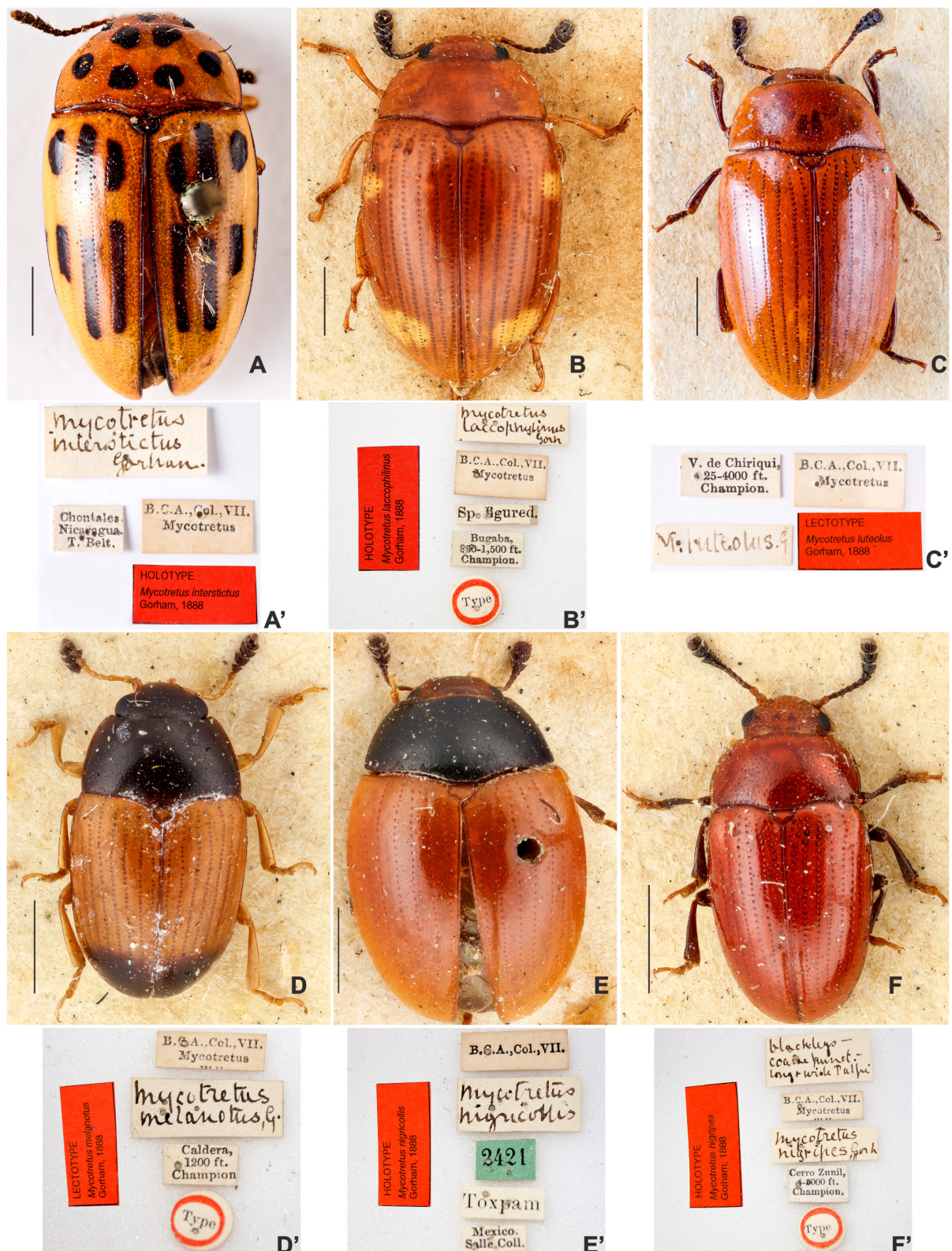


Fig. 18. Gorham primary types (dorsal, labels) cont. **A–A'**. Holotype of *Mycotretus interstictus* Gorham, 1888. **B–B'**. Holotype of *M. laccophilinus* Gorham, 1888. **C–C'**. Lectotype of *M. luteolus* Gorham, 1888. **D–D'**. Lectotype of *M. melanotus* Gorham, 1888. **E–E'**. Holotype of *M. nigricollis* Gorham, 1888. **F–F'**. Holotype of *Mycotretus nigripes* Gorham, 1888. Scale bars = 1 mm.

Primary type

Holotype (Fig. 18E)

MEXICO • “Type [disc-shaped label, printed] \ B.C.A.,Col.,VII *Mycotretus* [printed] \ *Mycotretus nigricollis* [handwritten] \ 2421 [printed] \ Toxpam [printed] \ Mexico. Salle Coll. [printed] \ HOLOTYPE *Mycotretus nigricollis* Gorham, 1888 [red label, printed]”; BMNH.

Distribution

Mexico.

102. *Mycotretus nigripes* Gorham, 1888

Mycotretus nigripes Gorham, 1888: 64. Type locality: “Guatemala, Cerro Zunil” [= Volcán Santo Tomás, Guatemala].

Mycotretus nigripes – Kuhnt 1909: 73; 1911: 51. — Blackwelder 1945: 467. — Alvarenga 1994: 30.

Primary type

Holotype (Fig. 18F)

GUATEMALA • “Type [disc-shaped label, printed] \ Cerro Zunil, 4–5000 ft. Champion. [printed] \ *Mycotretus nigripes*, Gorh [handwritten] \ black legs –coarse punct. - ? Palpi [handwritten] \ B.C.A.,Col.,VII *Mycotretus* [printed] \ HOLOTYPE *Mycotretus nigripes* Gorham, 1888 [red label, printed]”; BMNH.

Distribution

Guatemala.

103. *Mycotretus normalis* Gorham, 1888

Mycotretus normalis Gorham, 1888: 51. Type locality: “Mexico, Cordova”.

Mycotretus normalis – Kuhnt 1909: 72; 1911: 51. — Blackwelder 1945: 467. — Alvarenga 1994: 31.

Primary type

Holotype (Fig. 19A)

MEXICO • “Type [disc-shaped label, printed] \ *Mycotretus normalis*, G. [handwritten] \ B.C.A.,Col.,VII *Mycotretus* [printed] \ Cordova, Mexico. Hoega. [printed] \ HOLOTYPE *Mycotretus normalis* Gorham 1888 [red label, printed]”; BMNH.

Distribution

Mexico.

104. *Mycotretus noterinus* Gorham, 1888

Mycotretus noterinus Gorham, 1888: 65. Type locality: “Panama, Volcan de Chiriquí” [province of Chiriquí, Panama].

Mycotretus noterinus – Kuhnt 1909: 72; 1911: 51. — Deelder 1942: 88. — Blackwelder 1945: 467. — Alvarenga 1994: 31.

Primary type

Lectotype, here designated (Fig. 19B)

PANAMA • “Type [disc-shaped label, printed] \ ♂ [handwritten] \ V. de Chiriqui, 25–4000 ft. Champion. [printed] \ noterinus [handwritten] \ B.C.A., Col., VII Mycotretus [printed] \ LECTOTYPE Mycotretus noterinus Gorham, 1888 [red label, printed]”; BMNH.

Other specimens examined

Paralectotypes

PANAMA • 1 ♂ (dissected); “Coleção M. Alvarenga [printed] \ V. de Chiriqui, 25–4000 ft. Champion. [printed] \ B.C.A., Col., VII. [printed] Mycotretus noterinus, Gor. [handwritten] \ 1850 [printed] \ PARALECTOTYPE *Mycotretus noterinus* Gorham, 1888 [yellow label, printed]”; MNRJ • 1 spec.; “Coleção M. Alvarenga [printed] \ V. de Chiriqui, 25–4000 ft. Champion. [printed] \ B.C.A., Col., VII. [printed] Mycotretus noterinus, Gor. [handwritten] \ 1849 [printed] \ DZUP 132686 [printed] \ PARALECTOTYPE *Mycotretus noterinus* Gorham, 1888 [yellow label, printed]”; DZUP • 4 specs; “V. de Chiriqui, 25–4000 ft. Champion. [printed] \ B.C.A., Col., VII. [printed] Mycotretus noterinus, Gor. [handwritten] \ PARALECTOTYPE *Mycotretus noterinus* Gorham, 1888 [yellow label, printed]”; BMNH • 1 spec.; “V. de Chiriqui, 25–4000 ft. Champion. [printed] \ Mycotretus noterinus [handwritten] \ PARALECTOTYPE *Mycotretus noterinus* Gorham, 1888 [printed]”; BMNH • 1 spec.; “V. de Chiriqui, 25–4000 ft. Champion. [printed] \ B.C.A., Col., VII. [printed] M. noterinus, Gor. [handwritten] \ PARALECTOTYPE *Mycotretus noterinus* Gorham, 1888 [yellow label, printed]”; BMNH.

Distribution

Panama.

105. *Mycotretus oppositipunctum* Gorham, 1888

Mycotretus oppositipunctum Gorham, 1888: 69. Type locality: “Guatemala, San Gerónimo”.

Mycotretus oppositipunctum – Kuhnt 1909: 73; 1911: 51. — Blackwelder 1945: 467. — Alvarenga 1994: 31.

Primary type

Holotype (Fig. 19C)

GUATEMALA • “Type [disc-shaped label, printed] \ Sp. figured. Type. [printed] \ Mycotretus ? oppositipunctum Gorham. [handwritten] \ B.C.A., Col., VII Mycotretus [printed] \ S. Geronimo, 3000 ft. Champion. [printed] \ HOLOTYPE Mycotretus oppositipunctum Gorham, 1888 [red label, printed]”; BMNH.

Other specimens examined

GUATEMALA • 1 ♂ (dissected); “GUATEMALA: El Progreso, Sierra de las Minas; nr. Cerro, Pinalon, “las Cabañas”, nr. 15.08467, -89.94299, 12-15-V-2010; 2579m; cloud forest; P. Skelley [printed] \ Mycotretus oppositipunctum Gorh. [handwritten] det. P.E.Skelley [printed]”; FSCA.

MEXICO • 1 ♂ (dissected); “MEX.: CHIAPAS, Cerro, Huitepec, ca. 5km. W. San Cristobal, 2650m., 17.IX.1991, R. Anderson, wet oak forest, 91-106 [printed] \ Mycotretus (nr. oppositipunctum, note. black head) [handwritten] det. P.E.Skelley [printed]”; FSCA.

Distribution

Guatemala (Alvarenga 1994) and Mexico.

Remarks

Contrary to the lectotype and the other examined specimen from Guatemala, the Mexican specimen has a black head. That variation may be clinal and deserves additional studies. Based on the morphology of the male genitalia, *M. oppositipunctum* may belong to the *ornatus* species complex (see the Remarks on *M. ornatus* above).

106. *Mycotretus panamanus* Gorham, 1888

Mycotretus panamanus Gorham, 1888: 54. Type locality: “Panama, Bugaba”.

Mycotretus panamanus – Kuhnt 1909: 75; 1911: 52. — Blackwelder 1945: 467. — Alvarenga 1994: 32.

Primary type

Lectotype, here designated (Fig. 19D)

PANAMA • “Type [disc-shaped label, printed] \ Bugaba, 800–1500 ft. Champion. [printed] \ Type. Sp. figured. [printed] \ B.C.A., Col., VII Mycotretus [printed] \ Mycotretus panamanus Gorham. [handwritten] \ LECTOTYPE Mycotretus panamanus Gorham, 1888 [red label, printed]”; BMNH.

Distribution

Panama.

Remarks

Mycotretus panamanus resembles *M. sallaei* Crotch (Fig. 10D) in colour and shape.

107. *Mycotretus pictopiceus* Gorham, 1888

Mycotretus pictopiceus Gorham, 1888: 56. Type locality: “Panama, Bugaba”.

Mycotretus pictopiceus – Kuhnt 1909: 71; 1911: 52. — Blackwelder 1945: 467. — Alvarenga 1994: 33.

Primary type

Holotype (Fig. 19E)

PANAMA • “Type [disc-shaped label, printed] \ B.C.A., Col., VII Mycotretus [printed] \ Bugaba, 900–1,500 ft. Champion. [printed] \ *M. pictopiceus* Gorham [handwritten] \ HOLOTYPE Mycotretus pictopiceus Gorham, 1888 [red label, printed]”; BMNH.

Distribution

Panama.

108. *Mycotretus planus* Gorham, 1888

Mycotretus planus Gorham, 1888: 66. Type locality: “Panama, Bugaba”.

Mycotretus planus – Kuhnt 1909: 72; 1911: 52. — Blackwelder 1945: 467. — Alvarenga 1994: 33. — Pecci-Maddalena *et al.* 2021b: 3099.

Primary type

Holotype (Fig. 19F)

PANAMA • “Type [disc-shaped label, printed] \ B.C.A., Col., VII Mycotretus [printed] \ Bugaba, Panama. Champion. [printed] \ Mycotretus planus, G. [handwritten] \ HOLOTYPE Mycotretus planus Gorham, 1888 [red label, printed]”; BMNH.

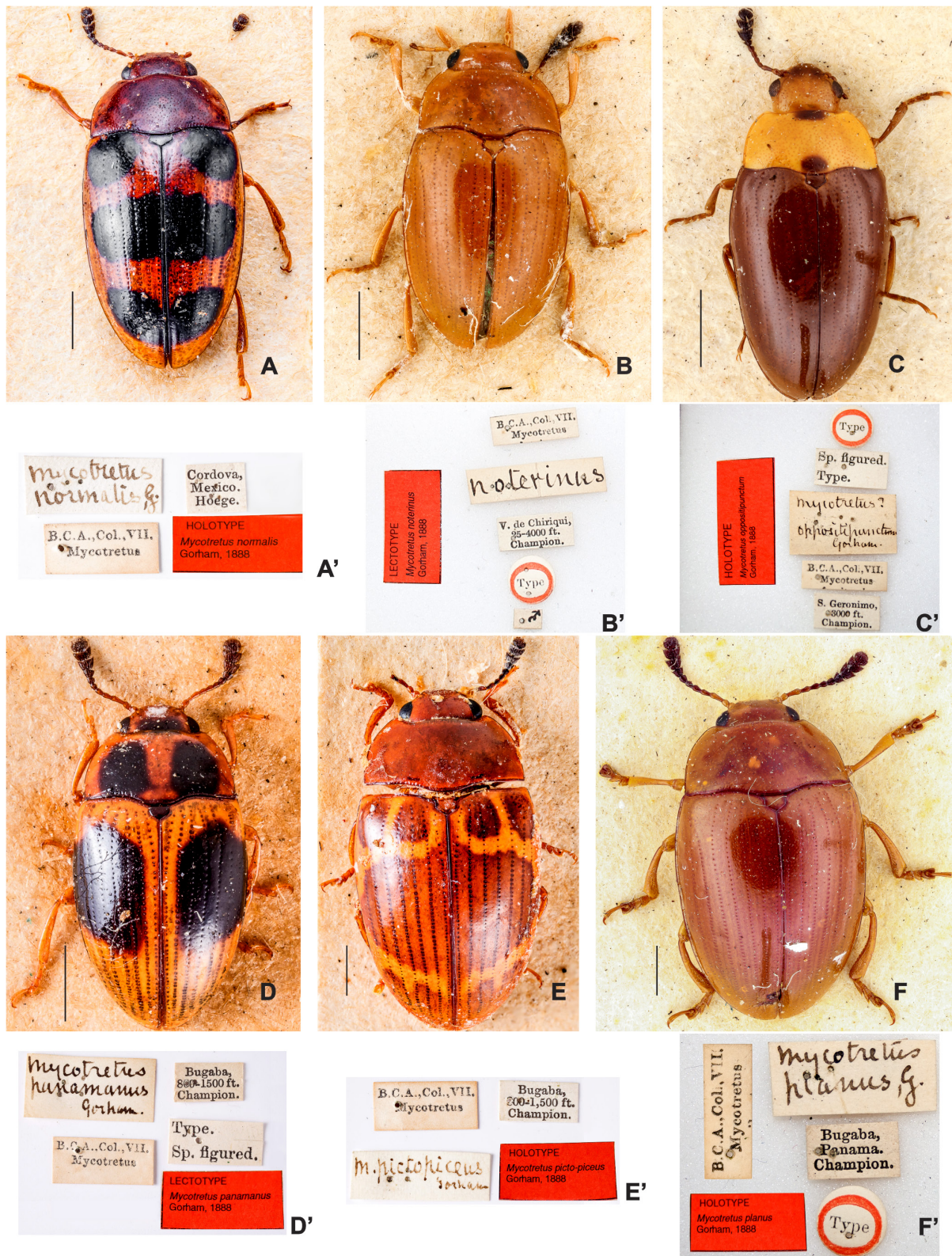


Fig. 19. Gorham primary types (dorsal, labels) cont. **A–A'**. Holotype of *Mycotretus normalis* Gorham, 1888. **B–B'**. Lectotype of *M. noterinus* Gorham, 1888. **C–C'**. Holotype of *M. oppositipunctum* Gorham, 1888. **D–D'**. Lectotype of *M. panamanus* Gorham, 1888. **E–E'**. Holotype of *M. pictopiceus* Gorham, 1888. **F–F'**. Holotype of *M. planus* Gorham, 1888. Scale bars = 1 mm.

Distribution

Panama.

109. *Mycotretus rubidus* Gorham, 1888

Mycotretus rubidus Gorham, 1888: 62. Type locality: “Guatemala, Chacoj, Panzos” [locality of Panzós in the department of Alta Verapaz].

Mycotretus rubidus – Kuhnt 1909: 73; 1911: 53. — Blackwelder 1945: 467. — Alvarenga 1994: 34.

Primary type

Lectotype, here designated (Fig. 20A)

GUATEMALA • “Type [disc-shaped label, printed] \ B.C.A., Col., VII *Mycotretus* [printed] \ *Mycotretus rubidus* [handwritten] \ Panzos, Vera Paz, Champion. [printed] \ LECTOTYPE *Mycotretus rubidus* Gorham, 1888 [red label, printed]”; BMNH.

Other specimens examined

Paralactotypes

GUATEMALA • 1 spec.; “Chacoj, Guatemala, Champion [handwritten] \ *Mycotretus rubidus* Gorh. Pale var. [handwritten] \ B.C.A., Col., VII *Mycotretus* [printed] \ PARALECTOTYPE *Mycotretus rubidus* Gorham, 1888 [yellow label, printed]”; BMNH • 1 spec.; “Chacoj, Vera paz. Champion. [printed] \ *Mycotretus rubidus* [handwritten] \ B.C.A., Col., VII *Mycotretus* [printed] \ PARALECTOTYPE *Mycotretus rubidus* Gorham, 1888 [yellow label, printed]”; BMNH.

Distribution

Guatemala.

110. *Mycotretus rufipennis* Gorham, 1888

Mycotretus rufipennis Gorham, 1888: 69. Type locality: “Mexico, Cerro de Plumas”.

Mycotretus rufipennis – Kuhnt 1909: 73; 1911: 53. — Blackwelder 1945: 467. — Alvarenga 1994: 34.

Primary type

Holotype (Fig. 20B)

MEXICO • “Type [disc-shaped label, printed] \ B.C.A., Col., VII [printed] \ *Mycotretus rufipennis* Goh. [handwritten] \ Cerro de Plumas, Mexico. Hoega. [printed] \ [Prost-? handwritten] \ HOLOTYPE *Mycotretus rufipennis* Gorham, 1888 [red label, printed]”; BMNH.

Distribution

Mexico.

111. *Mycotretus sandicatus* Gorham, 1888

Mycotretus sandicatus Gorham, 1888: 54. Type locality: “Guatemala, Purula, San Gerónimo”.

Mycotretus sandicatus – Kuhnt 1909: 72; 1911: 53. — Blackwelder 1945: 467. — Alvarenga 1994: 34.

Primary type

Lectotype, here designated (Fig. 20C)

GUATEMALA • “Type [disc-shaped label, printed] \ B.C.A., Col., VII. Mycotretus [printed] \ Purula, Vera Paz. Champion. [printed] \ Mycotretus sandicatus Gorham [handwritten] \ LECTOTYPE Mycotretus sandicatus Gorham, 1888 [red label, printed]”; BMNH.

Other specimens examined

Paralectotypes

GUATEMALA • 1 ♀ (dissected); “Purula, Vera Paz. Champion. [printed] \ B.C.A., Col., VII. [printed] sandicatus [handwritten] \ PARALECTOTYPE Mycotretus sandicatus Gorham, 1888 [yellow label, printed]”; BMNH • 1 spec.; “S. Geronimo, Guatemala. Champion. [printed] \ B.C.A., Col., VII. [printed] sandicatus [handwritten] \ PARALECTOTYPE Mycotretus sandicatus Gorham, 1888 [yellow label, printed]”; BMNH.

Distribution

Guatemala.

112. *Mycotretus sexpunctatus* Gorham, 1888

Mycotretus sexpunctatus Gorham, 1888: 50. Type locality: “Panama, Bugaba, Volcan de Chiriqui” [province of Chiriquí, Panama].

Mycotretus sexpunctatus – Kuhnt 1909: 76; 1911: 53. — Blackwelder 1945: 467. — Alvarenga 1994: 35.

Primary type

Lectotype, here designated (Fig. 20D)

PANAMA • “Type [disc-shaped label, printed] \ B.C.A., Col., VII. Mycotretus [printed] \ Type. Sp. figured. [printed] \ Bugaba, Panama. Champion. [printed] \ M. sexpunctatus Gorham [handwritten] \ LECTOTYPE Mycotretus sexpunctatus Gorham, 1888 [red label, printed]”; BMNH.

Other specimens examined

Paralectotypes

PANAMA • 1 ♂ (dissected) and 1 spec. (on the same card); “Bugaba, Panama. Champion. [printed] \ Mycotretus sexpunctatus Gorham [handwritten] \ B.C.A., Col., VII. Mycotretus [printed] \ PARALECTOTYPE *Mycotretus sexpunctatus* Gorham, 1888 [yellow label, printed]”; BMNH • 2 specs (on same card); “Bugaba, Panama. Champion. [printed] \ B.C.A., Col., VII. Mycotretus [printed] 6-punctatus [handwritten]” \ PARALECTOTYPE *Mycotretus sexpunctatus* Gorham, 1888 [yellow label, printed]”; BMNH • 1 spec.; “Bugaba, 800–1500 ft. Champion. [printed] \ B.C.A., Col., VII. Mycotretus [printed] 6-punctatus [handwritten]” \ PARALECTOTYPE *Mycotretus sexpunctatus* Gorham, 1888 [yellow label, printed]”; BMNH • 1 spec.; “Bugaba, Panama. Champion. [printed] \ B.C.A., Col., VII. Mycotretus [printed] 6-punctatus [handwritten] \ PARALECTOTYPE *Mycotretus sexpunctatus* Gorham, 1888 [yellow label, printed]”; BMNH 1 spec.; “V. de Chiriqui, 2–3000 ft. Champion. [printed] \ near M. Lepidus [handwritten] \ B.C.A., Col., VII. Mycotretus [printed] 6-punctatus [handwritten] \ PARALECTOTYPE *Mycotretus sexpunctatus* Gorham, 1888 [yellow label, printed]”; BMNH • 1 spec.; “V. de Chiriqui, 25–4000 ft. Champion. [printed] \ B.C.A., Col., VII. Mycotretus [printed] 6-punctatus [handwritten] \ PARALECTOTYPE *Mycotretus sexpunctatus* Gorham, 1888 [yellow label, printed]”; BMNH.

Distribution

Panama.

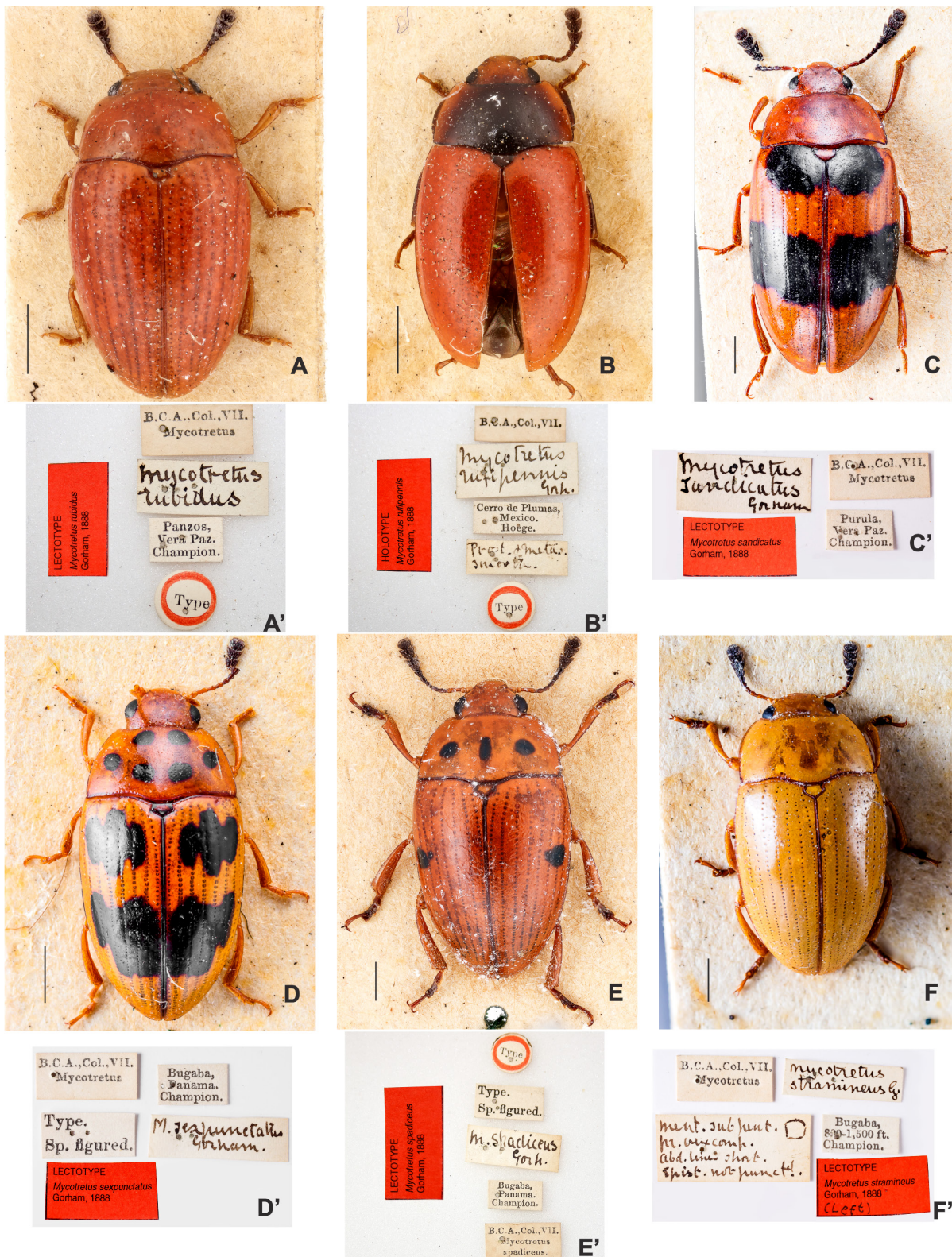


Fig. 20. Gorham primary types (dorsal, labels) cont. **A–A'**. Lectotype of *Mycotretus rubidus* Gorham, 1888. **B–B'**. Holotype of *M. rufipennis* Gorham, 1888. **C–C'**. Lectotype of *M. sandicatus* Gorham, 1888. **D–D'**. Lectotype of *M. sexpunctatus* Gorham, 1888. **E–E'**. Lectotype of *M. spadiceus* Gorham, 1888. **F–F'**. Lectotype of *M. stramineus* Gorham, 1888. Scale bars = 1 mm.

113. *Mycotretus spadiceus* Gorham, 1888

Mycotretus spadiceus Gorham, 1888: 53. Type locality: “Panama, Bugaba”.

Mycotretus spadiceus – Kuhnt 1909: 74; 1910: 239; 1911: 54. — Blackwelder 1945: 467. — Alvarenga 1994: 36.

Primary type

Lectotype, here designated (Fig. 20E)

PANAMA • “Type [disc-shaped label, printed] \ B.C.A., Col., VII. *Mycotretus spadiceus* [printed] \ Type. Sp. figured. [printed] \ Bugaba, Panama. Champion. [printed] \ *M. spadiceus* Gorh. [handwritten] \ LECTOTYPE *Mycotretus spadiceus* Gorham, 1888 [red label, printed]”; BMNH.

Other specimens examined

Paralectotypes

PANAMA • 2 specs (mounted on same card); “Bugaba, Panama. Champion. [printed] \ B.C.A., Col., VII. *Mycotretus spadiceus* [printed] \ PARALECTOTYPE *Mycotretus spadiceus* Gorham, 1888 [yellow label, printed]”; BMNH • 2 specs (mounted on same card); “Bugaba, 800–1,500 ft. Champion. [printed] \ *Mycotretus spadiceus* Gorh. [handwritten] \ PARALECTOTYPE *Mycotretus spadiceus* Gorham, 1888 [yellow label, printed]”; BMNH • 2 specs (mounted on same card); “Bugaba, 800–1,500 ft. Champion. [printed] \ *spadiceus* Gorham [handwritten] \ B.C.A., Col., VII. *Mycotretus spadiceus* [printed] \ PARALECTOTYPE *Mycotretus spadiceus* Gorham, 1888 [yellow label, printed]”; BMNH • 4 specs; “Bugaba, Panama. Champion. [printed] \ B.C.A., Col., VII. *Mycotretus spadiceus* [printed] \ PARALECTOTYPE *Mycotretus spadiceus* Gorham, 1888 [yellow label, printed]”; BMNH • 1 spec.; “Bugaba, Panama. Champion. [printed] \ Sp. figured. [printed] \ *spadiceus* Var. α [handwritten] \ B.C.A., Col., VII. *Mycotretus spadiceus* [printed] \ PARALECTOTYPE *Mycotretus spadiceus* Gorham, 1888 [yellow label, printed]”; BMNH • 2 specs; “Chontales. Nicaragua, T. Belt. [printed] \ B.C.A., Col., VII. *Mycotretus spadiceus*. [printed] \ PARALECTOTYPE *Mycotretus spadiceus* Gorham, 1888 [printed]”; BMNH • 1 ♂ (dissected); “Coleção M. Alvarenga [printed] \ Homeotipo [printed] \ Bugaba, 800–1,500 ft. Champion. [printed] \ B.C.A., Col., VII. *Mycotretus spadiceus*. [printed] \ 1746 [printed] \ PARALECTOTYPE *Mycotretus spadiceus* Gorham, 1888 [yellow label, printed]”; MNRJ • 1 ♀ (dissected); “Coleção M. Alvarenga [printed] \ Homeotipo [printed] \ Bugaba, 800–1,500 ft. Champion. [printed] \ B.C.A., Col., VII. *Mycotretus spadiceus*. [printed] \ *Mycotretus spadiceus* Var. B. [handwritten] \ Comparado com tipo [printed] *Mycotretus spadiceus* Gorham, 1888 [handwritten] M. Alvarenga det. 1971 [printed] \ 1744 [printed] \ DZUP 132893 [printed] \ PARALECTOTYPE *Mycotretus spadiceus* Gorham, 1888 [yellow label, printed]”; DZUP.

BELIZE • 1 spec.; “Belize. Blancaneaux. [printed] \ B.C.A., Col., VII. *Mycotretus spadiceus*. [printed] \ PARALECTOTYPE *Mycotretus spadiceus* Gorham, 1888 [yellow label, printed]”; BMNH.

Distribution

Central America, Colombia.

114. *Mycotretus stramineus* Gorham, 1888

Mycotretus stramineus Gorham, 1888: 58. Type locality: “Panama, Bugaba”.

Mycotretus stramineus – Kuhnt 1909: 71; 1911: 54. — Blackwelder 1945: 467. — Alvarenga 1994: 36.

Primary type

Lectotype, here designated (Fig. 20F)

PANAMA • “Type [disc-shaped label, printed] \ B.C.A.,Col.,VII. *Mycotretus* [printed] \ Bugaba, 800–1,500 ft. Champion. [printed] \ *Mycotretus stramineus* G. [handwritten] \ ment. subpent. pr.not comp. abd. lines short. Epist. ?not punctd [handwritten] \ LECTOTYPE *Mycotretus stramineus* Gorham, 1888 [printed] (left) [red label, handwritten]”; BMNH.

Other specimens examined

Paralectotypes

PANAMA • 1 spec. (mounted on same card as lectotype); same collectionn data as for lectotype \ PARALECTOTYPE *Mycotretus stramineus* Gorham, 1888 (right) [yellow label, handwritten]”; BMNH
 • 2 specs: “Bugaba, Panama. Champion. [printed] \ B.C.A.,Col.,VII. *Mycotretus* [printed] bipunctatus [handwritten] \ PARALECTOTYPE *Mycotretus stramineus* Gorham, 1888 [yellow label, printed]”; BMNH.

Distribution

Panama.

115. *Mycotretus ternotatus* Gorham, 1888

Mycotretus ternotatus Gorham, 1888: 51. Type locality: “Mexico, Jalapa”.

Mycotretus ternotatus – Kuhnt 1909: 76; 1911: 54. — Blackwelder 1945: 467. — Alvarenga 1994: 36.

Primary type

Holotype (Fig. 21A)

MEXICO • “Type [disc-shaped label, printed] \ Jalapa, Vera Cruz. Höge. [printed] \ Type. Sp. figured. [printed] \ *Mycotretus ternotatus* [handwritten] \ ? [handwritten] signatellus [handwritten] \ B.C.A.,Col.,VII. *Mycotretus* [printed] \ HOLOTYPE *Mycotretus ternotatus* Gorham, 1888 [red label, printed]”; BMNH.

Distribution

Mexico.

Remarks

Mycotretus ternotatus resembles *M. signatellus* Crotch (Fig. 11B) in colour and body shape.

116. *Mycotretus tibialis* Gorham, 1888

Mycotretus tibialis Gorham, 1888: 56. Type locality: “Nicaragua, Chontales” [Department of Chontales, Nicaragua].

Mycotretus tibialis – Kuhnt 1909: 72; 1911: 54. — Blackwelder 1945: 467. — Alvarenga 1994: 36.

Primary type

Holotype (Fig. 21B)

NICARAGUA • “Type [disc-shaped label, printed] \ Chontales, Nicaragua, T. Belt. [printed] \ *M. tibialis* Gorham. [handwritten] \ B.C.A.,Col.,VII. *Mycotretus* [printed] \ HOLOTYPE *Mycotretus tibialis* Gorham, 1888 [red label, printed]”; BMNH.

Distribution

Nicaragua.

117. *Mycotretus vittatus* Gorham, 1888

Mycotretus vittatus Gorham, 1888: 57. Type locality: “Guatemala, Pantaleon, Zapote”.

Mycotretus vittatus – Gorham 1898: 253. — Kuhnt 1909: 76; 1911: 54. — Blackwelder 1945: 468. — Alvarenga 1994: 37.

Primary type

Lectotype, here designated (Fig. 21C)

GUATEMALA • “Type [disc-shaped label, printed] \ *Mycotretus vittatus*. Gorham [handwritten] \ Type. Sp. figured. [printed] \ B.C.A., Col., VII. *Mycotretus* [printed] \ Zapote, Guatemala, C. Champion. [printed] \ LECTOTYPE *Mycotretus vittatus* Gorham, 1888 [red label, printed]”; BMNH.

Other specimens examined

MEXICO • 1 spec.; “Temax, N. Yucatan. Gaumer. [printed] \ *Mycotretus vittatus*, Gorch [handwritten] \ B.C.A., Col., VII. *Mycotretus* [printed]”; BMNH.

EL SALVADOR • 1 ♂ (dissected); “Coleção M. Alvarenga [printed] \ Homeotipo [printed] \ V. S. Vicente, Finca Lapaz, El Salvador, 3.VIII.1959, J. Bechyné [handwritten] \ Comparado com tipo [printed] *Mycotretus vittatus* Gorham, 1888 [handwritten] M. Alvarenga det. 1971 [printed] \ 1756 [printed]”; MNRJ.

Distribution

Mexico, Guatemala.

XIII. Guérin, J. Figs 21D–F, 22A

118. *Mycotretus anchoralis* Guérin, 1956

Mycotretus anchoralis Guérin, 1956: 62. Type locality: “Jujuy, Reyes, Argentina”.

Mycotretus anchoralis – Alvarenga 1994: 20. — Pecci-Maddalena & Lopes-Andrade 2017: 148.

Primary type

Holotype (Fig. 21D)

ARGENTINA • “Tipo [red label, printed] \ Jujuy, Reyes, Argentina, 4.950 [handwritten] \ Coll. J Guerin. S. Paulo. Brasil. [printed] 18476 [handwritten] \ *Mycotretus anchoralis* J. Guer [handwritten] J. Guerin. det. 19[printed]54[handwritten]”; MZSP.

Other specimens examined

Paratype

BOLIVIA • 1 spec.; “PARATIPO [pink label, handwritten] \ Yungas de Palmar Bolivia, 1.949 [handwritten] \ Coll. J Guerin. S. Paulo. Brasil. [printed] 18592 [handwritten] \ BOLIVIA, Yungas de Palmar, 2000 M. – Zischka [printed] \ *Mycotretus anchoralis* J. Guér [handwritten] J. Guerin. det. 19[printed]54[handwritten]”; MZSP.



Fig. 21. Primary types (dorsal, labels). A–A'. Holotype of *Mycotretus ternotatus* Gorham, 1888. B–B'. Holotype of *M. tibialis* Gorham, 1888. C–C'. Lectotype of *M. vittatus* Gorham, 1888. D–D'. Holotype of *M. anchoralis* Guérin, 1956. E–E'. Holotype of *M. bicinctus* Guérin, 1949. F–F'. Holotype of *M. monrosi* Guérin, 1949. Scale bars: A–C, F = 1 mm; D–E = 0.5 mm.

Distribution

Bolivia, Argentina.

119. *Mycotretus bicinctus* Guérin, 1949

Mycotretus bicinctus Guérin, 1949a: 236. Type locality: “Parque da Cantareira, São Paulo” [state of São Paulo, Brazil].

Mycotretus bicinctus – Alvarenga 1994: 21. — Campaner *et al.* 2008: 242. — Pecci-Maddalena & Lopes-Andrade 2017: 149.

Primary type

Holotype (Fig. 21E)

BRAZIL • “HOLOTIPO [red label, printed] \ Cantareira., S. Paulo. [printed], 1938 [handwritten] \ Coll. J. Guérin., S. Paulo., Brasil. [printed], 18336 [handwritten] \ Mycotretus bicinctus J. Guer [handwritten], J. Guerin det. [printed] 1949 [handwritten]”; MZSP.

Remarks

Junior synonym of *M. chilensis* Crotch, 1876 (Fig. 4F, see above). See Pecci-Maddalena & Lopes-Andrade (2017).

120. *Mycotretus monrosi* Guérin, 1949

Mycotretus monrosi Guérin, 1949b: 589. Type locality: “Piletas, Salta” [Department of Salta, Argentina].

Mycotretus monrosi – Alvarenga 1994: 29. — Pecci-Maddalena & Lopes-Andrade 2017: 148.

Primary type

Holotype (Fig. 21F)

ARGENTINA • “Piletas–Salta, 26 JUL–3AG. 944, R. Colbach. [handwritten] \ HOLOTIPO [red label, printed] \ Mycotretus monrosi J. Guérin, J. Guerin det. 949 [handwritten] \ Mycotretus monrosi J. Guerin [handwritten] J. Guerin. det. 194[printed]9[handwritten] \ COLECCION, INST – FUND. M. LILLO (4000) – S.M. TUCUMAN, TUCUMAN – ARGENTINA [printed] \ TCOL190 [printed]”; MZSP.

Other specimens examined

Paratype

BRAZIL • 1 ♂ (dissected); “PARATIPO [printed] \ Coll. J. Guerin. S. Paulo. Brasil. [printed] 18410 [handwritten] \ Piletas, Prov. Salta, Argentina, 8.944 [handwritten] \ Mycotretus monrosi J. Guer [handwritten] J. Guerin. det. 194[printed]9[handwritten]”; MZSP.

Remarks

New junior synonym of *M. bicolor* Taschenberg, 1870 (Fig. 40A, see below).

121. *Mycotretus trifasciatus* Guérin, 1956

Mycotretus trifasciatus Guérin, 1956: 63. Type locality: “Nova Teutonia, Estado de Santa Catarina” [state of Santa Catarina, Brazil].

Mycotretus trifasciatus – Alvarenga 1994: 37. — Pecci-Maddalena & Lopes-Andrade 2017: 153.

Primary type

Holotype (Fig. 22A)

BRAZIL • “TIPO [red label, printed] \ N. Teutonia., S. Catarina. [printed], 12.948 [handwritten] \ Coll. J. Guérin., S. Paulo., Brasil. [printed], 18407 [handwritten] \ 194, Brasilien, Nova Teutonia, 27° 11 B, 52° 23' L, Fritz Plaumann, 3500 m [printed] \ *Mycotretus trifasciatus* J. Guer [handwritten], J. Guerin det. 19[printed]54 [handwritten]”; MZSP.

Other specimens examined

See Pecci-Maddalena & Lopes-Andrade (2017).

Distribution

South and Southeast Brazil, with one doubtful record in Obidos (in the state of Pará, North Brazil) (Pecci-Maddalena & Lopes-Andrade 2017).

XIV. Guérin-Méneville, F.E.

Fig. 22B–E

Mycotretus cinctellus (Guérin-Méneville, 1841)

Erotylus cinctellus Guérin-Méneville, 1841: 153–154 (Fig. 22B). Type locality: “Bolivie”.

Mycotretus cinctellus – Lacordaire 1842: 178. — Crotch 1876: 447. — Gemminger & Harold 1876: 3692. — Kuhnt 1909: 71; 1911: 48. — Bruch 1914: 384. — Deelder 1942: 88. — Mader 1942: 172; 1951: 212. — Blackwelder 1945: 466. — Alvarenga 1994: 22. — Skelley 1998b: 16. — McHugh & Chaboo 2015: 278;

Mycomyestes cinctellus – Pecci-Maddalena *et al.* 2021b: 3080.

Primary type

Lectotype (Fig. 22B)

BOLIVIA • “*Mycotretus cinctellus* [handwritten] \ Coll. Thoms. [printed] \ Brésil [printed] \ Type [white label, printed]”; Collection Maurice Sedillot; MNHN.

Remarks

Synonym of *Mycomyestes melanophthalmus* (Duponchel, 1825) (Fig. 13D, see Pecci-Maddalena *et al.* 2021b).

122. *Mycotretus fallax* Guérin-Méneville, 1841

Erotylus fallax Guérin-Méneville, 1841: 155. Type locality: “Brésil”.

Mycotretus fallax – Lacordaire 1842: 153. — Crotch 1876: 453. — Gemminger & Harold 1876: 3692. — Kuhnt 1909: 76; 1911: 49. — Blackwelder 1945: 466. — Guérin 1948: 19. — Alvarenga 1994: 25. — Skelley 1998b: 17. — Pecci-Maddalena *et al.* 2021a: 955.

Primary type

Lectotype, here designated (Fig. 22C)

BRAZIL • “*Mycotretus fallax*. guer. Rev. Type, zool. Brésil. [handwritten] \ Type [printed] \ Lectotipo [red label, printed]”; MNHN.

Other specimens examined

BRAZIL • 1 ♂ (dissected); “Coleção M. Alvarenga [printed] \ BARUERI, S. Paulo BRASIL [printed] 7.II.1960 [handwritten] K. Lenko leg. [printed] \ DZUP 235139 [printed]”; DZUP • 1 ♂ (dissected); “BRASIL: MG, Viçosa; “Mata do Paraíso, trilha do pesquisador”, 11.X.2016; I Souza-Gonçalves, P Borlini, C Lopes-Andrade leg [printed] \ ex *Pleurotus ostreatus* [printed]”; CELC • 1 ♀ (dissected); “BRASIL: MG, Ingaí: “Boqueirão próx. Poço Bonito” xi. 2002 leg. R.J.Silva [printed]”; CELC.

Distribution

Southeast and South Brazil.

Remarks

The names “*amoenus* Dej.” and “*fallax* Chevrolat” appears in the Dejean Catalogue (1836) within the same pair of brackets. Both names were published before 1931 and lack a description or an indication of the taxon they denote. Therefore, they fail to conform to Article 12 of the CODE (ICZN 1999) and here are considered *nomina nuda*. The “Lectotipo” label is that used by Alvarenga, and was likely placed on the specimen when he studied it. We accept and validate that designation.

123. *Mycotretus sedecimguttatus* (Guérin-Méneville, 1844)

Ischyryus sedecimguttatus Guérin-Méneville, 1844: 310. Type locality: “Colombie”.

Mycotretus sedecimguttatus – Crotch 1876: 440. — Gemminger & Harold 1876: 3695. — Kuhnt 1909: 71; 1911: 53. — Blackwelder 1945: 467. — Alvarenga 1994: 35. — Skelley 1998b: 15.

Type specimen

Not found.

Other specimens examined

COLOMBIA • 1 spec. (Fig. 22D); “TYPE. [printed, crossed out], 16-guttatus, ex descr. [handwritten] \ L [printed] \ N gran [handwritten]”; UMZC.

Distribution

Unknown locality in Colombia.

Remarks

The unique individual examined by us has a label “ex descr”, which means “ex description”, and it was probably identified by Crotch based on the original description by Guérin-Méneville. Labels with the word “Type.” crossed out by Crotch indicate the specimen is probably not the type (Skelley 1998b).

124. *Mycotretus sobrinus* (Guérin-Méneville, 1841)

Erotylus sobrinus Guérin-Méneville, 1841: 154. Type locality: “Brésil”.

Mycotretus silaceus Lacordaire, 1842: 187 (Fig. 37A). Type locality: “Brésil”.

Mycotretus sobrinus – Lacordaire 1842: 186. — Crotch 1876: 456. — Gemminger & Harold 1876: 3695. — Gorham 1888: 60. — Kuhnt 1909: 72; 1911: 53. — Deelder 1942: 90. — Blackwelder 1945: 467. — Guérin 1948: 20. — Alvarenga 1994: 36. — Skelley 1998b: 17. — Pecci-Maddalena *et al.* 2021a: 955.

Mycotretus silaceus – Gorham 1888: 60 [junior synonym]. — Alvarenga 1994: 36. — Skelley 1998b: 17.

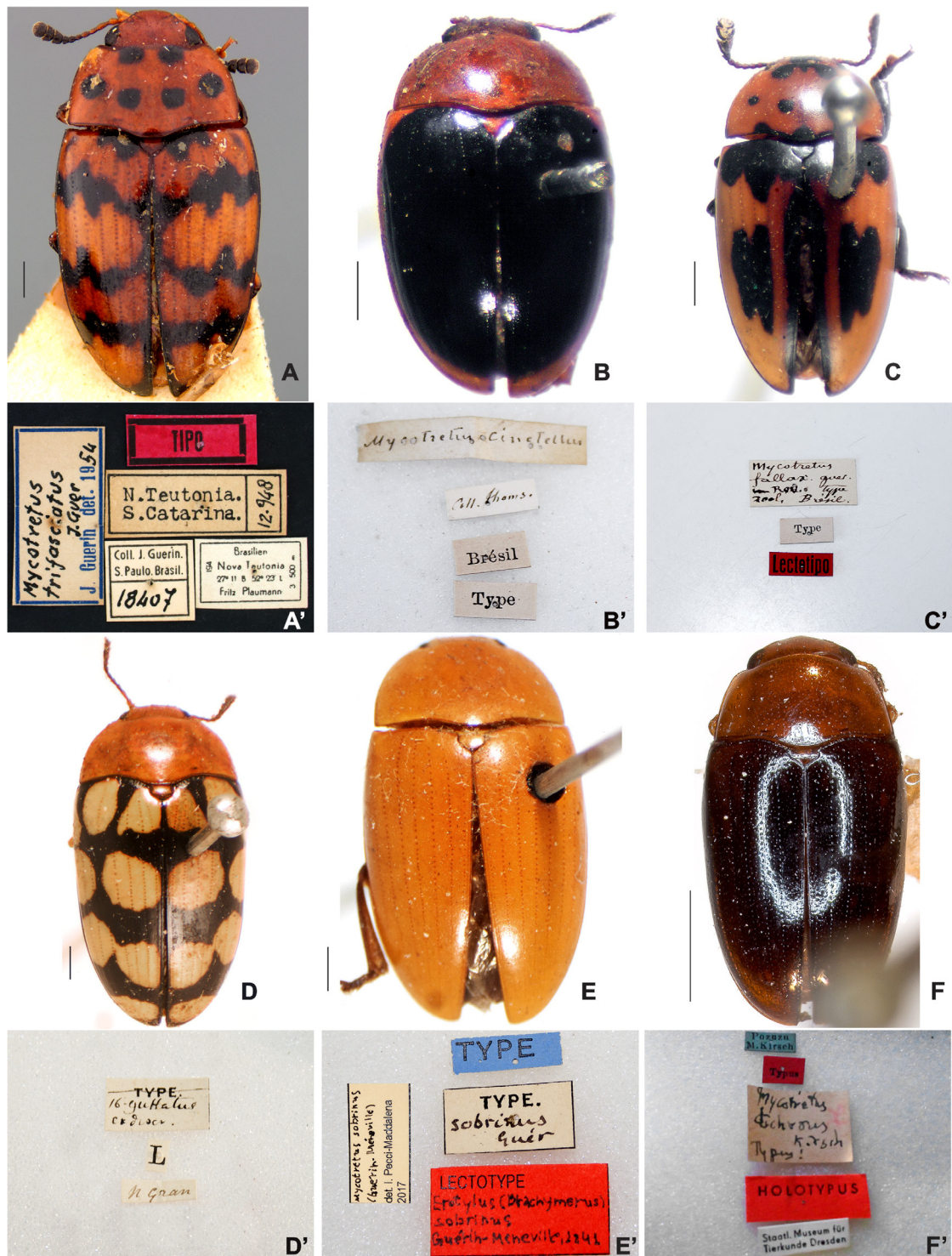


Fig. 22. A–C, D–F. Primary types (dorsal, labels). A–A'. Holotype of *Mycotretus trifasciatus* Guérin, 1956. B–B'. Lectotype of *Erotylus cinctellus* Guérin-Ménéville, 1841 [= *M. cinctellus*; synonym of *Mycomytes melanophthalmus* (Duponchel, 1825)]. C–C'. Lectotype of *M. fallax* Guérin-Ménéville, 1841. D–D'. Specimen of *M. sedecimguttatus* (Guérin-Ménéville, 1844) from the UMZC collection. E–E'. Lectotype of *Erotylus (Brachymerus) sobrinus* Guérin-Ménéville, 1841 [currently *M. sobrinus* (Guérin-Ménéville)]. F–F'. Lectotype of *M. dichrous* Kirsch, 1876. Scale bars: A = 0.5 mm; B–F = 1 mm.

Primary type

Lectotype, here designated (Fig. 22E)

BRAZIL • “TYPE [printed, blue label] \ TYPE. [printed] sobrinus Guér [handwritten] \ LECTOTYPE [printed] Erotylus (Brachymerus) sobrinus Guérin-Ménéville, 1841 [red label, handwritten] \ Mycotretus sobrinus (Guérin-Ménéville) [handwritten] det. I. Pecci-Maddalena 2017 [printed]”; UMZC.

Other specimens examined

Paralectotype

BRAZIL • 1 spec.; “TYPE [printed, blue label] \ TYPE. [printed] simplex Guéri. [handwritten] \ PARALECTOTYPE [printed] ? Erotylus (Brachymerus) sobrinus Guérin-Ménéville, 1841 [yellow label, handwritten] \ Mycotretus sobrinus (Guérin-Ménéville) [handwritten] det. I. Pecci-Maddalena 2017 [printed]”; UMZC.

Additional material

BRAZIL • 2 specs; “K [printed]”; UMZC • 1 spec.; “S Paul [handwritten]”; UMZC • 1 spec.; “Chevr. [printed]”; UMZC • 1 ♂ (dissected); “Coleção M. Alvarenga [printed] \ Homeotipo [printed] \ Mycotretus sobrinus Guérin, 1841 [handwritten] M. Alvarenga det. [printed] 1971 [handwritten] \ CORCOVADO, Guanabara BRASIL [printed] X. 1966 [handwritten] Alvarenga & Seabra [printed] \ 1678 [printed]”; MNRJ • 1 ♀; “Brasil: MG, Piau, 13.xii.2014, Pecci-Maddalena, I.S.C. leg. [printed]”; CELC.

Distribution

The type is from an unknown locality in Brazil, but the other specimens are from Southeast Brazil.

Remarks

As pointed out by Skelley (1998b) the name *Mycotretus simplex* is probably a nomen nudum. However, based on its label “TYPE” we considered that specimen a paralectotype of *M. sobrinus* and we included a question mark (?) indicating doubt.

XV. Harold, E.

Fig. 6B

125. *Mycotretus seminiger* Harold, 1876

Mycotretus dimidiatus Crotch, 1876: 444 [nec Taschenberg, 1870]. Type locality: “Ega” [= Tefé, in the state of Amazonas, North Brazil].

Mycotretus seminiger Harold, 1876: 174. Type locality: “Ega” [= Tefé, in the state of Amazonas, North Brazil].

Mycotretus dimidiatus – Alvarenga 1994: 35. — Skelley 1998b: 16.

Mycotretus seminiger – Alvarenga 1994: 35. — Skelley 1998b: 16.

Primary type

Lectotype, here designated (Fig. 6B)

BRAZIL • “TYPE [blue label, printed] \ TYPE. Dimidiatus Ega Bates, handwritten] \ LECTOTYPE [printed], Mycotretus dimidiatus Crotch, 1876 [red label, handwritten]”; UMZC.

Other specimens examined

1 ♂ (dissected); “Coleção M. Alvarenga [printed] \ Homeotipo [printed] \ FORTE PRINCIPE, Rondônia, Brasil [printed] XI. 1962 [handwritten] W. Bokermann [printed] \ Comparado com tipo [printed],

Mycotretus dimidiatus Crotch, 1876 [handwritten], M. Alvarenga det. 1971 [printed] \ *Mycotretus seminiger* Harold, 1876 [handwritten], M. Alvarenga det. [printed], 1984 [handwritten] \ 20-38-A [handwritten]"; MNRJ.

Remarks

Harold (1876) proposed the new specific name *Mycotretus seminiger* Harold, 1876 to replace *Mycotretus dimidiatus* Crotch, 1876. Taschenberg (1870) described a species called *M. dimidiatus*, so therefore the name proposed by Crotch (1876) is a junior homonym. The present combination is a replacement name, *Mycotretus seminiger* Harold, 1876, not *Mycotretus dimidiatus* Taschenberg, 1870, fide Alvarenga (1994) and Skelley (1998b).

XVI. Kirsch, T.F.W.

Figs 22F, 23A–D

Mycotretus bicolor Kirsch, 1876

Mycotretus bicolor Kirsch, 1876: 101 [nec Taschenberg, 1870]. Type locality: "Peru" [based on type label = "Pozuzu" (= locality of Pozuzo), in the department of Pasco, Peru].

Mycotretus bicolor – Fleutiaux 1886: 223. — Kuhnt 1909: 72; 1911: 48. — Alvarenga 1994: 21.

Remarks

Mycotretus bicolor Kirsch, 1876 is a junior homonym of *M. bicolor* Taschenberg, 1870. Kuhnt (1911: 48) proposed *M. bicoloratus* as a replacement name (see below).

126. *Mycotretus dichrous* Kirsch, 1876

Mycotretus dichrous Kirsch, 1876: 100. Type locality: "Peru" [based on type label = "Pozuzu" (= locality of Pozuzo), in the department of Pasco, Peru].

Mycotretus dichrous – Gemminger & Harold 1876: 3692. — Kuhnt 1909: 71; 1911: 49. — Mader 1942: 172; 1951: 212. — Blackwelder 1945: 466. — Alvarenga 1994: 23. — McHugh & Chaboo 2015: 278.

Primary type

Lectotype, here designated (Fig. 22F)

PERU • "Pozuzu M. Kirsch [printed] \ Typus [printed] \ *Mycotretus dichrous* Kirsch Typus ! [handwritten] \ HOLOTYPUS [red label, printed] \ Staatl. Museum für Tierkunde Dresden [printed]"; SNSD.

Other specimens examined

BRAZIL • 1 ♂ (dissected); "Coleção M. Alvarenga [printed] \ SINOP 12°31'S, 55°37'W, BR 163 km 500 a 600 Mato Grosso, BRASIL 350 m [printed] X. 1975 [handwritten] Roppa & Alvarenga col. [printed] \ *Mycotretus dichrous* Kirsch, 1876 [handwritten] M. Alvarenga det. [printed] 1984 [handwritten] \ PMMD [handwritten]"; MNRJ.

Distribution

Peru, Central-West and North Brazil.

127. *Mycotretus pelliciens* Kirsch, 1876

Mycotretus pelliciens Kirsch, 1876: 100. Type locality: “Peru” [based on type label = “Pozuzu” (= locality of Pozuzo), in the department of Pasco, Peru].

Mycotretus pelliciens – Gemminger & Harold 1876: 3694. — Kuhnt 1909: 76; 1911: 52. — Mader 1942: 174; 1951: 219. — Blackwelder 1945: 467. — Alvarenga 1994: 32. — McHugh & Chaboo 2015: 278.

Primary type

Lectotype, here designated (Fig. 23A)

PERU • “Pozuzu, M. Kirsch [printed] \ Typus [red label, printed] \ *Mycotretus pelliciens* Kirsch Typus [handwritten] \ HOLOTYPUS [red label, printed] \ Staatl. Museum für Tierkunde Dresden [printed]”; SNSD.

Remarks

New junior synonym of *M. opalescens* Crotch, 1876 (Fig. 8F, see above).

Mycomystes peruvianus (Kirsch, 1876)

Mycophthorus peruvianus Kirsch, 1876: 101–102. Type locality: “Peru” [based on type label = “Pozuzu” (= locality of Pozuzo), in the department of Pasco, Peru].

Mycophthorus peruvianus – Gemminger & Harold 1876: 3695. — Kuhnt 1909: 89; 1911: 66. — Mader 1942: 176; 1951: 224. — Blackwelder 1945: 468. — Alvarenga 1994: 41. — McHugh & Chaboo 2015: 278.

Mycotretus peruvianus – Skelley & Powell 2018: 311. — Pecci-Maddalena & Lopes-Andrade 2020: 579

Mycomystes peruvianus – Pecci-Maddalena *et al.* 2021b: 3080.

Primary type

Lectotype, here designated (Fig. 23B)

PERU • “Pozuzu, M. Kirsch [pale green paper] / Typus [red paper] / *Mycophthorus peruvianus* Kirsch Typus! [white paper, handwritten] / Staatl. Museum für Tierkunde Dresden [white paper] / HOLOTYPUS [red label] / *Mycotretus peruvianus* (Kirsch), det. P. Skelley 2012 [white paper]”; SNSD (apud Skelley & Powell 2018).

Distribution

Peru (Alvarenga 1994; Skelley & Powell 2018).

128. *Mycotretus puncticeps* Kirsch, 1865

Mycotretus puncticeps Kirsch, 1865: 97. Type locality: “Bogotá” [= Bogotá, Colombia].

Mycotretus puncticeps – Crotch 1876: 454. — Gemminger & Harold 1876: 3694. — Kuhnt 1909: 76; 1911: 52. — Deelder 1942: 89. — Blackwelder 1945: 467. — Alvarenga 1994: 33.

Primary type

Lectotype, here designated (Fig. 23C)

COLOMBIA • “Bogota, Coll. Kirsch. [printed] \ Typus [red label, printed] \ SYNTYPUS [red label, printed] \ Staatl. Museum für Tierkunde Dresden [printed]”; SNSD.

Other specimens examined

ECUADOR • 1 ♀ (dissected); “Coleção M. Alvarenga [printed] \ Pichilinge, Quevedo, Los Rios, Ecuador, II. 1977, A. Martinez [handwritten] \ *Mycotretus puncticeps* Kirsch, 1865 [handwritten] M. Alvarenga det. [printed] 1984 [handwritten]”; MNRJ.

Distribution

Colombia, Ecuador.

129. *Mycotretus suturalis* Kirsch, 1876

Mycotretus suturalis Kirsch, 1876: 99. Type locality: “Peru” [based on type label = “Pozuzu” (= locality of Pozuzo), in the department of Pasco, Peru].

Mycotretus suturalis – Gemminger & Harold 1876: 3695. — Kuhnt 1909: 72; 1911: 54. — Mader 1942: 172; 1951: 213. — Blackwelder 1945: 467. — Alvarenga 1994: 36. — McHugh & Chaboo 2015: 278.

Primary type

Lectotype, here designated (Fig. 23D)

PERU • “Pozuzu M. Kirsch [printed] \ Typus [red label, printed] \ *Mycotretus suturalis* Kirsch Typus [handwritten] \ HOLOTYPUS [red label, printed] \ Staatl. Museum für Tierkunde Dresden [printed]”; SNSD.

Other specimens examined

BRAZIL • 1 ♀ (dissected); “Coleção M. Alvarenga [printed] \ Homeotipo [printed] \ Comparado com tipo [printed] *Mycotretus suturalis* Kirsch, 1876 [handwritten] M. Alvarenga det. 1971 [printed] \ BENJAMIN CONSTANT, Amazonas BRASIL [printed], IX. 1955 [handwritten], I. C. Lima [printed] \ 1791 [printed] \ DZUP 132797 [printed]”; DZUP • 1 ♀ (dissected); “Coleção M. Alvarenga [printed] \ JATAI, Goiás Brasil, X 1972, F M. Oliveira [printed] \ DZUP 127781 [printed]”; DZUP.

Distribution

Peru, Bolivia, Central-West and North Brazil.

XVII. Kuhnt, P.

Figs 23E–F, 24–25, 26A–B

130. *Mycotretus bicoloratus* Kuhnt, 1911

Mycotretus bicolor Kirsch, 1976: 101 [nec Taschenberg 1870]. Type locality: “Peru” [based on type label = “Pozuzu” (= locality of Pozuzo), in the department of Pasco, Peru].

Mycotretus bicoloratus Kuhnt, 1911: 48 [replacement name].

Mycotretus bicoloratus – Mader 1942: 172; 1951: 211. — Blackwelder 1945: 465. — Alvarenga 1994: 21. — McHugh & Chaboo 2015: 278.

Mycotretus bicolor – Alvarenga 1994: 21.

Primary type

Holotype (Fig. 23E)

PERU • “Pozuzu M. Kirsch [printed] \ *Mycotretus* ? [handwritten] \ HOLOTYPUS [red label, printed] *bicolor* Kirsch [handwritten] \ Staatl. Museum für Tierkunde Dresden [printed]”; SNSD.

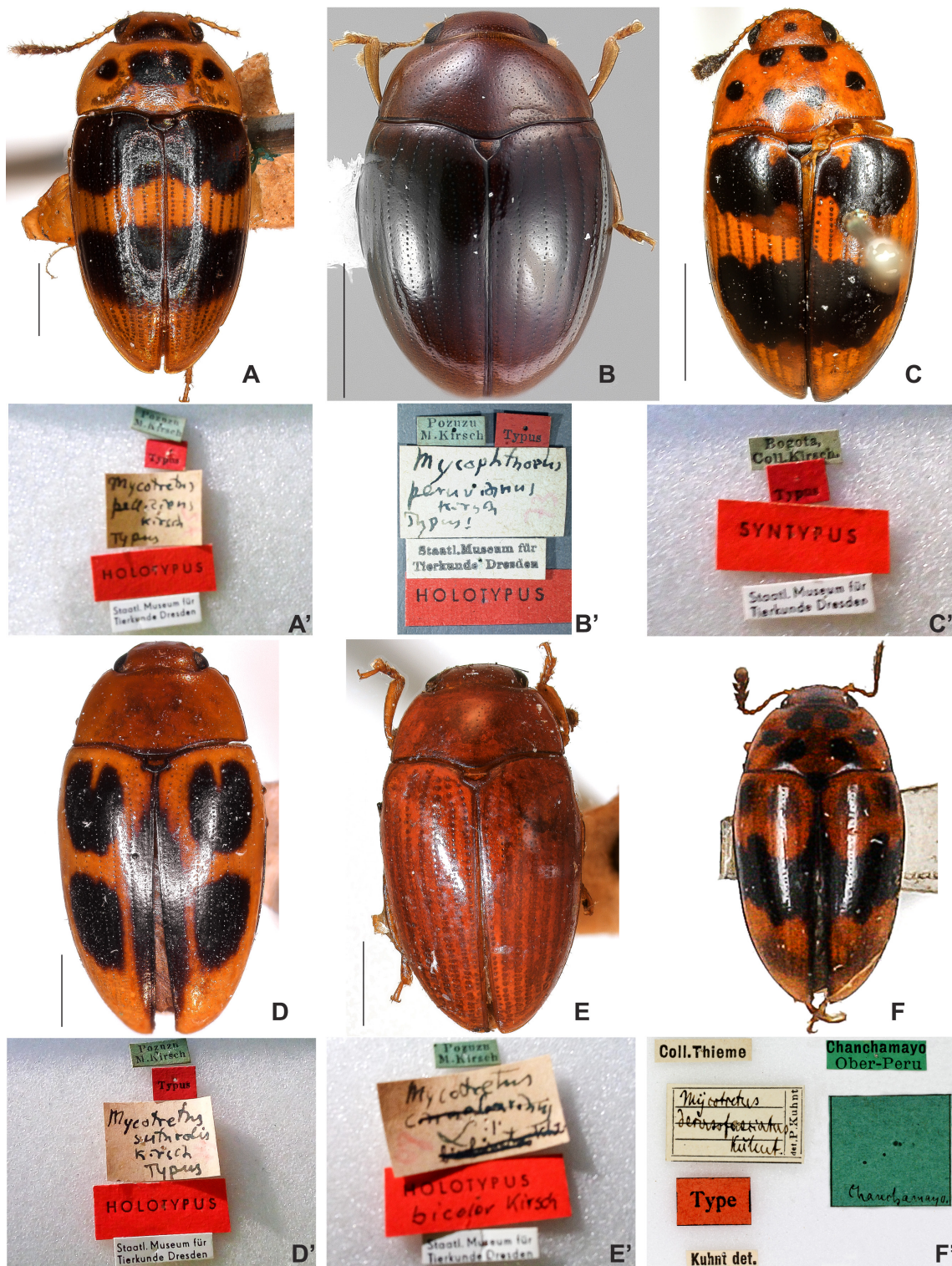


Fig. 23. Primary types (dorsal, labels). **A–A’.** Lectotype of *Mycotretus pelliciens* Kirsch, 1876. **B–B’.** Lectotype of *M. peruvianus* (Kirsch, 1876) [present combination *Mycomyastes peruvianus* (Kirsch)]. **C–C’.** Lectotype of *M. puncticeps* Kirsch, 1865. **D–D’.** Lectotype of *M. suturalis* Kirsch, 1876. **E–E’.** Lectotype of *M. bicoloratus* Kuhnt, 1911 [= *M. bicolor* Kirsch, 1876 (invalid name)]. **F–F’.** Lectotype of *M. derasofasciatus* Kuhnt, 1910. Scale bars: A–E = 1 mm; F = see Material and methods.

Distribution

Peru.

Remarks

Kuhnt (1911) proposed the new specific name *Mycotretus bicoloratus* to replace *Mycotretus bicolor* Kirsch, 1876. Taschenberg (1870) described a species called *M. bicolor*; therefore, the name proposed by Kirsch (1876) is a junior homonym.

131. *Mycotretus derasofasciatus* Kuhnt, 1910

Mycotretus derasofasciatus Kuhnt, 1910: 237. Type locality: “Chanchamayo, Peru”.

Mycotretus derasofasciatus – Kuhnt 1911: 49. — Mader 1942: 175, 199; 1951: 219, 222. — Blackwelder 1945: 466. — Guérin 1949a: 236. — Alvarenga 1994: 23. — McHugh & Chaboo 2015: 278.

Primary type

Lectotype, here designated (Fig. 23F)

PERU • “Coll. Thieme [printed] \ Chanchamayo, Ober-Peru [printed] \ *Mycotretus derasofasciatus* Kuhnt. [handwritten] det. P. Kuhnt [printed] \ Type [red label, printed] \ Chanchamayo [handwritten] \ LECTOTYPE *Mycotretus derasofasciatus* Kuhnt, 1910 det. I. Pecci-Maddalena 2017 [red label, printed]”; MFN.

Remarks

New junior synonym of *M. scitulus* Lacordaire, 1842 (Fig. 36E, see below).

132. *Mycotretus discipennis discipennis* Kuhnt, 1910

Mycotretus discipennis Kuhnt, 1910: 240. Type locality: “St. Catharina” [state of Santa Catarina, South Brazil].

Mycotretus discipennis – Kuhnt 1911: 49. — Blackwelder 1945: 466. — Alvarenga 1994: 24.

Primary type

Lectotype, here designated (Fig. 24A)

BRAZIL • “104379 [printed] \ Colonia Hansa, St Catharina, H.Rolle, Berlin SW1L [printed] \ *Mycotretus discipennis* Kuhnt [handwritten] \ Typus [printed] \ Type [red label, printed] \ LECTOTYPE *Mycotretus discipennis* Kuhnt, 1910, det. I. Pecci-Maddalena 2017 [red label, printed]”; MFN.

Remarks

New junior synonym of *M. deyrollei* Crotch, 1876 (Fig. 6A, see above).

133. *Mycotretus discipennis conductus* Kuhnt, 1910

Mycotretus discipennis conductus Kuhnt, 1910: 240 [as a variety]. Type locality: “St. Catharina (Colonia Hansa)” [in the state of Santa Catarina, South Brazil].

Mycotretus discipennis conductus – Kuhnt 1911: 49. — Blackwelder 1945: 466. — Alvarenga 1994: 24.

Primary type

Lectotype, here designated (Fig. 24B).

BRAZIL • “Colonia Hansa, St Catharina, H.Rolle, Berlin SW1L [printed] \ 104381 [printed] \ Typus [printed] \ *Mycotretus discipennis* Kuhnt var. *conductus* [handwritten] \ Type [red label, printed] \ LECTOTYPE *Mycotretus discipennis conductus* Kuhnt, 1910, det. I. Pecci-Maddalena 2017 [red label, printed]”; MFN.

Remarks

New junior synonym of *M. deyrollei* Crotch, 1876 (Fig. 6A, see above).

134. *Mycotretus expressus* Kuhnt, 1910

Mycotretus expressus Kuhnt, 1910: 237. Type locality: “Jatahy, Provinz Goyaz” [= Jatai, state of Goiás, Central-West Brasil].

Mycotretus expressus – Kuhnt 1911: 49. — Blackwelder 1945: 466. — Alvarenga 1994: 25. — Pecci-Maddalena *et al.* 2021a: 955.

Primary type

Lectotype, here designated (Fig. 24C)

BRAZIL • “104384 [printed] \ Jatahy GOYAZ [printed] \ *Mycotretus expressus* Kuhnt [handwritten] \ *Mycotretus expressus* Kuhnt [handwritten] \ LECTOTYPE *Mycotretus expressus* Kuhnt, 1910 det. I. Pecci-Maddalena 2017 [red label, printed]”; MFN.

Other specimens examined

BRAZIL • 1 ♂ (dissected); “Coleção M. Alvarenga [printed] \ homeotipo [printed] \ V. Rondônia, Rondônia Brasil, I–1961, A. Machado [printed] \ Comparado com tipo [printed] *Mycotretus expressus* Kuhnt, 1910 [handwritten] M. Alvarenga det. 1971 [printed] \ 1706 [printed] \ DZUP 132677 [printed]”; DZUP • 1 ♀ (dissected); “Coleção M. Alvarenga [printed] \ V. Rondônia, Rondônia Brasil, I–1961, A. Machado [printed] \ DZUP 132683 [printed]”; DZUP.

Distribution

Central-West and North Brazil.

135. *Mycotretus fascipennis* Kuhnt, 1910

Mycotretus fascipennis Kuhnt, 1910: 244. Type locality: “Surinam”.

Mycotretus fascipennis – Kuhnt 1911: 49. — Blackwelder 1945: 466. — Alvarenga 1994: 25.

Primary type

Holotype (Fig. 24D)

SURINAME • “21323 [printed] \ Surinam [handwritten] \ var. Surinam. ? [handwritten] \ Type [red label, printed] \ det. P. Kuhnt [printed] *Mycotretus fascipennis* Kuhnt. [handwritten] \ Kuhnt det. [printed] \ HOLOTYPE *Mycotretus fascipennis* Kuhnt, 1910 labelled by I. Pecci-Maddalena 2017”; MFN.

Distribution

Unknown locality in Suriname.

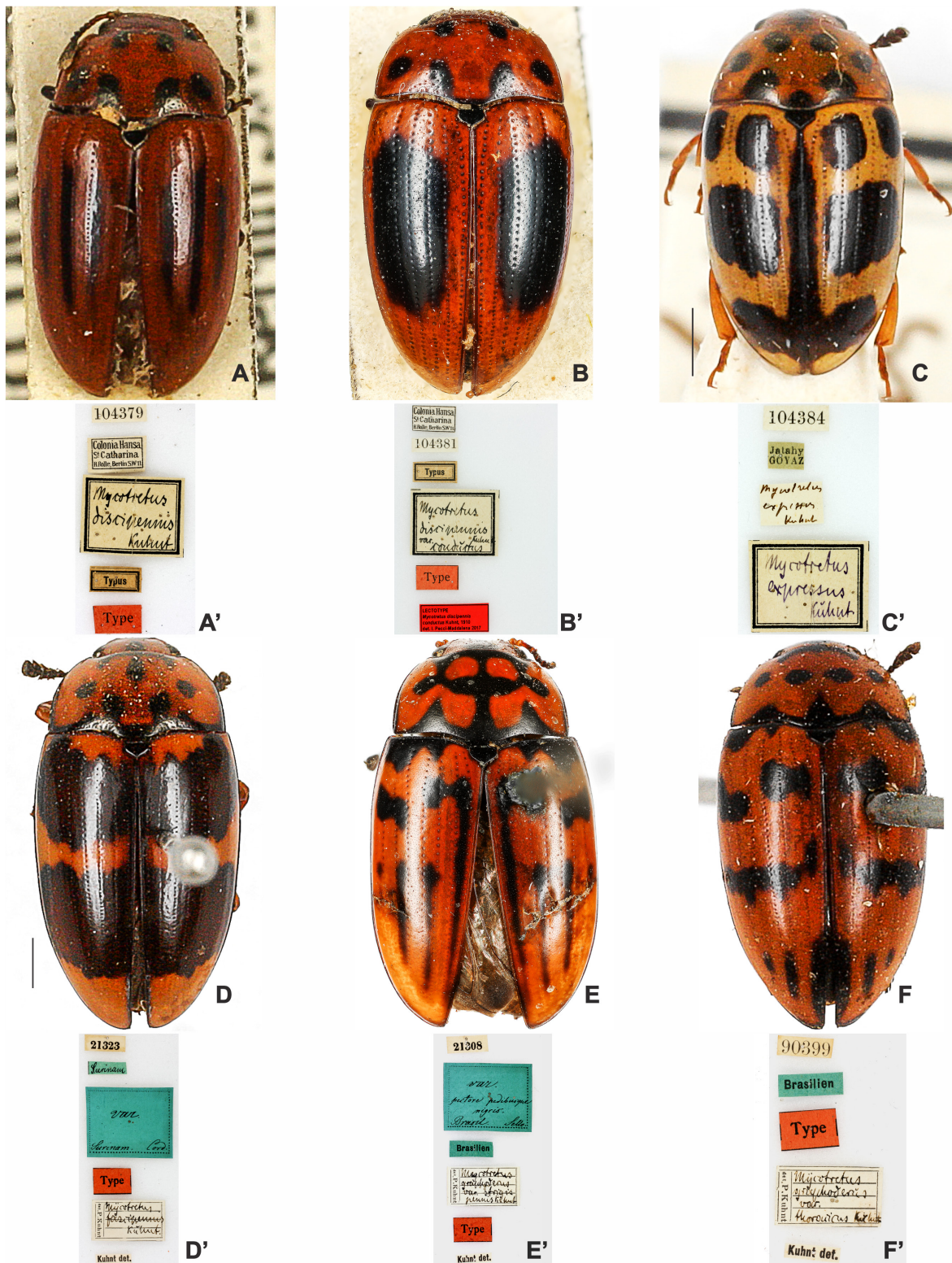


Fig. 24. Kuhn primary types (dorsal, labels). **A–A’.** Lectotype of *Mycotretus discipennis* Kuhn, 1910. **B–B’.** Lectotype of *M. discipennis conductus* Kuhn, 1910. **C–C’.** Lectotype of *M. expressus* Kuhn, 1910. **D–D’.** Holotype of *M. fascipennis* Kuhn, 1910. **E–E’.** Lectotype of *M. graphoderus strigipennis* Kuhn, 1910. **F–F’.** Lectotype of *M. graphoderus thoracicus* Kuhn, 1910. Scale bars: C–D = 1 mm; A–B, E–F = see Material and methods.

136. *Mycotretus graphoderus strigipennis* Kuhnt, 1910

Mycotretus graphoderus strigipennis Kuhnt, 1910: 244 [as a variety]. Type locality: not mentioned [based on type label = “Brasilien”].

Mycotretus graphoderus strigipennis – Kuhnt 1911: 50. — Bruch 1914: 384. — Blackwelder 1945: 466. — Guérin 1948: 20. — Mader 1951: 221. — Alvarenga 1994: 26.

Primary type

Lectotype, here designated (Fig. 24E)

BRAZIL • “21308 [printed] \ var. peitore pedibusque nigris. Brasil Sello [handwritten] \ Brasilien [printed] \ det. P. Kuhnt [printed] *Mycotretus graphoderus* var. *strigipennis* Kuhnt [handwritten] \ Type [red label, printed] \ Kuhnt det. [printed] \ LECTOTYPE *Mycotretus graphoderus strigipennis* Kuhnt, 1910 det. I. Pecci-Maddalena 2017 [red label, printed]; MFN.

Remarks

New junior synonym of *M. ornatus* (Duponchel, 1825) (Fig. 14A, see above).

137. *Mycotretus graphoderus thoracicus* Kuhnt, 1910

Mycotretus graphoderus thoracicus Kuhnt, 1910: 244 [as a variety]. Type locality: not mentioned [based on type label = “Brasilien”].

Mycotretus graphoderus thoracicus – Kuhnt 1911: 50. — Bruch 1914: 384. — Blackwelder 1945: 466. — Guérin 1948: 19. — Mader 1951: 221. — Alvarenga 1994: 27.

Primary type

Lectotype, here designated (Fig. 24F)

BRAZIL • “90399 [printed] \ Brasilien [printed] \ Type [red label, printed] \ det. P. Kuhnt [printed] *Mycotretus graphoderus* var. *thoracicus* Kuhnt [handwritten] \ Kuhnt det. [printed] \ LECTOTYPE *Mycotretus graphoderus thoracicus* Kuhnt, 1910 det. I. Pecci-Maddalena [red label, printed]; MFN.

Remarks

New junior synonym of *M. ornatus* (Duponchel, 1825) (Fig. 14A, see above).

138. *Mycotretus interstitialis* Kuhnt, 1910

Mycotretus interstitialis Kuhnt, 1910: 239. Type locality: “Panama, Isthmus Mataschin”.

Mycotretus interstitialis – Kuhnt 1911: 50. — Blackwelder 1945: 466. — Alvarenga 1994: 27.

Primary type

Lectotype, here designated (Fig. 25A)

PANAMA • “Panamá, Isthmus Mataschin, O. Thieme S. [printed] \ Coll. Thieme [printed] \ * Matachin [handwritten] \ det. P. Kuhnt [printed] *Mycotretus interstitialis* Kuhnt. [handwritten] \ Type [red label, printed] \ Kuhnt det. [printed] \ LECTOTYPE *Mycotretus interstitialis* Kuhnt, 1910 det. I. Pecci-Maddalena 2017 [red label, printed]”; MFN.

Remarks

New junior synonym of *M. interstictus* Gorham, 1888 (Fig. 18A, see above).

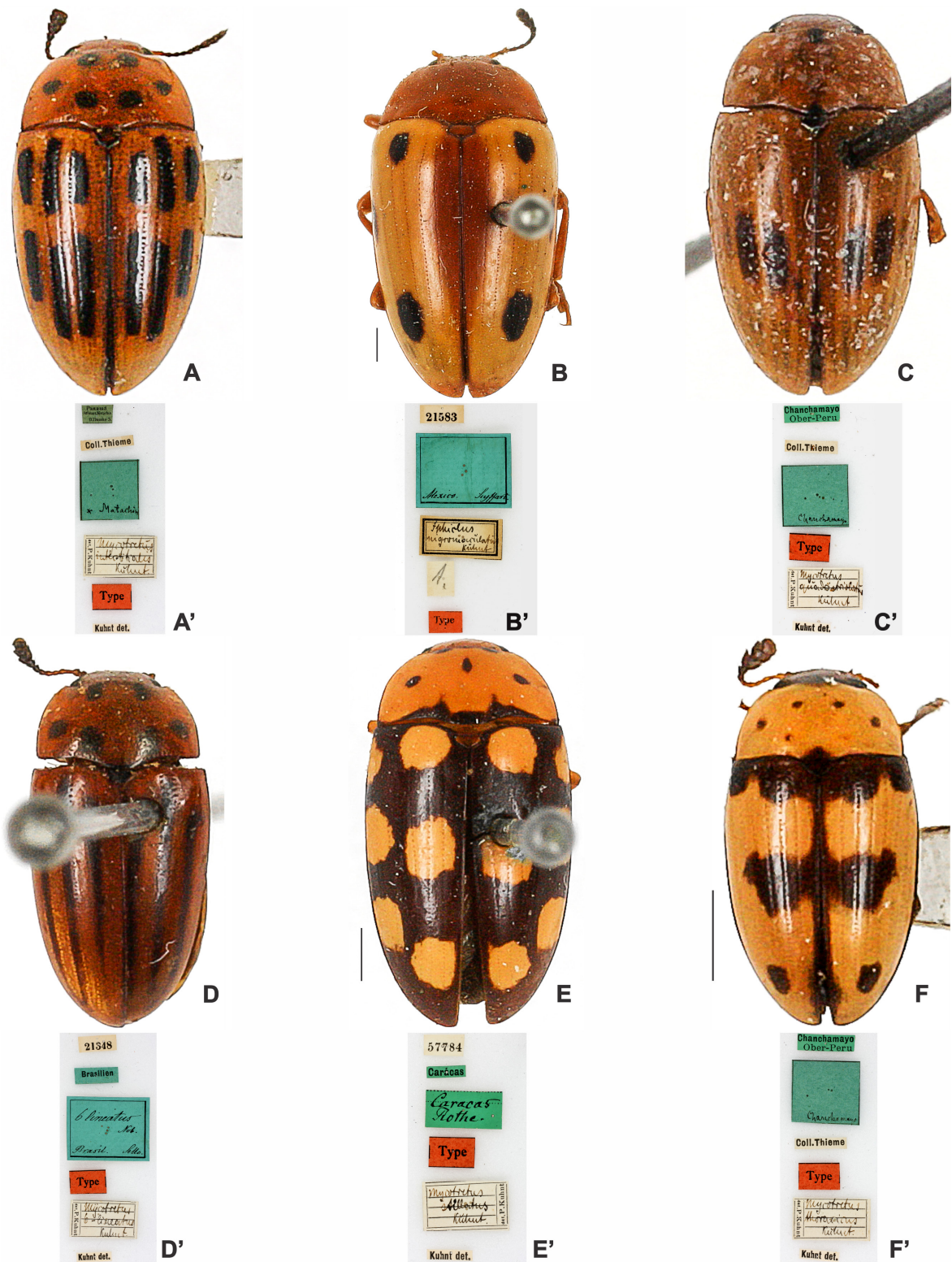


Fig. 25. Kuhnt primary types (dorsal, labels) cont. **A–A'**. Lectotype of *Mycotretus interstitialis* Kuhnt, 1910. **B–B'**. Holotype of *Brachysphaenus (Iphiclus) nigromaculatus* Kuhnt, 1909 [currently *M. nigromaculatus* (Kuhnt)]. **C–C'**. Holotype of *M. quadristriolatus* Kuhnt, 1910. **D–D'**. Lectotype of *M. sexlineatus* Kuhnt, 1910. **E–E'**. Holotype of *M. stillatus* Kuhnt, 1910. **F–F'**. Holotype of *M. thoracicus* Kuhnt, 1910. Scale bars: B, E–F = 1 mm; A, C–D = see Material and methods.

139. *Mycotretus nigromaculatus* (Kuhnt, 1909)

Brachysphaenus (Iphiclus) nigromaculatus Kuhnt, 1909: 27. Type locality: “Mexico”.

Brachysphaenus (Iphiclus) nigromaculatus – Kuhnt 1911: 17. — Blackwelder 1945: 459.

Mycotretus nigromaculatus – Delkeskamp 1939: 27. — Alvarenga 1994: 30.

Primary type

Holotype (Fig. 25B)

MEXICO • “21583 [printed] \ Mexico. (...) ? [handwritten] \ Iphiclus nigromaculatus Kuhnt [handwritten] \ 1. [handwritten] \ Type [red label, printed] \ HOLOTYPE *Brachysphaenus (Iphiclus) nigromaculatus* Kuhnt, 1909 labelled by I. Pecci-Maddalena 2017 [red label, printed]”; MFN.

Remarks

New junior synonym of *M. rhodosomus* Lacordaire, 1842 (Fig. 35F, see below).

140. *Mycotretus duodecimguttatus consociatus* (Kuhnt, 1910) comb. nov.

Mycotretus ocellatus consociatus Kuhnt, 1910: 238 [as a variety]. Type locality: “Bogota”, [Bogotá, Colombia].

Mycotretus ocellatus consociatus – Mader 1942: 173; 1951: 215. — Blackwelder 1945: 467. — Alvarenga 1994: 24.

Type specimen

Not located.

Remarks

Kuhnt (1910) described a “variety” of *M. ocellatus* Germar, 1824, naming it “*consociatus*”. Since the name “*ocellatus* Germar” is invalid (see Remarks of *M. duodecimguttatus* above) and the name “*duodecimguttatus* Duponchel” is a valid synonym (replacement name), “*consociatus*” must be considered subspecific according to the Code (see Remarks for *M. duodecimguttatus* above). Therefore, here we propose the following new combination: “*Mycotretus duodecimguttatus consociatus* (Kuhnt, 1910)”.

Mycotretus parallelus (Kuhnt, 1909)

Brachysphaenus (Barytopus) parallelus Kuhnt, 1909: 30 [nec Crotch, 1876]. Type locality: “Peru”.

Brachysphaenus (Barytopus) parallelus – Kuhnt 1911: 18. — Mader 1938: 17; 1942: 171. — Blackwelder 1945: 459.

Mycotretus parallelus — Delkeskamp 1939: 27. — Alvarenga 1994: 26.

Remarks

Delkeskamp (1939: 27) transferred *Brachysphaenus parallelus* Kuhnt to *Mycotretus* creating a secondary homonymy, and he therefore proposed *M. fidelis* as a replacement name (see above).

141. *Mycotretus quadristriolatus* Kuhnt, 1910

Mycotretus quadristriolatus Kuhnt, 1910: 242. Type locality. “Chanchamayo, Peru”.

Mycotretus quadristriolatus – Kuhnt 1911: 52. — Mader 1942: 174; 1951: 217. — Blackwelder 1945: 467. — Alvarenga 1994: 33. — McHugh & Chaboo 2015: 278.

Primary type

Holotype (Fig. 25C)

PERU • “Chanchamayo, Ober-Peru [printed] \ Coll. Thieme [printed] \ Chanchamayo [handwritten] \ Type [red label, printed] \ det. P. Kuhnt [printed] *Mycotretus quadristriolatus* Kuhnt. [handwritten] \ Kuhnt det. [printed] \ HOLOTYPE *Mycotretus quadristriolatus* Kuhnt, 1910 labelled by I. Pecci-Maddalena 2017 [red label, printed]”; MFN.

Remarks

New junior synonym of *M. dorsonotatus* Lacordaire, 1842 (Fig. 28D, see below).

142. *Mycotretus sexlineatus* Kuhnt, 1910

Mycotretus sexlineatus Kuhnt, 1910: 241. Type locality: “Brasilien”.

Mycotretus sexlineatus – Kuhnt 1911: 53. — Blackwelder 1945: 467. — Guérin 1948: 20. — Alvarenga 1994: 35.

Primary type

Lectotype, here designated (Fig. 25D)

BRAZIL • “21348 [printed] \ Brasilien [printed] \ 6 lineatus Nub. [?], Brasil. Sells. [?] [handwritten] \ Type [red label, printed] \ det. P. Kuhnt [printed] *Mycotretus 6-lineatus* Kuhnt. [handwritten] \ Kuhnt det. [printed] \ LECTOTYPE *Mycotretus sexlineatus* Kuhnt, 1910, det. I. Pecci-Maddalena 2017 [red label, printed]”; MFN.

Remarks

New junior synonym of *M. deyrollei* Crotch, 1876 (Fig. 6A, see above).

143. *Mycotretus stillatus* Kuhnt, 1910

Mycotretus stillatus Kuhnt, 1910: 239. Type locality: “Caracas”[Venezuela].

Mycotretus stillatus – Kuhnt 1911: 54. — Blackwelder 1945: 467. — Alvarenga 1994: 36.

Primary type

Holotype (Fig. 25E)

VENEZUELA • “57784 [printed] \ Carácas [printed] \ Caracas, Rothe. [handwritten] \ Type [red label, printed] \ *Mycotretus stillatus* Kuhnt. [handwritten] det. P. Kuhnt [printed] \ Kuhnt det. [printed] \ HOLOTYPE *Mycotretus stillatus* Kuhnt, 1910 labelled by I. Pecci-Maddalena 2017 [red label, printed]”; MFN.

Distribution

Venezuela.

Remarks

Two specimens dissected by us, from the states of Rondônia and Paraíba (Brazil), are phenotypically similar to the holotype of *M. stillatus*, differing from the latter only by slight variations of colour pattern

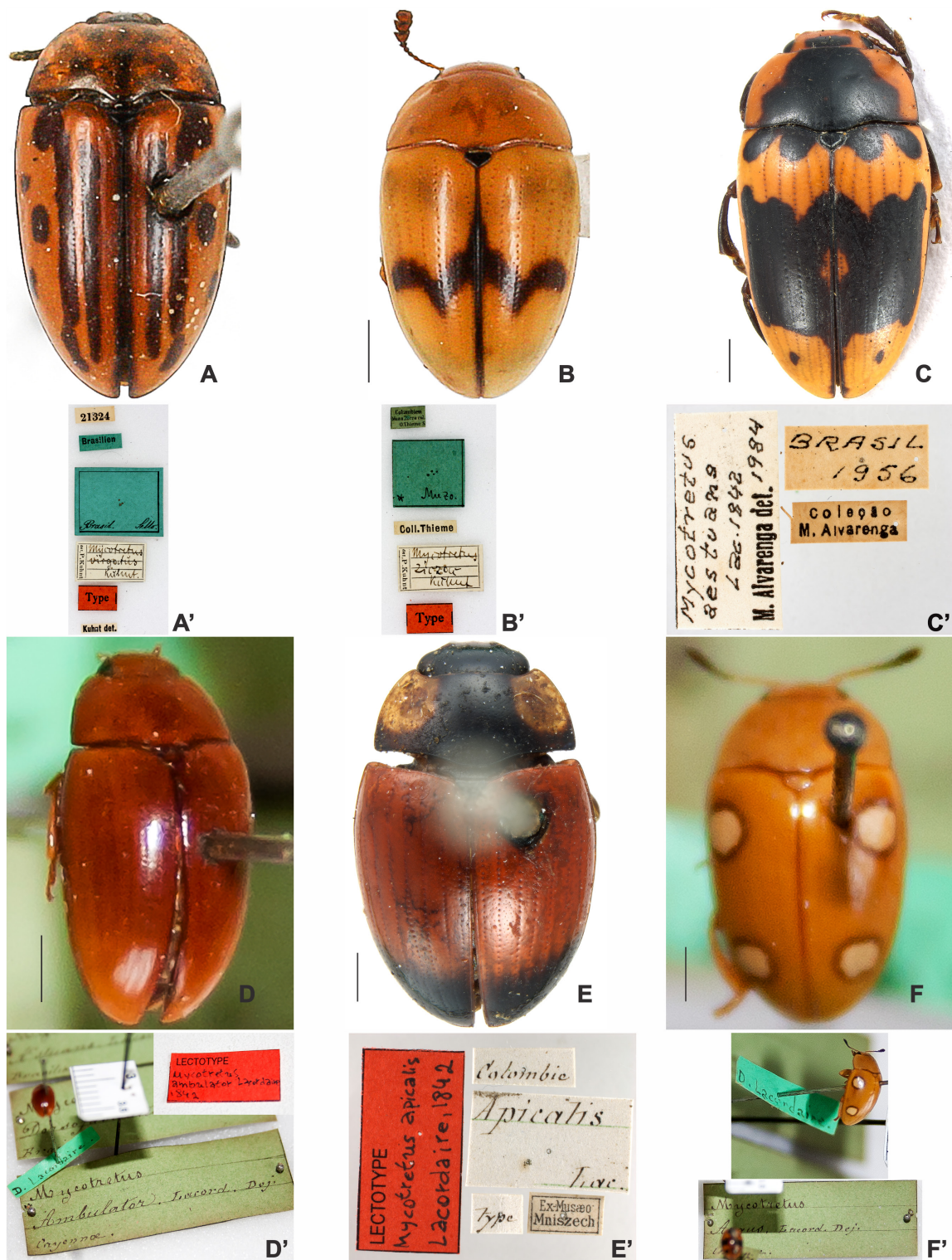


Fig. 26. A–B, D–F. Primary types (dorsal, labels). A–A'. Lectotype of *Mycotretus virgatus* Kuhnt, 1910 [= *Iphichlus virgatus* (Kuhnt), comb. nov.]. B–B'. Holotype of *M. ziczac ziczac* Kuhnt, 1910. C–C'. Specimen of *M. aestuans* Lacordaire, 1842 from the Alvarenga collection (MNRJ, Brazil). D–D'. Lectotype of *M. ambulator* Lacordaire, 1842. E–E'. Lectotype of *M. apicalis* Lacordaire, 1842 [current combination *Mycomystes apicalis* (Lacordaire)]. F–F'. Lectotype of *M. argus* Lacordaire, 1842. Scale bars: A = see Material and methods; B–F = 1 mm.

on pronotum and elytra. However, as we have no more specimens for comparison, we did not consider those specimens as conspecific with *M. stillatus*.

144. *Mycotretus thoracicus* Kuhnt, 1910

Mycotretus thoracicus Kuhnt, 1910: 242. Type locality: “Chanchamayo, Peru”.

Mycotretus thoracicus – Kuhnt 1911: 54. — Mader 1942: 175; 1951: 222. — Blackwelder 1945: 467. — Alvarenga 1994: 36.

Primary type

Holotype (Fig. 25F)

PERU • “Chanchamayo, Ober-Peru [printed] \ Chanchamayo [handwritten] \ Coll. Thieme [printed] \ Type [red label, printed] \ det. P. Kuhnt [printed] *Mycotretus thoracicus* Kuhnt. [handwritten] \ Kuhnt det. [printed] \ HOLOTYPE *Mycotretus thoracicus* Kuhnt, 1910 det. I. Pecci-Maddalena 2017 [red label, printed]”; MFN.

Distribution

Peru.

Iphiclus virgatus (Kuhnt, 1910) comb. nov.

Mycotretus virgatus Kuhnt, 1910: 243. Type locality: “Brasilien”.

Mycotretus virgatus – Kuhnt 1911: 54. — Blackwelder 1945: 468. — Guérin 1948: 20. — Alvarenga 1994: 37.

Primary type

Lectotype, here designated (Fig. 26A)

BRAZIL • “21324 [printed] \ Brasilien [printed] \ Brasil. Sello. [handwritten] \ det. P. Kuhnt [printed] *Mycotretus virgatus* Kuhnt. [handwritten] \ Type [red label, printed] \ Kuhnt det. [printed] \ LECTOTYPE *Mycotretus virgatus* Kuhnt, 1910 det. I. Pecci-Maddalena 2017 [red label, printed]”; MFN.

Other specimens examined

BRAZIL • 1 ♂ (dissected); “Coleção M. Alvarenga [printed] \ Pedra Azul, M. Gerais Brasil, XII–1970, F.M. Oliveira [printed] \ *Mycotretus virgatus* Kuhnt, 1910 [handwritten] M. Alvarenga det. [printed] 1984 [handwritten] \ *Iphiclus* ? [handwritten]”; MNRJ • 1 ♀ (dissected); “Coleção M. Alvarenga [printed] \ Homeotipo [printed] \ Jacaré P. N. XINGU, M. Grosso Brasil, XI–1961, Alvarenga e Werner [printed] \ Comparado c/ tipo *Mycotretus virgatus* Kuhnt, 1910 [handwritten] M. Alvarenga det. 1971 [printed] \ 1757 [printed]”; MNRJ.

Distribution

Southeast and South Brazil.

Remarks

The smooth body without depressions on the upper surface, triangular structure of the mentum, terminal maxillary palpomere triangularly dilated, penis with a posterior and narrowed lobe and metendosternite without laminae and with a narrowed stalk clearly remove “*virgatus*” from *Mycotretus* and place it in *Iphiclus* Chevrolat, 1837 (Erotylini). *Iphiclus* is grossly paraphyletic (Robertson *et al.* 2004) and currently includes ten recognized subgenera (Alvarenga 1994). Further studies are needed to evaluate which of

these subgenera have phylogenetic support. Aside from that, they are barely supported taxonomically and we prefer not to include *Iphichlus virgatus* (Kuhnt, 1910) in any of them until revisionary studies are carried out.

145. *Mycotretus ziczac ziczac* Kuhnt, 1910

Mycotretus ziczac ziczac Kuhnt, 1910: 241–242. Type locality: “Columbien, Muzo” [western Boyacá Province, in the department of Boyacá, Colombia].

Mycotretus ziczac ziczac – Kuhnt 1911: 54. — Blackwelder 1945: 468. — Alvarenga 1994: 38.

Primary type

Holotype (Fig. 26B)

COLOMBIA • “Colambien, Muzo, Terra cal. O. Thieme S [printed] \ * Muzo. [handwritten] \ Coll. Thieme [printed] \ det. P. Kuhnt [printed] *Mycotretus ziczac* Kuhnt. [handwritten] \ Type [red label, printed] \ HOLOTYPE *Mycotretus ziczac ziczac* Kuhnt, 1910 labelled by I. Pecci-Maddalena 2017 [red label, printed]”; MFN.

Distribution

Colombia.

XVIII. Lacordaire, J.T.

Figs 26C–F, 27–37

146. *Mycotretus aestuans* Lacordaire, 1842

Mycotretus aestuans Lacordaire, 1842: 170. Type locality: “Brésil”.

Mycotretus aestuans – Crotch 1876: 441. — Gemminger & Harold 1876: 3691. — Kuhnt 1909: 76; 1911: 48. — Blackwelder 1945: 465. — Alvarenga 1994: 20. — Skelley 1998b: 15.

Type specimen

Not located.

Distribution

Brazil.

Remarks

The specimen shown in Fig. 26C was identified by Moacyr Alvarenga and fits well the original description of Lacordaire (1842). Probably, *M. aestuans* may be a synonym of *M. hilaris* (Fig. 31B, see below). However, we have not examined the type of *M. aestuans* and it seems be a poorly represented species in collections (few specimens for comparison), we prefer not to synonymize them here.

147. *Mycotretus ambulator* Lacordaire, 1842

Mycotretus ambulator Lacordaire, 1842: 175. Type locality: “Cayenne” [French Guiana].

Mycotretus ambulator – Crotch 1876: 457. — Gemminger & Harold 1876: 3691. — Kuhnt 1909: 72; 1911: 48. — Blackwelder 1945: 465. — Alvarenga 1994: 20.

Primary type

Lectotype, here designated (Fig. 26D)

FRENCH GUIANA • “D. Lacordaire [handwritten] \ LECTOTYPE [printed] *Mycotretus ambulator* Lacordaire, 1842 [red label, handwritten]”; MRSN.

Distribution

French Guiana.

Mycomystes apicalis (Lacordaire, 1842)

Mycotretus apicalis Lacordaire, 1842: 181 [description]. Type locality: “Colombie”.

Mycotretus gemmula Lacordaire, 1842: 181 [description] (Fig. 30B).

Mycotretus gentilis Lacordaire, 1842: 182 [description] (Fig. 30C).

Mycotretus nigroterminatus Lacordaire, 1842: 180 [description] (Fig. 33F).

Mycotretus pulicarius Lacordaire, 1842: 182 [description] (Fig. 35A).

Mycotretus coccinelloides Taschenberg, 1870: 198 [description] (Fig. 40B).

Mycotretus corallipennis Crotch, 1876: 448 [description] (Fig. 5C).

Mycotretus apicalis – Crotch 1876: 448. — Gemminger & Harold 1876: 3691. — Kuhnt 1909: 74; 1911: 48. — Mader 1942: 173; 1951: 214. — Blackwelder 1945: 465. — Alvarenga 1994: 20. — Skelley 1998b: 16. — Moreira *et al.* 2010a: 573; 2010b: 342. — McHugh & Chaboo 2015: 278. — Pecci-Maddalena & Lopes-Andrade 2017: 162; 2020: 585. — Pecci-Maddalena *et al.* 2021a: 955.

Mycotretus gemmula – Crotch 1876: 448. — Gemminger & Harold 1876: 3693. — Kuhnt 1909: 73; 1911: 50. — Mader 1942: 173; 1951: 214. — Blackwelder 1945: 466. — Alvarenga 1994: 26. — Skelley 1998b: 16. — McHugh & Chaboo 2015: 278. — Pecci-Maddalena *et al.* 2021b: 3078 [synonym of *Mycomystes apicalis*].

Mycotretus gentilis – Crotch 1876: 448 [synonym with *M. gemmula*]. — Gemminger & Harold 1876: 3693. — Kuhnt 1909: 73; 1911: 50. — Blackwelder 1945: 466. — Alvarenga 1994: 26. — Pecci-Maddalena *et al.* 2021b: 3078 [synonym of *Mycomystes apicalis*].

Mycotretus nigroterminatus – Crotch 1876: 448. — Gemminger & Harold 1876: 3694. — Kuhnt 1909: 74; 1911: 51. — Blackwelder 1945: 467. — Guérin 1948: 20. — Alvarenga 1994: 30. — Skelley 1998b: 16. — Pecci-Maddalena *et al.* 2021b: 3078 [synonym of *Mycomystes apicalis*].

Mycotretus pulicarius – Crotch 1876: 448 [synonym with *M. gemmula*]. — Gemminger & Harold 1876: 3693. — Mader 1942: 173. — Blackwelder 1945: 466. — Alvarenga 1994: 26. — Pecci-Maddalena *et al.* 2021b: 3078 [synonym of *Mycomystes apicalis*].

Mycotretus coccinelloides – Gemminger & Harold 1876: 3692. — Kuhnt 1909: 74; 1911: 48. — Blackwelder 1945: 466. — Alvarenga 1994: 22. — Pecci-Maddalena *et al.* 2021b: 3078 [synonym of *Mycomystes apicalis*].

Mycotretus corallipennis – Gemminger & Harold 1876: 3692. — Kuhnt 1909: 71; 1911: 48. — Blackwelder 1945: 466. — Alvarenga 1994: 22. — Skelley 1998b: 16. — Pecci-Maddalena *et al.* 2021b: 3078 [synonym of *Mycomystes apicalis*].

Mycomystes apicalis – Pecci-Maddalena *et al.* 2021b: 3078.

Primary type

Lectotype (Fig. 26E)

COLOMBIA • “Colombie [handwritten] \ Apicalis Lac [handwritten] \ Type [handwritten] \ Ex-Musaeo Mniszech [printed] \ LECTOTYPE [printed] *Mycotretus apicalis* Lacordaire, 1842 [red label, handwritten]”; MNHN.

Other specimens examined

See Pecci-Maddalena *et al.* (2021b).

Distribution

Southeast Brazil, Colombia, Peru, Venezuela, Argentina (Pecci-Maddalena *et al.* 2021b).

Remarks

See Pecci-Maddalena *et al.* (2021b).

148. *Mycotretus arcuatus* Lacordaire, 1842

Mycotretus arcuatus Lacordaire, 1842: 158. Type locality: “Cayenne” [French Guiana].

Mycotretus arcuatus – Crotch 1876: 437. — Gemminger & Harold 1876: 3692. — Kuhnt 1909: 71; 1911: 48. — Blackwelder 1945: 465. — Alvarenga 1994: 20.

Type specimen

Not located.

Distribution

French Guiana.

149. *Mycotretus argus* Lacordaire, 1842

Mycotretus argus Lacordaire, 1842: 161. Type locality: “Cayenne” [French Guiana].

Mycotretus argus – Crotch 1876: 439. — Gemminger & Harold 1876: 3692. — Kuhnt 1909: 71; 1911: 48. — Blackwelder 1945: 465. — Alvarenga 1994: 21.

Primary type

Lectotype, here designated (Fig. 26F)

FRENCH GUIANA • “D. Lacordaire. [printed]”; MRSN.

Other specimen examined

BRAZIL • 1 ♀ (dissected); “Vilhena [printed] 20 [handwritten]-2-1961 [printed] \ Brasil, R O, J. & B. Bechyné [printed] \ MG [printed] \ argus [handwritten]”; MNRJ • 1 ♂ (dissected); “Coleção M. Alvarenga [printed] \ Jacareacanga, Pará, Brasil [printed] V. 1969 [handwritten] F.R. Barbosa [printed] \ DZUP 136039 [printed]”; DZUP.

Distribution

French Guiana, North Brazil.

150. *Mycotretus bistrigatus* Lacordaire, 1842

Mycotretus bistrigatus Lacordaire, 1842: 188. Type locality: “Mexique”.

Mycotretus bistrigatus – Crotch 1876: 456. — Gemminger & Harold 1876: 3692. — Gorham 1888: 52; 1898: 253. — Kuhnt 1909: 75; 1911:48. — Blackwelder 1945: 466. — Alvarenga 1994: 21. — Skelley 1998b: 17.

Primary type

Lectotype, here designated (Fig. 27A)

MEXICO • “Mexique [handwritten] \ Bistrigatus Lac. [handwritten] \ Type [printed] \ Ex-Musaeo Mniszech [printed] \ LECTOTYPE [printed] *Mycotretus bistrigatus* Lacordaire, 1842 [red label, handwritten]”; MNHN.

Other specimens examined

MEXICO • 1 ♀ (dissected); “Coleção M. Alvarenga [printed] \ Omilteme, Guerrero, 8000 ft. Aug. H.H. Smith. [printed] \ B.C.A., Col., VII. *Mycotretus* [printed] *bistrigatus* [handwritten] \ 1718 [printed]”; MNRJ.

Distribution

Mexico.

151. *Mycotretus clitelliger* Lacordaire, 1842

Mycotretus clitelliger Lacordaire, 1842: 149. Type locality: “Colombie”.

Mycotretus clitelliger – Crotch 1876: 452. — Gemminger & Harold 1876: 3692. — Kuhnt 1909:74; 1911: 48. — Blackwelder 1945: 466. — Mader 1951: 217. — Alvarenga 1994: 22.

Primary type

Lectotype, here designated (Fig. 27B)

COLOMBIA • “Ex-Musaeo Mniszech [printed] \ Type [printed] \ Clitelliger Lac [handwritten] \ Colombie [handwritten] \ LECTOTYPE [printed] *Mycotretus clitelliger* Lacordaire, 1842 [red label, handwritten]”; MNHN.

Distribution

Unknown locality in Colombia.

Mycomystes coccineus (Lacordaire, 1842)

Lybas coccineus Lacordaire, 1842: 239 [description]. Type locality: “Rio-Janeiro” [= Rio de Janeiro, state? locality?, Southeast Brazil].

Mycotretus unicolor Fauvel, 1860: 326 [description] (Fig. 14D).

Mycotretus sanguinosus Crotch, 1876: 458 [description] (Fig. 10E).

Mycotretus coccineus – Crotch 1876: 458. — Gemminger & Harold 1876: 3692. — Kuhnt 1909: 72; 1911: 48. — Curran 1941: 286. — Deelder 1942: 88. — Blackwelder 1945: 466. — Alvarenga 1994: 22. — Skelley 1998b: 18. — Pecci-Maddalena & Lopes-Andrade 2020: 585. — Pecci-Maddalena *et al.* 2021a: 955.

Mycotretus unicolor – Gemminger & Harold 1876: 3695. — Kuhnt 1911: 54. — Blackwelder 1945: 468. — Alvarenga 1994: 37. — Pecci-Maddalena *et al.* 2021b: 3080 [synonym of *Mycomystes coccineus*].

Mycotretus unicolor – Gemminger & Harold 1876: 3695. — Kuhnt 1911: 54. — Blackwelder 1945: 468. — Alvarenga 1994: 37 — Pecci-Maddalena *et al.* 2021b: 3080 [synonym of *Mycomystes coccineus*].

Mycotretus sanguinosus – Gemminger & Harold 1876: 3695. — Gorham 1888: 68. — Kuhnt 1909: 72; 1911: 53. — Curran 1941: 286 [doubtful synonym of *L. coccineus*]. — Blackwelder 1945: 467. — Alvarenga 1994: 34. — Skelley 1998b: 18. — Pecci-Maddalena *et al.* 2021b: 3080 [synonym of *Mycomystes coccineus*].

Mycomystes coccineus – Pecci-Maddalena *et al.* 2021b: 3078.



Fig. 27. Lacordaire specimens. A–B, D–F. Primary types (dorsal, labels). A–A'. Lectotype of *Mycotretus bistrigatus* Lacordaire, 1842. B–B'. Lectotype of *M. clitelliger* Lacordaire, 1842. C–C'. Specimen of *M. coccineus* (Lacordaire, 1842) from the Crotch collection (UMZC, United Kingdom) (current combination *Mycomystes coccineus* (Lacordaire)]. D–D'. Lectotype of *M. coelestinus* Lacordaire, 1842. E–E'. Lectotype of *M. cognatus* Lacordaire, 1842. F–F'. Lectotype of *M. cyanopterus* Lacordaire, 1842. Scale bars = 1 mm.

Type specimen

Not located (MRSN?).

Other specimen examined

BRAZIL • 1 spec. (Fig. 27C); “Bras [handwritten] \ TYPE. [printed, crossed out] coccineus Bras Reiche [handwritten]”; UMZC.

See other records in Pecci-Maddalena *et al.* (2021b).

Distribution

North and Southeast Brazil, Colombia, Costa Rica, Guiana, French Guiana, Panama, Suriname (Pecci-Maddalena *et al.* 2021b).

Remarks

See Pecci-Maddalena *et al.* (2021b).

152. *Mycotretus coelestinus* Lacordaire, 1842

Mycotretus coelestinus Lacordaire, 1842: 170. Type locality: “Colombie”.

Mycotretus coelestinus – Crotch 1876: 439. — Gemminger & Harold 1876: 3692. — Kuhnt 1909: 74; 1911: 48. — Blackwelder 1945: 466. — Alvarenga 1994: 22.

Primary type

Lectotype, here designated (Fig. 27D)

COLOMBIA • “Colombie [handwritten] \ Coelestinus Lac [handwritten] \ Type [handwritten] \ Ex-Musaeo Mniszech [printed] \ LECTOTYPE [printed] *Mycotretus coelestinus* Lacordaire, 1842 [red label, handwritten]”; MNHN.

Distribution

Unknown locality in Colombia.

153. *Mycotretus cognatus* Lacordaire, 1842

Mycotretus cognatus Lacordaire, 1842: 145. Type locality: “Rio-janeiro” [= Rio de Janeiro, state? locality?, Southeast Brazil].

Mycotretus cognatus – Crotch 1876: 450. — Gemminger & Harold 1876: 3692. — Kuhnt 1909: 75; 1911: 48. — Blackwelder 1945: 466. — Alvarenga 1994: 22. — Skelley 1998b: 16.

Primary type

Lectotype, here designated (Fig. 27E)

BRAZIL • “Coll. R.I.Sc.N.B., Brazil, Coll. Chapuis [printed], Rio Jan. [handwritten] \ *Mycotretus cognatus*, Rio Jan. Lac. [handwritten]”; RBINS.

Remarks

New junior synonym of *M. ornatus* (Duponchel, 1825) (Fig. 14A, see above).

154. *Mycotretus cyanopterus* Lacordaire, 1842

Mycotretus cyanopterus Lacordaire, 1842: 179. Type locality: “Colombie”.

Mycotretus cyanopterus – Crotch 1876: 447. — Gemminger & Harold 1876: 3692. — Kuhnt 1909: 73; 1911: 49. — Blackwelder 1945: 466. — Alvarenga 1994: 23. — Skelley 1998b: 16.

Primary type

Lectotype, here designated (Fig. 27F)

COLOMBIA • “Colombie [handwritten] \ Cyanopterus Lac [handwritten] \ Type [handwritten] \ Ex-Musaeo Mniszech [printed] \ LECTOTYPE [printed] *Mycotretus cyanopterus* Lacordaire, 1842 [red label, handwritten]”; MNHN.

Other specimens examined

Paralectotype

COLOMBIA • 1 spec.; “TYPE [blue label, printed] \ Colomb [handwritten] \ TYPE. [printed] *Cyanopterus* R [handwritten] \ PARALECTOTYPE [yellow label, printed] *Mycotretus cyanopterus* Lacordaire, 1842 [handwritten]”; UMZC.

Distribution

Unknown locality in Colombia.

155. *Mycotretus difficilis* Lacordaire, 1842

Mycotretus difficilis Lacordaire, 1842: 136. Type locality: “Brésil” (Fig. 28A).

Mycotretus difficilis – Crotch 1876: 449. — Gemminger & Harold 1876: 3692. — Kuhnt 1909: 76; 1911: 49. — Blackwelder 1945: 466. — Alvarenga 1994: 24.

Type specimen

Not located.

Remarks

New junior synonym of *M. ornatus* (Duponchel, 1825) (Fig. 14A, see above).

156. *Mycotretus distigma* Lacordaire, 1842

Mycotretus distigma Lacordaire, 1842: 190. Type locality: “Colombie”.

Mycotretus distigma – Crotch 1876: 457. — Gemminger & Harold 1876: 3692. — Kuhnt 1909: 74; 1911: 49. — Blackwelder 1945: 466. — Alvarenga 1994: 24.

Primary type

Lectotype, here designated (Fig. 28B)

COLOMBIA • “Colombie [handwritten] \ Distigma Lac [handwritten] \ Type [handwritten] \ Ex-Musaeo Mniszech [printed] \ LECTOTYPE [printed] *Mycotretus distigma* Lacordaire, 1842 [red label, handwritten]”; MNHN.

Distribution

Unknown locality in Colombia.

157. *Mycotretus dorsofasciatus* Lacordaire, 1842

Mycotretus dorsofasciatus Lacordaire, 1842: 173. Type locality: “Brésil”.

Mycotretus nugator Lacordaire, 1842: 174. Type locality: “Cayenne” [French Guiana] **syn. nov.** (Fig. 33G).

Mycotretus dorsofasciatus – Crotch 1876: 444. — Gemminger & Harold 1876: 3692. — Kuhnt 1909: 75; 1911: 49. — Blackwelder 1945: 466. — Alvarenga 1994: 24. — Skelley 1998b: 16.

Mycotretus nugator – Crotch 1876: 445. — Gemminger & Harold 1876: 3694. — Kuhnt 1909: 75; 1911: 51. — Blackwelder 1945: 467. — Alvarenga 1994: 31.

Type specimen

Not located.

Other specimens examined

BRAZIL • 1 spec. (Fig. 28C); “Bras [handwritten] \ TYPE. [printed, crossed out] dorsofasciat Reiche [handwritten]”; UMZC • 2 ♂♂ (dissected); “Coleção M. Alvarenga [printed] \ REPRÊSA RIO GRANDE, Guanabara BRASIL [printed], XII. 1977 [handwritten], F.M. Oliveira [printed] \ *Mycotretus dorsofasciatus* Lac. 1842 [handwritten] M. Alvarenga det. [printed] 1984 [handwritten]”; MNRJ • 1 ♂ (dissected); “Coleção M. Alvarenga [printed] \ Tiriós, Pará Brasil, I–1963, A. Machado [printed] \ *Mycotretus nugator* Lac, 1842 [handwritten] M. Alvarenga det. [printed] 1984 [handwritten]”; MNRJ • 1 ♀ (dissected; Fig. 33G); “Coleção M. Alvarenga [printed] \ SERRA do NAVIO, Terr. Amapá BRASIL, IX–1957, K. Lenko leg. [printed] \ *Mycotretus nugator* Lac, 1842 [handwritten] M. Alvarenga det. [printed] 1984 [handwritten]”; MNRJ.

Distribution

French Guiana, Southeast and North Brazil.

Remarks

The primary types of *M. dorsofasciatus* Lacordaire, 1842 and *M. nugator* Lacordaire, 1842 were not found. However, based on their original descriptions and examination of identified specimens from historical collections, we noted that *M. dorsofasciatus* and *M. nugator* differ mainly in the width of the elytral bands, which are wide on the former and narrow on the latter. The male genitalia of both species have the same structural pattern.

158. *Mycotretus dorsonotatus* Lacordaire, 1842

Mycotretus dorsonotatus Lacordaire, 1842: 151. Type locality: “Cayenne”.

Mycotretus alternans Gorham, 1888: 57. Type locality: “Panama, Bugaba” **syn. nov.** (Fig. 14F).

Mycotretus quadristriolatus Kuhnt, 1910: 242. Type locality: “Chanchamayo, Peru” **syn. nov.** (Fig. 25C).

Mycotretus dorsonotatus – Crotch, 1876: 453. — Gemminger & Harold 1876: 3692. — Kuhnt 1909: 71, 75; 1911: 49. — Curran 1941: 286. — Mader 1942: 172; 1951: 212. — Blackwelder 1945: 466. — Alvarenga 1994: 24. — Skelley 1998b: 17. — McHugh & Chaboo 2015: 278.

Mycotretus alternans – Kuhnt 1909: 75; 1911: 48. — Blackwelder 1945: 465. — Alvarenga 1994: 20.

Mycotretus quadristriolatus – Kuhnt 1911: 52. — Mader 1942: 174; 1951: 217. — Blackwelder 1945: 467. — Alvarenga 1994: 33. — McHugh & Chaboo 2015: 278.

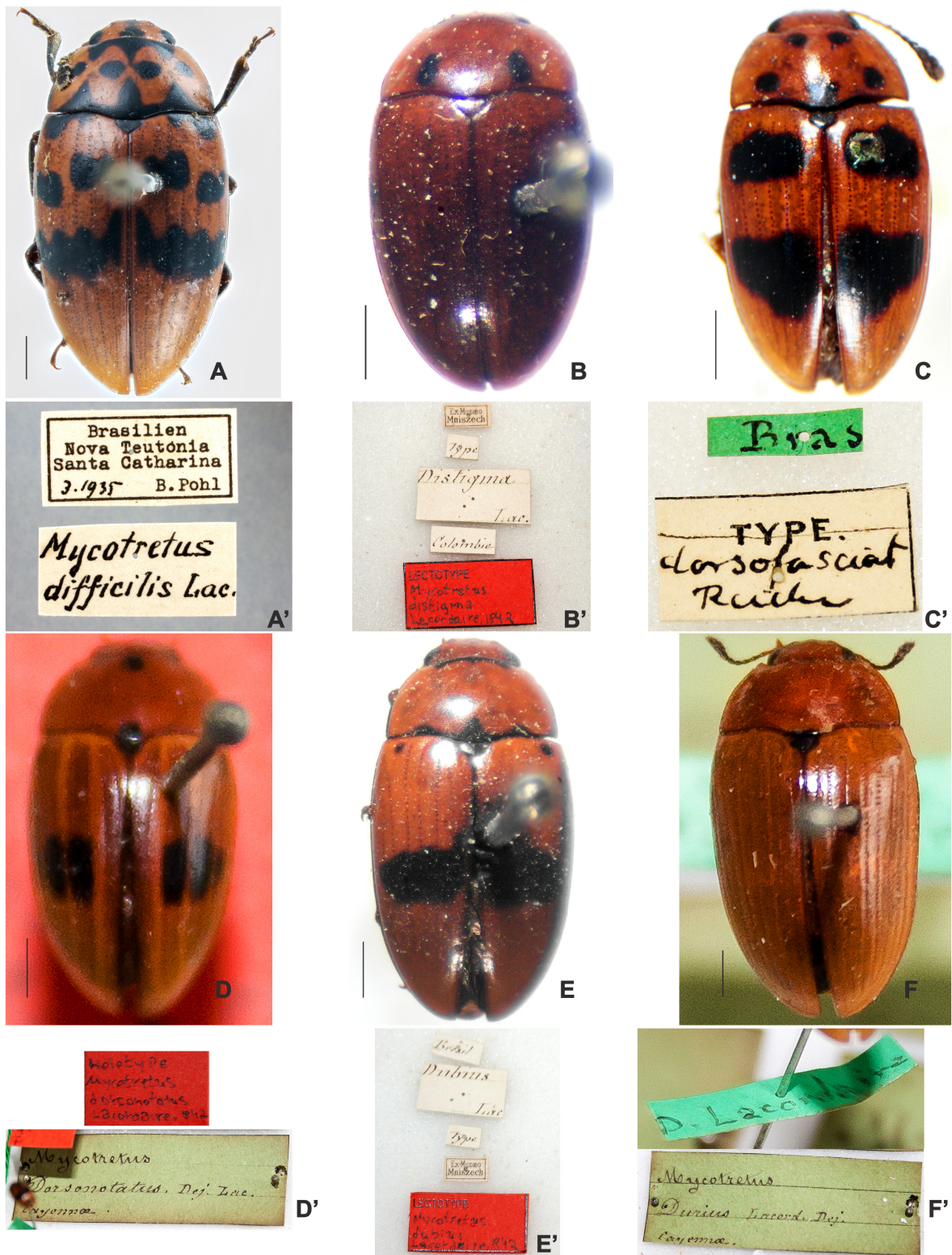


Fig. 28. Lacordaire specimens cont. **B, D–F.** Primary types (dorsal, labels). **A–A’.** Specimen of *Mycotretus difficilis* Lacordaire, 1842 from the MZSP collection (Brazil). **B–B’.** Lectotype of *M. distigma* Lacordaire, 1842. **C–C’.** Specimen of *M. dorsofasciatus* Lacordaire, 1842 from the Crotch collection (UMZC, UK). **D–D’.** Holotype of *M. dorsonotatus* Lacordaire, 1842. **E–E’.** Lectotype of *M. dubius* Lacordaire, 1842. **F–F’.** Lectotype of *M. durius* Lacordaire, 1842. Scale bars = 1 mm.

Primary type

Holotype (Fig. 28D)

FRENCH GUIANA • “Holotype, *Mycotretus dorsonotatus* Lacordaire, 1842 [red label, handwritten]”; MRSN.

Other specimens examined

BRAZIL • 1 ♂ (dissected); “Coleção M. Alvarenga [printed] \ Diamantino 400 m, M. Grosso Brasil, XI. 1983, A. Cerutti [printed]”; MNRJ.

Distribution

Guiana, French Guiana, Peru, Panama, North and Central-West Brazil.

Remarks

Mycotretus dorsonotatus Lacordaire and *M. quadristriolatus* Kuhnt are phenotypically almost identical and we consider them conspecifics. The medial elytral spots present on *M. dorsonotatus* are absent in *M. alternans* Gorham (probably a case of incomplete pigmentation), but we dissected individuals possessing both colorations and observed that their male genitalia are identical.

159. *Mycotretus dubius* Lacordaire, 1842

Mycotretus dubius Lacordaire, 1842: 141. Type locality: “Brésil”.

Mycotretus dubius – Crotch 1876: 449. — Gemminger & Harold 1876: 3692. — Kuhnt 1909: 75; 1911: 49. — Blackwelder 1945: 466. — Alvarenga 1994: 24.

Primary type

Lectotype, here designated (Fig. 28E)

GRAZIL • “Brésil [handwritten] \ Dubius Lac [handwritten] \ Type [handwritten] \ Ex-Musaeo Mniszech [printed] \ LECTOTYPE [printed] *Mycotretus dubius* Lacordaire, 1842 [red label, handwritten]”; MNHN.

Remarks

New junior synonym of *M. ornatus* (Duponchel, 1825) (Fig. 14A, see above).

160. *Mycotretus durius* Lacordaire, 1842

Mycotretus durius Lacordaire, 1842: 161. Type locality: “Cayenne” [French Guiana].

Mycotretus durius – Crotch 1876: 453. — Gemminger & Harold 1876: 3692. — Kuhnt 1909: 72; 1911: 49. — Curran 1941: 286, 287. — Blackwelder 1945: 466. — Alvarenga 1994: 25. — Skelley 1998b: 17.

Primary type

Lectotype, here designated (Fig. 28F)

FRENCH GUIANA • “D. Lacordaire [handwritten]”; MNHN.

Other specimens examined

BRAZIL • 1 ♀ (dissected); “Coleção M. Alvarenga [printed] \ SERRA do NAVIO, Terr. Amapá BRASIL, IX–1957, K. Lenko leg. [printed] \ *Mycotretus durius* Lac. 1842 [handwritten] M. Alvarenga det. [printed] 1984 [handwritten]”; MNRJ.

Distribution

French Guiana, North Brazil.

161. *Mycotretus dytiscoides* Lacordaire, 1842

Mycotretus dytiscoides Lacordaire, 1842: 184. Type locality: “Mexique”.

Mycotretus dytiscoides – Crotch 1876: 449. — Gemminger & Harold 1876: 3692. — Gorham 1888: 65. — Kuhnt 1909: 73; 1911: 49. — Blackwelder 1945: 466. — Alvarenga 1994: 25. — Skelley 1998b: 16.

Primary type

Lectotype, here designated (Fig. 29A)

MEXICO • “TYPE [blue label, printed] \ TYPE. [printed] dytiscoides Ch [handwritten] \ LECTOTYPE [printed] *Mycotretus dytiscoides* Lacordaire, 1842 [red label, handwritten]”; UMZC.

Distribution

Unknown locality in Mexico.

162. *Mycotretus episcopalis* Lacordaire, 1842

Mycotretus episcopalis Lacordaire, 1842: 152. Type locality: “Brésil”.

Mycotretus episcopalis – Crotch 1876: 453. — Gemminger & Harold 1876: 3692. — Kuhnt 1909: 75; 1911: 49. — Blackwelder 1945: 466. — Alvarenga 1994: 25. — Skelley 1998b: 17.

Type specimen

Not located.

Other specimens examined

BRAZIL • 1 ♀ (dissected; Fig. 29B) “Coleção M. Alvarenga [printed] \ FLORESTA da TIJUCA, Guanabara Brasil [printed], I. 1967 [handwritten], C.A. Campos Seabra [printed] \ *Mycotretus episcopalis* Lac, 1842 [handwritten] M. Alvarenga det. [printed] 1989 [handwritten]”; MNRJ • 1 ♂ (dissected); “Coleção M. Alvarenga [printed] \ Brasil M. Gerais, Aguas Vermelhas, XII. 1983, M. Alvarenga [printed] \ M [printed]”; MNRJ.

Distribution

French Guiana, North Brazil.

163. *Mycotretus fasciolatus* Lacordaire, 1842

Mycotretus fasciolatus Lacordaire, 1842: 150. Type locality: “Mexique”.

Mycotretus fasciolatus – Crotch 1876: 452. — Gemminger & Harold 1876: 3692. — Gorham 1888: 49. — Kuhnt 1909: 75; 1911: 49. — Blackwelder 1945: 466. — Alvarenga 1994: 25. — Skelley 1998b: 17.

Type specimen

Lectotype, here designated (Fig. 29C)

MEXICO • “Mex [handwritten] \ TYPE. [printed] fasciolatus R [handwritten] \ TYPE [blue label, printed] \ LECTOTYPE [red label, printed] *Mycotretus fasciolatus* Lacordaire, 1842 [handwritten]”; UMZC.

Other specimens examined

EL SALVADOR • 1 ♂ (dissected); “Coleção M. Alvarenga [printed] \ Homeotipo [printed] \ Hdo. [?] S. Diego, La Libertad El Salvador, 22.X.1959, J. Bechyné [handwritten] \ Comparado com tipo [printed] *Mycotretus fasciolatus* Lac., 1842 [handwritten] M. Alvarenga det. 1971 [printed] \ 1733 [printed] \ DZUP 132906 [printed]”; DZUP.

PANAMA • 1 ♂ (dissected); “Coleção M. Alvarenga [printed] \ Homeotipo [printed] \ Bugaba, 800–1,500 ft, Champion [printed] \ Comparado c/ tipo *Mycotretus fasciolatus* Lac. 1842 [handwritten] M. Alvarenga det. 1971 [printed] \ B.C.A., Col., VII. *Mycotretus fasciolatus*. [printed]”; MNRJ.

Distribution

Mexico, Guatemala, Panama, El Salvador.

164. *Mycotretus figuratus* Lacordaire, 1842

Mycotretus figuratus Lacordaire, 1842: 159. Type locality: “Cayenne” [French Guiana].

Mycotretus figuratus – Chevrolat 1843: 79. — Alvarenga 1994: 29. — Skelley 1998b: 15.

Primary type

Lectotype, here designated (Fig. 29D)

FRENCH GUIANA • “D. Lacordaire [handwritten]”; MRSN.

Remarks

Junior synonym of *M. maculatus* Olivier, 1792 (Fig. 39E, see below).

165. *Mycotretus flavomarginatus* Lacordaire, 1842

Mycotretus flavomarginatus Lacordaire, 1842: 157. Type locality: “province de Rio-Janeiro” [= Rio de Janeiro, state? locality?, Southeast Brazil].

Mycotretus major Mader, 1955: 477. Type locality: “Paraguay: Villarica” **syn. nov.** (Fig. 38D).

Mycotretus flavomarginatus – Crotch 1876: 444. — Gemminger & Harold 1876: 3692. — Kuhnt 1909: 71; 1911: 49. — Blackwelder 1945: 466. — Alvarenga 1994: 26. — Pecci-Maddalena *et al.* 2021a: 955.

Mycotretus major – Alvarenga 1994: 29.

Primary type

Lectotype, here designated (Fig. 29E)

BRAZIL • “LECTOTYPE [printed] *Mycotretus flavomarginatus* Lacordaire, 1842 [red label, handwritten]”; MRSN.

Other specimens examined

Paralectotype

BRAZIL • 1 ♀ (dissected); “Brésil [handwritten] \ *Flavomarginatus* Lac [handwritten] \ Type [handwritten] \ Ex-Musaeo Mniszech [printed] \ PARALECTOTYPE [printed] *Mycotretus flavomarginatus* Lacordaire, 1842 [yellow label, handwritten]”; MNHN.

Additional material

BRAZIL • 1 ♀ (dissected); “Brasil: MG, Ipatinga, “Ponte 13”, 05.i.2010, leg. Nolasco & C.L.A [printed]”;

CELC • 1 ♂ (dissected); “Coleção M. Alvarenga [printed] \ CAMPINAS-SP, 18/X/1979, C.A. Klink

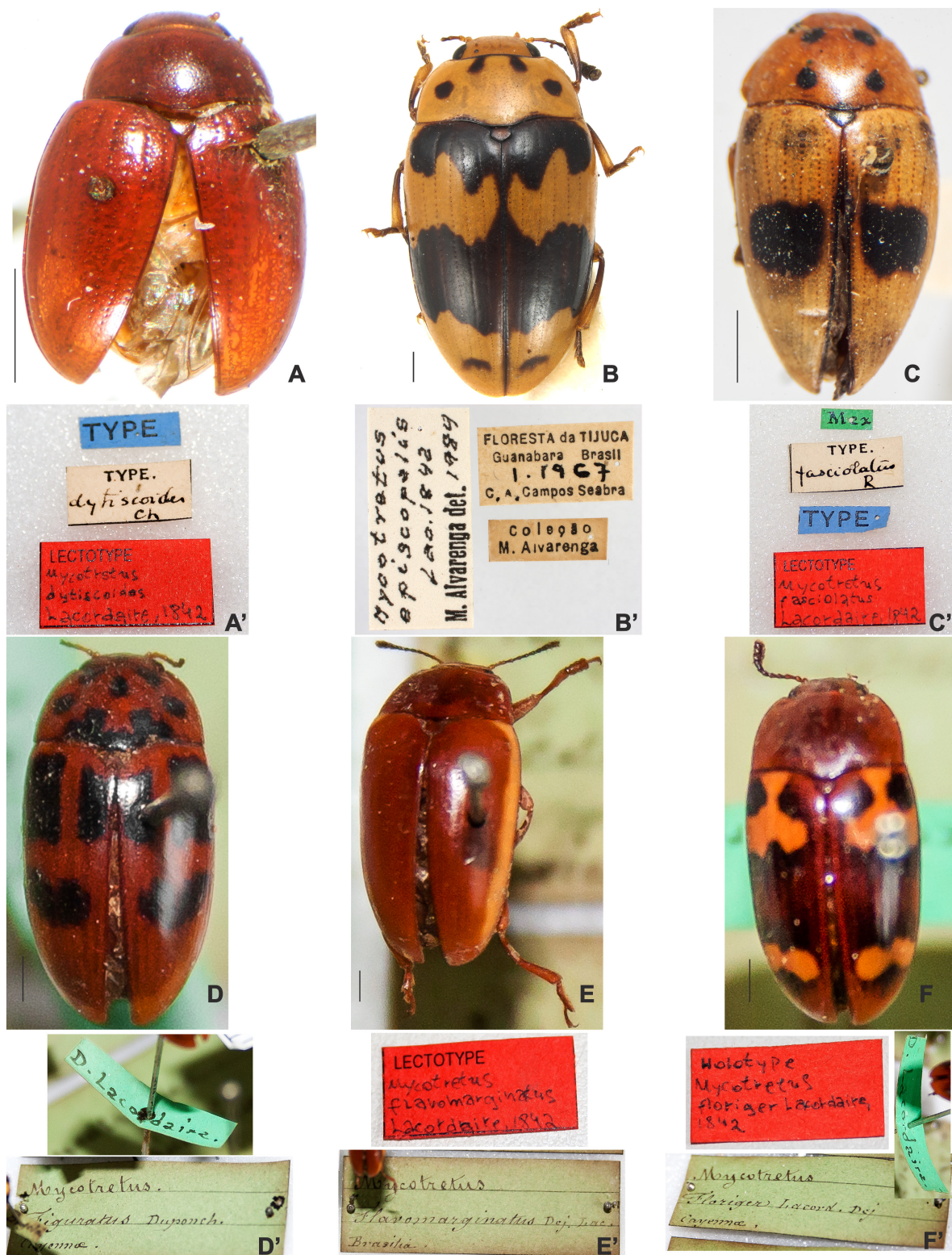


Fig. 29. Lacordaire specimens cont. **A, C–F.** Primary types (dorsal, labels). **A–A'.** Lectotype of *Mycotretus dytiscoides* Lacordaire, 1842. **B–B'.** Specimen of *M. episcopalis* Lacordaire, 1842 from the Alvarenga collection (MNRJ, Brazil). **C–C'.** Lectotype of *M. fasciolatus* Lacordaire, 1842. **D–D'.** Lectotype of *M. figuratus* Lacordaire, 1842. **E–E'.** Lectotype of *M. flavomarginatus* Lacordaire, 1842. **F–F'.** Holotype of *M. floriger* Lacordaire, 1842. Scale bars: A, C–F = 1 mm; B = 0.5 mm.

[handwritten] \ *Mycotretus flavomarginatus* Lac. 1842 [handwritten] M. Alvarenga det. [printed] 1984 [handwritten]"; MNRJ • 1 ♂ (dissected); "Coleção M. Alvarenga [printed] \ Colatina, E. Santo Brasil [printed] XI. 1970 [handwritten] A. Silva [printed] \ 1899 [printed] \ *Mycotretus* 183 [handwritten] \ n. sp. [handwritten] \ Tibia posterior fortemente curvada. ♂? [handwritten]"; MNRJ.

Distribution

Paraguay, Southeast Brazil.

Remarks

We dissected specimens of *M. flavomarginatus* and *M. major* and their male genitalia morphology is exactly the same. The holotype of *M. major* is probably just a barely pigmented individual of *M. flavomarginatus*.

166. *Mycotretus floriger* Lacordaire, 1842

Mycotretus floriger Lacordaire, 1842: 185. Type locality: "Cayenne" [French Guiana].

Mycotretus floriger – Crotch 1876: 456. — Gemminger & Harold 1876: 3692. — Kuhnt 1909: 71; 1911: 49. — Blackwelder 1945: 466. — Alvarenga 1994: 26. — Skelley 1998b: 17. — McHugh & Chaboo 2015: 278. — Pecci-Maddalena *et al.* 2021a: 955.

Primary type

Holotype (Fig. 29F)

FRENCH GUIANA • "D. Lacordaire [handwritten] \ Holotype *Mycotretus floriger* Lacordaire, 1842 [red label, handwritten]"; MRSN.

Other specimens examined

FRENCH GUIANA • 1 spec.; "Cayen [handwritten] \ TYPE. [printed, crossed out] \ floriger C. Reiche [handwritten]"; UMZC • 1 spec.; "Cayen [handwritten]"; UMZC • 1 ♂ (dissected); "Coleção M. Alvarenga [printed] \ SINOP 12° 31'S, 55°37'W, BR 163 Km 500 a 600, Mato Grosso, BRASIL, 350 m X. 1974, Alvarenga & Roppa col. [printed] \ DZUP 126040 [printed]"; DZUP.

Distribution

French Guiana, Central-West and North Brazil.

Mycomystes fuscitarsis (Lacordaire, 1842)

Mycotretus fuscitarsis Lacordaire, 1842: 180 [description].

Mycotretus fuscitarsis – Crotch 1876: 448. — Gemminger & Harold 1876: 3693. — Gorham 1888: 68. — Kuhnt 1909: 73; 1911: 49. — Blackwelder 1945: 466. — Alvarenga 1994: 25. — Skelley 1998b: 16. — Murgas 2006: 8. — Pecci-Maddalena *et al.* 2021a: 955.

Mycomystes fuscitarsis – Pecci-Maddalena *et al.* 2021b: 3080.

Primary type

Lectotype (Fig. 30A)

MEXICO • "Orizaba [handwritten] \ LECTOTYPE [printed] *Mycotretus fuscitarsis* Lacordaire, 1842 [red label, handwritten]"; MRSN.

Other specimens examined

See Pecci-Maddalena *et al.* (2021b).

Distribution

Mexico.

Mycotretus gemmula Lacordaire, 1842

Mycotretus gemmula Lacordaire, 1842: 181 [description] (Fig. 30B). Type locality: “Colombie”.

Mycotretus gemmula – Crotch 1876: 448. — Gemminger & Harold 1876: 3693. — Kuhnt 1909: 73; 1911: 50. — Mader 1942: 173; 1951: 214. — Blackwelder 1945: 466. — Alvarenga 1994: 26. — Skelley 1998b: 16. — McHugh & Chaboo 2015: 278. — Pecci-Maddalena *et al.* 2021b: 3078 [synonym of *Mycomystes apicalis*].

Primary type

Holotype (Fig. 30B)

COLOMBIA • “Colombie [handwritten] \ Gemmula Lac [handwritten] \ Type [handwritten] \ Ex-Musaeo Mniszech [printed] \ HOLOTYPE *Mycotretus gemmula* Lacordaire, 1842 [red label, handwritten]”; MNHN.

Remarks

Junior synonym of *Mycomystes apicalis* (Lacordaire, 1842) (Fig. 26E, see Pecci-Maddalena *et al.* 2021b).

Mycotretus gentilis Lacordaire, 1842

Mycotretus gentilis Lacordaire, 1842: 182 [description] (Fig. 30C). Type locality: “Colombie”.

Mycotretus gentilis – Crotch 1876: 448 [synonym with *M. gemmula*]. — Gemminger & Harold 1876: 3693. — Kuhnt 1909: 73; 1911: 50. — Blackwelder 1945: 466. — Alvarenga 1994: 26. — Pecci-Maddalena *et al.* 2021b: 3078 [synonym of *Mycomystes apicalis*].

Primary type

Lectotype (Fig. 30C)

COLOMBIA • “Ex-Musaeo Mniszech [printed] \ Type [handwritten] \ Gentilis Lac [handwritten] \ Colombie [handwritten] \ LECTOTYPE [printed] *Mycotretus gentilis* Lacordaire, 1842 [red label, handwritten]”; MNHN.

Remarks

Junior synonym of *Mycomystes apicalis* (Lacordaire, 1842) (Fig. 26E, Pecci-Maddalena *et al.* 2021b).

167. *Mycotretus godarti* Lacordaire, 1842

Mycotretus godarti Lacordaire, 1842: 146 (Fig. 30D). Type locality: “Colombie”.

Mycotretus godarti – Crotch 1876: 450. — Gemminger & Harold 1876: 3693. — Gorham 1888: 47 [junior synonym of *M. ornatus*]. — Kuhnt 1909: 76 [variety of *M. ornatus*]; 1911: 52. — Deelder 1942: 88. — Mader 1942: 175; 1951: 218, 221. — Blackwelder 1945: 467. — Alvarenga 1994: 31. — Skelley 1998b: 17.

Primary type

Lectotype, here designated (Fig. 30D)

COLOMBIA • “Ex-Musaeo Mniszech [printed] \ Type [handwritten] \ Godartii Lac [handwritten] \ Colombie [handwritten] \ LECTOTYPE [printed] *Mycotretus godartii* Lacordaire, 1842 [red label, handwritten]”; MNHN.

Remarks

Junior synonym of *M. ornatus* (Duponchel, 1825) (Fig. 14A, see above).

168. *Mycotretus graniformis* Lacordaire, 1842

Mycotretus graniformis Lacordaire, 1842: 152. Type locality: “Cayenne” [French Guiana].

Mycotretus graniformis – Crotch 1876: 453. — Gemminger & Harold 1876: 3693. — Kuhnt 1909: 72; 1911: 50. — Blackwelder 1945: 466. — Alvarenga 1994: 26.

Primary type

Not located.

Other specimens examined

UNKNOWN COUNTRY • 1 spec. (Fig. 30E); unlabeled; MRSN.

Remarks

New junior synonym of *M. lepidus* Lacordaire, 1842 (Fig. 31F, see below).

169. *Mycotretus graphoderus graphoderus* Lacordaire, 1842

Mycotretus graphoderus Lacordaire, 1842: 144. Type locality: “Brésil”.

Mycotretus graphoderus – Crotch 1876: 450. — Gemminger & Harold 1876: 3693. — Kuhnt 1909: 76; 1911: 50. — Bruch 1914: 384. — Deelder 1942: 88. — Blackwelder 1945: 466. — Mader 1951: 220. — Alvarenga 1994: 26. — Skelley 1998b: 16.

Primary type

Lectotype, here designated (Fig. 30F)

BRAZIL • “TYPE. [printed] graphoderus Ch [handwritten] \ TYPE [blue label, printed] \ LECTOTYPE [printed] *Mycotretus graphoderus* Lacordaire, 1842 [red label, handwritten]”; UMZC.

Remarks

New junior synonym of *M. ornatus* (Duponchel, 1825) (Fig. 14A, see above).

170. *Mycotretus hepaticus* Lacordaire, 1842

Mycotretus hepaticus Lacordaire, 1842: 190. Type locality: “Colombie”.

Mycotretus hepaticus – Crotch 1876: 457. — Gemminger & Harold 1876: 3693. — Kuhnt 1909: 72; 1911: 50. — Blackwelder 1945: 466. — Alvarenga 1994: 27.



Fig. 30. Lacordaire primary types (dorsal, labels) cont. **A–A'**. Lectotype of *Mycotretus fuscitarsis* Lacordaire, 1842 [current combination *Mycomystes fuscitarsis* (Lacordaire)]. **B–B'**. Holotype of *M. gemmula* Lacordaire, 1842 [synonym of *Mycomystes apicalis* (Lacordaire)]. **C–C'**. Lectotype of *M. gentilis* Lacordaire, 1842 [synonym of *Mycomystes apicalis* (Lacordaire, 1842)]. **D–D'**. Lectotype of *M. godarti* Lacordaire, 1842. **E–E'**. Specimen of *M. graniformis* Lacordaire, 1842 from MRSN. **F–F'**. Lectotype of *M. graphoderus* Lacordaire, 1842. Scale bars = 1 mm.

Primary type

Lectotype, here designated (Fig. 31A)

COLOMBIA • “Ex-Musaeo Mniszech [printed] \ Type [printed] \ Hepaticus Lac [handwritten] \ Colombie [handwritten] \ LECTOTYPE [printed] *Mycotretus hepaticus* Lacordaire, 1842 [red label, handwritten]”; MNHN.

Distribution

Unknown locality in Colombia.

Remarks

The present species was not dissected and must be examined again to confirm whether it belongs to *Mycotretus* or to another genus in Erotylidae (e.g., *Cyclomorphus* Hope, 1841). Presently, we have no specimens for dissection and, therefore, we prefer to keep it in *Mycotretus*.

171. *Mycotretus hilaris* Lacordaire, 1842

Mycotretus hilaris Lacordaire, 1842: 171. Type locality: “Brésil”.

Mycotretus hilaris – Crotch 1876: 441. — Gemminger & Harold 1876: 3693. — Kuhnt 1909: 76; 1911: 50. — Blackwelder 1945: 466. — Alvarenga 1994: 27. — Skelley 1998b: 15.

Primary type

Holotype (Fig. 31B)

BRAZIL • “TYPE. [printed] *hilaris* Ch [handwritten] \ TYPE [blue label, printed] \ Holotype *Mycotretus hilaris* Lacordaire, 1842 [red label, handwritten]”; UMZC.

Other specimens examined

BRAZIL • 1 ♂ (dissected); “Coll. J. Guerin. S. Paulo. Brasil. [printed] 18681 [handwritten] \ Itatiaya. Rio. [printed] 11.936 [handwritten] \ *Mycotretus hilaris* Lac. [handwritten] J. Guerin det. 19 [printed]54[handwritten]”; MZSP.

Distribution

Southeast Brazil.

172. *Mycotretus humilis* Lacordaire, 1842

Mycotretus humilis Lacordaire, 1842: 189. Type locality: “Cayenne” [French Guiana].

Mycotretus humilis – Crotch 1876: 457. — Gemminger & Harold 1876: 3693. — Kuhnt 1909: 73; 1911: 50. — Blackwelder 1945: 466. — Alvarenga 1994: 27.

Type specimen

Not located.

Distribution

French Guiana.

173. *Mycotretus intermedius* Lacordaire, 1842

Mycotretus intermedius Lacordaire, 1842: 135. Type locality: “Rio-Janeiro” [= Rio de Janeiro, state? locality?, Southeast Brazil].

Mycotretus intermedius – Crotch 1876: 449. — Gemminger & Harold 1876: 3693. — Kuhnt 1909: 76; 1911: 50. — Blackwelder 1945: 466. — Alvarenga 1994: 27.

Primary type

Lectotype, here designated (Fig. 31C)

BRAZIL • “Lacordaire [handwritten] \ LECTOTYPE [printed] *Mycotretus intermedius* Lacordaire, 1842 [red label, handwritten]”; MRSN.

Remarks

New junior synonym of *M. ornatus* (Duponchel, 1825) (Fig. 14A, see above).

174. *Mycotretus jocosus* Lacordaire, 1842

Mycotretus jocosus Lacordaire, 1842: 173. Type locality: “Brésil?”.

Mycotretus jocosus – Crotch 1876: 443. — Gemminger & Harold 1876: 3693. — Kuhnt 1909: 75; 1911: 50. — Blackwelder 1945: 466. — Alvarenga 1994: 28.

Primary type

Lectotype, here designated (Fig. 31D)

BRAZIL • “2247. 22. [?] [handwritten] \ *Mycotretus jocosus*. [handwritten] \ Lectotipo [red label, printed]”; MNHN.

Other specimens examined

BRAZIL • 1 ♂ (dissected); “Coleção M. Alvarenga [printed] \ CORCOVADO, Guanabara BRASIL [printed] IX. 1969 [handwritten] Alvarenga & Seabra [printed] \ 1944 [printed] \ *Mycotretus* 013 [handwritten] \ DZUP 136236 [printed]”; DZUP • 1 ♀ (dissected); “Coleção M. Alvarenga [printed] \ Homeotipo [printed] \ Comparado com tipo [printed] *Mycotretus jocosus* Lac. 1842 [handwritten] M. Alvarenga det. 1971 [printed] \ REPRESA RIO GRANDE, Guanabara Brasil [printed] X.1965 [handwritten] F.M.Oliveira [printed] \ DZUP 136233 [printed]”; DZUP.

Distribution

Southeast Brazil.

Remarks

As well as in the case of *M. coronatus* (Duponchel, 1825) (Fig. 13A), the printed label “Lectotipo” of the *M. jocosus* lectotype is the style used by Moacyr Alvarenga. He likely placed it on the specimen when he studied it. We accept and validate that designation.

175. *Mycotretus lacertosus* Lacordaire, 1842

Mycotretus lacertosus Lacordaire, 1842: 176. Type locality: “Cayenne” [French Guiana].

Mycotretus lacertosus – Crotch 1876: 446. — Gemminger & Harold 1876: 3693. — Kuhnt 1909: 74; 1911: 50. — Blackwelder 1945: 466. — Alvarenga 1994: 28.

Type specimen

Not located.

Other specimens examined

BRAZIL • 1 spec. (dissected; Fig. 31E); “OIAPOQUE, Amapá, Brasil V–1959, M. Alvarenga [printed] \ 1942 [printed] \ Coleção M. Alvarenga [printed] \ *Mycotretus lacertosus* Lac, 1842 [handwritten]”; MNRJ • 1 ♂ (dissected); “Coleção M. Alvarenga [printed] \ SINOP, M. Grosso, Brasil, X. 1974, M. Alvarenga [printed] \ Lat 12° 31’ S, Lon 55° 37’ W [printed] \ DZUP 126123 [printed]”; DZUP.

Distribution

French Guiana, North and Central-West Brazil.

176. *Mycotretus lepidus* Lacordaire, 1842

Mycotretus lepidus Lacordaire, 1842: 178. Type locality: “Cayenne” [French Guiana].

Mycotretus graniformis Lacordaire, 1842: 152. Type locality: “Cayenne” [French Guiana] **syn. nov.** (Fig. 30E).

Mycotretus chontalesi Crotch, 1873b: 145. Type locality: “Santo Domingo, Chontales, Nicaragua” [Department of Chontales, Nicaragua] **syn. nov.** (Fig. 5A).

Mycotretus lepidus – Crotch 1876: 446. — Gemminger & Harold 1876: 3693. — Kuhnt 1909: 72; 1911: 50. — Deelder 1942: 88. — Blackwelder 1945: 466. — Alvarenga 1994: 28.

Mycotretus graniformis – Crotch 1876: 453. — Gemminger & Harold 1876: 3693. — Kuhnt 1909: 72; 1911: 50. — Blackwelder 1945: 466. — Alvarenga 1994: 26.

Mycotretus chontalesi – Crotch: 1876: 446. — Gemminger & Harold 1876: 3692. — Gorham 1888: 70. — Kuhnt 1909: 72; 1911: 48. — Blackwelder 1945: 466. — Alvarenga 1994: 22.

Primary type

Lectotype, here designated (Fig. 31F)

FRENCH GUIANA • “D. Lacordaire [handwritten] \ LECTOTYPE [printed] *Mycotretus lepidus* Lacordaire, 1842 [red label, handwritten]”; MRSN.

Other specimens examined

BRAZIL • 1 ♂ (dissected); “Coleção M. Alvarenga [printed] \ 1790 [printed] \ Jacareacanga, Pará, Brasil, XII-1968, M. Alvarenga [printed] \ Homeotipo [red label, printed] \ *suturalis* [handwritten] \ não confere com a descrição [handwritten]”; MNRJ • 1 ♂ (dissected); “Chaparé, Bolivia, 10948 [handwritten] \ Coll. J. Guerin. S. Paulo. Brasil. [printed] 18173 [handwritten] \ *Mycotretus derasofasciatus* Kuhnt. [handwritten] J Guerin det. 19 [printed] 50 [handwritten]”; MZSP • 1 ♂ (dissected); “Coleção M. Alvarenga [printed] \ MANAUS, Amazonas Brasil [printed] XI. 1966, S.J. Oliveira [handwritten] \ 1784 [printed] \ DZUP 127837 [printed] \ *malaise* [handwritten] \ *Mycotretus* 023 [handwritten]”; DZUP • 1 ♀ (dissected); “PERU: Loreto Pr.:nr. Jct. Rio Maranon & Ucayali, 73.5°W 4.8°S, 6–20–VIII–1994, P. Skelley, day catch [printed] \ *Mycotretus Lepidus* Lac. [handwritten] det. P.E. Skelley 1996 [printed] \ Col. MCN 238413 [printed]”; MCNZ.

Distribution

Nicaragua, North Brazil, Bolivia, French Guiana, Suriname, Ecuador, Peru.

Remarks

The dorsal colour patterns of *Mycotretus lepidus*, *M. chontalesi*, *M. graniformis* are almost identical. Those species differ only by the spots close to the basal elytral edge, which can be completely ‘divided’

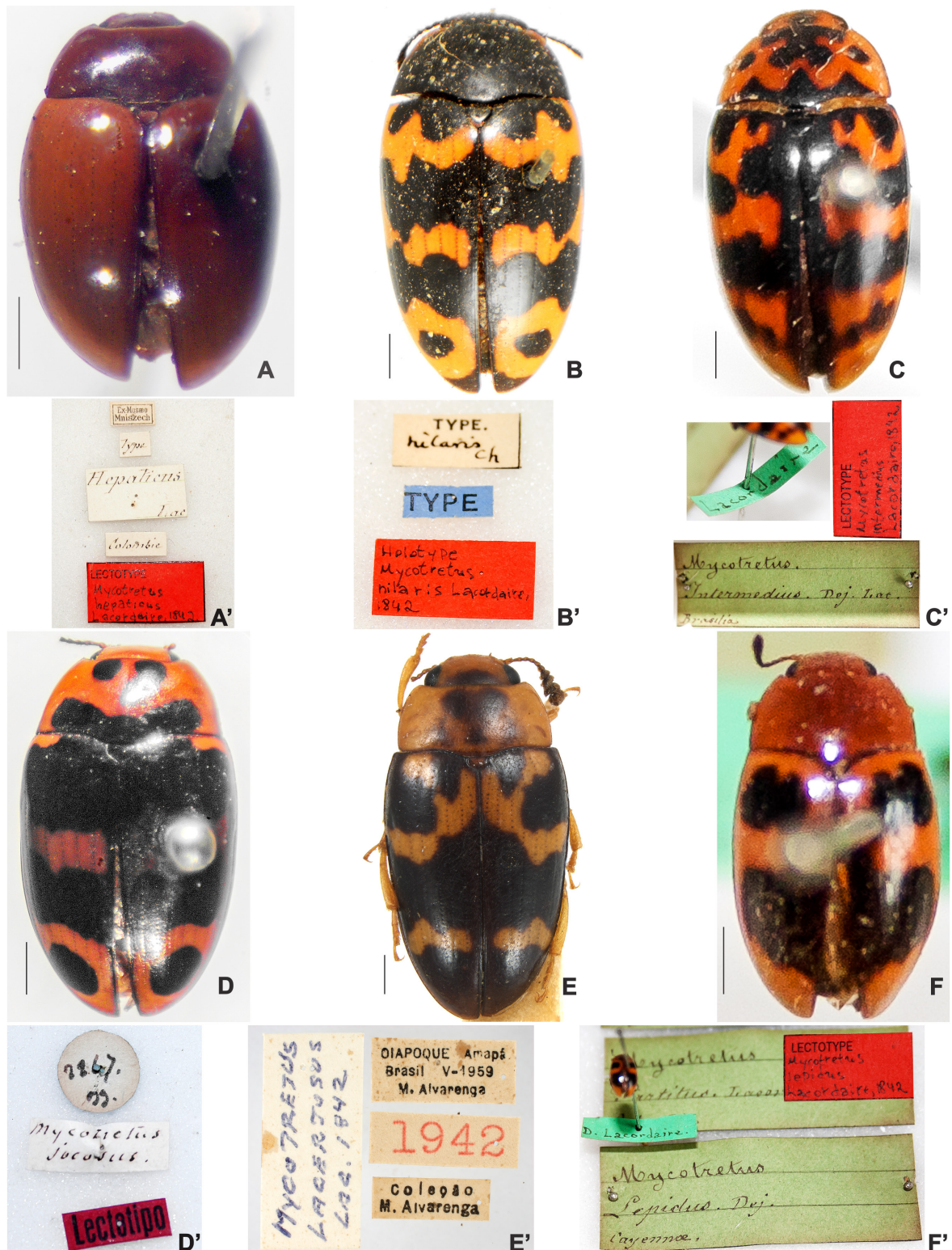


Fig. 31. Lacordaire specimens cont. A–D, F. Primary types (dorsal, labels). A–A'. Lectotype of *Mycotretus hepaticus* Lacordaire, 1842. B–B'. Holotype of *M. hilaris* Lacordaire, 1842. C–C'. Lectotype of *M. intermedius* Lacordaire, 1842. D–D'. Lectotype of *M. jocosus* Lacordaire, 1842. E–E'. Specimen of *M. lacertus* Lacordaire, 1842 from the Alvarenga collection (MNRJ, Brazil). F–F'. Lectotype of *M. lepidus* Lacordaire, 1842. Scale bars: A–D, F = 1 mm; E = 0.5 mm.

or ‘entire’ depending on the individuals. Aside from these small differences, we dissected individuals showing those phenotypes and observed that their male genitalia have the same morphology.

177. *Mycotretus leprosus* Lacordaire, 1842

Mycotretus leprosus Lacordaire, 1842: 160. Type locality: “Cayenne” [French Guiana].

Mycotretus leprosus – Crotch 1876: 439. — Gemminger & Harold 1876: 3693. — Kuhnt 1909: 72; 1911: 50. — Blackwelder 1945: 466. — Alvarenga 1994: 28. — Skelley 1998b: 15.

Primary type

Lectotype, here designated (Fig. 32A)

FRENCH GUIANA • “Cayenne [handwritten] \ Leprosus Lac [handwritten] \ Ex-Musaeo Mniszech [printed] \ Type [handwritten] \ LECTOTYPE [printed] *Mycotretus leprosus* Lacordaire, 1842 [red label, handwritten]”; MNHN.

Other specimens examined

BRAZIL • 1 ♂ (dissected); “BRASIL, OBIDOS (Traíra), Estº Pará, DIRINGS [front] JUN 1961 [back] [printed]”; MZSP.

Distribution

French Guiana, North Brazil.

178. *Mycotretus limbatus* (Lacordaire, 1842)

Tritoma limbata Lacordaire, 1842: 223. Type locality: “Brésil”.

Mycotretus limbatus – Crotch 1876: 458. — Gemminger & Harold 1876: 3693. — Kuhnt 1909: 74; 1911: 50. — Blackwelder 1945: 466. — Alvarenga 1994: 28. — Skelley 1998b: 18. — Pecci-Maddalena *et al.* 2021b: 3099.

Type specimen

Not located.

Other specimens examined

BRAZIL • 1 spec. (Fig. 32B); “TYPE. [printed, crossed out] \ Limbata c. typ. Turin, Ega Bates [handwritten]”; UMZC • 1 spec.; “Bates”; UMZC • 1 ♂ (dissected); “Brasilien, Nova Teutonia, 27º11’B, 52º23’L, Fritz Plaumann [printed], 20. 12. [handwritten] 193[printed]7[handwritten] \ DZUP 135158 [printed]”; DZUP.

Distribution

Brazil.

Remarks

The label data of the specimen from the UMZC, shown in Fig. 32B’, state that it was compared with the type that was already in Turin (MRSN) by the time Crotch obtained his specimen. In fact, we observed one unlabeled specimen of *M. limbatus* in the MRSN, but it must be examined again to confirm that it was the specimen used by Lacordaire before designating it as a lectotype.

179. *Mycotretus luteipes* Lacordaire, 1842

Mycotretus luteipes Lacordaire, 1842: 189. Type locality: “Mexique”.

Mycotretus luteipes – Crotch 1876: 457. — Gemminger & Harold 1876: 3693. — Gorham 1888: 61. — Kuhnt 1909: 73; 1911: 50. — Blackwelder 1945: 466. — Alvarenga 1994: 28. — Skelley 1998b: 17.

Primary type

Lectotype, here designated (Fig. 32C)

MEXICO • “TYPE. [printed] luteipes Ch [handwritten] \ TYPE [blue label, printed] \ LECTOTYPE [printed] Mycotretus luteipes Lacordaire, 1842 [red label, handwritten]”; UMZC.

Other specimens examined

MEXICO • 1 ♀ (dissected); “Coleção M. Alvarenga [printed] \ Homeotipo [printed] \ Teapa, Tabasco. March. H.H.S. [printed] \ B.C.A., Col., VII. Mycotretus luteipes. [printed] \ Comparado com tipo [printed] Mycotretus luteipes Lac., 1842 [handwritten] M. Alvarenga det. 1971 [printed] \ 1635 [printed] \ DZUP 132948 [printed]”; DZUP • 1 ♂ (dissected); “Coleção M. Alvarenga [printed] \ Mexico. Salle Coll. [printed] \ Toxam [printed] \ Mycotretus luteipes Lac apud Sallé [handwritten] \ B.C.A., Col., VII. Mycotretus luteipes. [printed] \ Homeotipo [printed]”; MNRJ.

Distribution

Mexico, Guatemala.

180. *Mycotretus magus* Lacordaire, 1842

Mycotretus magus Lacordaire, 1842: 184. Type locality: “Brésil”.

Mycotretus magus – Crotch 1876: 456. — Gemminger & Harold 1876: 3693. — Kuhnt 1909: 76; 1911: 50. — Blackwelder 1945: 466. — Alvarenga 1994: 29.

Primary type

Lectotype, here designated (Fig. 32D)

BRAZIL • “Brésil [handwritten] \ Magus Lac [handwritten] \ Type [handwritten] \ Ex-Musaeo Mniszech [printed] \ LECTOTYPE [printed] Mycotretus magus Lacordaire, 1842 [red label, handwritten]”; MNHN.

Other specimens examined

BRAZIL • 1 ♀ (dissected); “Coleção M. Alvarenga [printed] \ Itapetinga, Bahia Brasil, XI–1969, F.M. Oliveira [printed] \ Mycotretus magus Lac. 1842 [handwritten] M. Alvarenga det. [printed] 1984 [handwritten]”; MNRJ • 1 ♀ (dissected); “Coleção M. Alvarenga [printed] \ REPRÊSA RIO GRANDE Guanabara BRASIL [printed] XI. 1970 [handwritten] F.M.Oliveira [printed] \ Mycotretus magus Lac. 1842 [handwritten] M. Alvarenga det. [printed] 1984 [handwritten]”; MNRJ.

Distribution

Northeast and South Brazil.

181. *Mycotretus marginicollis* Lacordaire, 1842

Mycotretus marginicollis Lacordaire, 1842: 159. Type locality: “province de Rio-Grande” [state of Rio Grande do Sul, South Brazil].

Mycotretus marginicollis – Guérin-Méneville 1855: 610. — Crotch 1876: 438. — Gemminger & Harold 1876: 3693. — Kuhnt 1909: 76; 1911: 51. — Deelder 1942: 88. — Blackwelder 1945: 466. — Guérin 1948: 20. — Alvarenga 1994: 29. — Skelley 1998b: 15.

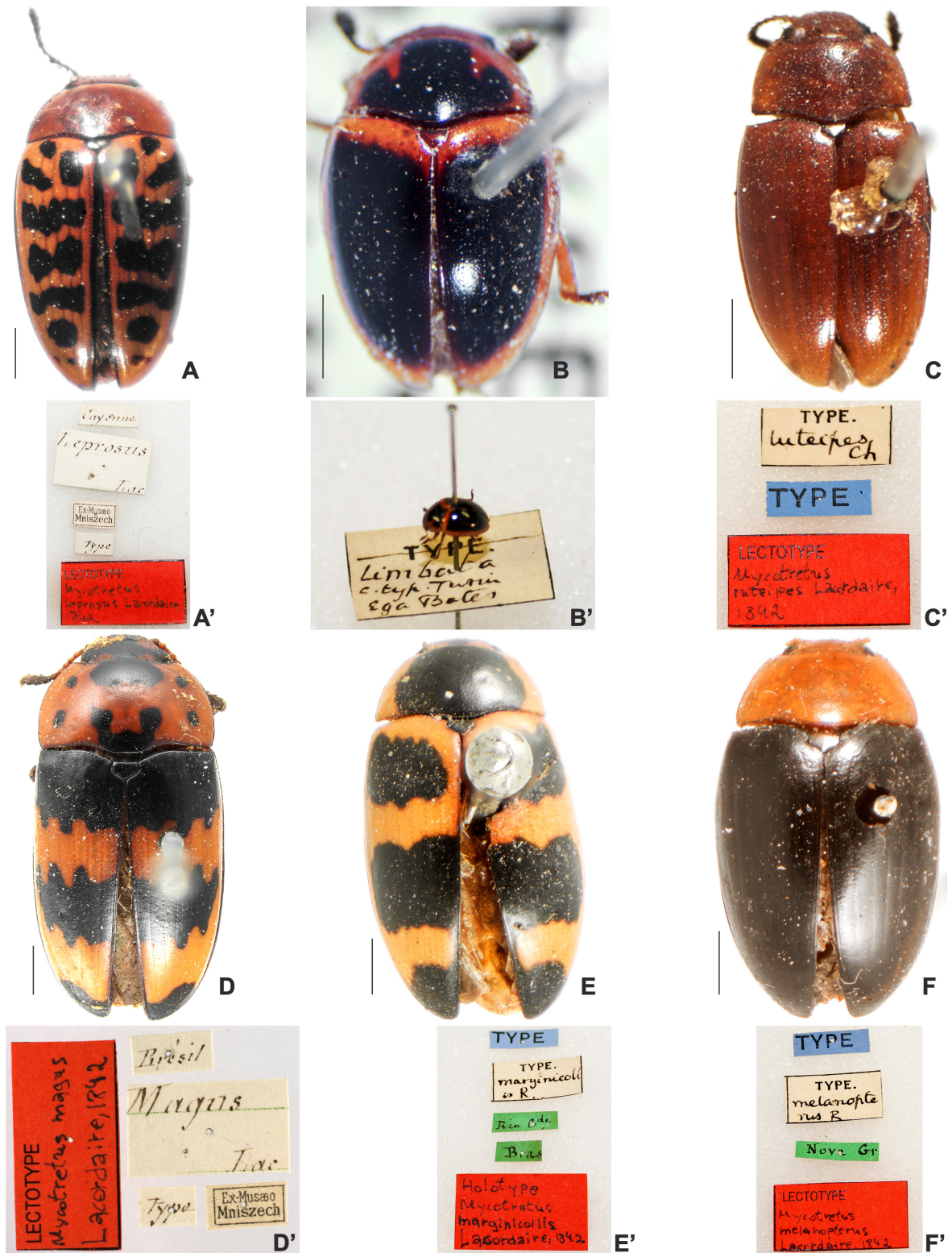


Fig. 32. Lacordaire specimens cont. **A, C–F.** Primary types (dorsal, labels). **A–A’.** Lectotype of *Mycotretus leprosus* Lacordaire, 1842. **B–B’.** Specimen of *M. limbatus* (Lacordaire, 1842) from the Crotch collection (UMZC, UK). **C–C’.** Lectotype of *M. luteipes* Lacordaire, 1842. **D–D’.** Lectotype of *M. magus* Lacordaire, 1842. **E–E’.** Holotype of *M. marginicollis* Lacordaire, 1842. **F–F’.** Lectotype of *M. melanopterus* Lacordaire, 1842. Scale bars = 1 mm.

Primary type

Holotype (Fig. 32E)

BRAZIL • “TYPE [blue label, printed] \ TYPE. [printed] marginicollis R. [handwritten] \ Rio Gde [handwritten] \ Bras [handwritten] \ Holotype Mycotretus marginicollis Lacordaire, 1842 [red label, handwritten]”; UMZC.

Other specimens examined

BRAZIL • 1 ♀; “CAXIAS DO SUL, RS (FAZ. SOUZA), 19–20 /XI/1993, L. Moura [handwritten] leg. [printed] \ Col. MCN 238416 [printed]”; MCNZ • 1 ♀; “S.F. de Paula, RS (Passo do Inferno), 16–19.XII.1999, Franceschini, Bonaldo & Silva [printed] \ Col. MCN [printed] 168.750 [handwritten] \ M. marginicollis [handwritten]”; MCNZ • 1 ♂ (dissected); “Brasilien, Nova Teutonia, Santa Catharina [printed] 3.1935 [handwritten] B. Pohl [printed] \ Mycotretus marginicollis Lac. [handwritten]”; MZSP.

Distribution

Southeast and South Brazil.

182. *Mycotretus melanopterus* Lacordaire, 1842

Mycotretus melanopterus Lacordaire, 1842: 162. Type locality: “Colombie”.

Mycotretus xanthosomus Lacordaire, 1842: 162 (Fig. 37F). Type locality: “Colombie”.

Mycotretus melanopterus – Gemminger & Harold 1876: 3693. — Kuhnt 1909: 71; 1911: 51. — Blackwelder 1945: 466. — Alvarenga 1994: 29. — Skelley 1998b: 15.

Mycotretus xanthosomus – Crotch 1876: 439 [synonym of *M. melanopterus* Lacordaire, 1842]. — Blackwelder 1945: 466. — Alvarenga 1994: 29.

Primary type

Lectotype, here designated (Fig. 32F)

COLOMBIA • “TYPE [blue label, printed] \ TYPE. [printed] melanopterus R [handwritten] \ Nova Gr [handwritten] \ LECTOTYPE [printed] Mycotretus melanopterus Lacordaire, 1842 [red label, handwritten]”; UMZC.

Distribution

Unknown locality in Colombia.

183. *Mycotretus melanostictus* Lacordaire, 1842

Mycotretus melanostictus Lacordaire, 1842: 139 (Fig. 33A). Type locality: “Colombie”.

Mycotretus melanostictus – Crotch 1876: 450. — Gemminger & Harold 1876: 3693. — Gorham 1888: 47 [junior synonym of *M. ornatus*]. — Kuhnt 1909: 76 [variety of *M. ornatus*]; 1911: 52. — Mader 1942: 175; 1951: 221. — Blackwelder 1945: 467. — Guérin 1948: 20. — Alvarenga 1994: 31. — Skelley 1998b: 16.

Primary type

Lectotype, here designated (Fig. 33A)

COLOMBIA • “Ex-Musaeo Mniszech [printed] \ Type [handwritten] \ Melanostictus Lac [handwritten] \ Colombie [handwritten] \ LECTOTYPE [printed] Mycotretus melanostictus Lacordaire, 1842 [red label, handwritten]”; MNHN.

Remarks

Junior synonym of *M. ornatus* (Duponchel, 1825) (Fig. 14A, see above).

184. *Mycotretus miniatus* Lacordaire, 1842

Mycotretus miniatus Lacordaire, 1842: 183. Type locality: “Mexique”.

Mycotretus miniatus – Crotch 1876: 449. — Gemminger & Harold 1876: 3693. — Gorham 1888: 65. — Kuhnt 1909: 73; 1911: 51. — Blackwelder 1945: 466. — Alvarenga 1994: 29.

Primary type

Lectotype, here designated (Fig. 33B)

MEXICO • “Orizaba [handwritten] \ LECTOTYPE [printed] *Mycotretus miniatus* Lacordaire, 1842 [red label, handwritten]”; MRSN.

Distribution

Mexico, Guatemala.

Remarks

Based on label information of the lectotype (Fig. 33B’), the type locality of *M. miniatus* is Orizaba, Mexico.

185. *Mycotretus misellus* Lacordaire, 1842

Mycotretus misellus Lacordaire, 1842: 183. Type locality: “Cayenne?” [French Guiana].

Mycotretus misellus – Crotch 1876: 447. — Gemminger & Harold 1876: 3693. — Kuhnt 1909: 72; 1911: 51. — Blackwelder 1945: 466. — Guérin 1948: 20. — Alvarenga 1994: 29. — Skelley 1998b: 16.

Type specimen

Not located.

Other specimens examined

COLOMBIA • 1 spec. (Fig. 33C); “Nova Gr [handwritten] \ TYPE. [printed, crossed out] *misellus* C. Reiche [handwritten]”; UMZC.

Distribution

Colombia, French Guiana, Southeast Brazil.

186. *Mycotretus nigrivittis* Lacordaire, 1842

Mycotretus nigrivittis Lacordaire, 1842: 157. Type locality: “Cayenne” [French Guiana].

Mycotretus nigrivittis – Crotch 1876: 437. — Gemminger & Harold 1876: 3694. — Kuhnt 1909: 75; 1911: 51. — Blackwelder 1945: 467. — Alvarenga 1994: 30.

Type specimen

Not located.

Other specimens examined

FRENCH GUIANA • 1 spec. (Fig. 33D); “Maués. Amazonas. [printed] 4.940 [handwritten] \ Coll. J. Guerin. S. Paulo. Brasil. [printed] 6220 [handwritten] \ *Mycotretus nigrivittis* Lac. [handwritten] J. Guerin. det. 194[printed]9[handwritten]”; MZSP.

Distribution

French Guiana, (North Brazil?).

Remarks

The specimen examined by us was tentatively identified as *M. nigrivittis*. Therefore, the northern Brazilian record is doubtful.

187. *Mycotretus nigrocinctus* Lacordaire, 1842

Mycotretus nigrocinctus Lacordaire, 1842: 151. Type locality: “Colombie”.

Mycotretus nigrocinctus – Crotch 1876: 451 [synonym of *M. tigratus*]. — Crotch 1876: 451. — Kuhnt 1909: 74; 1911: 54. — Blackwelder 1945: 467. — Mader 1951: 217. — Alvarenga 1994: 36.

Primary type

Lectotype, here designated (Fig. 33E)

COLOMBIA • “Ex-Musaeo Mniszech [printed] \ Type [handwritten] \ *Nigrocinctus* Lac [handwritten] \ Colombie [handwritten] \ LECTOTYPE [printed] *Mycotretus nigrocinctus* Lacordaire, 1842 [red label, handwritten]”; MNHN.

Remarks

Junior synonym of *M. tigratus* Lacordaire, 1842 (Fig. 37D, see below). Mader (1951) considered “*nigrocinctus* Lacordaire” an “aberration” of *M. tigratus* and this interpretation was followed by Alvarenga (1994). However, in this case the assignment of “aberration” is incorrect (see Remarks on *M. tigratus* below).

Mycotretus nigroterminatus Lacordaire, 1842

Mycotretus nigroterminatus Lacordaire, 1842: 180. Type locality: “Colombie”.

Mycotretus nigroterminatus – Crotch 1876: 448. — Gemminger & Harold 1876: 3694. — Kuhnt 1909: 74; 1911: 51. — Blackwelder 1945: 467. — Guérin 1948: 20. — Alvarenga 1994: 30. — Skelley 1998b: 16. — Pecci-Maddalena *et al.* 2021b: 3078 [synonymy with *Mycomystes apicalis*].

Primary type

Lectotype (Fig. 33F)

COLOMBIA • “Ex-Musaeo Mniszech [printed] \ Type [handwritten] \ *Nigroterminatus* Lac [handwritten] \ Colombie [handwritten] \ LECTOTYPE [printed] *Mycotretus nigroterminatus* Lacordaire, 1842 [red label, handwritten]”; MNHN.

Remarks

Synonym of *Mycomystes apicalis* (Lacordaire, 1842) (Fig. 26E, see Pecci-Maddalena *et al.* 2021b).

188. *Mycotretus nugator* Lacordaire, 1842

Mycotretus nugator Lacordaire, 1842: 174. Type locality: “Cayenne” [French Guiana] (Fig. 33G).

Mycotretus nugator – Crotch 1876: 445. — Gemminger & Harold 1876: 3694. — Kuhnt 1909: 75; 1911: 51. — Blackwelder 1945: 467. — Alvarenga 1994: 31.

Type specimen

Not located.

Remarks

New junior synonym of *M. dorsofasciatus* Lacordaire, 1842 (Fig. 28C, see above).

189. *Mycotretus palmiphilus* Lacordaire, 1842

Mycotretus palmiphilus Lacordaire, 1842: 165. Type locality: “Cayenne” [French Guiana].

Mycotretus palmiphilus – Crotch 1876: 439. — Gemminger & Harold 1876: 3694. — Kuhnt 1909: 71; 1911: 52. — Blackwelder 1945: 467. — Alvarenga 1994: 32; Skelley 1998b: 15.

Primary type

Lectotype, here designated (Fig. 34A)

FRENCH GUIANA • “D. Lacordaire [handwritten] \ LECTOTYPE [printed] *Mycotretus palmiphilus* Lacordaire, 1842 [red label, handwritten]”; MRSN.

Other specimens examined

FRENCH GUIANA • 1 spec.; “Cayenne [handwritten] \ Palmiphilus Lac. [handwritten] \ Type [handwritten] \ Ex-Musaeo Mniszech [printed]”; MNHN • 1 spec.; “Cayen [handwritten] \ TYPE. [printed, crossed out] palmiphilus coll Reiche [handwritten] \ PARALECTOTYPE [printed] *Mycotretus palmiphilus* Lacordaire, 1842 [yellow label, handwritten]”; UMCZ.

Distribution

French Guiana, North Brazil.

Remarks

We examined a specimen of *M. palmiphilus* deposited in the MNHN and mistakenly labeled it as “lectotype”. Subsequently we decided that it would be better to designate the specimen from the MRSN (Fig. 34A) as the lectotype, since Lacordaire (1842) did not mention the Dupont collection in his description (see Material and Methods, comments about type depositories). In such cases, the specimens used by Lacordaire presumably belong to the Brême collection (MRSN). *Mycotretus palmiphilus* resembles *M. argus* Lacordaire, 1842 (Fig. 26F), but we did not have a sufficient number of specimens of either species for comparison, and we prefer not to propose a new synonym here.

190. *Mycotretus partitus* Lacordaire, 1842

Mycotretus partitus Lacordaire, 1842: 176. Type locality: “Colombie”.

Mycotretus partitus – Crotch 1876: 446. — Gemminger & Harold 1876: 3694. — Kuhnt 1909: 75; 1911: 52. — Blackwelder 1945: 467. — Alvarenga 1994: 32. — Skelley 1998b: 16.



Fig. 33. Lacordaire specimens cont. **A–B, E–F.** Primary types (dorsal, labels). **A–A’.** Lectotype of *Mycotretus melanostictus* Lacordaire, 1842. **B–B’.** Lectotype of *M. miniatus* Lacordaire, 1842. **C–C’.** Specimen of *M. misellus* Lacordaire, 1842 from the Crotch collection (UMZC, UK). **D–D’.** Specimen of *M. nigrivittis* Lacordaire, 1842 from MZSP (Brazil). **E–E’.** Lectotype of *M. nigrocinctus* Lacordaire, 1842. **F–F’.** Lectotype of *M. nigroterminatus* Lacordaire, 1842 [synonym of *Mycomyastes apicalis* (Lacordaire, 1842)]. **G–G’.** Specimen of *M. nugator* Lacordaire, 1842 from the Alvarenga collection (MNRJ, Brazil). Scale bars: A–F = 1 mm; G = 0.5 mm.

Primary type

Lectotype, here designated (Fig. 34B)

COLOMBIA • “Coll. R.I.Sc.N.B., Colombie, Coll. Chapuis [printed] \ *Mycotretus partitus* Colombie Lac [handwritten]”; RBINS.

Distribution

Unknown locality in Colombia.

191. *Mycotretus pecari* Lacordaire, 1842

Mycotretus pecari Lacordaire, 1842: 167. Type locality: Colombia.

Mycotretus quattuordecimguttatus conjunctus Crotch, 1876: 440 [as a variety]. Type locality: unknown **syn. nov.** (Fig. 10A).

Mycotretus pecari – Crotch 1876: 440. — Gemminger & Harold 1876: 3694. — Gorham 1888: 55. — Kuhnt 1909: 71; 1911: 52. — Deelder 1942: 89. — Blackwelder 1945: 467. — Guérin 1948: 20. — Alvarenga 1994: 32. — Skelley 1998b: 15. — Pecci-Maddalena *et al* 2021a: 969.

Mycotretus quattuordecimguttatus conjunctus – Gemminger & Harold 1876: 3694. — Kuhnt 1909: 71; 1911: 53. — Blackwelder 1945: 467. — Alvarenga 1994: 34. — Skelley 1998b: 15.

Primary type

Lectotype, here designated (Fig. 34C).

VENEZUELA • “maracay. [handwritten]”; MRSN.

Other specimens examined

Paralectotype

COLOMBIA • 1 spec.; “TYPE. [printed, crossed out] *pecari* Co Reiche [handwritten] \ Valencia [handwritten] \ Colombia [handwritten] \ Paratype *Mycotretus pecari* Lacordaire, 1842 [yellow label, handwritten]”; UMCZ.

Distribution

Colombia (apud Alvarenga 1994), Venezuela.

Remarks

1) Although no specimen of *M. quattuordecimguttatus conjunctus* was dissected, we observed that its colour pattern and body shape (Fig. 10A) are very similar to those of *M. pecari*. Based on the examination of the paralectotype from “Valencia” (UMCZ), we noted a tendency of the first elytral band to fuse with the second band. Once this fusion has occurred, the resulting pattern is that observed in *M. quattuordecimguttatus conjunctus*. Therefore, here we synonymize *M. quattuordecimguttatus conjunctus* under *M. pecari*. 2) A few examined specimens from the state of Rio Grande do Sul, in South Brazil, have the colour pattern strongly similar to that of *M. pecari*. However, such specimens have the contour of the elytral bands smooth, rather than serrate as in the typical *M. pecari* and their localities are very far from those where *M. pecari* occurs (with no intermediate geographical records). Therefore, they were not considered conspecific here. 3) Crotch (1876) did not mention the type locality of *M. quattuordecimguttatus conjunctus* and there is no locality information on the type labels. This species and *M. guatemalae* were collected by the same person, “Sheppard”, a contemporary of Crotch (Skelley 1998b), so there is a chance these species were collected at the same locality in Guatemala. 4) The two localities mentioned by Lacordaire (1842), “Valencia” and “Maracaybo” (= Maracaibo), as being from Colombia, currently pertain to Venezuela. 5) Lacordaire (1842: 168) pointed out three specimens

examined by him, two from Valencia and one from Maraibo. According to him, there were the varieties “A” and “B”; variety “A” was not found by us and variety “B” was described by Lacordaire as follows: “La variété B est conforme au type quant à la forme des trois premières bandes, mais la tache oblongue de l’extrémité a complètement disparu”. The specimen from Valencia is currently kept in UMCZ and fits well the description of “variety B”; it has a label with the word “type” crossed out, suggesting that it is not a primary type. On the other hand, the specimen from Maracaibo is kept in MRSN and fits the main description of *M. pecari* provided by Lacordaire. Lacordaire mentioned a “type”, and the specimen from Maraibo (MRSN) is here considered the “holotype” and, consequently, the specimen from Valencia (UMCZ) is considered a paratype.

192. *Mycotretus polyophthalmus* Lacordaire, 1842

Mycotretus polyophthalmus Lacordaire, 1842: 163. Type locality: “Cayenne” [French Guiana].

Mycotretus polyophthalmus – Crotch 1876: 441. — Gemminger & Harold 1876: 3694. — Kuhnt 1909: 74; 1911: 52. — Blackwelder 1945: 467. — Alvarenga 1994: 33.

Primary type

Lectotype, here designated (Fig. 34D)

FRENCH GUIANA • “D. Lacordaire [handwritten]”; MRSN.

Other specimens examined

FRENCH GUIANA • 1 spec.; “Ex-Musaeo Mniszech [printed] \ Type [handwritten] \ Cayenne [handwritten] \ Polyophthalmus Lac. [handwritten]”; MNHN • 1 ♂ (dissected); “Coleção M. Alvarenga [printed] \ Porto Platon [printed] 24 [handwritten]-7-1961 [printed] \ Brasil, A P, J. & B. Bechyné [printed] \ *Mycotretus polyophthalmus* Lac. 1842 [handwritten] M. Alvarenga det. [printed] 1984 [handwritten]”; MNRJ.

Distribution

French Guiana, Venezuela, North Brazil.

Remarks

The examined specimen (MNHN) was mistakenly labelled as “lectotype”. The specimen from MRSN (Fig. 34D) is the correct lectotype (see the case of the lectotype of *M. palmiphilus* above, Fig. 34A).

193. *Mycotretus posticus* Lacordaire, 1842

Mycotretus posticus Lacordaire, 1842: 147. Type locality: “Colombie”.

Mycotretus posticus – Crotch 1876: 450 [junior synonym of *M. godarti* Lacordaire]. — Gemminger & Harold 1876: 3693. — Kuhnt 1909: 76 [variety of *M. ornatus*]; 1911: 52. — Mader 1942: 175; 1951: 218, 221. — Blackwelder 1945 : 467. — Alvarenga 1994: 31.

Type specimen

Not located.

Remarks

New junior synonym of *M. ornatus* (Duponchel, 1825) (Fig. 14A, see above).



Fig. 34. Lacordaire primary types (dorsal, labels) cont. **A–A'**. Lectotype of *Mycotretus palmiphilus* Lacordaire, 1842. **B–B'**. Lectotype of *M. partitus* Lacordaire, 1842. **C–C'**. Lectotype of *M. pecari* Lacordaire, 1842. **D–D'**. Lectotype of *M. polyophthalmus* Lacordaire, 1842. **E–E'**. Lectotype of *M. psittacus* Lacordaire, 1842. **F–F'**. Holotype of *M. pulchellus* Lacordaire, 1842. Scale bars: A–B, E–F = 1 mm; C–D = see Material and methods.

194. *Mycotretus psittacus* Lacordaire, 1842

Mycotretus psittacus Lacordaire, 1842: 167. Type locality: “Mexique” [?].

Mycotretus psittacus – Crotch 1876: 440. — Gemminger & Harold 1876: 3694. — Gorham 1888: 54. — Kuhnt 1909: 72; 1911: 52. — Blackwelder 1945: 467. — Alvarenga 1994: 33. — Skelley 1998b: 15.

Primary type

Lectotype, here designated (Fig. 34E)

MEXICO • “LECTOTYPE [printed] *Mycotretus psittacus* Lacordaire, 1842 [red label, handwritten]”; MRSN.

Other specimens examined

Paralectotype

FRENCH GUIANA • 1 ♂ (dissected); “Cayenne [handwritten] \ *Psittacus* Lac [handwritten] \ Type [handwritten] \ Ex-Musaeo Mniszech [printed] \ PARALECTOTYPE [printed] *Mycotretus psittacus* Lacordaire, 1842 [yellow label, handwritten]”; MNHN.

Additional material

BRAZIL • 1 spec.; “Bahia [handwritten] \ Chevr. [printed] \ TYPE. [printed, crossed out] *psittacus* Ex descr. [handwritten]”; UMCZ.

Distribution

Mexico [?], French Guiana, unknown locality in Brazil.

Remarks

According to Lacordaire (1842: 167), in his description of *M. psittacus*, individuals available to him belonged to the “Collections de M. Dupont et de M. le marquis de Brème”. We chose the specimen from the Brème collection (MRSN) as the lectotype and considered the Dupont specimen (MNHN) as a paralectotype. Gorham (1888) stated that he had not examined any specimen of *M. psittacus* from Mexico, and suggested that the correct locality for *M. psittacus* would be “perhaps Bahia” (Gorham commentary is based on a specimen from the Crotch collection, the same examined by us, see above). Alvarenga (1994) also pointed out that the type locality mentioned by Lacordaire might be wrong and mentioned that *M. psittacus* occurs in Southeast Brazil. We cannot confirm the exact distribution of *M. psittacus* in Brazil, although it is possible that this species occurs in the Northeast and Southeast regions.

195. *Mycotretus pulchellus* Lacordaire, 1842

Mycotretus pulchellus Lacordaire, 1842: 177. Type locality: “Rio-Janeiro” [= Rio de Janeiro, state? locality?, Southeast Brazil].

Mycotretus pulchellus – Crotch 1876: 446. — Gemminger & Harold 1876: 3694. — Kuhnt 1909: 71; 1911: 52. — Blackwelder 1945: 467. — Alvarenga 1994: 33.

Primary type

Holotype (Fig. 34F)

BRAZIL • “D. Lacordaire [handwritten] \ Holotype *Mycotretus pulchellus* Lacordaire, 1842 [red label, handwritten]”; MRSN.

Other specimens examined

BRAZIL • 1 spec.; “Ex-Musaeo Mniszech [printed] \ Type [handwritten] \ Pulchellus Lac [handwritten] \ Brésil [handwritten]”; MNHN • 1 ♀ (dissected); “Coleção M. Alvarenga [printed] \ CORCOVADO, Guanabara BRASIL [printed] X. 1970 [handwritten], Alvarenga & Seabra [printed] \ *Mycotretus pulchellus* Lac. 1842 [handwritten] M. Alvarenga det. [printed] 1984 [handwritten]”; MNRJ.

Distribution

Southeast Brazil.

Remarks

The examined specimen (MNHN) was mistakenly labelled as “lectotype”, but the specimen from MRSN (Fig. 34F) is the true holotype (see the case of the lectotypes of *M. palmiphilus* Lacordaire Fig. 34A and *M. polyophthalmus* Lacordaire Fig. 34D above).

Mycotretus pulicarius Lacordaire, 1842

Mycotretus pulicarius Lacordaire, 1842: 182 [description]. Type locality: “Colombie”.

Mycotretus pulicarius – Crotch 1876: 448 [synonym of *M. gemmula*]; 1876: 448 [synonym of *Mycomystes gemmula*]. — Gemminger & Harold 1876: 3693. — Mader 1942: 173. — Blackwelder 1945: 466. — Alvarenga 1994: 26. — Skelley 1998b: 16. — Pecci-Maddalena *et al.* 2021b: 3078 [synonym of *Mycomystes apicalis*].

Primary type

Lectotype (Fig. 35A)

COLOMBIA • “Ex-Musaeo Mniszech [printed] \ Type [handwritten] \ Pulicarius Lac [handwritten] \ Colombie [handwritten] \ LECTOTYPE [printed] *Mycotretus pulicarius* Lacordaire, 1842 [red label, handwritten]”; MNHN.

Remarks

Synonym of *Mycomystes apicalis* (Lacordaire, 1842) (Fig. 26E, see above).

196. *Mycotretus pusillus* Lacordaire, 1842

Mycotretus pusillus Lacordaire, 1842: 188. Type locality: “Cayenne” [French Guiana].

Mycotretus pusillus – Crotch 1876: 456. — Gemminger & Harold 1876: 3694. — Kuhnt 1909: 72; 1911: 52. — Blackwelder 1945: 467. — Alvarenga 1994: 33. — Skelley 1998b: 17.

Primary type

Lectotype, here designated (Fig. 35B)

FRENCH GUIANA • “Cayen [handwritten] \ TYPE. [printed] pusillus R [handwritten] \ TYPE [blue label, printed] \ LECTOTYPE [printed] *Mycotretus pusillus* Lacordaire, 1842 [red label, handwritten]”; UMZC.

Other specimens examined

BRAZIL • 1 ♂ (dissected); “Coleção M. Alvarenga [printed] \ Jacareacanga, Pará Brasil, XII–1968, M. Alvarenga [printed] \ Malaise [handwritten] \ 1622 [printed] \ *Mycotretus* 184 [handwritten] \ pusillus Lac., 1842 [handwritten]”; MNRJ.

Distribution

French Guiana, North Brazil.

Remarks

Mycotretus pusillus resembles *M. pygmaeus* Lacordaire (Fig. 35C) in body shape, coloration and morphology of male genitalia, but differs from the latter in the more elongated penile flagellum.

197. *Mycotretus pygmaeus* Lacordaire, 1842

Mycotretus pygmaeus Lacordaire, 1842: 156. Type locality: “Cayenne” [French Guiana].

Mycotretus pygmaeus – Crotch 1876: 455. — Gemminger & Harold 1876: 3694. — Gorham 1888: 62. — Kuhnt 1909: 72; 1911: 52. — Bruch 1914: 384. — Curran 1941: 286. — Mader 1942: 172; 1951: 211. — Blackwelder 1945: 467. — Guérin 1948: 20. — Alvarenga 1994: 33. — Skelley 1998b: 17. — McHugh & Chaboo 2015: 278.

Primary type

Lectotype, here designated (Fig. 35C)

FRENCH GUIANA — “Cayenne [handwritten] \ Pygmaeus Lac [handwritten] \ Type [handwritten] \ Ex-Musaeo Mniszech [printed] \ LECTOTYPE [printed] *Mycotretus pygmaeus* Lacordaire, 1842 [red label, handwritten]”; MNHN.

Other specimens examined

FRENCH GUIANA • 1 spec.; “D. Guerin. [handwritten]”; MRSN • 1 spec.; “Cayenne Lacordaire. [handwritten] \ TYPE. [printed, crossed out] *pygmaeus* coll. Reiche. [handwritten]”; UMZC.

BRAZIL • 1 ♂ (dissected); “Coleção M. Alvarenga [printed] \ Jacaré P.N.XINGU, M. Grosso Brasil, XI–1961, Alvarenga e Werner [printed] \ DZUP 371368 [printed]”; DZUP • 1 ♀; “Coleção M. Alvarenga [printed] \ SERRA do NAVIO, Terr. Amapá BRASIL, IX–1957, K. Lenko leg. [printed] \ DZUP 371396 [printed]”; DZUP • 1 ♂ (dissected); “Coleção M. Alvarenga [printed] \ CHAPADA GUIMARÃES, Mato Grosso Brasil, XI–1963, Alvarenga e Werner [printed] \ DZUP 371440 [printed]”; DZUP.

Distribution

From Mexico to Argentina.

198. *Mycotretus quadrinus* Lacordaire, 1842

Mycotretus quadrinus Lacordaire, 1842: 155 (Fig. 35D). Type locality: “Brésil”.

Mycotretus quadrinus – Crotch 1876: 455 [junior synonym]. — Alvarenga 1994: 29.

Primary type

Lectotype, here designated (Fig. 35D)

BRAZIL • “TYPE. [printed] *quadrinus* Ch [handwritten] \ TYPE [blue label, printed] \ LECTOTYPE [printed] *Mycotretus quadrinus* Lacordaire, 1842 [red label, handwritten]”; UMCZ.

Remarks

Synonym of *M. minutus* Duponchel, 1825 (Fig. 13E, see above).

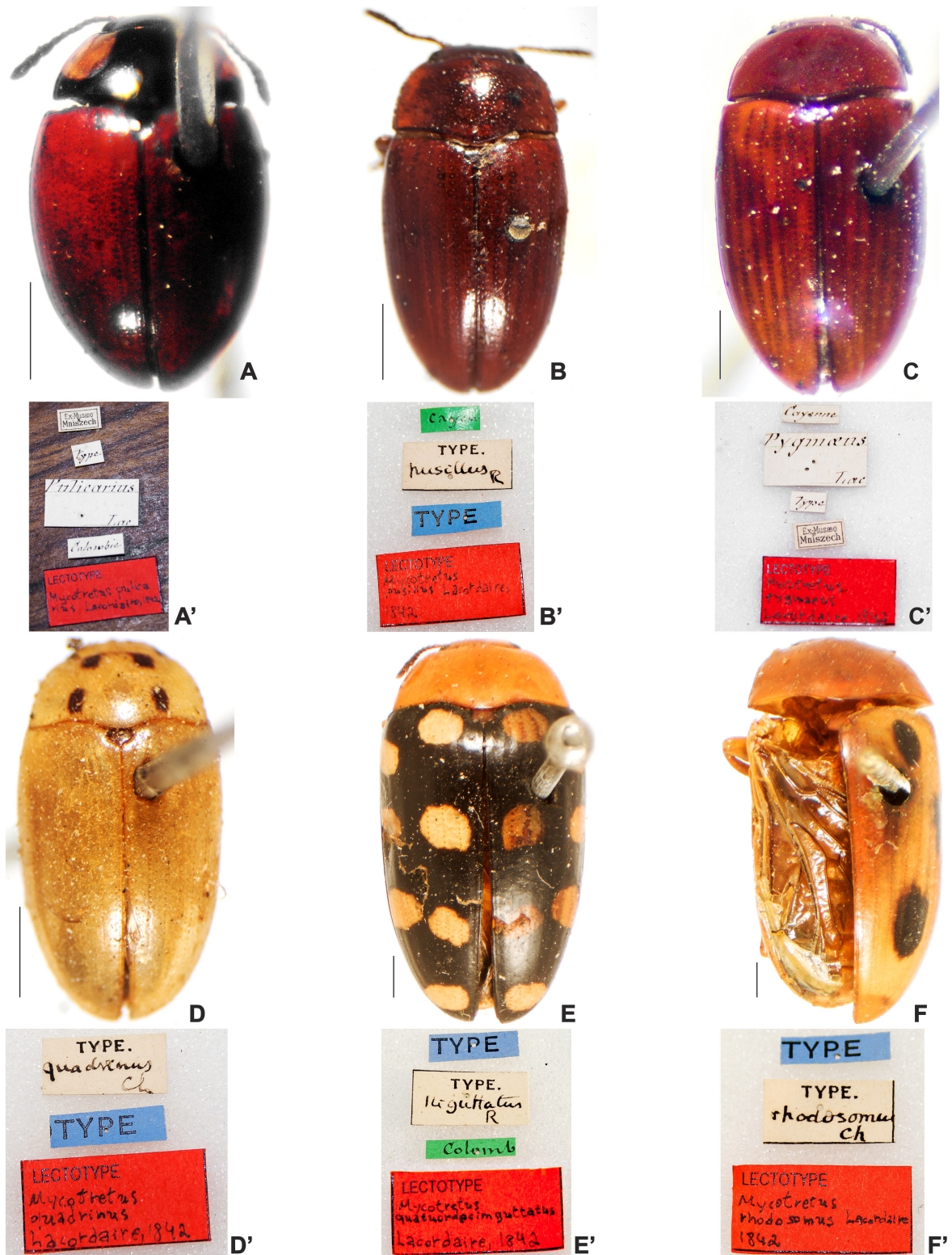


Fig. 35. Lacordaire primary types (dorsal, labels) cont. **A–A’.** Lectotype of *Mycotretus pulicarius* Lacordaire, 1842 [synonym of *Mycomystes apicalis* (Lacordaire, 1842)]. **B–B’.** Lectotype of *M. pusillus* Lacordaire, 1842. **C–C’.** Lectotype of *M. pygmaeus* Lacordaire, 1842. **D–D’.** Lectotype of *M. quadrinus* Lacordaire, 1842. **E–E’.** Lectotype of *M. quatuordecimguttatus* Lacordaire, 1842. **F–F’.** Lectotype of *M. rhodosomus* Lacordaire, 1842. Scale bars = 1 mm.

199. *Mycotretus quattuordecimguttatus* Lacordaire, 1842

Mycotretus quattuordecimguttatus Lacordaire, 1842: 163. Type locality: Colombia (Fig. 35E).

Mycotretus bisseptemguttatus Crotch, 1876: 441. Type locality: “Cayenne” [Cayenne, French Guiana] **syn. nov.** (Fig. 4D)

Mycotretus quattuordecimguttatus – Crotch 1876: 439. — Gemminger & Harold 1876: 3694. — Kuhnt 1909: 71; 1911: 53. — Deelder 1942: 89. — Blackwelder 1945: 467. — Alvarenga 1994: 33. — Skelley 1998b: 15.

Mycotretus bisseptemguttatus – Gemminger & Harold 1876: 3692. — Kuhnt 1909: 71; 1911: 48. — Blackwelder 1945: 466. — Alvarenga 1994: 21.

Primary type

Lectotype, here designated (Fig. 35E)

COLOMBIA • “TYPE [blue label, printed] \ TYPE. [printed] 14-guttatus R [handwritten] \ Colomb [handwritten] \ LECTOTYPE [printed] *Mycotretus quattuordecimguttatus* Lacordaire, 1842 [red label, handwritten]”; UMZC.

Other specimens examined

BRAZIL • 1 ♀ (dissected); “Coleção M. Alvarenga [printed] \ Homeotipo [red label, printed] \ XI-60, Ter. Amapá, Serra do Navio, R. Bicelli col. [handwritten] \ Comparado com tipo [printed] *Mycotretus quattuordecimguttatus*; Lac, 1842 [handwritten] M. Alvarenga det. 1971 [printed] \ Comparado com tipo [printed] *Mycotretus bisseptemguttatus* Crotch, 1876 [handwritten] M. Alvarenga det. 1971 [printed] \ 1827 [printed]”; MNRJ.

Remarks

Mycotretus bisseptemguttatus Crotch differs from *M. quattuordecimguttatus* Lacordaire only in the circular elytral spots, which are comparatively larger in the former species.

200. *Mycotretus rhodosomus* Lacordaire, 1842

Mycotretus rhodosomus Lacordaire, 1842: 166. Type locality: “Brésil”.

Brachysphaenus (Iphiclus) nigromaculatus Kuhnt, 1909: 27. Type locality: “Mexico” **syn. nov.** (Fig. 25B).

Mycotretus rhodosomus – Crotch 1876: 444. — Gemminger & Harold 1876: 3694. — Kuhnt 1909: 72; 1911: 53. — Blackwelder 1945: 467. — Guérin 1948: 20. — Alvarenga 1994: 34. — Skelley 1998b: 16. — Pecci-Maddalena *et al.* 2021a: 955.

Brachysphaenus (Iphiclus) nigromaculatus Kuhnt 1911: 17. — Blackwelder 1945: 459.

Mycotretus nigromaculatus – Delkeskamp 1939: 27. — Alvarenga 1994: 30.

Primary type

Lectotype, here designated (Fig. 35F)

MEXICO • “TYPE [blue label, printed] \ TYPE. [printed] rhodosomus Ch [handwritten] \ LECTOTYPE [printed] *Mycotretus rhodosomus* Lacordaire, 1842 [red label, handwritten]”; UMZC.

Other specimens examined

BRAZIL • 1 ♂ (dissected); “Rio de janeiro, 2/1944, O. Braga [handwritten] \ *Mycotretus rhodosomus* Lac [handwritten] J. Guerin. det. 194[printed]8[handwritten]”; MNRJ • 1 ♀ (dissected); “Coleção M. Alvarenga [printed] \ Homeotipo [printed] \ Rio de janeiro, 2/1944, O. Braga [handwritten] \ 1825

[printed] \ *Mycotretus rhodosomus* Lac [handwritten] J. Guerin. det. 194 [printed]8[handwritten] \ Comparado com tipo [printed] *Mycotretus rhodosomus* Lac, 1842 [handwritten] M. Alvarenga det. 1971 [printed]”; MNRJ.

Distribution

Mexico [?], Southeast Brazil.

Remarks

1) Although the lectotype of *M. nigromaculatus* (Kuhnt) was not dissected, its general morphology and colour pattern are identical to those of the lectotype of *M. rhodosomus* Lacordaire. Therefore, here we synonymize *M. nigromaculatus* (Kuhnt) under *M. rhodosomus* Lacordaire. 2) We observed that the type locality “Mexico” of *M. nigromaculatus* cited by Kuhnt (1909) is likely wrong. Lacordaire (1842) mentioned that the type locality of *M. rhodosomus* is “Brazil” and all individuals examined by us are from Southeast Brazil. Aside from that, there is no mention of the name “*M. rhodosomus*” in *Biologia Centrali-Americana* (see Gorham 1888), a work for which hundreds of erotylids from Central America and Mexico were studied.

201. *Mycotretus rufilabris* (Lacordaire, 1842)

Tritoma rufilabris Lacordaire, 1842: 222. Type locality: “Brésil”.

Mycotretus rufilabris – Crotch 1876: 458. — Gemminger & Harold 1876: 3694. — Kuhnt 1909: 70; 1911: 53. — Blackwelder 1945: 467. — Alvarenga 1994: 34. — Pecci-Maddalena *et al.* 2021b: 3099.

Type specimen

Not located.

Other specimens examined

BRAZIL • 1 spec. (Fig. 36A); “Coleção M. Alvarenga [printed] \ CORCOVADO Rio Guanabara Brasil [printed] XI. 1958 [handwritten] Alvarenga e Seabra [printed] \ *Mycotretus rufilabris* (Lac. 1842) [handwritten] M. Alvarenga det. [printed] 1984 [handwritten]”; MNRJ.

Distribution

Brazil.

Remarks

There is an unlabeled specimen in the Brême collection (box “EROTYLIENS–Engidiformes, 1H–16 [handwritten]”) which may be the type specimen of *M. rufilabris*, but it has not been examined by us.

202. *Mycotretus sannio* Lacordaire, 1842

Mycotretus sannio Lacordaire, 1842: 169. Type locality: “Brésil”.

Mycotretus sannio – Crotch 1876: 441. — Gemminger & Harold 1876: 3695. — Kuhnt 1909: 75; 1911: 53. — Blackwelder 1945: 467. — Alvarenga 1994: 34. — Skelley 1998b: 15.

Type specimen

Not located.

Other specimens examined

BRAZIL • 1 spec. (Fig. 36B) “TYPE. [printed. Crossed out], Sannio ex. Descr [?] [handwritten]”; UMCZ.

Distribution

Unknown locality in Brazil.

203. *Mycotretus savignyi* Lacordaire, 1842

Mycotretus savignyi Lacordaire, 1842: 156. Type locality: “Colombie” (Fig. 36C).

Mycotretus savignyi – Crotch 1873b: 145; 1876: 455. — Gemminger & Harold 1876: 3695. — Gorham 1888: 60. — Kuhnt 1909: 72; 1911: 53. — Deelder 1942: 89. — Mader 1942: 172; 1951: 212. — Blackwelder 1945: 467. — Guérin 1948: 20. — Alvarenga 1994: 34. — Skelley 1998b: 17. — McHugh & Chaboo 2015: 278.

Primary type

Lectotype, here designated (Fig. 36C)

COLOMBIA • “Ex-Musaeo Mniszech [printed] \ Type [handwritten] \ Savignyi Lac [handwritten] \ Colombie [handwritten] \ LECTOTYPE [printed] *Mycotretus savignyi* Lacordaire, 1842 [red label, handwritten]”; MNHN.

Remarks

New junior synonym of *M. lesueuri* Chevrolat, 1835 (Fig. 3F, see above).

204. *Mycotretus scalaris* Lacordaire, 1842

Mycotretus scalaris Lacordaire, 1842: 168. Type locality: “Colombie”.

Mycotretus scalaris – Crotch 1876: 440. — Gemminger & Harold 1876: 3695. — Kuhnt 1909: 71; 1911: 53. — Blackwelder 1945: 467. — Alvarenga 1994: 35.

Primary type

Lectotype, here designated (Fig. 36D)

COLOMBIA • “Ex-Musaeo, Mniszech [printed] \ Type [handwritten] \ Scalaris Lac [handwritten] \ Colombie [handwritten] \ LECTOTYPE [printed] *Mycotretus scalaris* Lacordaire, 1842 [red label, handwritten]”; MNHN.

Distribution

Unknown locality in Colombia.

205. *Mycotretus scitulus* Lacordaire, 1842

Mycotretus scitulus Lacordaire, 1842: 154. Type locality: Rio-Janeiro [= Rio de Janeiro, state? locality?, Southeast Brazil].

Mycotretus derasofasciatus Kuhnt, 1910: 237. Type locality: “Chanchamayo, Peru” **syn. nov.** (Fig. 23F).

Mycotretus nubifer Casey, 1916: 158. Type locality: “Guatemala (Quitché)” [= Department of Quiché, Guatemala] **syn. nov.** (Fig. 3E).

Mycotretus scitulus – Crotch 1876: 454. — Gemminger & Harold 1876: 3695. — Gorham 1888: 49; 1898: 253. — Kuhnt 1909: 75; 1911: 53. — Mader 1942: 174; 1951: 219, 222. — Blackwelder 1945: 467. — Delkeskamp 1957: 99. — Alvarenga 1994: 35. — Skelley 1998b: 17. — Robertson *et al.* 2004: 175. — McHugh & Chaboo 2015: 278. — Pecci-Maddalena *et al.* 2021a: 955; 2021b: 3100.
Mycotretus derasofasciatus – Kuhnt 1911: 49. — Mader 1942: 175, 199; 1951: 219, 222. — Blackwelder 1945: 466. — Guérin 1949a: 236. — Alvarenga 1994: 23. — McHugh & Chaboo 2015: 278.
Mycotretus nubifer – Blackwelder 1945: 467. — Alvarenga 1994: 31.

Primary type

Lectotype, here designated (Fig. 36E)

BRAZIL • “Lacordaire [handwritten] \ LECTOTYPE [printed] *Mycotretus scitulus* Lacordaire, 1842 [red label, handwritten]”; MRSN.

Other specimens examined

MEXICO • 1 ♂ (dissected); “Coleção M. Alvarenga [printed] \ Toxpam [handwritten] Mexico. Salle Coll. [printed] \ 2404 [printed] \ B.C.A., Col.,VII. *Mycotretus* [printed] \ *Mycotretus scitulus* Lac apud Sallé [handwritten] \ DZUP 132673 [printed]”; DZUP • 1 ♀ (dissected); “Coleção M. Alvarenga [printed] \ mex. [handwritten] \ *Mycotretus scitulus* Lac. [printed] \ DZUP 132675 [printed]”; DZUP.

VENEZUELA • 1 ♂ (dissected); “Coleção M. Alvarenga [printed] \ Rio Caurimare, CARACAS [printed] \ 24-4-60, BORDON LEG [printed] \ DZUP, 371162 [printed]”; DZUP.

BRAZIL • 1 ♂ (dissected); “BRASIL: MG, Viçosa; “Mata do Paraíso, trilha do pesquisador” 11.X.2016; I Souza-Gonçalves, P Borlini, C Lopes-Andrade leg [printed]”; CELC.

Distribution

Guatemala, Venezuela, Mexico, Brazil.

Remarks

The lectotype of *Mycotretus derasofasciatus* Kuhnt is morphologically identical to the lectotype of *M. scitulus*. The lectotype of *M. nubifer* Casey is slightly wider and has a smoother contour of the elytral medial band (not serrated) compared to the two former species. We dissected male individuals of those distinct phenotypes (and from widely separated localities, see above), and observed no morphological difference in their male genitalia. Aside from that, we noted several representatives of *M. scitulus*, housed in the DZUP collection, from distinct localities in the Neotropical region, as follows: “Tiriós”, “Jacaré P.N. Xingu” (Northeast Brazil), “Parque Soretama”, “Represa Rio Grande” (Southeast Brazil), and others. Such specimens and their labels were not examined in more details and were not included in the examined material listed above. These geographical records reveal that *M. scitulus* is a broadly distributed species in the Neotropical region, occurring from Mexico to Southeast Brazil.

206. *Mycotretus sexoculatus sexoculatus* Lacordaire, 1842

Mycotretus sexoculatus sexoculatus Lacordaire, 1842: 165. Type locality: “Colombie”.

Mycotretus sexoculatus sexoculatus – Crotch 1876: 439. — Gemminger & Harold 1876: 3695. — Kuhnt 1909: 74; 1911: 53. — Blackwelder 1945: 467. — Alvarenga 1994: 35. — Skelley 1998b: 15.

Primary type

Lectotype, here designated (Fig. 36F)

COLOMBIA • “TYPE [blue label, printed] \ TYPE. [printed] 6-oculatus R [handwritten] \ Nova Gr [handwritten] \ LECTOTYPE [printed] *Mycotretus sexoculatus* Lacordaire, 1842 [red label, handwritten]”; UMCZ.

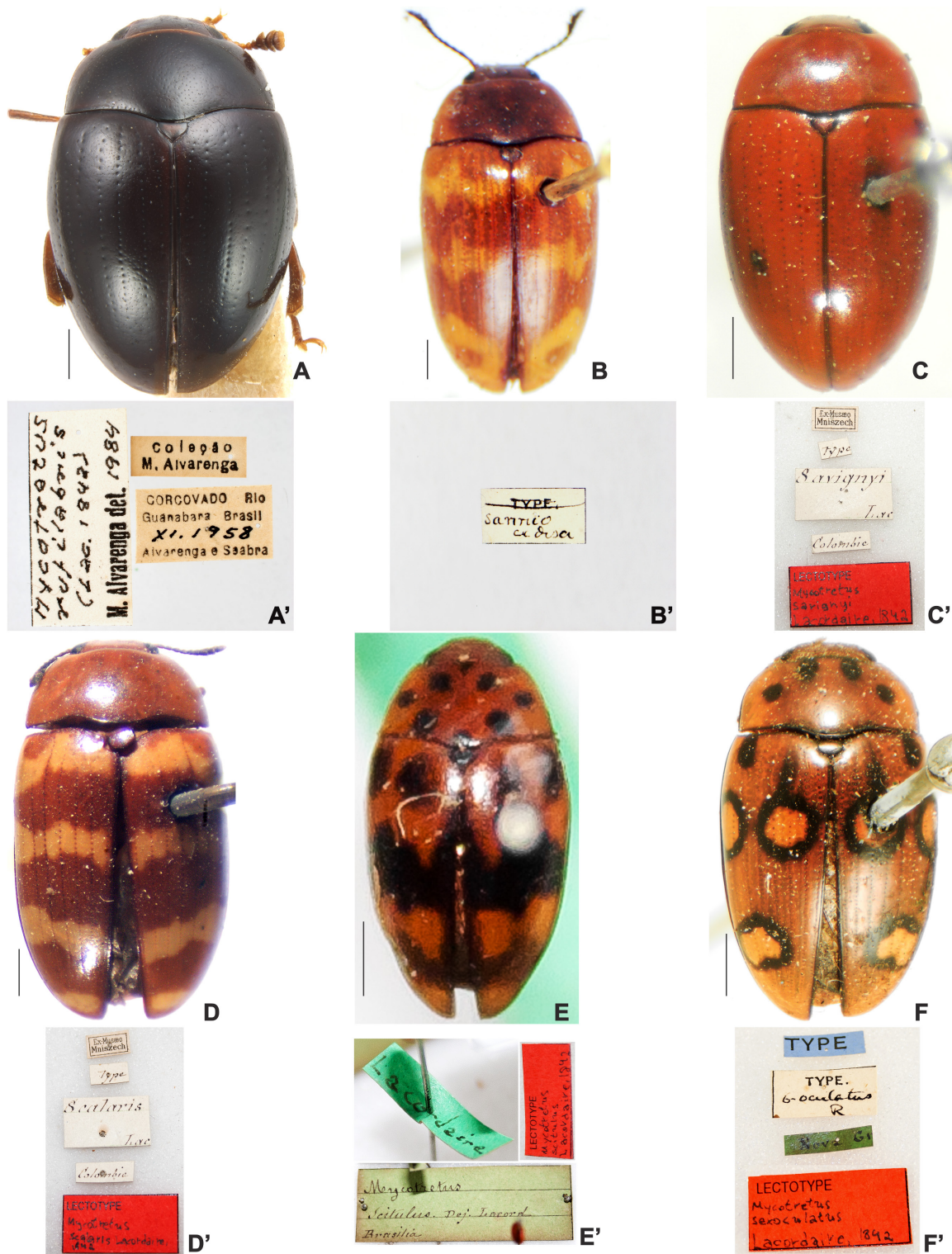


Fig. 36. Lacordaire specimens cont. C–F. Primary types (dorsal, labels). A–A'. Specimen of *Mycotretus rufilabris* (Lacordaire, 1842) from the Alvarenga collection (MNRJ, Brazil). B–B'. Specimen of *M. sannio* Lacordaire, 1842 from the Crotch collection (UMZC, UK). C–C'. Lectotype of *M. savignyi* Lacordaire, 1842. D–D'. Lectotype of *M. scalaris* Lacordaire, 1842. E–E'. Lectotype of *M. scitulus* Lacordaire, 1842. F–F'. Lectotype of *M. sexoculatus sexoculatus* Lacordaire, 1842. Scale bars: A = 0.5 mm; B–F = 1 mm.

Other specimens examined

BRAZIL • 1 ♀ (dissected); “Coleção M. Alvarenga [printed] \ Homeotipo [printed] \ CORCOVADO, Guanabara BRASIL [printed] XI. 1967 [handwritten], Alvarenga & Seabra [printed] \ Comparado c/ tipo, *Mycotretus sexoculatus* Lac. 1842 [handwritten] M. Alvarenga det. 1971 [printed]”; MNRJ • 1 ♀ (dissected); “Coleção M. Alvarenga [printed] \ REPRÊSA RIO GRANDE, Guanabara BRASIL [printed] XII. 1977 [handwritten] F.M. Oliveira [printed] \ *Mycotretus sexoculatus sexoculatus* Lac. 1842 [handwritten] M. Alvarenga det. [printed] 1984 [handwritten]”; MNRJ • 1 ♂ (dissected); “Coleção M. Alvarenga [printed] \ REPRÊSA RIO GRANDE, Guanabara BRASIL [printed] IV. 1966 [handwritten] F.M. Oliveira [printed] \ MALAISE [handwritten] \ *mycotretus* 020 [handwritten]”; MNRJ.

Distribution

Colombia, Southeast Brazil.

207. *Mycotretus silaceus* Lacordaire, 1842

Mycotretus silaceus Lacordaire, 1842: 187 (Fig. 37A). Type locality: “Brésil”.

Mycotretus silaceus Gorham 1888: 60 [junior synonym]. — Alvarenga 1994: 36. — Skelley 1998b: 17.

Primary type

Lectotype, here designated (Fig. 37A)

BRAZIL • “TYPE. [printed] *silaceus* Ch [handwritten] \ TYPE [printed, blue label] \ LECTOTYPE [printed] *Mycotretus silaceus* Lacordaire, 1842 [red label, handwritten]”; UMCZ.

Remarks

Junior synonym of *M. sobrinus* (Guérin-Méneville, 1841) (Fig. 22E, see above).

208. *Mycotretus singularis* Lacordaire, 1842

Mycotretus singularis Lacordaire, 1842: 148. Type locality: “Colombie”.

Mycotretus singularis – Crotch 1876: 451. — Gemminger & Harold 1876: 3695. — Kuhnt 1909: 74; 1911: 53. — Blackwelder 1945: 467. — Alvarenga 1994: 35. — Skelley 1998b: 17.

Primary type

Lectotype, here designated (Fig. 37B)

COLOMBIA • “Nova Gr [handwritten] \ TYPE [blue label, printed] \ TYPE. [printed] *Singularis* R [handwritten] \ LECTOTYPE [printed] *Mycotretus singularis* Lacordaire, 1842 [red label, handwritten]”; UMCZ.

Distribution

Unknown locality in Colombia.

209. *Mycotretus sticticollis* Lacordaire, 1842

Mycotretus sticticollis Lacordaire, 1842: 174. Type locality: “Cayenne” [French Guiana].

Mycotretus sticticollis – Crotch 1876: 446. — Gemminger & Harold 1876: 3695. — Kuhnt 1909: 73; 1911: 54. — Blackwelder 1945: 467. — Alvarenga 1994: 36.

Type specimen

Not located.

Distribution

Unknown locality in French Guiana.

210. *Mycotretus terminalis* Lacordaire, 1842

Mycotretus terminalis Lacordaire, 1842: 134 (Fig. 37C). Type locality: “Rio-Janeiro” [= Rio de Janeiro, state? locality?, Southeast Brazil].

Mycotretus terminalis – Crotch 1876: 449. — Gemminger & Harold 1876: 3695. — Gorham 1888: 47 [junior synonym of *M. ornatus*]. — Kuhnt 1909: 76 [variety of *M. ornatus*]; 1911: 52. — Deelder 1942: 88. — Mader 1942: 175; 1951: 221. — Blackwelder 1945: 467. — Alvarenga 1994: 32. — Skelley 1998b: 16.

Primary type

Holotype (Fig. 37C)

BRAZIL • “Lacordaire [handwritten] \ Holotype, *Mycotretus terminalis* Lacordaire, 1842 [red label, handwritten]”; MRSN.

Remarks

Junior synonym of *M. ornatus* (Duponchel, 1825) (Fig. 14A, see above).

211. *Mycotretus tessararius* Lacordaire, 1842

Mycotretus tessararius Lacordaire, 1842: 191. Type locality: “Colombie”.

Mycotretus tessararius – Crotch 1876: 458. — Gemminger & Harold 1876: 3695. — Kuhnt 1909: 75; 1911: 54. — Blackwelder 1945: 467. — Alvarenga 1994: 36.

Type specimen

Not located.

Distribution

Unknown locality in Colombia.

212. *Mycotretus tigratus* Lacordaire, 1842

Mycotretus tigratus Lacordaire, 1842: 150. Type locality: “Colombie”.

Mycotretus nigrocinctus Lacordaire, 1842: 151 (Fig. 33E). Type locality: “Colombie”.

Mycotretus trabeatus Lacordaire, 1842: 148. Type locality: “Colombie” **syn. nov.** (Fig. 37E).

Mycotretus tigratus – Crotch 1876: 451. — Gemminger & Harold 1876: 3695. — Kuhnt 1909: 74; 1911: 54. — Blackwelder 1945: 467. — Mader 1951: 217. — Alvarenga 1994: 36.

Mycotretus nigrocinctus – Crotch 1876: 451 [synonym of *M. tigratus* Lacordaire, 1842]. — Kuhnt 1909: 74; 1911: 54451. — Blackwelder 1945: 467451. — Mader 1951: 217451. — Alvarenga 1994: 36.

Mycotretus trabeatus – Crotch 1876: 451. — Gemminger & Harold 1876: 3695. — Kuhnt 1909: 74; 1911: 54. — Deelder 1942: 90. — Mader 1951: 216. — Blackwelder 1945: 468. — Alvarenga 1994: 37. — Skelley 1998b: 17.

Primary type

Lectotype, here designated (Fig. 37D)

COLOMBIA • “Ex-Musaeo Mniszech [printed] \ Type [handwritten] \ Tigratus Lac [handwritten] \ Colombie [handwritten] \ LECTOTYPE [printed] *Mycotretus tigratus* Lacordaire, 1842 [red label, handwritten]”; MNHN.

Distribution

Unknown locality in Colombia.

Remarks

1) The small differences in coloration of *Mycotretus nigrocinctus* Lacordaire, *M. trabeatus* Lacordaire and *M. tigratus* Lacordaire are expected to occur in species of *Mycotretus* of a single locality and, in spite of that, we observed that these species have the same general colour pattern. Therefore, here we synonymized *M. trabeatus* Lacordaire under *M. tigratus* Lacordaire. 2) Crotch (1876) placed *M. nigrocinctus* under *M. tigratus* stating only the following: “*M. nigrocinctus* has lost the elytral spot, retaining only the band”. That act was interpreted by Kuhnt (1909) as a “variety” and was repeated in subsequent works (Kuhnt 1911; Blackwelder 1945). Later, Mader (1951) stated the following: “*tigratus* a. *nigrocinctus* Lac.”, with the “a” probably meaning an “aberration” and this interpretation was followed by Alvarenga (1994). Here, we considered Crotch’s act as a synonymy and consider use of the term “aberration” as incorrect.

213. *Mycotretus trabeatus* Lacordaire, 1842

Mycotretus trabeatus Lacordaire, 1842: 148. Type locality: “Colombie” (Fig. 37E).

Mycotretus trabeatus – Crotch 1876: 451. — Gemminger & Harold 1876: 3695. — Kuhnt 1909: 74; 1911: 54. — Deelder 1942: 90. — Mader 1951: 216. — Blackwelder 1945: 468. — Alvarenga 1994: 37. — Skelley 1998b: 17.

Primary type

Lectotype, here designated (Fig. 37E)

COLOMBIA • “Ex-Musaeo Mniszech [printed] \ Type [handwritten] \ Trabeatus Lac [handwritten] \ Colombie [handwritten] \ LECTOTYPE [printed] *Mycotretus trabeatus* Lacordaire, 1842 [red label, handwritten]”; MNHN.

Remarks

New junior synonym of *M. tigratus* Lacordaire, 1842 (Fig. 37D, see above).

214. *Mycotretus vilis* Lacordaire, 1842

Mycotretus vilis Lacordaire, 1842: 175. Type locality: “Cayenne” [French Guiana].

Mycotretus vilis – Crotch 1876: 446. — Gemminger & Harold 1876: 3695. — Kuhnt 1909: 73; 1911: 54. — Blackwelder 1945: 468. — Alvarenga 1994: 37.

Type specimen

Not located.

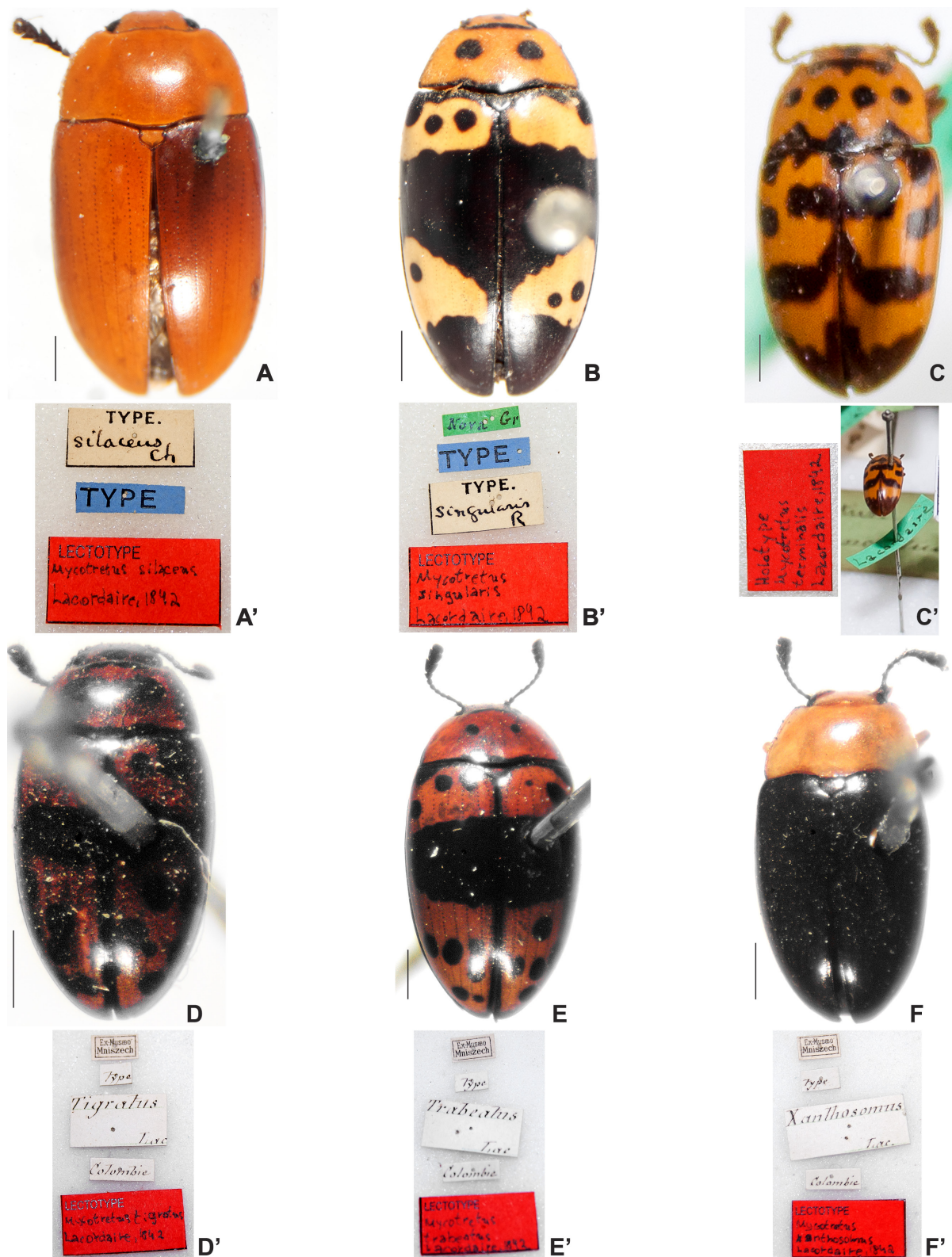


Fig. 37. Lacordaire primary types (dorsal, labels) cont. **A–A'**. Lectotype of *Mycotretus silaceus* (Lacordaire, 1842). **B–B'**. Lectotype of *M. singularis* Lacordaire, 1842. **C–C'**. Holotype of *M. terminalis* Lacordaire, 1842. **D–D'**. Lectotype of *M. tigratus* Lacordaire, 1842. **E–E'**. Lectotype of *M. trabeatus* Lacordaire, 1842. **F–F'**. Lectotype of *M. xanthosomus* Lacordaire, 1842. Scale bars = 1 mm.

Distribution

Unknown locality in French Guiana.

215. *Mycotretus xanthosomus* Lacordaire, 1842

Mycotretus xanthosomus Lacordaire, 1842: 162 (Fig. 37F). Type locality: “Colombie”.

Mycotretus xanthosomus – Crotch 1876: 439 [synonym of *M. melanopterus* Lacordaire, 1842]. — Alvarenga 1994: 29.

Primary type

Lectotype, here designated (Fig. 37F)

COLOMBIA • “Ex-Musaeo Mniszech [printed] \ Type [handwritten] \ Xanthosomus Lac. [handwritten] \ Colombie [handwritten] \ LECTOTYPE [printed] *Mycotretus xanthosomus* Lacordaire, 1842 [red label, handwritten]”; MNHN.

Remarks

Junior synonym of *M. melanopterus* Lacordaire, 1842 (Fig. 32F, see above).

XIX. Mader, L.
Figs 38, 39A–D

Mycolybas antesignatus (Mader, 1942) comb. nov.

Mycotretus antesignatus Mader, 1942: 174, 198. Type locality: “Peru”.

Mycotretus antesignatus – Mader 1951: 220. — Alvarenga 1994: 20.

Primary type

Holotype (Fig. 38A)

PERU • “Holotypus [red label, printed] \ Typus [printed] \ Peru [handwritten] \ Mus. Zool. Polonicum, Warszawa, 12/45 [printed] \ 147 [printed] \ *Mycotretus antesignatus* Holotype m. det. Mader [handwritten] \ ? [handwritten]”; MIZ.

Other specimens examined

BRAZIL • 1 ♀ (dissected); “Coleção M. Alvarenga [printed] \ V. Rondônia, Rondônia Brasil, I–1961, A. Machado [printed] \ 2178 [printed] \ I. Sedis 043 [handwritten] \ PMMD. Linhas prosternais junto as cavidades coxais, linhas metasternais e abdominais ausentes. Tibias [?] fortemente dilatadas apicalmente. [handwritten]”; MNRJ • 1 ♂ (dissected); “Coleção M. Alvarenga [printed] \ Chapada dos Guimarães [printed] 2–2–[handwritten]-1961[printed] \ Brasil, MT, J.&B. Bechyné [printed] \ *Mycotretus antesignatus* Mader, 1942 [handwritten] M. Alvarenga det. [printed] 1984 [handwritten]”; MNRJ.

Distribution

Peru, North and Central-West Brazil.

Remarks

Despite its colour pattern with bands and spots, this species fits well with the diagnosis of *Mycolybas* Crotch, 1876 proposed by Lopes (2006), and the general features mentioned by Pecci-Maddalena *et al.*

(2021b) for this genus. The following combination of characters quickly removes “*antesignatus*” from *Mycotretus* and places it in *Mycolybas*: absence of mesocoxal lines on the metaventrite (not verified in *Mycotretus*), mental plate pentagonal, humeri protuberant and the general morphology of the flagellar head of male genitalia, similar to that of other *Mycolybas* species (see Lopes 2006).

216. *Mycotretus cunctans* Mader, 1942

Mycotretus cunctans Mader, 1942: 174, 198. Type locality: “Peru: Chanchamayo”.

Mycotretus cunctans – Mader 1951: 217. — Alvarenga 1994: 23.

Primary type

Holotype (Fig. 38B)

PERU • “Dr. Bässler Chanchomayo [printed] \ 12/84 [handwritten] \ Holotypus [printed] \ Priotelus [handwritten] spec. [Handwritten] \ *Mycotretus cunctans* m. det. Mader [handwritten] \ HOLOTYPUS [red label, printed] \ *Mycotretus cunctans* Mader [handwritten] \ Staatl. Museum für Tierkunde Dresden [printed]”; SNSD.

Other specimens examined

BOLIVIA • 1 spec.; “BOLIVIA, tropica Region CHAPARÉ (400 Mtr.) DIRINGS [front, printed] MAI 1954 [back, printed] \ *Mycotretus cunctans* Mader [printed]”; MZSP • 1 spec.; “BOLIVIA, tropica Region CHAPARÉ (400 Mtr.) DIRINGS [front, printed] MAI 1954 [back, printed] \ *Mycotretus cunctans* Mader [printed] \ *Mycotretus cunctans* MADER [printed]”; MZSP.

Distribution

Peru, Bolivia.

217. *Mycotretus major* Mader, 1955

Mycotretus major Mader, 1955: 477. Type locality: “Paraguay: Villarica” (Fig. 38D).

Mycotretus major – Alvarenga 1994: 29.

Primary type

Holotype (Fig. 38D)

PARAGUAY • “Villarica, Paraguay, XI, 1951 [handwritten] \ Holotype major m. [red label, handwritten]”; NMBS.

Remarks

New junior synonym of *M. flavomarginatus* Lacordaire, 1842 (Fig. 29E, see above).

218. *Mycotretus opalizans* Mader, 1942

Mycotretus opalizans Mader, 1942: 175, 200. Type locality: “Peru: Chanchamayo”.

Mycotretus opalizans – Mader 1951: 223. — Alvarenga 1994: 31.

Primary type

Holotype (Fig. 38E)

PERU • “Holotypus [red label, printed] \ Schenkling det. [printed] \ Coll. Kraatz [printed] \ Peru [handwritten] \ pelliciens [handwritten] \ Keine Rede vom M. pelliciens. Type ist ganz anders. [handwritten, ‘M. pelliciens not relevant, the type is completely different’] \ *Mycotretus opalizans* sp. nov. Det. Mader [handwritten]”; SDEI.

Distribution

Peru.

Remarks

Mycotretus opalizans Mader, 1942 is morphologically similar to *M. opalescens* Crotch (Fig. 8F) and they may be synonymized in the future. At the moment we do not have any specimen phenotypically similar to *M. opalizans*, and therefore we prefer not to take any taxonomic acts.

219. *Mycotretus partialis* Mader, 1940

Mycotretus partialis Mader, 1940: 12. Type locality: “Cauca in Colombien” [Department of Cauca, Colombia] (Fig. 39A).

Mycotretus partialis – Blackwelder 1945: 467. — Delkeskamp 1957: 113. — Alvarenga 1994: 32.

Primary type

Holotype (Fig. 39A)

COLOMBIA • “Cauca, Columb. [printed] \ Holo-[handwritten] TYPUS. [red label, printed] partialis M. [handwritten] \ M. partialis Kuhnt [handwritten]”; NMBS.

Remarks

New junior synonym of *M. ornatus* (Duponchel, 1825) (Fig. 14A, see above).

220. *Mycotretus prioteloides* Mader, 1942

Mycotretus prioteloides Mader, 1942: 174, 196. Type locality: “Bolivien: Coroico”.

Mycotretus prioteloides – Mader 1951: 217. — Alvarenga 1994: 33. — Pecci-Maddalena & Lopes-Andrade 2018b: 1.

Primary type

Holotype (Fig. 39B)

BOLIVIA • “Coroico Bolivia [printed] \ prioteloides Mad. [handwritten] \ holo- [handwritten], TYPUS [red label, printed], prioteloides [handwritten]”; NMBS.

Other specimens examined

See Pecci-Maddalena & Lopes-Andrade (2018b).

Distribution

Bolivia (Coroico), Peru (Calango, Machu Picchu).

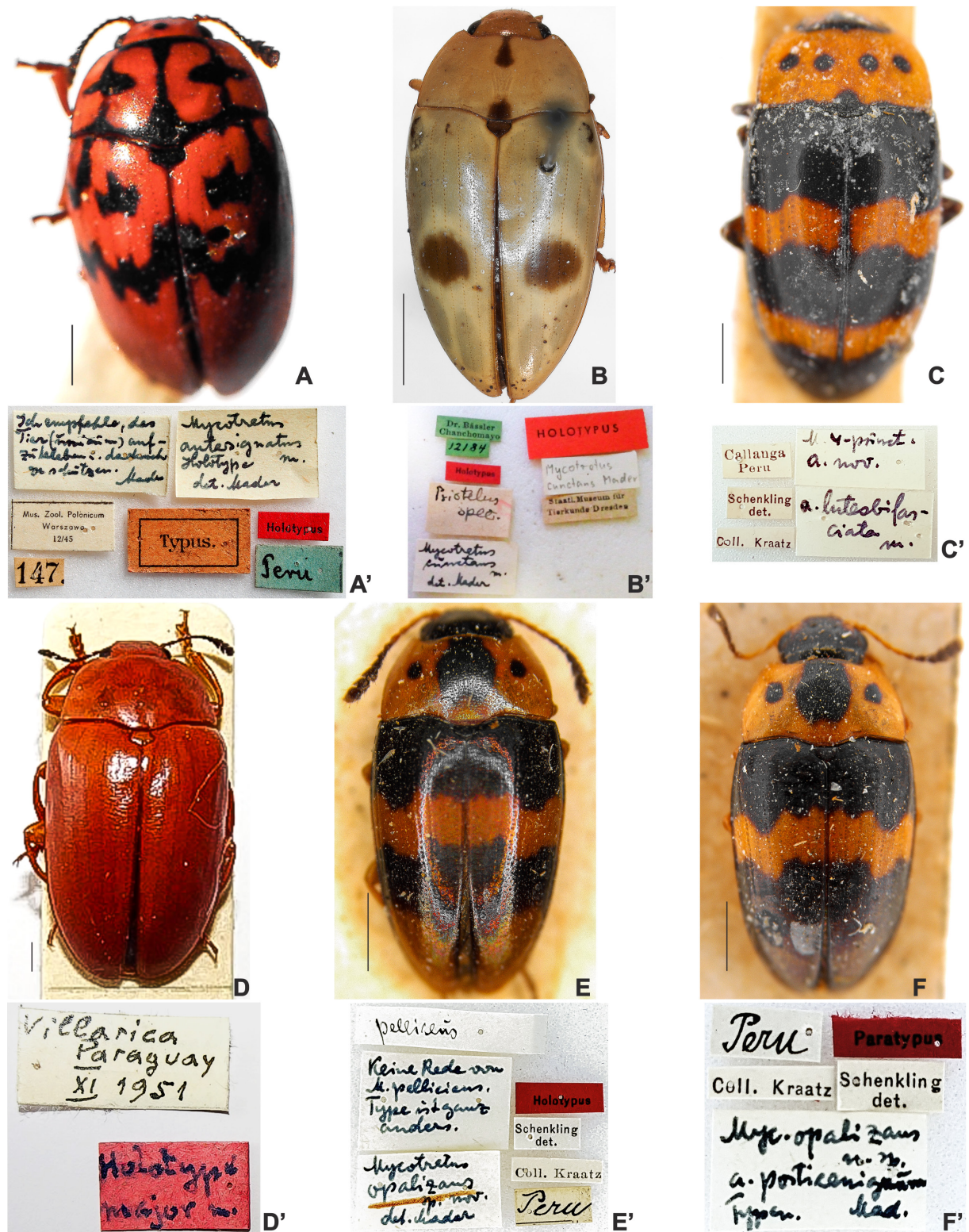


Fig. 38. A–B, D–F. Mader primary types (dorsal, labels). A–A'. Holotype of *Mycotretus antesignatus* Mader, 1942 [= *Mycolybas antesignatus* (Mader) comv. nov.]. B–B'. Holotype of *M. cunctans* Mader, 1942. C–C'. *M. quadripunctatus* ab. *luteobifasciatus* Mader, 1942 (invalid name). D–D'. Holotype of *M. major* Mader, 1955. E–E'. Holotype of *M. opalizans* Mader, 1942. F–F'. *M. opalizans* ab. *posticenigrum* Mader, 1942 (invalid name). Scale bars: A, C–F = 1 mm; B = 2 mm.

Remarks

See Pecci-Maddalena & Lopes-Andrade (2018b).

221. *Mycotretus tigrinoides* Mader, 1942

Mycotretus tigrinoides Mader, 1942: 174, 196. Type locality: “Peru: Ocobambe”.

Mycotretus tigrinoides – Mader 1951: 216. — Alvarenga 1994: 37. — Pecci-Maddalena & Lopes-Andrade 2018b: 1.

Primary type

Holotype (Fig. 39C)

PERU • “Holotypus [red label, printed] \ Coll. Kraatz [printed] \ Ocobambe Peru [printed] \ *Mycotretus tigrinoides* [handwritten] Ma. [?] det. Mader n.sp. [handwritten]”; SDEI.

Other specimens examined

See Pecci-Maddalena & Lopes-Andrade (2018b).

Distribution

Peru, North and Central-West Brazil.

Remarks

See Pecci-Maddalena & Lopes-Andrade (2018b).

222. *Mycotretus tigripennis* Mader, 1942

Mycotretus tigripennis Mader, 1942: 174, 197. Type locality: “Ecuador: Santa Inéz”.

Mycotretus tigripennis – Mader 1951: 217. — Alvarenga 1994: 37.

Primary type

Holotype (Fig. 39D).

ECUADOR • “Holotypus [red label, printed] \ Santa Jnéz [misspelling] (Ecuad.) R. Haensch S. [printed] \ Coll. Kraatz [printed] \ *Mycotretus tigripennis* [handwritten] Ma. [?] Holotypus det. Mader [handwritten]”; SDEI.

Other specimens examined

See Pecci-Maddalena & Lopes-Andrade (2018b).

Distribution

Ecuador (Santa Inéz) and Southeast Brazil.

Remarks

See Pecci-Maddalena & Lopes-Andrade (2018b).

XX. Olivier, A.G.

Fig. 39E–F

223. *Mycotretus maculatus* (Olivier, 1792)

Erotylus maculatus Olivier, 1792: 436. Type locality: “Surinam”.

Mycotretus figuratus Lacordaire, 1842: 159 (Fig. 29D). Type locality: “Cayenne” [French Guiana].

Mycotretus mutabilis Crotch, 1876: 438. Type locality: “Ega” [= Tefé, in the state of Amazonas, North Brazil] **syn. nov.** (Fig. 7E).

Erotylus maculatus – Duponchel 1825: 176. — Lacordaire 1842: 192.

Mycotretus figuratus – Chevrolat 1843: 79 [synonym of *M. maculatus* (Olivier, 1792)]. — Alvarenga 1994: 29.

Mycotretus maculatus – Crotch 1876: 438. — Gemminger & Harold 1876: 3693. — Gorham 1888: 49. — Kuhnt 1909: 76; 1911: 50. — Curran 1941: 286–287. — Blackwelder 1945: 466. — Guérin 1948: 20. — Alvarenga 1994: 28. — Skelley 1998b: 15. — McHugh & Chaboo 2015: 278.

Mycotretus mutabilis – Gemminger & Harold 1876: 3694. — Kuhnt 1909: 76; 1911: 51. — Blackwelder 1945: 467. — Alvarenga 1994: 30. — Skelley 1998b: 15.

Type specimen

Not located.

Other specimens examined

BRAZIL • 1 ♂ (dissected); “Coleção M. Alvarenga [printed] \ SINOP 12°31’S, 55°37’W, BR 163 km 500 a 600, Mato Grosso, BRASIL, 350 m [printed] X. 1975 [handwritten], Roppa & Alvarenga col. [printed] \ *Mycotretus mutabilis* Crotch, 1876 [handwritten] M. Alvarenga det. [printed] 1984 [handwritten]”; MNRJ • 1 ♂ (dissected); “Hansa. S. Catarina. [printed] 11. 941 ? [handwritten] \ Coll. J. Guerin. S. Paulo. Brasil. [printed] 18709 [handwritten] \ *Mycotretus maculatus* Ol. [handwritten] J. Guerin. det. 19 [printed] 54 [handwritten]”; MZSP.

PANAMA • 1 ♂ (dissected); (Fig. 39E); “Bugaba, 800–1,500 ft. Champion. [printed] \ Sp. figured. [printed] \ *Mycotretus maculatus* [handwritten] \ B.C.A., Vol., VII. *Mycotretus* [printed]”; BMNH.

Distribution

Neotropical region.

Remarks

1) There are no morphological or colour pattern differences between *M. maculatus* Olivier and *M. figuratus* Lacordaire, and we confirm the synonymy first proposed by Chevrolat (1843). 2) In spite of small colour differences between *M. maculatus* Olivier and *M. mutabilis* Crotch, the male genitalia and ventral/dorsal features of both species have the same morphology. Therefore we synonymized *M. mutabilis* under *M. maculatus*. 3) Crotch (1876: 438) mentioned one specimen named “*M. tricinctus*” in the description of *M. mutabilis*. However it is not clear whether it was considered a variety of *M. mutabilis* or any other specimen examined. In this case, we considered the “*M. tricinctus* specimen” as a paralectotype of *M. mutabilis*, but we included a question mark on its label (see Remarks on *M. mutabilis* above).

224. *Mycotretus tigrinus* (Olivier, 1792)

Erotylus tigrinus Olivier, 1792: 437. Type locality: “Surinam”.

Erotylus conspersus Germar, 1824: 614. Type locality: “Brasilia”.



Fig. 39. A–D, G. Primary types (dorsal, labels). A–A'. Holotype of *Mycotretus partialis* Mader, 1940. B–B'. Holotype of *M. prioteloides* Mader, 1942. C–C'. Holotype of *M. tigrinoides* Mader, 1942. D–D'. Holotype of *M. tigripennis* Mader, 1942. E–E'. Specimen of *M. maculatus* (Olivier, 1791) from the BMNH collection (UK). F–F'. Topotype of *M. tigrinus* (Olivier, 1791) from RBINS (Belgium). G–G'. Holotype of *M. alvarengai* Pecci-Maddalena & Lopes-Andrade, 2018. Scale bars: A–C, E–G = 1 mm; D = 2 mm.

Mycotretus multimaculatus Taschenberg, 1870: 197 (Fig. 40F). Type locality: “Colombia”.

Mycotretus leopardus Crotch, 1876: 451. Type locality: “Peru”.

Mycotretus tigrinus pardalis Crotch, 1876: 451 [as a variety]. Type locality: “Ecuador” [apud Alvarenga 1994].

Erotylus tigrinus – Duponchel 1825: 51.

Mycotretus conspersus – Lacordaire 1842: 145 [synonym of *M. tigrinus* (Olivier)]. — Alvarenga 1994: 37. — Pecci-Maddalena & Lopes-Andrade 2018b: 4.

Mycotretus tigrinus – Lacordaire 1842: 145. — Erichson 1847: 180. — Guérin-Méneville 1855: 610. — Fauvel 1860: 326. — Crotch 1876: 451. — Gemminger & Harold 1876: 3695. — Kirsch 1876: 101. — Kuhnt 1909: 74; 1911: 54. — Deelder 1942: 90. — Mader 1942: 173; 1951: 216. — Blackwelder 1945: 468. — Guérin 1948: 20. — Delkeskamp 1957: 99. — Alvarenga 1994: 37. — Skelley 1998b: 17. — McHugh & Chaboo 2015: 278. — Pecci-Maddalena & Lopes-Andrade 2018b: 1. — Pecci-Maddalena *et al.* 2021a: 955.

Mycotretus leopardus – Crotch 1876: 451 [synonym of *M. tigrinus* (Olivier)]. — Gorham 1888: 49. — Kuhnt 1911: 54. — Alvarenga 1994: 37. — Pecci-Maddalena & Lopes-Andrade 2018b: 4 [attribution of the genus authorship to Crotch].

Mycotretus multimaculatus – Gemminger & Harold 1876: 3693. — Kuhnt 1909: 74; 1911: 51. — Blackwelder 1945: 467. — Mader 1942: 174; 1951: 216. — Alvarenga 1994: 29. — Pecci-Maddalena & Lopes-Andrade 2018b: 4 [synonym of *M. tigrinus* (Olivier)].

Mycotretus tigrinus pardalis – Gemminger & Harold 1876: 3695. — Kuhnt 1909: 74; 1911: 54. — Mader 1942: 173; 1951: 216. — Blackwelder 1945: 468. — Alvarenga 1994: 37. — Pecci-Maddalena & Lopes-Andrade 2018b: 4 [synonym of *M. tigrinus* (Olivier)].

Type specimen

Not located.

Other specimens examined

SURINAME • 1 spec. (Fig. 39F); “*Mycotretus tigrinus*, Surinam Oliv [handwritten] \ Coll. R. I. Sc. N. B., Surinam, Coll. Chapuis [printed]”; See Pecci-Maddalena & Lopes-Andrade (2018b); RBINS.

Distribution

Northern to southern Neotropical region.

Remarks

See Pecci-Maddalena & Lopes-Andrade (2018b) for details concerning *M. tigrinus*. The name “*Mycotretus multipunctatus* Dej.”, listed and placed in synonymy with *M. tigrinus* in Dejean (1836), is a nomen nudum.

XXI. Pecci-Maddalena, I.S.C. & Lopes-Andrade, C.

225. *Mycotretus alvarengai* Pecci-Maddalena & Lopes-Andrade, 2018

Mycotretus alvarengai Pecci-Maddalena & Lopes-Andrade, 2018a: 1. Type locality: “Maués, in the state of Amazonas, North Brazil. Estimated coordinates: 5°3’47”S, 58°18’10”W”.

Primary type

Holotype (Fig. 39G)

BRAZIL • “Coleção M. Alvarenga [printed] \ Brasilien [printed], Maués, Amazonas, 3.1940 [handwritten], B. Pohl [printed] \ *Mycotretus multinotatus* sp.n. holótipo [handwritten], M. Alvarenga

det. 1999 [printed] \ Mycotr. 018 [printed] \ HOLOTYPUS *Mycotretus alvarengai* Pecci-Maddalena & Lopes-Andrade [red label, printed]"; MNRJ.

Distribution

Known only from the type locality Maués in the Amazon, North Brazil.

Remarks

See Pecci-Maddalena & Lopes-Andrade (2018a).

XXII. Taschenberg, E.L.

Fig. 40

226. *Mycotretus bicolor* Taschenberg, 1870

Mycotretus bicolor Taschenberg, 1870: 198. Type locality: "Colombia".

Mycotretus monrosi Guérin, 1949b: 589. Type locality: "Piletas, Salta" [Department of Salta, Argentina] **syn. nov.** (Fig. 21F).

Mycotretus bicolor – Gemminger & Harold 1876: 3692. — Kuhnt 1909: 73; 1911: 48. — Mader 1942: 172; 1951: 213. — Blackwelder 1945: 465. — Alvarenga 1994: 21. — McHugh & Chaboo 2015: 278.

Mycotretus monrosi – Alvarenga 1994: 29.

Primary type

Lectotype, here designated (image not available)

COLOMBIA • "bicolor*", Zeitschr. 1870. Colomb. Wallis [green label, handwritten, box label] \ LECTOTYPE *Mycotretus bicolor* Taschenberg, 1870 det. I. Pecci-Maddalena 2017 [red label, printed]"; ZNS.

Other specimens examined

BOLIVIA • 1 ♀ (dissected; Fig. 40A); "Chapare, Bolivia, iv. 1953, A. Martinez [handwritten] \ Coleção M. Alvarenga [printed] \ *Mycotretus bicolor* Tasch. 1870 [handwritten] M. Alvarenga det. [printed] 1984 [handwritten]"; MNRJ.

Distribution

Colombia, Ecuador, Peru, Bolivia, Argentina.

Remarks

Mycotretus monrosi Guérin is identical to *Mycotretus bicolor* Taschenberg.

Mycotretus coccinelloides Taschenberg, 1870

Mycotretus coccinelloides Taschenberg, 1870: 198 (Fig. 40B). Type locality: not mentioned in the description [based on type label = Colombia].

Mycotretus coccinelloides – Gemminger & Harold 1876: 3692. — Kuhnt 1909: 74; 1911: 48. — Blackwelder 1945: 466. — Alvarenga 1994: 22. — Pecci-Maddalena *et al.* 2021b: 3078 [synonym of *Mycomystes apicalis*].

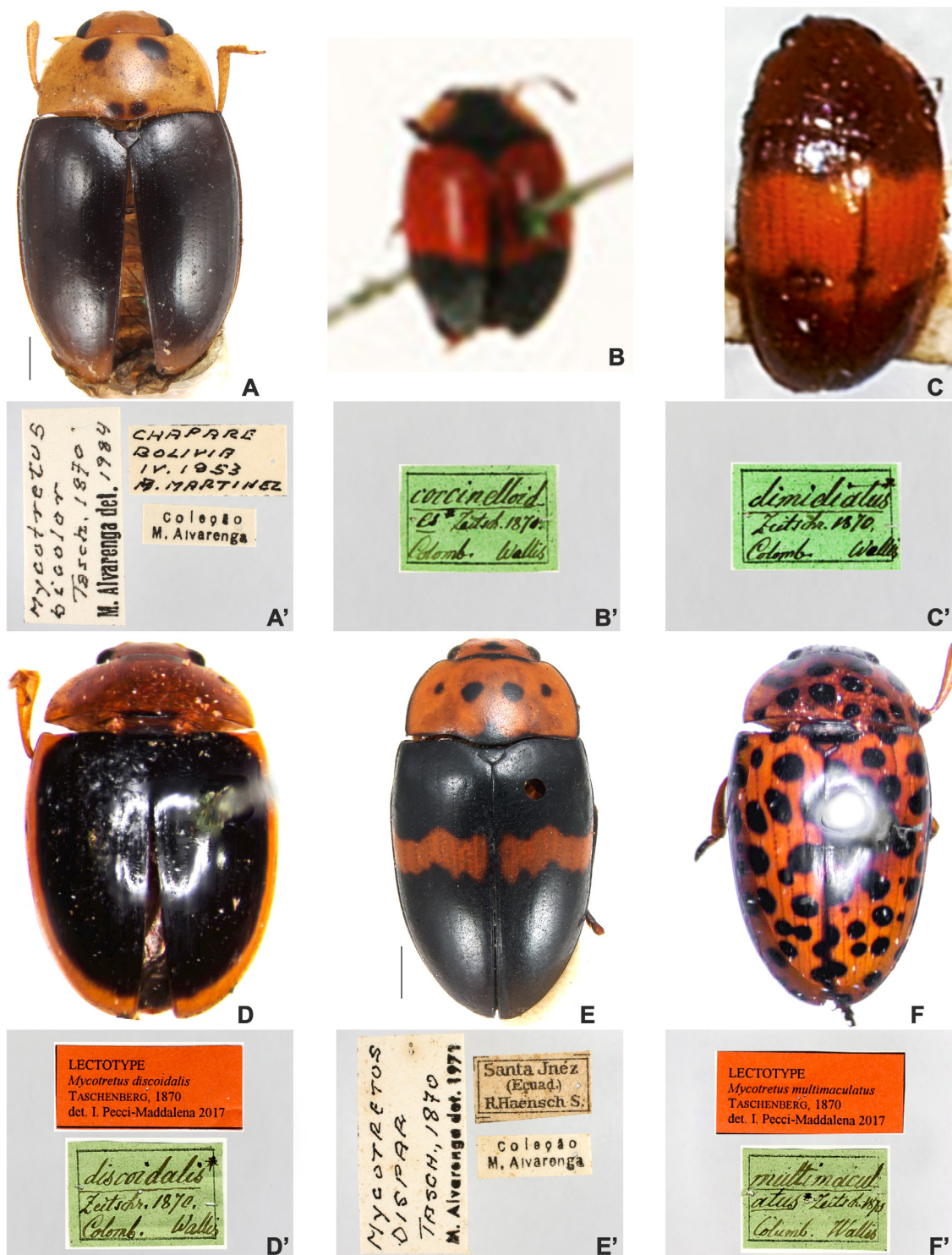


Fig. 40. Taschenberg specimens. **B–D, F.** Primary types (dorsal, labels). **A–A’.** Specimen of *Mycotretus bicolor* Taschenberg, 1870 from Alvarenga collection (MNRJ, Brazil). **B–B’.** Lectotype of *M. coccinelloides* Taschenberg, 1870 [synonym of *Mycomystes apicalis* (Lacordaire, 1842)]. **C–C’.** Lectotype of *M. dimidiatus* Taschenberg, 1870. **D–D’.** Lectotype of *M. discoidalis* Taschenberg, 1870 [synonym of *Mycomystes melanophthalmus* (Duponchel, 1825)]. **E–E’.** Specimen of *M. dispar* Taschenberg, 1870 from the Alvarenga collection (MNRJ, Brazil). **F–F’.** Lectotype of *M. multimaculatus* Taschenberg, 1870. Scale bars: A = 0.5 mm; E = 1 mm; B–D, F = see Material and methods.

Primary type

Lectotype (Fig. 40B)

COLOMBIA • “LECTOTYPE, *Mycotretus coccinelloides* Taschenberg, 1870, det. I. Pecci-Maddalena 2017 [red label, printed] \ coccinelloides, Zeitschr. 1870. Colomb. Wallis [handwritten]”; ZNS.

Remarks

Synonym of *Mycomystes apicalis* (Lacordaire, 1842) (Pecci-Maddalena *et al.* 2021b; Fig. 26E above).

227. *Mycotretus dimidiatus* Taschenberg, 1870

Mycotretus dimidiatus Taschenberg, 1870: 198. Type locality: “Colombia”.

Mycotretus dimidiatus – Gemminger & Harold 1876: 3692. — Kuhnt 1909: 71; 1911: 49. — Blackwelder 1945: 466. — Alvarenga 1994: 24.

Primary type

Lectotype, here designated (Fig. 40C)

COLOMBIA • “dimidiatus*, Zeitschr. 1870. Colomb. Wallis [green label, handwritten, box label] \ LECTOTYPE *Mycotretus dimidiatus* Taschenberg, 1870 det. I. Pecci-Maddalena 2017 [red label, printed]”; ZNS.

Distribution

Unknown locality in Colombia.

Mycotretus discoidalis Taschenberg, 1870

Mycotretus discoidalis Taschenberg, 1870: 199 (Fig. 40D). Type locality: “Colombia”.

Mycotretus discoidalis – Gemminger & Harold 1876: 3692. — Kuhnt 1909: 73; 1911: 49. — Mader 1942: 173; 1951: 214. — Blackwelder 1945: 466. — Alvarenga 1994: 24. — McHugh & Chaboo 2015: 278. — Pecci-Maddalena *et al.* 2021b: 3080 [synonym of *Mycomystes melanophthalmus*].

Primary type

Lectotype (Fig. 40D)

COLOMBIA • “LECTOTYPE, *Mycotretus discoidalis* Taschenberg, 1870, det. I. Pecci-Maddalena 2017 [red label, printed] \ discoidalis, Zeitschr. 1870. Colomb. Wallis [handwritten]”; ZNS.

Remarks

Synonym of *Mycomystes melanophthalmus* (Duponchel, 1825) (Pecci-Maddalena *et al.* 2021b; Fig. 13D above).

228. *Mycotretus dispar* Taschenberg, 1870

Mycotretus dispar Taschenberg, 1870: 197. Type locality: “Colombia” (Fig. 40E).

Mycotretus dispar – Gemminger & Harold 1876: 3692. — Kuhnt 1909: 74; 1911: 49. — Deelder 1942: 88. — Mader 1942: 173; 1951: 215, 223. — Blackwelder 1945: 466. — Alvarenga 1994: 24. — McHugh & Chaboo 2015: 278.

Primary type

Lectotype, here designated (image not available)

COLOMBIA • “LECTOTYPE, *Mycotretus dispar* Taschenberg, 1870, det. I. Pecci-Maddalena 2017 [red label, printed] \ *dispar**, Zeitschr. 1870. Colomb. Wallis [handwritten]”; ZNS.

Remarks

New junior synonym of *M. ornatus* (Duponchel, 1825) (Fig. 14A, see above).

229. *Mycotretus multimaculatus* Taschenberg, 1870

Mycotretus multimaculatus Taschenberg, 1870: 197 (Fig. 40F). Type locality: “Colombia”.

Mycotretus multimaculatus – Gemminger & Harold 1876: 3693. — Kuhnt 1909: 74; 1911: 51. — Blackwelder 1945: 467. — Mader 1942: 174; 1951: 216. — Alvarenga 1994: 29. — Pecci-Maddalena & Lopes-Andrade 2018b: 4 [synonym of *M. tigrinus* (Olivier)].

Primary type

Lectotype (Fig. 40F)

COLOMBIA • “multimaculatus, Zeitschr. 1870. Colomb. Wallis [green label, handwritten, box label] \ LECTOTYPE *Mycotretus multimaculatus* Taschenberg, 1870 det. I. Pecci-Maddalena 2017 [red label, printed]”; ZNS.

Remarks

Junior synonym of *M. tigrinus* (Olivier, 1792) (Fig. 39F, see above).

Discussion

Comparisons with the Catalogue of Alvarenga (1994)

Except for the aforementioned “*Mycotretus fasciatus*” (a member of *Epopterus*, Endomychidae), two Mader “aberrations” and four homonyms (*M. dimidiatus* Crotch, 1876; *M. parallelus* (Kuhnt, 1909); *M. bicolor* Kirsch, 1876; *M. ocellatus* (Germar, 1824)), Alvarenga (1994) listed 244 names in *Mycotretus*, as follows: 218 “valid” species names (including *M. nigrocinctus* Lacordaire, wrongly considered an “aberration”, see main text), 11 “varieties” (here elevated to subspecies) and 15 synonyms.

Since the publication of Alvarenga’s catalogue until the present work, the number of available names (244) and the number of valid names (218) included in *Mycotretus* have changed, as follows: *Mycotretus bicinctus* Guérin, 1949 was synonymized with *M. chilensis* Crotch, 1876 and *M. multimaculatus* Taschenberg, 1870 and *M. tigrinus pardalis* Crotch 1876 with *M. tigrinus* (Olivier, 1792) (Pecci-Maddalena & Lopes-Andrade 2017, 2018b); *M. peruvianus* (Kirsch, 1876) was transferred to *Mycotretus* (Skelley & Powell 2018); and *M. alvarengai* Pecci-Maddalena & Lopes-Andrade, 2018 was described (Pecci-Maddalena & Lopes-Andrade 2018a). Recently, the genus *Mycomystes* was reviewed, resulting in five species transfers from *Mycotretus* to *Mycomystes* and ten synonymies (Pecci-Maddalena *et al.* 2021b). Prior to this paper, *Mycotretus* contained 231 available names and 204 valid names. Representatives of most of them were located and their images (most of them types) are shown in plates.

Herein, the numbers of names in *Mycotretus* are updated to 229 available and 174 valid species names, due to two species being excluded from the genus, 41 new junior synonyms and eleven taxa previously considered “varieties” and here elevated to the rank of subspecies (Table 1). In addition, of the 244 names listed by Alvarenga (1994), we examined and indicated the repositories of 216 types (Table 1), 74 more than Alvarenga, who indicated that the repositories of most of the Duponchel and Lacordaire types were

Table 1. A comparisons of the Catalogue of Alvarenga (1994), the taxonomic changes before the present work (1994–) and the results of the present work.

<i>Mycotretus</i> Lacordaire, 1842	Catalogue of Alvarenga (1994)	Before the present work (1994–)	Present work
Species listed (available names)	244	231	229
Valid species names	218	204	174***
«Varieties»	11	0	0
Subspecies	0	0	11
Synonymies	15	13	41
Species transferred to or described in <i>Mycotretus</i>	0	2	0
Species removed from <i>Mycotretus</i>	0	5	2
Lectotype designations	0	16	143
Number of primary types examined and repository indications	142	**	216

**See Pecci-Maddalena & Lopes-Andrade (2017; 2018a, 2018b); Pecci-Maddalena *et al.* (2021b).

***Including subspecies.

unknown. Probably, Alvarenga did not examine the Brême collection (MRSN), where several Dejean specimens described by Duponchel and Lacordaire are housed, and although he studied the MNHN collections, he did not recognize most of the Lacordaire specimens housed in the Oberthür collection (MNHN). Other types not examined by Alvarenga, and located by us, are those from Taschenberg (1870) (Fig. 40) housed in the ZNS. Alvarenga (1994) did not designate lectotypes in his publication, but he apparently labelled a few specimens from the MNHN as “lectotype” (see above). Skelley (1998b) had the opportunity to designate types in the Crotch Collection, but did not because he was not preparing for revisionary work and other potential syntypes could be housed in other collections. Before the present work, there were only four lectotype designations for species of *Mycotretus*, as follows: *M. chilensis* Crotch, 1876, *M. centralis* Arrow, 1909, *M. multimaculatus* Taschenberg, 1870 and *M. leopardus* Crotch, 1876 (Pecci-Maddalena & Lopes-Andrade 2017, 2018b). Here we designate lectotypes for 143 species names under *Mycotretus* (Table 1).

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