

# Papéis Avulsos de Zoologia

Museu de Zoologia da Universidade de São Paulo

Volume 55(24):335-361, 2015

[www.mz.usp.br/publicacoes](http://www.mz.usp.br/publicacoes)

ISSN impresso: 0031-1049

[www.revistas.usp.br/paz](http://www.revistas.usp.br/paz)

ISSN on-line: 1807-0205

[www.scielo.br/paz](http://www.scielo.br/paz)

## TYPE SPECIMENS OF BEES (HYMENOPTERA, APIDAE) DEPOSITED IN THE MUSEU DE ZOOLOGIA DA UNIVERSIDADE DE SÃO PAULO, BRAZIL

KELLI S. RAMOS<sup>1,3</sup>

RICARDO KAWADA<sup>2</sup>

CARLOS ROBERTO F. BRANDÃO<sup>1,4</sup>

### ABSTRACT

The present catalogue lists the bee types (Hymenoptera, Apidae s.l.) deposited in the Museu de Zoologia, Universidade de São Paulo, Brazil (MZSP). The Hymenoptera collection of the MZSP is one of the most important collections for the Brazilian and Neotropical faunas, holding relatively large number of types and represented taxa. The Apidae collection includes a total of 473 type-specimens (101 holotypes, 30 lectotypes, 190 paratypes, 34 paralectotypes, and 119 syntypes) that represent 257 species currently classified in 88 genera, 22 tribes, and five subfamilies (Andreninae, Apinae, Colletinae, Halictinae, and Megachilinae). Label data and additional information from the MZSP registers, literature sources, and taxonomic remarks are given, including high-resolution photographs of holotypes and lectotypes available through links to Specimage (image database of The Ohio State University).

KEY-WORDS: Apoidea; Catalogue; MZSP; Taxonomy; Types list.

### INTRODUCTION

Bees (Apoidea, Apidae s.l.) comprise the major group of Hymenoptera (Aculeata) and are the most important pollinating agents in numerous natural ecosystems, as well as for many agricultural crops (Michener, 2007). Given such importance, a growing concern about the conservation of bee species has become prominent, with many studies focusing the species diversity and the ecosystem services they provide.

The bees are a cosmopolitan group of approximately 20.000 described species, whose origin in the Cretaceous is directly associated to the appearance of the first flowering plants in the xeric interior of the old continent of Gondwanaland (Africa-South America) (Michener, 2007). The more species-rich and diverse regions of bees are the warm-temperate and xeric areas of the world, especially those with sandy soils (Michener, 2007). Among these, the Neotropical region is among the richest area of bees in the world with

<sup>1</sup>. Museu de Zoologia, Universidade de São Paulo. Caixa Postal 42.494, 04218-970, São Paulo, SP, Brasil.

<sup>2</sup>. Universidade Federal da Grande Dourados – UFGD, Faculdade de Ciências Biológicas e Ambientais, Programa de Pós-Graduação em Entomologia e Conservação da Biodiversidade. Rodovia Dourados-Itahum, km 12, Cidade Universitária, CEP 79804-970, Dourados, MS, Brasil. E-mail: ctax.base@gmail.com, Researcher ID: B-6051-2009.

<sup>3</sup>. E-mail: kellisramos@gmail.com, Researcher ID: G-7526-2015.

<sup>4</sup>. E-mail: crfbrand@usp.br, Researcher ID: D-2047-2012.

<http://dx.doi.org/10.1590/0031-1049.2015.55.24>

more than 5.000 species reported, many of them endemic (Moure *et al.*, 2007, 2013).

The Museum of Zoology of the University of São Paulo ('Museu de Zoologia da Universidade de São Paulo' – MZSP) holds one of the most important historical collections for the Neotropical and Brazilian Hymenoptera faunas. The earliest Hymenoptera specimens deposited in the museum date back to the early 20<sup>th</sup> century and correspond to material collected by Hermann von Lüderwaldt and Hermann von Ihering, when the zoological collection was formerly a section of the 'Museu Paulista' (Klingenberg & Brandão, 2005). The collection includes an extensive amount of species described and/or identified by specialists with great historical significance to bee systematics.

The MZSP collection of bees comprises approximately 35.000 specimens, including many type specimens described by Adolpho Ducke (1876-1959), Heinrich Friese (1860-1948), Hermann Friedrich Albrecht von Ihering (1850-1930), Curt Schrottky (1874-1937), João Maria de Franco Camargo (1941-2009), and Jesus Santiago Moure (1912-2010); recently, the type specimens described by Schrottky was listed by Rasmussen *et al.* (2009). Collections amassed by Ernest Garbe (1853-1925) and Karol Lenko (1914-1975) in São Paulo state, and particularly by Wolfgang Wilms in the Ecological Station of Boracéia (São Paulo, Brazil), greatly contributed to the enrichment of the collection from the nineteenth century on. Since then, the collection has been receiving material from many research projects, in special the recent Biota/FAPESP and INCT-HYMPAR/Sudeste (CNPq/FAPESP) programs, as well as from the acquisition of smaller collections, exchanges, and deposit of specimens from other institutions and/or specialists from different parts of the world.

The purpose of the present catalogue is to list the bee type specimens deposited in the MZSP, providing taxonomic remarks and information of their corresponding labels. Additionally, a large dataset of primary types imagens in high-resolution is provided.

This paper is part of a series of lists being published to cover the Hymenoptera deposited in the entomological collection of MZSP (Klingenberg & Brandão, 2005; Brandão *et al.*, 2010; Esteves *et al.*, 2011; Prado & Brandão, 2013; Ulysséa & Brandão, 2013; Onody *et al.*, 2014). These initiatives are in agreement with efforts from various institutions to document their type specimen holdings as recommended the Article 72F.4 of the International Commission on Zoological Nomenclature (ICZN, fourth edition, January 1999), which regards the documentation of the specimens type as an institutional responsibility.

## MATERIAL AND METHODS

The presented catalogue lists all bee types specimens deposited at MZSP according to their original combinations and arranged in alphabetical order by genus and specific epithet of the species, considering the current classification. The species classification follows Melo & Gonçalves (2005) and Moure *et al.* (2007, 2013). The names of species are followed by author(s), year, and page of publication. All information given herein was taken from labels data and listed as complete are they appear in these labels, with the addition of further information recovered from MZSP registers. Although the existence of a holotype or lectotype and neotype is important to secure the stability of nomenclature by fixing the identity of the taxa, all type specimens were recorded in the present catalogue. We avoid designating lectotypes, as recommended by ICZN; designations are to be made within a revisionary context, and not only for curatorial purposes (Article 74, 74G).

Type specimens were recognized from their labels, compared to the original descriptions, the Moure's Bee Catalogue website (<http://moure.ria.org.br/catalogue>) (Moure *et al.*, 2013), the Schrottky's catalogue (Rasmussen *et al.*, 2009), and the Friese's catalogue (Rasmussen & Ascher, 2008). In the special case of the types described by Friese is important to be careful about the status of the specimens holding type labels because he did not clearly distinguish the types consistently and his conventions may be misinterpreted (see Rasmussen & Ascher, 2008). The type specimens labels were transcribed with apostrophe marks ('') indicating information of different labels attached to the same specimens. Of each label, original information is given in the original language used by authors; information between brackets ([ ]) is given to explicit abbreviated or important concealed information, and question marks (?) are applied when handwriting was impossible to decipher.

Additionally, information on high resolution photographs of primary type specimens (holotypes, lectotypes, and neotypes) and their labels are provided and available via a link in the Specimage (<http://specimage.osu.edu>), a database at The Ohio State University. Series of images were obtained from Leica M205C magnifying stereoscope attached to a Leica DFC 295 video camera and assembled with the Leica LAS (Leica Application Suite V3.6.0) and Helicon Focus (version 6.0.18) – render method based on Method C (Pyramid). Final figures were edited in commercial software for small adjustments, such as brightness and contrast. Despite its importance to

**TABLE 1:** Type specimens of bees (Hymenoptera, Apidae) deposited in the Museu de Zoologia, Universidade de São Paulo, Brazil (MZSP) that are currently under loan and could not be assessed for this work; female (F), male (M), female worker (W).

TAXON	CURRENT STATUS	TYPE
<b>Apinae: Apini: Euglossina</b>		
<i>Centris venezolana</i> Schrottky, 1913	<i>Eufriesea venezolana</i> (Schrottky, 1913)	Holotype (M)
<b>Apinae: Apini: Meliponina</b>		
<i>Melipona scutellaris paraensis</i> Ducke, 1916	—	Lectotype (W)
<b>Apinae: Nomadini</b>		
<i>Trophocleptria 4-spinosa</i> Schrottky, 1909	<i>Rhinepeolus rufiventris</i> (Friese, 1908)	Holotype (M)
<b>Colletinae: Neopasiphaeini</b>		
<i>Niltonia virgili</i> Moure, 1964	—	Holotype (F)
<i>Perditomorpha paraguayensis</i> Schrottky, 1907	<i>Perditomorpha paraguayensis</i> Schrottky, 1907	Syntypes (F,M)
<b>Megachilinae: Anthidiini</b>		
<i>Anthidium cuzcoense</i> Schrottky, 1910	—	Lectotype (F)
<i>Anthidium garleppi</i> Schrottky, 1910	—	Lectotype (F)
<i>Anthidium nigerrimum</i> Schrottky, 1910	—	Lectotype (F)
<i>Anthidium patagonicum</i> Schrottky, 1910	—	Lectotype (F)
<i>Anthidium peruvianum</i> Schrottky, 1910	—	Lectotype (M)
<i>Anthidium subpetiolatum</i> Schrottky, 1910	<i>Anthidium chubuti</i> Cockerell, 1910	Lectotype (F)
<i>Dianthidium anisitsi</i> Schrottky, 1908	—	Lectotype (M)
<i>Dianthidium autumnale</i> Schrottky, 1909	<i>Dianthidium anisitsi</i> Schrottky, 1908	Lectotype (F)
<i>Dianthidium brethesi</i> Schrottky, 1909	<i>Epanthidium autumnale</i> (Schrottky, 1909)	Lectotype (M)
<i>Dianthidium catamarcense</i> Schrottky, 1909	<i>Epanthidium brethesi</i> (Schrottky, 1909)	Lectotype (M)
<i>Dianthidium iheringi</i> Schrottky, 1910	<i>Austrostelis catamarcensis</i> (Schrottky, 1909)	Lectotype (M)
<i>Dianthidium nudum</i> Schrottky, 1909	<i>Austrostelis iheringi</i> (Schrottky, 1910)	Lectotype (M)
<i>Dianthidium zebratum</i> Schrottky, 1905	<i>Austrostelis catamarcensis</i> (Schrottky, 1909)	Lectotype (M)
<i>Bothranthidium lauroi</i> Moure, 1947	<i>Austrostelis zebrata</i> (Schrottky, 1905)	Lectotype (M)
<i>Hyanthidium tigrinum</i> Schrottky, 1905	—	Holotype (F)
<i>Nananthidium bettyae</i> Moure, 1947	<i>Epanthidium tigrinum</i> (Schrottky, 1905)	Holotype (F)
<b>Megachilinae: Megachilini</b>		
<i>Megachile (Moureapis) atahualpa</i> Schrottky, 1913	—	Holotype (F)
<i>Megachile bicegoi</i> Schrottky, 1913	<i>Megachile (Leptorachis) propinqua</i> Smith, 1879	Holotype (F)
<i>Megachile (Pseudocentron) botucatuna</i> Schrottky, 1913	—	Holotype (M)
<i>Megachile dalmeidai</i> Moure, 1944	<i>Megachile (Pseudocentron) dalmeidai</i> Moure, 1944	Holotype (F)
<i>Megachile itapuae</i> Schrottky, 1908	<i>Megachile (Acentron) itapuae</i> Schrottky, 1908	Holotype (F)
<i>Megachile (Leptorachis) rubricrus</i> Moure, 1948	—	Holotype (M)

recognize the primary types, these images also provide documentation for the condition of specimens and label information.

## RESULTS

The collection comprises a total of 473 type-specimens (101 holotypes, 30 lectotypes, 190 paratypes, 34 paralectotypes, and 119 syntypes), considering both the specimens currently registered in the museum as those currently under loan (Table 1). Exemplars here listed represent 257 species current classified in 88 genera, 22 tribes, and five subfamilies (Andreninae, Apinae, Colletinae, Halictinae, Megachilinae) distributed in countries mainly throughout South America. These numbers exclude type speci-

mens reported in the literature as deposited in MZSP but that were not located (Table 2).

### Andreninae Calliopsisini *Acamptopoeum* Cockerell

#### *Friesea brasiliensis* Schrottky, 1902a: 418

*Syntypes:* 1♂ ‘*Friesea brasiliensis*’ ‘Tipo’ 102.540; 1♀ ‘*Friesea brasiliensis*’ ‘Tipo’ 102.541. *Current status:* *Acamptopoeum prinii* (Holmberg, 1884). *Comments:* In the original description of the syntypes the type locality is recorded as Jundiaí and São Paulo (São Paulo, Brazil). The lack of locality labels on listed syntypes did not afford the recognition of the provenance of each specimen, except in case of the unique male described from São Paulo city.

**TABLE 2:** Type specimens of bees (Hymenoptera, Apidae) reported in the literature as deposited in the Museu de Zoologia, Universidade de São Paulo, Brazil (MZSP) but that were not located.

TAXON	CURRENT STATUS	TYPE
<b>Andreninae: Calliopsini</b>		
<i>Arbysosage flava</i> Moure, 1958	—	Paratype
<i>Arbysosage germana</i> Moure, 1958	<i>Arbysosage ochracea</i> (Friese, 1908)	Paratype
<b>Andreninae: Protandrenini</b>		
<i>Cephalurgus anomalus</i> Moure & Lucas de Oliveira, 1962	—	Paratype
<i>Panurgillus flavitarsis</i> Schlindwein & Moure, 1998	<i>Rhophitulus flavitarsis</i> (Schlindwein & Moure, 1998)	Paratype
<i>Panurgillus formosus</i> Schlindwein & Moure, 1998	<i>Rhophitulus formosus</i> (Schlindwein & Moure, 1998)	Paratype
<i>Panurgillus guaraticola</i> Schlindwein & Moure, 1998	<i>Panurgillus guaraticola</i> Schlindwein & Moure, 1998	Paratype
<i>Panurgillus hamatus</i> Schlindwein & Moure, 1998	<i>Rhophitulus hamatus</i> (Schlindwein & Moure, 1998)	Paratype
<i>Panurgillus malvacearum</i> Schlindwein & Moure, 1998	<i>Rhophitulus malvacearum</i> (Schlindwein & Moure, 1998)	Paratype
<i>Panurgillus minutus</i> Schlindwein & Moure, 1998	<i>Rhophitulus minutus</i> (Schlindwein & Moure, 1998)	Paratype
<i>Panurgillus pereziae</i> Schlindwein & Moure, 1998	<i>Rhophitulus pereziae</i> (Schlindwein & Moure, 1998)	Paratype
<i>Panurgillus plomosulus</i> Schlindwein & Moure, 1998	<i>Rhophitulus plomosulus</i> (Schlindwein & Moure, 1998)	Paratype
<i>Panurgillus politus</i> Schlindwein & Moure, 1998	<i>Rhophitulus politus</i> (Schlindwein & Moure, 1998)	Paratype
<i>Panurgillus reticulatus</i> Schlindwein & Moure, 1998	<i>Rhophitulus reticulatus</i> (Schlindwein & Moure, 1998)	Paratype
<b>Apinae: Centridini</b>		
<i>Centris (Melacentris) confusa</i> Moure, 1960	—	Holotype
<i>Centris (Melanocentris) furcata</i> friesei Schrottky, 1902	<i>Centris (Melacentris) obsoleta</i> Lepeletier, 1841	Holotype
<i>Centris (Ptilotopus) decipiens</i> Moure & Seabra, 1960	—	Paratype
<b>Apinae: Emphorini</b>		
<i>Diadasia paraensis monticola</i> Moure, 1944	<i>Diadasina monticola</i> (Moure, 1944)	Holotype
<i>Leptometria willineri</i> Moure, 1947	<i>Diadasia willineri</i> (Moure, 1947)	Paratype
<i>Melitoma torquata</i> Roig-Alsina, 2009	—	Paratype
<b>Apinae: Ericocidini</b>		
<i>Acanthopodus excellens</i> Schrottky, 1902	—	Syntype
<i>Mesonychium littoreum</i> Moure, 1944	—	Paratype
<b>Apinae: Eucerini</b>		
<i>Florilegus (Euflorilegus) barbiellinii</i> Moure & Michener, 1955	<i>Florilegus (Euflorilegus) fulvipes</i> (Smith, 1854)	Paratype
<i>Thygater sordidipennis</i> Moure, 1941	—	Paratype
<b>Apinae: Exomalopsini</b>		
<i>Exomalopsis lissotera</i> Moure, 1943	—	Paratype
<i>Exomalopsis (Phanomalopsis) atlantica</i> Silveira, 1996	—	Holotype
<b>Apinae: Apini: Meliponina</b>		
<i>Trigona (Friesomelitta) freiremaiai</i> Moure, 1963	<i>Friesomelitta freiremaiai</i> (Moure, 1963)	Paratype
<i>Melipona minima meridionalis</i> Ducke, 1916	<i>Plebeia meridionalis</i> (Ducke, 1916)	Syntype
<i>Plebeia fraterna</i> Laroca & Rodriguez-Parilli, 2009	—	Paratype
<i>Plebeia julianii</i> Moure, 1962	—	Paratype
<i>Plebeia margaritae</i> Moure, 1962	—	Paratype
<i>Scaptotrigona postica xanthotricha</i> Moure, 1950	<i>Scaptotrigona xanthotricha</i> Moure, 1950	Paratype
<i>Tetragona truncata</i> Moure, 1971	—	Paratype
<i>Trigona sesquipedalis</i> Almeida, 1984	—	Paratype
<b>Apinae: Tapinotaspidini</b>		
<i>Nasutopedia micheneri</i> Aguiar & Melo, 2011	—	Paratype
<i>Trigonopedia oligotricha</i> Moure, 1941	—	Paratype
<b>Apinae: Xylocopini</b>		
<i>Ceratina cyanicollis</i> Schrottky, 1902	—	Holotype
<i>Ceratinula turgida</i> Moure, 1941	<i>Ceratina (Ceratinula) turgida</i> (Moure, 1941)	Paratype
<b>Colletinae: Colletini</b>		
<i>Colletes kerri</i> Moure, 1956	—	Paratype
<i>Colletes punctatissimus</i> Schrottky, 1902	<i>Colletes rugicollis</i> Friese, 1900	Holotype

TAXON	CURRENT STATUS	TYPE
<b>Colletinae: Diphaglossini</b>		
<i>Ptiloglossa hemileuca</i> Moure, 1944	—	Paratype
<b>Colletinae: Neopasiphaeini</b>		
<i>Belopria zonata</i> Moure, 1956	—	Paratype
<i>Lonchopria (Ctenosibyne) cingulata</i> Moure, 1956	<i>Ctenosibyne cingulata</i> (Moure, 1956)	Paratype
<i>Pasiphae iheringi</i> Schrottky, 1910	<i>Bicolletes iheringi</i> (Schrottky, 1910)	Holotype
<b>Halictinae: Augochlorini</b>		
<i>Augochlora (Augochlora) mulleri</i> var. <i>capitata</i> Schrottky, 1902	<i>Augochlora (Augochlora) mulleri</i> Cockerell, 1900	Holotype
<i>Augochlora (Paraugochloropsis) leocadia</i> Schrottky, 1909	<i>Augochloropsis smithiana</i> (Cockerell, 1900)	Holotype
<i>Augochlorodes turrifaciens</i> Moure, 1958	—	Paratype
<i>Augochloropsis crassiceps</i> Moure, 1947	—	Paratype
<i>Augochloropsis crassigena</i> Moure, 1943	—	Paratype
<i>Augochloropsis melanochaeta</i> Moure, 1950	—	Paratype
<i>Chloralictus loureiroi</i> Moure, 1941	<i>Halictillus loureiroi</i> (Moure, 1941)	Paratype
<i>Corynuroides zikani</i> Moure, 1943	<i>Rhinocorynura crotonis</i> (Ducke, 1906)	Paratype
<i>Paroxystoglossa mimetica</i> Moure, 1950	—	Paratype
<i>Pereirapis rhizophila</i> Moure, 1943	—	Paratype
<i>Oxystoglossidia uraniella</i> Moure, 1943	<i>Augochlorella ephyra</i> (Schrottky, 1910)	Paratype
<i>Oxystoglossidia uranoides</i> Moure, 1943	<i>Augochlorella urania</i> (Smith, 1853)	Paratype
<b>Halictinae: Halictini</b>		
<i>Chloralictus rhytidophorus</i> Moure, 1956	<i>Dialictus rhytidophorus</i> (Moure, 1956)	Paratype
<i>Pseudagapostemon rufipes</i> Moure, 1943	<i>Pseudagapostemon ochromerus</i> (Vachal, 1904)	Paratype
<b>Megachilinae: Anthidiini</b>		
<i>Anthidium sertanicola</i> Moure & Urban, 1964	—	Paratype
<i>Anthidium erythrocephala</i> Schrottky, 1902	<i>Epanthidium erythrocephalum</i> (Schrottky, 1902)	Syntype
<i>Anthidium nectarinoides</i> Schrottky, 1902	<i>Epanthidium nectarinoides</i> (Schrottky, 1902)	Syntype
<i>Coelioxys assumptionis</i> Schrottky, 1909	<i>Coelioxys (Neocoelioxys) simillima</i> Smith, 1854	Syntype
<i>Megachile anomala</i> Schrottky, 1902	<i>Megachile (Austromegachile) susurrans</i> Haliday, 1836	Holotype
<i>Megachile (Moureapis) apicipennis</i> Schrottky, 1902	—	Holotype
<i>Megachile (Trichurochile) cachoirensis</i> Schrottky, 1920	<i>Megachile (Austromegachile) fiebrigii</i> Schrottky, 1908	Syntype
<i>Megachile fiebrigii</i> Schrottky, 1908	<i>Megachile (Austromegachile) exaltata</i> Smith, 1853	Holotype
<i>Megachile giraffa</i> Schrottky, 1913	<i>Megachile (Austromegachile) susurrans</i> Haliday, 1836	Syntype
<i>Megachile minuscula</i> Schrottky, 1913	<i>Megachile (Moureapis) nigropilosa</i> Schrottky, 1902	Holotype
<i>Megachile nigropilosa</i> Schrottky, 1902	<i>Megachile (Sayapis) mendozana</i> Cockerell, 1907	Paratype
<i>Megachile (Sayapis) opsipanes</i> Moure, 1943	<i>Megachile (Neochelynia) paulista</i> (Schrottky, 1920)	Holotype
<i>Neochelynia paulista</i> Schrottky, 1920	<i>Megachile (Neochelynia) brethesi</i> Schrottky, 1909	Paratype
<i>Megachile rodriguesi</i> Moure, 1943	—	Holotype
<i>Megachile (Leptorachis) tenuitarsis</i> Schrottky, 1920	—	Holotype
<i>Megachile thygaterella</i> Schrottky, 1913	—	Holotype
<i>Megachile (Acentonron) tupinaquina</i> Schrottky, 1913	<i>Megachile (Melanosarus) nigripennis</i> Spinola, 1841	Holotype
<i>Megachile vernoniae</i> Schrottky, 1913	—	Syntype
<i>Megachile rubricata beroni</i> Schrottky, 1902	<i>Megachile (Pseudocentron) curvipes</i> Smith, 1853	Holotype
<i>Megachile fossoris leucocentra</i> Schrottky, 1908	<i>Megachile (Pseudocentron) curvipes</i> Smith, 1853	Holotype

**Arbysosage Brêthes****Arbysosage biguttulata** Ramos, 2013: 2737

Paratypes: 2♂ 'Brasil, Mato Grosso do Sul, Porto Murtinho, Estrada do Rio Apa, 21°47.383'S/57°34.468'W, 21.i.2008, F.A. Esteves leg.'; 1♀ and 1♂ 'Brasil, Mato Grosso do Sul, Porto Murtinho, 21-30.i.2008, S. Nihui & A.J.C. Aguiar leg.'; 1♀ 'Brasil, Mato Grosso

do Sul, Porto Murtinho, estr.[ada] para Faz.[enda] Pirizal, 10-11.xii.2008, K.S. Ramos & V. Kanamura [col.]'.

**Psaenythia bifasciata** Friese, 1908: 41

Syntype: 1♀ 'Argentina, Mendoza, 24.ii.1905, Jensen [col.]' 'Cotipo' 'Typus' '102.547'. Current status: *Arbysosage bifasciata* (Friese, 1908).

**Protandrenini*****Chaeturginus* Lucas-de-Oliveira & Moura*****Chaeturginus alexanderi* Ruz & Melo, 1999: 233**[\(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000002>\)](http://hol.osu.edu/spmInfo.html?id=MZSP%20000002)

*Holotype:* ♂ 'Brasil, SP [São Paulo], Campinas, 15.xii.[19]90-02.i.1991, Alexandre Ruszczyk [col.]' 'Reserva Municipal de Santa Genebra, Armadilha Malaise' 'Holotype, *Chaeturginus alexanderi*, Ruz & Melo'.

***Rhophitulus testaceus* Ducke, 1907a: 367**

*Paralectotype:* 1♂ 'Brazil, Estado do Amazonas' '[Brazil, Amazonas], R.[io] Japurá, 20.[?].1904, Ducke [col.]' '*Rhophitulus testaceus* Ducke typ[e]' 'Cotipo' '102.556'. *Current status:* *Chaeturginus testaceus* (Ducke, 1907). *Comments:* Lecotype and paralectotype designated by Ruz & Melo (1999: 233).

***Parapsaenythia* Friese*****Anthrenoides paspali* Schrottky, 1909a: 148**[\(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000001>\)](http://hol.osu.edu/spmInfo.html?id=MZSP%20000001)

*Lectotype:* ♂ '12.965 [Paraguay, Alto Paraná, Puerto Bertoni, i.1909, Schrottky col.]' 'Lectotype, *Anthrenoides paspali* Schrottky, 1909, desig. Ramos & Melo 2006'. *Current status:* *Parapsaenythia paspali* (Schrottky, 1909). *Comments:* Lectotype designated by Ramos & Melo (2010: 464).

***Parasarus specularis* Ramos, 2014b: 509**

*Paratypes:* 4♀ and 4♂ 'Argentina, La Rioja, 10 km S Pituil, 26.xi.1993, J.G. Rozen [col.], On *Larrea*'; 1♀ 'ARG[entina], Valle de Zonda, SJ [San Juan], 11.03.[19]94, E. Michelette leg.' 'N°[umber]: 0749, Pl[ant]: 010, Hor[hour]: 11:00'; 1♂ same data except label saying 'N°[umber]: 0753, Pl[ant]: 010, Hor[hour]: 12:00'.

***Protandrena* Cockerell*****Protandrena avulsa* Ramos & Melo, 2006: 44**

*Paratypes:* 2♀ 'Brasil, E.[Espírito] Santo, Caracica, 02-08.v.[19]67, C.T. Elias [col.]'; 2♂ 'Brasil, ES[Espírito Santo], 19.iv.1967, C. & C.T. Elias [col.]'.

***Psaenythia* Gerstaeker*****Psaenythia variabilis* Ducke, 1908: 68**

*Paralectotypes:* 1♀ 'Brazil, Estado do Ceará' '[Brazil], Ceará, Serra do Baturité, 06.viii.[19]08, 600 m, Ducke [col.]' '*Psaenythia variabilis*, Ducke, typ[e]' '102.526'; 1♂ 'Brazil, Estado do Ceará' '[Brazil], Ceará, Serra do

Baturité, 600 m, 10.viii.[19]08, Ducke leg.' '*Psaenythia variabilis* Ducke, typ[e]' '102.525'. *Comments:* Paralectotype according designation by Nascimento (1979: 8).

***Rhophitulus* Ducke*****Rhophitulus friesei* Ducke, 1907a: 366**

*Paralectotype:* 1♀ 'Brazil, Estado de Minas Ger.[ais]' '[Brazil, Minas Gerais], Barbacena, 14.xii.1905, Ducke [col.]' 'Cotipo' '*Rhophitulus friesei* Ducke, typ[e]' '102.559'. *Comments:* Paralectotype according designation by Nascimento (1979: 9).

***Rhophitulus mimus* Ramos, 2014a: 548**

*Paratypes:* 1♀ and 2♂ 'Argentina, Salta, 18 km E. Cachi, 3000 m, March 21, 1990, J.G. Rozen & A. Roig [col.]' 'Paratype, *Rhophitulus mimus* Ramos, 2014'; 1♂ 'Argentina, Salta, 18 km E. Cachi, March 21, 1990, Rozen & Roig [col.], near nest area' 'Paratype, *Rhophitulus mimus* Ramos, 2014'.

***Panurginus solani* Ducke, 1912: 87**

*Paralectotypes:* 1♀ '[Brazil], Rio de Janeiro, Tijuca, xi.1911, 500 m, Ducke [col.]' 'Cotipo' '*Panurginus solani* Ducke, typ[e]' '102.553'; 1♂ '[Brazil], Rio de Janeiro, Tijuca, xi.1911, 500 m, Ducke [col.]' 'Cotipo' '*Panurginus solani* Ducke, typ[e]' '102.554'. *Current status:* *Rhophitulus solani* (Ducke, 1912). *Comments:* Paralectotype according to designation by Nascimento (1979: 8).

***Rhophitulus xenopalpus* Ramos, 2014a: 552**

*Paratypes:* 1♀ 'Argentina, Catamarca, Prov.[ince] Copacabana, 14 November 1998, A. Ugarte Peña [col.]' 'Paratype, *Rhophitulus xenopalpus* Ramos, 2014'; 2♀ 'Argentina, Tucumán, 11 km NW El Cadillal, Nov.[ember] 7, 1991, J.G. Rozen, L. Pena & A. Ugarte [col.]' 'Paratype, *Rhophitulus xenopalpus* Ramos, 2014'; 1♂ 'Argentina, Tucumán, El Cadillal to 12 km N, October 30, 1989, J.G. Rozen & A. Roig [col.]' 'Paratype, *Rhophitulus xenopalpus* Ramos, 2014'; 2♂ 'Argentina, Tucumán, 6 km W Tapia, XII-02-1993, J.G. Rozen [col.]' 'Paratype, *Rhophitulus xenopalpus* Ramos, 2014'.

***Protomeliturgini*  
*Protomeliturga* Ducke*****Calliopsis turnerae* Ducke, 1907b: 76**

*Paralectotype:* 1♀ '11.303 [Brazil, Maranhão, São Luis, 08.vi.1907, Ducke col.]' '*Calliopsis turnerae* Ducke, typ[e]' '96715'. *Current status:* *Protomeliturga*

*turnerae* (Ducke, 1907). *Comments:* Paralectotype according to designation by Nascimento (1979: 3).

**Apinae**  
**Apini**  
**Euglossina**  
***Euglossa* Latreille**

***Euglossa (Euglossa) melanotricha***

**Moure, 1967a: 47**

*Paratypes:* 1♀ [Brazil], Goyaz [now Goiás], Vianópolis [*sic* Vianópolis], xi.[19]31, R. Spitz coll.' Paratype, *Euglossa melanotricha* J.S. Moure [19]66'; 1♀ [Brazil], Goyaz [now Goiás], Viannopolis [*sic* Vianópolis], iii.1936, R. Spitz coll.' Paratype, *Euglossa melanotricha* J.S. Moure 1966'; 1♀ [Brazil], E. [Estado] M.[Minas] Gerais, Pirapora, 1912, E. Garbe leg.' 18.025 [Brazil, Minas Gerais, Pirapora, 1912, E. Garbe col.]' Paratype, *Euglossa melanotricha* J.S. Moure 1966'; 1♀ '18.025 [Brazil, Minas Gerais, Pirapora, 1912, E. Garbe col.]' Paratype, *Euglossa melanotricha* J.S. Moure 1966'.

***Euglossa solangeae* Nemésio, 2007: 25**

*Paratype:* 1♂ 'Brazil, SP [São Paulo], S.[São] Sebastião, P.[raia] Cambury, i.1989, C.R.F. Brandão col.' Paratype, *Euglossa solangeae* Nemésio, 2007'. *Current status:* *Euglossa (Glossurella) stellfeldi* Moure, 1947.

***Eulaema* Lepelletier**

***Eulaema (Eulaema) mimetica* Moure, 1967a: 379**

*Paratypes:* 1♀ and 1♂ 'Brasil, Pará, Óbidos, 1956, F.M. Oliveira [col.]' Paratipo' Paratype, *Eulaema s. mimetica* J.S. Moure 1960'; 1♂ 'Brasil, Pará, Óbidos, 1955, J. Brazilino [col.]' Paratipo' Paratype, *Eulaema s. mimetica* J.S. Moure 1960'; 1♂ 'Brasil, Pará, Óbidos, xi.1953, J. Brazilino Coll.' Paratipo' Paratype, *Eulaema s. mimetica* J.S. Moure 1960'; 1♀ 'Brasil, Pará, Óbidos, Colônia Rio Branco, v.1953, Jose Brazilino [col.]' Paratipo' Paratype, *Eulaema s. mimetica* J.S. Moure 1960'.

***Centris nigrita raymondi* Schrottky, 1907a: 65**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000003>)

*Lectotype:* ♀ 'Venezuela, Caracas' '102.942' '*Centris nigrita* (Lep.) var. *raymondi* Schrottky, C. Schrottky 1912 det.' Lectótipo'. *Paralectotype:* 1♀ 'Venezuela, Caracas' '102.944' '*Centris nigrita* (Lep.) var. *raymondi* Schrottky, C. Schrottky 1912 det.' Paralectótipo'.

*Current status:* *Eulaema (Apeulaema) nigrita* Lepelletier, 1841. *Comments:* Lectotype designated by Moure (1967b: 412).

***Exaerete Hoffmannsegg***

***Exaerete guaykuru* Anjos-Silva & Rebêlo, 2006: 29**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000008>)

*Holotype:* ♂ 'BR [Brazil], MT [Mato Grosso], C.[Chapada] dos Guimarães, Vale Véu de Noiva, 18°20'017"/55°50'205"W, 29.xi.2004' E.J. Anjos-Silva leg., 959, Salicílato de metila' Holotypus, *Exaerete guaykuru* Anjos-Silva & Rebêlo'. *Current status:* *Exaerete trochanterica* (Friese, 1900).

**Apini**  
**Meliponina**  
***Geotrigona* Moure**

***Melipona subterranea aequinoctialis***

**Ducke, 1925: 423**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000013>)

*Lectotype:* ♀ (worker), 'Brasil, Pará, 02.06.1902, Ducke [col.]' '103589' 'Lectótipo, *Geotrigona aequinoctialis* Ducke 1925, Des. Moure & Camargo, 1994'. *Paralectotype:* 1♀ (worker), 'Brasil, Pará, 18.08.1900, Ducke [col.]' '18.312' '*Trigona subterranea* Friese, det. Ducke 1911' '103579' 'Paralectótipo, *Geotrigona aequinoctialis* Ducke 1925, Des. Moure & Camargo, 1994'. *Current status:* *Geotrigona aequinoctialis* (Ducke, 1925). *Comments:* Lectotype and paralectotype designated by Camargo & Moure (1996: 118).

***Geotrigona argentina***

**Camargo & Moure, 1996: 111**

*Paratypes:* 1♀ (workers), '1.826 [Argentina, Chaco del Santiago del Estero]' '103586' 'Paratype, *Geotrigona argentina* Camargo & Moure, 1995'; 1♀ (workers), same labels data except '103584'.

***Trigona fulvohirta* Friese, 1900: 385**

*Syntype:* 1♀ (worker), 'Bolivia, [18]97' '1.003 [Bolivia, 1897]' '*Trigona fulvohirta*, 1900 Friese det.' '95054'. *Current status:* *Geotrigona fulvohirta* (Friese, 1900).

***Trigona subterranea* Friese, 1901: 265**

*Syntypes:* 1♀ (worker), '1.138 [Brazil, São Paulo, São Paulo, Ipiranga, 21.v.1900]' '103569'; 1♀ (worker), same labels data except '103570'. *Curret status:* *Geotrigona subterranea* (Friese, 1901). *Comments:* Worker specimens probably from the type-series, see Camargo & Moure, 1996: 124.

***Melipona Illiger******Melipona babiana* Ducke, 1916: 169**

Syntypes: 1♀ '[Brazil]', Bahia, Cid.[ade] da Barra' '18.710 [Brazil, Bahia, Cidade da Barra, x.1913, E. Garbe col.]' 'Typus' '103.214'; 1♂ same labels data except '103.213'. Current status: *Melipona (Melipona) mandacaia* Smith, 1863.

***Melipona eburnea fuscopilosa*****Moure & Kerr, 1950: 113**

Lectotype: ♀ (worker), '[Brazil]', Pará, Santarém, 18.769 [Brazil, Pará, Santarém, 1901, E. Garbe col.]' 'Tipo' '103.254'. Palectotypes: 1♀ (worker), '17.780 [Brazil, Pará, Santarém, 1901, E. Garbe col.]' 'Tipo' '103.255' 'Para-lectotypus'; 1♀ 'Perú, Amazonico' '[Peru], Iquitos, 02.08.1906, Ducke [col.]' '103.307' 'Para-lectotypus'. Current status: *Melipona (Michmelia) fuscopilosa* Moure & Kerr, 1950. Comments: Lectotype and para lectotypes designated by Urban (2003: 33).

***Melipona scutellaris flavofasciata*****Ducke, 1916: 150**

Lectotype: ♀ (worker), '18.208 [Brazil, Pará, Trombetas, Rio Ariramba, 18.xii.1910, Ducke col.]' '[Brazil, Pará], R.[io] Ariramba (Trombetas), 18.12.1910, Ducke [col.]' 'Brazil, Estado do Pará' '103.256'. Current status: *Melipona (Michmelia) lateralis* Erichson, 1848. Comments: Lectotype according to Moure & Kerr (1950: 113) and Camargo & Pedro (in Moure et al. 2007: 373).

***Melipona captiosa* Moure, 1962: 10**

Paratype: 1♀ (worker), 'Brasil, AP [Amapá], Serra do Navio, 07.ii.[19]62, F.M. Oliveira [col.]'. Current status: *Melipona (Michmelia) captiosa* Moure, 1962.

***Melipona peruviana* Friese, 1900: 382**

Syntype: 1♀ (worker), '18.217 [Peru, Callanga]' '*Melipona peruviana* 190[?] Friese det' '*Melipona peruviana* Friese, Pe. J.S. Moure det. [19]40' '103.247'. Current status: *Melipona (Melipona) peruviana* Friese, 1900.

***Melipona rufescens* Friese, 1900: 381**

Syntype: 1♀ (worker), '1.014 [Bolivia, Mapiri]' 'Bolivia, Mapiri, 1900' '103.250'. Current status: *Melipona (Michmelia) rufescens* Friese, 1900.

***Melipona seminigra* Friese, 1903: 359**

Syntype: 1♀ (worker), '18.219 [Brazil, Pará, Óbidos, vii.1902, Ducke col.]' 'Brasil, Para, Obidos, 26.07.1902, Ducke [col.]' '103.251' 'Cotipo'. Current status: *Melipona (Michmelia) seminigra seminigra* Friese, 1903.

***Melipona subnitida* Ducke, 1910: 107**

Paralectotype: 1♀ (worker), '[Brazil], Maranhão, Alcantara, 01.10.1903, Ducke [col.]' 'Brazil, Estado do Maranhão' '18.216 [Brazil, Maranhão, Alcântara, x.1903, Ducke col.], Cotopo!' '103.311' '*Melipona subnitida* Ducke, Cotopo'. Current status: *Melipona (Melipona) subnitida* Ducke, 1910. Comments: Paralectotype according to the lectotype designation in Nascimento (1979: 7).

***Nannotrigona* Cockerell*****Trigona dutrae* Friese, 1901: 267**

Syntype: 1♀ (worker), 'Brasil, Pará, 09.1900' '974' '*Trigona dutrae*, 1900 Friese det.' '95051'. Current status: *Nannotrigona dutrae* (Friese, 1901).

***Partamona* Schwarz*****Partamona mourei* Camargo, 1980: 53**

Paratype: 1♀ (worker), '[Brazil, Pará], Óbidos, 20.07.1902, Ducke [col.]' '*Trigona pallida* Ltr. v. *rhumbleri* Friese, det. Ducke 1911' '18.247' '95497' 'Paratype, *P. (Partamona) mourei* Camargo 1976.

***Partamona (Partamona) mulata*****Moure in Camargo, 1980: 52**

Paratype: 1♀ (worker) 'Brasil, MT [Mato Grosso], Cuiabá, I.1963, M. Alvarenga [col.]' 'Paratype, *P. (Partamona) mulata* Camargo, 1977'.

***Trigona peckolti* Friese, 1901: 265**

Paralectotype: 1♀ (worker), 'Columbia [sic Colombia], Popayan, 1900, Lehmann [col.]' '*Trigona peckolti*, 1900 Friese det.' '95494'. Current status: *Partamona peckolti* (Friese, 1901). Comments: Paralectotype designated by Camargo & Pedro (in Moure et al. 2007: 444).

***Partamona (Partamona) pseudomusarum*****Camargo, 1980: 49**

Paratypes: 20♀ (workers), 'Brasil, PA [Pará], Alto Pará d' Oeste, Tiriós, I-II.1963, Machado & Pereira [col.]' 'Paratype, *P. (Partamona) pseudomusarum*, Camargo, 1976'; 8♀ (workers), 'Brasil, Pará, Alter do Chão, 19.ix.1969, Exp. Perm. Amaz.' 'Paratype, *P. (Partamona) pseudomusarum*, Camargo, 1976'; 1♀ (worker), 'Brazil, Estado do Pará' 'Oyapock[Oiapoque], 29.05.1904, Ducke [col.]' '95493' 'Paratype, *P. (Partamona) pseudomusarum*, Camargo, 1976'; 1♀ (worker), 'Surinam' '1.002 [Suriname, 1898]' '*Trigona pallida*, 1900 Friese det.' '95490' 'Paratype, *P. (Partamona) pseudomusarum*, Camargo, 1976'; 1♀ (worker), same labels data

except '95489'; 1♀ (worker), 'Rio Acre, 1902' '18.305 [Brazil, Amazonas, 1902, Ducke col.]' '*Trigona pallida* Latr., det. Ducke 1911' '95491' 'Paratype, *P. (Partamona) pseudomusarum*, Camargo, 1976'. Current status: *Partamona vicina* Camargo, 1980.

#### *Partamona (Partamona) vicina* Camargo, 1980: 45

Paratypes: 2♀ (workers), 'Brasil, Mato Grosso, MT [Mato Grosso], 02-xi-[19]61, F.M. Oliveira [col.]' '*P. (Partamona) vicina* Camargo, 1977'.

#### *Plebeia* Schwarz

#### *Trigona emerina* Friese, 1900: 392

Syntypes: 1♀ (queen), '926 [Brazil, Rio Grande do Sul, Dutra col.]' 'Cotipo' '95966'; 1♀ (worker), '926 [same data]' 'Cotipo' '*Tr. emerina* 1900 Friese det.' 'Brasil, S.[São] Leopoldo, 926, 1898, Dutra [col.]' '95969'; 1♀ (worker), '926 [same data]' 'Cotipo' '95972'. Current status: *Plebeia emerina* (Friese, 1900).

#### *Trigona saiqui* Friese, 1900: 392

Syntypes: 1♀ (queen), '936a [Brazil, Rio Grande do Sul, São Leopoldo, Dutra col.]' '96076'; 1♀ (worker), same labels data except '96078'; 1♀ (workers), same labels data except '96079'. Current status: *Plebeia saiqui* (Friese, 1900).

#### *Scaptotrigona* Moure

#### *Trigona (Scaptotrigona) depilis* Moure, 1942: 316

Paratypes: 3♀ (workers) '[Brazil], Mato Grosso, Salobra, 20-23.vii.1939' 'Paratypus'; 3♀ and 1♂ (workers) '[Brazil], Mato Grosso, Salobra, 19-21.i.1941, F. Lane coll.' 'Paratypus'. Current status: *Scaptotrigona depilis* (Moure, 1942).

#### *Schwarziana* Moure

#### *Schwarziana mourei* Melo, 2003: 89

Paratypes: 20♀ (workers), '[Brazil], MT [Mato Grosso], marg[em] esq[uerda] rio Sucuriu, Faz[enda] Canaã, i.1967, F. Lane col.' 'Paratype, *Schwarziana mourei*, Melo 2003'; 1♀ (workers), '[Brazil], MT [Mato Grosso], Três Lagoas, Faz[enda] Floresta, 13-20.ix.1964, Exp.[edição] Depto[Departamento] [de] Zool[ogia]'.  
Trigoniaca Moure

#### *Trigoniaca* Friese, 1901: 268

Syntypes: 1♀ (worker), '18.374 [Brazil, Pará, vi.1900, Ducke col.]' '*Trigona fraissei*, 1900 Friese det' 'Brasil, Pará, I. [Island of] Marajó, vi.1900, Ducke [col.]'

'95.427'; 1♀ (worker), '18.374 [same data]' 'Brazil, Estado do Pará' '*Trigona fraissei* Friese, det. Ducke 1911' '[Brazil, Pará], I.[Island of] Marajó, R.[iver] Anajás, 02.06.1900, Ducke' '95.426'. Current status: *Trigonisca fraissei* (Friesei, 1901). Comments: Specimens indicated as cotypes by Moure (1950a: 254), although the date is different from that mentioned by Friesei.

#### *Hypotrigona (Trigonisca) graeffei* flavicans

#### Moure, 1950a: 257

Paralectotype: 1♀ (worker), 'Brazil, Estado do Amazonas' '18.382 [Brazil, Amazonas, Santo Antonio do Iça, ix.1906, Ducke col.]' 'S.[anto] Antonio do Içá, 22.ix.1906, Ducke [col.]' '*Trigona graeffei* Friesei, det. Ducke 1911' '103.568'. Current status: *Trigonisca flavicans* (Moure, 1950a). Comments: Paralectotype designated by Urban (2003: 33).

#### Centridini *Centris* Fabricius

#### *Centris ehrhardti* Schrottky, 1902a: 579

Syntypes: 1♂ '1.360 [Brazil, São Paulo, Rincão, ii.1901, D. Ehrhardt col.]'; 1♂ '1.360' '97250'. Current status: *Centris (Melacentris) dorsata* Lepeletier, 1841.

#### *Centris (Trachina) machadoi*

#### Azevedo & Silveira, 2005: 41

Paratypes: 1♀ 'Brasil, MG [Minas Gerais], Bocaiúva, 11.viii.2003, A.A. Azevedo [col.]' 'Sucupira-preta, Faz.[enda] Vargem Grande, 8538-25979' '*Centris machadoi* Azevedo & Silveira sp. nov., Paratypus'; 1♂ same labels data except '8538-25983'.

#### *Centris maranhensis* Ducke, 1910: 99

Paralectotype: 1♀ '[Brazil]', Maranhão, Alcantara, 26.ix.1903, Ducke [col.]' 'Brazil, Estado do Maranhão' '*Centris maranhensis* Ducke, typo'. Current status: *Centris (Ptilotopus) maranhensis* Ducke, 1910. Comments: Paralectotype according to designation in Nascimento (1979: 4).

#### *Centris pocograndensis* Schrottky, 1902a: 578

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%20000004>)

Holotype: ♂ 'Brazil, [São Paulo], Poço Grande [old farm near the town of Juquiá], *Centris pocograndensis* Schrottky'. Current status: *Centris (Melacentris) collaris* Lepeletier, 1841.

#### *Centris (Trachina) rupestris*

#### Azevedo & Silveira, 2005: 45

Paratypes: 1♀ 'Brasil, MG [Minas Gerais], Santana do Riacho, 02.vi.2001, B.A. Ribeiro [col.]' '*Chamae-*

*scrita semaphora*, S.[erra] do Cipó, 7801-23531' '*Centris rupestris* Azevedo & Silveira sp. nov., Paratypus'; 1♂ 'Brasil, MG[Minas Gerais], Santana do Riacho, 27.v.1998, R.M. Carmo [col.]' 'Serra do Cipó, Campo rupestre, 2257-7107' '*Centris rupestris* Azevedo & Silveira sp. nov., Paratypus'.

***Centris xanthocnemis perflava***  
**Schrottky, 1902a: 576**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000005>)

*Holotype*: ♂ '1.376 [Brazil, São Paulo, Jundiaí, M. Beron col.]' '97262'. *Current status*: *Centris (Melacentris) xanthocnemis* (Perty, 1833).

***Epicharis* Klug**

***Epicharis cockerelli fulvohirta***  
**Schrottky, 1902a: 566**

*Syntypes*: 1♀ '17.874 [Brazil, São Paulo, Ipiranga, xii.1900, Dr. H.v. Ihering col.]'; 8♀ and 3♂ '17.876 [Brazil, São Paulo, Jundiaí, xi.1900, M. Beron col.]'. *Current status*: *Epicharis (Epicharitides) iheringi* Friese, 1899.

**Emphorini**  
***Diadasina* Moure**

***Ptilothrix riparia* Ducke, 1907b: 82**

*Paralectotypes*: 1♂ '11.305 [Brazil, Maranhão, Codó, vi.1907, Ducke col.]' '*Ptilothrix riparia* Ducke, typ.[e]'; 1♀ '11.306 [Brazil, Maranhão, Caxias, 29.vi.1907, Ducke col.]' '*Ptilothrix riparia* Ducke, typ.[e]'. *Current status*: *Diadasina riparia* (Ducke, 1907). *Comments*: Paralectotype according to type designation by Nascimento (1979: 9).

***Melitoma* Lepeletier & Serville**

***Podalirius ipomoeae* Ducke, 1907b: 84**

*Paralectotype*: 1♀ 'Brazil, Estado do Maranhão' '[Brazil], Maranhão, Caxias, 02.vii.1907, Ducke [col.]' '*Melitoma ipomoearum* Ducke, typ.'. *Current status*: *Melitoma ipomoearum* Ducke, 1912. *Comments*: Paralectotype according to designation by Nascimento (1979: 8).

***Ancyloscelis osmiooides* Ducke, 1908: 71**

*Syntypes*: 1♀ 'Brazil, Estado do Ceará' '[Brazil], Ceará, Quixadá, 04.vii.1908, Ducke [col.]' '*Melitoma osmiooides* Ducke, typ.[e]'; 1♂ 'Brazil, Estado do Ceará' '[Brazil], Ceará, Baturité, 29.vi.1908, Ducke [col.]' '*Melitoma osmiooides* Ducke, typ.[e]'. *Current status*: *Melitoma osmiooides* (Ducke, 1908).

**Ericrocidini**

***Cyphomelissa* Schrottky**

***Cyphomelissa pernigra* Schrottky, 1902a: 494**

*Syntypes*: 1♀ '17.769 [Brazil, São Paulo, Jundiaí, ii.1900, M. Beron col.]' '102.348'; 1♂ '17.770 [Brazil, São Paulo, Campinas, i.1901, A. Hempel col.]' '102.349'. *Current status*: *Cyphomelissa diabolica* (Friese, 1900).

***Hopliphora* Lepeletier**

***Oxynedys beroni* Schrottky, 1902a: 492**

*Syntypes*: 1♂ '17.772 [Brazil, São Paulo, Campinas, i.1900, A. Hempel col.]' '102.341'; 1♀ '1.387 [Brazil, São Paulo, Jundiaí, 27.i.1901, M. Beron col.]' '*Hopliphora velutina* (Lep.)' '102.345'; 1♀ '1.387' '*Hopliphora velutina*, 1900 Friese det.' '102.345'. *Current status*: *Hopliphora velutina* (Lepeletier & Serville, 1825).

***Mesonychium* Lepeletier & Serville**

***Cyphomelissa garleppi* Schrottky, 1910a: 209**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000007>)

*Holotype*: ♀ 'Peru, Apurímac, [O. Garlepp col.]' '102.370'. *Current status*: *Mesonychium garleppi* (Schrottky, 1910). *Comments*: In addition to the listed specimen, we found another female specimen with the following labels 'Peru, Apurímac' '102.371' although the original description makes no mention to the existence of more than one specimen in the type series. In this case, we consider the specimens with the label '102.370' as holotype because the word 'Type' written on the label by Schrottky.

**Eucerini**

***Alloscirtetica* Holmberg**

***Tetralonia orientalis***

**Bertoni & Schrottky, 1910: 569**

*Syntype*: 1♀ '[Uruguay], Monte-video [sic Montevideo]' '*Tetralonia orientalis* Bert. & Schrottky, Type, C. Schrottky det. 1910' '96778' '*Alloscirtetica eophila*, D. Urban det. 1969' 'Syntype'. *Current status*: *Alloscirtetica eophila* (Cockerell, 1918).

***Tetralonia eophila* Cockerell, 1918: 35**

*Syntype*: 1♀ '[Uruguay], Monte-video [sic Montevideo]' '*Tetralonia orientalis* Bert. & Schrottky, Type, C. Schrottky det. 1910' '96778' '*Alloscirtetica eophila*, D. Urban det. 1969' 'Syntype'. *Current status*: *Alloscirtetica eophila* (Cockerell, 1918).

***Florilegus* Robertson*****Tetralonia quadrata* Bertoni & Schrottky, 1910: 572**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000025>)

*Lectotype*: ♂ ‘Paraguay, Encarnacion, 04.ii.[19]05, C. Schrottky [col.], *Cucumis sativa*’ ‘*Tetralonia quadrata* Bert. & Schrottky, Type, C. Schrottky det. 1910’ ‘96648’. *Paralectotype*: 1♀ ‘Paraguay, Asuncion, xii. [19]05, C. Schrottky [col.]’ ‘*Tetralonia quadrata* Bert. & Schrottky, Type, C. Schrottky det. 1910’ ‘96649’. *Current status*: *Florilegus (Florilegus) condignus* (Cresson, 1878). *Comments*: Lectotype designated by Urban (1970: 255).

***Gaesischia* Michener, LaBerge & Moure*****Tetralonia iheringi* Bertoni & Schrottky, 1910: 572**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000023>)

*Holotype*: ♀ ‘8.174 [Brazil, São Paulo, Ipiranga, 25.i.1907, H. Luederwaldt leg.]’ ‘Type’ ‘*Tetralonia iheringi* Bert. & Schrottky, C. Schrottky det. 1910’ ‘96671’ ‘Holotypus’. *Current status*: *Gaesischia (Gaesischia) fulgurans* (Holmberg, 1903).

***Eucera patellicornis* Ducke, 1910: 94**

*Paralectotype*: 1♀ ‘Brazil, Estado do Pará’ ‘[Brazil, Pará], Obidos, 22.ii.1903, Ducke [col.]’ ‘96639’ ‘*Tetralonia patellicornis*, Ducke, typo’. *Current status*: *Gaesischia (Agaesischia) patellicornis* (Ducke, 1910). *Comments*: Paralectotype according to designation by Urban (1968: 88).

***Megascirtetica* Moure & Michener*****Macrocerina mephistophelica* Schrottky, 1902b: 310**

*Syntypes*: 8♂ ‘1.395 [Brazil, São Paulo, Jundiaí, 27.i.1901, M. Beron col.]’. *Current status*: *Megascirtetica mephistophelica* (Schrottky, 1902).

***Melissodes* Latreille*****Melissodes (Ecplectica) ecuaduria*****Bertoni & Schrottky, 1910: 577**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000017>)

*Lectotype*: ♀ ‘Ecuador, Guayquil, 4.1902, Buchwald [col.]’ ‘*Tetralonia ecuaduria*, 1909 Friese det.’ ‘96644’. *Comments*: Lectotype designated by Urban (2000: 78).

***Melissodes montevidensis*****Bertoni & Schrottky, 1910: 577**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000018>)

*Holotype*: ♂ ‘[Uruguay], Montevideo’ ‘*Melissodes montevidensis* sp. nov. Bert. & Schrottky, Type, C. Schrott-

ky det. 1910’ ‘96694’ ‘Holotypus’. *Current status*: *Melissodes (Ecplectica) tintinnans* (Holmberg, 1884).

***Melissoptila* Holmberg*****Melissoptila (Epimelissoptila) chubutana*****Bertoni & Schrottky, 1910: 581**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000014>)

*Lectotype*: ♂ ‘[Argentina], Chubut’ ‘*Epimelissoptila chubutana* Bert. & Schrottky, Type, C. Schrottky det. 1910’. *Paralectotype*: 1♀ same data as lectotype except additional label ‘96777’. *Current status*: *Melissoptila desiderata* (Holmberg, 1903). *Comments*: Lectotype and paralectotype designated by Urban (2000: 80).

***Tetralonia crassipes* Friese, 1906: 91**

*Syntypes*: 1♀ and 1♂ ‘18.434 [Argentina, Tucuman, 2000 m, Friese col.]’ ‘Argentina, Tucuman, 2000 m’ ‘*Tetralonia crassipes*, 1907 Friese det.’ ‘Typus’. *Current status*: *Melissoptila tandilensis* Holmberg, 1884.

***Melissoptila (Epimelissoptila) melochiae*****Bertoni & Schrottky, 1910: 581**

*Syntypes*: 1♀ ‘Paraguay, Encarnacion, 12.x.[19]06, C. Schrottky [col.]’ ‘*Epimelissoptila melochiae* Bert. & Schrottky, Type, C. Schrottky det. 1910’ ‘96771’; 1♂ same label data except ‘96770’. *Current status*: *Melissoptila minarum* (Bertoni & Schrottky, 1910).

***Melissoptila (Epimelissoptila) minarum*****Bertoni & Schrottky, 1910: 582**

*Syntypes*: 2♂ ‘[Brazil], Minas Geraes [sic Gerais]’ ‘*Epimelissoptila minarum* Bert. & Schrottky, C. Schrottky det. 1910’. *Current status*: *Melissoptila minarum* (Bertoni & Schrottky, 1910).

***Eucera metallescens* Ducke, 1910: 89**

*Syntype*: 1♀ ‘Brazil, Estado do Ceará’ ‘[Brazil], Ceará, Serra de Baturité, 31.vii.[19]08, 700 m, Ducke [col.]’ ‘*Tetralonia submetallecsens* Ducke, typo’ ‘96668’. *Current status*: *Melissoptila fiebregi* Brèthes, 1909.

***Melissoptila nudiventris*****Bertoni & Schrottky, 1910: 591**

*Syntype*: 1♀ ‘Paraguay, Puerto Bertoni, Alto Paraná, xii.’ ‘*Melissoptila nudiventris* Bert. & Schrottky, co-type, C. Schrottky det. 1910’ ‘96683’. *Current status*: *Melissoptila thoracica* (Smith, 1854).

***Melissoptila pauloensis* Schrottky, 1910b: 88**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000020>)

*Holotype*: ♂ ‘[Brazil], São Paulo, Campos do Jordão’ ‘*Melissoptila pauloensis* sp. nov., C. Schrottky det.

1910'. *Current status*: *Melissoptila thoracica* (Smith, 1854).

#### *Melissodes (Epimelissodes) pseudogilva*

**Bertoni & Schrottky, 1910: 580**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000015>)

*Holotype*: ♂ [Argentina], Neuquén, 1907, Dr. Lendl Adolf [col.] 'Epimelissodes pseudogilva' Bert. & Schrottky, Type, C. Schrottky det. 1910' '96769'. *Current status*: *Melissoptila dama* (Vachal, 1904).

#### *Melissoptila richardiae*

**Bertoni & Schrottky, 1910: 590**

*Syntype*: 1♂ 'Paraguay, Alto Paraná, Puerto Bertoni' 'Melissoptila richardiae' Bert. & Schrottky, Co-type, C. Schrottky det. 1910' '96680'.

#### *Eucera uncicornis* Ducke, 1910: 95

*Paralectotype*: 1♂ 'Brazil, Estado do Maranhão' [Brazil], Maranhão, Codó, 21.vi.1907, Ducke [col.] 'Tetralonia uncicornis' Ducke, typo '96670'. *Current status*: *Melissoptila uncicornis* (Ducke, 1910). *Comments*: Paralectotype according to designation by Nas-cimento (1979: 5).

#### *Melissoptila vulpecula*

**Bertoni & Schrottky, 1910: 589**

*Syntype*: 1♂ [Paraguay], Alto Paraná, Puerto Bertoni 'Melissoptila vulpecula' Bert. & Schrottky, Co-type, C. Schrottky det. 1910' '96681'.

#### *Pachysvasta Moure & Michener*

#### *Tetralonia beroni* Schrottky, 1913a: 706

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000022>)

*Lectotype*: ♀ '1.299 [Brazil, São Paulo, Jundiaí, 28.xii.]' 'Tetralonia beroni' Schrottky, C. Schrottky det. 1910' '96656'. *Paralectotype*: 1♀ '1.299 [Brazil, São Paulo, Jundiaí, 28.xii.]' 'Tetralonia beroni' Schrottky, C. Schrottky det. 1910' '96658'. *Current status*: *Pachysvasta leucocephala* (Bertoni & Schrottky, 1910). *Comments*: Lectotype and paralectotype designated by Urban (2000: 81).

#### *Peponapis* Robertson

#### *Melissodes catamarcensis*

**Bertoni & Schrottky, 1910: 575**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000016>)

*Lectotype*: ♀ '[Argentina], Catam[arca]' 'Melissodes catamarcensis' Bert. & Schrottky, C. Schrottky det. 1910' '96691'. *Paralectotype*: 1♀ same labels data as lectotype except '96690'. *Current status*: *Peponapis fer-*

*vens* (Smith, 1879). *Comments*: Lectotype designated by Urban (2000: 80).

#### *Svastra Holmberg*

#### *Melissodes venturii*

**Bertoni & Schrottky, 1910: 575**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000019>)

*Holotype*: ♀ [Argentina, Buenos Aires], Bahia Blanca, 17.x.1899' 'Melissodes venturii' Bert. & Schrottky, Type, C. Schrottky det. 1910' '96692' 'Holotypus'. *Current status*: *Svastra (Svastra) detecta* Holmberg, 1884.

#### *Tetralonia flavitarsis bicincta* Friese, 1906: 91

*Syntypes*: 1♂ '18.435 [Argentina, xi.1904, Friese col.]' 'Argentini [sic Argentina], 21.11.1904' 'Tetralonia flavitarsis bicincta', 1907 Friese det.' 'Typus' '96783'; 1♀ '18.435' [Argentina], Mendoza, xii' 'Tetralonia flavitarsis bicincta', 1907 Friese det.' 'Typus' '96784'. *Current status*: *Svastra (Svastra) flavitarsis* (Spinola, 1851).

#### *Thygater Holmberg*

#### *Tetralonia luederwaldti* Schrottky, 1910b: 78

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000024>)

*Holotype*: ♀ '14.815 [Brazil, São Paulo, Campos do Jordão, 02.iii.1906, H. Luederwaldt col.]' 'Tetralonia luederwaldti' sp. nov., C. Schrottky det. 1910' '96717'. *Current status*: *Thygater (Nectarodiaeta) luederwaldti* (Schrottky, 1910).

#### *Thygater arechavaletae*

**Bertoni & Schrottky, 1910: 586**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000030>)

*Lectotype*: ♂ [Uruguay], Montevideo' 'Thygater arechavaletae' Bert. & Schrottky, Type, C. Schrottky det. 1910' '96738'. *Paralectotype*: 1♀ 'R.[epublica] O.[riental] del Uruguay' 'Thygater arechavaletae' Bert. & Schrottky, Co-type, C. Schrottky det. 1910' '96739'. *Current status*: *Thygater (Thygater) analis* (Lepeletier, 1841). *Comments*: Lectotype designated by Urban (2000: 83).

#### *Exomalopsisini*

#### *Exomalopsis* Spinola

#### *Exomalopsis campestris* Silveira, 1996: 83

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000009>)

*Holotype*: ♀ 'Brasil, MG[Minas Gerais], Uberlândia, 15.vi.[19]93, G.A.R. Melo [col.]' 'Holotypus, *Exomalopsis campestris* Silveira'. *Paratype*: 1♂ 'Brasil, São Paulo, Batatais, x.1943, (Stafizza) [col.]' 'Para-

type, *E. (Exomalopsis) campestris* Silveira'. Current status: *Exomalopsis (Exomalopsis) campestris* Silveira, 1996.

***Exomalopsis elephantopodis* Schrottky, 1909b: 279**  
 Syntype: 1♀ 'Paraguay, Alto Paraná, Puerto Bertoni, 25.iv.1909, Schrottky col.' '14.824 [Paraguay, Alto Paraná, Puerto Bertoni, 25.iv.1909, Schrottky col.]'. Current status: *Exomalopsis (Exomalopsis) tomentosa* Friese, 1899.

#### ***Exomalopsis elephantopodis minor***

**Schrottky, 1910b: 89**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000010>)

Holotype: ♀ '14.825 [Brazil, São Paulo, São Paulo, Ipiranga, 02.ix.1907, H. Luederwaldt coll., on flowers of *Rosa setigera*] '96879' 'Brasil, SP[São Paulo], S.[São] Paulo, Ipiranga, 02.ix.1907, Luederwaldt [col.], flores de *Rosa setigera*' '*Exomalopsis elephantopodis minor* subsp. nov., Schrottky det. 1910' 'Holotypus *Exomalopsis elephantopodis minor* Schrottky'. Current status: *Exomalopsis (Exomalopsis) minor* Schrottky, 1910.

#### ***Exomalopsis fulvipennis* Schrottky, 1910b: 88**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000011>)

Holotype: ♀ '14.817 [Brazil, São Paulo, São Paulo, Ipiranga, 02.ix.1907, H. Luderwaldt coll., Typo, on flowers of *Rosa setigera*] '96872' 'Type' '*Exomalopsis fulvipennis* sp. nov. C. Schrottky det. 1910' 'Brasil, SP[São Paulo], S.[São] Paulo, Ipiranga, 02.ix.1907, H. Luderwaldt col.' 'Holotypus *Exomalopsis fulvipennis* Schr'. Current status: *Exomalopsis (Exomalopsis) fulvipennis* Schrottky, 1910.

#### ***Exomalopsis ypirangensis* Schrottky, 1910b: 89**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000012>)

Holotype: ♀ '14.823 [Brazil, São Paulo, São Paulo, Ipiranga, 02.ix.1907, H. Luderwaldt col., on flowers of *Rosa setigera*] 'Type' '*Exomalopsis ypirangensis* sp. nov., C. Schrottky det. 1910' 'Brasil, SP[São Paulo], São Paulo, Ipiranga, 02.ix.1907, H. Luederwaldt col.' 'Holotypus, *Exomalopsis ypirangensis* Schrottky'. Current status: *Exomalopsis (Exomalopsis) ypirangensis* Schrottky, 1910.

#### **Nomadini** ***Odyneropsis* Schrottky**

#### ***Odyneropsis holosericea* Schrottky, 1902a: 433**

Syntypes: 1♀ and 1♂ '1.386 [Brazil, São Paulo, São Paulo, Ipiranga, ii.1901, H. Ihering col.]' 'Tipo'. Current status: *Odyneropsis armata* (Friese, 1900).

#### ***Triepeolus* Robertson**

#### ***Epeolus osiriformis* Schrottky, 1910a: 208**

Syntype: 1♂ 'Puerto Bertoni, Alto Parana' 'Paraguay, [Alto Paraná, Puerto Bertoni], 22.iv.1909' '*Epeolus osiriformis* Schrottky, Type, C. Schrottky det. 1910' '102.272'. Current status: *Triepeolus osiriformis* (Schrottky, 1910).

#### **Tapinotaspidini** ***Caenonomada* Ashmead**

#### ***Epicharis unicalcarata* Ducke, 1908: 73**

Parlectotype: 1♂ 'Brazil, Estado do Ceará' '[Brazil], Ceará, Baturité, 26.vi.1908, Ducke [col.]' '*Chacoana unicalcarata*, typo' '96954'. Current status: *Caenonomada unicalcarata* (Ducke, 1908). Comments: Parlectotype according to designation by Nascimento (1979: 4).

#### ***Lophopedia* Michener & Moure**

#### ***Lophopedia fulviventris* Aguiar, 2009: 16**

Paratype: 1♂ 'Brasil, São Paulo, Ubatuba, Parque Estadual da Serra do Mar, N.[ucleo] Pinciguaba, 600 m, Malaise, 11-14.i.2006, E.F. Santos & C.F. Scott-Santos [col.]' 'Paratype, *Lophopedia fulviventris*, Aguiar'.

#### ***Tetrapedia pygmaea* Schrottky, 1902a: 544**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000029>)

Lectotype: ♂ '1.347 [Brazil, São Paulo, São José do Rio Pardo, Schrottky col.]' '96937' '1.347 [same data], *Tetrapedia pygmaea* Schrott.[Schrottky], S.[áo] J.[osé] D.[o] R.[io] Pardo (Est.[ado] S.P.[São Paulo]), Ducke rev. [19]13' 'Lectotipo, *Tetrapedia pygmaea* Schrottky, 1902, designado por A.J.C. Aguiar & G. Melo, 2005'. Current status: *Lophopedia pygmaea* (Schrottky, 1902). Comments: Lectotype designated by Aguiar & Melo (2005: 32).

#### ***Monoeca* Lepeletier & Serville**

#### ***Pachycentris lanei* Moure, 1944: 110**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000021>)

Holotype: ♂ 'Holotipo' '[Brazil, São Paulo], Monte Alegre, Fazenda Sta.[Santa] Maria, Alt.[itude] 1.100 mts., 24-30.xi.1942, F. Lane col.' '*Pachycentris lanei* sp. nov., Pe. J.S. Moure det. 1943'. Paratypes: 3♂ '[Brazil, São Paulo], Monte Alegre, Fazenda Sta. [Santa] Maria, Alt.[itude] 1.100 mts., 24-30.xi.1942, F. Lane col.' '*Pachycentris lanei* sp. nov., Pe. J.S. Moure det. 1943' 'Paratipo'. Current status: *Monoeca lanei* (Moure, 1944).

***Chacoana schizacantha* Ducke, 1912: 93**

*Paralectotype*: 1♂ 'Brazil, Estado de Minas Ger.[ais], Barbacena, 17.11.1905, Ducke [col.]' '96953'. *Current status*: *Monoeca pluricincta* (Vachal, 1909). *Comments*: Paralectotype according to designation by Nascimento (1979: 4).

***Paratetrapedia* Moure*****Paratetrapedia atlantica***

**Aguiar & Melo, 2011: 409**

*Paratype*: 1♀ 'Brasil, SP[São Paulo], Ubatuba, 31.iii.1962, K. Lenko col.' 'Paratipo, *Paratetrapedia atlantica*, Aguiar & Melo, 2006'.

***Paratetrapedia basilaris***

**Aguiar & Melo, 2011: 386**

*Paratype*: 1♂ 'Brasil, Pará, Alter do Chão, 19.ix.1969, Exp. Perm. Amaz.' 'Paratipo, *Paratetrapedia basilaris*, Aguiar & Melo, 2006'.

***Paratetrapedia flavifrons***

**Aguiar & Melo, 2011: 398**

*Paratypes*: 2♀ 'Brasil, Amazonas, Novo Airão, 02°38.439'S/60°50.407'S, 12.xii.2007, R. Gonçalves leg.' 'Paratype, *Paratetrapedia flavifrons*, Aguiar & Melo'; 1♂ '[Brazil], PA[Pará], BR-14, km 93, Belém-Brasília, viii-x.1959, Exp.[edição] Dep.[artamento] [de] Zool.[ogia]' 'Paratipo, *Paratetrapedia flavifrons*, Aguiar & Melo, 2006'.

***Tetrapedia bimaculata* Schrottky, 1902a: 547**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000026>)

*Holotype*: ♂ '17.840 [Brazil, Jundiaí, xi.1900, Schrottky col.]' 'bimaculata' '96914' '*Tetrapedia bimaculata* Schrottky 1902, Holotype'. *Current status*: *Paratetrapedia volatilis* (Smith, 1879).

***Tetrapedia fuliginosa* Schrottky, 1902a: 551**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000027>)

*Lectotype*: ♂ '17.842 [Brazil, São Paulo, Vitória, Botucatu, 20.vii.1900, A. Hempel col.]' '96935' 'Lectotipo, *Tetrapedia fuliginosa*, Schrottky, 1902, designado por A.J.C. Aguiar, 2006'. *Current status*: *Paratetrapedia volatilis* (Smith, 1879). *Comments*: Lectotype designated by Aguiar (in Moure et al. 2007: 626).

***Tetrapedia obsoleta* Schrottky, 1902a: 547**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000028>)

*Holotype*: ♂ '17.838 [Brazil, São Paulo, Jundiaí, xi.1889]' 'obsoleta 96918' '*Paratetrapedia obsoleta* (Schrottky, 1902), Holotypus, Pe. J.S. Moure det.

1987'. *Current status*: *Paratetrapedia fervida* (Smith, 1879).

***Tropidopedia* Moure*****Tropidopedia nigrita* Aguiar & Melo, 2007: 529**

*Paratypes*: 3♀ and 1♂ 'Brasil, MG[Minas Gerais], Serra do Caraça, xi.[1]961, 1880 m, Kloss, Lenko, Martins & Silva col.' 'Paratipo, *Tropidopedia nigrita* Aguiar & Melo, 2006'; 1♀ 'Brasil, MG[Minas Gerais], Sta.[Santa] Barbara, Serra do Caraça, 23-25. xi.[1]960, Araujo e Martins [col.]' 'Paratipo, *Tropidopedia nigrita* Aguiar & Melo, 2006'.

***Xylocopini******Ceratina* Latreille*****Ceratina aspera* Schrottky, 1902a: 484**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000006>)

*Holotype*: ♂ '17.764 [Brazil, São Paulo, Jundiaí, i.1900, M. Beron col.]' '*Ceratina aspera*, Holotypus, M, Pe. J.S. Moure 1986'. *Current status*: *Ceratina (Crewella) aspera* Schrottky, 1902.

***Ceratina fulvofasciata* Ducke, 1908: 32**

*Paralectotype*: 1♀ 'Perú amazonico' '[Peru], Iquitos, 13.viii.1906, Ducke [col.]' '*Ceratina fulvofasciata* Ducke, typ.[e]' '97483'. *Current status*: *Ceratina (Ceratinula) fulvofasciata* Ducke, 1908. *Comments*: Paralectotype according to designation by Nascimento (1979: 3).

***Ceratina huberi* Friese, 1910: 701**

*Syntypes*: 1♀ '[Brazil]', Pará, 15.xi.[19]99, Ducke [col.]' '*Ceratina huberi* Ducke, Typ.[e]'; 1♂ '[Brazil]', Pará, 25.xi.[19]99, Ducke [col.]' '*Ceratina huberi* Ducke, Typ.[e]'. *Current status*: *Ceratina (Crewella) huberi* Friese, 1910.

***Ceratina oxalidis* Schrottky, 1907b: 471**

*Syntypes*: 1♀ '5.326 [Paraguay, Villa Encarnación, 28.vii.1905, co-type]' '*Ceratina oxalidis* Schrottky' '97484'; 1♂ '5.326 [Paraguay, Villa Encarnación, 28.vii.1905, co-type]' '*Ceratina oxalidis* Schrottky, co-type' '97485'. *Current status*: *Ceratina (Ceratinula) oxalidis* Schrottky, 1907.

***Ceratina oxalidis piracicabana******Schrottky, 1910d: 86***

*Holotype*: ♀ '6.699 [Brazil, São Paulo, Piracicaba, xi.1906]' 'Typus' '*Ceratina oxalidis piracicabana* Schrottky'. *Current status*: *Ceratina (Ceratinula) pi-*

*racicabana* Schrottky, 1910. *Comments:* Only the pin and labels, the specimen is absent.

**Colletinae**  
**Colletini**  
**Colletes Latreille**

***Ceratina stilbonota* Moure, 1941: 73**

*Paratype:* 1♀ [Brazil], Paraná, Curityba [now Curitiba], i.1939, coll. Claretiano' 'Paratypus' '*Ceratina stilbonota* sp. nov., Pe. J.S. Moure det. 1940' '97464'. *Current status:* *Ceratina (Rhysoceratina) stilbonota* Moure, 1941.

***Ceratina sclerops* Schrottky, 1907b: 472**

*Syntype:* 1♀ '17.761 [Paraguay]' 'sclerops, co-type' '97489'. *Current status:* *Ceratina (Ceratinula) sclerops* Schrottky, 1907.

***Ceratina volitans* Schrottky, 1907b: 473**

*Syntype:* 1♀ '17.762 [Paraguay]' '*Ceratina volitans* Schrottky, co-type' '97460'. *Current status:* *Ceratina (Rhysoceratina) volitans* Schrottky, 1907.

***Xylocopa* Latreille**

***Xylocopa bambusae* Schrottky, 1902a: 475**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000031>)

*Holotype:* ♂ '17.757 [Brazil, Rio Grande do Sul, H. Ihering col.]' 'Tipo' 'Holotype, *Xylocopa bambusae* Schrottky, 1902'. *Current status:* *Xylocopa (Xylocospila) bambusae* Schrottky, 1902.

***Xylocopa chrysopoda* Schrottky, 1902a: 475**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000032>)

*Holotype:* ♂ '17.759 [Brazil, São Paulo, Jundiaí, 1900, O. Dreher col.]' 'Tipo' 'Holotype, *Xylocopa chrysopoda* Schrottky, 1902'. *Current status:* *Xylocopa (Loxylocopa) chrysopoda* Schrottky, 1902.

***Xylocopa crotalariae* Schrottky, 1902a: 472**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000033>)

*Holotype:* ♀ '1.296 [Brazil, São Paulo, Jundiaí, M. Beron col.]' 'Holotype, *Xylocopa crotalariae* Schrottky, 1902'. *Current status:* *Xylocopa (Schonherria) macrops* Lepeletier, 1841.

***Xylocopa (Monoxylocopa) macambirae***

**Zanella & Silva, 2010: 62**

*Paratypes:* 1♀ 'Brasil, Pernambuco, Buíque, Pq. [Parque] Nacional Catimbau, 28.xi.2007, Maise Silva [col.]' 'L112, 1213, *Encholirium spectabile*, ninho na haste'; 1♀ 'Brasil, Pernambuco, Buíque, Pq. [Parque] Nacional Catimbau, 28.vii.2006, Maise Silva [col.]' 'L112, 1213, *Encholirium spectabile*, ninho na haste'; 1♀ 'Brasil, Pernambuco, Buíque, Pq. [Parque] Nacional Catimbau, 25.viii.2007, Maise Silva [col.]' 'L112, 1213, *Encholirium spectabile*, ninho na haste'.

***Colletes rufipes meridionalis***

**Schrottky, 1902a: 344**

*Syntypes:* 3♀ '17.585 [Brazil, Rio Grande do Sul, H. Ihering col.]'. *Current status:* *Colletes meridionalis* Schrottky, 1902.

***Colletes ornatus* Schrottky, 1902a: 345**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000034>)

*Holotype:* ♀ '17.586 [Brazil, São Paulo, Jundiaí, i.1900, M. Beron col.]' '100.075'.

**Diphaglossini**

***Ptiloglossa* Smith**

***Ptiloglossa aenigmatica* Moure, 1945: 166**

*Holotype:* ♀ '1.343 [Brazil, São Paulo, Jundiaí, i.1901, M. Beron col.]' 'Holotipo' '100.123'.

***Megacilissa obscura* Schrottky, 1902a: 412**

*Holotype:* ♀ '17.604 [Brazil, São Paulo, Jundiaí, 28.i.1900, M. Beron col.]' '100.133'. *Current status:* *Ptiloglossa olivacea* (Friese, 1898).

**Hylaeini**

***Hylaeus* Fabricius**

***Hylaeus alampes* Moure, 1942: 293**

*Paratype:* 1♀ [Brazil], Mato Grosso [do Sul], Salobra, 27-31.i.1941, F. Lane col.' 'Paratypus'.

***Prosopis brasiliensis* Schrottky, 1910c: 134**

*Syntype:* 1♂ '14.666 [Brazil, São Paulo, Piracicaba, xi.1906, J. Lima col.]' '*Prosopis brasiliensis* Schrottky' '100.004'. *Current status:* *Hylaeus brasiliensis* (Schrottky, 1910).

***Prosopis exigua* Schrottky, 1902a: 341**

*Syntype:* 1♂ '17.580 [Brazil, São Paulo, Botucatu, vii.1900, A. Hempel col.]' '100.010'. *Current status:* *Hylaeus exiguis* (Schrottky, 1902).

***Prosopis femoralis* Schrottky, 1902a: 339**

*Syntypes:* 2♂ '17.581 [Brazil, São Paulo, Botucatu, vii.1900, A. Hempel col.]'. *Current status:* *Hylaeus femoralis* (Schrottky, 1902).

***Prosopis gracillima* Schrottky, 1902a: 340**

*Syntype:* 1♀ '17.578 [Brazil, São Paulo, Botucatu]' '*Hylaeus gracillimus*, (Schr.ottky, 1902), Holotypus,

n.c.' '100.024'. Current status: *Hylaeus (Hylaeopsis) gracillimus* (Schrottky, 1902).

**Prosopis guaranitica Schrottky, 1906: 10**

Syntype: 1♂ '5.334 [Paraguay, Encarnación, 1906]' '*Prosopis guaranitica* Schrottky co-type' '100.029'. Current status: *Hylaeus guaraniticus* (Schrottky, 1906).

**Prosopis polybioides Schrottky, 1906: 9**

Syntype: 1♀ '5.332 [Paraguay, Encarnación, 1906]' '*Prosopis polybioides* Schrottky co-type' '100.052'. Current status: *Hylaeus polybioides* (Schrottky, 1906).

**Prosopis stenops Schrottky, 1910c: 136**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000036>)

Holotype: ♂ '14.669 [Brazil, São Paulo, Piracicaba, 1906]' '100.054'. Current status: *Hylaeus stenops* (Schrottky, 1910).

**Prosopis tricolor Schrottky, 1906: 18**

Syntype: 1♂ '5.336 [Paraguay, Villa Encarnacion, 1906, Schrottky coll., co-type]' 'tricolor co-type' '100.056'. Current status: *Hylaeus (Hylaeopsis) tricolor* (Schrottky, 1906).

**Neopasiphaeini**  
**Bicolletes Friese**

**Panurginus decoloratus Ducke, 1908: 66**

Paralectotype: 1♂ '[Brazil], Ceará, Baturité, 26.06.1908, Ducke [col.]'. Current status: *Bicolletes decolorata* (Ducke, 1908). Comments: Paralectotype according designation by Nascimento (1979: 8).

**Pasiphae cestri Ducke, 1912: 77**

Paralectotype: 1♂ '[Brazil], Rio de Janeiro, Tijuca, 500 m, XI-1911, Ducke col.]' '100.166'. Current status: *Bicolletes iheringi* (Schrottky, 1910). Comments: Paralectotype according designation by Nascimento (1979: 8).

**Bicolletes tauraphilus**

Laroca & Almeida, 2005: 130

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000095>)

Holotype: ♂ 'Brasil, PR [Paraná], Curitiba, 17.ix.1994, S. Laroca leg.' 'Coletado em *Vassobia breviflora* (Sendtn.) Hunz, 1977' 'Holótipo *Bicolletes tauraphilus* Laroca & Almeida, 2004'. Paratype: 1♀ 'Brasil, PR [Paraná], Curitiba, 08.x.1994, S. Laroca leg.' 'Coletado em *Vassobia breviflora* (Sendtn.) Hunz, 1977' 'Parátipo *Bicolletes tauraphilus* Laroca & Almeida, 2004'. Current status: *Bicolletes tauraphila* Laroca & Almeida, 2005.

**Protodiscelis Brèthes, 1909**

**Panurginus alismatis Ducke, 1908: 66**

Paralectotypes: 1♀ 'Brazil, Estado do Ceará' '[Brazil], Ceará, Quixadá, 08-07-1908, Ducke [col.]' '*Pasiphae alismatis* Ducke, Typ.[e]' '100.152'; 1♂ 'Brazil, Estado do Ceará' '[Brazil], Ceará, Quixadá, 08-07-1908, Ducke [col.]' '*Pasiphae alismatis* Ducke, Typ.[e]'. Current status: *Protodiscelis alismatis* (Ducke, 1908). Comments: Paralectotypes according to designation by Nascimento (1979: 7).

**Protodiscelis echinodori Melo, 1996: 98**

Paratypes: 1♀ 'Brasil, MG [Minas Gerais], Viçosa, 30/11/[19]91, Lima, N.A.S. [col.]'; 1♂ and 2♀ same labels data except collected in 17/11/[19]93; 2♀ 'Brasil, MG[Minas Gerais], Viçosa, 30/12/[19]93, Vieira, M.F.'

**Xeromelissini**  
**Chilicola Spinola**

**Scapteroides cupheae Schrottky, 1905: 2**

Syntype: 1♂ '5.340 [Paraguay, Villa Encarnación]'. Current status: *Chilicola cupheae* (Schrottky, 1905).

**Halictinae**  
**Augochlorini**  
**Augochlora Smith**

**Odontochlora cydippe Schrottky, 1910d: 72**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000054>)

Holotype: ♀ '12.978 [Brazil, São Paulo, São Paulo, Anhandava, 1903, E. Garbe col.]'. Current status: *Augochlora (Augochlora) cydippe* (Schrottky, 1910).

**Augochlora (Augochlora) francisca**

Schrottky, 1902a: 391

Syntype: 1♀ '17.637 [Brazil, São Paulo, Jundiaí, ix.1900, M. Beron col.]'.

**Augochlora cupraria Friese, 1925: 6**

Syntype: 1♀ 'Ecuador, Guayaquil[Guayaquil], 4.1923, Buchwald [col.], *Curcubita*' '*Augochlora cupricollis* Fr., Friese det. [19]25' '102.922' '*Odontochlora cupricollis* (Fr.), Pe. J.S. Moure det. [19]40'. Current status: *Augochlora (Augochlora) cupraria* Friese, 1925.

**Odontochlora dolichocephala Moure, 1941: 43**

Paratype: 1♀ '[Brazil, São Paulo], Guarulhos, ii.1940' 'Paratypus' '102.627'. Current status: *Augochlora (Augochlora) dolichocephala* (Moure, 1941).

***Augochlora microsticta* Moure, 1943a: 473**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000046>)

*Holotype:* ♀ '17.640 [Brazil, Amazonas, Manaus, Bi-cego col.]' 'Holotipo' '*Augochlora microsticta* sp. nov. Pe. J.S. Moure det. 1943'.

***Oxystoglossa pyrgo* Schrottky, 1910d: 75**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000057>)

*Holotype:* ♀ '12.980 [Brazil, São Paulo, Anhandava, 1903, E. Garbe col.]' 'Typus'. *Current status:* *Augochlora* (*Augochlora*) *pyrgo* (Schrottky, 1910).

***Oxystoglossa schrottkyi* Moure, 1940a: 57**

*Paratype:* 1♀ '[Brazil], Mato Grosso [do Sul], Bodó-quena, 30.x.[19]38, F. Lane coll.'. *Current status:* *Augochlora* (*Augochlora*) *esox* (Vachal, 1911).

***Oxystoglossa semiramis* Schrottky, 1910d: 78**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000058>)

*Holotype:* ♀ '5.757 [Brazil, São Paulo, São Paulo, Ipiranga, 16.ix.1906, H. Luderwaldt col.]' 'Typus' '100.321'. *Current status:* *Augochlora* (*Oxystoglossella*) *iphigenia* Holmberg, 1886.

***Augochlora tantilla* Moure, 1943a: 471**

*Paratypes:* 1♀ 'Brasil, São Paulo, Ilha Seca, Com. I.O. Cruz, 18/26.ii.1940' 'Paratipo'; 1♀ '[Brazil, São Paulo], Ituverava, vi.1911, Garbe leg' 'Paratypus, *Augochlora tantilla* Pe. J.S. Moure 1943'; 5♀ '17.444 [Brazil, São Paulo, Ituverava, 1911, E. Garbe col.]' 'Paratipo'. *Current status:* *Augochlora* (*Augochlora*) *tantilla* Moure, 1943.

***Augochlorella* Sandhouse*****Augochlorella acarinata* Coelho, 2004: 291**

*Paratype:* 1♀ 'Brasil, MG[Minas Gerais], Viçosa, 23.iii.[19]87, E.F. Morato [col.]' 'N. 6261/136'.

***Oxystoglossa ephyra* Schrottky, 1910d: 75**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000055>)

*Holotype:* ♀ '6.344 [Brazil, São Paulo, São Paulo, Ipiranga, 19.xi.1906, S.M. Torres col.]' 'Typus' '100.307'. *Current status:* *Augochlorella ephyra* (Schrottky, 1910).

***Augochlorella karankawa* Coelho, 2004: 307**

*Paratypes:* 1♀ and 1♂ '[USA], Texas, San Patricio Co., Welder Wildlife Refuge (8 mi NE Sinton), 11-12 July 1982, WJ Pulawski [col.]'.

***Augochlorella meridionalis* Coelho, 2004: 296**

*Paratype:* 1♀ 'Argentina, La Rioja, Iliar, February 1934, M. Gomez [col.]'.

***Augochlorella stenothoracica* Coelho, 2004: 298**

*Paratype:* 1♀ 'Brazil, Pará, Jacareacanga, Dec[ember] 1968, M. Alvarenga [col.]'.

***Augochlorella una* Coelho, 2004: 300**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000047>)

*Holotype:* ♀ 'Brazil, DF[Distrito Federal], Jardim Botânico, 23.viii.1996, RIP Freitas & GS Freitas [col.]' '1990'. *Paratype:* 1♀ [coated with gold] 'Brazil, DF[Distrito Federal], Reserva do IBGE, 14.viii.1996, RIP Freitas & GS Freitas [col.]'.

***Augochlorodes* Moure*****Augochlorodes vachali*****Gonçalves & Melo, 2008: 1399**

*Paratype:* 1♀ 'Brasil, SP[São Paulo], São José do Barreiro, Campo de Altitude, Serra da Bocaina, 20.xii.1999, Coletor: Leandro Freitas nº 407'.

***Augochloropsis* Cockerell*****Augochlora* (*Augochloropsis*) *aphrodite*****Schrottky, 1902a: 376**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000037>)

*Holotype:* ♂ '17.619 [Brazil, São Paulo, Jundiaí, i.1901, M. Beron col.]' '100.355'. *Current status:* *Augochloropsis smithiana* (Cockerell, 1900).

***Augochlora* (*Glyptobasis*) *chloera*****Moure, 1940a: 49**

*Paratype:* 1♀ '[Brazil, Rio de Janeiro], Macahé [Macaé], x.1909, Garbe col.' 'Paratypus' '22.957'. *Current status:* *Augochloropsis chloera* (Moure, 1940).

***Augochlora* (*Augochloropsis*) *circe*****Schrottky, 1902a: 385**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000038>)

*Holotype:* ♀ '17.633 [Brazil, São Paulo, Jundiaí, xi.1899, C. Schrottky col.]' '102.929'. *Current status:* *Augochloropsis cleopatra* (Schrottky, 1902).

***Augochlora* (*Augochloropsis*) *cleopatra*****Schrottky, 1902a: 384**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000039>)

*Holotype:* ♀ '12.097 [Brazil, São Paulo, Jundiaí, 15.ix.1900, M. Beron col.]' '100.360'. *Current status:* *Augochloropsis cleopatra* (Schrottky, 1902).

***Augochlora* (*Augochloropsis*) *cyanea*****Schrottky, 1902a: 381**

*Syntypes:* 1♀ '1.273 [Brazil, São Paulo, Jundiaí, 12.xi.1900, C. Schrottky col.]' '100.334'; 1♀ same

labels data except '100.335'; 1♀ same labels data except '100.333'; 1♀ [Brazil], E.[stado] S.[ão] Paulo, Jundiah[Jundiaí], 08.i.1901, M. Beron lg[leg.]' '100.339'; 1♀ [Brazil], E.[Estado] S.[ão] Paulo, Jundiah[Jundiaí], 29.ix.1900, M. Beron lg[leg.]' '100.342'; 1♀ [Brazil], E.[stado] S.[ão] Paulo, Jundiah[Jundiaí], 31.i.[19]01, M. Beron lg[leg.]' '100.341'. Current status: *Augochloropsis cyanea* (Schrottky, 1902).

**Tetrachlora deianira Schrottky, 1910d: 80**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000067>)

Holotype: ♀ '12.974 [Brazil, São Paulo, Campos do Jordão, xi.1905, Luderwaldt col.]' 'Typus' '100.359'. Current status: *Augochloropsis deianira* (Schrottky, 1910).

**Augochlora (Augochloropsis) hecuba**

Schrottky, 1902a: 380

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000040>)

Holotype: ♀ '1.041 [Brazil, São Paulo, São Paulo, Ipiranga, 15.iv.1902, Ihering col.]' '102.912'. Current status: *Augochloropsis semele* (Schrottky, 1902).

**Augochlora (Pseudaugochloropsis) hypsipyle**

Schrottky, 1909c: 215

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000044>)

Holotype: ♀ '12.700 [Brazil, São Paulo, São Paulo, Ipiranga, 19.xi.1906, H. Luderwaldt col.]' 'Typus' '102.848'. Current status: *Augochloropsis hypsipyle* (Schrottky, 1909).

**Augochlora (Augochloropsis) iris**

Schrottky, 1902a: 372

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000041>)

Holotype: ♀ '17.622 [Brazil, São Paulo, São Paulo, Ipiranga]' '100.375'. Current status: *Augochloropsis iris* (Schrottky, 1902).

**Augochlora (Augochloropsis) liopelte**

Moure, 1940a: 44

Paratype: 1♀ [Brazil], Paraná, Curityba [now Curitiba], Matto[Mato] Grego, 10.iv.[19]39, Coll. Claretiano leg' 'Paratypus'. Current status: *Augochloropsis liopelte* (Moure, 1940).

**Augochlora (Augochloropsis) pereirai**

Moure, 1940b: 469

Paratype: 1♀ [Brazil], S.P.[São Paulo], Rio Claro, 16.x.1939, Coll. Claretiano' 'Paratypus' '102.813' '*Augochlora pereirai* sp. nov. Pe. J.S. Moure det. 1940'. Current status: *Augochloropsis aurifluens* (Vachal, 1903).

***Augochloropsis terrestris* var. *prognatha***

**Moure, 1944: 106**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000049>)

Holotype: ♀ 'Brasil, São Paulo, Monte Alegre, 750 ms, Faz.[enda] Experimental, 14-27.x.1942, L. Trav. & Almeida [col.]' '104.434' 'Holotipo'. Current status: *Augochloropsis prognatha* Moure, 1944.

***Augochlora (Pseudaugochloropsis) pandrosos***

**Schrottky, 1909c: 216**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000045>)

Holotype: ♀ '12.982 [Brazil, São Paulo, Avanhandava, 1903, E. Garbe col.]' '100.353'. Current status: *Augochloropsis pandrosos* (Schrottky, 1909).

***Augochlora (Augochloropsis) semele***

**Schrottky, 1902a: 377**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000042>)

Holotype: ♀ '17.626 [Brazil, São Paulo, São Paulo, Ipiranga, iii.1900, C. Schrottky col.]' '100.361'. Current status: *Augochloropsis semele* (Schrottky, 1902).

***Tetrachlora thyias* Schrottky, 1910d: 79**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000068>)

Holotype: ♀ '6.410 [Brazil, São Paulo, Cubatão, Estação Raiz da Serra, 22.xi.1906, J. Lima col.]' 'Type' '100.358'. Current status: *Augochloropsis cockerelli* Schrottky, 1909.

***Caenaugochlora* Michener**

***Caenaugochlora (Caenaugochlora)***

***bennetti* Gonçalves & Engel, 2010: 73**

Paratypes: 1♀ and 1♂ 'Ecuador, Cuenca Azuay Prov. [ince], 13.iii.1965' 'L.E. Pena, collector'.

***Caenaugochlora (Caenaugochlora) quichua***

**Gonçalves & Engel, 2010: 75**

Paratypes: 1♀ and 1♂ 'Ecuador: Pich. above Tandapi, 08.ii.1983, 2300 m, Masner Sharker [col.]; 1♂ 'Ecuador, A/uasi, 18.vi.1914, H.S. Parish [col.]'.

***Ceratalictus* Moure**

***Oxystoglossa thalia pauloensis***

**Moure, 1910d: 78**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000059>)

Lectotype: ♀ '12.975 [Brazil, São Paulo, Campos do Jordão, 16.ii.1906, H. Luderwaldt coll.]' 'Typus' '100.318'. Paralectotype: 1♂ '12.988 [Brazil, São Paulo, Jundiaí, 14.x.1900, M. Beron col.]' 'Typus' '100.320' '*Oxystoglossa thalia pauloensis* Schrottky'. Current status: *Ceratalictus clonius* (Brèthes, 1909).

*Comments:* Lectotype and paralectotype designated by Moure (1950b: 313). According to Moure (1950b) and Coelho & Gonçalves (2010) the male specimen with number 12.988/100.320 is a species of *Augochlora*.

***Oxystoglossa theia* Schrottky, 1910d: 77**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000060>)

*Lectotype:* ♂ ‘11.966 [Brazil, São Paulo, São Paulo, Ipiranga, 16.xii.1902, H. Luderwaldt col.]’ ‘Type’ ‘100.267’. *Current status:* *Ceratalictus clonius* (Brèthes, 1909). *Comments:* Lectotype designated by Moure (1950b: 313).

***Chlerogella* Michener**

***Chlerogella cochabambensis* Engel, 2010: 9**

*Paratype:* 1♀ ‘Bolivia: Cochabamba, Cochabamba, 109 km E. Yungas (Cochabamba – Villa Tunari Rd.), 1480 m, 17°8'50"S/65°42'29"W, 01-06.ii.1999, F. Genier [col.], Bol1G99 027, ex. flight intercept trap’.

***Corynurella* Eickwort**

***Corynurella cognata* Gonçalves, 2010: 99**

*Paratypes:* 1♀ and 1♂ ‘[Brazil], SP[São Paulo], Salesópolis, Est.[açao] Biol.[ógica] Boracéia, 02.ii.1994, W. Wilms col.’; 1♀ ‘Brasil, SP[São Paulo], São Paulo, Juréia, 20.iii.[19]82, F.R.N.K. col., Costão, 15:00’; 1♀ ‘Brasil, SP[São Paulo], Salesópolis, E.B.B.[Estação Ecológica Boracéia], 05.vii-06. ix.1997, C.I. Yamamoto col., Malaise – laboratório’.

***Halictillus* Moure**

***Halictillus verissimus* Gonçalves, 2010: 754**

*Paratypes:* 1♀ and 1♂ ‘Chile, Ñuble, Chillán area, “Shangri lá”, Las Trancas, E. Recinto, January 19-22, 1979, 1600 m., L.E. Peña [col.]’.

***Megalopta* Smith**

***Megalopta guimaraesi* Santos & Silveira, 2009: 10**

*Paratypes:* 3♀ ‘Brasil, MG[Minas Gerais], Morro da Garça, 18-20.x.1964, Exp.[edição] Dep.[artamento] [de] Zool.[ogia]’.

***Megalopta piraha* Santos & Melo 2015: 615**

*Paratypes:* 1♂ ‘Brasil, AM (Amazonas), Taracuá (Rio Uapés), viii.1964, Pereira & Machado [col.]’; 1♂ ‘[Brazil], Pará, Canindé, Rio Gurupi, iv.1963, B. Malkin [col.]’.

***Megommation* Moure**

***Megalopta (Megaloptella) ipomoeae***

**Schrottky, 1912: 271**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000053>)

*Lectotype:* ♂ ‘17.644 [Brazil, Minas Gerais, Mar de Espanha, vi.1908, Zikán col.]’. *Paralectotype:* 1♀ ‘17.644 [same data as lectotype]’. *Current status:* *Megommation insigne* (Smith, 1853). *Comments:* Lectotype designated by Gonçalves & Santos (2010: 60).

***Neocorynura* Schrottky**

***Augochlora (Pseudaugochloropsis) erinnys***

**Schrottky, 1910d: 81**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000043>)

*Holotype:* ♀ ‘9.944 [Brazil, São Paulo, Cubatão, Estação Raiz da Serra, 30.ix.1907, H. Luderwaldt col.]’ ‘Type’ ‘100.439’. *Current status:* *Neocorynura erinnys* (Schrottky, 1910).

***Corynura oiospermi* Schrottky, 1909d: 145**

*Syntypes:* 1♀ ‘12.713[Paraguay, 07.ii.1909, C. Schrottky col.]’; 1♂ same data except ‘100.433’. *Current status:* *Neocorynura oiospermi* (Schrottky, 1909).

***Paracorynurella* Gonçalves**

***Paracorynurella betoi* Gonçalves, 2010: 106**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000061>)

*Holotype:* ♂ ‘Brasil, MA[Maranhão], Balsas, Gerais de Balsas, Córrego MA-6, 01-07.xi.1999, Malaise, 08°31'32"S/46°36'18"W’, Brandão, Yamamoto & Dietz [col.]. *Paratype:* 1♀ same labels data as holotype.

***Paroxystoglossa* Moure**

***Oxystoglossa jocasta* Schrottky, 1910d: 74**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000056>)

*Holotype:* ♀ ‘12.971 [Brazil, São Paulo, Campos do Jordão, xi.1905, H. Luderwaldt col.]’ ‘Typus’ ‘100.266’. *Current status:* *Paroxystoglossa jocasta* (Schrottky, 1910).

***Pseudaugochlora* Michener**

***Pseudaugochlora callaina* Almeida, 2008: 14**

*Paratypes:* 1♀ ‘Brasil, São Paulo, Barueri, 09.vii.1966, K. Lenko col.’; 1♀ ‘Brasil, São Paulo, Barueri, 17.iii.1962, K. Lenko col.’; 1♀ ‘Brasil, São Paulo, Barueri, 02.i.1966, K. Lenko col.’; 1♀ ‘Brasil, SP[São Paulo], São Sebastião, praia Brava, 30.xii.1989, M.G. Oliveira col.’; 1♀ ‘[Brasil], E.[stado] de S.[ão] Paulo,

Juquiá, Faz.[enda] Poço Grande, 27.iv.1948, F. Lane col.; 1♀ '17.629[Brazil, Paraná, 1910, C. Schrottky col.]' 'Pto[Puerto] Mojoli, Guayra, Paraná, Br, 31.x.1910' '100.415'; 1♂ '[Brazil], Paraná, Pto Britannia, 09.xi.1910' '17.629' '100.416'.

**Pseudaugochlora flammula Almeida, 2008: 22**

Paratype: 1♀ 'Brasil, Mato Grosso, Corumbá, Serra do Urucum, 27.xi.1960, K. Lenko col.'

**Pseudagapostemon Schrottky**

**Pseudagapostemon paulista Schrottky, 1910d: 82**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000062>)

Holotype: ♂ '2.510 [Brazil, São Paulo, São Paulo, Vila Mariana, 23.iii.1906, Lima col.]' 'Typus' '100.217'.

Current status: *Pseudagapostemon* (*Pseudagapostemon*) *ochromerus* (Vachal, 1904).

**Halictini**

**Dialictus Robertson**

**Augochloropsis carioca Schrottky, 1910d: 79**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000048>)

Holotype: ♀ '2.841 [Brazil, Rio de Janeiro, Itatiaia, iv.1906, H. Luderwaldt col.]' 'Typus' '100.407'. Current status: *Dialictus carioca* (Schrottky, 1910).

**Tetrachlora creusa Schrottky, 1910d: 80**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000066>)

Holotype: ♀ '9.654 [Brazil, São Paulo, São Paulo, Ipiranga, 06.ix.1907, H. Luderwaldt coll.]' 'Typus' '100.410'. Current status: *Dialictus creusa* (Schrottky, 1910).

**Halictomorpha mottai Moure, 1940b: 473**

Paratypes: 5♀ '[Brazil], S.P.[São Paulo], Chacara Paráizo, x.1939, Coll. Claretiano' 'Paratypus'; each one with respective additional labels '100.715', '100.719', '100.720', '100.721', and '100.723'. Current status: *Dialictus picadensis* (Strand, 1910).

**Halictomorpha opaca Moure, 1940b: 475**

Paratypes: 1♀ '[Brazil], Paraná, Curityba [now Curitiba], Parolim, x.1939, Coll. Claretiano' 'Paratypus'; 1♀ same labels data except '20.v.1939'; 1♀ same labels data except '01.ix.1938'. Current status: *Dialictus opacus* (Moure, 1940).

**Gastrohalictus pabulator Schrottky, 1910d: 84**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000050>)

Holotype: ♀ '12.985 [Brazil, São Paulo, São Paulo, Ipiranga, 02.ix.1907, H. Luderwaldt col.]' 'Ty-

pus' '100.448'. Current status: *Dialictus pabulator* (Schrottky, 1910).

**Halictomorpha phaedra Schrottky, 1910d: 82**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000052>)

Holotype: ♀ '12.986[Brazil, São Paulo, São Paulo, Ipiranga, 02.ix.1907, H. Luderwaldt col.]' 'Typus' '100.408'. Current status: *Dialictus phaedrus* (Schrottky, 1910).

**Halictomorpha travassosi Moure, 1940a: 62**

Paratypes: 1♀ '[Brazil], Mato Grosso [do Sul], Boduquena, 30.x.[19]38, F. Lane col.' 'Instituto Oswaldo Cruz, Zona da N.O.B., 30.x.[1]938' 'Paratypus' '22.969'; 1♀ same labels data except '22.970'. Current status: *Dialictus travassosi* (Moure, 1940).

**Gastrohalictus ypirangensis Schrottky, 1910d: 85**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000051>)

Holotype: ♀ '12.983 [Brazil, São Paulo, São Paulo, Ipiranga, 02.ix.1907, H. Luderwaldt col.]' 'Typus' '100.449'. Current status: *Dialictus ypirangensis* (Schrottky, 1910).

**Caenohalictus Cameron**

**Augochlora (Augochloropsis) incerta**

**Schrottky, 1902a: 386**

Holotype: ♀ '1.272 [Brazil, São Paulo, Botucatu, Vitoria, Hempel col.]'. Current status: *Caenohalictus incertus* (Schrottky, 1902). Comments: The type series consists only of a female holotype, however, there are three conspecific females with the same label information as described by Schrottky. The specimens do not have any indicative of type in the labels, so it is unknown which of these were originally designated as the holotype. Besides the label '1.272', the tree specimens have an additional label with respective numbers '100.398', '100.399', and '100.397'.

**Caenohalictus mourei**

**Almeida & Laroca, 2005: 136**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000096>)

Holotype: ♀ 'Brasil, PR [Paraná], Curitiba, 17.ix.1994, S. Laroca leg.' 'Holótipo *Caenohalictus mourei* Almeida & Laroca, 2004'.

**Paragapostemon tessellatus Moure, 1940a: 63**

Paratype: 1♀ '[Brazil], Paraná, Curityba [Curitiba], Parolim, 29.ix.[19]38, coll Claretiano' 'Paratypus' '22.971'. Current status: *Caenohalictus tessellatus* (Moure, 1940).

***Habralictus* Moure*****Habralictus flavopictus* Moure, 1941: 62**

Paratypes: 1♀ '[Brazil], S.P.[São Paulo], v.1939, Coll. Claretiano' 'Paraypus' '102.716'; 1♂ same labels data except '102.718'.

***Pseudagapostemon* Schrottky*****Pseudagapostemon (Pseudagapostemon)******anasmus* Cure, 1989: 252**

Paratypes: 1♀ '[Brazil], DF[Distrito Federal], Res.[erva] Ecol.[ógica] IBGE, km 0 BR-251, 09-16.x.[19]81, 3A-75-8 m'; 1♀ same label data except '11-18.iv.[19]80, 3A-34-7 J'.

***Agapostemon arenarius* Schrottky, 1902a: 403**

Syntypes: 1♀ '1.269 [Brazil, São Paulo, Botucatu, Vitoria, 05.iii.1900, Hempel col.]' '100.207'; 1♀ same labels data except '100.213'; 1♂ same labels data except '100.196'. Current status: *Pseudagapostemon (Pseudagapostemon) arenarius* (Schrottky, 1902).

***Pseudagapostemon nasua* Schrottky, 1910d: 83**

Syntype: 1♂ '12.987 [Brazil, São Paulo, São Paulo, Ipiranga, i.1906, J. Lima col.]' 'Typus' '100.214'. Current status: *Pseudagapostemon (Pseudagapostemon) arenarius* (Schrottky, 1902).

***Sphecodes* Latreille*****Sphecodes brasiliensis* Schrottky, 1910b: 63**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000063>)

Holotype: ♀ '14.676 [Brazil, Minas Gerais, Caxambu, v.1906, R. Ihering col.]' 'Type' '100.195'.

***Temnosoma inornatum* Schrottky, 1902a: 351**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000065>)

Holotype: ♂ '17.614 [Brazil, São Paulo, Botucatu, Vitoria, x.1900, A. Hempel col.]' '100.205'. Current status: *Sphecodes inornatus* (Schrottky, 1902).

***Sphecodes minarum* Schrottky, 1910b: 63**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000064>)

Holotype: ♂ '2.533' 'Type!' '100.200'. Comments: The holotype is described from Minas Gerais (Brazil) although the number 2.533 is related to the locality of São Paulo (Brazil). There was probably a mistake in the labels, with the collection information of the type specimens depicting the number 2.553 [Brazil, Minas Gerais, Caxambu, v.1906, v. Ihering col.].

***Megachilinae******Anthidiini******Anthidium* Fabricius*****Anthidium latum******Schrottky, 1902a: 447***

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000070>)

Holotype: ♀ '18.114 [Brazil, São Paulo, Jundiaí, 28.i.1900, M. Beron col.]' '100.209'.

***Anthodioctes* Holmberg*****Dianthidium vernoniae******Schrottky, 1911: 14***

Syntype: 1♀ '18.105 [Brazil, Paraná, Guairá, Porto Majoli, xi.1910, C. Schrottky col.]' '102.249'. Current status: *Anthodioctes vernoniae* (Schrottky, 1911).

***Dicranthidium* Moure & Urban*****Hypanthidium gregarium******Schrottky, 1905: 8***

Syntypes: 1♀ '5.325 [Paraguay, Itapúa, Encarnación, 1904, C. Schrottky col.]' '102.163'; 1♂ same labels data except '102.164'. Current status: *Dicranthidium gregarium* (Schrottky, 1905).

***Epanthidium* Moure*****Dianthidium bruchi******Schrottky, 1909c: 217***

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000078>)

Holotype: ♂ '[Argentina], Catamarca, iii.1908, Bruch [col.]' '102.226'. Current status: *Epanthidium joergensei* (Friese, 1908).

***Hypanthidioides* Moure*****Anthidium flavofasciatum******Schrottky, 1902a: 448***

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000069>)

Holotype: ♀ '18.102 [Brazil, São Paulo, São Paulo, Ipiranga, 12.xii.1900, Ihering col.]' '102.165'. Current status: *Hypanthidioides flavofasciata* (Schrottky, 1902).

***Saranthidium* Moure & Hurd*****Anthidium musciforme******Schrottky, 1902a: 455***

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000071>)

Holotype: ♀ '18.104 [Brazil, São Paulo, Jundiaí, M. Beron col.]' '102.179'. Current status: *Saranthidium musciforme* (Schrottky, 1902).

**Lithurgini**  
***Lithurgus* Berthold**

***Lithurgus huberi* Ducke, 1907b: 78**

*Paralectotype*: 1♂ [Brazil], Maranhão, Codó, 24.vi.1907, Ducke [col.] '11.307'. *Current status*: *Lithurgus huberi* Ducke, 1907. *Comments*: Paralectotype according to designation by Nascimento (1979: 6).

**Megachilini**  
***Coelioxys* Latreille**

***Coelioxys aculeata* Schrottky, 1902a: 429**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000072>)

*Holotype*: ♀ '18.098 [Brazil, Amazonas, Manaus, Bicego col.]'. *Current status*: *Coelioxys (Acrocoelioxys) aculeata* Schrottky, 1902.

***Coelioxys amazonica* Schrottky, 1902a: 426**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000073>)

*Holotype*: ♀ '18.091 [Brazil, Amazonas, Manaus, 1899, Bicero col.]'. *Current status*: *Coelioxys (Acrocoelioxys) amazonica* Schrottky, 1902.

***Coelioxys beroni* Schrottky, 1902a: 425**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000074>)

*Holotype*: ♂ '18.090 [Brazil, São Paulo, Jundiaí, i.1900, M. Beron col.]'. *Current status*: *Coelioxys (Glyptocoelioxys) beroni* Schrottky, 1902.

***Coelioxys chrysoccephala* Schrottky, 1902a: 428**

*Syntypes*: 1♀ '18.096 [Brazil, São Paulo, Jundiaí, 01.xi.1900, C. Schrottky col.]'; 2♂ '1.408 [Brazil, São Paulo, Botucatu, Vitoriana, 25.vii.1900, Hempell col.]'. *Current status*: *Coelioxys (Acrocoelioxys) tolteca* Cresson, 1878.

***Coelioxys leporina* Schrottky, 1909e: 261**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000075>)

*Holotype*: ♀ 'Paraguay, Encarnación, C. Schrottky [col.]' 'Typus'. *Current status*: *Coelioxys (Acrocoelioxys) pygidialis* Schrottky, 1902.

***Coelioxys pygidialis* Schrottky, 1902a: 426**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000076>)

*Holotype*: ♀ '18.093 [Brazil, São Paulo, Jundiaí, 19.xi.1899, C. Schrottky col.]' 'Brasil, [São Paulo], Jundiaí [now Jundiaí], 19.xi.1899, Schrottky [col.]'. *Current status*: *Coelioxys (Acrocoelioxys) pygidialis* Schrottky, 1902.

***Coelioxys scutellaris* Schrottky, 1902a: 424**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000077>)

*Holotype*: ♀ '18.088 [Brazil, São Paulo, São Paulo, Ipiranga, 27.iii.1900, C. Schrottky col.]'. *Current*

*status*: *Coelioxys (Glyptocoelioxys) scutellaris* Schrottky, 1902.

***Megachile* Latreille**

***Megachile laeta anisitsi* Schrottky, 1908: 237**

*Syntype*: 1♀ '12.875 [Brazil, São Paulo, Jundiaí, 25.i.1900, M. Beron col.]' 'Cotipo' '102.086'. *Current status*: *Megachile (Leptorachina) laeta* Smith, 1853.

***Megachile aureiventris* Schrottky, 1902a: 441**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000079>)

*Holotype*: ♀ [Brazil], E.[stado] de São Paulo, Jundiaí [now Jundiaí], 1897, [Schrottky col.], *Megachile auriventris* [sic *aureiventris*] Schrottky, Type '102.059' 'Holotipo'. *Current status*: *Megachile (Leptorachis) aureiventris* Schrottky, 1902.

***Megachile bernardina* Schrottky, 1913b: 209**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000080>)

*Holotype*: ♂ '18.151 [Brazil, São Paulo, Jundiaí, xi.1900, M. Beron col.]' 'Cotipo' '102.162'. *Current status*: *Megachile (Acentron) eburnipes* Vachal, 1904.

***Megachile capra* Schrottky, 1913b: 214**

*Holotype*: ♂ '18.155 [Brazil, São Paulo, Jundiaí, i.1900, M. Beron col.]' 'Holotipo' '102.067'. *Current status*: *Megachile (Leptorachis) aureiventris* Schrottky, 1902.

***Megachile coelioxoides* Schrottky, 1909c: 220**

*Syntypes*: 1♀ '12.970 [Paraguay, Hohenau, C. Schrottky col.], 12.971' 'Paraguay, Hohenau, C. Schrottky [col.]' 'Cotipo' '102.045'; 1♀ '12.970 [Paraguay, Hohenau, C. Schrottky col.]' 'Paraguay, Hohenau, C. Schrottky [col.]' 'Cotipo' '*Megachile coelioxoides* Schrottky' '102.046'; 1♀ '18.132 [Paraguay, Alto Paraná, Puerto Bertoni, 1910, C. Schrottky col.]' 'Paraguay, Alto Paraná, Puerto Bertoni' 'Metatipo' '*Megachile coelioxiformis* Schrottky, C. Schrottky det. 1910' '102.047'. *Current status*: *Megachile (Sayapis) planula* Vachal, 1909.

***Megachile coelioxiformis* Schrottky, 1910e: 540**

*Syntype*: 1♀ '18.132 [Paraguay, Alto Paraná, Puerto Bertoni, 1910, C. Schrottky col.]' 'Paraguay, Alto Paraná, Puerto Bertoni' 'Metatipo' '*Megachile coelioxiformis* Schrottky, C. Schrottky det. 1910' '102.047'.

***Megachile framea* Schrottky, 1913b: 211**

*Holotype*: ♂ '18.152 [Brazil, São Paulo, Jundiaí, xi.1900, M. Beron col.]' 'Holotipo' '102.071'. *Cur-*

rent status: *Megachile (Pseudocentron) framea* Schrottky, 1913.

***Megachile friesei* Schrottky, 1902a: 439**

*Syntypes*: 1♀ ‘1.402 [Brazil, São Paulo, Jundiaí, 01.ii.1900, M. Beron col.]’ ‘Paratypus, *Megachile friesei*, Schr.[ottky], 1902’ ‘102.088’; 1♀ ‘1.402 [same data]’ ‘Holotipo’ ‘102.084’; 1♀ ‘1.402 [same data]’ ‘Paratipo’ ‘102.077’; 1♀ ‘1.402 [same data]’ ‘Paratipo’ ‘102.082’. *Current status*: *Megachile (Leptorachis) friesei* Schrottky, 1902.

***Megachile gracilis* Schrottky, 1902a: 435**

*Syntypes*: 1♀ ‘1.403 [Brazil, São Paulo, Jundiaí, 28.i.1900, M. Beron col.]’ ‘Holotipo’ ‘102.075’; 1♂ ‘1.403 [same data]’ ‘gracilis Schr[ottky], 1202, Typo’. *Current status*: *Megachile (Trichurochile) gracilis* Schrottky, 1902.

***Megachile helicitarsus* Schrottky, 1913b: 206**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000081>)

*Holotype*: ♂ ‘14.299 [Brazil, São Paulo, Jundiaí, 25.i.1900, M. Beron col.]’ ‘Alotipo’ ‘Type’ ‘102.078’. *Current status*: *Megachile (Leptorachis) friesei* Schrottky, 1902.

***Megachile iheringi* Schrottky, 1913b: 157**

*Holotype*: ♀ ‘12.875 [Brazil, São Paulo, Jundiaí, 25.i.1900, M. Beron col.]’ ‘Holotipo’ ‘Type’ ‘102.063’.

***Megachile jundaiana* Schrottky, 1913b: 204**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000083>)

*Holotype*: ♂ 14.290 [Brazil, São Paulo, Jundiaí, i.1900, M. Beron col.]’ ‘Típo’ ‘Type’ ‘102.074’. *Paratype*: 1♂ ‘[Brazil], São Paulo, Botucatú, 25.vii.1900, Localidade provável P.J.Moure’ ‘102.073’. *Current status*: *Megachile (Pseudocentron) terrestris* Schrottky, 1902.

***Megachile limae* Schrottky, 1913b: 176**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000084>)

*Holotype*: ♀ ‘18.128 [Brazil, São Paulo, Jundiaí, i.1900, M. Beron col.]’. *Paratypes*: 1♀ ‘18.127[same data as holotype]’ ‘Paralectotipo’ ‘102.051’; 1♀ ‘18.127[same data as holotype]’ ‘Paratypus’ ‘102.070’; 1♀ ‘6.494 [Brazil, São Paulo, Campinas, 30.i.1901, Hempel col.]’ ‘Paratypus’ ‘102.069’. *Current status*: *Megachile (Acentron) lentifera* Vachal, 1909.

***Megachile luederwaldti* Schrottky, 1913b: 189**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000085>)

*Holotype*: ♀ ‘18.144 [Brazil, São Paulo, Campos do Jordão, 16.ii.1906, Lüderwaldt col.]’ ‘Holotipo’

‘102.076’. *Current status*: *Megachile (Chrysosarus) luederwaldti* Schrottky, 1913.

***Megachile manaensis* Schrottky, 1913b: 201**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000086>)

*Holotype*: ♂ ‘12.881 [Brazil, Amazonas, Manaus]’ ‘Type’ ‘Holotipo’. *Current status*: *Megachile (Acentron) manaensis* Schrottky, 1913.

***Megachile melochiae* Schrottky, 1913b: 205**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000087>)

*Holotype*: ♂ ‘18.150 [Paraguay, C. Schrottky col.]’ ‘Paraguay, C. Schrottky [col.]’. *Current status*: *Megachile (Sayapis) zaptlana* Cresson, 1878.

***Megachile orba* Schrottky, 1913b: 214**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000088>)

*Holotype*: ♂ ‘18.154 [Paraguay, Alto Paraná, Puerto Pertoni, C. Schrottky col.]’ ‘Paraguay, Alto Paraná, Puerto Bertoni’ ‘Cotipo’ ‘102.072’. *Current status*: *Megachile (Tylomegachile) orba* Schrottky, 1913.

***Megachile parsoniae* Schrottky, 1913b: 197**

*Syntypes*: 1♂ ‘Paraguay, Encarnacion, C. Schrottky’ ‘18.148 [Paraguay, Encarnación, 1906, C. Schrottky col.]’ ‘Cotipo’ ‘102.113’; 1♀ ‘Paraguay, Villa Encarnacion, 12.08.[19]06, C. Schrottky [col.]’ ‘18.148a [same data]’ ‘Cotipo’ ‘102.112’. *Current status*: *Megachile (Chrysosarus) parsoniae* Schrottky, 1913.

***Megachile paulistana* Schrottky, 1902a: 440**

*Syntypes*: 1♀ ‘Brasil, Jundiah [Jundiaí], 17.11.1899, Schrottky [col.]’ ‘1.400 [Brazil, São Paulo, Jundiaí, 17.xi.1899, C. Schrottky col.]’ ‘Lectotipo’ ‘102.052’; 1♀ ‘1.400 [same data]’; 1♀ ‘18.136 [Brazil, São Paulo, São José do Rio Pardo, 12.v.1900, C. Schrottky col.]’ ‘102.050’. *Current status*: *Megachile (Leptorachis) paulistana* Schrottky, 1902.

***Megachile pocograndensis* Schrottky, 1902a: 438**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000089>)

*Holotype*: ♀ ‘18.125 [Brazil, São Paulo, Poço Grande, i.1898, Hempel col.]’ ‘Holotipo’ ‘102.161’. *Current status*: *Megachile (Pseudocentrom) nudiventris* Smith, 1853. *Comments*: Poço Grande is an old farm near Juquiá, São Paulo (Rasmussen et al., 2009; Moura et al., 2013).

***Megachile pseudanthidiooides* Moura, 1943b: 183**

*Paratype*: 1♂ ‘Brasil, Jundiah [Jundiaí], 17.11.1899, Schrottky, 1398’ ‘1.398 [Brazil, São Paulo, Jundiaí, viii.1899, C. Schrottky col.]’ ‘Paratipo’ ‘102.049’. *Current status*: *Megachile (Chrysosarus) pseudanthidiooides* Moura, 1943.

***Megachile pseudocoelioxys* Schrottky, 1920: 204**

*Holotype:* ♀ [Brazil], São Paulo, Franca, i.[19]03, O. Dreher leg.' Holotipo' 'Typus' '102.108'. *Current status:* *Megachile (Tylomegachile) orba* Schrottky, 1913.

***Megachile pseudopleuralis* Schrottky, 1913b: 190**

*Holotype:* ♀ '12.872 [Brazil, Minas Gerais, Jaguára]' 'Holotipo' '102.055'. *Current status:* *Megachile (Moureapis) pseudopleuralis* Schrottky, 1913.

***Megachile separata* Schrottky, 1913b: 185**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000090>)

*Holotype:* ♀ '18.138 [Brazil, São Paulo, Rincão, ii.1901, Lima & Erhardt col.]' 'Holotipo' 'Type' '102.053'. *Paratype:* 1♀ '18.139 [Brazil, São Paulo, Franca, xii.1902, Dreher col.]' 'Paratipo' '102.054'. *Current status:* *Megachile (Leptorachis) paulistana* Schrottky, 1902.

***Megachile terrestris* Schrottky, 1902a: 441**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000091>)

*Holotype:* ♀ '18.142 [Brazil, São Paulo, Jundiaí, 02.ii.1900, M. Beron col.]' 'Typo!' 'Holotipo' '102.056'. *Current status:* *Megachile (Pseudocentron) terrestris* Schrottky, 1902.

***Megachile trigonaspis* Schrottky, 1913b: 191**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000092>)

*Holotype:* ♀ '18.145 [Brazil, São Paulo, Rincão, ii.1901, Lima & Erhardt col.]' 'Holotipo' '102.160'. *Current status:* *Megachile (Austromegachile) trigonaspis* Schrottky, 1913.

***Megachile tuberculifera* Schrottky, 1913b: 188**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000093>)

*Holotype:* ♀ '18.143 [Brazil, São Paulo, Campos do Jordão, 02.iii.1906, Luderwaldt col.]' 'Holotipo' '102.057'. *Current status:* *Megachile (Chrysosarus) tuberculifera* Schrottky, 1913.

***Megachile ypiranguensis* Schrottky, 1913b: 194**

(<http://hol.osu.edu/spmInfo.html?id=MZSP%20000094>)

*Holotype:* ♀ '18.146 [Brazil, São Paulo, São Paulo, Ipiranga, xii.1908, Lima col.]' 'Holotipo' '102.066'. *Current status:* *Megachile (Sayapis) ypiranguensis* Schrottky, 1913.

**RESUMO**

O presente catálogo apresenta uma lista dos espécimes tipo de abelhas (Hymenoptera, Apidae s.l.) depositados no Museu de Zoologia da Universidade de São Paulo,

Brasil (MZSP). A coleção de Hymenoptera do MZSP representa uma das mais importantes coleções para a fauna brasileira e Neotropical, incluindo um número relativamente grande de tipos e táxons representados. A coleção de Apidae abriga um total de 473 espécimes-tipo (101 holótipos, 30 lectótipos, 190 parátipos, 34 paralectótipos e 119 síntipos) pertencentes a 257 espécies classificadas em 88 gêneros, 22 tribos e cinco subfamílias (Andreninae, Apinae, Colletinae, Halictinae, e Megachilinae). São apresentadas as informações das etiquetas, informações adicionais a partir dos registros do MZSP e da literatura publicada, e cometários taxonómicos. Fotografias em alta resolução dos holótipos e lectótipos estão disponibilizadas digitalmente através de links para o Specimage (banco de dados de imagens da Ohio State University).

PALAVRAS-CHAVE: Apoidea; Catálogo; Lista de tipos; MZSP; Taxonomia.

**ACKNOWLEDGMENTS**

KSR and RK thank Fundação de Amparo à Pesquisa do Estado de São Paulo – FAPESP (Proc. 2010/17046-5) and Conselho Nacional de Desenvolvimento Científico e Tecnológico – CNPq (Proc. 151153/2013-2), respectively, for post-doctoral grants. This work was supported by a FAPESP grant Proc. 2010/16063-3 to CRFB. CRFB is a Research Fellow of CNPq. We are grateful to Monica Antunes Ulysséa for scanning the old manuscript catalogs of insect specimens deposited in the MZUSP.

**REFERENCES**

- AGUIAR, A.J.C. 2009. Taxonomic revision of the bee genus *Lophopedia* Michener and Moura (Hymenoptera, Apidae, Tapinotaspidini). *Zootaxa*, 2193: 1-52.
- AGUIAR, A.J.C. & MELO, G.A.R. 2005. Notes on the type species of the subgenera *Paratetrapedia* (*Lophopedia*) and *P* (*Amphipedia*) (Hymenoptera, Apidae, Tapinotaspidini). *Zootaxa*, 1084: 31-42.
- AGUIAR, A.J.C. & MELO, G.A.R. 2007. Taxonomic revision, phylogenetic analysis, and biogeography of the bee genus *Tropidiopedia* (Hymenoptera, Apidae, Tapinotaspidini). *Zoological Journal of the Linnean Society*, 151: 511-554.
- AGUIAR, A.J.C. & MELO, G.A.R. 2011. Revision and phylogeny of the bee genus *Paratetrapedia* Moura, with description of a new genus from the Andean Cordillera (Hymenoptera, Apidae, Tapinotaspidini). *Zoological Journal of the Linnean Society*, 162: 351-442.
- ALMEIDA, E.A.B. 2008. Revision of the Brazilian species of *Pseudaugochlora* Michener 1954 (Hymenoptera: Halictidae: Augochlorini). *Zootaxa*, 1679: 1-38
- ALMEIDA, M.C. & LAROCA, S. 2005. Taxonomia de Apoidea Neotropical. II. Descrição de *Caenohalictus mourei* sp. nov.

- (Halictidae, Halictini) do Paraná (Sul do Brasil). *Acta Biológica Paranaense*, 33: 135-141.
- ANJOS-SILVA, E.J. & REBÉLO, J.M.M. 2006. A new species of *Exaerete* Hoffmannsegg (Hymenoptera: Apidae: Euglossini) from Brazil. *Zootaxa*, 1105: 27-35.
- AZEVEDO, A.A. & SILVEIRA, F.A. 2005. Two new species of *Centris* (*Trachina*) Klug, 1807 (Hymenoptera: Apidae) from the state of Minas Gerais, Brazil, with a note on *Centris pachysoma* Cockerell, 1919. *Lundiana*, 6: 41-48.
- BERTONI, A.W. & SCHROTTKY, C. 1910. Beitrag zur Kenntnis der mit *Tetralonia* verwandten Bienen aus Südamerika. *Zoologische Jahrbücher. Abteilung für Systematik, Geographie und Biologie der Tiere*, 29: 563-596.
- BRANDÃO, C.R.F.; ESTEVES, F.A. & PRADO, L.P. 2010. A catalogue of the Pseudomyrmecinae ants type specimens (Hymenoptera, Fomicidae) deposited in the Museu de Zoologia da Universidade de São Paulo, Brazil. *Papéis Avulsos de Zoologia*, 50: 693-699.
- CAMARGO, J.M.F. 1980. O grupo *Partamona* (*Partamona*) testacea (Klug): suas espécies, distribuição e diferenciação geográfica (Meliponinae, Apidae, Hymenoptera). *Acta Amazonica*, 10: 1-175.
- CAMARGO, J.M.F. & MOURE, J.S. 1996. Meliponini Neotropicais: o gênero *Geotrigona* Moure, 1943 (Apinae, Apidae, Hymenoptera), com especial referência à filogenia e biogeografia. *Arquivos de Zoologia*, 33: 95-161.
- COCKERELL, T.D.A. 1918. Neotropical bees, principally collected by Professor Bruner in Argentina. *Transactions of the American Entomological Society*, 44: 25-38.
- COELHO, B.W.T. 2004. A review of the bee genus *Augochlorella* (Hymenoptera: Halictidae: Augochlorini). *Systematic Entomology*, 29: 282-323.
- COELHO, B.W.T. & GONÇALVES, R.B. 2010. A taxonomic revision of the augochlorine bee genus *Ceratalictus* moure (Hymenoptera, Apoidea). *Zootaxa*, 2675: 1-25.
- CURE, J.R. 1989. Revisão de *Pseudagapostemon* Schrottky e descrição de *Oragapostemon*, gen. nov. (Hymenoptera, Halictidae). *Revista Brasileira de Entomologia*, 33: 229-335.
- DUCKE, A. 1907a. Beitrag zur Kenntnis der Solitärbielen Brasiliens. (Hym.). *Zeitschrift für Systematische Hymenopterologie und Dipteronologie*, 7: 361-368.
- DUCKE, A. 1907b. Contribucion a la connaissance de la faune hyménoptérologique du Nord-Est du Brésil. *Revue d'Entomologie*, 26: 73-96.
- DUCKE, A. 1908. Contribucion a la connaissance de la faune hyménoptérologique du Nord-Est du Brésil. *Revue d'Entomologie*, 27: 57-87.
- DUCKE, A. 1910. Contribution a la connaissance de la faune hyménoptérologique du Nord-Est du Brésil. *Revue d'Entomologie*, 28: 78-122.
- DUCKE, A. 1912. Die natürlichen Bienengenera Südamerikas. *Zoologische Jahrbücher. Abteilung für Systematik, Geographie und Biologie der Tiere*, 34: 51-116.
- DUCKE, A. 1916. Enumeração dos Hymenopteros colligidos pela Comissão e Revisão das espécies de abelhas do Brasil. *Comissão de Linhas Telegraphicas Estratégicas de Matto Grosso ao Amazonas*, 35: 3-171.
- DUCKE, A. 1925. Die stachellosen Bienen (*Melipona*) Brasiliens, Nach morphologischen und ethologischen Merkmalen geordnet. *Zoologische Jahrbücher. Abteilung für Systematik, Geographie und Biologie der Tiere*, 49: 335-448.
- ENGEL, M.S. 2010. Revision of the bee genus *Chlerogella* (Hymenoptera, Halictidae), Part II: South American species and generic diagnosis. *Zookeys*, 47: 1-100.
- ESTEVES, F.A.; BRANDÃO, C.R.F. & PRADO, L.P. 2011. The type specimens of "Dorylomorph" ants (Hymenoptera, Fomicidae: Aenictinae, Ecitoninae, Cerapachyinae, Leptanilloidinae) deposited in the Museu de Zoologia da Universidade de São Paulo, Brazil. *Papéis Avulsos de Zoologia*, 51: 341-357.
- FRIESE, H. 1900. Neue arten der Bienengattungen *Melipona* Ill. Und *Trigona* Jur. *Termesztrajzi Füzetek*, 23: 381-394.
- FRIESE, H. 1901. Neue arten der Bienengattung *Trigona* Jur. (Hym.). *Zeitschrift für Systematische Hymenopterologie und Dipteronologie*, 1: 265-27.
- FRIESE, H. 1903. Neue Meliponiden II. (Hym.). *Zeitschrift für Systematische Hymenopterologie und Dipteronologie*, 3: 359-361.
- FRIESE, H. 1906. Resultate einer Reise des Herrn A.C. Jensen-Haarup in die Gegend von Mendoza (Argentina). *Flora Fauna*, 8: 89-102.
- FRIESE, H. 1908. Die Apidae (Blumenwespen) von Argentina nach den Reisenergebnissen der Herren A.C. Jensen-Haarup und P. Jörgensen in den Jahren 1904-1907. *Flora Fauna*, 10: 1-94.
- FRIESE, H. 1910. Neue Bienenarten aus Sud-Amerika. *Deutsche Entomologische Zeitschrift*, 1910: 693-711.
- FRIESE, H. 1925. Neue neotropische Bienenarten, zugleich II. Nachtrag zur Bienenfauna von Costa Rica. (Hym.). *Stettiner Entomologische Zeitung*, 86: 1-41.
- GONÇALVES, R.B. 2010. Phylogeny and revision of the Neotropical bee genus *Rhectomia* s.l. Moure (Hymenoptera, Apidae, Augochlorini). *Systematic Entomology*, 35: 90-117.
- GONÇALVES, R.B. & ENGEL, M.S. 2010. The bee genus *Caenaugochlora* (Hymenoptera, Apoidea) and its constituent subgenera, with new species of *Caenaugochlora* s.str. from Ecuador. *Zookeys*, 37: 69-80.
- GONÇALVES, R.B. & MELO, G.A.R. 2008. New species of the bee genus *Augochlorodes* Moure (Hymenoptera, Apidae s.l., Halictinae). *Journal of Natural History*, 42: 1385-1403.
- GONÇALVES, R.B. & SANTOS, L.M. 2010. Notes and new species of the halictine genus *Megommation* Moure (Hymenoptera, Apidae, Augochlorini). *Zootaxa*, 2685: 57-64.
- INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE – ICZN. 1999. International Code of Zoological Nomenclature. 4<sup>a</sup> ed., London. Available at: <[www.nhm.ac.uk/hosted-sites/iczn/code](http://www.nhm.ac.uk/hosted-sites/iczn/code)>
- KLINGENBERG, C. & BRANDÃO, C.R.F. 2005. The type specimens of fungus growing ants, Attini (Hymenoptera, Formicidae, Myrmicinae) deposited in the Museu de Zoologia da Universidade de São Paulo, Brazil. *Papéis Avulsos de Zoologia*, 45: 41-50.
- LAROCA, S. & ALMEIDA, M.C. 2005. Taxonomia de Apoidea Neotropical. I. Descrição de *Bicolletes tauraphilus* sp. nov. (Colletidae, Paracolletini) do Paraná (Sul do Brasil). *Acta Biológica Paranaense*, 33: 129-134.
- MELO, G.A.R. 1996. Two new Brazilian bees of the genus *Protodiscelis* (Hymenoptera, Colletidae). *Revista Brasileira de Entomologia*, 40: 97-100.
- MELO, G.A.R. 2003. Notas sobre meliponíneos neotropicais, com a descrição de três novas espécies (Hymenoptera, Apidae), In: Melo, G.A.R. & Alves-dos-Santos, I. (Eds.). *Apoidea Neotropica: Homenagem aos 90 anos de Jesus Santiago Moure*. Criciúma, Editora UNESC. p. 85-91.
- MELO, G.A.R. & GONÇALVES, R.B. 2005. Higher-level bee classifications (Hymenoptera, Apoidea, Apidae *sensu lato*). *Revista Brasileira de Zoologia*, 22(1): 153-159.
- MICHENER, C.D. 2007. *The bees of the world*. Baltimore, The John Hopkins University Press, 2.ed. 953p.
- MOURE, J.S. 1940a. I – Apoidea Neotropica. *Arquivos de Zoologia*, 2: 39-64.
- MOURE, J.S. 1940b. Apoidea Neotropica. II. *Revista de Entomologia*, 11: 465-477.
- MOURE, J.S. 1941. Apoidea Neotropica – III. *Arquivos do Museu Paranaense*, 1: 41-99.

- MOURE, J.S. 1942. Abelhas de Salobra (Hym. Apoidea). *Papéis Avulsos de Zoologia*, 2: 291-321.
- MOURE, J.S. 1943a. Notas sobre abelhas da coleção Zikán (Hym. Apoidea). *Revista de Entomologia*, 14: 447-484.
- MOURE, J.S. 1943b. Abelhas de Batatais (Hym. Apoidea). *Arquivos do Museu Paranaense*, 3: 145-203.
- MOURE, J.S. 1944. Abelhas de Monte Alegre (Est. S. Paulo) (Hym. Apoidea). *Papéis Avulsos de Zoologia*, 6: 103-126.
- MOURE, J.S. 1945. Contribuição para o conhecimento dos Diphaglossinae, particularmente *Ptiloglossa* (Hym. – Apoidea). *Arquivos do Museu Paranaense*, 4: 137-178.
- MOURE, J.S. 1950a. Contribuição para o conhecimento das espécies brasileiras de *Hypotrigona* Cockerell (Hymen., Apoidea). *Dusenia*, 1: 241-260.
- MOURE, J.S. 1950b. Halictidae novos da América do Sul (Hymenoptera: Apoidea). *Dusenia*, 1: 307-323.
- MOURE, J.S. 1962. Notas sobre meliponas da Hiléia Amazônica (Hym., Apoidea). *Boletim da Universidade Federal do Paraná*, 19: 10-12.
- MOURE, J.S. 1967a. Descrição de algumas espécies de Euglossinae (Hym., Apoidea). In: Lent, H. (Ed.). *Atas do Simpósio sobre a Biota Amazônica*. Rio de Janeiro, Conselho Nacional de Pesquisas. v. 5, p. 373-394.
- MOURE, J.S. 1967b. A check-list of the known euglossine bees (Hymenoptera, Apidae). In: Lent, H. (Ed.). *Atas do Simpósio sobre a Biota Amazônica*. Rio de Janeiro, Conselho Nacional de Pesquisas. v. 5, 395-415.
- MOURE, J.S. & KERR W.E. 1950. Sugestões para a modificação da sistemática do gênero *Melipona* (Hymen. – Apoidea). *Dusenia*, 1: 105-129.
- MOURE, J.S.; URBAN, D. & MELO, G.A.R. 2007. *Catalogue of bees (Hymenoptera, Apoidea) in the Neotropical Region*. Curitiba, Sociedade Brasileira de Entomologia.
- MOURE, J.S.; URBAN, D. & MELO, G.A.R. 2013. *Catalogue of bees (Hymenoptera, Apoidea) in the Neotropical region*. Available from: <<http://moure.cria.org.br/catalogue>>. Accessed: January, 2014.
- NASCIMENTO, P.T.R. 1979. Catálogo de tipos entomológicos do Museu Goeldi. Hymenoptera. *Boletim do Museu Paraense Emílio Goeldi*, 98: 1-18.
- NEMÉSIO, A. 2007. Three new species of *Euglossa* Latreille (Hymenoptera: Apidae) from Brazil. *Zootaxa*, 1547: 21-31.
- ONODY, H.C.; KAWADA, R. & BRANDÃO, C.R.F. 2014. Type specimens of Hymenoptera deposited in the Museu de Zoologia da Universidade de São Paulo, Brazil (excluding Aculeata). *Papéis Avulsos de Zoologia*, 54: 391-402.
- PRADO, L.P. & BRANDÃO, C.R.F. 2013. A catalogue of Cephalotini ant types specimens (Hymenoptera: Fomicidae: Myrmicinae) deposited in the Museu de Zoologia da Universidade de São Paulo, Brazil. *Papéis Avulsos de Zoologia*, 53: 285-293.
- RAMOS, K.S. 2013. The bee genus *Arhyssosage* Brôthes (Apidae: Andreninae: Calliopsisini): new species, taxonomic notes and new distribution records from Brazil. *Journal of Natural History*, 47: 2735-2747.
- RAMOS, K.S. 2014a. Three new bee species of *Rhophitulus* Ducke (Hymenoptera, Apidae, Protandrenini) from Argentina and Brazil. *Zootaxa*, 3847: 545-556.
- RAMOS, K.S. 2014b. Taxonomic revision of the South American bee genus *Parasarus* (Hymenoptera, Apidae s.l., Protandrenini). *Zoologia*, 31: 503-5015.
- RAMOS, K.S. & MELO, G.A.R. 2006. A new species of *Protandrena* Cockerell from Brazil (Hymenoptera, Apidae, Andreninae). *Zootaxa*, 1330: 43-50.
- RAMOS, K.S. & MELO, G.A.R. 2010. Taxonomic revision and phylogenetic relationships of the bee genus *Parapsaenithia* Friese (Hymenoptera, Apidae, Protandrenini), with biogeographic inferences for the South American Chacoan subregion. *Systematic Entomology*, 35: 449-474.
- RASMUSSEN, C. & ASCHER, J.S. 2008. Heinrich Friese (1860-1948): Names proposed and notes on a pioneer melittologist (Hymenoptera, Anthophila). *Zootaxa*, 1833: 1-118.
- RASMUSSEN, C.; GARCETE-BARRETT, B.R. & GONÇALVES, R.B. 2009. Curt Schrottky (1874-1937): South American entomology at the beginning of the 20<sup>th</sup> century (Hymenoptera, Lepidoptera, Diptera). *Zootaxa*, 2282: 1-50.
- RUZ, L. & MELO, G.A.R. 1999. Reassessment of the bee genus *Chaeturginus* (Apoidea, Andrenidae, Panurginae), with description of a new species from Southeastern Brazil. *University of Kansas Natural History Museum Special Publication*, 24: 231-236.
- SANTOS, L.M. & MELO, G.A.R. 2015. Updating the taxonomy of the bee genus *Megalopta* (Hymenoptera: Apidae, Augochlorini) including revision of the Brazilian species. *Journal of Natural History*, 49: 575-674.
- SANTOS, L.M. & SILVEIRA, F.A. 2009. Taxonomic notes on *Megalopta* Smith, 1853 (Hymenoptera: Halictidae: Augochlorini) with a synopsis of the species in the state of Minas Gerais, Brazil. *Zootaxa*, 2194: 1-20.
- SCHROTTKY, C. 1902a. Ensaio sobre as abelhas solitárias do Brasil. *Revista do Museu Paulista*, 5: 330-613.
- SCHROTTKY, C. 1902b. Hymenopteres nouveaux de l'Amérique Meridionale. *Anales del Museo Nacional de Buenos Aires*, 7: 309-315.
- SCHROTTKY, C. 1905. Contribución ao conocimiento de los himenópteros del Paraguay. *Anales Científicos Paraguayos*, 4: 1-14.
- SCHROTTKY, C. 1906. Contribución ao conocimiento de los himenópteros del Paraguay. *Anales Científicos Paraguayos*, 6: 1-32.
- SCHROTTKY, C. 1907a. Contribución al conocimiento de los himenópteros del Paraguay. III. *Anales Científicos Paraguayos*, 7: 1-78.
- SCHROTTKY, C. 1907b. Neue und wenig bekannte südamerikanische Bienen. *Zeitschrift für Systematische Hymenopterologie und Dipterologie*, 7: 469-480.
- SCHROTTKY, C. 1908. Nuevos himenópteros. *Anales de La Sociedad Científica Argentina*, 65: 225-239.
- SCHROTTKY, C. 1909a. Nuevos himenópteros sudamericanos. *Revista del Museo de la Plata*, 16: 137-149.
- SCHROTTKY, C. 1909b. Blumen und Insekten in Paraguay. *Zeitschrift für Wissenschaftliche Insektenbiologie*, 5: 277-280.
- SCHROTTKY, C. 1909c. Hymenoptera Nova. *Anales de La Sociedad Científica Argentina*, 67: 209-228.
- SCHROTTKY, C. 1909d. Nuevos himenópteros sudamericanos. *Revista del Museo de la Plata*, 16: 137-149.
- SCHROTTKY, C. 1909e. Himenópteros de Catamarca. *Anales de La Sociedad Científica Argentina*, 68: 233-272.
- SCHROTTKY, C. 1910a. Two new Nomadidae (Hymenoptera) from South America. *Journal of the New York Entomological Society*, 18: 208-210.
- SCHROTTKY, C. 1910b. Neue und wenig bekannte südamerikanische Bienen. *Entomologische Rundschau*, 27: 88-89.
- SCHROTTKY, C. 1910c. Neue südamerikanische Arten der Bienengattung *Prosopis* F. *Wiener Entomologische Zeitung*, 29: 133-138.
- SCHROTTKY, C. 1910d. Descrição de abelhas novas do Brazil e de regiões vizinhas. *Revista do Museu Paulista*, 8: 71-88.
- SCHROTTKY, C. 1910e. Berichtigung. (Hym.). *Deutsche Entomologische Zeitschrift*, 1910: 540.
- SCHROTTKY, C. 1911. A new *Dianthidium* from Paraguay. *Proceedings of the Entomological Society of Washington*, 13: 14-15.

- SCHROTTKY, C. 1913a. Neue südamerikanische Hymenopteren. *Deutsche Entomologische Zeitschrift*, 1913: 702-708.
- SCHROTTKY, C. 1913b. As especies brasileiras do genero *Megachile*. *Revista do Museu Paulista*, 9: 134-223.
- SCHROTTKY, C. 1920. Himenopteros nuevos o poco conocidos sudamericanos. *Revista do Museu Paulista*, 12: 179-227.
- SILVEIRA, F.A. 1996. Espécies novas e designação de lectótipos de *Exomalopsis* sul-americanas (Hymenoptera, Apoidea). *Revista Brasileira de Entomologia*, 40: 81-88.
- ULYSSÉA, M.A. & BRANDÃO, C.R.F. 2013. Catalogue of Dacetini and Solenopsidini ant type specimens (Hymenoptera, Formicidae, Myrmicinae) deposited in the museu de Zoologia da universidade de São Paulo, Brazil. *Papéis Avulsos de Zoologia*, 53: 187-209.
- URBAN, D. 1968. As espécies de Gaesischia Michener, LaBerge & Moure, 1955. *Boletim da Universidade Federal do Paraná*, 3(4): 79-129.
- URBAN, D. 1970. As espécies do gênero *Florilegus* Robertson, 1900 (Hymenoptera, Apoidea). *Boletim da Universidade Federal do Paraná*, 3(12): 245-280.
- URBAN, D. 2000. Designação de lectótipos e notas sobre material-tipo de Anthidiinae e Eucerinae (Hymenoptera, Apoidea). *Acta Biológica Paranaense*, 29: 71-88.
- URBAN, D. 2003. Catálogo das abelhas publicadas por Jesus Santiago Moure. In: Melo, G.A.R. & Alves-dos-Santos, I. (Eds.). *Apoidea Neotropical: Homenagem aos 90 anos de Jesus Santiago Moure*. Criciúma, Editora UNESC. p. 11-43.
- ZANELLA, F.C.V. & SILVA, M. 2010. Uma nova espécie de *Xylocopa (Monoxylöcöpa)* Hurd & Moure e novos registros de *X. abbreviata* Hurd & Moure (Hymenoptera: Apidae). *Neotropical Entomology*, 39: 61-66.

Aceito por Helena Carolina Onody: 28/05/2015  
Impresso em: 30/09/2015