

Type specimens of Pompiloidea, Thynnoidea and Vespoidea (Hymenoptera) deposited in the Museu de Zoologia da Universidade de São Paulo, Brazil

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Abstract. The Hymenoptera collection of the Museu de Zoologia da Universidade de São Paulo, Brazil (MZSP) houses one of the most important collections for the Brazilian and Neotropical wasp faunas. The present catalogue lists the type specimens of Pompiloidea, Thynnoidea and Vespoidea (Insecta, Hymenoptera) deposited in the MZSP. The collection includes a total of 422 type specimens (66 holotypes, 28 lectotypes, 278 paratypes, 45 paralectotypes, and five syntypes), being 91 Pompiloidea (40 Mutillidae type specimens of 10 genera and 25 species, 51 Pompilidae type specimens of 4 genera and 27 species), 191 Vespoidea (15 genera and 86 species of Vespidae), and 18 Thynnoidea (eight genera and 12 species of Thynnidae). All information written in labels was compiled and is presented along with additional data from the original descriptions, MZSP records and other sources. We provide Specimage links to high-resolution photographs of holotypes and lectotypes at the Hymenoptera image database of the Ohio State University.

Key-Words. Catalogue; Insecta; MZSP; Taxonomy; Wasp.

INTRODUCTION

The collection of Pompiloidea, Thynnoidea and Vespoidea (Hymenoptera) housed in the Museum of Zoology of the University of São Paulo (MZSP) is one of the most important scientific collections for the Brazilian and Neotropical wasp faunas, regarding the number of types, species and specimens, as well as taxonomic and geographic coverage. The earliest records of the collection date back to the early 20th century, when the collection still belonged to the Zoology section of the 'Museu Paulista', with material collected mainly by Hermann von Ihering (1850-1930) and by Hermann von Lüderwaldt (1865-1934) (Klingenberg & Brandão, 2005). Since then, the collection received several type specimens described by Adolpho Ducke, Clarence E. Mickel, Osvaldo H. Casal, Francisco J. Suárez, William J. Fox, Jean Brèthes, Colin R. Vardy, Lynn S. Kimsey, Hermann Friederich von Ihering, Joseph Zikán, and Owain W. Richards. Additionally, research projects such as the recent programs Biota/FAPESP, INCT-HYMPAR/Sudeste (CNPq/FAPESP), and PROTAX (CNPq/FAPESP) have collaborated greatly for the growth and maintenance of the collection.

This paper is part of a series of lists being published to cover the Hymenoptera type specimens deposited in the entomological collection of MZSP. Until this moment, the following catalogues have been published: ants (Brandão, 1991; Klingenberg & Brandão, 2005; Brandão *et al.*, 2010; Esteves *et al.*, 2011; Prado & Brandão, 2013; Ulysséa & Brandão, 2013; Ulysséa *et al.*, 2015), bees (Ramos *et al.*, 2015), "Symphyta" & "Parasitica" wasps (Onody *et al.*, 2014) and Chrysididae wasps (Santos *et al.*, 2017). These initiatives agree with the 72F of the International Code of Zoological Nomenclature (ICZN, fourth edition, January 1999) recommendation making information about these types available to researchers. Additionally, images are also given complementing the catalogue and hopefully avoiding unnecessary movement of these unique specimens.

MATERIAL AND METHODS

In this catalogue, we adopted the classification of Pilgrim *et al.* (2008), which recognizes eight superfamilies in Aculeata: Apoidea, Chrysididae, Formicoidea, Pompiloidea, Scolioidea, Tiphioidea,

Thynnoidea and Vespoidea. The MZSP collection has no types of Scoliidea and Tiphioidea; Chrysoidea and Formicoidea types were already catalogued and Apoidea catalogue is in preparation. To address the type specimen's current status, the following references were used: Catálogo Taxonômico da Fauna do Brasil (Oliveira et al., 2018), Integrated Taxonomic Information System (ITIS), Hymenoptera Online (HOL) and the Checklist and/or Catalog of Social Wasps (Carpenter, 2018).

All pertinent primary and secondary type specimens deposited at the MZSP were listed according to their original combination and in alphabetical order by family, sub-family, tribe, genus, and species. The names of all species are followed by the name of the author, year and page of the publication. Also, the current valid names are given for each species following by the author's name and year.

For holotypes and lectotypes, a link is provided for high resolution photographs of the specimens in Specimage website (<http://specimage.osu.edu>) database of The Ohio State University, except the lectotypes of *Megacanthopus collaris* Ducke, 1904, *Mischocyttarus parallelogrammus* Zikán, 1935 and *Mischocyttarus cristatus* Zikán, 1935 that are currently under loan and could not be assessed for this work. For each specimens photographs of labels, head (frontal view), dorsal and lateral habitus are provided. Images were obtained in a Leica M205C magnifying stereoscope attached to a Leica DFC 295 video camera and with a DSLR camera model Cannon 70D and 18-55 mm lens. Illumination system employed the low budget dome as proposed by Kawada & Buffington (2016). We used Leica LAS (Leica Application Suite V3.6.0) and Helicon Focus (Version 6.0.18) to assemble the series of images taken at different focus distances by z-stacking method. Small adjustments, such as brightness and contrast, were made using commercial software.

All information given here was taken from label data, MZSP records, published material and other available sources. The data labels are presented in the following sequence: type category, number and sex of specimens, current MZSP registration number, locality (country, state/province, city, and other locality details), date of collecting, trap and collector's name. The labels were transcribed between apostrophes (' '), indicating information from different labels attached to the same specimen. Abbreviated and additional information are presented in brackets ([]). Original data is provided in the original languages of the labels, while additional information is provided in English. Question marks are used when it was not possible to decipher the handwriting.

RESULTS

Exemplars here listed comprises a total of 301 type-specimens, being 91 of Pompiloidea (Mutillidae: 8 holotypes and 32 paratypes representatives of 10 genera and 25 species, Pompilidae: 20 holotypes, five lectotypes, 19 paratypes, and seven paralectotypes representatives of four genera and 27 species), 191 of Vespoidea (Vespidae: 34 holotypes, 23 lectotypes, 94 paratypes,

38 paralectotypes, and four syntypes representatives of 15 genera and 86 species), and 18 of Thynnoidea (Thynnidae: four holotypes, 13 paratypes and one syntype representatives of eight genera and 12 species).

POMPILOIDEA MUTILLIDAE Mutillinae Trogaspidiini *Timulla* Ashmead

Timulla intermissa Mickel, 1938: 606

Paratypes: 1♀ (# MZSP 56445) '[Brazil], Paraná, Rio Negro' 'Paratype, *Timulla* (T.) *intermissa*, ♀, C.E. Mickel'; 1♀ (# MZSP 56446) '[Brazil], S.P. [São Paulo], [Cubatão city], Estação Raiz da Serra, 22.xi.1906, João Lima col.' '6.401 [Brazil, São Paulo, Estação Raiz da Serra, 22.xi.1906, João Lima col.]' 'Paratype, *Timulla* (T.) *intermissa*, ♀, C.E. Mickel'; 1♀ (# MZSP 56447) 'Brasil, SP [São Paulo], São Paulo [city], Ipiranga [neighborhood], 16.iii.1906, H. Luederwaldt col.' '2.543 [Ipiranga, H. Lüderwaldt col., 16.iii.1906]' 'Paratype, *Timulla* (T.) *intermissa*, ♀, C.E. Mickel'.

Timulla lineoloides Mickel, 1938: 624

Paratype: 1♀ (# MZSP 56448) '[Brazil], S.[ão] Paulo, Cantareira, i.1914, E. Garbe col.' '18.697 [Brazil, São Paulo, Cantareira, i.1914, E. Garbe col.]' '*Timulla* (T.) *lineoloides*, ♀, C.E. Mickel'.

Timulla lule Casal, 1957: 91

Paratype: 1♀ (# MZSP 56449) 'D.A. [Argentina], Tucuman, [San] Pedro de Colalao, (Arnau), i.1949' 'Col. M.A. Fritz' '*Timulla* (T.) *lule* n. sp., ♀, Casal, 1957'.

Timulla odice Mickel, 1938: 578

Paratypes: 2♀ (# MZSP 56451-56452) '[Brazil], São Paulo, Alto da Serra, 6.28 [vi.1928], R. Spitz col.' 'Paratype, *Timulla* (T.) *odice*, ♀, C.E. Mickel'; 1♀ (# MZSP 56450) '[Brazil], S.[ão] P.[aulo], Estação Raiz da Serra [Cubatão City], 14.i.1906, H. Luederwaldt col.' '8.161 [Brazil, São Paulo, Estação Raiz da Serra, 14.i.1906, H. Lüderwaldt col.]' 'Paratype, *Timulla* (T.) *odice*, ♀, C.E. Mickel'; 1♀ (# MZSP 56454) '[Brazil], S.[ão] Paulo, Estação Raiz da Serra [Cubatão City], 3.xii.1907, H. Luederwaldt col.' '7.049 [Brazil, São Paulo, Cubatão, Estação Raiz da Serra, 3.xii.1907, H. Lüderwaldt col.]' 'Paratype, *Timulla* (T.) *odice*, ♀, C.E. Mickel'; 1♀ (# MZSP 56453) '[Brazil], Est.[ado], S.[ão] Paulo, Itanhaem, iv.1928, Spitz col.' 'Paratype, *Timulla* (T.) *odice*, ♀, C.E. Mickel'.

Timulla spiniclypeata Mickel, 1938: 604

Paratype: 1♀ (# MZSP 56455) '[Brazil], Est.[ado] São Paulo, Franca, x.1910, E. Garbe col.' '15.772 [Brazil, São Paulo, Franca, x.1910, E. Garbe col.]' 'Paratype, *Timulla* (T.) *spiniclypeata*, ♀, C.E. Mickel'.

Sphaerophthalminae
Dasymutillini
Cephalomutilla Andre

Cephalomutilla transversa Mickel, 1960: 166

Paratypes: 1♀ (# MZSP 56404) '[Brazil], Goiás, 11.xi.1906, Baer col.' '6.057 [Brazil, Goiás, 11.xi.1906, Baer col.]' 'Paratype, *Cephalomutilla transversa*, ♀, C.E. Mickel'; 1♀ (# MZSP 56405) '[Brazil], Mato Grosso [do Sul], [Porto] Murtinho, xi.1929, R. Spitz col.' '22.023 [Brazil, Mato Grosso do Sul, Porto Murtinho, xi.1929, R. Spitz col.]' 'Paratype, *Cephalomutilla transversa*, ♀, C.E. Mickel'.

Comments: In the original publication the collection date of the specimen from Porto Murtinho (# MZSP 56405) is listed as January, 1930. The original publication also reported one female paratype from São Paulo (Brazil) deposited at MZSP, however, this specimen was not found in the collection.

Traumatomutilla pereirai Suárez, 1960: 473

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056442>)

Holotype: ♀ (# MZSP 56442) '[Brazil], Goiás, 1935/36, Spitz col.' '*Traumatomutilla pereirai* n. sp., J. Suárez det. 1960'.

Traumatomutilla pertela Casal, 1969: 282

Paratypes: 2♀ (# MZSP 56443-56444) 'Brasil, Paraíba, Juazeirinho, Soledade, vi.1956, A.G.A. Silva [col.]' '*Traumatomutilla pertela* sp. n. V.O.H. Casal, 1968'.

Pseudomethocini
Atillum Andre

Atillum dubium Casal, 1963: 86

Paratype: 1♂ (# MZSP 56403) 'R.A.[Argentina], Bs. As. [Buenos Aires], Est.[ación] F. [Felipe] Sola, A. Martinez [col.]' 'Paratipo' 'Paratypus' '*Atillum dubium* sp. nov., Casal 1962, ♂'.

Hoplocrates Mickel

Hoplocrates scutellaris Mickel, 1941: 363

Paratypes: 1♂ (# MZSP 56406) '[Brazil], Santa Catarina, Colonia Hansa [now Corupá city], 1904, H. Rolle col.' '2.736 [Brazil, Santa Catarina, Joinville, Corupá, 1904, H. Rolle col.]' 'Paratype, *Hoplocrates scutellaris*, ♂, C.E. Mickel'; 1♂ (# MZSP 56407) '[Brazil], São Paulo, Bocaina, R. Spitz col., tf.24.' 'Paratype, *Hoplocrates scutellaris*, ♂, C.E. Mickel'.

Current status: *Hoplocrates specularis* (Gerstaecker, 1874).

Hoplomutilla Ashmead

Hoplomutilla bequaerti Mickel, 1939b: 665

Paratype: 1♀ (# MZSP 56408) '[Brazil], Amazonas, Rio Uaupés, 1907, Bosh col.' '10.779 [Brazil, Amazonas, Rio Uaupés, 1907, Dr. Bosh col.]' 'Paratype, *Hoplomutilla bequaerti*, ♀, C.E. Mickel'.

Hoplomutilla lenkoi Suárez, 1961: 225

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056409>)

Holotype: ♀ (# MZSP 56409) 'Brasil, Rondonia, V.[ila] Rondonia, 378 km S de P. [Porto] Velho, 25.i-9.ii.1961, Pereira e A. Machado [col.]' '*Hoplomutilla lenkoi* sp. nov., Holotipo, J. Suárez det. 1961'.

Hoplomutilla myops flavimyops Mickel, 1939a: 377

Paratype: 1♀ (# MZSP 56410) 'Brasil, Goiás, 11.xi.1906, Baer col.' '6.057 [Brazil, Goiás, 11.xi.1906, Baer col.]' 'Paratype, *Hoplomutilla myops* ssp. *flavimyops*, ♀, C.E. Mickel'.

Hoplomutilla triumphans Mickel, 1939a: 370

Paratype: 1♀ (# MZSP 56412) '[Brazil], Mato Grosso [do Sul], [Porto] Murtinho, xi.1929, R. Spitz col.' '22.023 [Brazil, Mato Grosso do Sul, Porto Murtinho, xi.1929, R. Spitz col.]' 'Paratype, *Hoplomutilla triumphans*, ♀, C.E. Mickel'.

Comments: In the original publication the collection date of the specimen from Porto Murtinho (# MZSP 56412) is listed as January, 1930.

Lophomutilla Mickel

Lophomutilla lenkoi Suárez, 1962: 204

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056413>)

Holotype: ♀ (# MZSP 56413) 'Brasil, S.[ão] P.[aulo], São Paulo, Interlagos, 4.iii.1961, Reichardt & Werner' '*Lophomutilla lenkoi* sp. nov., ♀, Holotipo, J. Suárez det. 1962'.

Lophomutilla mickeli Suárez, 1962: 200

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056414>)

Holotype: ♀ (# MZSP 56414) 'Brasil, São Paulo, Salesópolis, Est.[ação] Biol.[ógica] Boraceia, vi.1952, L. Travassos - col.' '*Lophomutilla mickeli* sp. n., ♀, Holotipo, J. Suarez det. 1962'.

Lophomutilla prionophora jaragua Casal, 1961: 59

Paratype: 1♀ (# MZSP 56415) 'Brasil, S.[anta] Catarina, Corupá, i.1957, A. Maller' 'Coleção Campos Seabra' '*Lophomutilla prionophora jaragua* n. ssp., Casal, 1960, Paratypus, ♀'.

Mickelia Suárez

Mickelia cressoni Suárez, 1966: 478

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056419>)

Holotype: ♀ (# MZSP 56419) 'Brasil, São Paulo, Ribeirão Preto, 21.x.1962, Exp.[edição] Dep.[artamento] Zool.[ogia]' 'Holótipo, *Mickelia cressoni* n. sp., ♀, J. Suárez det. 1965'.

Paratypes: 1♀ (# MZSP 56417) '[Brazil], M.[ato] Grosso [do Sul], Maracaju, 3-[1]937, Shannon Lane' Paratipo, *Mickelia cressoni* n. sp., ♀, J. Suárez det. 1965'; 1♀ (# MZSP 56418) '[Brazil], São Paulo, Bofete, ii.[1]939, col. Dr. Hempel' Paratipo, *Mickelia cressoni* n. sp., ♀, J. Suarez det. 1965'.

Pseudomethoca Ashmead

Pseudomethoca melanocephala brevipunctata

Mickel, 1937: 183

Paratypes: 1♀ (# MZSP 56430) '[Brazil], S.[ão] P.[aulo], Alto da Serra [old name for Paranapiacaba city], Parque Cajuru, iii.1910, H. Luederwaldt col.' '18.551 [Brazil, São Paulo, Paranapiacaba, Parque Cajuru, iii.1910, H. Luederwaldt col.]' 'Paratype, *Pseudomethoca melanocephala* v. *brevipunctata*, ♀, C.E. Mickel'; 1♀ (# MZSP 56432) 'Brasil, Est.[ado] S.[ão] P.[aulo], Campos do Jordão, 3.ii.1906, H. Luederwaldt col.' '9.540 [Brazil, São Paulo, Campos do Jordão, 3.ii.1906, H. Luederwaldt col.]' 'Paratype, *Pseudomethoca melanocephala* v. *brevipunctata*, ♀, C.E. Mickel'; 1♀ (# MZSP 56431) '[Brazil], São Paulo, Capital [São Paulo city], i.1920, Domingos col.' 'Paratype, *Pseudomethoca melanocephala* v. *brevipunctata*, ♀, C.E. Mickel'; 1♀ (# MZSP 56433) '[Brazil], São Paulo, Jundiáhy [Jundiá], xii.1900, M. Beron col.' 'Paratype, *Pseudomethoca melanocephala* v. *brevipunctata*, ♀, C.E. Mickel'.

Sphaerophthalmi

Tallium Andre

Tallium moleque Casal, 1962a: 323

Paratype: 1♂ (# MZSP 56435) 'Brasil, Paraíba, Juazeirinho, Soledade, Julho, 1956, A.G.A. Silva [col.]' 'Tallium moleque sp. nov. ♂, Casal, 1962'.

Tallium precarious Suárez, 1960: 464

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056436>)

Holotype: ♂ (# MZSP 56436) '[Brazil], Mato Grosso [do Sul], Maracaju, Shannon Lane, 3.937 [Mato Grosso, Fazenda da Faya, 1905, E. Garbe]' 'Tallium precarious n. sp., ♂, J. Suarez det. 1960'.

Tallium schusteri Suárez, 1960: 461

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056437>)

Holotype: ♀ (# MZSP 56437) '[Brazil], Mato Grosso [do Sul], Maracaju, Shannon Lane, 3.937 [Mato Grosso,

Fazenda da Faya, 1905, E. Garbe]' 'Tallium schusteri n. sp., ♀, Holótipo, J. Suarez det. 1960'.

Tallium vianai Casal, 1962b: 274

Paratype: 1♀ (# MZSP 56438) 'Argentina, Cordoba, Dep. [Department] de Calamuchita, "El Sauce", ii.1940, Manuel J. Viana [col.]' 'col. M.A. Fritz' 'Tallium vianai n. sp. ♀, Paratypus, Casal, 1960'.

Tallium willinki Suárez, 1960: 468

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056439>)

Holotype: ♂ (# MZSP 56439) '[Brazil], Goyaz [Goiás], Campinas, [1]937' 'Tallium willinki n. sp., ♂, Holótipo, J. Suárez det. 1960'.

Traumatomutilla Andre

Traumatomutilla maula Casal, 1969: 294

Paratypes: 2♀ (# MZSP 56440-56441) 'Brasil, Pará, Mocajuba, Mocajuba, iii-1953, Orlando M. Rago [col.]' 'Traumatomutilla maula sp. nov., ♀, O.H. Casal, 1968'.

POMPILIDAE

Pepsinae

Pepsini

Anacyphonix Banks

Salius (Priocnemis) apicipennis Fox, 1899: 197

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056461>)

Holotype: ♂ (# MZSP 56461) '[Brazil, São Paulo, São Paulo], Ypiranga [Ipiranga, neighborhood], ♂, 12.489 [Brazil, São Paulo, São Paulo, Ipiranga, J. Lima col.]' 'Salius (Priocnemis) apicipennis Fox Fishel, Fox det.' 'Salius (Priocnemis) apicipennis Fox' 'Salius apicipennis Fox 1899 = Entypus brasiliensis (Taschenberg, 1869), A. Roig Alsina det. 1981' 'Salius apicipennis Fox 1899, Holotypus, A. Roig Alsina exam. 1981' 'R. Wahis dt. 86, Lep., ♂' 'R. Wahis rv. 86, Holotype, Salius apicipennis Fox 1899, ♂ = Entypus caeruleans, Lep., 1845'.

Current status: *Anacyphonyx apicipennis* (Fox, 1899).

Entypus Dahlbom

Salius carinatellus Brèthes, 1911: 68

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056456>)

Holotype: ♂ (# MZSP 56456) '[Brazil], E.[stado] de São Paulo, ♂, 12.396 [Brazil, São Paulo]' 'Brèthes det., Salius (Priocnemis) carinatellus n. sp.' 'Salius (Priocnemis) carinatellus n. sp., Brèthes.' 'Salius carinatellus, Brèthes, 1911, ♂, Holotypus, A. Roig Alsina exam 1981' 'Salius carinatellus, Brèthes, 1911 = Entypus bituberculatus, (Guérin, 1838), A. Roig Alsina det. 1981' 'R. Wahis dt.86, Entypus bitubercula-

tus, Guerin'R. Wahis rv. 86, Lectotype, *Salius carinatellus*, Breth. 1911 = *Entypus bituberculatus*, Guer. 1838'.

Current status: *Entypus bituberculatus* (Guérin, 1838).

***Salius gracilicornis* Brèthes, 1911: 66**

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056500>)

Holotype: ♂ (# MZSP 56500) '[Brazil], São Paulo, Capital [São Paulo], ♂, 12.395 [Brazil, São Paulo, São Paulo, 7.v.1902, C. Dreher col.]' '*Salius gracilicornis*, Brèthes det.' '*Holotypus*, *Salius gracilicornis*, Brèthes 1911, A. Roig Alsina exam. 1981, *Salius gracilicornis*'.

Current status: *Entypus coeruleus* (Taschenberg, 1869).

Comments: We did not find the current information about the status of *S. gracilicornis*. The association adopted here is based to Banks (1946: 475) in which refers the holotype male of *S. gracilicornis* may be corresponding to the male of *E. coeruleus*.

***Salius limbatus* Brèthes, 1911: 69**

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056535>)

Holotype: ♀ (# MZSP 56535) '[Brazil], Rio Grande de Sul, ♀' '12.397 [Brazil, Rio Grande do Sul, Mabilde col.]' '*Salius limbatus*, Brèthes det.' '*Salius limbatus*, Brèthes, 1911, ♀, *Holotypus*, A. Roig Alsina exam. 1981' '*Salius limbatus*, Brèthes 1911 = *Entypus taschenbergii* (Dalla Torre, 1897), A. Roig Alsina det. 1981' '*Salius limbatus*' R. Wehis rv. 86, Holotype, *Salius limbatus*, Breth, 1911, ♀ = *Entypus cyaneus taschenbergii*, D. Torre, 1897'.

Current status: *Entypus taschenbergi* (Dalla Torre, 1897).

***Salius (Priocnemis) tinctipennis* Fox, 1899: 198**

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056460>)

Lectotype: ♀ (# MZSP 56460) '[Brazil], Rio Grande do Sul, ♀' '*Salius (Priocnemis) tinctipennis* Fox, Fische' '*Salius (Priocnemis) tinctipennis* Fox' '*Salius tinctipennis* Fox, 1899, ♀, Lectotypus, A. Roig Alsina exam. 1981' '*Salius tinctipennis* Fox, 1899 = *Entypus velutinus* (Taschenberg, 1869), A. Roig Alsina det. 1981' 'R. Wahis rv. 86, Lectotype, *Salius tinctipennis* Fox, 1899, ♀ = *Entypus caerulans tinctipennis* Fox' R. Wahis dt. 86, *Entypus caerulans tinctipennis* Fox'.

Current status: *Entypus velutinus* (Taschenberg, 1869).

Comments: Lectotype designated by Roig Alsina (1981:333).

Pepsis Fabricius

***Pepsis achterbergi* Vardy, 2005: 191**

Paratype: 1♀ (# MZSP 56462) 'Brasil, Esto.[Estado] Pará, Óbidos, (Traira) [community], Dirings [col.]' 'Paratype, ♀, *Pepsis achterbergi* n. sp., Det. Vardy, 2001'.

***Pepsis adonta* Vardy, 2005: 245**

Paratype: 1♀ (# MZSP 56463) '[Brazil], Pará, Rio Xingu, Cach.[oeira] do Espelho, 21-28.x.1986, F.C. do Val. Col.' 'Paratype ♀, *Pepsis adonta* n. sp., Det. Vardy 2001'.

Comments: The paratype listed herein is incorrectly indicated in the original publication as a male specimen. Also, the male specimen from Canoas (Brazil) listed as deposited at MZSP was not located.

***Pepsis bahiae* Brèthes, 1914: 288**

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056464>)

Lectotype: ♀ (# MZSP 56464) '[Brazil], Bahia, V.[ila] Nova, Garbe [col.], 14., anno: 1908' '*Pepsis bahiae*, Br., ♀, Brèthes, det. 17' 'Lectotype, ♀, *Pepsis bahiae* Brè. = *helvolicornis* Luc., det. C.R. Vardy, 1991'.

Paralectotype: 1♀ (# MZSP 56465) '[Brazil], Bahia, V.[ila] Nova, Garbe [col.], 14., anno: 1908' '*Pepsis bahiae* Br., Brèthes det. 17' '98922' 'Paralectotype, ♀, *Pepsis bahiae* Brè. = *helvolicornis* Luc., det. C.R. Vardy, 1991'.

Current status: *Pepsis helvolicornis* Lucas, 1895.

Comments: Lectotype designated by Vardy (2005: 114).

***Pepsis carinata* Brèthes, 1914: 311**

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056494>)

Holotype: ♂ (# MZSP 56494) 'Ecuador, Balzapamba, R. Haensch S. [col.]' '*Pepsis carinata* Brèth., Brèth. Det. 17' 'Holotype, ♂, *Pepsis carinata* Brè. = *purpureipes* Pack., det. C.R. Vardy, 1990' '*Pepsis purpureipes* Packard, ♂, Det. Vardy, 92'.

Current status: *Pepsis purpureipes* Packard, 1869.

***Pepsis clypeata* Brèthes, 1914: 310**

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056495>)

Holotype: ♀ (# MZSP 56495) 'Ecuador, Archidona, R. Haensch S. [col.]' 'Holotype' '*Pepsis clypeata* Br., Breth. Det. 17' 'Holotype, ♀, *Pepsis clypeata* Brè. = *purpurea* Sm., det. C.R. Vardy, 1990'.

Current status: *Pepsis purpurea* Smith, 1873.

***Pepsis coronaria* Brèthes, 1914: 313**

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056467>)

Holotype: ♂ (# MZSP 56467) '[Brazil], [São Paulo], São Paulo, 18.714 [Brazil, São Paulo, 1912, Barbiellini col.]' '*Pepsis coronaria* Br.' 'Holotype, ♂, *Pepsis coronaria* Brè., det. C.R. Vardy, 1989' '*Pepsis chrysoptera* Burm., ♂, det. C.R. Vardy, 1989'.

Current status: *Pepsis chrysoptera* Burmeister, 1872.

***Pepsis erecta* Brèthes, 1914: 299**

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056533>)

Holotype: ♂ (# MZSP 56533) '[Brazil], Bahia, V[ila] Nova, 1908, Garbe leg.' '*Pepsis erecta* Br, Brèthes det. 17' 'Holotype, *Pepsis erecta* Brè, ♂, det. C.R. Vardy, 1989' '*Pepsis viridis* Lep., ♂, det. C.R. Vardy, 1989'.

Current status: *Pepsis viridis* Lepelletier, 1845.

***Pepsis fusciorubra* Brèthes, 1914: 321**

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056468>)

Holotype: ♀ (# MZSP 56468) '[Brazil], Goyaz [Goiás], 6.050 [Brazil, Goiás, 11.xi.1906, Baer col.]' '*Pepsis fusciorubra* Br., Brèthes det. 17' 'Lectotype, ♀, *Pepsis fusciorubra* Brè., det. C.R. Vardy, 1988'.

Current status: *Pepsis terminata* Dahlbom, 1843.

Comments: Vardy (2002: 68) has designated the specimen as a lectotype, however, according to original description the specimens listed herein is a holotype by monotypy.

***Pepsis garbei* Brèthes, 1914: 297**

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056497>)

Lectotype: ♀ (# MZSP 56497) '[Brazil], Espírito Santo, 9.309 [Brazil, Espírito Santo, 1906, E. Garbe col.]' '*Pepsis garbei* Brèthes, Brèthes det. 17' 'Lectotype, ♀, *Pepsis garbei*, Brèthes = *viridis* Lep., det. C.R. Vardy, 1991'.

Paralectotypes: 2♀ (# MZSP 56498, 56499) '[Brazil], Espírito Santo, 3.537 [Brazil, Espírito Santo, 1906, E. Garbe col.]' '*Pepsis garbei* Br., Brèthes det. 17' 'Paralectotype, ♀, *Pepsis garbei* Brè. = *viridis* Lep., det. C.R. Vardy, 1991'.

Current status: *Pepsis viridis* Lepelletier, 1845.

Comments: Lectotype designated by Vardy, 2005: 248. The original publication listed incorrectly the number 3.537 as 3.573. The type series is composed by different species being the paralectotype (# MZSP 56505) female with the following labels identified as *Pepsis festiva* Fabricius, 1804 '[Brazil], São Paulo, Raiz da Serra, xii, 18.523 [Brazil, São Paulo, Estação Raiz da Serra, xii.1907, H. Lüderwaldt col.]' '*Pepsis garbei* Br, Brèthes, det. 17' 'Paralectotype, ♀, *Pepsis garbei* Brè. = *festiva* F., det. C.R. Vardy, 1991'.

***Pepsis heterochroa* Brèthes, 1914: 298**

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056473>)

Holotype: ♀ (# MZSP 56473) '[Brazil], Espírito Santo, 3.461 [Brazil, Espírito Santo, 1905, E. Garbe col.]' '*Pepsis heterochroa* Brè., Brèth. Det. 17' 'Holotype, ♀, *Pepsis heterochroa* Brè., det. C.R. Vardy, 1989' '*Pepsis cassiope* Mocs. Det. C.R. Vardy 1989'.

Current status: *Pepsis cassiope* Mocsáry, 1888.

***Pepsis hora* Brèthes, 1914: 289**

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056470>)

Lectotype: ♀ (# MZSP 56470) '[Brazil], São Paulo, S.[ão] Sebastião, Bicego det.' '*Pepsis hora* Br., Brèthes det. 17' 'Lectotype, ♀, *Pepsis hora* Brè. = *festiva* F., det. C.R. Vardy, 1991'.

Paralectotypes: 1♀ (# MZSP 56472) '[Brazil], Espírito Santo, 3.444 [Brazil, Espírito Santo, x.1905, Garbe col.]' '*Pepsis hora* Br, Brèthes det. 17' 'Paralectotype, ♀, *Pepsis hora* Brè. = *festiva* F., det. C.R. Vardy, 1991'; 1♀ (# MZSP 56471) '[Brazil], São Paulo, São Sebastião, ix.[19]96' '*Pepsis hora* Br, ♀, Brèthes det. 17' 'Paralectotype, ♀, *Pepsis hora* Brè. = *festiva* F., det. C.R. Vardy, 1991'.

Current status: *Pepsis festiva* Fabricius, 1804.

Comments: Lectotype designated by Vardy (2005: 219).

***Pepsis humeralis* Brèthes, 1914: 294**

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056469>)

Holotype: ♂ (# MZSP 56469) '[Brazil], São Paulo, Alto da Serra, xi, 16.227 [Brazil, Parque Cajuru, xi.1911, E. Schwebel col.]' '*Pepsis humeralis* Br., Brèthes, det. 17' 'Holotype, ♂, *Pepsis humeralis* Brè., det. C.R. Vardy, 1991'.

Current status: *Pepsis convexa* Lucas, 1895.

***Pepsis iheringi* Brèthes, 1908: 238**

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056496>)

Holotype: ♀ (# MZSP 56496) '[Brazil], Est.[ado] S.[ão] P.[aulo], Rincão, 12.382 [Brazil, São Paulo, Rincão]' '*Pepsis iheringi* n. sp., Brèthes det. ♀' '*Pepsis iheringi* n. sp., Brèthes' 'Holotype, ♀, *Pepsis iheringi* Brè., det. C.R. Vardy, 1989' '*Pepsis smaragdina* Dhlb., ♀, det. C.R. Vardy, 1989'.

Current status: *Pepsis smaragdina* Dahlbom, 1843.

***Pepsis impatiens* Brèthes, 1914: 273**

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056474>)

Holotype: ♂ (# MZSP 56474) '[Brazil], São Paulo, Ypiranga [Ipiranga, neighborhood], i[January], 18.528 [Brazil, São Paulo, Ipiranga, i.1908, H. Lüderwaldt col.]' '*Pepsis impatiens* Br., Brèth. det. 17' 'Holotype, *Pepsis impatiens* Brè., det. C.R. Vardy, 1989'.

Current status: *Pepsis nitida* Lepelletier, 1845.

***Pepsis inbio* Vardy, 2000: 73**

Paratypes: 1♀ and 1♂ (# MZSP 56475, 56476) 'Costa Rica, Guanacaste Prov.[ince], Fca. Jenny 31 km N Liberia, 300 m, Sep.[tember] 1988, GNP Biodiversity Survey, W85 34'27" N10 51'55"' 'Paratype, ♂, *Pepsis inbio* n. sp., det. C.R. Vardy, 1990'.

***Pepsis limbatica* Brèthes, 1914: 342**

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056477>)

Holotype: ♂ (# MZSP 56477) '[Brazil], Paraná, Palmeira, 12.413 [Brazil, Paraná, Palmeira, v.1898, Bisego col.]' '*Pepsis limbatica* Br., Brèthes det. 17.' 'Holotype, ♂, *Pepsis limbatica* Brè., det. C.R. Vardy, 1989' '*Pepsis limbatica* Brè., det. C.R. Vardy, 1989'.

Current status: *Pepsis flavescens* Lucas, 1895.

***Pepsis marthae* Vardy, 2002: 82**

Paratype: 1♀ (# MZSP 56478) '[Peru], Chanchamayo [valley]' 'Chanchazaya [Chanchamayo], H. Rolle, Berlin col.' '2.741 [Peru, Chanchamayo, H. Rolle, Berlin col.]' '99174' 'Paratype, ♀, *Pepsis marthae*, Vardy'.

***Pepsis martini* Vardy, 2005: 260**

Paratypes: 1♂ (# MZSP 56483) '[Brazil], S[ão] Paulo – Ypiranga [Ipiranga, neighborhood], 2.iv.[19]36, Lange de Morrets col.' 'Paratype' 'Paratype, ♂, *Pepsis martini* n. sp., Det. Vardy 2001'; 1♂ (# MZSP 56480) '[Brazil], Minas [Gerais], Pouso Alegre, xii.1953' 'Paratype, ♂, *Pepsis martini* n. sp., Det. Vardy 2001'; 1♂ (# MZSP 56487) 'Brasil, São Paulo, Monte Alegre, 750 ms. Faz.[enda] Experimental, 14-27.x.1942, L. Trav. & Almeida [col.]' 'Paratype, ♂, *Pepsis martini* n. sp., Det. Vardy 2001'; 1♂ (# MZSP 56481) '[Brazil], S.[ão] P[aulo], Campinas, Guará, 20.xi.[19]88, R.P. Martins col.' 'Paratype, ♂, *Pepsis martini* n. sp., Det. Vardy 2001'; 1♂ (# MZSP 56484) 'Brasil, M.[inas] G.[erais], Serra Caraça – 1380 m, xi.[19]61, Kloss, Lenko, Martins & Silva col.' 'Paratype, ♂, *Pepsis martini* n. sp., Det. Vardy 2001'; 1♂ (# MZSP 56479) '[Brazil], Goyaz [Goiás], Leop[oldo] Bulhões, xii.[19]33, Spitz [col.]' 'Paratype, ♂, *Pepsis martini* n. sp., Det. Vardy 2001'; 1♂ (# MZSP 56485) '[Brazil], São Paulo, Campinas, 3.484 [Brazil, São Paulo, Campinas, 1906]' '*Pepsis dimidiata* F., Brèthes det. 17' 'Paratype, ♂, *Pepsis martini* n. sp., Det. Vardy 2001'; 1♂ (# MZSP 56486) 'Brasil, S.[ão] P[aulo], Campinas, 15.xi.1900, A. Hempel col.' '6.502 [Brazil, São Paulo, Campinas, 15.xi.1900, A. Hempel col.]' '99398' 'Paratype, *Pepsis martini* n. sp., Det. Vardy 2001'; 1♂ (# MZSP 56482) '[Brazil], S.[ão] P[aulo], Salesópolis, Est.[rada] Biol.[ógica] Boraceia, 850 m, 5.iv.1966, Rabello col.' 'Paratype, ♂, *Pepsis martini* n. sp., det. Vardy 2001'.

***Pepsis militaris* Brèthes, 1914: 343**

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056502>)

Lectotype: ♀ (# MZSP 56502) '[Brazil], São Paulo, [Campos do] Jordão, ii.[19]06, Lüd.[erwaldt] [col.]' 'Lectotype' '*Pepsis militaris* Br. Brèth. Det. 1.' 'Lectotype, ♀, *Pepsis militaris* Brè. = *flavescens* Luc., det. C.R. Vardy, 1991'.

Paralectotypes: 2♀ (# MZSP 56503, 56504) '[Brazil], São Paulo, [Campos do] Jordão, ii.[19]06, Lüd.[erwaldt] [col.]' '*Pepsis militaris* Br. Brèth. Det. 17.' 'Lectotype, ♀, *Pepsis militaris* Brè. = *flavescens* Luc., det. C.R. Vardy, 1991'.

Current status: *Pepsis flavescens* Lucas, 1895.

Comments: Lectotype designated by Vardy (2005: 176).

***Pepsis minarum* Brèthes, 1914: 286**

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056531>)

Holotype: ♀ (# MZSP 56531) '[Brazil], Minas Gerais, Irapá, 12.414 [Brazil, Minas Gerais, Irapá, Dr. Bach col.]' '*Pepsis minarum* Br., Brèthes det. 17' 'Lectotype, *Pepsis minarum* Brè., det. C.R. Vardy, 1988'.

Comments: Vardy (2005: 140) has designated the specimen as a lectotype, however, according to the original description the specimen listed herein is a holotype by monotypy.

***Pepsis nanooides* Vardy, 2005: 268**

Paratypes: 1♀ (# MZSP 56488) '[Brazil], São Paulo, Rio Claro, Horto Florestal [Edmundo] Navarro de Andrade, 30.vi.[19]87, coletado no barranco, R.P. Martins, col.' 'Paratype, ♀, *Pepsis nanooides* n. sp., Det. Vardy, 2001'; 1♀ (# MZSP 56489) '[Brazil], Pará, Belém, June, 1924' 'F.X. Williams collector' 'Paratype, ♀, *Pepsis nanooides* n. sp., Det. Vardy, 2001'; 1♀ (# MZSP 56490) '[Brazil], E.[stado] de S.[ão] Paulo, 12.430 [Brazil, São Paulo, Jundiá, 21.iv.1899, M. Beron col.], *Pepsis dimidiata*' 'Head Figured Specimen' 'Paratype, ♀, *Pepsis nanooides* n. sp., Det. Vardy 2001' 'MZUSP'; 1♀ (# MZSP 56491) '[Brazil], E[stado] S[ão] Paulo, Jundiáhy [Jundiá], ♀, 12.430[Brazil, São Paulo, Jundiá, 21.iv.1899, M. Beron col.], *Pepsis dimidiata*' 'Coll antiga' '*Pepsis dimidiata* Fabr.' 'Paratype, ♀, *Pepsis nanooides* n. sp., Det. Vardy, 2001' 'MZUSP'; 1♀ (# MZSP 56492) 'Brasil, S.[ão] P[aulo], Itu, Faz.[enda] Pau D'Alho, ii.1963, F. Werner & U. Martins col.' '*Pepsis dimidiata*, Fabr., ♀, det. H. Evans 1967' '*Pepsis dimidiata*, Fabr.' 'Paratype, ♀, *Pepsis nanooides* n. sp., det. Vardy 2001'.

Comments: The original publication listed the specimen from Belém (Brazil) (# MZSP 56489) as collected on May, but the correct date in the label is June.

***Pepsis pacifica* Brèthes, 1914: 326**

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056493>)

Holotype: ♀ (# MZSP 56493) 'Bolívia, Yungas [de La Paz], 1000 m., det. P' '*Pepsis pacifica* Br., Brèthes det. 17.' 'Holotype, ♀, *Pepsis pacifica* Brè., det. C.R. Vardy, 1989' '*Pepsis montezuma* Sm., ♀, det. Vardy, 1987'.

Current status: *Pepsis montezuma* Smith, 1855.

***Pepsis paulistana* Brèthes, 1914: 307**

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056466>)

Holotype: ♂ (# MZSP 56466) '[Brazil], São Paulo, [São Paulo], Ypiranga [Ipiranga, neighborhood]' '*Pepsis paulistana* Brèthes det. 17' 'Brithey' 'Holotype, ♂, *Pepsis pau-*

listana Bre., det. C.R. Vardy, 1989' *Pepsis chrysoptera* Burm., ♂, det. C.R. Vardy, 1989'.

Current status: *Pepsis chrysoptera* Burmeister, 1872.

***Pepsis pulchra* Brèthes, 1914: 323**

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056532>)

Holotype: ♂ (# MZSP 56532) [Brazil], São Paulo, Jundiáhy [Jundiáí], Beron leg.' 'Lectotype' *P. pulchra* Brè., det. C.R. Vardy, 1988' *Pepsis minarum* Brè., det. C.R. Vardy, 1989'.

Current status: *Pepsis minarum* Brèthes, 1914.

Comments: Vardy (2005: 140) has designated the specimen as a lectotype, however, according to original description the specimen listed herein is a holotype by monotypy.

***Cryptocheilus* Panzer**

***Salius diffusus* Brèthes, 1911: 67**

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056534>)

Holotype: ♀ (# MZSP 56534) [Brazil, São Paulo, São Paulo], Ypiranga [Ipiranga, neighborhood], ♀, 2.013 [Brazil, São Paulo, São Paulo, Ipiranga, J. Lima col.]' *Salius diffusus*, Brèthes det.' *Salius diffusus*, Brèthes 1911, ♀, *Holotypus*, A. Roig Alsina exam. 1981' *Salius diffusus*' R. Wahis rv. 86, Holotype, *Salius diffusus*, Breth, 1911, ♀ = *Entypus cyaneus*, Lep. 1845, ♀' R. Wahis dt. 86, *Entypus cyaneus cyaneus*, Lep.'

Current status: *Cryptocheilus diffusus* (Brèthes, 1911)

***Salius (Cyphononyx) notatipennis* Fox, 1899: 196**

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056501>)

Holotype: ♀ (# MZSP 56501) [Brazil], Rio Grande do Sul' *Salius (Cyphononyx) notatipennis*, Fox, Type, 12.482 [Brazil, Rio Grande do Sul], ♀, Fox det.' *Holotypus*, *Salius (Cyphononyx) notatipennis* Fox, 1899, A. Roig Alsina Glam., 1981' *Salius (Cyphononyx) notatipennis*, Fox' *Salius notatipennis* Fox = *Anacyphononyx notatipennis* (Fox), det. A. Rog. Alsina, 1982'.

Current status: *Cryptocheilus notatipennis* (Fox, 1899)

**THYNNOIDEA
THYNNIDAE
Myzininae
Mizinini
Pterombrus Smith**

***Pterombrus iheringi* Ducke, 1914: 117**

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056536>)

Holotype: ♀ (# MZSP 56536) '12.446 [Brazil, São Paulo, São Paulo, Ipiranga, J. Lima coll.], Ypiranga [Ipiranga,

neighborhood], typo, Ducke det.' *Pterombrus iheringi*, Ducke, typo' *Holotipo*' *Pterombrus iheringi*, Ducke'.

***Huberia glabricollis* Ducke, 1907a: 06**

Syntype: 1♀ (# MZSP 56537) 'Brazil, Estado do Pará' '16.624 [Brazil, Pará, Parinha, v.1903], Cotypo' *Pterombrus glabricollis* Ducke, cotypo' Prainha, 10.v.1903 Ducke' *cótipo*' *Pterombrus glabricollis* Ducke'.

Current status: *Pterombrus glabricollis* (Ducke, 1907).

**Thynninae
Rhagigasterini
Aelurus Klug**

***Aelurus grandis* Kimsey, 1991b: 234**

Paratype: 1♀ (# MZSP 56538) [Brazil], S.[ão] Paulo, C.[ampos do] Jordão, i.1948' *Paratype Aelurus grandis*, L.S. Kymsey'.

**Elaphropterini
Atopothygnus Kimsey**

***Atopothygnus unidens* Kimsey, 1991a: 73**

Paratypes: 1♂ and 1♀ (# MZSP 57213) on the same pin [Brazil], Paraná, Curitiba, vi.[1]937, P. Pereira [col]' *Paratype Atopothygnus unidens* L.S. Kimsey'.

***Elaphroptera* Guerin-Meneville**

***Elaphroptera montifacies* Genise & Kimsey, 1993: 209**

Paratypes: 1♂ (# MZSP 57214) 'Brazil, Santa Catarina, Nova Teutônia, ix.1964, Fritz Plaumann [col]' *Paratype Elaphroptera montifacies* Genise & Kimsey'; 1♂ (# MZSP 57215) same data except '11.[19]66'.

***Glottynoides* Kimsey**

***Glottynoides genisei* Kimsey, 1991: 61 in Genise & Kimsey, 1991**

Paratype: 1♂ (# MZSP 56880) 'Argent[ina], Cordoba, Carlos Paz – Capilla del monte, 26.Feb.[19]66, C.C. Porter' *Paratype Glottynoides genisei* L.S. Kimsey'.

***Merithynnus* Kimsey**

***Merithynnus paradoxus* Kimsey, 2005: 591**

Paratype: 1♂ (# MZSP 56879) 'Colombia, Norte de Santander PNN [Parque Nacional Natural], Tamá, El

Arenal, 07°25'N, 72°26'W, Malaise 7-15.viii.1998, A. Cortés Leg. M.291: 'Paratype *Merithynnus paradoxus* Kimsey'.

***Ornepetes* Guerin-Meneville**

***Ornepetes sylvicola* Bradley, 1911: 131**

Paratypes: 1♂ (# MZSP 57211) 'Brazil, State Sao Paulo, Hammar coll.' 'Cornell U. Lot 298. sub 111''20.871 [Estado de São Paulo, Hammar col.]' 'Paratype *Ornepetes sylvicola*, J.C. Bradley' '*Ornepetes sylvicola* Bradley' '99841' 'Sao Paulo'; 1♂ (# MZSP 57212) same data except 'sub 43' '99842' 'J.C. Bradley Dissection No. 52'.

***Upa* Kimsey**

***Upa bidentata* Kimsey, 1996: 57**

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056539>)

Holotype: ♂ (# MZSP 56539) 'Brazil, Santa Catarina, Nova Teutonia, x.1964, Fritz Plaumann [col.]' 'Holotype *Upa bidentata* Kimsey'.

Paratype: 1♂ (# MZSP 56540) '[Brazil], Paraná, Curityba[Curitiba], 4.i.[19]37, C. Wsterman coll.' 'Paratype *Upa bidentata* LS Kimsey'.

***Upa longispina* Kimsey, 1996: 59**

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056541>)

Holotype: ♂ (# MZSP 56541) '[Brazil], S.[ão] Paulo, H.[orto] Florestal' 'John Lane Collector' 'Holotype *Upa longispina* Kimsey'.

***Upa nasuta* Kimsey, 1996: 60**

Paratypes: 2♂ (# MZSP 56542, 56543) 'Brazil, S.[ão] P.[aulo], S.[ão] J.[osé do] Barreiro, Serra da Bocaina, 13-17.i.1969, Porter, García [col.]' 'Paratype *Upa nasuta* Kimsey'; 1♂ (# MZSP 56544) 'Brazil, São Paulo, Serra [da] Bocaina, 13-17.i.1969'.

***Upa tridentata* Kimsey, 1996: 62**

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056545>)

Holotype: ♂ (# MZSP 56545) 'Br[asil], Rio de Janeiro, Mury, Nova Friburgo, xii.1975, Gred & Guimarães col' 'Holotype *Upa tridentata* Kimsey'.

Paratype: 1♂ (# MZSP 57209) same data as holotype, except 'xii.1976' and additional labels '♀ is species of *Dolichothenus* det L.S. Kimsey' 'Paratype *Upa tridentata* Kimsey'.

Comments: Additionally to the specimens listed, there is 1♂ (# MZSP 57210) with the following label data 'S[ão] P[aulo], Jaraguá, 9.xii.1962, J.D. Cardoso col.' 'Paratype *Upa tridentata* Kimsey' that are not cited in the original

publication although it has the paratypes labels from L.S. Kimsey.

VESPOIDEA

VESPIDAE

Eumeninae

***Hypalastoroides* Saussure**

***Alastor rotundiceps* Schrottky, 1911: 19**

Syntype: 1♀ (# MZSP 57085) 'Paraguay, V[illa] Encarnacion, *Alastor rotundiceps* Schrottky [col.], 16.344 [Paraguay, Encarnacion, Schrottky col.], Schrottky det.' '16.344 [Paraguay, Encarnación, i.1906, Schrottky col.]' '*Alastor rotundiceps* ♀ Schrottky, cotype, C. *Alastor* Schrottky det. 1910' 'Lectotype of *Hypalastoroides rotundiceps* (Schr.) des. by J.V.D. Vecht 1981'.

Current status: *Hypalastoroides rotundiceps* (Schrottky, 1911).

Comments: The specimen has a lectotype label from Jacobus van der Vecht, however there is no a published designation of this lectotype.

Polistinae

***Agelaia* Lapeletier**

***Stelopolybia angulata bertonii* Richards, 1978: 244**

Paratype: 1♀ (# MZSP 57101) '[Brazil], S.[anta] Catharina [Catarina], Joinville, 17.018 [Santa Catarina, Joinville, comp. Rolle col., xi.1900]' '*Stelopolybia angulata* Ducke rev. 11' 'S. *angulata* ssp. *bertonii* Rich., ♀, paratype'.

Current status: *Agelaia angulata* (Fabricius, 1804).

Comments: In addition to the specimens listed, the original publication reported one female from Espírito Santo (Brazil) deposited at MZSP, however, this paratype was not found in the collection.

***Stelopolybia cornelliana subterranea* Richards, 1978: 242**

Paratypes: 2♀ (# MZSP 57099-57100) 'Peru, Tomentoy, canyn base of Machu Pichu, 2000 m, 19-24.vi.64, (B. Malkin)' '*Stelopolybia cornelliana* Rich. ssp. *subterranea* Rich., ♀, paratype'.

Current status: *Agelaia cornelliana subterranea* (Richards, 1978).

Comments: In addition to the specimens listed, the original publication reported one more female paratype deposited at MZSP, however, these specimens were not found in the collection.

***Stelopolybia hamiltoni* Richards, 1978: 251**

Paratypes: 2♀ (# MZSP 57096, 57097) '[Brazil], E.[stado] Amaz.[onas], Rio Juruá, 2.164 [Amazonas, Rio Juruá, Garbe leg.]' '*Stelopolybia vulgaris*, Ducke rev. 11' '*Stelopolybia hamiltoni* Rich., ♀, paratype'.

Current status: *Agelaia hamiltoni* (Richards, 1978).

Comments: In addition to the specimens listed, the original publication reported more two females paratypes from Amazonas (Brazil) and one female paratype from Rondônia (Brazil) deposited at MZSP, however, these paratypes were not found in the collection.

***Stelopolybia lobipleura* Richards, 1978: 247**

Paratype: 1♀ (# MZSP 57098) 'Bras.[il], Mato Grosso, Serra [do] Roncador, R.S. Base Camp., 7.ix.68' 'W. Hamilton col.' '*Stelopolybia* n. sp.' '*Stelopolybia lobipleura* Rich., ♀, paratype'.

Current status: *Agelaia lobipleura* (Richards, 1978).

***Apoica* Lepeletier**

***Apoica (Apoica) strigata* Richards, 1978: 267**

Paratypes: 1♀ and 1♂ (# MZSP 56881, 56882) 'Brasil, Amazonas, Benjamin Constant, 18-28.ix.1962, K. Lenko – col.' '*Apoica strigata* Rich., paratype'; 3♂ (# MZSP 56883-56885) '[Brazil], AM [Amazonas], Tapuruquara, Rio Negro, 26-27.xi.1962, J. Bechyné col.' '*Apoica strigata* Rich., ♂, paratype'.

***Brachygastra* Perty**

***Nectarinia baccaurea* Ihering, 1903: 154**

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056886>)

Lectotype: ♀ (# MZSP 56886) 'Perú, 827 [Peru, Stand col.]' '*Nectarinia baccaurea* R. v. lh., Ducke rev. 11' '*Brachygastra baccaurea* (R. Von Ihering), det. M. Naumann' '*Nectarinia baccaurea* R. v. Iher., ♀, lectotype'.

Current status: *Brachygastra baccaurea* (Ihering, 1903).

Comments: Lectotype designated by Richards (1978: 177).

***Brachygastra fistulosa* Naumann, 1968: 949**

Paratypes: 1♀ (# MZSP 56888) 'Brasil, 830' 'Paratype, *Brachygastra fistulosa*, M.G. Naumann' '*Nect. aug.* var. *quinta* R.v.lh., R.v.lh rev. 12'; 1♀ (# MZSP 56889) 'Brazil, 830' 'Paratype, *Brachygastra fistulosa*, M.G. Naumann' '*Nectarinia augusti* var. *quinta* Sauss, R.v.lh., Ducke rev. 1911'.

***Brachygastra mouleae* Richards, 1978: 170**

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056906>)

Holotype: ♀ (# MZSP 56906) 'Brazil, S.[ão] P.[aulo], Rio Claro, Faz.[enda] Jussara, Nest, 4.ix.69, V.M. Rodrigues' '*Brachygastra mouleae* Rich., ♀, holotype'.

Paratypes: 1♀ (# MZSP 56907) 'Brazil, S.[ão] P.[aulo], Rio Claro, Nest, 4.ix.69, V.M. Rodrigues' '*Brachygastra mouleae* Rich., ♀, paratype'; 1♀ (# MZSP 56908) 'BR [Brazil], S.[ão] P.[aulo], R.[io] Paraná, Porto Cabral [Right bank of the Paraná River], 1-25.iv.1944, Trav. Fo. & Carrera & E. Dente' '*Brachygastra augusti* (Sauss.), det. M. Naumann 1965' '*Brachygastra mouleae* Rich., ♀, paratype'.

Comments: In addition to the specimens listed, the original publication reported one female from Rio Claro (São Paulo, Brazil) deposited at MZSP, however, this paratype was not found in the collection.

***Caba* Ihering**

***Caba bilineolata* var. *fasciata* Ihering, 1904: 112**

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056887>)

Lectotype: ♀ (# MZSP 56887) 'Surinam[e], 785 [Suriname, Stand col.]' '*Nect. 2-lin.* Spin. var. *fasciata* R. v. lh., R. v. lh. det.' '*Nectarina 2-lineolata* Spin., Ducke det. 11' '*Brachygastra bilineolata* var. *fasciata* (R.V. Iher.), ♀, lectotype'.

Current status: *Caba fasciata* Ihering, 1904.

Comments: Lectotype designated by Richards (1978: 171).

***Chartergellus* Bequaert**

***Chartergellus amazonicus* Richards, 1978: 220**

Paratype: 1♀ (# MZSP 56891) 'Brasil, Amazonas, Benjamin Constant, 18-28.ix.1962, K. Lenko – col.' '*Chartergellus amazonicus* Rich., ♀, paratype'.

***Chartergellus nigerrimus* Richards, 1978: 222**

Paratype: 1♀ (# MZSP 56892) 'Peru, 16.734 [Peru, 1905, Stand. col.]' '*Parachart. compressus*, Ducke rev. 11' '99502' '*Chartergellus nigerrimus* Rich., ♀, paratype'.

***Chartergellus punctatior* Richards, 1978: 221**

Paratype: 1♀ (# MZSP 56893) '[Brazil], Estado do Pará, 16.400 [Pará, xi.1899, Ducke col.]' '*Parachartergus frontalis* F., det. Ducke 1912' '*Chartergellus punctatior* Rich., ♀, paratype'.

Clypearia Saussure***Clypearia duckei* Richards, 1978: 196**

Paratypes: 1♀ (# MZSP 56894) 'Bras.[il], Acre, Cruzeiro do Sul, 26.11.[19]68, Ant complex, Nov[ember] 78' 'W. Hamilton col.' '*Clypearia* n. sp.' '*Clypearia duckei* Rich., ♀, paratype'; 1♀ (# MZSP 56895) 'Brasil, Pará, Canindé (Rio Gurupí), x.1964, B. Malkin col.' '*Clypearia duckei* Rich., ♀, paratype'.

Metapolybia Ducke***Metapolybia miltoni* Andena & Carpenter 2011: 117**

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056896>)

Holotype: ♀ (# MZSP 56896) 'Brasil, S.[ão] P.[aulo], Ribeirão Preto, 21°09'S, 47°51'W, 860 m, 15 may 1997, James M. Carpenter Nest, 970515-9' '*Metapolybia miltoni*, Antena & Carpenter'.

Paratypes: 1♀ (# MZSP 56897) 'Brasil, S.[ão] P.[aulo], Ribeirão Preto, 21°09'S, 47°51'W, 860 m, 15 may 1997, James M. Carpenter Nest 970515-9' '*Metapolybia miltoni*, Antena & Carpenter'; 1♀ (# MZSP 56898) 'Brazil, S.[ão] P.[aulo], Ribeirão Preto, 21°09'S, 47°51'W, 860 m, 15 may 1997, James M. Carpenter Nest, 970515-9' '*Metapolybia docilis* Richards, det. J.M. Carpenter 1997' '*Metapolybia miltoni* Andena & Carpenter'.

Parachartergus Ihering***Parachartergus bentobuenoi* Ihering, 1904**

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2091838>)

Lectotype: ♀ (# MZSP 91838) '[Brazil], E.[stado] Amaz. [onas], Rio Juruá, 1576 [x.02, Amazonas, Rio Juruá]' '*Parachart. bentob.* R. v. Ih., R. v. Ih. Rev. 12.' 'Lectotype, ♀, of *Parachartergus bentobuenoi*, R. v. Ihering 1904, Richards, 1971'

Current status: *Parachartergus griseus* Fox, 1898

Comments: Lectotype designated by Richards (1978: 213)

***Parachartergus lenkoi* Richards, 1978: 213**

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056899>)

Holotype: ♀ (# MZSP 56899) '[Brazil], M.[ato] G.[rosso], Utiariti, Rio Papagaio, 30.x.1966, Lenko & Pereira' 'KL.161' '*Parachartergus lenkoi* Rich., holotype, ♀'.

Paratypes: 1♀ (MZSP 61955) '[Brazil], MT [Mato Grosso], Utiariti, Rio Papagaio, x.1966, Lenko & Pereira' '*Parachartergus griseus* (Fox)' '*Parachartergus lenkoi*, Det. J. M. Carpenter'; 1♀ (MZSP 61954) '[Brazil], MT [Mato Grosso], Utiariti, Rio Papagaio, xi.1966, Lenko & Pereira';

1♀ (MZSP 62027) '[Bolivia], [La Paz], Yungas Camp. Sacramento, Ingavi – Coroico, 2500m, 9-11.vii.[19]64, B. Malkin' '*Parachartergus lenkoi*, Det. J. M. Carpenter'; 117♀ (MZSP 56899-56905; 61897-61953; 61967-62026) '[Brazil], MT [Mato Grosso], Utiariti, Rio Papagaio, 30.x.1966, Lenko & Pereira' 'KL 161'; 6♀ (# MZSP 56900-56905) '[Brazil], Utiariti, MT [Mato Grosso], Rio Papagaio, 30.x.1966, Lenko & Pereira' 'KL.161' '*Parachartergus lenkoi* Rich., ♀, paratype'.

Polybia Lepeletier***Polybia dubitata* Ducke, 1910: 500**

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056909>)

Lectotype: ♀ (# MZSP 56909) 'Brazil, Estado do Pará' 'Est. [ado] Pará, Óbidos, 16.417 [Pará, Óbidos, 1912, Ducke col.]' '*Polybia dubitata* Ducke, 1910, ♀, lectotype'.

Current status: *Polybia procellosa* Zavattari, 1906

Comments: Lectotype designated by Richards (1978: 126).

***Polybia furnaria* Ihering, 1904: 217**

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056890>)

Lectotype: ♀ (# MZSP 56890) '[Brazil], Est.[ado] Pará, Santarém, 1.571 [Pará, Santarém, E. Garbe col.]' '*Polybia furnaria*, Ducke ver. 11' '*Polybia furnaria* R. v. Ih., ♀, lectotype'.

Comments: Lectotype designated by Richards (1978: 121).

***Polybia incerta* Ducke, 1907b: 179**

Paralectotype: 1♀ (# MZSP 57086) 'Brazil, Estado do Amazonas' 'Teffé [Tefé], 7.xi.1904, Ducke' '16.418 [Amazonas, Tefé, xi.1904, Ducke col.]' '*Polybia incerta* Ducke, ♀, paralectotype'.

Comments: Paralectotype designated by Richards, 1978: 124. The lectotype from Amazonas (Tefé) was designated by Richards (1978: 124) and indicated by him as deposited at MZSP, however, it was not found in the collection.

***Polybia (Myrapetra) platycephala sylvestris* Richards, 1978: 91**

Paratypes: 1♀ (# MZSP 56910) 'Brasil, Terr.[a] Amapá, Rio Felício, 2.vii.1959, J. Lane leg.' 'Coleção J. Lane'; 1♀ (# MZSP 56911) '[Brazil, Amazonas], Rio Parauary [Parauari], 3[iii].1937' '*Polybia platycephala* R. ssp. *sylvestris* Rich., ♀, paratype'; 10♀ (# MZSP 56912-56921) '[Brazil], MT [Mato Grosso], Utiariti, Rio Papagaio, 5.xi.1966, Lenko & Pereira' '*Polybia platycephala sylvestris* Rich., ♀, paratype'; 3♀ (# MZSP 56922-56924) '[Brazil], Est.[ado] Rio [de Janeiro], C.[ampo] Itatinga, 2.840 [Campo Itatinga,

iv.1906, H. Luederwaldt col.]. 'P. *platycephala sylvestris* Rich., ♀, paratype'; 4♀ (# MZSP 56925-56928) 'Brasil, São Paulo, Osasco, 9.xi.1956, M.A. Vulcano col.'; 1♀ (# MZSP 57087) 'Brasil, S.[ão] Paulo, Ilha dos Búzios, 16.x – 4.xi. [1]963, Exp.[edição] Dep.[artamento] Zool.[ogia]' 'Polybia *platycephala* Rich. ssp. *sylvestris* Rich.'

Comments: In the original publication the collection date of the specimen # MZSP 56911 was incorrectly transcribed as February. Additionally, the following paratypes were also cited in the original publication as deposited at MZSP but were not found: four females from Rio Parauary (Amazonas, Brazil), one female from Barra dos Tapirapés (Mato Grosso, Brazil), 93 females from Utariti (Mato Grosso, Brazil), 19 females from Ilha dos Búzios (São Paulo, Brazil), 6 females from São Sebastião (São Paulo, Brazil), 5 females from Campos do Jordão (São Paulo, Brazil), and 3 females from Osasco (São Paulo, Brazil).

Polybia (Myrapetra) ruficeps xanthops Richards, 1978: 76
(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056929>)

Holotype: ♀ (# MZSP 56929) '[Brazil], MT [Mato Grosso] [now Mato Grosso do Sul], Três Lagoas, marg.[em] esq. [uerda] rio Sucuriu, Faz.[enda] Canaã, iv. 1967, F. Lane col.' 'Polybia *ruficeps* Schrottky ssp. *xanthops* Rich., ♀, holotype'.

Paratypes: 1♀ (# MZSP 56930) 'Brazil, BA [Bahia], Villa Nova, E. Garbe' '18.081 [Bahia, Villa Nova, E. Garbe col.]' 'Polybia *ruficeps* ssp. *xanthops* Rich., ♀, paratype'; 3♀ (# MZSP 56931-56933) '[Brazil], Ceará, Quixaramobim, xi.1940' 'Polybia *ruficeps* Schrottky ssp. *xanthops* Rich., ♀, paratype'; 2♀ (# MZSP 56934-56935) '[Brazil], MT [Mato Grosso] [now Mato Grosso do Sul], Três Lagoas, marg. [em] esq.[uerda] rio Sucuriu, Faz.[enda] Canaã, iv.1967, F. Lane col.' 'Polybia *ruficeps* Schrottky ssp. *xanthops* Rich., ♀, paratype'; 3♀ (# MZSP 56936-56938) '[Brazil], MG [Minas Gerais], Piraporá [Pirapora], 1912, E. Garbe' '17.374 [Minas Gerais, Pirapora, 1912, E. Garbe col.]' 'Polybia *ruficeps* Schrottky ssp. *xanthops* Rich., ♀, paratype'.

Polybia scutellaris var. paulista Ihering, 1896: 160
(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2057088>)

Lectotype: ♀ (# MZSP 57088) '[Brazil, São Paulo], Ypiranga [Ipiranga], Glattes Nest' 'Polybia *scutellaris* var. *paulista* H. v. Iher., ♀, lectotype'.

Current status: *Polybia paulista* Ihering, 1896.

Comments: Lectotype designated by Richards (1978: 85).

Protopolybia Ducke

Protopolybia bituberculata Silveira & Carpenter 1995: 48

Paratypes: 3♀ (# MZSP 57089-57091) 'Peru, Depto. [Departament] Loreto, 40 km NE Iquitos, 29 December

1990, Carpenter & Wenzel, Nest 901229-7' 'Paratype, *Protopolybia bituberculata*, Silveira & Carpenter'.

Mischocyttarini **Mischocyttarus Saussure**

Megacanthopus alfkenii Ducke, 1904: 362
(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056939>)

Lectotype: ♀ (# MZSP 56939) 'Brasil, Guyana [now Amapá], Rio Villa Nova, 17.107 [Rio Villa Nova, Amapá, x.1900, Ducke col.]' 'Megacanth. *indet.* var. *alfkenii*, Cotypo!, Ducke rev 11:' 'Mischocyttarus (*Megacanthopus*) *alfkenii* (Ducke, 1904), lectotype, Richards, 1970'.

Comments: Lectotype designated by Richards (1978: 343).

Current status: *Mischocyttarus (Megacanthopus) alfkenii* (Ducke, 1904).

Mischocyttarus archidonaensis Zikán, 1949: 43
(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2057102>)

Holotype: ♀ (# MZSP 57102) 'Ecuador, Archidona, 16.668 [Ecuador, Archidona]' 'Mischocyth. *labiatus* F., Ducke rev 11:' 'Mischocyttarus *archidonaensis* Zik., J.F. Zikán determ.' 'Mischocyttarus *archidonaensis* Zik., ♀, holotype'.

Current status: *Mischocyttarus tomentosus* Zikán, 1935.

Mischocyttarus atramentarius Zikán, 1949: 206
(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056940>)

Lectotype: ♀ (# MZSP 56940) '[Brazil, Rio de Janeiro], Itatiaia [Itatiaia] – 800 m km, Monts, Bau V, 5.xi.1931, J.F. Zikán,' 'Mischocytt. *atramentarius* Zik., J.F. Zikán determ.' 'Mischocyttarius *atramentarius* Zik., ♀, lectotype, Richards 1970'.

Paralectotypes: 1♀ (# MZSP 56946) '[Brazil] Est.[ado] do Rio [de Janeiro], Itatiaia [Itatiaia], 500 m Valparaízo, 17.ii.1933 c.l [?] Ban, J.F. Zikán' 'Mischocytt. *atramentarius* Zik., J.F. Zikán determ.' 'M. *atramentarius* Zik., ♂, paratype'; 1♂ (# MZSP 56947) '[Brazil] Est.[ado] do Rio [de Janeiro], Itatiaia [Itatiaia], 500 m Valparaízo, 3.ii.1933, [?] Ban, J.F. Zikán' 'Mischocytt. *atramentarius* Zik., J.F. Zikán determ.' 'M. *atramentarius* Zik., ♀, paratype'; 1♀ (# MZSP 56948) '[Brazil, Rio de Janeiro], Itatiaia [Itatiaia], 550 m km, Faz. [enda] Valpar.[aízo], 25.ii.1933, J.F. Zikán' 'Mischocytt. *atramentarius* Zik., J.F. Zikán determ.' 'M. *atramentarius* Zik., ♀, paratype'; 1♀ (# MZSP 56949) '[Brazil, Rio de Janeiro], Itatiaia [Itatiaia], 550 m km, Faz.[enda] Valpar.[aízo], 17.ii.1933, J.F. Zikán' 'Mischocytt. *atramentarius* Zik., J.F. Zikán determ.' 'M. *atramentarius* Zik., ♀, paratype'; 1♂ (# MZSP 56950) '[Brazil] Est.[ado] do Rio, Itatiaia [Itatiaia] – 700 m, 14.ii.1932, Ban v, J.F. Zikán' 'Mischocytt. *atramentarius* Zik., J.F. Zikán determ.' 'M. *atramentarius* Zik., ♂, paratype'; 1♂ (# MZSP 56945) '[Brazil, Rio de Janeiro],

Itatiaya [Itatiaia], 800 m km, Monts, [?] Ban v, 5.xi.1931' *Mischocytt. atramentarius* Zik., J.F. Zikán determ.' *M. atramentarius* Zik., ♂, paratype'; 2♀ and 1♂ (# MZSP 56941-56943) [Brazil], E.[stado] S.[ão] Paulo, Ypiranga [Ipiranga], 1.052 [São Paulo, Ipiranga]' *Megacanth. ater*, Duce rev. 11' *Mischocytt. atramentarius* Z., J.F. Zikán determ.' *M. atramentarius* Zik. paratype'; 1♀ (# MZSP 56944) [Brazil], E.[stado] S.[ão] Paulo, Jundiahy [Jundiaí], 17.086 [São Paulo, Jundiaí, col. M. Beron]' *Megacanthop. ater*, Duce rev. 11' *Mischocytt. atramentarius* Zik., J.F. Zikán determ.' *M. atramentarius* Zik., ♀, paratype'.

Comments: Lectotype designated by Richards (1978: 298).

***Mischocyttarus bahiaensis* Zikán, 1949: 882**

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056953>)

Holotype: ♀ (# MZSP 56953) 'Brésil, Bahia, E. Mocquerys 1845, Museum Paris' 16.475 [Bahia, Coll. Museu Paris, R.v. Ihg], Buysson det., *Megacanthopus surinamensis* Sauss.' *Mischocyttarus bahiansis* Zik., J.F. Zikán determ.' *Mischocyttarus bahiaensis* Zik., ♀, holotype, Richards, 1970'.

***Mischocyttarus capichaba* Zikán, 1949: 83**

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056951>)

Holotype: ♀ (# MZSP 56951) [Brazil], Esp.[írito] Santo, Garbe leg. [19]06, 7.239 [Espírito Santo, E. Garbe col., Duce rev.]' *Mischocyttarus indeterminabilis* Sauss, Duce rev. 11' *Mischocyttarus capichaba* Zik., J.F. Zikán determ.' *Mischocittarus capichaba* Zik., ♀, holotype, Richards 1970'.

***Mischocyttarus carbonarius* r. *flavonotatus* Zikán, 1949: 189**

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056954>)

Holotype: ♀ (# MZSP 56954) 'Bolivia, Yungas de La Paz, 2.727 [Yungas de La Paz, Bolivia, 1903, col. H. Rolle, Berlin]' Holotypus' *Megacanthop. flavisus*, Duce rev. 11' *Mischoc. flavicans – carbonarius* r. *flavonotatus* Zik., J.F. Zikán determ.' *Mischocyttarus carbonarius* (Sauss.) r. *flavonotatus* Zik., ♀, holotype, Richards, 1970'.

Current status: *Mischocyttarus carbonarius* (de Saussure, 1854).

***Mischocyttarus carinulatus* Zikán, 1949: 71**

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056955>)

Holotype: ♀ (# MZSP 56955) [Brazil], Esp.[írito] Santo, xi.1906, E. Garbe' Holotypus' *Mischocyttarus carinulatus* Zik., J.F. Zikán determ.' 7.245 [Espírito Santo, E. Garbe col., Duce rev.]' *Mischocyttarus carinulatus*, ♀, holotype'.

***Megacanthopus collaris* Duce, 1904: 361**

Lectotype: ♀ (# MZSP 61646) [Brazil], Oyapock [now Oiapoque], 17.097' *Megacanthopus collaris* cotipo! Duce

rev 11' 'Dept. Zoolgia' 17.097, Oyapock' *Mischocyttarus (Megacanthops) collaris*. Lectotype Richards, 1970'.

Comments: Lectotype designated by Richards (1978: 384).

Current status: *Mischocyttarus (Megacanthops) collaris* (Duce, 1904).

***Mischocyttarus confirmatus* var. *cearensis* Richards, 1945: 375**

Paratype: 1♂ (# MZSP 56956) 'Brazil, Estado do Ceará' Ceará, Serra de Baturité, 600 m, 27.7.[19]08, Duce' *Mischocyttarus (Megacanthopus) rufidens* Sauss., ♂, det. Duce 1912'.

Current status: *Mischocyttarus cearensis* Richards, 1945.

***Mischocyttarus consimilis* Zikán, 1949: 148**

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056957>)

Lectotype: ♂ (# MZSP 56957) 'Paraguay, Mbovevo, ix.1937, Bau I, F. Schade' ♂' Cotypus' *Mischocytt. consimilis* Zik., J.F. Zikán determ.' *Mischocyttarus consimilis* Zik., ♂, lectotype, Richards 1970'.

Paralectotype: 1♀ (# MZSP 56958) 'Paraguay, Mbovevo, ix.1937, Bau I, F. Schade, Cotypus, *Mischocytt. consimilis* Zik., F.J. Zikán determ.' *M. consimilis* Zik., ♀, paratype'.

Comments: Lectotype designated by Richards (1978: 351).

***Mischocyttarus cryptobius* Zikán 1935: 186**

Paralectotype: 1♀ (# MZSP 56960) [Brazil, Rio de Janeiro], Itatiaya [Itatiaia] – 1250 m km, 6 ½, 10.v.1934, [?] Bau 28. J.F. Zikán' *Mischocyttarus cryptobius* Zik., J.F. Zikán determ.' *M. cryptobius* Zik., ♀, paratype'.

Comments: Paralectotype according designation by Richards (1978: 366).

***Mischocyttarus cristatus* Zikán, 1935: 201**

Lectotype: ♀ (# MZSP 61645) 'Brasil, E.[stado] do Rio [de Janeiro], Itatiaya [Itatiaia] – 700 m, 25.iii.1933, J.F. Zikán' *Mischocyttarus cristatus* Zik., J.F. Zikán determ.' *Mischocyttarus cristatus* Zik., ♀, lectotype, Richards 1970'.

Paralectotypes: 1♀ (# MZSP 57094) 'Brasil, E.[stado] do Rio [de Janeiro], Itatiaya [Itatiaia] – 700 m, 25.iii.1933, J.F. Zikán' *Monacanthocnemis cristatus* Zik., J.F. Zikán determ.' *M. cristatus* Zik., ♀, paratype, Richards 1970'; 1♂ (# MZSP 57095) 'Brasil, [E.]stado do Rio [de Janeiro], Itatiaya [Itatiaia] – 700 m, 25.iii.1933, [?] Bau, J.F. Zikán' ♂' Typus' *Mischoccyttarus cristatus* Zik., J.F. Zikán determ.' *M. cristatus* Zik. ♂, paratype, Richards 1970'.

Current status: *Mischocyttarus buyssoni* (Duce, 1906).

Comments: Lectotype designated by Richards (1978: 373).

***Mischocyttarus crypticus* Zikán, 1949: 141**

Paralectotype: 1♂ (# MZSP 56959) 'Brasil, E.[stado] Rio [de Janeiro], Itatiaia [Itatiaia], 700 m, 27.v.1935, [?] Bau 59, J.F. Zikán' '*Mischocyttarus crypticus* Zik., J.F. Zikán determ.' '*M. crypticus* Zik., ♂, paratype'.

Comments: Paralectotype according designation by Richards (1978: 366).

***Mischocyttarus curitybanus* Zikán, 1949: 106**

Paralectotype: 1♀ (# MZSP 56961) '[Brasil], S.[ão] P.[aulo], [Serra da] Cantareira, 2.436 [Serra da Cantareira, 23.iii.1906, col. H. Luderwaldt]' '*Megacanthop. cassanunga*, Ducke rev. 11' '*Mischocytt. curitybanus* Zik., J.F. Zikán determ.' '*M. curitybanus* Zik., ♀, paratype'.

Comment: Paralectotype according designation by Richards (1978: 423).

***Mischocyttarus declaratus* Zikán, 1935: 162**

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056962>)

Lectotype: ♂ (# MZSP 56962) 'Brasil, E.[stado] do Rio [de Janeiro], Itatiaia [Itatiaia] – 700 m, 20.ii.1932, c.l. Bau, J.F. Zikán' '*Mischocyttarus declaratus* Zik., J.F. Zikán determ.' '*Mischocyttarus declaratus* Zik., ♂, lectotype, Richards 1970'.

Paralectotypes: 1♀ (# MZSP 56963) 'Brasil, E.[stado] do Rio [de Janeiro], Itatiaia [Itatiaia] – 700 m, 6.ii.1932, [?] Bau, J.F. Zikán' '*Mischocyttarus declaratus* Zik., J.F. Zikán determ.' '*M. declaratus* Zik., ♀, paratype'; 1♀ (# MZSP 56964) 'Brasil, Est.[ado] do Rio [de Janeiro], Itatiaia [Itatiaia], 700 m, 5.ii.1932, c. Bau I, J.F. Zikán' '*Mischocyttarus declaratus* Zik., J.F. Zikán determ.' 'Dept. [Departament] Zoologia' '*M. declaratus* Zik., ♀, paratype'.

Comments: Lectotype designated by Richards (1978: 348).

***Mischocyttarus drewseni* r. *andinus* Zikán, 1949: 52**

Paralectotypes: 2♀ (# MZSP 56965, 56966) 'Peru, Abancay, 2400 m, Dr. Weyrauch' '*Misch. drewseni* r. *andinus* Zik., J.F. Zikán determ.' '*M. drewseni andinus* Zik., ♀, paratype'.

Comments: Paralectotypes according designation by Richards (1978: 277).

***Mischocyttarus ecuadorensis* Zikán, 1949: 158**

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056967>)

Holotype: ♀ (# MZSP 56967) 'Ecuador, 17.088 [Equador, Balzapamba, Rolle col.]' '*Mischocytt. ecuadorensis* Zik., J.F.

Zikán determ.' '*Mischocyttarus ecuadorensis* Zik., Holotype, Richards 1970' '*Megacanthop. rufidens*, Ducke rev.11'.

***Mischocyttarus flaveolus* Zikán, 1949: 89**

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056969>)

Holotype: ♀ (# MZSP 56969) '[Brazil], Esp[írito] Santo, xi. 1906, E. Garbe' '7.243 [Espírito Santo, 1906, E. Garbe col.]' '*Megacanthopus surinamensis* Sauss., perm. Buysson, Guyana' '*Mischocyttarus flaveolus* Zik., J.F. Zikán determ.' '*M. flaveolus* Zik., ♀, holotype = *M. garbei* Zik., Richards 1970'.

Current status: *Mischocyttarus garbei* Zikán, 1935.

***Mischocyttarus flavicornis* Zikán, 1935: 168**

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056970>)

Lectotype: ♀ (# MZSP 56970) '[Brazil], Goyaz [Goiás], 17.982 [Goiás, Santa Rita de Andes, 1913]' '*Megacanth. indeterminat. affi.*, R.v. Ihg det. 13' 'var. *alkfenii* Ducke, Ducke revist.' '*Mischocyttarus flavicornis* Zik., J.F. Zikán determ.' '*Mischocyttarus flavicornis* Zik., ♀, lectotype, Richards 1970'.

Paralectotype: 1♀ (# MZSP 56971) '[Brazil], Est.[ado] Goyaz [Goiás], 17.105 [Goiás, 1906, Baer col.]' '*Megac. indeterminat. var. alkfenii* Ducke rev. 11' '*Mischocytt. flavicornis* Zik., J.F. Zikán determ.' '*Mischocyttarus flavicornis* Zik., ♀, paratype'.

Comments: Lectotype designated by Richards (1978: 340).

***Mischocyttarus flavoscutellatus* Zikán, 1935: 198**

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056972>)

Lectotype: ♀ (# MZSP 56972) 'Brasil, E.[stado] Rio [de Janeiro], Itatiaia [Itatiaia], 700 m, 6.i.1932. J.F. Zikán' '*Mischocyttarus flavoscutellatus* Zik., J.F. Zikán determ.' '*Mischocyttarus flavoscutellatus* Zik., ♀, lectotype, Richards 1970'.

Comments: Lectotype designated by Richards (1978: 306).

***Mischocyttarus garbei* Zikán, 1935: 194**

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056973>)

Lectotype: ♀ (# MZSP 56973) '[Brazil], Esp.[írito] Santo, Garbe leg. 06, 7.243 [Espírito Santo, com ninho, 1906, E. Garbe col.]' '*Megacanthop. surinamensis*, Ducke rev. 11' '*Mischocyttarus garbei* Zik., J.F. Zikán determ.' '*Mischocyttarus garbei* Zik., lectotype, ♀, Richards 1970'.

Comments: Lectotype designated by Richards (1978: 404).

***Mischocyttarus gibbicollis* Zikán, 1949: 43**

Paratype: 1♀ (# MZSP 57103) 'Peru, Valle Chanchamayo, 800 m, 1.4[iv].1939, leg. Weyrauch' '*Mischocyttarus gibbicollis* Zik., J.F. Zikán determ.' '*M. gibbicollis* Zik., ♀, paratype'.

Current status: *Mischocyttarus tomentosus* Zikán, 1935.

***Mischocyttarus gilvus* Zikán, 1949: 159**

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056974>)

Holotype: ♂ (# MZSP 56974) 'Paraguay, Pto. [Puerto] Bertoni, Coll. Bertoni' '*Megacanth. forma anormal*, 16.438 [Paraguay, Puerto Bertoni, 1910, Schrottky col.], Pchrottky det. 10' '*Mischocytt. gilvus* Zik., J.F. Zikán determ.' '*Mischocyttarus gilvus* Zik., ♂, holotype, Richards 1970'.

***Mischocyttarus goyanus* Zikán, 1949: 206**

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056975>)

Holotype: ♀ (# MZSP 56975) '[Brazil], Est.[ado] Goyaz [Goiás], 17.085 [Goiás, 1906, Baer col.]' '*Megacanth. ater*, Ducke rev. 11' '*Mischocytt. goyanus* Zik., J.F. Zikán determ.' '*Mischocyttarus goyanus* Zik., ♀, holotype'.

Current status: *Mischocyttarus imitator* (Ducke, 1904).

***Mischocyttarus granadaensis* Zikán, 1949: 202**

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056976>)

Lectotype: ♀ (# MZSP 56976) 'Columbia [Colombia], 17.095 [Colombia, perm. Museu Paris]' '*Megacanthop. metathorac.* Sauss., Ducke rev. 11' '*Mischocytt. granadensis* [*granadaensis*] Zik., J.F. Zikán determ.' '*Mischocyttarus granadaensis* Zik., ♀, lectotype, Richards 1970'.

Current status: *Mischocyttarus metathoracicus* (de Saussure, 1854).

Comments: Lectotype designated by Richards (1978: 305).

***Mischocyttarus ignotus* Zikán, 1949: 91**

Paralectotype: 1♀ (# MZSP 56977) '[Brazil], E.[stado] S.[ão] P.[aulo], Franca, i.1911, E. Garbe' '15.902 [São Paulo, Franca, i.1916, E. Garbe col.]' '*Mischocytt. ignotus*, Zik., J.F. Zikán determ.' '*M. ignotus* Zik., ♀, paratype'.

Comments: Paralectotype according designation by Richards (1978: 403).

***Mischocyttarus inca* Zikán, 1949: 191**

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056978>)

Holotype: ♀ (# MZSP 56978) 'Perú, 1.193 [Peru, Stand col.], *Mischocyttarus* (*Megacanthopus*) *rufidens* Sauss det. Ducke 1912' '*Mischoc. bequaerti* r. *inca* Zik., J.F. Zikán determ.' '*Mischocyttarus silvaticus* Zik. race *inca* Zik. 1949, ♀, holotype, Richards, 1970'.

***Mischocyttarus infrastrigatus* Zikán 1949: 175**

Paralectotypes: 1♀ (# MZSP 56979) 'Brasil, E.[stado] do Rio [de Janeiro], Itatiaya [Itatiaia], 700, 11.ii.1941, Bau 113, J.F. Zikán' '*Mischocytt. ornatulus* Zik., J.F. Zikán de-

term.' '*M. ornatulus* Zik., ♀, paratype'; 1♂ (# MZSP 56980) 'Brasil, E.[stado] do Rio [de Janeiro], Itatiaya [Itatiaia], 700 m, 1.iv.1941, Bau 114, J.F. Zikán' '*Mischocytt. ornatulus* Zik., J.F. Zikán determ.' '*M. ornatulus* Zik., ♂, paratype'.

Comments: Paralectotypes according designation by Richards (1978: 360).

***Mischocyttarus intermedius* Zikán, 1949: 57**

Paralectotype: 1♀ (# MZSP 57093) 'Brasil, E.[stado] do Rio [de Janeiro], Itatiaya [Itatiaia] – 700 m, 26.iii.1933, [?] Bau, J.F. Zikán' '*Mischoc. intermedius* Zik., J.F. Zikán determ.' '*M. intermedius* Zik., ♀, paratype'.

Current status: *Mischocyttarus drewseni* de Saussure, 1857.

Comment: Paralectotype according designation by Richards (1978: 276).

***Mischocyttarus itatiayaensis* Zikán, 1935: 190**

Paralectotype: 1♀ (# MZSP 56981) '[Brazil, Rio de Janeiro], Itatiaya [Itatiaia], 900 m km, Itaoca, 5.xi.1931, [?] Bau, J.F. Zikán' '*Mischocyttarus itatiayaensis* Zik., J.F. Zikán determ., *Mischocyttarus itatiayaensis* Zik., ♀, paratype'.

Comments: Paralectotype according designation by Richards (1978: 353).

***Mischocyttarus japuraensis* Zikán, 1949: 147**

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056982>)

Holotype: ♀ (# MZSP 56982) '[Brazil], Est.[ado] Amaz.[onas], Rio Japurá, 17.106 [Amazonas, Rio Japurá, ix.04, Ducke col.]' '*Megac. indet.* var. *alfkenii*, Ducke rev.11' '*Mischocytt. japuraensis* Zik., J.F. Zikán determ.'.

Current status: *Mischocyttarus alfkenii alfkenii* (Ducke, 1904).

***Mischocyttarus (Kappa) juruanus* Richards, 1978: 302**

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056983>)

Holotype: ♀ (# MZSP 56983) '[Brazil], E.[stado] Amaz[onas], Rio Juruá, 1254 [Amazonas, Rio Juruá, com ninho, 1902, E. Garbe col.]' '*Megacanthop. injucundus* Sauss., Ducke rev. 11' 'Dept. [Departament] Zoologia' '*Mischocyttarus juruanus* Rich., ♀, holotype'.

Current status: *Mischocyttarus injucundus* (de Saussure, 1854).

***Mischocyttarus lanei* Zikán, 1949: 127**

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056997>)

Holotype: ♀ (# MZSP 56997) '[Brazil], São Paulo, Campos da Serra, xi.[19]40' '*Mischocytt. lanei* Zik., J.F. Zikán determ.' '*Mischocyttarus lanei* Zik., ♀, Holotype, Richards 1970'.

Comments: In the original publication the collection date was incorrectly transcribed as 1904.

***Mischocyttarus litoralis* Zikán, 1949: 53**

Paralectotype: 1♀ (# MZSP 57092) 'Brasil, Rio de Janeiro – 30 m., Deodoro, Lab.[oratório] de Pomologia, 16.viii. [1]935, W. Zikán' '*Misch. intermedius* r. *litoralis* Zik., J.F. Zikán determ.' '*M. litoralis* Zik., probably ♀ paratype, Richards 1970'.

Current status: *Mischocyttarus drewseni* de Saussure, 1857.

Comments: Paralectotype according designation by Richards (1978: 276).

***Mischocyttarus litoralis* r. *meridionalis* Zikán, 1949: 54**

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056968>)

Lectotype: ♀ (# MZSP 56968) 'Bolivia, 1.230 [Bolivia, Ducke rev. 11]' '*Mischocyth. drewseni* Sauss., Ducke, rev. 11' '*Mischoc. drewseni* r. *meridionalis* Zik., J.F. Zikán determ.' '*Mischocyttarus litoralis* Zik. race *meridionalis* Zik. ♀, lectotype, Richards, 1970'.

Current status: *Mischocyttarus drewseni andinus* Zikán, 1949.

Comments: Lectotype designated by Richards (1978: 277).

***Mischocyttarus mattogrossensis* Zikán, 1935: 156**

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056985>)

Holotype: ♂ (# MZSP 56985) '[Brazil], Estado M.[ato] Grosso, 3.147[Mato Grosso, 1904, E. Garbe col., Ducke rev.11]' '*Mischocyth. labiatus* F. Ducke rev. 11' '*Mischocyttarus mattogrossensis*, Zik., J.F. Zikán determ.' '*Mischocyttarus mattogrossensis* Zik., ♂, holotype'.

***Mischocyttarus montei* Zikán, 1949: 65**

Paralectotypes: 2♂ (# MZSP 56986, 56987) '[Brazil], (Est. [ado] S.[ão] P.[aulo]), 15.782 [São Paulo, Franca, x.1910, E. Garbe col.]' '*Mischocyttarus (Megacanthopus) lecointei* Ducke, det. Ducke, 1912' 'Vespidae, *Megacanthopus lecointei* Ducke, Garbe – Franca, Est.[ado] S.[ão] P.[aulo], 15.782 [São Paulo, Franca, x.1910, E. Garbe col.]' '*Mischocyttarus montei* Zik., J.F. Zikán determ.' '*M. montei* Zik, ♂, paratype'.

Comments: In the original publication the museum number was incorrectly transcribed as 15.786. Paralectotypes according designation by Richards (1978: 377).

***Mischocyttarus nigroclavatus* Zikán, 1949: 92**

Paratype: 1♂ (# MZSP 56988) 'Costa Rica, S.[an] José, 25.i.1926, F. Nevermann [col], Bau 5' '*Mischocytt. nigro-*

clavatus Zik., J.F. Zikán determ.' '*M. nigroclavatus* Zik., ♂, paratype'.

Comments: In the original publication the collection date was incorrectly transcribed as 1936.

***Mischocyttarus oaxacanus* Zikán, 1949: 168**

Syntypes: 1♂ (# MZSP 56989) '16.476 [Mexico, 1912], Buysson det.' 'Museum Paris, Basse Mixtèque, Env. d'Oaxaca, L. Diguët, 1904' '*Mischoc. pallidipectus* Sm. r. *oaxacanus* Zik., J.F. Zikán determ.' '*Mischocyttarus oaxacanus* Zik., ♂ lectotype, Richards 1970'; 1♀ (# MZSP 56990) same data except '*Mischocyttarus oaxacanus* Zik., ♀ paratype, Richards 1970'; 1♀ (# MZSP 56991) 'Mexico, State de Puebla, Env. De Zehuacan' 'Mexico, 1.831 [Mexico, Puebla, Ducke rev.11]' '*Meganthop. rufipens*, Ducke rev. 11' '*Mischoc. pallidipectus* Sm. r. *oaxacanus* Zik., J.F. Zikán determ.' '*M. oaxacanus*, Zik., ♀, paratype'.

Current status: *Mischocyttarus pallidipectus* (Smith, 1857).

***Mischocyttarus pallidus* Zikán, 1949: 116**

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056998>)

Holotype: ♀ (# MZSP 56998) '[Brazil], Est.[ado] Amazonas, 1.067 [Manaus, Bicego leg., Ducke rev. 11]' '*Megacanthop. surinamensis* Ducke rev. 11' '*Mischocytt. pallidus* Zik., J.F. Zikán determ.' '*Mischocyttarus pallidus* Zik., ♀, Holotype'.

***Mischocyttarus paraguayensis* Zikán, 1935: 165**

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056992>)

Lectotype: ♂ (# MZSP 56992) 'Paraguay, Mbovevo, 25.iii.1933, F. Schade, [?] Bau' '*Mischocyttarus paraguayensis* Zik., J.F. Zikán determ.' '*Mischocyttarus paraguayensis* Zik., ♂, lectotype, Richards 1970'.

Comments: In the original publication the collection date was incorrectly transcribed as 1932. Lectotype designated by Richards (1978: 339).

***Mischocyttarus parallelogrammus* Zikán, 1935: 172**

Lectotype: ♀ (# MZSP 61644) 'Brasil, E.[stado] do Rio [de Janeiro], Itatiaia [Itatiaia], 700 m, 6.vi.1932, Monte Bello. Bau 2, J.F. Zikán' '*Mischocyttarus parallelogrammus* Zik., J.F. Zikán determ.' '♀' 'Typus' '*Mischocyttarus parallelogrammus* Zik. Lectotype, Richards, 1970'.

Paralectotype: 1♀ (# MZSP 57094) '[Brazil], Est.[ado] do Rio [de Janeiro], Itatiaia [Itatiaia], 700 m, 6.vi.1932, Monte Bello. J.F. Zikán' '*Mischocytt. parallelogrammus* Zik., J.F. Zikán determ.' '*M. parallelogrammus* Zik, ♀, paratype'.

***Mischocyttarus pedunculatus* Zikán, 1935: 159**

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056993>)

Lectotype: ♀ (# MZSP 56993) '[Brazil, Rio de Janeiro], Itatiaia [Itatiaia] – 550 m. km, 3.ii.1933, Faz.[enda] Val

Paraiso, [?] Bau 2' *Mischocyttarus pedunculatus* Zik., J.F. Zikán determ.' *Mischocyttarus pedunculatus* Zik., ♀, lectotype, Richards 1970'.

Paralectotypes: 1♀ (# MZSP 56994) 'Brasil, E.[stado] do Rio [de Janeiro], Itatiaia [Itatiaia] – 700 m, 17.ii.1933, Bau M. Bello, J.F. Zikán, *Mischocyttarus pedunculatus* Zik., J.F. Zikán determ.' *Mischocyttarus pedunculatus* Zik., J.F. Zikán determ.' *M. pedunculatus* Zik., ♀, paratype'; 1♂ (# MZSP 56995) 'Brasil, E.[stado] do Rio [de Janeiro], Itatiaia [Itatiaia] – 700 m, 3.iii.1933, J.F. Zikán' *Mischocyttarus pedunculatus* Zik, J.F. Zikán determ.' *Mischocyttarus pedunculatus* Zik, ♂, paratype'.

Current status: *Mischocyttarus wagneri* (du Buysson, 1908).

Comments: Lectotype designated by Richards (1978: 334).

***Mischocyttarus pelor* Carpenter, 1988: 89 in Carpenter & Wenzel, 1988**

Paratype: 1♀ (# MZSP 56996) 'Costa Rica, Turrialba, 31.May.1951, OLCartwright' 'Paratype, *Mischocyttarus pelor* Carpenter'.

***Mischocyttarus proximus* Zikán, 1949: 130** (<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056984>)

Holotype: ♀ (# MZSP 56984) '[Brazil], São Paulo, Campos da Serra, xi.40' *Mischocytt. proximus* Zik., J.F. Zikán determ.' *Mischocyttarus proximus* Zik., ♀, holotype, Richards 1970'.

***Mischocyttarus riograndensis* Richards, 1978: 361** (<http://hol.osu.edu/spmlInfo.html?id=MZSP%2056999>)

Holotype: ♀ (# MZSP 56999) '[Brazil], Rio Grande do Sul, S.[ão] Leopoldo, Brentano col, viii.[19]13, 18.490 [Rio Grande do Sul, São Leopoldo, viii.1913, Pe. Brentano col.]' *Megacanthop. indeterminabilis* Sauss., R.v. Iherig det.' *Mischocyth. surinamensis* Sauss., Ducke rev. 1911' *Mischocytt. riograndensis* Zik., J.F. Zikán determ.' *Mischocyttarus riograndensis* Rich., ♀, holotype'.

Paratypes: 2♀ (# MZSP 57000, 57001) '18.490 [Rio Grande do Sul, São Leopoldo, viii.1913, Pe. Brentano col.]' *Mischocytt. riograndensis* Zik., J.F. Zikán determ.' *Mischocyttarus riograndensis*, ♀, Rich., paratype'; 1♂ (# MZSP 57002) '[Brazil], Rio Grande do Sul, 1.210 [Rio Grande do Sul]' *Megacanthop. indeterminab.* Ducke rev. 11' *Mischocytt. riograndensis* Zik., J.F. Zikán determ.' *Mischocyttarus riograndensis*, ♂, Rich, paratype'.

***Mischocyttarus santacruz* Raw, 2000: 941** (<http://hol.osu.edu/spmlInfo.html?id=MZSP%2057003>)

Holotype: ♀ (# MZSP 57003) 'Brazil, BA[Bahia], Ilhéus, Faz. [enda] Baixão, 12.2.1999, A. Raw' *Mischocyttarus santacruz* Raw'.

Paratype: 1♂ (# MZSP 57004) 'Brazil, BA[Bahia], Ilhéus, Faz.[enda] Baixão, 12.2.1999, A. Raw' *Mischocyttarus santacruz* Raw 2000'.

***Mischocyttarus saussurei* Zikán, 1949: 98**

Paratype: 1♂ (# MZSP 57005) '[Brazil], São Paulo, Ypiranga [Ipiranga], anno [ano] 1922' *Mischocytt. saussurei* Zik., J.F. Zikán determ.' *Mischocyttarus saussurei* Zik., ♂, paratype'.

***Mischocyttarus (Clypeopolybia) sericeus* Richards, 1978: 283**

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2057006>)

Holotype: ♀ (# MZSP 57006) 'Bolívia, Yungas de La Paz, 16.979 [Bolivia, Yungas de La Paz, 1000, camp. Rolle col.]' *'Polybia sericea*, Ducke rev. 12' *Mischocyttarus sericeus* Rich., ♀, Holotype'.

***Mischocyttarus schrottkyi* Zikán, 1949: 159**

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2057007>)

Holotype: ♀ (# MZSP 57007) 'Paraguay, P.[uerto] Bertoni, Coll.[ection] Bertoni' 'Paraguay, 16.438 [Paraguay, Puerto Bertoni, 1910, Schottky col.], Schrottkyi det.' *Mischocytt. schrottkyi* Zik., J.F. Zikán determ.' *Mischocyttarus schrottkyi* Zik., ♀, holotype, Richards 1970'.

Current status: *Mischocyttarus consimilis* Zikán, 1949.

***Mischocyttarus tomentosus* Zikán, 1935: 155**

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2057008>)

Holotype: ♀ (# MZSP 57008) '[Brazil], Esp.[írito] Santo, 7.244 [Espírito Santo, 1906, E. Garbe col.], Garbe leg. 06' *'Mischocyth. labiatus* F., Ducke rev. 11' *'Mischocyttarus tomentosus* Zik., J.F. Zikán determ.' *Mischocyttarus tomentosus* Zik., ♀, holotype, Richards 1970'.

***Mischocyttarus varolii* Zikán, 1949: 95**

Paratype: 1♀ (# MZSP 57009) '[Brazil], S.[ão] P.[aulo], Franca, 10.xii.1913, E. Garbe' '17.499 [São Paulo, Franca, xii.1910, E. Garbe col.]' *Mischocyttarus varolii* Zik., J.F. Zikán determ.' *M. varolii* Zik., ♀, paratype = *cerbereus* Ducke ssp. *styx*, Rich. 1970'.

Current status: *Mischocyttarus cerberus styx* Richards, 1940.

***Mischocyttarus ypiranguensis* Fonseca, 1926: 181**

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2057010>)

Lectotype: ♂ (# MZSP 57010) '[Brazil], São Paulo, Ypiranga [Ipiranga, neighborhood], 19. 287 [Ipiranga, ii.1916]' *Mischocyttarus ypiranguensis*, Typo, Pinto F. 23' *Mischocyttarus ypiranguensis* Pinto da Fonseca, lectotype, Richards 1970'.

Paralectotypes: 3♂ and 2♀ (# MZSP 57011-57015) [Brazil], São Paulo, Ypiranga [Ipiranga, neighborhood], 19. 287 [Ipiranga, ii.1916] '*Mischocyttarus ypiranguensis*, Typo, Pinto F. 23' '*Mischocyttarus ypiranguensis* Pinto da Fonseca, paratype, Richards 1970'.

Comments: Lectotype designated by Richards (1978: 427).

***Mischocyttarus (Kappa) zikaninus* Richards, 1978: 295**
(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2057016>)

Holotype: ♀ (# MZSP 57016) 'Brazil, Estado do Pará 'Óbidos, 30.5.1911, Ducke' '*Mischocyttarus (Megacanthopus) pseudomimeticus* Schulz, det. Ducke 1912' '*Mischocyttarus zikaninus* Rich., holotype'.

Polistes Latreille

***Polistes brevifissus* Richards, 1978: 481**
(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2057043>)

Holotype: ♀ (# MZSP 57043) [Brazil], MT [Mato Grosso], Utariiti, Rio Papagaio, 17.x.1966, Lenko & Pereira' '*Polistes brevifissus*, Rich., ♀, holotype'.

***Polistes canadensis borientalis* Richards, 1978: 494**
(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2057022>)

Holotype: ♀ (# MZSP 57022) 'Brasil, Pernambuco, Serra Talhada, 7.v.1965, G. Cisneiros col.' '*Polistes canadensis* (L.) ssp. *borientalis* Rich., ♀, holotype'.

Paratypes: 2♀ (# MZSP 57023, 57024) [Brazil], Paraíba, Corema, vi.1957, Exp.[edição] Dep.[artamento] Zoologia' '*Polistes canadensis* (L.) ssp. *borientalis* Rich., ♀, paratype'; 12♀ (# MZSP 57025-57036) 'Brasil, Pernambuco, Serra Talhada, 7.v.1965, G. Cisneiros col.' '*Polistes canadensis* (L.) ssp. *borientalis* Rich., ♀, paratype'; 5♀ (# MZSP 57037-57041) [Brazil], R.[io] G.[rande] [do] Norte, Natal, vii.[1]955, Pe. Pereira' '*P. canadensis* (L.) ssp. *borientalis* Rich., ♀, paratype'; 1♀ (# MZSP 57042) [Brazil], R.[io] G.[rande] [do] Norte, Natal, viii.x.[1]954' '*P. canadensis* (L.) ssp. *borientalis* Rich., ♀, paratype'.

Comments: Original publication reported 15 females paratypes from Serra Talhada (Pernambuco, Brazil) deposited at MZSP, however, three paratypes were not found.

***Polistes bicolor* var. *unicolor* Ducke, 1908: 700**
(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2057021>)

Lectotype: ♀ (# MZSP 57021) [Panama], Chiriqui, de Standing, 1.156 [Chiriqui, Stand. col.] '*Polistes bicolor* var. *unicolor* Ducke, Ducke det. 11' '98358' '*P. bicolor* var. *unicolor* Ducke, ♀, lectotype, Richards 1971' '*Polistes duckei* Bequaert, Type'.

Current status: *Polistes bicolor* Lepeletier, 1836.

Comments: Lectotype designated by Richards (1978: 531).

***Polistes notatipes* Richards, 1978: 488**
(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2057018>)

Holotype: ♀ (# MZSP 57018) [Brazil, São Paulo], Ypiranga [Ipiranga, neighborhood], 647 [Ipiranga, 6.ii.1902 J Lima col.] '97577' '*Polistes notatipes* Rich., ♀, holotype'.

Paratypes: 1♀ (# MZSP 57019) 'Brasil, Rio Grande do Sul, Ihering' '97603' '*Polistes notatipes* Rich., ♀, paratype'; 1♀ (# MZSP 57020) 'Brasil, RS [Rio Grande do Sul], 1888, R. v. Ihering, almost certainly' '97598' '*Polistes notatipes* Rich., ♀, paratype'.

Comments: In addition to the specimens listed, the original publication reported more two females paratypes from Rio Grande do Sul (Brazil) and one female from São Paulo (Brazil) as deposited at MZSP, however, these paratypes were not found in the collection.

Zethinae ***Zethus Fabricius***

***Zethus (Zethusculus) brasiliensis fuscatus* Bohart & Stange, 1965: 130**

Paratype: 1♀ (# MZSP 57078) [Brazil], Amazon [Amazonas state], Rio Uapes' '10.779 [Brazil, Amazonas, Rio Uaupés, 1907, Dr Bosh col.]' '*Zethus coeruleopennis* Fabri, C. Schrottky det. 1910' '01725' 'Lane' 'Paratype *Zethus brasiliensis fuscatus* Bohart & Stange'.

***Discoelius bruneoniger* Ihering, 1911: 469**
(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2057083>)

Holotype: ♀ (# MZSP 57083) [Brazil], Est.[ado] Goyaz [Goiás], G.A. Baer Leg, *Discoelius bruneoniger* n. sp., typus R. v Ihering, 6.803' '6.803 [Brazil, Goiás, 1906, Baer coll.]' '97983' 'Lane' '*Zethus bruneoniger* Ihering, Type' '*Zethus (Zethus) productus* Fox det R.M. Bohart & L.A. Stange, [19]63'.

Current status: *Zethus (Zethus) productus* (Fox, 1899).

***Discoelius peculiaris dives* Ihering, 1911: 471**
(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2057082>)

Holotype: ♀ (# MZSP 570782) 'Perú? Bolivia?', 16.333 *Didymogaster peculiaris dives* n. sp., Typus R. v. Ihering' '16.333 [Perú? Bolivia?]' 'Lane' '97979' 'Perú? Bolivia?', *Didy.[mogaster] peculiaris dives*, Ihering, Type' 'Holotype, *Discoelius peculiaris dives* ♀, Ihering' '*Zethus (Zethus) fuscus* ♀ (Perty), det R.M. Bohart & L.A. Stange, 1[9]63'.

Current status: *Zethus (Zethus) fuscus* (Ihering, 1911).

***Discoelius luederwaldti* Ihering, 1911: 468**

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2057080>)

Holotype: ♂ (# MZSP 57080) '[Brazil, São Paulo, São Paulo], Ypiranga [Ipiranga, neighborhood], [Luederwaldt coll.] typo' 3.389 [Brazil, São Paulo, São Paulo, Ipiranga, 20vii1906]'97997''Lane''Holotype *Discoelius luederwaldti* ♂ Ihering''*Discoelius heydeni* ♂ (Sauss) C. Schrottky det. 1910'3.389 *Discoelius luederwaldti* n. sp., Typus, R. v. lh., H. Luederwaldt leg. Ypiranga'.

Current status: *Zethus (Zethoides) luederwaldti* (Ihering, 1911).

***Zethus (Zethus) pronatus* Bohart & Stange, 1965: 60**

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2057078>)

Holotype: ♀ (# MZSP 57078) '[Brazil, São Paulo] Camp.[os] d.[o] Jordão Est. S.P.'16.330 [Brazil, São Paulo, Campos do Jordão, xii.1905, Luderwaldt coll.]''*Discoelius fluminensis* Brèthes, C. Schrottky det. 1910'97996' 'Lane' 'Holotype *Zethus pronatus* ♀ Bohart & Stange'.

***Zethus (Zethusculus) mexicanus erythrogena* Bohart & Stange, 1965: 132**

Paratypes: 1♂ (# MZSP 57081) '[Brazil] São Paulo, Jundiáhy [Jundiá], iii.[19]08, 14.862''*Zethus mexicanus*, C. Schrottky det. 1910'101713''Lane''Paratype *Zethus mexicanus erythrogena*, Bohart & Stange'; 1♀ '[Brazil] Minas Geraes [Minas Gerais], Pirapora, 17.417 [Brasil, Minas Gerais, Pirapora, 1912, Garbe col.]''*Zethus mexicanus v. brasiliensis*, Bequaert det. 1930'101721''Lane''Paratype *Zethus mexicanus erythrogena*, ♀, Bohart & Stange'.

Comments: In addition to the specimens listed, the original publication reported one female from Jundiá (São Paulo, Brazil) and one male from Pirapora (Minas Gerais, Brazil) deposited at MZSP, however, these paratypes were not found in the collection.

***Zethus (Zethusculus) schrottkyanus* Ihering, 1911: 465**

(<http://hol.osu.edu/spmlInfo.html?id=MZSP%2057084>)

Lectotype: ♂ (# MZSP 57084) '[Brazil], Rio Gr.[ande] do Sul, [Camaquã], H.v.lh[ering] leg, *Zethus schrottkyanus* ♂ n. sp., typus, R.v.lh, 1514'1514 [Brazil, Rio Grande do Sul, Ihering coll.]''101726''Lane''Z. (*Zethusculus) schrottkyanus* Ihering, Lectotype, Rio Gr. do Sul''Z. (*Zethusculus) schrottkyanus* ♂ (Ihering) det. R.M. Bohart & L.A. Stange [19]63' 'Lectotype *Zethus schrottkyanus* Iher. Bohart & Stange'.

Comments: Lectotype designated by Bohart & Stange (1965: 148).

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