

The Type Specimens of Apoidea (Hymenoptera) Deposited in the Entomological Collection of Instituto Oswaldo Cruz, Rio de Janeiro, RJ, Brazil

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A list of 41 Apoidea (Hymenoptera) type specimens deposited in the Entomological Collection of the Instituto Oswaldo Cruz, Rio de Janeiro, RJ, Brazil is presented. The types previously belonged to the Zikán and Schrottky private collections. A total of 11 holotypes and 30 paratypes are listed with their respective data and literature.

Key words: type specimens - Apoidea - Hymenoptera - Zikán Collection - Schrottky Collection - Instituto Oswaldo Cruz

The general entomological collection of the Instituto Oswaldo Cruz (IOC), Rio de Janeiro, RJ, Brazil, has approximately 1.2 million specimens, a rich source for research and historical documentation for Brazilian and foreign researchers. It began in 1900 when researchers on scientific expeditions collected insects vector of human and animal diseases. The collection was under the care of A da Costa Lima until 1964, when he died. Afterwards, Orlando V Ferreira and Sebastião José de Oliveira assumed responsibility for the collection.

The Hymenoptera collection, with approximately 25,000 specimens, has representative species of most families, as well as many nest samples. Two superfamilies of this order, Apoidea and Vespoidea, have species represented by type specimens. This paper deals with the super-family Apoidea.

Some privately owned collections have been integrated into the collection of IOC. The former Zikán Collection includes specimens collected mostly in the National Park of Itatiaia, State of Rio de Janeiro, while the former Schrottky Collection contains specimens collected mostly in Paraguay.

This paper is part of a series of lists being published to cover all orders of insects deposited in the entomological collection of IOC. Lists of type specimens of triatomine bugs (Gonçalves et al. 1994) and mosquitoes (Marchon-Silva et al. 1996) started this series.

The genera and species are listed alphabetically within an alphabetical arrangement of families and subfamilies. The names were last reviewed and updated by Michener (1954), Stephen (1954), Moure (1960), Ordway (1966), Urban (1967, 1968), Eickwort (1969), Moure and Hurd (1987), and Michener et al. (1994). The information for each species name is provide in the following order: original biomen, author, year of publication, genus, junior synonyms (if any) and type data, including sex, registration number, type locality, collector, date and other informations.

FAMILY ANDRENIDAE

SUBFAMILY PANURGINAE

Genus *Anthrenoides* Ducke, 1907

- *meridionalis* (Schrottky, 1906). *Anthrenoides*. Synonym of *Protandrena meridionalis* Schrottky, 1906. Holotype (no. 10), Paraguay: Villa Encarnación; C Schrottky coll. (no coll. data).

Genus *Parapsaenythia* Friese, 1908

- *paspali* (Schrottky, 1909). *Parapsaenythia*. Synonym of *Anthrenoides paspali* Schrottky, 1909. Holotypes: (no. 07), Paraguay: Puerto Bertoni; C Schrottky coll., 27-XII-1908; (no. 08), Paraguay: Puerto Bertoni, Alto Parana. (no coll. data).

Genus *Psaenythia* Gerstäcker, 1868

- *atriventris* Schrottky, 1907. *Psaenythia*. Holotype (no. 06), Paraguay: Villa Encarnación; C Schrottky coll., 29-XII-1905.
- *burmeisteri* Gerstäcker, 1868. *Psaenythia*. Holotype (no. 04). (no coll. data)
- *collaris* Schrottky, 1906. *Psaenythia*. Holotype (no. 14), Paraguay: Villa Encarnación; C Schrottky coll., IX-1904.
- *comma* Schrottky, 1907. *Psaenythia*. Holotype

(no. 05), Paraguay: Villa Encarnación; C Schrottky coll., 12-X-1906.

- *physalidis* Schrottky, 1907. *Psaenythia*. Holotype (no. 13), Paraguay: Villa Encarnación; C Schrottky coll., 13-X-1906.
- *picta* Gerstäcker, 1868. *Psaenythia*. Holotype (no. 11), Paraguay: Villa Encarnación; C Schrottky coll., 16-XI-1904.
- *quinquefasciata* Schrottky, 1907. *Psaenythia*. Holotype (no. 12), Paraguay: Villa Encarnación; C Schrottky coll., 03-II-1905.
- *solani* Schrottky, 1907. *Psaenythia*. Holotype (no. 09), Paraguay: Villa Encarnación; C Schrottky coll., 14-X-1906.

FAMILY ANTHOPHORIDAE

SUBFAMILY ANTHOPHORINAE

Genus *Melissoptila* Holmberg, 1884

- *thoracica* (Smith, 1854). *Melissoptila* (*Ptilomelissa*). Synonym of *Melissoptila ochromelaena* Moure, 1943. Paratype (no. 24), Brazil: Rio de Janeiro, Itatiaia, 700 m; JF Zikán coll., 29-XI-1935.

Genus *Thygater* Holmberg, 1903

- *chaetaspis* Moure, 1941. *Thygater* (*Thygater*). Paratype (no. 22), Brazil: Rio de Janeiro, Itatiaia, 720 m, km 12; JF Zikán coll., 05-II-1931.
- *sordidipennis* Moure, 1941. *Thygater* (*Nectarodiaeta*). Paratype (no. 21), Brazil: Rio de Janeiro, Itatiaia, 700 m; JF Zikán coll., 18-VII-1931 (in Solanaceae flowers).

SUBFAMILY XYLOCOPINAE

Genus *Ceratinula* Moure, 1941

- *turgida* Moure, 1941. *Ceratinula*. Paratypes: (no. 25), Brazil: Rio de Janeiro, Itatiaia, 700 m; JF Zikán coll., 07-V-1929 (in *Camboata* [Myrtaceae] flowers); (no. 26), Brazil: Rio de Janeiro, Itatiaia, 700 m; JF Zikán coll., 20-V-1932 (in *Camboata* [Myrtaceae] flowers).
- *xanthocera* Moure, 1941. *Ceratinula*. Paratype (no. 27), Brazil: Minas Gerais, Mar de Hespanha; JF Zikán coll., 02-IX-1909.

FAMILY COLLETIDAE

SUBFAMILY COLLETINAE

Genus *Colletes* Latreille, 1805

- *albicinctus* (Moure, 1943). *Colletes*. Synonym of *Rhynchocolletes albicinctus* Moure, 1943. Paratype (no. 28), Brazil: Rio de Janeiro, Itatiaia, 700 m; JF Zikán coll., 26-V-1934 (in *Camboata* [Myrtaceae] flowers).

SUBFAMILY DIPHAGLOSSINAE

Genus *Ptiloglossa* Smith, 1853

- *decora* Moure, 1945. *Ptiloglossa*. Paratype (no. 46), Brazil: Rio de Janeiro, Mendes; (no coll. data) XII-1944.
- *dubia* Moure, 1945. *Ptiloglossa*. Paratype (no. 47), Brazil: Minas Gerais, Mar de Hespanha; JF Zikán coll., 02-IV-1911.
- *immixta* Moure, 1945. *Ptiloglossa*. Paratype (no. 49), Brazil: Rio Grande do Sul, Esteio; R.P.C. Negrini coll., III-1943.
- *latecalcarata* Moure, 1945. *Ptiloglossa*. Paratype (no. 44), Brazil: south of Minas Gerais, Virginia, 900 m; JF Zikán coll., 23-III-1919.
- *stafuzzai* Moure, 1945. *Ptiloglossa*. Paratype (no. 48), Brazil: São Paulo, Batatais; A.M. Stafuzza coll., III-1943.
- *stypblaspsis* Moure, 1945. *Ptiloglossa*. Paratype (no. 43), Brazil: São Paulo, Batatais; A.M. Stafuzza coll., XII-1943.
- *xanthorhina* Moure, 1945. *Ptiloglossa*. Paratype (no. 50), Brazil: Amazonas, Rio Negro, São Gabriel; JF Zikán coll., 25-X-1927.

FAMILY HALICTIDAE

SUBFAMILY HALICTINAE

Genus *Augochlora* Smith, 1853

- *esox* (Vachal, 1911). *Augochlora* (*Augochlora*). Synonym of *Oxystoglossa franzisca* Schrottky, 1909; *Halictus esox* Vachal, 1911; *Oxystoglossa schrottkyi* Moure, 1940. Paratype (no. 42), Brazil: Rio de Janeiro, Itatiaia, 816 m; JF Zikán coll., 17-VII-1941 (in *Azalea* flowers).
- *pyrgo* (Schrottky, 1911). *Augochlora* (*Augochlora*). Synonym of *Oxystoglossa pyrgo* Schrottky, 1911; *Halictus liotribes* Vachal, 1911. Paratype (no. 41), Brazil: Rio de Janeiro, Itatiaia, 700 m; JF Zikán coll., 20-V-1932 (in *Camboata* [Myrtaceae] flowers).
- *tantilla* Moure, 1943. *Augochlora* (*Augochlora*). Paratype (no. 19), Brazil: Rio de Janeiro, Itatiaia, 816 m; JF Zikán coll., 15-VII-1941 (in *Azalea* flowers).
- *thusnelda* (Schrottky, 1909). *Augochlora* (*Augochlora*). Synonym of *Oxystoglossa thusnelda* Schrottky, 1909. Paratype (no. 20), Brazil: Rio de Janeiro, Itatiaia, 700 m; JF Zikán coll., 28-V-1941 (in *Poinsettia* flowers).

Genus *Augochlorella* Sandhouse, 1937

- *ephyra* (Schrottky, 1911). *Augochlorella*. Synonym of *Oxystoglossa ephyra* Schrottky, 1911; *Halictus ictis* Vachal, 1911; *Halictus traumatias* Vachal, 1911; *Oxystoglossa ephyra* Moure, 1940; *Oxystoglossidia uraniella* Moure, 1943. Paratypes: (no. 39), Brazil: Rio de Janeiro, Itatiaia, 700 m; JF Zikán coll., 15-V-1940 (in *Poinsettia* flowers); (no. 40), Brazil: Rio de Janeiro, Itatiaia, 816

m; JF Zikán coll., 06-VI-1941 (in *Poinsettia* flowers).

Genus *Augochloropsis* Cockerell, 1897

• *brachycephala* Moure, 1943. *Augochloropsis*. Paratype (no. 34), Brazil: Rio de Janeiro, Itatiaia, 700 m; JF Zikán coll., 07-XI-1942 (in *Ingá* flowers).

• *nasuta* Moure, 1944. *Augochloropsis*. Paratype (no. 37), Brazil: Rio de Janeiro, Itatiaia, 816 m; JF Zikán coll., 24-VI-1941 (in *Azalea* flowers).

Genus *Habralictus* Moure, 1941

• *canaliculatus* Moure, 1941. *Habralictus*. Paratype (no. 17), Brazil: Rio de Janeiro, Itatiaia, 816 m; JF Zikán coll., 13-V-1941 (in *Poinsettia* flowers).

• *flavopictus* Moure, 1941. *Habralictus*. Paratype (no. 18), Brazil: São Paulo, Rio Claro; Claretiano coll., V-1939; P. F. S. Pereira & J. A. Mota coll.

• *orites* Moure, 1941. *Habralictus*. Paratype (no. 38), Brazil: Rio de Janeiro, Itatiaia, 700 m; JF Zikán coll., 12-V-1932 (in *Cactus* flowers).

Genus *Paroxystoglossa* Moure, 1940

• *transversa* Moure, 1943. *Paroxystoglossa*. Paratypes: (no. 02), probably Paraguay: Puerto Bertoni; coll. ?, 1943 (acquired from the Schrottky collection); (no. 01), probably Paraguay: Puerto Bertoni; (no coll. data) 1947 (acquired from the Schrottky collection).

Genus *Pereirapis* Moure, 1943

• *rhizophila* Moure, 1943. *Pereirapis*. Paratypes: (no. 15), Brazil: Rio de Janeiro, Itatiaia, 700 m; JF Zikán coll., 23-II-1942; (no. 16), Brazil: Rio de Janeiro, Itatiaia, 700 m; (no coll. data) 12-V-1932 (in *Cactus* flowers).

Genus *Rhinocorynura* Schrottky, 1909

• *crotonis* (Ducke, 1906). *Rhinocorynura*. Synonym of *Halictus* (*Corynuropsis*) *crotonis* Ducke, 1906; *Corynuroides zikani* Moure, 1943. Paratype (no. 03), Brazil: Rio de Janeiro, Itatiaia, 700 m; JF Zikán coll., 13-II-1942.

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