



The types of Braconidae and Ichneumonidae (Hymenoptera: Ichneumonoidea) in the Museo de La Plata, Argentina

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Abstract

The 154 type specimens of Braconidae and Ichneumonidae housed in the collection of División Entomología, Museo de La Plata, were examined and listed, providing update information on synonymies, valid names, categories of types, data of collection and hosts. The types belong to 42 species described by Blanchard (3), Dasch (1), De Santis (14), De Santis & Millán (1), De Santis & Redolfi (1), Fischer (2), Kula & Martínez (1), Mason (3), Millán & De Santis (1), Monetti (1), Porter (7), Townes (2), Townes & Gupta (1) and Townes & Townes (4). Two new combinations are proposed: *Catolestes desantisi* is transferred to *Heterospilus desantisi* (Monetti) **comb. nov.** and *Opidnus sublaevis sublaevis* to *Oresbius sublaevis* (Townes & Gupta) **comb. nov.** respectively.

Key words: Parasitoids, catalog, type material, collection

Resumen

Los tipos de Braconidae e Ichneumonidae (Hymenoptera: Ichneumonoidea) depositados en el Museo de La Plata, Argentina. Se realizó el análisis crítico y se listaron 154 especímenes tipo de Braconidae e Ichneumonidae (Hymenoptera: Ichneumonoidea) depositados en las colecciones de la División Entomología del Museo de La Plata. Para cada taxón se brinda información actualizada acerca de las sinonimias, nombres válidos, categorías de los tipos, datos de recolección y hospedadores. Éstos pertenecen a 42 especies de Ichneumonoidea descritas por Blanchard (3), Dasch (1), De Santis (14), De Santis & Millán (1), De Santis & Redolfi (1), Fischer (2), Kula & Martínez (1), Mason (3), Millán & De Santis (1), Monetti (1), Porter (7), Townes (2), Townes & Gupta (1) y Townes & Townes (4). Dos nuevas combinaciones son propuestas: *Catolestes desantisi* es transferido a *Heterospilus desantisi* (Monetti) **comb. nov.** y *Opidnus sublaevis sublaevis* a *Oresbius sublaevis* (Townes & Gupta) **comb. nov.** respectivamente.

Palabras clave: Parasitoides, catálogo, material tipo, colección

Introduction

The Ichneumonoidea comprises a huge group (over 100,000 estimated species worldwide) of primarily parasitoid insects that attack other arthropods, especially the immature stages of other insects. A few taxa are secondarily phytophagous, and several groups that attack egg masses or food provisions of other arthropods are difficult to classify as either "parasitic", predaceous or parasitoid (Whitfield, 2004).

The location and recognition of type material and their placement in currently recognized taxa is a necessary preliminary to revisionary studies which, in order they have lasting value, must be based on a knowledge of species already described. In this context, this catalogue is part of a series of contributions to the

study of type material of Hymenoptera housed in the collection of División Entomología, Museo de La Plata, Argentina (MLP), according to the recommendations of the International Code of Zoological Nomenclature (Article 72 F. 4, ICZN, 1999). There were previously studied type series belonging to superfamilies Cynipoidea, Ceraphronoidea and Proctotrupeoidea (Díaz & Loíacono, 1995; Loíacono & Díaz, 1996; Díaz *et al.*, 2005), Apoidea (Durante & Díaz, 1998), and Chalcidoidea: Encyrtidae (Loíacono *et al.*, 2001), Eulophidae (Loíacono *et al.*, 2002), Aphelinidae and Signiphoridae (Loíacono *et al.*, 2003), Eupelmidae and Trichogrammatidae (Loíacono *et al.*, 2004), Chalcididae, Eucharitidae, Eurytomidae, Leucospidae, Tanaostigmatidae and Torymidae (Loíacono *et al.*, 2006; Margaría & Aquino, 2007) and Pteromalidae (Loíacono *et al.*, 2007).

There is no previous comprehensive published list of Ichneumonoidea types held by the Museo de La Plata. Consequently, the current study aims to catalogue and update information on synonymies, valid names, categories of types, data of collection and hosts of type material of the families Braconidae and Ichneumonidae at Museo de La Plata, in order to make them accessible and comprehensible to future workers.

Material and methods

Information about the specimens studied was taken from collection labels and it was compared with data of the type material described in the original descriptions. References for these descriptions were found with the help of catalogues published by De Santis (1967), Noyes (2001), Yu *et al.* (2005) and Gauld & Wahl (2009). The following information is provided for each type specimen:

Species names: corresponding to the original combination (basonym) that accompanies original description, author and year of the synonymy. **Bibliographic reference of original publication:** author/s, year, and page number/s of the complete description. **Current valid name:** according to Noyes (2001), Yu *et al.* (2005) and Gauld & Wahl (2009). **Type material:** category (HOLOTYPE, ALLOTYPE, PARATYPE, SYNTYPE, LECTOTYPE); number of specimens, sex if known; collection number. All specimens of the same series have received the same collection number, each one separated by a slash with an order number. **Collection data:** country, province or state, locality, date of collection, collector's name. **Morphology:** explanations about the slides. **Comments:** Important information not explained in other items. **Biology:** host or other bionomic data included on the labels. Additional information not present in labels, but given in the original descriptions, is written between brackets.

The specimens studied are in the main card mounted and slide mounted material is indicated with (S.M.).

Abbreviations for depositories of type series:

AEI: American Entomological Institute, H. & M. Townes Collection, Michigan, USA

CNC: Canadian National Collection, Ottawa, Canadá

IML: Instituto Miguel Lillo, Tucumán, Argentina

MLP: Museo de La Plata, Buenos Aires, Argentina

NHMW: Naturhistorischen Museum, Austria, Wien

USNM: United States National Museum, Washington, USA

Braconidae

Agathis alvarengai De Santis, 1975:251–253. HOLOTYPE ♀ (MLP 3834/1): Brasil, Isla Fernando de Noronha, V.1954, Alvarenga coll.

Morphology: Fore and hind wings of HOLOTYPE (MLP 3834/1) on S.M.

Agathis haywardi De Santis. Blanchard & De Santis, 1963:118–120. HOLOTYPE ♀ (MLP 1848/1): Argentina, Salta, Cafayate, II–III.1961, Hayward coll. ALLOTYPE ♂ (MLP 1848/2), same data. PARATYPE ♂ (MLP 1848/3), same data.

Morphology: Fore and hind wings of HOLOTYPE on S.M. (MLP 1848/1).

Biology: Reared from *Coleophora haywardi* (Pastrana) (Lepidoptera, Coleophoridae).

Apanteles bruchi Blanchard, 1941:153–155. [SYNTYPES unspecified number. Argentina, Vicente López, III.1939, Bruch coll.]

Comments: SYNTYPE not found.

Biology: [Reared from *Melittia bergi* Edwards (Lepidoptera, Sesiidae)].

Apanteles capucinae Fischer, 1961:4–5. Synonymized by Papp, 1988. Current valid name: *Cotesia capucinae* (Fischer). PARATYPE ♀ (MLP 1853/3): Macedonia, Drenovo bei Kavadar, VI.1960, Kasy coll. PARATYPE ♂ (MLP 1853/4), same data. HOLOTYPE in the NHMW (not examined).

Biology: Reared from *Calpe capucina* (Esper) (Lepidoptera, Noctuidae).

Apanteles cordoi De Santis, 1980:145–146. HOLOTYPE ♀ (MLP 4276/1): Argentina, Buenos Aires, Campana, 3.XII.1975, Cordo coll. ALLOTYPE ♂ (MLP 4276/2), same data.

Biology: HOLOTYPE reared from *Acigona infusella* (Walker) (Lepidoptera, Noctuidae).

Apanteles fluitantis De Santis, 1980:144–145. HOLOTYPE ♀ (MLP 4277/1): Argentina, Buenos Aires, Campana, 30.XII.1975, Cordo coll. ALLOTYPE ♂ (MLP 4277/2), same data except 26.XII.1975. PARATYPES (26) ♀♀ (MLP 4277/3–28), same data as ALLOTYPE. PARATYPES (7) ♂♂ (MLP 4277/29–35), same data as ALLOTYPE. PARATYPES (9) ♀♀ (MLP 4277/36–44), same data as HOLOTYPE.

Biology: HOLOTYPE reared from *Sameodes albiguttalis* (Warren) (Lepidoptera, Pyralidae) and ALLOTYPE reared from *Acigona infusella* (Walker) (Lepidoptera, Noctuidae).

Apanteles noronhai De Santis, 1975:253–255. HOLOTYPE ♀ (MLP 5269/1): Brasil, Isla Fernando de Noronha, V.1954, Alvarenga coll. ALLOTYPE ♂ (MLP 5269/2), same data. PARATYPES (2) ♀♀ (MLP 5269/3–4), same data. PARATYPE ♂ (MLP 5269/5), same data.

Apanteles menezesi De Santis & Redolfi, 1976:185–186. HOLOTYPE ♀ (MLP 5270/1): Brasil, São Paulo, São Pedro, IV.1974, Menezes coll. PARATYPES (3) ♀♀ (MLP 5270/3–5), same data.

Biology: Reared from *Hylesia* sp. (Lepidoptera, Saturniidae).

Catolestes desantisi Monetti, 1980:47–48. Current valid name: *Heterospilus desantisi* (Monetti) **comb. nov.** PARATYPES (6) ♀♀ and (6) ♂♂ (MLP 5271/3–14): Argentina, Santiago del Estero, Los Tigres, 16.I.1970, Golbach coll.

Biology: Reared from *Anobium* sp. (Coleoptera, Anobiidae).

Chaenusa aurantium Kula, Martínez & Walsh, 2009:643–649. HOLOTYPE ♀ (MLP 5281/1): Argentina, Buenos Aires, Otamendi, 34.19146 S, 58.87713 W, 17.X.2007, Walsh col. PARATYPE ♂ (MLP 5281/3) same data.

Biology: Reared from pupa of *Hydrellia* sp. (Diptera, Ephydriidae).

Glyptapanteles dalosoma De Santis, 1987:97–98. Synonymized by van Achterberg & Rezbanyai-Reser, 2001. Current valid name: *Protapanteles dalosoma* (De Santis). HOLOTYPE ♀ (MLP 5272/1): Brasil, São Paulo, Ouro Verde, VI.1983, Lourenção coll. ALLOTYPE ♂ (MLP 5272/2), same data. PARATYPE ♀ (MLP 5272/3), same data. PARATYPE ♂ (MLP 5272/4), same data.

Biology: Reared from *Anacraga* sp. (Lepidoptera, Dalceridae).

Hecabalodes xylophagi Fischer, 1962:297–312. [PARATYPES (2) sex unknown (MLP 1856/3-4): Africa, Africa Ecuatorial fr. Ennedi, Quedi Harischi, 2.V.1959, J. Mateu coll.]

Comments: PARATYPES not found.

Hypomicrogaster hypsipylae De Santis, 1972:223–224. HOLOTYPE ♀ (MLP 3827/1): Costa Rica, Turrialba, Santa Cruz, 6.XII.1971, Grijpma coll. PARATYPES (3) ♀♀ (MLP 3827/3–5), same data.

Biology: Reared from cocoons of *Hypsipyla grandella* (Zeller) (Lepidoptera, Pyralidae).

Opius chilensis De Santis, 1966:5–7. HOLOTYPE ♀ (MLP 1855/1): Chile: La Cruz, VII.1966, Carvajal [Maugard] coll. ALLOTYPE ♂ (MLP 1855/2), same data. PARATYPES (3) ♀♀ (MLP 1855/3–5), same data. PARATYPES (2) ♂♂ (MLP 1855/6–7), same data.

Biology: Reared from *Liriomyza quadrata* (Malloch) (Diptera, Agromyzidae).

Opius eurytenoides De Santis, 1966:3–5. HOLOTYPE ♀ (MLP 1854/1): Chile, La Cruz, VII.1966, Carvajal Maugard coll. ALLOTYPE, ♂ (MLP 1854/2), same data. PARATYPES (2) ♀♀ (MLP 1854/3–4), same data.

Biology: Reared from *Liriomyza quadrata* (Malloch) (Diptera, Agromyzidae).

Opius graciellae De Santis. Valladares, Díaz & De Santis, 1982:326–327. HOLOTYPE ♀ (MLP 5273/1): Argentina, Córdoba, Manfredi, 4.XI.1980, Valladares coll. ALLOTYPE ♂ (MLP 5273/2), same data. PARATYPE sex unknown (MLP 5273/3), same data.

Biology: Reared from *Amauromyza maculosa* (Malloch) (Diptera, Agromyzidae) on *Helianthus* sp. (Asteraceae).

Phanerotoma vidua De Santis 1975:255–256. PARATYPE ♂ (MLP 5274/3): Brasil, Isla Fernando de Noronha, V.1954, Alvarenga coll.

Comments: HOLOTYPE not found.

Ichneumonidae

Basileucus tetraleucus De Santis, 1982:42. HOLOTYPE ♀ (MLP 4014/1): Argentina, Rio Negro, Cinco Saltos, II.1982, Porley coll.

Comments: HOLOTYPE not found.

Casinaría oeceticola De Santis, 1956:309–312. Synonymized by Townes & Townes, 1966. Current valid name: *Casinaría bonaerensis* (Schrottky). SYNTYPES (3) ♀♀ (MLP 1886/1–3): Argentina, Santa Fe, San Jorge, 11.II.1954, Brizuela coll. SYNTYPES (MLP 1886/4–7) (S.M.), same data as SYNTYPES (MLP 1886/1–3).

Morphology: S.M. SYNTYPES (MLP 1886/4–5): wings; (MLP 1886/6): head, legs and metasoma; (MLP 1886/7): head, antenna, legs and metasoma.

Comments: The specimens labeled as “COTYPES” are equivalent to SYNTYPES (ICZN, art. 73.2.1).

Biology: Collected from the “bagworm moth” *Oiketicus kirbyi* Guilding (Lepidoptera: Psychidae).

Coccygomimus aeolus Porter, 1970:136–140. Synonymized by Yu & Horstmann, 1997. Current valid name: *Pimpla aeola* (Porter). PARATYPES (2) ♂♂ (MLP 4075/3–4): Perú, Cuzco, 28.II.1968, García & Porter colls. PARATYPE ♀ (MLP 4075/5), same data except 20.II.1968. HOLOTYPE in the AEI (not examined).

Comments: Collection data of PARATYPES (MLP 4075/3–4) is outside of the range stated in the original publication.

Coccygomimus golbachi Porter, 1970:153–157. Synonymized by Yu & Hortsmann, 1997. Current valid name: *Pimpla golbachi* (Porter). PARATYPE ♀ (MLP 4013/3): Argentina, Formosa, 28.XI.1939, Denier coll. PARATYPE ♀ (MLP 4013/4): Uruguay, Montevideo, 28.XII.1921, Tremoleras coll. PARATYPES (2), ♂♂

(MLP 4013/5–6): Uruguay, Tacuarembó, San Gregorio de Polanco, 24.VIII.1963. HOLOTYPE in the IML (not examined).

Comments: Collection date of PARATYPE (MLP 4013/4) is not stated in the original publication.

Biology: PARATYPES (MLP 4013/5–6) were reared from *Evetria buholiana* (Denis & Schiffermüller) (Lepidoptera: Tortricidae).

Coccygomimus sparsus Porter, 1970:168–172. Synonymized by Yu & Horstmann, 1997. Current valid name: *Pimpla sparsa* (Porter). PARATYPE ♂ (MLP 4073/3): Perú, Cuzco, 22.II.1968, García & Porter colls. HOLOTYPE in the AEI (not examined).

Echthrus adillae rubidus Townes & Townes, 1962:499–500. PARATYPE ♀ (MLP 1867/3): [U.S.A.], California, Mammoth Lakes, 7–28–33, Bohar coll. PARATYPE ♂ (MLP 1867/4): [U.S.A.], California, Yosemite Park, near Glacier point, 16.VII.1948, H., M., G., D. & J. Townes colls. HOLOTYPE in the USNM (not examined).

Comments: Collection data of PARATYPE (MLP 1867/3) is outside of the range stated in the original publication.

Exochus postfurcalis Townes & Townes, 1959:242–244. PARATYPE ♀ (MLP 1891/3): [U.S.A.], Maryland, Takoma Park., 2.VIII.1943, H. & M. Townes colls. HOLOTYPE in the USNM (not examined).

Exyston (Anecphysis) californicus Mason, 1959:1093–1095. PARATYPE ♂ (MLP 1861/3): [U.S.A.], California, Fish Camp, 12.VII.1948, H., M., G. & D. Townes colls. PARATYPE ♂ (MLP 1861/4), same data except 11.VII.1948. HOLOTYPE in the AEI (not examined).

Hemiteles pastranai Millán & De Santis, 1958:108–110. Synonymized by De Santis, 1967. Current valid name: *Mastrus pastranai* (Millán & De Santis). HOLOTYPE ♀ (MLP 1868/1): [Argentina], Buenos Aires, José C. Paz, 1954, Pastrana coll. ALLOTYPE ♂ (MLP 1868/2), same data. PARATYPE ♀ (MLP 1868/3) (S.M.), same data. PARATYPE (MLP 1868/4) (S.M.), same data.

Morphology: S.M. PARATYPES (MLP 1868/3): leg; (MLP 1868/4): fore and hind wings.

Biology: The HOLOTYPE was reared from *Rhyacionia buoliana* (Denis & Schiffermüller) (Lepidoptera: Tortricidae).

Kristotomus simplex Mason, 1966:46–48. Synonymized by Gupta, 1994. Current valid name: *Orthomiscus simplex* (Mason). PARATYPE ♂ (MLP 1863/3): Japan, Kamikochi, 22.VII.1954, Townes family coll. HOLOTYPE in the AEI (not examined).

Comments: Collection date of PARATYPE (MLP 1863/3) is outside the range stated in the original publication.

Lemophagus curtus Townes, 1965:409–417. [PARATYPE sex unknown (MLP 1885/3): Francia, Toulouse, VI.1964].

Comments: PARATYPE not found.

Metopius (Metopius) mimicus Townes & Townes, 1959:68–69. PARATYPE ♂ (MLP 1890/3): [U.S.A.], Arizona, Workman Creek, Sierra Ancha, 8.V.1947, H. & M. Townes colls. HOLOTYPE in the USNM (not examined).

Opidnus sublaevis sublaevis Townes, 1962:134–135. Synonymized by Carlson, 1979. Current valid name: *Oresbius sublaevis* (Townes). PARATYPE ♂ (MLP 1866/3): [U.S.A., Colorado], Poudre [Lake], [11000ft.], 12.VIII.1948, H., M., G., D. & J. Townes colls. HOLOTYPE in the AEI (not examined).

Parapechthis bazani Blanchard, 1936:404–407. Synonymized by De Santis, 1967. Current valid name: *Apechthis bazani* (Blanchard). LECTOTYPE ♀ (MLP 4076/1): [Argentina], Salta, [IV].1936, Bazán coll.

Pimpla spatulata Townes, 1960:106–109. Synonymized by Walkley, 1967. Current valid name: *Ephialtes spatulatus* (Townes). PARATYPE ♀ (MLP 1857/3): [U.S.A.], West Virginia, Lost River State Park in Hardy Co., 18.VI.1951, Krombein coll. HOLOTYPE in the USNM (not examined).

Polysphincta townesorum De Santis & Millán, 1968:3–5. HOLOTYPE ♀ (MLP 4012/1): [Argentina], Buenos Aires, Castelar, 8.XII.1963, Pastrana coll.

Biology: Reared from cocoon on *Pinus radiata* Don (Pinaceae).

Porizon argentinensis Blanchard, 1945:308. Synonymized by Gauld, 1984. Current valid name: *Stethantix argentinensis* (Blanchard). SYNTYPE ♀ (MLP 4062/1): Argentina, Santa Fe, Rosario, 7.IX.1943, Parker Silveira coll.

Comments: Collection data is outside of the range stated in the original publication.

Biology: With host molt *Listroderes* sp. (Coleoptera: Curculionidae).

Smicroplectrus takomae Mason, 1956:131. Synonymized by Kasparyan, 1984. Current valid name: *Smicroplectrus jucundus* (Holmgren). PARATYPE ♂ (MLP 1862/3): [U.S.A.], Washington, Mount Rainier, 5000ft., 9.VII.1940, H. & M. Townes colls. PARATYPE ♂ (MLP 1862/4), same data except 4700ft., 11.VII.1940. HOLOTYPE in the AEI (not examined).

Sussaba cognata faceta Dasch, 1964: 265–267. PARATYPE ♂ (MLP 1892/3): [U.S.A.], Oregon, Warrenton, 8.VIII.1940, H. & M. Townes colls. HOLOTYPE in the AEI (not examined).

Trachysphyrus brasson Porter, 1967:177–178. Synonymized by Porter, 1987. Current valid name: *Neocryptoteryx brasson* (Porter). PARATYPES (2) ♀♀ (MLP 1869/3–4), [Argentina], Buenos Aires, Manuel de Pinazo, 14.XII.1953, Icart coll. HOLOTYPE in the CNC (not examined).

Biology: Reared from cocoons of Lepidoptera.

Trachysphyrus desantis Porter, 1967:240–242. HOLOTYPE ♀ (MLP 1870/1): [Argentina], Buenos Aires, Olivos, 6.XII.1955, Ibarra Grasso coll. PARATYPES (2) ♀♀ (MLP 1870/3–4), same data. PARATYPES (7) ♂♂ (MLP 1870/5–11), same data.

Comments: The specimen (MLP 1870/1) labeled as “Type” must be considered as HOLOTYPE (ICZN, art. 73.1.1). Despite the fact that the original publication mentions only three males from Argentina (Buenos Aires and Entre Rios), seven males PARATYPES were labeled with the same data, so it cannot be stated which specimens were used by Porter to describe the species.

Biology: HOLOTYPE reared from Saturnidae (Lepidoptera).

Trachysphyrus hypodyneri Porter, 1967:156–160. Synonymized by Porter, 1987. Current valid name: *Neocryptoteryx hypodyneri* (Porter). PARATYPE ♀ (MLP 1871/3): [Argentina], Neuquén, Pucará, 15.XII.1955, Schajovskoi coll.

Biology: Reared from *Hypodynerus porteri* Bequaert & Ruiz (Hymenoptera, Vespidae).

Trachysphyrus praeclarus Porter, 1969:362–366. PARATYPE ♂ (MLP 4074/3): Bolivia, La Paz, Cota–Cota, 2–4.III.1968, García & Porter colls. HOLOTYPE in the IML (not examined).

Trieces integer Townes & Townes, 1959:48–49. PARATYPE ♂ (MLP 1889/3): [U.S.A.], Virginia, Skyline Drive, 5.VIII.1945, H. & M. Townes colls. HOLOTYPE in the USNM (not examined).

Venturia saxatilis De Santis, 1975:256–258. HOLOTYPE ♀ (MLP 4063/1): Brasil, Isla Fernando de Noronha, V.1954, Alvarenga coll. ALLOTYPE ♂ (MLP 4063/2), same data. PARATYPES (2) ♂♂ (MLP 4063/3–4), same data.

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