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THE TYPE SPECIMENS OF “DORYLOMORPH” ANTS (HYMENOPTERA, FORMICIDAE: AENICTINAE, ECITONINAE, CERAPACHYINAE, LEPTANILLOIDINAE) DEPOSITED IN THE MUSEU DE ZOOLOGIA DA UNIVERSIDADE DE SÃO PAULO, BRAZIL

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ABSTRACT

The present catalogue lists the “dorylomorph” ant types (Aenictinae: Aenictus; Cerapachyinae: Acanthostichus and Cerapachys; Ecitoninae: Eciton, Labidus, Neivamyrmex and Nomyrmex; and Leptanilloidinae: Asphinctanilloides and Leptanilloides) housed in the Formicidae collection of the Hymenoptera laboratory, Museu de Zoologia da Universidade de São Paulo (MZSP), Brazil. In total, the collection includes types of 141 nominal species, of which 56 are still valid. The majority of types of dorylomorph species in the MZSP collection are syntypes (67 species), but there are as well 13 species represented by holotypes only, 17 by holotypes and paratypes, 43 species by paratypes only, and one species by a paralectotype. We record the label information, condition of the specimens, nomenclatural changes, type status, and provide indexes of the listed taxa.

KEY-WORDS: Catalogue; Ant Types; MZSP; Dorylomorphs; Hymenoptera.

INTRODUCTION

The Museu de Zoologia da Universidade de São Paulo (MZSP) holds one of the most important collections of ants worldwide (Brandão, 2000), due to the acquisition of the Kempf-Borgmeier collection in 1977 (see Brandão, 1991), besides material added more recently by several collaborators and by C.R.F. Brandão (curator since 1981) and his students and associates, especially material from localities not represented before.

The present catalogue is the fourth of a series which aims to list all ant types hereby deposited. We have published thus far a catalogue of the Atini ant types (Myrmicinae), including a history of the MZSP Formicidae collection (Klingenberg & Brandão, 2005), a catalogue of “poneromorph” ant types (Scott-Santos *et al.* 2008) and a catalogue of the Pseudomyrmecinae ant types (Brandão *et al.* 2010).

The “dorylomorphs” include the subfamilies Aenictinae, Aenictogitoninae, Cerapachyinae, Dorylinae, Ecitoninae and Leptanilloidinae (Bolton, 1995;

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2007), of which the MZSP holds important collections of the Neotropical subfamilies (Cerapachyinae, Ecitoninae and Leptanilloidinae), but houses some syntypes of Aenictinae as well. The target of the catalogue is to provide label information and conservation status of dorylomorph type specimens in the MZSP, and the current taxonomic status of the correspondent nominal species, according to the International Code of Zoological Nomenclature (1999). Our aim is to boost further studies and also to avoid unnecessary movement of precious, sometimes unique, specimens, as proposed by the recommendation 72F of the ICZN (1999) about institutional responsibility: every institution in which name-bearing types are deposited should make them accessible for studies, publish lists of name-bearing types in its possession or custody, and so far as possible, communicate information concerning name-bearing types.

MATERIAL AND METHODS

For the elaboration of the catalogue, information from labels associated with dorylomorph ant types deposited in the MZSP was compared to the appropriate original descriptions, which can be mostly found in Agosti & Johnson (2005). The nomenclature of type specimens was updated following the International Code of Zoological Nomenclature (1999).

The combination of type names within genera and species are quoted in alphabetical order by the last name, according the genus they are presently recognized. The following abbreviations are used: col. = collector, coll. = collection, g. = gyne, m. = male, w. = worker, and s. = soldier. In order to indicate the conservation status of the specimens, the following abbreviations are used: W = wing, W1 and W2 representing the anterior and posterior left wings, respectively, and W3 and W4 representing the right wings, L = leg, L1, L2 and L3 representing the left legs and L4, L5 and L6 the right legs, and A = antenna, A1 representing the left antenna; A2 representing the right antenna. Furthermore, we indicate, when appropriate, broken body parts glued to the paper triangle that holds the type specimen, or the ones that are missing.

In order to record information related to the MZSP dorylomorph ant types, the following order is adopted in the present catalogue (although we do not have complete information for all entries): species name, author, publication year, page number, type category, number of type specimens of each sex or caste, place of collection, date, collector, original

collection name, collection number or collection code and other information; all these information are taken from labels and listed as complete are they appear in the labels. We also comment on the conservation status of each specimen. Additional information, present in publications but not recorded in labels, is presented in brackets (in the original language); for clarity reasons, we added also further information that we were able to recover from different sources. At the end of each species entry, we present, when necessary, the present valid name of the taxon corresponding to the type specimen listed. In the format of two addenda, we present an index of all valid names listed in the present catalogue and their respective synonyms or current combinations (when we have corresponding type material) followed by a list of all synonyms here listed and their present valid names. Taxonomic information about the species listed here can be found in Bolton (1995; 2003; 2007).

It is important to note that Dr. Sean Brady started the project to catalog the "army ant" types in the MZSP collection. He developed the notation to record missing parts of the specimens and produced a preliminary list of types; we updated and completed the information, and added information related to the other dorylomorph subfamilies.

RESULTS

The present catalogue includes types of 141 nominal species (56 valid), including 584 individuals of the four subfamilies and nine genera (Aenictinae Emery: *Aenictus* Shuckard (1840); Cerapachyinae Forel: *Acanthostichus* Mayr (1887) and *Cerapachys* Smith (1857); Ecitoninae Forel: *Eciton* Latreille (1804), *Labidus* Jurine (1807), *Neivamyrmex* Borgmeier (1940) and *Nomamyrmex* Borgmeier (1936); Leptanilloidinae Bolton: *Asphinctanilloides* Brandão *et al.* (1999) and *Leptanilloides* Mann (1923). The MZSP holds holotypes of 13 dorylomorph species, holotypes and paratypes of 17 species, paratypes of 43 species, syntypes of 67 species and a paralectotype of one species not represented by other type categories.

Subfamily Aenictinae

Tribe Aenictini

Genus *Aenictus* Schuckard

Aenictus eugenii subsp. *caroli* Forel, 1910: 248. Cotype [syntype]: 1 w. [Ethiopia], Nexassir, Erythrea, Escherich, [West-Abessinien], [Herrn leg].

Eciton (Aenictus) ceylonicus subsp. *orientalis* Karavaiev, 1926: 423. Cotype [syntype]: 1 w. [Indonesia], Wammar Aroc., [Aru-Archipelago, 19.iii.1913], Karavaiev col., # 2611. L2 and L3 only (rest of specimen missing). Junior synonym of *Aenictus ceylonicus* Mayr: Wilson, 1964: 452.

Eciton (Aenictus) fergusonii var. *sundaica* Karavaiev, 1927: 7. Syntype: 1 w. [Java], 5.i.1913, [no col.], coll. Karavajew, # 2398. Missing L1 (tibia). Junior synonym of *Aenictus laeviceps* Smith: Wilson, 1964: 467.

Subfamily Cerapachyinae

Tribe Acanthostichini

Genus *Acanthostichus* Dalla Torre

Acanthostichus arizonensis Mackay, 1996: 141. Paratype: 1 w. [United States of America], Ariz[ona], Pima Co: 7 mi SE Sihuairita, 3.ix.1982, T.C. Myles col. Colony – with termites in exp[erimental] plot. Missing A1 and A2.

Acanthostichus brevinodis Mackay, 1996: 147. Holotype: 1 m. [Brazil], MT [Mato Grosso], Sinop 55°37'W, 12°31'S, x.1974, Alv. & Roppa cols, [#] 12673. Missing wings.

Acanthostichus concavinodis Mackay, 1996: 147. Paratype: 1 w. Bolivia, Juan Beni, [no date], W.M. Mann col.

Acanthostichus femoralis Kusnezov, 1962: 126. Paratypes: 2 w. Arg[entina], Formosa, Ing[eniero] Juarez, 26.vii.1958, N. Kusnezov [col.].

Acanthostichus laevigatus Mackay, 1996: 157. Paratype: 1 w. Venezuela, Bolivar, Imatuca, 19.v.1985, [no col.], Ël Bochinchí Res. Forest.

Acanthostichus lattkei Mackay, 1996: 160. Paratype: 1 w. Venezuela, Táchira, Presa Las Cuevas, 44 km, WNW San Cristóbal, 07°48'N, 71°46'W, 500 m, [no date], J. Lattke col., in soil below leaf litter in tropical forest.

Acanthostichus laticornis var. *obscuridens* Santschi, 1934: 23. Cotypes [syntypes]: 2 w. [Argentina], Misiones, Loreto, 24.viii.[19]33, Ogloblin col., coll. Borgmeier, # 5540. One worker missing head and other worker with disarticulated gaster, head, L1 and L4. Junior synonym of *Acanthostichus laticornis* Forel: Kusnezov, 1962: 131.

Acanthostichus punctiscapus Mackay, 1996: 160. Paratype: 1 w. [United States of America], N[ew] Mexico, Dona Ana Co[unty], Jornada LTER site, 1 mi. W[est]. College R[an]ch. 17.vii. [19]85, D. Light-foot and S. van Vactor cols,

habitat: 70 cm deep in *Pogonomyrmex desertorum* nest, *Larrea* scrub.

Acanthostichus quirozi Mackay, 1996: 164. Paratype: 1 w. Mexico, V[era] C[ruz], Los Tuxtlas, 27.viii.1992, L. Quiroz [col.].

Acanthostichus sanchezorum Mackay, 1985: 128. Paratype: 1 w. Colombia, Meta, Villa Vicencio, 17.xii.1975, Bill and Emma Mackay cols, # 669.

Acanthostichus truncatus Mackay, 1996: 170. Paratype: 1 w. Colombia, Mocoa, Guzmán, 26.iv.1977, D. Jackson col. Raiding arboreal termite nest.

Tribe Cerapachyini

Genus *Cerapachys* Smith

Cerapachys splendens Borgmeier, 1957: 107. Type [holotype]: 1 w. Cotypes [paratypes]: 6 w. Brasilien [Brazil], [Santa Catarina], Nova Teutonia, 27°11', 52°23', vi and x.1954, Fritz Plaumann col. Paratype: one worker disarticulated L1 and L4, another worker disarticulated L1, L4 and head.

Subfamily Ecitoninae

Tribe Ecitonini

Genus *Eciton* Latreille

Eciton vagans subsp. *allognathum* Borgmeier, 1955: 239. Cotypes [paratypes]: 2 m. Venez[uela], Caracas, 1921, [A.J.] Carranza, Rojas leg. One male missing left wings, other male disarticulated head, gaster, petiole, missing L1 and wings. Paratype: 1 w. (s.). Venez[uela], Puerto Cabello, 6.x.[18]93, Sievers leg., Georg Ges. det.

Eciton amazona Santschi, 1923b: 68. Types [paratypes]: 13 w. (3 s.), Brazil, Pará, Monte Alegre, 1923, Reichensperger leg. One worker missing head and L1, L2, L4 and L5 (femur), other worker missing head, L1 and L4 (tarsi), other missing L1 (femur) and L4 (tarsi), one soldier missing L5 (femur) and two others missing L1 (femur). Junior synonym of *Eciton hamatum* Fabricius: Borgmeier, 1953: 14. Comment: We found five workers (1 s.) (all on same pin) from the type locality labelled as "Types" by Santschi, 1925, bearing a label saying "*Eciton amazona* v. *lividior*", a name not listed in Borgmeier (1953) or in Bolton, 1995. We do not consider these specimens as types.

- Eciton mexicanum* subsp. *argentinum* Borgmeier, 1955: 259. Cotype [paratype]: 1 w. (1 s.). [Argentina], R[oque] S[áenz] Peña, Chaco, [no date, col. illegible].
- Eciton bellicosum* Santschi, 1921: 90. Syntypes: 3 w. (2 s.). Guyane Française, S[ain]t Jean du Maroni, 1914, R. Benoist col., Museum Paris, # 7284. One soldier missing L3 (tarsi), other soldier missing A2 (funiculus) and one worker missing L2 (tarsi), L4 (claw), L6 (claw) and disarticulated L5 (tarsi). Junior synonym of *Eciton drepanophorum* Smith: Borgmeier, 1936: 52.
- Eciton (Eciton) conquistador* Weber, 1949: 3. Syn- types: 5 w. (2 s.). Panamá, Pequeni R[iver], 15.xii.[19]47, Schneirla [col.], # 84. One worker missing L5. Considered as subspecies *Eciton lucanoides conquistador*: Borgmeier, 1955: 264.
- Eciton dulcius* subsp. *crassinode* Borgmeier, 1955: 209. Cotype [paratype]: 1 w. (1 s.). [Panama], Barro Col[orado] Isl[and, Canal Zone], 4.iii.[19]55, Schneirla leg. Comment: In the MZSP collection there are three workers (2 s.) with same data labeled as nidotypes.
- Eciton vagans* subsp. *dispar* Borgmeier, 1955: 244. Cotypes [paratypes]: 2 m., 1 w. (1 s.). [Brazil], S[ão] P[aulo], Pindamonhangaba, 3.vii.[19]40, Schwarzmaier leg. One male missing wings, and another with disarticulated gaster, head and genitalia dissociated. Cotype [paratype]: 1 m. [Brazil], Rio de Janeiro, Itatiaya [Itatiaia], 13.iv. [19]29, J.F. Zikán leg. Missing genitalia. Paratype: 1 m. [Brazil], Esp[írito] S[anto], S[anta] Teresa, [v. 28], O. Conde [leg.], # 4962. Right wings disarticulated.
- Eciton vagans* var. *francanum* Santschi, 1923a: 1260. Cotype [syntype]: 1 w. [Brazil], S[ão] P[aulo], Franca, MP # 15768, # 1877. Junior synonym of *Eciton vagans dubitatum* Emery: Borgmeier 1955: 229.
- Eciton vagans fur* Borgmeier, 1955: 245. Type [holo- type]: 1 m. Paratypes: 1 m., 2 w. (1 s.). [Brazil], Pernambuco, Tapera, xi.1929, Pickel leg. Holo- type: disarticulated right wings. Paratype: One male disarticulated gaster and head, genitalia dissociated, missing left forewings and L4.
- Eciton mexicanum* subsp. *goianum* Borgmeier, 1955: 258. Types [paratypes]: 1 g., 1 w. (1 s.). Brasil, Goiás, Campinas [Goiânia], [26. xi.1935], Schwarzmaier [col.], Coll. Borgmeier, nr. 5553.
- Eciton burchelli* *jeanae* Weber, 1941: 329. Co- types [syntypes]: 3 w. (1 s.). B[ritish] Guiana, Oronoque R[iver], 02°42'[N], 21.vii.1936, N.A. Weber, [#] 582. Junior synonym of *Eciton burchelli* st. *cupiens* Santschi: Borgmeier, 1955: 178.
- Eciton lucanoides* Emery, 1894: 176. Syntype: 1 w. Peru, Cumbasa, [no date, no col.]. Missing L1, disarticulated L2.
- Eciton hamatum* var. *mattogrossensis* Luederwaldt, 1920: 4. Cotypes [syntypes]: 2 w. [Brazil], Mato Grosso, S[ão] L[ui]z de Cáceres, [no date, E. Garbe leg.], [#] 19608. Junior synonym of *Eciton hamatum* Fabricius: Borgmeier, 1953: 10.
- Eciton vagans* subsp. *mutatum* Borgmeier, 1955: 242. Holotype: 1 g. C[osta] R[ica], S[na] José, H. Schmidt, coll. Borgm[eyer], # 5948. Paratypes: 1 g., 2 m., 3 w. (1 s.). Costa Rica, Hamburg Farm, [no date, no col.], Nevermann leg. One male missing wings, one worker missing L1. Types [paratypes]: 1 m., 1 w. (1 s.). Costa Rica, San José, [no date, no col.]. One worker disarticulated head. One male missing wings. Comment: There is one pupa on the same pin of the worker, but it is not mentioned in the original publication. We do not consider it a type.
- Eciton mexicanum* subsp. *panamense* Borgmeier, 1955: 257. Types [paratypes]: 1 w., 1 g. [Pan- ama], Barro Col[orado] Is[land], 29.iii.[19]46, [Schneirla col.], Cotypes [paratypes]: 3 w. (1 s.). Panamá, Pequeni River, 16.xii.[19]47, R. Schneirla col.
- Eciton pittieri* Forel, 1899: 24. Cotype [syntype]: 1 w. Costa Rica, Buenos Ayres [Aires, no date], Pit- tier [leg.], coll. Forel. Missing L5. Combination in *Eciton (Labidus)*: Emery, 1910: 23; in *Eciton (Holcopone)*: Santschi: 1925: 11. Junior syn- onym of *Eciton hamatum* Fabricius: Borgmeier, 1953: 9.
- Eciton setigaster* Borgmeier, 1953: 22. Paratypes: 3 m. Bolívia, Tropical region, Chaparé, 400 m, 5.xii.1949, Zischka leg., nr. 11864. One male missing head. Paratype: 1 m. Peru, Tingo Ma- ria, Rio Huallaga, 700 m., 1940, leg. Weyrauch. Paratype: 1 m. Peru, Tingo Maria, 670 m., [no date], leg. Weyrauch.
- Eciton uncinatum* Borgmeier, 1953: 21. Holotype: 1 m. Ecuador, Chimbo[r]azo, sept.[ix].[18]94, Rosenberg [leg.], 99-104. Male missing W3 and W4.
- Eciton burchelli* r. *urichi* Forel, 1899: 24. Syntypes: 3 w. Trinidad, [no date], Urichi col. Junior syn- onym of *Eciton foreli*: Borgmeier, 1930: 404. Revived from synonymy as subspecies of *Eciton burchellii urichi* Forel, Weber, 1941: 329.

Eciton vagans Oliver, 1792: 501. Cotypes [syntypes]: 8 w. (2 s.). Costa Rica, San José, H. Schmidt [col.], R. Reichensperger leg., coll. Borgmeier, nr. 5948.

Eciton velutatus Menozzi, 1926: 30. Cotype [syntype]: 1 m. Costa Rica, Orosi. Missing left wings and torn right wings, disarticulated L3, gaster and petiole. Junior synonym of *Eciton jansonii* Forel: Borgmeier 1953: 11.

Genus *Labidus* Jurine

Labidus nero subsp. *denticulatus* Borgmeier, 1955: 129. Type [holotype]: 1 m. Type [paratype]: 1 male [Brazil], PA[rá], Serra do Cachimbo, [09°22'S, 54°54'W, 420 m.], ix.1953, H. Sick leg. Holotype: Genitalia dissociated, disarticulated left forewing.

Eciton (Labidus) caecum st. *servillei* var. *hostilis* Santschi, 1920: 368. Cotype [syntype]: 1 m. French Guiana, Nouveau Chantier, coll. Le Moul. Missing head, genitalia dissociated [Unavailable name, material referred to *Labidus coecus* Latreille, 1802 by Borgmeier, 1953: 14 (Bolton, 1995)].

Eciton (Labidus) coecum st. *nero* Santschi, 1930: 82. Syntype: 1 m. [Brazil, Rio de Janeiro,] Itatiaya [Itatiaia], 15.x.[19]28, J.F. Zikán [original description says Reichensperger leg.]. Combination in *Labidus* and raised to species: Borgmeier, 1953: 14. See also: Borgmeier, 1955: 127. Junior synonym of *Labidus mars* Forel: Nascimento *et al.* 2004: 618.

Eciton (Labidus) serpentis Weber, 1938: 209. Cotype [syntype]: 1 w. B[ritish] Guiana, Oronoque R[iver], 02°42', N.A., [1.viii.1936], Weber col., [#] 620. Junior synonym of *Labidus coecus* Latreille: Borgmeier, 1955: 86.

Genus *Neivamyrmex* Borgmeier

Eciton (Acamatus) adnepos Wheeler, 1922: 2. Syntype: 1 w. Trinidad, [Botanical Garden at Port of Spain], vii. 1920, Wheeler col. Combination in *Neivamyrmex*: Borgmeier, 1953: 18.

Neivamyrmex agilis Borgmeier, 1953: 45. Cotypes [paratypes]: 8 w. Mexico, Chihuahua, Rio Santa Maria, [no date], C.H.T. Townsend leg. One worker with head only.

Eciton alfaroi Emery, 1890: 39. Cotypes [syntypes]: 1 g. 2 w. Costa Rica, San José, Schmidt leg,

[#] 1938. Combination in *Eciton (Acamatus)*: Emery, 1894: 182, in *Eciton (Neivamyrmex)*: Borgmeier, 1949: 20; in *Neivamyrmex*: Borgmeier, 1953: 6.

Eciton pilosum var. *angustius* Forel, 1909: 256. Syntypes: 3 w. Paraguay, S[an] Bernadino, 1860, Fiebrig col. Combination in *Neivamyrmex*: Borgmeier, 1953: 8. Junior synonym of *Neivamyrmex pilosus* Smith: Borgmeier, 1955: 361.

Eciton antillanum Forel, 1897: 299. Cotype [syntype]: 1 w. [Antilles], Grenada, W.I, H.H. Smith col., 99-37, [no date]. Missing L4. Combination in *Eciton (Acamatus)*: Emery 1910: 24; in *Eciton (Neivamyrmex)*: Borgmeier, 1948: in *Neivamyrmex*: Borgmeier, 1953: 8.

Neivamyrmex asper Borgmeier, 1955: 547. Cotypes [syntypes]: 3 w. Costa Rica, Zent, [8.xii.]1911, W[illia]m. M. Wheeler [leg.].

Eciton aztecum Forel, 1901: 49. Cotype [syntype]: 1 m. [Guatemala], San José de Guatemala, [no date], [P.] Strussenberg [col.]. Junior synonym of *Neivamyrmex mexicanus* Enzmann: Borgmeier, 1936: 60.

Eciton (Acamatus) balzani Emery, 1894: 182. Cotypes [syntypes]: 3 w. Bolivia, Beni, Salinas sul, [no date], Balzán leg. One worker disarticulated head and missing antennae. Combination in *Neivamyrmex*: Borgmeier, 1953: 6.

Eciton (Acamatus) bohlsi Emery, 1896: 626. Cotype [syntype]: 1 w. Paraguay, [no date], Balzán col. Disarticulated head. Combination in *Eciton (Neivamyrmex)*: Borgmeier, 1948b: 462; in *Neivamyrmex*: Borgmeier, 1953: 6.

Eciton (Acamatus) bruchi Forel, 1912b: 30. Cotypes [syntypes]: 2 w. Argentina, Catamarca Huasan [1300 m.], 29.i.1912, C. Bruch leg. One worker disarticulated head. Combination in *Neivamyrmex*: Borgmeier, 1953: 8.

Eciton californicum Mayr, 1870: 969. Paratypes: 3 w. [United States of America, California], San Francisco, [no date], Schaufuss leg., coll. Forel. One worker disarticulated L2. Combination in *Eciton (Acamatus)*: Emery, 1894: 182; in *Eciton (Neivamyrmex)*: Smith, M.R, 1942: 560; in *Neivamyrmex*: Borgmeier, 1953: 8.

Eciton (Acamatus) carettei Forel, 1913: 208. Cotype [syntype]: 1 w. Argentina, Prov[ince] Mendoza, 15.v.1912, C. Bruch [col.], # 7. Combination in *Neivamyrmex*: Borgmeier, 1953: 8.

Neivamyrmex carinifrons Borgmeier, 1953: 24. Holotype: 1 m. [Brasil], Rio de Jan[eiro], Rio de Janeiro, Botafogo, 12.vii.[19]40, T. Borgmeier

- col. Disarticulated head, metasoma, wings, genitalia, L1 and L5.
- Eciton (Acamatus) opacithorax* var. *castaneum* Borgmeier, 1939: 416. Cotypes [syntypes]: 11 w. Costa Rica, San José, H. Schmidt [leg.], coll. Borgmeier, [#] 1235, 497, 911, 169, 109. One worker missing L2 (tarsi). Combination in *Eciton (Neivamyrmex)*: Borgmeier, 1948a: 191; in *Neivamyrmex*: Borgmeier, 1953: 5. Junior synonym of *Neivamyrmex opacithorax*: Borgmeier, 1955: 502.
- Neivamyrmex chameleensis* Watkins, 1986: 361. Paratype: 2 w. México, Jal[isco], Chamela Biol[ogical] Station, 21.vi.1984, J.F. Watkins [& Coody] col., (w-329).
- Neivamyrmex clavifemur* Borgmeier, 1953: 30. Type [holotype]: 1 m. Cotypes [paratypes]: 4 m. [Brazil, Rio de Janeiro], Itatiaia [Itatiaia], 10.xii.19[32], J.F. Zikán col. One paratype disarticulated genitalia, other disarticulated head. Cotype [paratype]: 1 m. [Brazil, Rio de Janeiro], Estr[ada] Rio-São Paulo, km 47, 8.i.1943, P. Wygodzinsky col. Cotype [paratype]: 1 m. [Brazil], R[io de] J[aneiro], S[ão] Bento, 5.xi.19[47], R.C. Gonçalves col.
- Eciton (Acamatus) cloosae* Forel, 1912a: 48. Type [holotype]: 1 m., [part of antennae only]. Mexico, Guerrero, R[iver] Papagaio, 400 m., oct[ober, no year], H.H. Smith [col.]. Combination in *Neivamyrmex*: Borgmeier, 1953: 8.
- Neivamyrmex compressinodis* Borgmeier, 1953: 50. Cotypes [paratypes]: 2 w. C[osta] Rica, Port Limon, 25.iii.19[05], C. Paulmier leg. One worker with disarticulated head and L1.
- Eciton (Neivamyrmex) commutatum* Emery, 1900: 184. Cotypes [syntypes]: 4 w. U[nited] S[tates of] A[merica], Texas, Victoria, 17.i.18[33], L.C. Murphree col., [48337]. Cotype [syntype]: 1 w. Colômbia, S[anta] Fé de Bogotá. [no date, no col.], coll. G. Mayr. Combination in *Eciton (Acamatus)*: Emery, 1900: 187; in *Eciton (Neivamyrmex)*: Smith, M.R., 1942: 568; in *Neivamyrmex*: Borgmeier, 1953: 6. Junior synonym of *Labidus spinolae*: Borgmeier, 1955: 409.
- Neivamyrmex crassiscapus* Watkins, 1990: 348. Paratype: 1 m. Mexico, Chiapas, Palenque, 12.vi.1979, [J.F.] Watkins col., at light.
- Neivamyrmex cratensis* Borgmeier, 1953: 38. Holotype: 1 m. [Brazil], Ceará, Crato, 4.xi.19[41], Mangabeira leg. Genitalia dissociated, disarticulated head and tarsal claws.
- Eciton (Acamatus) legionis* subsp. *crenulatum* Mann, 1916: 422. Syntype: 1 w. [Brazil], RO [Rondônia], Madeira-Mamoré, km 284, 1916, Mann & Baker leg., [camp. N° 39]. Junior synonym of *Neivamyrmex cristatus* André: Borgmeier, 1953: 10.
- Eciton (Acamatus) densepunctatum* Borgmeier, 1933: 162. Syntypes: 19 w. [Brazil], Rio de Janeiro, [Itatiaia], Campo Bello, [17.iii.1926], J.F. Zikán leg., coll. Reichensperger, # 5444. One worker missing mesosoma and head. Other worker missing head. Other disarticulated body. Combination in *Neivamyrmex*: Borgmeier, 1953: 5.
- Neivamyrmex detectus* Borgmeier, 1953: 25. Type [holotype]: 1 m. Cotypes [paratypes]: 4 m. [Brazil, Rio de Janeiro], Itatiaia [Itatiaia], 6.xii.1928, 3.xi.1929, 9.xi.1931, 9.xi.1937, xi.1949, Zikan, J.F. [leg.]. Paratype: one male missing gaster and a part of A2 (funiculus), another male with disarticulated head and gaster, genitalia dissociated and missing A1 (funiculus), another with gaster and left wings disarticulated. Paratype: 1 m. [Brazil, Rio de Janeiro], Petrópolis, 3.xi.19[48], [Zikan, J.F. leg.]. Paratypes: 2 m. [Brazil, Rio de Janeiro], Angra dos Reis, Jussara, 26.x.1935, S. Lopes et H. Lent [leg.]. One male missing A1 (funiculus). Paratype: 1 m. [Brazil], São Paulo, Eug[enio] Lefevre, 1.xi.1937, Lopes et Oiticica [leg.]. Paratypes: 2 m. [Brazil], São Paulo, Ypiranga [Ipiranga], 17.vi.1896, Dr. L. Roth leg. Cotypes [paratypes]: 2 m. [Brasil, São Paulo], Alto da Serra, iv and vi.1929, R. Spitz col. One male missing A1. Paratype: 1 m. Brazil, S[ão] P[aulo], Cantareira, iv.1920, H.V. Lüderwaldt col. Missing left wings.
- Eciton (Acamatus) diana* Forel, 1912b: 31. Syntypes: 20 w. Brazil, São Paulo, Ituverava, 1911, E. Garbe col., coll. von Ihering, [#] 16196. Combination in *Neivamyrmex*: Borgmeier, 1953: 8.
- Neivamyrmex klugii* subsp. *distans* Borgmeier, 1953: 32. Holotype: 1 m. Paratypes: 2 m. Costa Rica, [no date], F. Nevermann col. Holotype: missing L2 (tibia), L5 (tarsi), left hindwing, genitalia dissociated. Paratype: One male genitalia dissociated, another missing A2 (part). Paratype: 1 m. Costa Rica, S[an]ta Clara Pr, Hamburg Farm, 10.v.19[26], F. Nevermann col. Cotype [paratype]: 1 m. Bolivia, Staudinger, [no date, no col., coll. Emery].
- Eciton (Acamatus) diversinode* Borgmeier, 1933: 163. Paratypes: 13 w. Brasil, Go[í]ás, Campinas [Go[í]ânia], iii.1928, 7.x.1928, 15.x.1928, 13.ii.1929; [#] 3744, 4591, 4689, 4879, Schwarzmaier leg. One worker missing

- mesosoma and head. Paratypes: 7 w. Argentina, Prov[ince] de Cordoba e Tantiviejo, [no date], C. Bruch leg., [#] 1112. Combination in *Eciton* (*Neivamyrmex*): Borgmeier, 1948b: 462 in *Neivamyrmex*: Borgmeier: 1953: 5. Junior synonym of *Neivamyrmex bohlsi*: Borgmeier, 1948b: 462.
- Labidus dorbignii* Shuckard 1840: 259. Syntypes: 8 w. [Brazil, Rio Grande do Sul], Pareci Novo, 28.xi.[18]25, Rambo col. [Mons. D'Orbignii col. in original publication, #] 108. Combination in *Eciton*: Dalla Torre, 1893: 2; in *Eciton*: Forel, 1895: 119; in *Eciton* (*Acamatus*): Emery, 1900: 187; in *Neivamyrmex*: Borgmeier, 1953: 14. Comment: Not with standing the labels say Pareci Novo, which is in Rio Grande do Sul, in the original description Shuckard (1840) says that the paratypes were collected in "South America"; Bolton (1995) states that Emery (1900) says that the types are from Bolivia.
- Eciton* (*Acamatus*) *melshaemeri* subsp. *desartsi* Forel, 1907: 2. Holotype: 1 m. (only part of legs). Type [paratype]: 1 m. Paraguay, [Estancia Postillon, Puerto Max. Rio Paraguay, 9.iii.1905, Louis Des Arts Jr. leg.] Paratype: One male missing left hindwing, disarticulated gaster, genitalia dissociated. Junior synonym of *Neivamyrmex romandii* Schuckard: Borgmeier, 1953: 9.
- Eciton* (*Acamatus*) *angustinode* subsp. *emersoni* Wheeler, 1921: 311. Cotypes [syntypes]: 3 w. British Guiana, Kartabo, vii-viii.1920, [no col.], W.M. Wheeler coll. One worker disarticulated head, A2 and mandible. Combination in *Neivamyrmex*: Borgmeier, 1953: 18.
- Eciton* (*Acamatus*) *emeryi* Santschi, 1921: 92. Cotype [syntype]: 1 m. Peru, [Mariscal Cáceres Province], Juanjui, [1900, no col.]. One male disarticulated head and right hind wing, missing A1 (funiculus), genitalia dissociated. Combination in *Neivamyrmex*: Borgmeier, 1953: 13.
- Neivamyrmex fallax* Borgmeier, 1953: 48. Cotype [paratype]: 1 w. [United States of America], Tex[as], Victoria, 17.i.[19]33, L.C. Murphree col.
- Eciton* (*Acamatus*) *flicorne* Santschi, 1916: 369. Cotype: [syntype]: 1 m. [Argentina], Chaco de Santiago del Estero, La Palisa, Bords du Rio Salado, 26 Kil[Km], N.O. d'Icaño, xii.1909, E.R. Wagner leg. Genitalia dissociated. Junior synonym of *Neivamyrmex jerrmanni* Forel: Borgmeier, 1953: 14.
- Neivamyrmex foveolatus* Borgmeier, 1953: 41. Types [paratypes]: 2 m. Panama, Vulk[án] Chiriqui, vii.[1]930 [original description says iv.1930], A. Bierig leg. One male disarticulated gaster and head.
- Eciton* (*Acamatus*) *pseudops* r. *garbei* Forel, 1912a: 47. Syntypes: 27 w. [Brasil], S[ão] P[aulo], Franca, i.1911, E. Garbe col., MP # 15.881, # 15.882. One worker missing A2, another worker missing L6 (tibia), another missing L4 (tarsi) and L5 (tibia), another missing L1 (tarsi), another missing L6 (tibia), another two missing L3 (tibia), another disarticulated gaster, another missing A2. Junior synonym of *Neivamyrmex pseudops* Forel: Borgmeier, 1953: 9.
- Neivamyrmex genalis* Borgmeier, 1953: 34. Type [holotype]: 1 m. Bolivia, Región tropical 400 m, Región Chaparé, 25.ii.[19]49, M. Zischka col. Cotype [paratype]: 1 m. Bolivia, Mapiiri, Staudinger, [no date, no col.]. One male disarticulated head, dissociated genitalia, gaster broken. Paratype: 1 m. (only head). [Bolivia, no date, no col.]
- Neivamyrmex gibbatus* Borgmeier, 1953: 45. Types and cotypes [syntypes]: 9 w. Costa Rica, Hamburg Farm, 24.i.[19]38, Nevermann leg. One worker disarticulated head. Cotypes [syntypes]: 5 w., 1 g. Panama, Barro Colorado Island, 19.i.[19]48, Schneirla leg, # 224. One worker disarticulated head. Syntypes [cotypes]: 6 w. [British] Guiana, Kartabo, 25.vii.[19]24, S.C. Crawford leg., # 1093.
- Eciton* (*Acamatus*) *goeldii* Forel, 1901: 352. Syntype: 1 w. [Brazil, Bahia], Jakobina [Jacobina], Sertão de Bahia, 1890, Göldi col. Combination in *Eciton* (*Neivamyrmex*): Borgmeier: 1948b: 462; in *Neivamyrmex*: Borgmeier, 1955: 396. Missing L6 tibia.
- Eciton graciellae* Mann, 1926: 97. Cotype [syntype]: 1 w. Mexico, Jal[isco], Ototonilco, [no date], W.M. Mann col. [original publication say Graciella Mercedes Maderiaga col.]. Disarticulated head. Combination in *Neivamyrmex* and spelling emended to *graciellae*: Borgmeier, 1953: 10.
- Neivamyrmex gracilis* Borgmeier, 1955: 590. Cotype [syntype]: 1 m. Brasil, Bahia, Canudos, vii.1951, L. Travassos col. Cotypes [syntypes]: 4 m. [Brazil], S[ão] P[aulo], Agudos, i.1953, 26.ii.1954, W. Kempf col., [#] 921, 922. One male disarticulated head, another genitalia dissociated.
- Neivamyrmex gradualis* Borgmeier, 1953: 46. Holotype: 1 w. Paratype: 1 w. Bolivia, Rio Ibares, "entre Los Tojabos y Los Cusis", [no date], Lizer & Deletang leg., # 977. Holotype: missing A2. Paratype: missing L5 (tarsi).

- Eciton (Acamatus) pseudops* r. *grandipseudops* Forel, 1915: 353. Syntype: 1 w. Argentina, Prov[ince] Salta, [no date], C. Bruch [col.], # 298303. Missing L4 (tibia, tarsi) and L5 (tarsi). Junior synonym of *Neivamyrmex pseudops* Forel: Borgmeier, 1936: 64.
- Labidus guerinii* Shuckard, 1840: 397. Type [holotype]: 1 m, only one antenna. [Brazil, no date, no col.] Combination in *Eciton*: Dalla Torre, 1893: 3, in *Eciton (Acamatus)*: Emery: 1900: 186, in *Neivamyrmex*: Borgmeier, 1953: 14.
- Eciton (Neivamyrmex) angustinode* subsp. *haskinsi* Weber, 1943: 68. Cotype [syntype]: 1 w. Trinidad, B.W.I., [C.P.Haskins col.], 23.vi.[19]35, [n°]209.2. One worker missing L3 (tarsi), disarticulated head, A2. Junior synonym of *Neivamyrmex emersoni* Wheeler: Borgmeier, 1955: 555.
- Eciton hetschkoi* Mayr, 1886: 36. Cotype [syntype]: genitalia only. [Brasil], Paraná, Palmas, [26. iv.1885], [H.] Hetschko [col.]. Combination in *Eciton (Labidus)*: Mayr; 1886: 441 in *Eciton (Acamatus)*: Emery, 1894: 184; in *Neivamyrmex*: Borgmeier, 1953: 11. Comment: We found also in the collection one worker with same data labeled as nidotype.
- Eciton (Acamatus) humile* Borgmeier, 1939: 415. Syntypes: 8 w. Costa Rica, San José, [no date], H. Schmidt col., [n°] 198. One worker missing head and L4 (femur). Combination in *Eciton (Neivamyrmex)*: Borgmeier, 1948a: 194; in *Neivamyrmex*: Borgmeier, 1953: 5.
- Eciton (Acamatus) impudens* Mann, 1922: 19. Cotypes [syntypes]: 4 w. Honduras, Progreso, [no date], W.M. Mann col. [#] 24446. One worker head dissociated and disarticulated A2. Combination in *Neivamyrmex*: Borgmeier, 1953: 10.
- Neivamyrmex iridescens* Borgmeier, 1950: 623. Cotype [paratype]: 1 w. B[ritish] Guiana, Oronoque R[iver], 02°42', 1.viii.[19]38, N.A. Weber, [#] 621. Cotype [paratype]: 1 w. Suriname, Courantyne R[iver], 9.viii.[19]36, N.A. Weber col., [#] 5491. One worker disarticulated head, mandible, L1, L5, missing A1, L4, L2 (tarsi) and L6 (tarsi).
- Eciton jerrmanni* Forel, 1901: 48. Type [holotype]: 1 m. Paraguay, 6.xii.1897, C[a]pt[ain] Jerrmann leg., # 561. Genitalia dissociated. Combination in *Eciton (Acamatus)*: Emery, 1910: 26; in *Neivamyrmex*: Borgmeier, 1953: 8.
- Eciton (Neivamyrmex) laevigatum* Borgmeier, 1948b: 460. Cotypes [syntypes]: 7 w. Arg[entina], Roque S[ae]nz Peña, Chaco, 13.vi.1948 (the original publication says 15.vi.1948), N. Kusnezov leg., # 2580. One worker disarticulated head. Combination in *Neivamyrmex*: Borgmeier, 1953: 5.
- Eciton (Acamatus) lemoulti* Santschi, 1912: 524. Type [holotype]: 1 m. Guyane [French Guiana], [La Forestière, St. Laurent de] Maroni, [no date], Le Moulst col. Disarticulated head, A1 missing right wings, genitalia dissociated. Combination in *Neivamyrmex* and as "race" of *N. halidaii*: Borgmeier, 1953: 14. Junior synonym of *Neivamyrmex halidaii* Shuckard: Borgmeier, 1955: 437.
- Eciton (Acamatus) lieselae* Forel, 1913: 209. Paratype: 1 m. [Argentina], Prov[ince] Santa Fé, Rosario, [no date], C. Bruch col. One male disarticulated head and wings, genitalia dissociated. Combination in *Neivamyrmex*: Borgmeier, 1953: 8.
- Neivamyrmex longiscapus* Borgmeier, 1953: 27. Type [holotype]: 1 m. Cotypes [paratypes]: 5 m. Costa Rica, Prov[ince] Santa Clara, Hamburgfarm, [holotype was collected in 22.v.1936], 10.v.1925 and 1.vi.1926, [F.] Nevermann leg. # 198. Paratypes: One worker missing head, genitalia of other specimen dissociated.
- Eciton (Acamatus) luederwaldti* Emery, 1911: 220. Cotypes [syntypes]: 2 m. [Brazil], S[ão] P[aulo], Ipiranga, M[useu] P[aulista], # 157483 and # 157489. One male disarticulated gaster, genitalia dissociated. One male disarticulated wings, missing right hindwing, mesosoma broken, incomplete right and left funiculi, missing L1. Junior synonym of *Neivamyrmex jerrmanni* Forel: Borgmeier, 1933: 167.
- Neivamyrmex macropterus* Borgmeier, 1953: 40. Cotype [paratype]: 1 m. Mexico, [23.v.1918], F.C. Baker col., coll. F.C. Baker, [#] 2320. One male disarticulated head, genitalia dissociated.
- Eciton (Acamatus) manni* Wheeler, 1914: 41. Cotype [syntype]: 1 w. Mex[ico], Hidalgo, Guerrero Mill, [no date], W.M. Mann leg. Disarticulated head. Combination in *Neivamyrmex*: Borgmeier, 1953: 18.
- Eciton (Acamatus) marginatum* Borgmeier, 1939: 414. Cotypes [syntypes]: 7 w. Costa Rica, Hamburg Farm, [no date], Nevermann leg., coll. Borgmeier, # 168, # 5914. One worker missing L1 (tarsi), disarticulated head and A2. Combination in *Eciton (Neivamyrmex)*: Borgmeier, 1948a: 198. Junior synonym of *Neivamyrmex adnepos* Wheeler: Borgmeier, 1953: 5. Comment: We found also in the collection a pin labeled "cotype" (four workers, Costa Rica, San

- José, Nevermann, 30.viii.[19]36, [# 5922]), but the locality data is different from that of the original publication. We do not consider them as types.
- Neivamyrmex megathrix* Kempf, 1961: 486. Holotype: 1 w. Paratypes: 9 w. Suriname, La Poulle, viii.1959, (17-XVa-2), Drift col. Holotype: One worker disarticulated head. Paratypes: 9 w. Suriname, Dirkshoop, x.1959, (17-DVa-2), Drift col.
- Eciton (Acamatus) melanocephalum* Emery, 1895: 260. Cotypes [syntypes]: 2 w. Mexico, [Nayarit], Tepic, [no date, no col.], # 5506, coll. T. Pergande. Combination in *Eciton (Neivamyrmex)*: Smith, M.R., 1942: 549; in *Neivamyrmex*: Borgmeier, 1953: 6.
- Neivamyrmex micans* Borgmeier, 1953: 32. Type [holotype]: 1 m. Cotypes [paratypes]: 2 m. [Brazil], M[at]o Grosso, F[azenda] Murtinho, ii.1930, Spitz [leg.]. One male disarticulated head, another male genital dissociated, disarticulated hindwing 1 and missing wing 2. Cotype [paratype]: 1 m. [Brazil], M[at]o Grosso [do Sul], Maracaju, iii.1937, Shannon & Lane leg., # 3-937. Disarticulated gaster, missing L4. Cotype [paratype]: 1 m. [Brazil], Goyas [Goiás], Campinas [Goiânia], 19.xi.[19]36, Schwarzmaier [leg.]. Missing left wings, torn right forewing and disarticulated right hindwing.
- Eciton (Labidus) spininode* st. *militarium* Santschi, 1929a: 84. Syntypes: 3 w. Panama, Changuinola, Distr[ict] Bocas del Toro, 3.vii.1924, G.C. Wheeler [col.], # 154. One worker missing head, another worker disarticulated L5 (tarsi) and L6. Junior synonym of *Neivamyrmex pilosus mexicanus* Smith: Borgmeier, 1953: 14.
- Eciton (Acamatus) balzanii* subsp. *minenses* Borgmeier, 1928: 58. Cotypes and types [syntypes]: 6 w. Brasil, M[inas] G[erais], Pirapora, 1912, E. Garbe leg., [#] 2885. One worker disarticulated head A1 and A2. Combination in *Neivamyrmex*: Borgmeier, 1953: 5.
- Eciton (Acamatus) modestum* Borgmeier, 1933: 165. Cotypes [syntypes]: 12 w. [Brazil], Rio de Janeiro, Mendes, ix.1933, H. Eidmann col., coll. Borgmeier, # 5483. Two workers disarticulated head, A2. Combination in *Neivamyrmex*: Borgmeier, 1953: 5.
- Eciton (Acamatus) richteri* var. *modificata* Forel, 1913: 212. Cotype [syntype]: 1 m. Argentina, Prov[ince] Cordoba. C. Bruch, # 259. Genitalia dissociated. Syntype: 1 m. (only tarsal claws). Argentina, [no date, no col.]. Junior synonym of *Neivamyrmex sulcatus* Mayr, 1868: Borgmeier, 1953: 9. Comment: We found also in the collection a pin labeled as "Type" (1 m. Argentina, Prov[ince] Santa Fé, [no date], C. Bruch [col.]), but the locality is different from that showed in the original publication. We do not consider it as a type.
- Neivamyrmex moseri* Watkins, 1969: 529. Paratypes: 2 w. U[nited] S[tates of] A[merica], Louisiana, Rapides Parish, Kisatchie Nat[ional] For[est], 93°36' long., 31°14' lat., 13.iv.1959, John C. Moser col.
- Leptanilla nordenskioldii* Holmgren, 1908: 347. Syntypes: 2 w. Peru, [Province de Sandia], Quiaca, [no date], Holmgren col. Combination in *Eciton (Acamatus)*: Emery, 1910: 25, in *Neivamyrmex*: Borgmeier, 1953: 10.
- Eciton (Acamatus) hetschkoi* var. *ogloblini* Santschi, 1934: 25. Cotypes [syntypes]: 4 w. Arg[entina], Misiones, Est. Exp. Loreto, [no date], Dr. A.A. Oglobin leg., # 1984 and # 2001. One worker missing A2, another disarticulated A2. Combination in *Neivamyrmex*: Borgmeier, 1953: 13. Junior synonym of *Neivamyrmex hetschkoi*: Borgmeier, 1955: 472.
- Eciton (Acamatus) orthonotum* Borgmeier, 1933: 165. Cotypes [paratypes]: 10 w. [Brazil], Goiás, Campinas [Goiânia], vi.[19]28, 14, 15.xii.[19]28, Schwarzmaier leg., # 5303, # 4693, # 4268, # 4607. Cotypes [paratypes]: 4 w. [Brazil], [Rio de Janeiro] Mendes, [ix.1933], Eidmann leg., # 5482. One worker missing head, disarticulated A1. Cotypes [paratypes]: 3 w. [Brazil], R[io de] J[aneiro], 9.xi.[19]28, Zikan col. One worker missing A2. Combination in *Neivamyrmex*: Borgmeier, 1953: 5.
- Neivamyrmex pacificus* Borgmeier, 1955: 536. Cotypes [syntypes]: 3 w. Peru, Trujillo, vii.1939, Weyrauch leg., # 87. Cotypes [syntypes]: 3 w. Peru, Valle Chicama, 40 km NE from Trujilo, [no date], Weyrauch leg., # 151. One worker missing L1.
- Neivamyrmex perplexus* Borgmeier, 1953: 36. Type [holotype]: 1 m. [Brazil], M[at]o Grosso, Rio Cariguati, iii.1953, [F.] Plaum[ann col.]. Male disarticulated head, dissociated genitalia.
- Neivamyrmex piraticus* Borgmeier, 1953: 37. Type [holotype]: 1 m. [Brazil], S[ão] Paulo, Ipiranga, i.[19]23, Spitz leg. Cotype [paratype]: 1 m. [Brazil], S[ão] Paulo, Serra Negra, i.1931, Borgmeier col. Cotype [paratype]: 1 m. [Brazil], São Paulo, São José dos Campos, xii.[19]34, Lopes col. Cotype [paratype]: 1 m. [Brazil],

- Espírito Santo, S[anta] Teresa, xii.1928, O. Conde leg. One male missing funiculi A2.
- Neivamyrmex planidens* Borgmeier, 1953: 31. Holotype: 1 m. Ecuador, Balzapamba, [no date], R. Haensch col. Disarticulated fore wings, two missing hind wings, disarticulated head, dissociated genitalia.
- Eciton (Acamatus) porrectognathum* Borgmeier, 1933: 167. Cotypes [paratypes]: 2 m. [Brazil, Rio de Janeiro], Angra dos Reis, L. T[ravassos leg.]. xii.1931. One male missing A1 (part), right forewing. Cotypes [paratypes]: 3 m. [Brazil, Rio de Janeiro], Itatiaia, 30.xi.[19]24, Zikán leg. One male missing head, other missing left wings, other represented only by the head. Combination in *Neivamyrmex* Borgmeier, 1953: 5. Junior synonym of *Neivamyrmex pilosus* Smith: Borgmeier, 1955: 361.
- Eciton (Acamatus) postangustatum* Borgmeier, 1934: 94. Cotypes [paratypes]: 20 w. [Suriname], Paramaribo, [no date], Bünzli [leg.], # 5446. Combination in *Neivamyrmex*: Borgmeier, 1953: 5.
- Neivamyrmex postcarinatus* Borgmeier, 1953: 43. Type [holotype]: 1 m. Cotypes [paratypes]: 16 w. [Panama], Barro Col[orado] Is[land], 8.iii.[19]46, Schneirla col., # 97, # 100. Paratype: one worker disarticulated head, missing L4 and second gastral tergite, another worker disarticulated L3 (femur), another missing L6, another missing L6 (tibia).
- Eciton pseudops* Forel, 1909: 254. Syntypes: 3 w. Paraguay, San Bernardino, 31.viii.1890, Fiebrig leg. (Ex. coll. A. Forel; MP 16032). One worker missing L2 (tarsi), L3 (tibia) and L4 (femur). Combination in *Eciton (Acamatus)*: Emery, 1910: 25; in *Eciton (Neivamyrmex)*: Borgmeier: 1948b: 462; in *Neivamyrmex*: Borgmeier, 1953: 8.
- Neivamyrmex puerulus* Borgmeier, 1955: 591. Cotype [paratype]: 1 m. Panama, Pan[ama], 26.ix.[19]52, F.S. Blanton col. Genitalia dissociated.
- Neivamyrmex pullus* Borgmeier, 1953: 42. Cotype [paratype]: 1 m. Panama, Corozal, Canal Zone, 7.iv.[19]11, A. Busck col., (at light). Disarticulated head. Cotype [paratype]: 1 m. Panama, Taboga Island, 13.vi.19[11], A. Busck col. Cotype [paratype]: 1 m. Panama, Tabernilla, Canal Zone, 14.v.1907, A. Busck col., Genitalia dissociated. Cotype [paratype]: 1 m. Panama, B[arro] C[olorado] I[sland], 31.v.1946, Schneirla col.
- Eciton (Acamatus) raptor* Forel, 1911: 289. Cotypes [syntypes]: 10 w. Brasil, S[ão] P[aulo], Ipiranga, 13 and 15.x.[19]07, 16.x.1917, H. Luderwaldt [col., von Iheringi leg.]. Combination in *Neivamyrmex*: Borgmeier, 1955: 481. Comment: one pin holding a single specimen has an additional label saying nidotype.
- Eciton (Acamatus) raptans* var. *rebellatum* Santschi, 1934: 25. Cotype [syntype]: 1 w. [Argentina], Cordoba, Alta Gracia, La Granja, i.1922, C. Brunch leg. Disarticulated L4, L5, L6, head, missing A2. Combination in *Neivamyrmex*: Borgmeier, 1953: 13. Junior synonym of *Neivamyrmex raptans*: Borgmeier, 1955: 481.
- Neivamyrmex rugulosus* Borgmeier, 1953: 49. Paratype: 1 w. Mex[ico], Jalisco, Zapotlán, [no date], Townsend leg. Disarticulated head. Paratypes: 3 w. Mex[ico], Tepic, [Nayarit, no date, T. Pergande leg.]. Disarticulated head.
- Neivamyrmex scutellaris* Borgmeier, 1953: 28. Paratype: 1 m. Pan[ama], Cabima, 26.v.1911, August Busck col., [#] 28. Missing gaster.
- Eciton silvestrii* Emery, 1906: 109. Type and cotype [syntypes]: 2 w. Argentina, Misiones, S[anta] Ana, [no date, no col.]. One worker missing A2. Combination in *Eciton (Acamatus)*: Bruch, 1914: 215; in *Neivamyrmex*: Borgmeier, 1953: 6. Junior synonym of *Neivamyrmex hetschkoi* Mayr: Borgmeier, 1955: 472. Comment: one of the specimens bears a label saying lectotype, although we were not able to find this designation in the literature.
- Eciton (Acamatus) spatulatum* Borgmeier, 1939: 417. Syntypes: 4 m. Costa Rica, Hamburg Farm, 25.xi.[19]35, Reichensperger col., F. Nevermann leg., # 13, 200. One male disarticulated head. Combination in *Neivamyrmex*: Borgmeier, 1953: 5.
- Eciton spoliator* r. *triste* Forel, 1901: 48. Holotype: 1 m. Mex[ico], Chiapas, Soconusco, Herrm & Hans Kulow cols, 1120 m über Meer, ded., 6.vii.1900. One male missing L4, disarticulated head and genitalia dissociated. Combination in *Neivamyrmex* and raised to species: Borgmeier, 1953: 9.
- Eciton (Acamatus) taunayi* Borgmeier, 1928: 55. Type [holotype]: 1 m. Brasil, S[ão] P[aulo], Ipiranga, v.1916, Luderwaldt leg., # 19687. Missing L1, L2 (tarsi), L3 (tarsi), L5 and L6 (tarsi), left forewing, disarticulated head and A2. Junior synonym of *Neivamyrmex hetschkoi* Mayr: Borgmeier, 1953: 5.
- Neivamyrmex tenuis* Borgmeier, 1953: 36. Holotype: 1 m. Paratypes: 7 m. [Brazil], M[ato] Grosso, Rio Cariguati, ii.[19]53, [F.] Plaum[ann] col.

Paratype: One male with disarticulated head and dissociated genital, another male represented only by tarsal claws.

Neivamyrmex vicinus Borgmeier, 1953: 35. Type [holotype]: 1 m. Cotypes [paratypes]: 4 m. [Brazil], Goiás, Campinas [Goiânia], 10.i.1934, T. Borgmeier col., Paratype: One male disarticulated head, genitalia dissociated, disarticulated forewing and hindwing 1, other male represented only by head, disarticulated mandible, other male represented only by tarsal claws.

Eciton (Acamatus) melanocephalum subsp. *xipe* Wheeler, 1914: 41. Cotype [syntype]: 1 w. Mexico, Hidalgo, San Miguel. W.M. Mann. Junior synonym of *Neivamyrmex melanocephalus*: Smith. M.R., 1942: 549.

Genus *Nomamyrmex* Borgmeier

Eciton (Labidus) apicifer Santschi, 1916: 366. Type [holotype]: 1 m. Paraguay, S[anta] Trinidad, x.1913, [Zurcher leg.]. Disarticulated W1 and W2. Junior synonym of *Nomamyrmex hartigii* Westwood: Borgmeier, 1953: 14.

Eciton (Holopone) crassicornis subsp. *crudele* Santschi, 1929b: 414. Cotype [syntype]: 1 w. Paraguay, [no date, Fiebrig leg.]. Missing L6 (tarsi). Junior synonym of *Nomamyrmex esenbeckii* Westwood: Borgmeier, 1955: 139.

Eciton (Holopone) crassicornis var. *indomabile* Santschi, 1930: 82. Cotypes [syntypes]: 9 w. [Brazil], Pernambuco, Olinda, [no date], Reichensperger col. Junior synonym of *Nomamyrmex esenbeckii* Westwood: Borgmeier, 1955: 139.

Subfamily Leptanilloidinae

Tribe Leptanilloidini

Genus *Asphinctanilloides* Brandão *et al.*

Asphinctanilloides amazona Brandão, Diniz, Agosti & Delabie, 1999: 31. Paratypes: 2 w. Brazil, AM [Amazonas], [North of] Manaus 4832, Fazenda Esteio, [c. 70 km], RS [Reserva] 1202 [02°24'50"S, 59°52'11"W], M12S [sample], [ZF 23 Road, km 28, Projeto Dinâmica Biológica de Fragmentos Florestais, INPA/Smithsonian], 12.xi.1993, A.B. Casimiro col. Two workers dissected and preserved on slide.

Asphinctanilloides anae Brandão, Diniz, Agosti & Delabie, 1999: 32. Holotype: 1 w. Paratypes: 9 w. Brazil, SP [São Paulo], Mirassol, Faz[enda]

da Lima, 30.iv.1979, J.L.M. Diniz col., # 1850. Paratype: One worker fragmented, dissected and preserved on slide.

Asphinctanilloides manauara Brandão, Diniz, Agosti & Delabie, 1999: 33. Paratype: 1 w. Brazil, AM [Amazonas, 70 km North of] Manaus 4832, [Fazenda Esteio, ZF 23 road, km 28], RS [Reserve] 1301 [02°26'13"S, 59°48'35"W, Projeto Dinâmica Biológica de Fragmentos Florestais, INPA/Smithsonian, soil sample] H46 S [sample], 16.xii.1993 [publication says 14.xii.1993], A.B. Casimiro col., [# 1001]. Worker fragmented and dissected, preserved on slide.

Genus *Leptanilloides* Mann

Leptanilloides biconstricta Mann, 1923: 14. Paralectotypes: 3 w. Bolivia, La Paz, Tumupasa, [no date], W.M. Mann col. Two workers fragmented.

Leptanilloides legionaria Brandão, Diniz, Agosti & Delabie, 1999: 29. Paratypes: 2 w. Colombia, Santa Marta M[oun]t[ain]s, Walker Expedition, 7.vii.1913, F.M. Gaige col., # 55.

Leptanilloides mckennae Longino, 2003: 2. Paratypes: 2 w. CR [Costa Rica], Puntarenas Prov[ince], Monteverde, 1300 m, 10°18'N, 84°48'W, vii.1995, D. Mckenna col. Moist forest litter.

Leptanilloides nomada Donoso, Vieira & Wild, 2006: 50. Paratypes: 3 w. Ecuador, Cotopaxi, Otonga Reserve, 1960 m, 00°25'S, 79°00'W, # AW2146, 2.xii.2003, A.L. Wild & J.M. Vieira cols, Cloud forest, column of ants on forest floor & in soil.

Leptanilloides sculpturata Brandão, Diniz, Agosti & Delabie, 1999: 30. Paratype: 1 w. Colombia, Venice (near Medellin), v.1956, E. Flanders col., # 56-6029. Associated with *Acropyga fuhrmanni* on healthy coffee trees.

RESUMO

O presente catálogo lista os espécimes-tipo de espécies nominais de formigas "dorilomorfas" (Aenictinae: Aenictus; Cerapachyinae: Acanthostichus e Cerapachys; Ecitoninae: Eciton, Labidus, Neivamyrmex e Nomamyrmex; e Leptanilloidinae: Asphinctanilloides e Leptanilloides) depositados na coleção de Formicidae do Laboratório de Hymenoptera do Museu de Zoologia da Universidade de São Paulo (MZSP), Brasil. No total, a coleção inclui tipos de 141 espécies nominais de formigas dorilomorfas, das quais 56 ainda são válidas. A maioria

dos tipos de dorilomorfas na coleção do MZSP são sín-tipos (67), mas há na coleção 13 espécies representadas apenas pelos holótipos, 17 por holótipos e parátipos, 43 espécies representadas apenas por parátipos e uma espécie por um paralectótipo. São apresentados os dados de rótulos, estado de conservação dos exemplares, alterações nomenclaturais, status taxonômico e índices para os táxons catalogados.

PALAVRAS-CHAVE: Catálogo; Formigas; Tipos; MZSP; Dorilomorfas; Hymenoptera.

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APPENDIX

Index I: Currently valid names of the listed taxa, followed by their original names (if applicable)

- Acanthostichus arizonensis*
Acanthostichus brevinodis
Acanthostichus concavinodis
Acanthostichus femoralis
Acanthostichus laevigatus
Acanthostichus laticornis – *Acanthostichus laticornis*
 var. *obscuridens*
Acanthostichus lattkei
Acanthostichus punctiscapus
Acanthostichus quirozi
Acanthostichus sanchezorum
Acanthostichus truncatus
Aenictus eugenii caroli – *Aenictus eugenii* subsp. *caroli*
Aenictus ceylonicus – *Eciton (Aenictus) ceylonicus*
 subsp. *orientalis*
Aenictus laeviceps – *Eciton (Aenictus) fergusonii* var.
 sundaica
Asphinctanilloides amazona
Asphinctanilloides anae
Asphinctanilloides manauara
Cerapachys splendens
Eciton vagans allognathum – *Eciton vagans* subsp.
 allognathum
Eciton mexicanum argentinum – *Eciton mexicanum*
 subsp. *argentinum*
Eciton burchellii – *Eciton burchellii jeanae*
Eciton lucanoides conquistador – *Eciton (Eciton)*
 conquistador
Eciton dulcium crassinode – *Eciton dulcius* subsp.
 crassinode
Eciton vagans dispar – *Eciton vagans dispar*
Eciton drepanophorum – *Eciton bellicosum*
Eciton vagans francanum – *Eciton vagans* var.
 francanum
Eciton vagans fur
Eciton mexicanum goianum – *Eciton mexicanum*
 subsp. *goianum*
Eciton hamatum – *Eciton amazona*
Eciton hamatum – *Eciton hamatum* var.
 mattogrossensis
Eciton hamatum – *Eciton pittieri*
Eciton jansoni – *Eciton velutatus*
Eciton lucanoides
Eciton vagans mutatum – *Eciton vagans* subsp.
 mutatum
Eciton mexicanum panamense – *Eciton mexicanum*
 subsp. *panamense*
Eciton (Labidus) serpentis – *Labidus coecus*
Eciton setigaster
Eciton uncinatum
Eciton burchellii urichi – *Eciton burchelli* r. *urichi*
Eciton vagans
Labidus coecus – *Eciton (Labidus) caecum* st. *servillei*
 var. *hostilis*
Labidus nero denticulatus – *Labidus nero* subsp.
 denticulatus
Labidus mars – *Eciton (Labidus) coecum* st. *nero*
Leptanilloides biconstricta
Leptanilloides legionaria
Leptanilloides mckennae
Leptanilloides nomada
Leptanilloides sculpturata
Neivamyrmex adenops – *Eciton (Acamatus) adnepos*
Neivamyrmex adnepos – *Eciton (Acamatus)*
 marginatum
Neivamyrmex agilis
Neivamyrmex alfaroi – *Eciton alfaroi*
Neivamyrmex antillanus – *Eciton antillanum*
Neivamyrmex asper
Neivamyrmex balzani – *Eciton (Acamatus) balzani*
Neivamyrmex bohlsi – *Eciton (Acamatus) bohlsi*
Neivamyrmex bruchi – *Eciton (Acamatus) bruchi*
Neivamyrmex californicus – *Eciton californicum*
Neivamyrmex carettei – *Eciton (Acamatus) carettei*
Neivamyrmex carinifrons
Neivamyrmex chamelensis
Neivamyrmex clavifemur
Neivamyrmex cloosae – *Eciton (Acamatus) cloosae*
Neivamyrmex compressinodis
Neivamyrmex crassiscapus
Neivamyrmex cratensis
Neivamyrmex cristatus – *Eciton (Acamatus) legionis*
 subsp. *crenulatum*
Neivamyrmex densepunctatus – *Eciton (Acamatus)*
 densepunctatus
Neivamyrmex detectus
Neivamyrmex diana – *Eciton (Acamatus) diana*
Neivamyrmex klugii distans – *Neivamyrmex klugii*
 subsp. *distans*
Neivamyrmex diversinodis – *Eciton (Acamatus)*
 diversinode
Neivamyrmex dorbignii – *Labidus dorbignii*
Neivamyrmex emersoni
Neivamyrmex emersoni – *Eciton (Acamatus) angusti-*
 node subsp. *emersoni*
Neivamyrmex emersoni – *Eciton (Neivamyrmex) an-*
 gustinode subsp. *haskinsi*
Neivamyrmex emeryi – *Eciton (Acamatus) emeryi*

- Neivamyrmex fallax*
Neivamyrmex foveolatus
Neivamyrmex genalis
Neivamyrmex gibbatus
Neivamyrmex goeldii – *Eciton (Acamatus) goeldii*
Neivamyrmex graciellae – *Eciton graciellae*
Neivamyrmex gracilis
Neivamyrmex gradualis
Neivamyrmex guerinii – *Labidus guerinii*
Neivamyrmex halidatii – *Eciton (Acamatus) lemoulti*
Neivamyrmex hetschkoi – *Eciton hetschkoi*
Neivamyrmex hetschkoi – *Eciton (Acamatus) hetschkoi*
 var. *ogloblini*
Neivamyrmex hetschkoi – *Eciton (Acamatus) taunayi*
Neivamyrmex hetschkoi – *Eciton silvestrii*
Neivamyrmex humilis – *Eciton (Acamatus) humile*
Neivamyrmex impudens – *Eciton (Acamatus) impudens*
Neivamyrmex iridescens
Neivamyrmex jerrmanni – *Eciton (Acamatus) filicorne*
Neivamyrmex jerrmanni – *Eciton jerrmanni*
Neivamyrmex jerrmanni – *Eciton (Acamatus)*
luederwaldti
Neivamyrmex laevigatus – *Eciton (Neivamyrmex)*
laevigatum
Neivamyrmex lieselae – *Eciton (Acamatus) lieselae*
Neivamyrmex longiscapus
Neivamyrmex macropterus
Neivamyrmex manni – *Eciton (Acamatus) manni*
Neivamyrmex megathrix
Neivamyrmex melanocephalus – *Eciton (Acamatus)*
melanocephalum
Neivamyrmex melanocephalus – *Eciton (Acamatus)*
melanocephalum subsp. *xipe*
Neivamyrmex mexicanus – *Eciton aztecum*
Neivamyrmex micans
Neivamyrmex minensis – *Eciton (Acamatus) balzanii*
 subsp. *minensis*
Neivamyrmex modestus – *Eciton (Acamatus) modestum*
Neivamyrmex moseri
Neivamyrmex nordenskioldii – *Leptanilla*
nordenskioldii
Neivamyrmex opacithorax – *Eciton (Acamatus) opaci-*
thorax var. *castaneum*
- Neivamyrmex orthonotus* – *Eciton (Acamatus)*
orthonotum
Neivamyrmex pacificus
Neivamyrmex perplexus
Neivamyrmex pilosus – *Eciton (Acamatus)*
porrectognathum
Neivamyrmex pilosus mexicanus – *Eciton (Labidus)*
spininode st. *militarium*
Neivamyrmex piraticus
Neivamyrmex planidens
Neivamyrmex postangustatus – *Eciton (Acamatus)*
postangustatum
Neivamyrmex postcarinatus
Neivamyrmex pseudops – *Eciton pseudops*
Neivamyrmex pseudops – *Eciton (Acamatus) pseudops*
 r. *garbei*
Neivamyrmex pseudops – *Eciton (Acamatus) pseudops* r.
grandipseudops
Neivamyrmex puerulus
Neivamyrmex pullus
Neivamyrmex punctaticeps – *Eciton (Neivamyrmex)*
commutatum
Neivamyrmex raptans – *Eciton (Acamatus) raptans* var.
rebellatum
Neivamyrmex raptor – *Eciton (Acamatus) raptor*
Neivamyrmex romandii – *Eciton (Acamatus) melshae-*
meri subsp. *desartsi*
Neivamyrmex rugulosus
Neivamyrmex scutellaris
Neivamyrmex spatulatus – *Eciton (Acamatus)*
spatulatum
Neivamyrmex sulcatus – *Eciton (Acamatus) richteri*
 var. *modificata*
Neivamyrmex tenuis
Neivamyrmex tristis – *Eciton spoliator* r. *triste*
Neivamyrmex vicinus
Nomamyrmex esenbeckii – *Eciton (Holopone) crassi-*
corne subsp. *crudele*
Nomamyrmex esenbeckii – *Eciton (Holopone) crassi-*
corne var. *indomabile*
Nomamyrmex hartigii – *Eciton (Labidus) apicifer*

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- Acanthostichus laticornis* var. *obscuridens* – *Acanthostichus laticornis*
Aenictus eugenii subsp. *caroli* – *Aenictus eugenii caroli*
Eciton amazona – *Eciton hamatum*
Eciton (Labidus) apicifer – *Nomamyrmex hartigii*
Eciton aztecum – *Neivamyrmex mexicanus*
Eciton bellicosum – *Eciton drepanophorum*
Eciton (Acamatus) opacithorax var. *castaneum* – *Neivamyrmex opacithorax*
Eciton (Neivamyrmex) commutatum – *Neivamyrmex punctaticeps*
Eciton (Holopone) crassicorne var. *indomabile* – *Nomamyrmex esenbeckii*
Eciton (Holopone) crassicorne subsp. *crudale* – *Nomamyrmex esenbeckii*
Eciton (Acamatus) legionis subsp. *crenulatum* – *Neivamyrmex cristatus*
Eciton (Acamatus) diversinode – *Neivamyrmex bohlsi*
Eciton (Acamatus) melshaemeri subsp. *desartsi* – *Neivamyrmex romandii*
Eciton (Acamatus) filicorne – *Neivamyrmex jerrmanni*
Eciton vagans var. *francanum* – *Eciton vagans francanum*
Eciton (Acamatus) pseudops r. *garbei* – *Neivamyrmex pseudops*
Eciton (Acamatus) pseudops r. *grandipseudops* – *Neivamyrmex pseudops*
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Eciton burchelli jeanae – *Eciton burchelli* st. *cupiens*
Eciton (Acamatus) lemoulti – *Neivamyrmex halidaii*
Eciton (Acamatus) luederwaldti – *Neivamyrmex jerrmanni*
Eciton (Acamatus) marginatum – *Neivamyrmex adnepos*
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Eciton (Acamatus) richteri var. *modificata* – *Neivamyrmex sulcatus*
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Eciton (Aenictus) ceylonicus subsp. *orientalis* – *Aenictus ceylonicus*
Eciton pittieri – *Eciton hamatum*
Eciton (Acamatus) porrectognathum – *Neivamyrmex pilosus*
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Eciton silvestrii – *Neivamyrmex hetschkoi*
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Eciton (Acamatus) taunayi – *Neivamyrmex hetschkoi*
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Eciton (Acamatus) melanocephalum subsp. *xipe* – *Neivamyrmex melanocephalus*
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