

**Kataloge der
wissenschaftlichen Sammlungen
des Naturhistorischen Museums in Wien**

Band 15

Entomologie, Heft 7

**Type specimens of Phymatidae
in the Natural History Museum Vienna
(Insecta: Heteroptera)**

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**Verlag des
Naturhistorischen Museums Wien
November 2000**

ISBN 3-900 275-79-3

Type specimens of Phymatidae in the Natural History Museum Vienna (Insecta: Heteroptera)¹

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Abstract

The Heteroptera collection of the Natural History Museum in Vienna includes the type specimens of 47 species and 2 subspecies of the family Phymatidae. These types are listed alphabetically with the original citation of description, the type locality, the actual systematic placement and their labels. In some cases comments on the condition of the types, manuscript names and possible ambiguities of type identification are included. The majority of types was described by A. Handlirsch from the collection of V. Signoret.

Zusammenfassung

Die Heteropteren Sammlung des Naturhistorischen Museums in Wien enthält die Typusexemplare von 47 Arten und 2 Unterarten der Familie Phymatidae. In der alphabetischen Liste werden Originalzitat der Erstbeschreibung, locus typicus, die aktuelle systematische Stellung, Etikettenbeschriftungen und gegebenenfalls Beschädigungen der Exemplare, nicht publizierte Manuskriptnamen oder Kommentare zu Unklarheiten angeführt. Der Großteil der Typen stammt von Beschreibungen durch A. Handlirsch aus der Sammlung V. Signoret.

Key words: Phymatidae, type list, Natural History Museum Vienna.

Introduction

In completion to the type list of the large heteropteran family Reduviidae at the Natural History Museum in Vienna (NHMW) by SEHNAL (2000), the types of the family Phymatidae are reported. There is no conformity about the classification of this group as a subfamily within the Reduviidae or treating them at family rank. MALDONADO (1990) considered the Phymatidae as a separate family (and therefore they were not included in his catalog), whereas PUTSHKOV & PUTSHKOV (1985) treated them as subfamily. The former suggestion is followed by FROESCHNER (1988) and FROESCHNER & KORMILEV (1989), the latter by SCHUH & SLATER (1995).

In the years 1994 and 1995 the Reduviidae collection of the NHMW was re-organized on the basis of Maldonado's catalog, hence the Phymatidae retained at family rank and are not considered by SEHNAL (2000).

The small collection of Phymatidae at the NHMW is relatively rich in types, due to the efforts of Anton HANDLIRSCH (1865-1935). His "Monographie der Phymatiden" (1897b) is still of great importance for students of the group. Although Handlirsch did not designate types, he carefully noted details (patria, sex and collector or collection) and depository of his material. The majority of his material originated from the Signoret collection, acquired by the NHMW in 1890. Additional types in the collec-

¹ This paper is dedicated to the memory of N. Kormilev, the world leading specialist of Phymatidae, who passed away in April 1998. It would not have been possible, without his determinations of many of the types.

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tion are from G.C. Champion, J.H. Evans, M.F.E. Guérin-Méneville, N. Kormilev, G. Mayr, C. Stål, P.R. Uhler and J.O. Westwood. The specimens of the Signoret collection were re-labelled by Handlirsch, then bearing characteristic handwritten/printed labels (i.e. one label with a handwritten locality and the printed collection and a second label with the handwritten species name and the printed determinant, e.g. [*Mexico*/ coll. Signoret] [*annulipes*/ det. Signoret]).

Altogether the types of 47 species and 2 subspecies are listed, which is approximately a sixth of the currently recognized species in this family (FROESCHNER & KORMILEV 1989).

The type-list is arranged alphabetically and the following informations are given: The original reference of description, the type locality, the current systematic placement of the taxon (with reference if changed), the category of the type (with a ? if uncertain), the number and sex of specimens, their mode of preparation and the complete labels. Handwritten text is given in italics. Two (or more) labels are separated from each other by square brackets, a stroke marks the end of a line. The state of preservation is given for selected, damaged types only. Comments, color of labels and the mode of preparation (Abbreviations: <pn> = pinned, <mp> = micropinned, <gc> = glued on card, <gt> = glued on triangle) appear in special brackets <...>.

The determination of these beautiful bugs is not free of uncertainties, due to a distinct sexual dimorphism and the variability of characters in combination with very often only limited numbers of specimens available for comparison. Fortunately, most of the types were seen and revised by the leading expert of the group, the late N. Kormilev (see FROESCHNER (1995) for a list of publications and proposed taxa).

The list of type specimens

acuta HANDLIRSCH

Glossopelta acuta HANDLIRSCH, 1897 Ann. Naturh. Hofm. 12: 216.

Type locality: "Burma; Sumatra"

Current status: *Glossopelta acuta* HANDLIRSCH, 1897

Syntypes: 1 ♀ <pn>, 1 ♂ <gc> [Sumatra/ S1-Rambé/ XII.90-III.91/ E. Modigliani] <orange> [Museo Civ./ Genova] [*acuta m.*/ det. Handlirsch]; 1 ♀ <pn> [Sumatra/ D. Tolong/ XI.1890/ E. Modigliani] <orange> [Museo Civ./ Genova] [*acuta m.*/ det. Handlirsch]; 1 ♂ <gc> [Carin Chebà/ 900-1100.m./ L. Fea V.XII.88] <orange> [Museo Civ./ Genova] [*acuta m.*/ det. Handlirsch]

albopicta HANDLIRSCH

Phymata albopicta HANDLIRSCH, 1897 Ann. Naturh. Hofm. 12: 151.

Type locality: "U.S.A.: Georgia; Mexico"

Current status: *Phymata albopicta* HANDLIRSCH, 1897

Syntypes: 3 ♂♂, 1 ♀ <pn> [Georgia] [*albopicta m.*/ det. Handlirsch]; 1 ♀ <pn> [Bilimek/ Orizaba/ 5.Mai] [*albopicta m.*/ det. Handlirsch]

angulata UHLER

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Phymata angulata UHLER, 1894 Proc. Zool. Soc. Lond. 1894: 204.

Type locality: "Grenada: La Force, Mount Gay"

Current status: *Phymata angulata* UHLER, 1894

Syntype: 1 ♂ <gt> [49] [La Force Est./ (Windward side)/ Grenada, W.I./ H.H. Smith.] [*angulata*/ det. Handlirsch]

annulipes STÅL

Phymata annulipes STÅL, 1862 Stett. Ent. Zeitg. 23: 439.

Type locality: "Mexico"

Current status: *Phymata annulipes* STÅL, 1862

Holotype: 1 ♂ <pn> [*Mexico*/ coll. Signoret.] [*annulipes*/ det. Signoret.] [*annulipes*/ Stål] [*annulipes*/ det. Handlirsch]

Type condition: right fore leg femur missing;

armata HANDLIRSCH

Phymata armata HANDLIRSCH, 1897 Ann. Naturh. Hofm. 12: 174.

Type locality: "Brazil; Venezuela"

Current status: *Phymata armata* HANDLIRSCH, 1897

Syntypes: 1 ♂ <pn> [Natterer/ Brasilien.] [*armata*/ det. Handlirsch]; 1 ♂ <pn> [2400.] [*armata*/ det. Handlirsch] [*Berl. Mus./ Cassapava*]; 1 ♀ <pn> [2399.] [*armata*/ det. Handlirsch] [*Berl. Mus./ Para.*]; 1 ♀ <pn> [*Venezuela*/ coll. Signoret.] [*armata*/ det. Signoret.] [*armata m.*/ det. Handlirsch]

asper STÅL

Macrocephalus asper STÅL, 1876 Svenska Vetens.-Akad. Handl. 5: 135.

Type locality: "Venezuela: La Guayra"

Current status: *Lophoscutus asper* (STÅL, 1876) (transferred by KORMILEV 1986: 304).

Syntype : 1 ♂ <pn> [*Laguayra*/ coll. Signoret.] [*asper*/ det. Signoret.] [*asper*/ Stål] [*asper*/ det. Handlirsch] [*Lophoscutus/ asper Stål*/ det. N. Kormilev 1984]

barberi KORMILEV

Phymata barberi KORMILEV, 1962 Philipp. Jour. Sci. 89: 322, 434.

Type locality: "Mexico; Costa Rica"

Current status: *Phymata barberi* KORMILEV, 1962

Paratype: 1 ♀ <gc> [*Costa Rica*/ S. José 1135m/ P. Biollny <not P. Biolley>] [*parva m.*/ det. Handlirsch] <yellow> [Paratype] <yellow> [*Phymata/ barberi*/ N. Kormilev 955]

Note: This ♀ was taken from the type series of *parva* HANDLIRSCH by KORMILEV (1962) and is a syntype of *parva* HANDLIRSCH as well.

beieri KORMILEV

Phymata beieri KORMILEV, 1962 Philipp. Jour. Sci. 89: 310, 333.

Type locality: "Bolivia"

Current status: *Phymata beieri* KORMILEV, 1962

Holotype: 1 ♀ <pn> [Yungas de Coroico/ Bolivia, Fassel.] <red> [Holotype] <red> [*Phymata/ beieri*/ N. Kormilev 55]

Type condition: right antenna segment 4 missing; entire left mid leg and left and right hind leg tarsi missing;

bogotana HANDLIRSCH

Phymata erosa ssp. *bogotana* HANDLIRSCH, 1897 Ann. Naturh. Hofm. 12: 169.

Type locality: "Colombia: Bogota"

Current status: *Phymata bogotana* HANDLIRSCH, 1897 (upgraded by MELIN 1930: 20).

Lectotype: 1 ♂ <pn> [Bogota] [Lindig] [*bogotana m.*/ det. Handlirsch] <white-red> [Lectotype] [*Phymata/ bogotana/ Handlirsch/ det. N. Kormilev 55*]

Paralectotypes: 1 ♀, 1 ♂ <pn> <with the same data>; 1 ♂ <pn> [*Bogota/ coll. Signoret*] [*pectoralis/ det. Signoret.*] [*bogotana m.*/ det. Handlirsch] [*Phymata/ bogotana/ Handlirsch/ det. N. Kormilev 55*]

Note: Type designations by KORMILEV (1962: 422). *Phymata pectoralis* may be a manuscript name by Signoret being never published.

carneipes MAYR

Phymata carneipes MAYR, 1865 Verh. k. k. zool.-bot. Ges. Wien 15: 442.

Type locality: "Brazil"

Current status: *Phymata carneipes* MAYR, 1865

Syntypes: 1 ♀ and 1 ♂ <pinned together> [*Brasilien*] [*P. carneipes/ Type Mayr*] [*carneipes/ det. Handlirsch*] [*Phymata/ carneipes/ Mayr/ rev. N. Kormilev 955*] <mauve> [Holotype]; 1 ♂ <pn> [*Georgia*] [*carneipes/ det. Handlirsch*]

? **Syntypes:** 2 ♂♂ <pn> [*Brasilien* <in the same handwriting as on the syntype labels, but not of Mayr's style>] [*carneipes/ det. Handlirsch*]

Note: The origin of the holotype label is unclear. According to HANDLIRSCH (1897b: 168) the specimen from Georgia is a case of mislabelling.

castetsi HANDLIRSCH

Carcinocoris castetsi HANDLIRSCH, 1897 Verh. k. k. zool.-bot. Ges. Wien 47: 26.

Type locality: "Southern India: Trichinopoly, Pulney Hills"

Current status: *Carcinocoris castetsi* HANDLIRSCH, 1897

Syntype: 1 ♂ <mp> [*Inde merid./ Pulney Hills*] [*castetsi m./ det. Handlirsch*]

Type condition: right fore leg broken, but glued on card;

chilensis HANDLIRSCH

Phymata erosa ssp. *chilensis* HANDLIRSCH, 1897 Ann. Naturh. Hofm. 12: 171.

Type locality: "Chile; Peru"

Current status: *Phymata chilensis chilensis* HANDLIRSCH, 1897 (upgraded by KORMILEV 1962: 445).

Paralectotypes: 2 ♂♂ <pn> <green> [Museum Paris/ Chili/ Gay 15-43] [*chilensis m./ det. Handlirsch*]; 3 ♂♂ <pn> [*Chile/ coll. Signoret.*] [*fasciata/ det. Signoret.*] [*chilensis m./ det. Handlirsch*]; 1 ♀ <pn> <green> [Santa Rosa] <green> [Museum Paris/ Chili/ Gay 15-43] [*chilensis m./ det. Handlirsch*]; 1 ♀ <pn> [*Philipi/ Chili/ 1870*] [*chilensis m./ det. Handlirsch*]

? **Paralectotypes:** 1 ♀ <pn> [*carinata/ det. Signoret.*] [*Mexico/ coll. Signoret.*] [*chilensis m./ det. Handlirsch*]; 1 ♀ <pn> [*Nd. America/ coll. Signoret.*] [*wolffii/ det. Signoret.*] [*chilensis m./ det. Handlirsch*]

Note: KORMILEV (1962: 446) designated a lectotype, deposited in the Natural History Museum Stockholm. The specimens from Mexico and North America, however, bear identical labels Handlirsch used to indicate his types, but they were actually not included in his monograph. *Phymata chilensis* is known from Chile and Peru (KORMILEV 1962), so most probably the locality labels are placed in error.

cinnamomea HANDLIRSCH

Phymata erosa ssp. *cinnamomea* HANDLIRSCH, 1897 Ann. Naturh. Hofm. 12: 168.

Type locality: "Brazil"

Current status: *Phymata cinnamomea* HANDLIRSCH, 1897 (upgraded by KORMILEV 1962: 433).

Lectotype: 1 ♂ <pn> [Schott <not Scott>/ Brasilien] [*cinamomea <sic!> m./ det. Handlirsch*] <white-red> [Lectotype] [*Phymata/ cinnamomea/ Handlirsch/ N. Kormilev 55*]

Paralectotypes: 1 ♀ <pn> <turquoise> [Espirito Santo/ Brasil./ ex coll. Fruhstorfer <not Fruhstoffer>.] [*cinamomea m./ det. Handlirsch*] <white-red> [Lectotype] [*Phymata/ cinnamomea/ Handlirsch/ N. Kormilev 55*]; 1 ♂ <pn> [*cinanom. m./ det. Handlirsch*] [*Brasil/ Mayr*] [*Phymata/ cinnamomea/ Handlirsch/ N. Kormilev 55*]; 1 ♂ <pn> [*Brasilien*] [*cinanom. m./ det.*]

Handlirsch]; 1 ♀ <pn> [*Bras/* <illegible>] [*cinamomea m./* det. Handlirsch] [*Phymata/ cinnamomea/ Handlirsch/ N. Kormilev 55*]

Note: Type designations by KORMILEV 1962: 434.

cliens STÅL

Macrocephalus cliens STÅL, 1862 Stett. Ent. Zeitg. 23: 440.

Type locality: "Mexico"

Current status: *Macrocephalus incisus* STÅL, 1862 (synonymized by STÅL 1876: 135).

Syntype: 1 ♂ <pn> [*Mexico/ coll. Signoret.*] [*cliens/ det. Signoret.*] [*cliens/ Stål*] [*notatus/ det. Handlirsch*] [*Macrocephalus/ incisus Stål/ det. N. Kormilev 1984*]

Type condition: left mid leg tibia, left hind and right mid leg tarsi missing;

communis HANDLIRSCH

Phymata erosa ssp. *communis* HANDLIRSCH, 1897 Ann. Naturh. Hofm. 12: 169.

Type locality: "Brazil; Paraguay"

Current status: *Phymata communis* HANDLIRSCH, 1897 (upgraded by KORMILEV 1962: 441).

Paralectotypes: 1 ♀ <pn> [*Brasilien*] [*comunis <sic> m./ det. Handlirsch*] <white-red> [*Allo-/ Lectotype*] [*Phymata/ communis/ Handlirsch/ rev. Kormilev 955*]; 3 ♂♂ <pn> [*Helmr./ Brasil.*] [*comunis m./ det. Handlirsch*] [*Phymata/ communis/ Handlirsch/ rev. Kormilev 955*]; 1 ♂ <pn> [*Helm./ Bras/ 846*] [*comunis m./ det. Handlirsch*]; 1 ♂ <pn> [*Helmr./ Brasil.*] [*comunis m./ det. Handlirsch*]; 1 ♂ <pn> [*Schott/ Brasilien.*] [*comunis m./ det. Handlirsch*]; 1 ♂ <pn> [*Brasilien/ coll. Signoret.*] [*comunis m./ det. Handlirsch*]; 1 ♂ <pn> [*Paraguay/ 1893/ Dr. P. Jordan*] [*comunis m./ det. Handlirsch*] [*Phymata/ communis/ Handlirsch/ rev. Kormilev 955*]; 1 ♂ <pn> [*Brasilien*] [*comunis m./ det. Handlirsch*] [*Phymata/ communis/ Handlirsch/ rev. Kormilev 955*]

? Paralectotype: 1 ♀ <pn> [*Mexico*] [*comunis m./ det. Handlirsch*]

Note: Lectotype designation by KORMILEV 1962: 443. Although bearing his type label, the ♀ from Mexico was not mentioned in the original description by HANDLIRSCH (1897b). *Phymata communis* is widely distributed in Peru, central and eastern Brazil and Argentina (KORMILEV 1962), hence most probably the locality label is an error. The original type series of *communis* HANDLIRSCH was a mixture of different species:

1 ♂ <pn> [*Rio de Jan./ coll. Signoret.*] [*inermis/ det. Signoret.*] [*comunis m./ det. Handlirsch*] [*Phymata/ chilensis Handl./ ssp. cordobensis Kormilev/ det. N. Kormilev 955*] This paralectotype of *communis* HANDLIRSCH was identified as *Phymata chilensis cordobensis* KORMILEV 1951. *Phymata inermis* may be a manuscript name by Signoret being never published.

1 ♀ <pn> [*Natterer/ Brasilien*] [*comunis m./ det. Handlirsch*] [*Phymata/ chilensis Handl./ ssp. pampeana Kormilev/ det. N. Kormilev 955*] This paralectotype of *communis* HANDLIRSCH was identified as *Phymata chilensis pampeana* KORMILEV 1951.

***crassus* HANDLIRSCH**

Macrocephalus crassus HANDLIRSCH, 1897 Ann. Naturh. Hofm. 12: 191.

Type locality: "Brazil"

Current status: *Macrocephalus crassus* HANDLIRSCH, 1897

Syntype: 1 ♀ <pn> <blue> [Bahia/ Brasilia/ Fruhstorfer] [*crassus m./ det.* Handlirsch] <yellow> [coll. Nat.-Mus. Wien] [*Macrocephalus/ crassus/ Handlirsch/ det. N. Kormilev 87*]

***debilis* HANDLIRSCH**

Phymata erosa sp. *debilis* HANDLIRSCH, 1897 Ann. Naturh. Hofm. 12: 172.

Type locality: "Brazil"

Current status: *Phymata debilis* HANDLIRSCH, 1897 (upgraded by KORMILEV 1962: 420).

Syntypes: 3 ♂♂, 2 ♀♀ <pn> [Stieglmayr,/ Rio Gr. do Sul] [*debilis m./ det.* Handlirsch]

Note: Rio Grande do Sul is located in the southern part of Brazil, not in Argentina as mentioned by FROESCHNER & KORMILEV (1989). With the same data, a final instar nymph is deposited in the collection.

***elongata* SIGNORET**

Phymata elongata SIGNORET, 1863 Ann. Soc. Ent. France, ser. 4(3): 574.

Type locality: "Chile"

Current status: *Anthylla nervosopunctata* (SIGNORET, 1863) (transferred by STÅL 1876: 134; synonymized by HANDLIRSCH 1897b: 178).

Syntypes: 1 ♀ <pn, without Abdomen>, 2 ♀♀ <pn> [*Chile/ coll. Signoret.*] [*elongatus/ det. Signoret.*] [*nervosopunct/ det. Handlirsch*]

***emarginata* GUÉRIN-MÉNEVILLE**

Syrtris (Phymata) emarginata GUÉRIN-MÉNEVILLE, 1857 Hist. phys. polit. nat. Cuba 7: 407.

Type locality: "Cuba"

Current status: *Phymata emarginata* GUÉRIN-MÉNEVILLE, 1857

Syntype: 1 ♂ <mp> [*Cuba/ coll. Signoret.*] [*marginata/ det. Signoret.*] [*emarginata/ det. Handlirsch*]

Type condition: entire right hind leg, left mid and hind leg tarsi missing;

***erinaceus* HANDLIRSCH**

Carcinocoris erinaceus HANDLIRSCH, 1897 Verh. k. k. zool.-bot. Ges. Wien 47: 26.

Type locality: "Burma: Carin Cheba"

Current status: *Carcinocoris erinaceus* HANDLIRSCH, 1897

Syntypes: 1 ♀ <mp> [Carin Chebà/ 900-1100.m./ L. Fea V XII-88] <orange> [Museo Civ/ Genova] [*binghami*/ det. Handlirsch]; 1 ♂ <gc> [Carin Chebà/ 900-1100.m./ L. Fea V XII-88] <green> [193] [*binghami*/ det. Handlirsch]

Note: HANDLIRSCH (1897a) described *C. erinaceus*, but later (HANDLIRSCH 1897b) synonymized it with *C. binghami* SHARP, 1897. MAA & LIN (1956) reestablished its species rank.

falleni STÅL

Macrocephalus falleni STÅL, 1862 Stett. Ent. Zeitg. 23: 441.

Type locality: "Mexico"

Current status: *Lophoscutus falleni* (STÅL, 1862) (transferred by KORMILEV 1987: 705).

Syntype: 1 ♂ <pn> [Mexico/ coll. Signoret.] [*Fallenii*/ det. Signoret.] [*Falleni*/ Stål] [*Fallenii*/ det. Handlirsch] [*Lophoscutus falleni* Stål/ det. N. Kormilev 1984]

fasciata ssp. *panamensis* KORMILEV

Phymata fasciata GRAY ssp. *panamensis* KORMILEV, 1962 Philipp. Jour. Sci. 89(3-4): 319, 411.

Type locality: "Panama; Costa Rica"

Current status: *Phymata fasciata* GRAY ssp. *panamensis* KORMILEV, 1962

Paratype: 1 ♀ <pn> [Costa Rica, F. Ham-/ burg, Rio Reventazon/ 30.IV-8.V. Reimoser] <red> [Allotype] <red> [*Phymata fasciata* Gray/ ssp. *panamensis*/ N. Kormilev 55]

Type condition: right antenna segments 2-4 missing;

granulosa HANDLIRSCH

Phymata erosa ssp. *granulosa* HANDLIRSCH, 1897 Ann. Naturh. Hofm. 12: 163.

Type locality: "Mexico"

Current status: *Phymata granulosa* HANDLIRSCH, 1897 (upgraded by MELIN 1930: 15).

Paralectotypes: 7 ♂♂, 3 ♀♀ <pn> [Bilimek/ Mexico/ 1883 II/ Orizaba] [*granulosa m.*/ det. Handlirsch]; 30 ♂♂, 6 ♀♀ <pn> [Bilimek/ Mexico 83] [*granulosa m.*/ det. Handlirsch]; 1 ♂ <pn> [Bilimek/ Orizaba/ 1869] [*granulosa m.*/ det. Handlirsch]; 2 ♂♂, 3 ♀♀ <pn> [Bilimek/ Mexico/ 1871] [*granulosa m.*/ det. Handlirsch]; 3 ♂♂, 1 ♀ <pn> [Sichel/ Mexico/ 1867] [*granulosa m.*/ det. Handlirsch]; 1 ♂ <pn> [Mexico] [*granulosa m.*/ det. Handlirsch]; 2 ♂♂ <pn> [Mexico/ coll. Signoret.] [*brunnea*/ det. Signoret.] [*granulosa m.*/ det. Handlirsch]; 1 ♂ <pn> [Bilimek/ Mexico/ 1883 II/ Cornuva] [*granulosa m.*/ det. Handlirsch]; 1 ♀ <pn> [Mexico/ coll. Signoret.] [*erosa*/ det. Signoret.] [*granulosa m.*/ det. Handlirsch]

? **Paralectotype:** 1 ♀ <pn> [N.Amerika] [*granulosa m.*/ det. Handlirsch]

Note: Lectotype designation by KORMILEV (1962: 398), deposited in the Natural History Museum Stockholm. *Phymata brunnea* may be a manuscript name by Signoret being never published. The ♀ from North America bears the label Handlirsch used to indicate his types, but it was not included in the monograph, although apparently identified correctly. *Phymata granulosa* does not occur north of Texas (FROESCHNER 1988), so most probably the locality label is wrong.

incisus STÅL

Macrocephalus incisus STÅL, 1862 Stett. Ent. Zeitg. 23: 440.

Type locality: "Mexico"

Current status: *Macrocephalus incisus* STÅL, 1862

Syntype: 1 ♂ <pn> [*Mexico*/ coll. Signoret.] [*incisus*/ det. Signoret.] [*incisus*/ Stål] [*notatus*/ det. Handlirsch] [*Macrocephalus incisus* Stål/ det. N. Kormilev 1984]

Type condition: right mid leg tarsus missing;

Note: It is not evidently clear from the original description if Stål had only one or more specimens at his disposal for the diagnosis. HANDLIRSCH (1897b: 189) mentioned as types the ♂ of Signoret, and a further ♂ from Tabasco (which he stated to be a type of Stål, deposited at the Natural History Museum Stockholm), although Stål only mentioned the ♂ of Signoret. A ♂ from Tabasco was indeed found at the NHMW, but originating from Champion's Biologia Centrali Americana material (leg. H.H. Smith, compare CHAMPION 1898: 56). Earlier authors often meant under "type" a specimen identified by the given author, but this is not necessarily "type" in the current meaning.

intermedius HANDLIRSCH

Amblythyreus intermedius HANDLIRSCH, 1897 Ann. Naturh. Hofm. 12: 210.

Type locality: "Southern India: Bengalen, Tritschinapali (=Trichinopoly), Mts. Kodikanel"

Current status: *Amblythyreus intermedius* HANDLIRSCH, 1897

Syntype: 1 ♀ <pn> [*Inde merid./ Mts Kodikanel*] [*intermed. m./ det. Handlirsch*].

lepidus STÅL

Macrocephalus lepidus STÅL, 1862 Stett. Ent. Zeitg. 23: 440.

Type locality: "Mexico"

Current status: *Lophoscotus lepidus* (STÅL, 1862) (transferred by KORMILEV 1984: 628).

Syntype: 1 ♂ <pn> [*Mexico*/ coll. Signoret.] [*lepidus*/ det. Signoret.] [*lepidus*/ Stål] [*lepidus*/ det. Handlirsch] [*Lophoscotus lepidus* Stål/ det. N. Kormilev 1984]

Type condition: left and right antenna segments 3 and 4 missing, entire left and right fore legs and left mid leg missing;

***leucographus* WESTWOOD**

Macrocephalus leucographus WESTWOOD, 1841 Trans. Ent. Soc. Lond. 3(1): 25.

Type locality: "Haiti: Port au Prince"

Current status: *Lophoscutus leucographus* (WESTWOOD, 1841) (transferred by KORMILEV 1986: 304).

Syntype: 1 ♂ <pn> [2409.] [*leucographus*/ det. Handlirsch] [*Berl. Mus./ Port au Prince*] [*Lophoscutus/ leucographus/ Westw/ det. N. Kormilev 1984*]

***martini* HANDLIRSCH**

Amblythyreus martini HANDLIRSCH, 1899 Bull. Mus. Hist. Nat. Paris 5: 33.

Type locality: "China: Yun-Nan"

Current status: *Amblythyreus martini* HANDLIRSCH, 1899

Syntype: 1 ♀ <mp> [*Yun-nan-fou/ Mgr. Excoffier*] [*Museum Paris/ Yun-Nan/ R. Oberthur 1898*]

***mayri* KORMILEV**

Phymata mayri KORMILEV, 1962 Philipp. Jour. Sci. 89: 317, 393.

Type locality: "Paraguay"

Current status: *Phymata mayri* KORMILEV, 1962

Holotype: 1 ♂ <pn> [Reimoser/ Paraguay/ San Luis] <red> [Holotype] <red> [*Phymata/ mayri/ N. Kormilev 955*]

***mopsus* HANDLIRSCH**

Macrocephalus mopsus HANDLIRSCH, 1897 Ann. Naturh. Hofm. 12: 196.

Type locality: "Brazil"

Current status: *Lophoscutus mopsus* (HANDLIRSCH, 1897) (transferred by KORMILEV 1986: 304).

Holotype: 1 ♀ <mp> [*Brasilien/ coll. Signoret.*] [*prehensibilis* <sic!>/ det. Signoret.] [*mopsus m./ det. Handlirsch*] [*Lophoscutus/ mopsus/ Handl./ det. N. Kormilev 1984*]

Note: *L. prehensibilis* may be a manuscript name by Signoret being never published or may be a *lapsus calami* for *P. prehensilis* (FABRICIUS, 1803), though the latter is distributed north of Mexico (FROESCHNER 1988).

***mystica* EVANS**

Phymata mystica EVANS, 1931 Ann. Ent. Soc. Am. 24: 717.

Type locality: "Florida"

Current status: *Phymata fasciata mystica* EVANS, 1931 (downgraded by KORMILEV 1962: 409).

Paratypes: 1 ♀, 1 ♂ <pn> [*Leesburg, Fla./ 9-10-30/ Goff-coll.*] <blue> [Paratype/ *P. mystical/ Evans 1931*]

nervosopunctata SIGNORET

Phymata nervoso-punctata SIGNORET, 1863 Ann. Soc. Ent. France, ser. 4(3): 574.

Type locality: "Chile"

Current status: *Anthylla nervosopunctata* (SIGNORET, 1863) (transferred by STÅL 1876: 134).

Syntype: 1 ♂ <pn, Abdomen broken, but pinned below on the same needle> [*Chile/ coll. Signoret.*] [*nervosopunctata/ det. Signoret.*] [*nervosopunct/ det. Handlirsch*]

Type condition: left and right antenna segments 3 and 4 missing, left and right mid and hind leg tarsi missing;

Note: The pinned abdomen was mentioned by HANDLIRSCH (1897b: 179).

noualhierii HANDLIRSCH

Phymata noualhierii HANDLIRSCH, 1897 Ann. Naturh. Hofm. 12: 153.

Type locality: "North America; Mexico; Guatemala"

Current status: *Phymata noualhierii* HANDLIRSCH, 1897

Syntype: 1 ♀ <pn> [*Georgia*] [*noualhierii m./ det. Handlirsch*] <mauve> [Holotype]

Type condition: right hind tarsus missing;

Note: The origin of the holotype label is unclear, the specimen is a syntype.

pacifica EVANS

Phymata pacifica EVANS, 1931 Ann. Ent. Soc. Am. 24: 725.

Type locality: "California"

Current status: *Phymata pacifica* EVANS, 1931

Paratypes: 1 ♀, 1 ♂ <pn> [*Alpine Calif./ 7-9-29/ R.H. Beamer*] <blue> [Paratype/ *P. pacifica/ det. Evans 1931*]

pacifica ssp. *stanfordi* EVANS

Phymata pacifica ssp. *stanfordi* EVANS, 1931 Ann. Ent. Soc. Am. 24: 726.

Type locality: "California"

Current status: *Phymata pacifica stanfordi* EVANS, 1931

Paratypes: 1 ♀ and 1 ♂ <pn, pinned together> [Stanford Univer-/sity, California/ Sept.1-1929] [Carl D. Duncan/ collector/ 1462-262] <blue> [Paratype/ *P. pac./ stanfordi/ det. Evans 1931*]

Type condition: The ♂ right mid and left hind tarsi are missing;

parva HANDLIRSCH

Phymata erosa ssp. *parva* HANDLIRSCH, 1897 Ann. Naturh. Hofm. 12: 165.

Type locality: "Mexico; Guatemala; Costa Rica; Colombia; Venezuela"

Current status: *Phymata parva* HANDLIRSCH, 1897 (upgraded by KORMILEV 1962: 425).

Lectotype: 1 ♂ <pn> <green> [Morelia] [E. Dugès/ 1892] [*Mexique/ A. de Borre*] [*parva m./ det. Handlirsch*] <white-red> [Lectotype] [*Phymata/ parva/ Handlirsch/ det. N. Kormilev 55*]

Paralectotypes: 1 ♀ <pn> <with the same data>; 1 ♂ <pn> [*Bilimek/ Orizaba/ Juni*] [*parva m./ det. Handlirsch*]; 1 ♂ <pn> [*Bilimek/ Mexico 83*] [409] [*parva m./ det. Handlirsch*]; 2 ♂♂ <pn> [*Bilimek/ Mexico 83*] [*parva m./ det. Handlirsch*] [*Phymata/ parva/ Handlirsch/ det. N. Kormilev 54*]; 1 ♂ <pn> [*Bilimek/ Mexico/ 1883. II/ Veracruz*] [*parva m./ det. Handlirsch*] [*Phymata/ parva/ Handlirsch/ det. N. Kormilev 54*]; 1 ♂ <pn> [*Mexico*] [*parva m./ det. Handlirsch*] [*Phymata/ parva/ Handlirsch/ det. N. Kormilev 54*]; 1 ♂, 1 ♀ <pn> <green> [Guanaxuato] <green> [E. Dugès] [M.R. Belg.] [*parva m./ det. Handlirsch*]; 1 ♂ <gt> <green> [Guanaxuato] <green> [E. Dugès] [M.R. Belg.] [*parva m./ det. Handlirsch*] [*Phymata/ parva/ Handlirsch/ det. N. Kormilev 54*]; 1 ♂ <gc> [*Costa Rica/ San Jose 1135m/ P.Biollny* <not P. Biotley>] [*parva m./ det. Handlirsch*] [*Phymata/ parva/ Handlirsch/ det. N. Kormilev 55*]; 1 ♀ <pn> [*Guatemala/ coll. Signoret.*] [*cariniventris/ det. Signoret.*] [*parva m./ det. Handlirsch*]; 1 ♀ <gc> [*Costa Rica/ S. Jose 1135m./ P.Biollny*] [*parva m./ det. Handlirsch*]

Note: Type designations by KORMILEV (1962: 426). *Phymata cariniventris* may be a manuscript name by Signoret being never published. The original type series of *parva* HANDLIRSCH was a mixture of different species:

1 ♂, 1 ♀ <gc> [?Cozozal? <illegible>] [*parva m./ det. Handlirsch*] [*Bergroth/ Venezuel*] <pink> [cum Typus comparavit] [*Phymata/ andina/ Melin/ det. N. Kormilev 55*] were syntypes of *parva* HANDLIRSCH, but later identified as *Phymata andina* MELIN, 1930. See also *P. barberi* KORMILEV, 1962.

parviceps HANDLIRSCH

Phymata erosa ssp. *parviceps* HANDLIRSCH, 1897 Ann. Naturh. Hofm. 12: 166.

Type locality: "French Guiana; Surinam; Colombia; Antilles"

Current status: *Phymata conspicua* SCOTT, 1870 (synonymized by KORMILEV 1962: 428).

Syntypes: 1 ♀ <pn> <green> [Museum Paris/ Colombie/ 302-40] [*parviceps m./ det. Handlirsch*]; 1 ♂ <pn> [*Cayenne/ Prudhomme*] [*parviceps m./ det. Handlirsch*]

***pennsylvanica* HANDLIRSCH**

Phymata erosa ssp. *pennsylvanica* HANDLIRSCH, 1897 Ann. Naturh. Hofm. 12: 163.

Type locality: "U.S.A."

Current status: *Phymata pennsylvanica* HANDLIRSCH, 1897 (upgraded by EVANS 1931: 714).

Syntypes: 2 ♂♂ <pn> [Amerika] [*pennsylvanica* <sic!> m./ det. Handlirsch]; 1 ♂, 2 ♀♀ <pn> [Pennsylvania/ H.S. Klages] [*pennsylvanica* m./ det. Handlirsch]; 1 ♂ <pn> [St. Louis Mo/ L. Schoelch] [*pennsylvanica* m./ det. Handlirsch]; 1 ♂, 1 ♀ <pn> [Floride Or./ W.H. Ashmead] [*pennsylvanica* m./ det. Handlirsch]; 1 ♀ <without abdomen> [Kono/ pitzky/ 1874/ Boston] [*pennsylvanica* m./ det. Handlirsch]; 1 ♂ <pn> [New York/ coll. Signoret.] [*antenata* <sic!>/ det. Signoret.] [*pennsylvanica* m./ det. Handlirsch] <mauve> [Holotype]; 1 ♀ <pn> [America/ coll. Signoret.] [*carinata*/ det. Signoret.] [*pennsylvanica* m./ det. Handlirsch]

? **Syntype:** 1 ♂ <pn> [Venezuela/ coll. Signoret.] [*picturatus*/ det. Signoret.] [*pennsylvanica* m./ det. Handlirsch]

Note: The origin of the holotype label is unclear, the specimen is a syntype. Although bearing his type label, the ♂ from Venezuela was not mentioned by HANDLIRSCH (1897b) and indeed belongs to a different species. *Phymata antenata* and *Phymata picturatus* are manuscript names by Signoret. The original spelling was with one "n", as in "Pensylvanien", americanized by EVANS (1931) without explanation ("Pennsylvania"). This incorrect subsequent spelling should be retained because of being widely used since then.

***phyllomorpha* HANDLIRSCH**

Phymata phyllomorpha HANDLIRSCH, 1897 Ann. Naturh. Hofm. 12: 176.

Type locality: "Brazil, San Paolo"

Current status: *Phymata phyllomorpha* HANDLIRSCH, 1897

Holotype: 1 ♂ <mp> [San Paolo/ coll. Signoret.] [*spinulosa*/ det. Signoret.] [*phyllomorph* <sic!>/ det. Handlirsch]

Type condition: the right, lateral part of the connexivum is broken;

Note: *Phymata spinulosa* may be a manuscript name by Signoret being never published.

***praestans* HANDLIRSCH**

Phymata erosa ssp. *praestans* HANDLIRSCH, 1897 Ann. Naturh. Hofm. 12: 172.

Type locality: "Brazil"

Current status: *Phymata praestans* HANDLIRSCH, 1897 (upgraded by KORMILEV 1951: 67).

Syntypes: 20 ♂♂, 15 ♀♀ <all pn> [Rio Grande/ do Sul] [*praestans* m./ det. Handlirsch]; 1 ♂, 2 ♀♀ <mp> and 1 ♂, 3 ♀♀ <pn> [Stieglmayr./ Rio Gr. do Sul] [*praestans* m./ det. Handlirsch]; 1 ♂ <pn, without abdomen> <with the same data>; 1 ♂ <pn> [Uruguay/ C.Berg/ 1882] [*Phymata fasciata*/ det. Berg] [*praestans* m./ det. Handlirsch]

Note: According to KORMILEV (1962: 441), the specimen from Uruguay belongs to *Phymata chilensis uruguayensis* KORMILEV, 1951.

reuteri HANDLIRSCH

Macrocephalus reuteri HANDLIRSCH, 1897 Ann. Naturh. Hofm. 12: 190.

Type locality: "Venezuela: San Esteban, Puerto Cabello"

Current status: *Macrocephalus reuteri* HANDLIRSCH, 1897

Syntype: 1 ♂ <pn> [San Esteban/ E. Simon III.88] [*Reuteri m./ det. Handlirsch*] [*Bergroth Venezuel.*]

rossi EVANS

Phymata rossi EVANS, 1931 Ann. Ent. Soc. Am. 24: 720.

Type locality: "Arizona, Utah, New Mexico"

Current status: *Phymata rossi* EVANS, 1931

Paratype: 1 ♀ <pn> [Yavapai Co/ Ariz 8.9.27/ P.A. Readio] <blue> [Paratype/ *P. rossi/ det. Evans 1931*]

Type condition: left hind leg and right mid leg tarsus missing;

rugosipes GUÉRIN-MÉNEVILLE

Syrts (Macrocephalus) rugosipes GUÉRIN-MÉNEVILLE, 1857 Hist. phys. polit. nat. Cuba 7: 405.

Type locality: "Cuba"

Current status: *Lophoscutus rugosipes* (GUÉRIN-MÉNEVILLE, 1857) (transferred by KORMILEV 1986: 304).

Syntype: 1 ♀ <pn> [*Cuba/ coll. Signoret.*] [*rugosipes/ det. Signoret.*] [*rugosipes/ rugosipes/ det. Handlirsch*] [*Lophoscutus/ rugosipes/ Guér/ det. N. Kormilev 1984*]

Type condition: left and right antennae missing;

severini HANDLIRSCH

Phymata erosa ssp. *severini* HANDLIRSCH, 1897 Ann. Naturh. Hofm. 12: 164.

Type locality: "Mexico; Panama; Guatemala"

Current status: *Phymata severini* HANDLIRSCH, 1897 (upgraded by MELIN 1930: 8).

Syntypes: 1 ♀ <pn> [*Bilimek/ Mexico/ 1883 II/ Vera Cruz*] [*severini m./ det. Handlirsch*]; 1 ♀ <pn> [*Bilimek/ Mexico/ 1871*] [*severini m./ det. Handlirsch*]; 1 ♂ <pn> [*Bilimek/ Cuerna/ vacca/ August*] [*severini m./ det. Handlirsch*]; 1 ♀ <pn> and 1 ♂ <gt> <green> [*Guanaxuato*] <green> [*E. Dugès*] [*M.R. Belg.*] [*severini m./ det. Handlirsch*]

***spiculosus* CHAMPION**

Macrocephalus spiculosus CHAMPION, 1898 Biol. Centr.-Amer., Insecta, Rhynchota 2: 63.

Type locality: "Mexico; Guatemala"

Current status: *Lophoscutus spiculosus* (CHAMPION, 1898) (transferred by KORMILEV 1986: 303).

Syntype: 1 ♂ <gc> [Chiacaman, <sic!>/ Vera Paz./ Champion.] [*spiculosus*/ det. Handlirsch] [*Lophoscutus/ spiculosus/ Charp <sic!>/ det. N. Kormilev 1984*]

***spinosissima* MAYR**

Phymata spinosissima MAYR, 1865 Verh. k. k. zool.-bot. Gesell. Wien 15: 442.

Type locality: "Brazil"

Current status: *Phymata spinosissima* MAYR, 1865

Syntype: 1 ♀ <pn> [Brasilien] [*spinosissima*/ det. Mayr] [*spinosissima*/ det. Handlirsch]

Type condition: entire right mid and hind leg missing, left mid leg tibia and hind leg tarsus missing;

***stali* HANDLIRSCH**

Macrocephalus stali HANDLIRSCH, 1897 Ann. Naturh. Hofm. 12: 195.

Type locality: "Mexico: Guanajuato, Chilpancingo"

Current status: *Lophoscutus lepidus* (STÅL, 1862) (synonymized by KORMILEV 1987: 705).

Syntypes: 1 ♂ <gt> <green> [Guanajuato/ E. Dugès] [M.R. Belg.] [*stali m.*/ det. Handlirsch] [*Lophoscutus/ stalii Handl.*/ det. N. Kormilev 1984]; 1 ♀ and 1 ♂ <gc> [Chilpancingo,/ Guerrero, 4600 ft./ June. H.H.Smith.] [*stali m.*/ det. Handlirsch] [*Lophoscutus/ stalii Handl.*/ det. N. Kormilev 1984]

***stalii* HANDLIRSCH**

Amblythyreus stalii HANDLIRSCH, 1897 Ann. Naturh. Hofm. 12: 209.

Type locality: "Eastern India: Pondichery"

Current status: *Amblythyreus stalii* HANDLIRSCH, 1897

Holotype: 1 ♂ <pn> [Ostindien/ coll. Signoret.] [*quadratus*/ det. Signoret.] [*stalii m.*/ det. Handlirsch]

Type condition: left antenna completely and right antenna segment 4 missing;

***vesiculosus* HANDLIRSCH**

Macrocephalus vesiculosus HANDLIRSCH, 1897 Ann. Naturh. Hofm. 12: 192.

Type locality: "Venezuela: Laguayra"

Current status: *Lophoscutus vesiculosus* (HANDLIRSCH, 1897) (transferred by KORMILEV 1990: 105).

Holotype: 1 ♂ <mp> [*Laguayra*/ coll. Signoret.] [*vesiculosa*/ det. Signoret.] [*vesiculosus m./* det. Handlirsch] <yellow> [coll. Nat.-Mus. Wien] [*Lophoscutus vesiculosus/ Handlirsch/* det. N. Kormilev 87]

Type condition: left antenna completely and right antenna segments 3 and 4 missing, entire right mid leg missing;

wolffii STÅL

Phymata wolffii STÅL, 1876 Svenska Vetens.-Akad. Handl. 5: 133.

Type locality: "U.S.A.; Mexico"

Current status: *Phymata fasciata* (GRAY, 1832) (synonymized by KORMILEV 1962: 406).

? **Syntypes:** 1 ♀ <pn> <yellow> [*Mex*] [292] [*Stål det.*] [*granulosa m./* det. Handlirsch] [*wolffii/* det. Stål]; 1 ♂ <pn> <yellow> [*Mex*] [*wolffii/* det. Stål] [*parva m./* det. Handlirsch]

Note: It is not clear if these syntypes of *granulosa* HANDLIRSCH and *parva* HANDLIRSCH, respectively, are the syntypes of *wolffii* STÅL.

Acknowledgements

I thank Dr. H. Zettel and Dr. R. Contreras-Lichtenberg (NHMW) for providing access to the Heteroptera collection and Dr. I.M. Kerzhner for reviewing the manuscript and making helpful comments which greatly improved the paper.

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Jahr/Year: 2000

Band/Volume: [15](#)

Autor(en)/Author(s): Rabitsch Wolfgang

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