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Two synonymies in Neotropical Mezirinae (Hemiptera, Heteroptera, Aradidae)

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A b s t r a c t

As a result of a study of some neotropical Aradidae, mainly from French Guyana, and with a comparison with the respective type specimens, two synonymies are proposed: *Mezira handlirschi* (BERGROTH, 1898) = *Hesus angulicollis* BLOETE, 1965 nov. syn. *Santaremia robusta* KORMILEV, 1960 = *Santaremia armata* KORMILEV, 1974 nov.syn. Additional records for both taxa are reported and the hitherto unknown male genitalic structures illustrated.

Key words: Heteroptera, Aradidae, Mezirinae, *Hesus*, *Mezira*, *Santaremia*, synonymy, Neotropics.

Z u s a m m e n f a s s u n g

Im Zuge der Bestimmung Neotropischer Aradidae, vor allem aus Französisch Guyana, konnten durch Vergleich mit Typenmaterial zwei Synonyme verifiziert werden. *Mezira handlirschi* (BERGROTH, 1898) = *Hesus angulicollis* BLOETE, 1965 nov.syn. *Santaremia robusta* KORMILEV, 1960 = *Santaremia armata* KORMILEV, 1974 nov.syn. Weitere Funde dieser beiden Arten werden mitgeteilt und die bisher unbekannt Genitalstrukturen der Männchen dargestellt.

I n t r o d u c t i o n

While identifying specimens and assembling data for a preliminary faunal list of Aradidae known to date from French Guyana, seemingly rare species as *Hesus angulicollis* BLOETE, 1965 and *Santaremia robusta* KORMILEV, 1960 were recognized in the material. Both taxa are known only from the types and no further records are reported. Reexamination of these types showed that there are synonymies involved, which are discussed below. For better recognition of these species, the male genitalic structures are figured for the first time.

Repositories of specimens:

CEHI	Collection Ernst Heiss, Innsbruck, Austria
CGMM	Collection Gérard Moragues, Marseille, France
NHRS	Naturhistoriska Riksmuseet, Stockholm, Sweden
RMNH	Nationaal Natuurhistorisch Museum, Leiden, The Netherlands

1. *Hesus angulicollis* BLOETE, 1965 (Fig. 1-7, photo 1, 2)

Material examined: Holotype ♀, labelled "Museum Leiden, Surinam exp., 1948-1949, Morowijne, Nassau Geb. 12 III 1949, km 10.3 " / " *Mezira handlirschi* BERGROTH 1898, det. Heiss 1994" (RMNH).

Already an earlier examination of the holotype had proved that *Hesus angulicollis* BLOETE, 1965 is the same species as that described as *Brachyrrhynchus handlirschi* by BERGROTH, 1898, later transferred to *Mezira* by USINGER & MATSUDA, 1959: 350. Therefore the following synonymy is proposed:

Mezira handlirschi (BERGROTH, 1898) = *Hesus angulicollis* BLOETE, 1965 syn. nov.

Mezira handlirschi was described from specimens from Panama, Cayenne (now French Guyana) and Brazil. Further material examined:

Syntype labelled: 1♂ "Museum Paris, Cayenne, 128-38"

28 ex. from French Guyana, detailed data cited in: HEISS & MORAGUES 2009 (in print)

1♂ 1♀ Brazil, Para, Jacareacanga II 1970 F.R.Barbosa lg. (CEHI)

1♀ Brazil, Santarem and 1# Para, Acc. 2966 (Carnegie Museum, Pittsburg)

1♀ Brazil, Santa Catarina, Corupa XI 1953 1200m, A.Martinez lg. (CEHI)

1♀ Ecuador, Sucumbios Prov., Cuya Beno III 1989, Paz y Minno lg. (coll. Onore, Bogota)

1♀ Ecuador, Napo, Puerto Misahuali 1600-1900ft , 1°2'4.2"S, 77°39'49.2"W, 6-19 IX 1998, J.E.Eger lg. (CEHI)

1♂ Bolivia, Cochabamba, Yungas de P. IV 1953, 1200m, A. Martinez lg. (CEHI)

1♂ 1♀ Peru, Monson Valley, Tiago Maria 10 XI 1954, Schlinger & Ross lg. (CEHI)

Male genitalic structures: Pygophore (fig. 6, 7) elongate oval, with a conical posterior projection, surface with irregular wrinkles and granulation, split longitudinally at middle; parameres (fig. 1-5) with bifurcate apex, deep oval cavities on dorsal and ventral face, the latter beset with bristles.

Measurements. ♂♂ 8.8 – 10.1mm; ♀♀ 10.1 – 10.5mm.

The general habitus of *Mezira handlirschi* is similar to that of *Hesus* species. However, it can be distinguished from all species of *Hesus* by the rectangular anterolateral angles of the pronotum which does not embrace the collar, by the hook-like projections lateral to the collar, and the distinctly ventral position of spiracle VII which is lateral or dorso-lateral and always visible from above in *Hesus* species.

2. *Santaremia robusta* KORMILEV, 1960 (Fig. 8 - 17, photo 3, 4)

KORMILEV (1960) established the genus *Santaremia* for the unique species *robusta*, which he described from two males from Santarem in Brazil. It seems to be allied to the Neotropical genus *Aphleboderrhis* STÅL, 1860 which comprises to date 7 species (KORMILEV & FROESCHNER, 1987). According to KORMILEV (loc.cit.:10) *Santaremia* differs from *Aphleboderrhis* by: "membrane with anastomosed veins; midlateral glabrous areas completely fused with the tergum; the shape of the pronotum, with rectangular antero-lateral angles; high transverse ridge on the hind border of connexivum II." Another striking character is the presence of a flat ovale tubercle at the middle of sternum VII in males of *Santaremia* (fig. 8, 9).

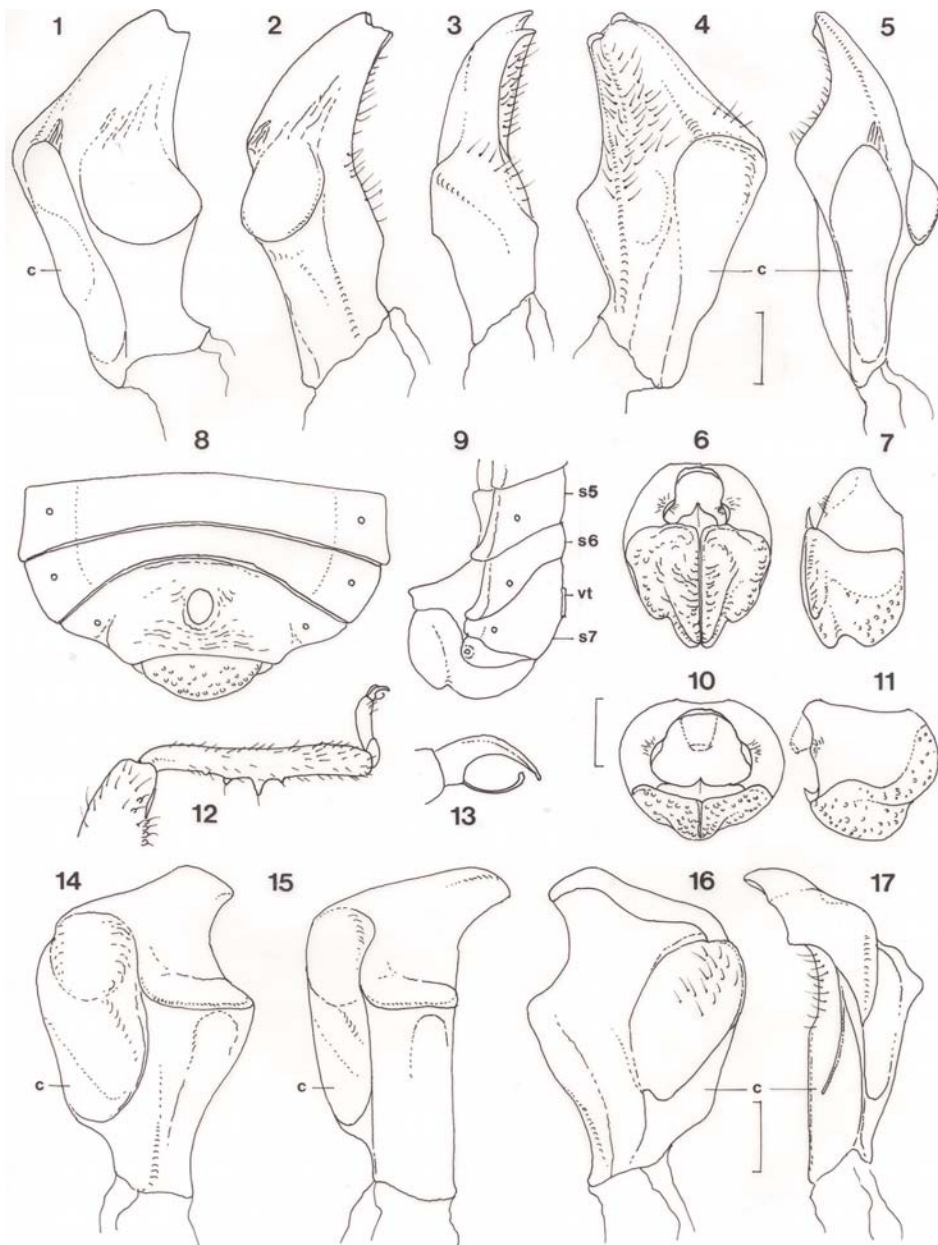


Fig. 1-7 *Mezira handlirschi*, 8-17 *Santaremia robusta*. 1-5 left paramere in different positions (1)= dorsal face, c= cavity; 6 – pygophore, dorsal view; 7 – ditto lateral view; 8 – ventral terminal segments of male; 9 – ditto lateral view, s5-s7 sternites 5-7, vt ventral tubercle; 12 – middle tibia of male; 13 – claw lateral with curved parempodium; 10 – pygophore, dorsal view; 11 – ditto lateral view; 14 – 17 left paramere in different positions (14)= dorsal face, c= cavity. Scales: 0.1 mm for fig. 1-5, 14-17; 0.5 mm for fig. 6-7, 10-11.

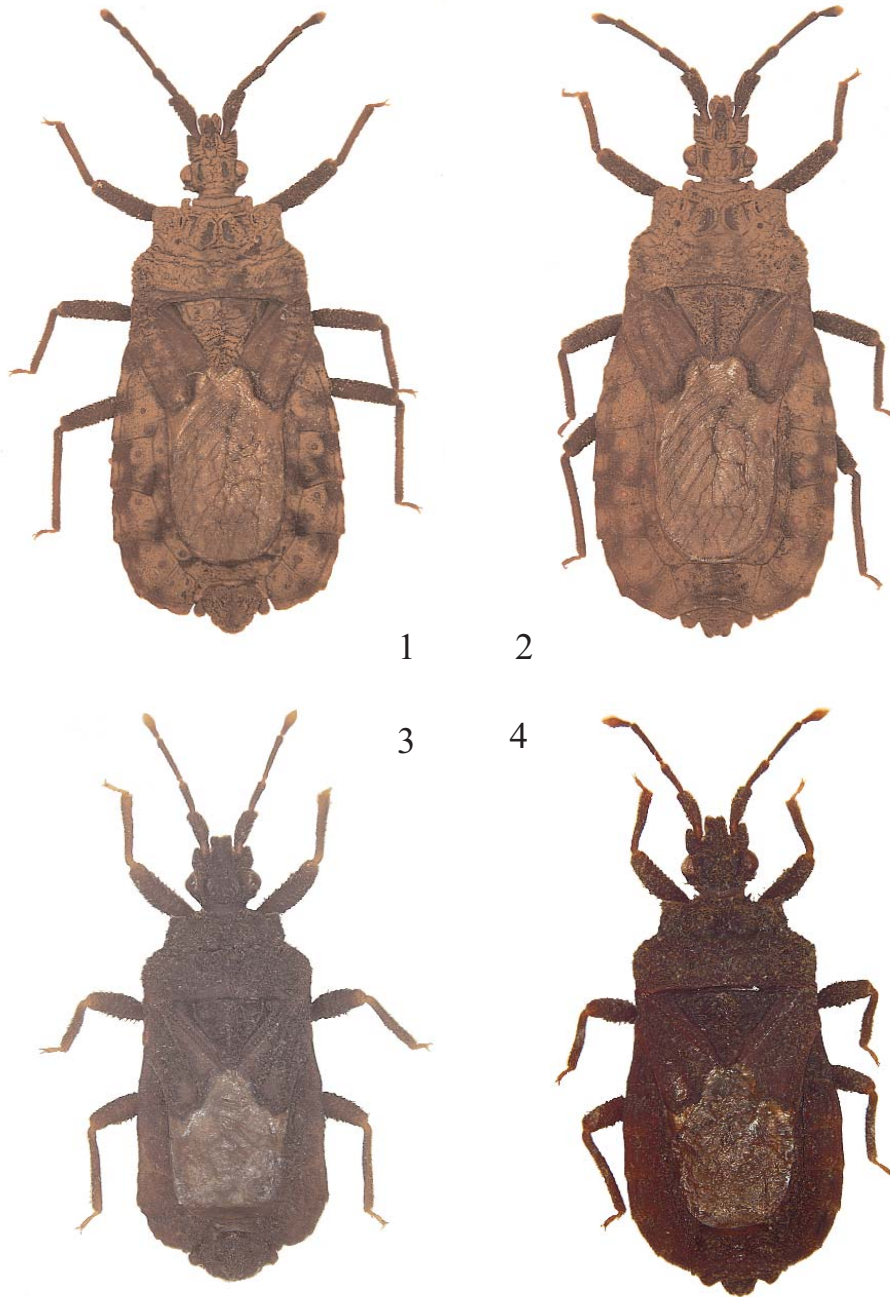


Photo 1-4. 1 – *Mezira handlirschi*, male (French Guyana); 2 – ditto female; 3 – *Santaremia robusta*, male (French Guyana); 4 – ditto female.

In 1974 KORMILEV described a second species: *Santaremia armata* based on a single male from Surinam (RMNH). In this description he states on p. 239: “*Santaremia armata* n. sp. may be separated from *S. robusta* KORMILEV, 1960, by its 3 teeth on the middle tibiae” which he shows in fig.5. In fact these “teeth” are larger tubercles bearing an apical seta, which are also present in numbers on the ventral face of all femora.

Now additional specimens from French Guyana were available for study: 3♂ 4♀ from Régina area and 1♀ from Montagne de Kaw (CEHI, CGMM, coll. JC Streito). All male specimens have a more prominent and one or two smaller tubercles on the ventral face of the middle tibiae (fig. 12). They are not developed in females.

As the male paratype of *robusta* (CEHI ex coll. Kormilev) bears as well such “teeth” which have been overlooked due to their ventral position, *S. armata* and *S. robusta* refer to the same taxon. Therefore the following synonymy is proposed:

Santaremia robusta KORMILEV, 1960 = *Santaremia armata* KORMILEV, 1974 nov.syn.

The original descriptions by KORMILEV are very detailed and enable one to recognize this genus and species. However KORMILEV’s statement (1960:10):” tarsi without arolia” is erroneous, as long curved thin parempodia are present in all specimens (fig.13). In addition the unknown male genitalic structures are illustrated below: pygophore (fig.10, 11) stout and rounded posteriorly, dorsal opening large; parameres (fig.14-17) with a large oval dorsal and ventral cavity, the latter partly divided by a thin lamina (fig.17).

Measurements: ♂♂ 6.6 (HT *robusta*), 6.7 (PT *robusta*), 7.1, 7.3 and 7.44mm (HT *armata*); ♀♀ 7.4 – 7.5mm.

A c k n o w l e d g m e n t s

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