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First Record of a Mezirinae Flat Bug from Dominican Amber: *Mezira scheveni* n. sp. (Heteroptera, Aradidae).

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A b s t r a c t

To date only one species of the hemipteran family Aradidae has been described from Dominican Amber, belonging to the genus *Calisiopsis* of the subfamily Calisiinae. Now a new species of the subfamily Mezirinae, *Mezira scheveni* n. sp. is described. The inclusion is shown in dorsal and ventral view and a figure is given for easier comparison with recent taxa.

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

Aus dem Dominikanischen Bernstein ist bisher nur eine Art der Heteropterenfamilie Aradidae beschrieben worden, welche in die Unterfamilie Calisiinae, Gattung *Calisiopsis* gestellt wurde. Nun liegt eine neue Art der Unterfamilie Mezirinae vor, welche als *Mezira scheveni* n. sp. nachstehend beschrieben und abgebildet wird.

Key words: Heteroptera, Aradidae, *Mezira* new species, Dominican Amber.

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

The New Worlds largest deposits of amber are known from the Dominican Republic (Hispaniola, Greater Antilles). Its fauna is - as far as already investigated - extremely rich in insects, most of them belonging to terrestrial groups (POINAR 1992, GRIMALDI 1996), but also few aquatic insects have been described (ANDERSEN 1999).

Of the heteropteran family Aradidae, which is rich in species and widely distributed from North- to South America, only one species (*Calisiopsis brodzinskyorum*) was described to date (FROESCHNER 1992).

The age of the Dominican Amber is still unknown, and according to literature data it ranges between 15 to 30 million years (GRIMALDI 1995, SCHLEE 1990), which is younger than the typical Baltic Amber.

Material and Methods

One aradid specimen enclosed in a piece of transparent, honey - yellow Dominican Amber. It is not known, from which deposit it originates. The piece is ovate with maximum diameters of 19 x 14 mm, polished flat on both sides, nearly without impurities and without cracks. The specimen is well preserved and visible on both sides, antennae and legs are partly broken, but their remnants are mostly included as well.

Measurements were taken with a micrometer eyepiece and are given in millimeters or 40 units = 1 mm.

Description

Mezira scheveni n. sp. (Table 1, photo 1,2; fig. 1)

H o l o t y p e : Macropterous male, inclusion of Dominican Amber, in coll. Heiss.

Habitus as fig.1, with body and appendages finely granulate. Colour cinnamon - brown.

H e a d : Slightly longer than wide across eyes (40/38); genae produced beyond apex of clypeus, their apices blunt and forming a cleft. Antenniferous tubercles diverging anteriorly, apices pointed. Antennae slender, 1.37 x as long as width of head (52/38), first segment long, thickened on anterior 2/3, second and third thinner, gradually thickened toward apex, fourth barrelshaped with pilose apex. Relative length of segments I : II : III : IV = 14 : 13 : 13 : 12 . Eyes semiglobose, protruding laterally. Vertex with two longitudinal rows of larger granules and two (1 + 1) ovate depressions laterad. Postocular tubercles large with pointed apices reaching slightly beyond outer margin of eyes, posterior margin with a small tubercle. Rostrum as long as head, arising from a slit - like atrium, rostral groove with elevated lateral borders is open posteriorly.

P r o n o t u m : Trapezoidal, twice as wide as long at middle (75/36). Lateral margins irregularly dentate, rounded at humeri, then constricted to subparallel anterior portion, anterolateral angles not produced over ringlike granular collar. Disk rather flat, with 2 (1+1) ovate smooth callosities on anterior half, coarsely granulate elsewhere. Transverse depression shallow, humeral angles feebly longitudinally elevated.

S c u t e l l u m : Triangular, wider than long (39/35). Lateral margins formed by granular ridges, constricted before split apex. Base of scutellum elevated, its anterolateral angles with a larger granule. Disk elevated along anterior 2/3 of midline, coarsely granulate.

H e m e l y t r a : Base of corium granulate, with subparallel margins. Membrane irregularly wrinkled, without distinct veins, reaching 1/2 of mediotergite (Mtg) VII.

A b d o m e n : Ovate, lateral margins rounded, posterolateral angles of dorsal laterotergites (Dltg) II - VI slightly produced, truncate in Dltg VII. Dltg II and III not

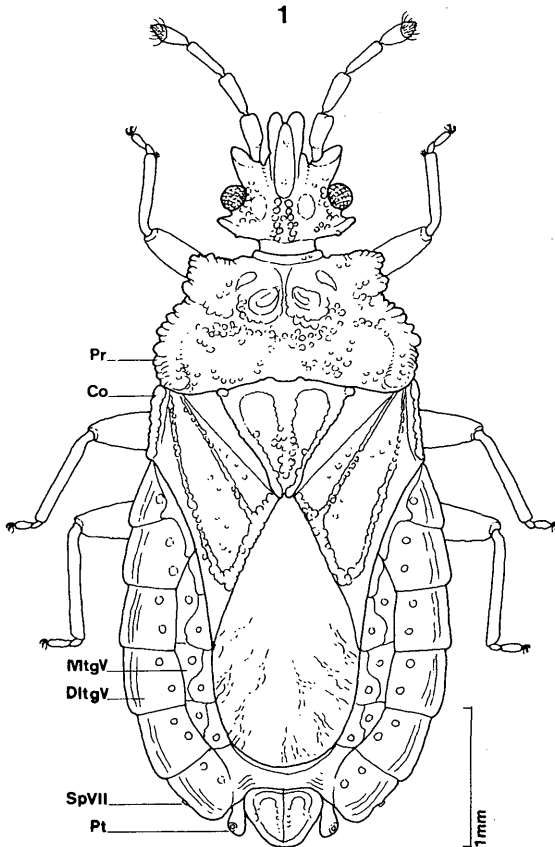


Fig. 1 *Mezira scheveni* n. sp.: holotype male, reconstruction, dorsal view. Abbreviations: Co base of corium; Dltg V dorsal laterotergite V; Mtg V expanded portion of mediotergite V; Pr pronotum; Pt paratergite VIII with spiracle VIII; Sp VII lateral spiracle VII.

fused. Tergal plate expanded laterally of membrane on Mtg III to VI, with an elevated ridge along corium and membrane, which in its wider parts encloses the exposed sublateral apodemes („glabrous spots“) of Mtg III to VI. Mtg VII elevated medially. Pygophore pear-shaped, constricted towards broadly rounded apex, surface only slightly elevated along cleft midline, this cleft extending posterolaterally along thickened posterior margin of pygophore. Paratergites VIII clubshaped, shorter than pygophore.

Venter: (Table 1, photo 2). Pro- meso- and metasternum fused, marked by transverse sutures. Metathoracic scent gland canal curved posteriorly, reaching lateral margin of corium. Mediosternites (Mst) II and III fused, medially marked by a curved suture. Mst III to VII separated, posterior margin of Mst VI and anterior one of Mst VII curved. Spiracles II to VI ventral, VII and VIII lateral and visible from above.



Table 1 *Mezira scheveni*: photo 1 - Dominican Amber inclusion of holotype male, dorsal view; photo 2 ditto, ventral view.

L e g s : Trochanters distinct, separated by a suture from femora, the latter thickened medially. Tibiae cylindrical. Protibial comb present. Tarsi twosegmented, claws with distinct pseudopulvilli.

M e a s u r e m e n t s : Length 5.3 mm; head w/l 0.95/1.0 mm; length of antennae 1.3 mm; pronotum w/l 1.87/0.9 mm; width of abdomen 2.35 mm.

E t y m o l o g y : It is a pleasure to dedicate this interesting species to Dr. Joachim Scheven, Hagen, Germany, who generously donated this inclusion to my special amber collection of Aradidae.

D i s c u s s i o n

The specimen belongs unambiguously to the extant genus *Mezira* AMYOT & SERVILLE 1843, which shows a cosmopolitan distribution, but is most species-rich in tropical regions of the New World, where 112 of 160 species occur (KORMILEV & FROESCHNER 1987).

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Mezira scheveni n. sp. seems related to *Mezira abdominalis* (STAL 1873), a species widespread in the Caribbean which shows the same peculiar structure of pygophore. But *M. abdominalis* differs by larger size (8 - 8.5 mm in male), longer antennae (ratio length of antennae / width of head more than 1.9), wider and more rounded abdomen and rounded, anteriorly produced anterolateral angles of pronotum. A similar pygophore is furthermore shared by *Mezira gradata* (BERGROTH 1889) and *Mezira bouvieri* (BERGROTH 1898), but both species occur only in tropical South America and share no other characters with the new species.

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