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New records of Aradidae from Spain and description of *Quilnus marcosi* spec.nov. (Heteroptera: Aradidae)

E. HEISS & M. BAENA

Abstract: Additional records of Aradidae, *Quilnus subsimilis*, *Iralumeulus gallicus*, *Aneururus (Aneurodes) avenius* from Spain are reported and *Quilnus marcosi* spec. nov. is described and figured. It is closely related to *Q. mediterraneus* HEISS 1989 but shows clear differences in abdominal and male genitalic stuctures.

Key words: Heteroptera, Aradidae, *Quilnus*, new species, faunistics, Spain.

Introduction

The genus *Quilnus* STÅL 1873 contains to date 7 palaeartic species, all but one occurring in the mediterranean region (HEISS 2001). Of them only *Q. subsimilis* HORVATH 1911, described from Algeria, is so far recorded from Spain. Specimens collected in Jaén, Sierra de Cazorla proved to belong to a new taxon, which is decribed below. Additional records of other Aradidae are also reported. Measurements were taken with an eye micrometer, 40 units = 1 mm.

Quilnus marcosi spec. nov. (Fig. 1)

Type material: Holotype ♂, stenopterous, Spain : Jaén, Sierra de Cazorla, Alredores de Linarejos 8 V 2004 under bark of *Pinus*, Marcos López Vergara leg, coll. M. Baena, Cordoba. Paratypes 1♂, 1♀ brach., 1 larva V with the same collection data, coll. Baena and Heiss.

Description

Adult. Stenopterous ♂ (fig. 1a). Body elongate oval, uniformly dark brown. Antennae and legs beset with small setigerous tubercles, surface of body finely granulate.

Head. As long as wide across eyes (diatone). Clypeus conical; antenniferous tubercles acute, laterally without a tooth (present in larvae). Antennae about 1.67 × as long as the diatone, all segments cylindrical, I shortest, III longest and about 1.2 × as long as II, IV shorter than II; relative length of segments I : II : III : IV = 8 : 19 : 23 : 17. Preocular and postocular tubercles blunt and rounded. Vertex with two oval depressions. Rostrum short, as long as head.

Pronotum. Trapeziform, about 2.5 × as wide as long at middle; lateral margins slightly convex and granulate, anterior margin with a shallow, posterior margin with a deep median incision. Disk with indistinct longitudinal carinae at middle and flat rounded structures laterad of them; humeral angles rounded.

Scutellum. Triangular, elongate with narrow apex; lateral margins carinate, disk flat and depressed.

Hemelytra. Corium long, reaching $\frac{1}{2}$ of dorsal laterotergite (dltg) V, with distinct carinate veins; membrane narrow, subparallel, enlarged and rounded posteriorly bearing three veins.

Abdomen. Egg-shaped, lateral margins evenly rounded, posteroexterior angles of dltg VII rounded; paratergites VIII with a thin carinate anterior margin and a posterolateral tooth.

Legs. Long and thin; tarsi bisegmented, segment I yellowish brown.

Genitalic structures. Parameres (fig. 1l, m), slender and curved; parandria with a rounded apical lobe (fig. 1j); tergite IX with a wide base and finger-like projections anteriorly (fig. 1h).

Brachypterous ♀ (fig. 1b,d) : Larger than male, abdomen wider and more rounded. Head and antennal structures as of male. Antennae 1.66 × as long as the diatone, relative length of segments I : II : III : IV = 9 : 22 : 25 : 17. Pronotum about 2.75 × as wide as long, lateral margins granulate. Scutellum with a bluntly rounded apex, lateral margins thickened and carinate. Hemelytra reduced to rounded wingpads, which are about as long as the scutellum. Abdomen completely exposed, paratergites VIII small, about twice as wide as long, with a distinct tooth posterolaterally.

Measurements: HT ♂ : Length 5.5 mm; head width / length 20 / 20; pronotum w / l 30 / 12; scutellum w / l 15 / 21; width of abdomen 2.4 mm. PT ♀ : Length 6.6 mm; head w / l 22 / 22; pronotum w / l 33 / 12; scutellum w / l 17 / 23; width of abdomen 3.2 mm.

Discussion

Larva (stage V) : Reddish brown, yellowish are antennal segment I and apical half of III, anterior and median posterior margin of pronotum, anterolateral margins of wingpads, the abdomen medially and along the lateral margins and the apex of femora and base of tibiae.

Head with acute antenniferous tubercles, their lateral margin with a distinct tooth. Antennae slender, relative length of I : II : III : IV = 10 : 19 : 19 : 17. Pronotum with convex, anteriorly converging lateral margins, humeri subacute. Wingpads slightly projecting over posterior margin of tergite I. Abdomen with posterolateral angles of dltg VI and VII angulate, of paratergites VIII acute (fig. 1f).

Measurements: Length 7.15 mm (presumably a ♀); width of abdomen 3.3 mm.

The larval stage V of *Q. marcosi* spec. nov. differs from that of *Q. mediterraneus* by the angulate humeri of pronotum, the acute posterolateral angles of dltg VII and paratergites VIII, which are rounded in *Q. mediterraneus* (fig. 1f, g).

Egg: Elongate oval, milky whitish; when larvae of stage I hatched, the remaining shell is transparent with smooth surface showing a hexagonal reticulation, the anterior pole is of darker color (egg burster?) and bears almost 2-3 micropyles. Length 1.1-1.2 mm, diameter 0.45-0.5 mm. It has been observed by MB that the larval stages I hatched into stage II without feeding.

E t y m o l o g y : This unexpected new Aradid species is named after Marcos López Vergara, who collected this and other interesting Aradidae and presented them to MB for our studies.

Quilnus marcosi spec.nov. is closest related to *Q. mediterraneus* HEISS 1989 described from Italy, sharing the same size and general habitus. It is however easily distinguished by the different male genitalic structures as shape of tergite IX (fig. 1h, i), by widely rounded not narrowed apex of parandria (fig. 1 j, k) and narrower and more curved paramers (fig. 1l,m). Females of *Q. marcosi* spec. nov.. differ from *Q. mediterraneus* by lateral margin of pronotum slightly convex not straight, paratergites VIII smaller and with a narrow cleft between them (fig. 1d, e) and longer wingpads, reaching apex of the scutellum (fig. 1b, c).

Additional records of Aradidae

Quilnus subsimilis HORVATH 1911

M a t e r i a l : Jaén: Sierra de Cazorla, Sendero Collado del Oso, Fuente del Oso, 22.XI. 2003, 1 ♂ under bark of *Pinus*, M. López Vergara (leg). in coll. Baena; Jaén, Cañada de las Azadillas, 14.V.2005, 1 larva V 1 ♀★ under bark of *Pinus*, A. Castro Tovar leg. in coll. Baena; Avila, El Tiemblo, 6.I.2004, 1 ♀ under bark of *Pinus*, J.J. De la Rosa leg. in coll. Baena.

Iralunelus gallicus STYS 1974

M a t e r i a l : Jaén, Mancha Real, Subida al pico Almadén, 1506m. UTM 30S 0453536 4178115, 16.4.2005, 9 ♂♂ 15 ♀♀, 1 larva V under bark of *Crataegus* sp., M. Baena leg. et coll.; Málaga; Sierra de las Nieves, Cortijo Quejigales, 1250 m, UTM 30S 1762, 12.6.1984, 1 ♀, J. M. Vela leg. in coll. Baena, (this specimen was recorded by VELA y BASTAZO (1986) as *Aneuris avenius*).

Aneuris (Aneurodes) avenius (DUFOR 1833)

M a t e r i a l : Spain: Cádiz, Vejer de la Frontera, Cuesta de la Muela, 28.8. 2004, 1 ♂, 4.9.2004, 2 ♀♀, under bark of *Ulmus* sp. P. Coello leg. in coll. Baena.
Marocco: Tánger, 3 ♂♂ 4 ♀♀, Escalera leg., coll. Museo Nacional de Ciencias Naturales de Madrid.

Resumen

Se describe y se figura una nueva especie de *Quilnus* de Andalucía, *Q. marcosi* spec. nov. La nueva especie es próxima a *Q. mediterraneus* HEISS 1989, de la que se separa con facilidad por la morfología abdominal y genitalia. Se aportan nuevos registros de *Q. subsimilis*, *Iralunelus gallicus* y *Aneuris (Aneurodes) avenius*.

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Address of the Authors: DI Dr. Ernst HEISS
 Research Entomologist Tiroler Landesmuseum
 Josef-Schraffl-Strasse 2a
 A-6020 Innsbruck, Austria
 E-Mail: aradus@aon.at

 Pr. Manuel BAENA
 Departamento de Biología y Geología
 I.E.S. Trassierra
 Avda. Arroyo del Moro, s/n
 14011 Córdoba, Spain
 E-Mail: jsusin@chopo.pntic.mec.es

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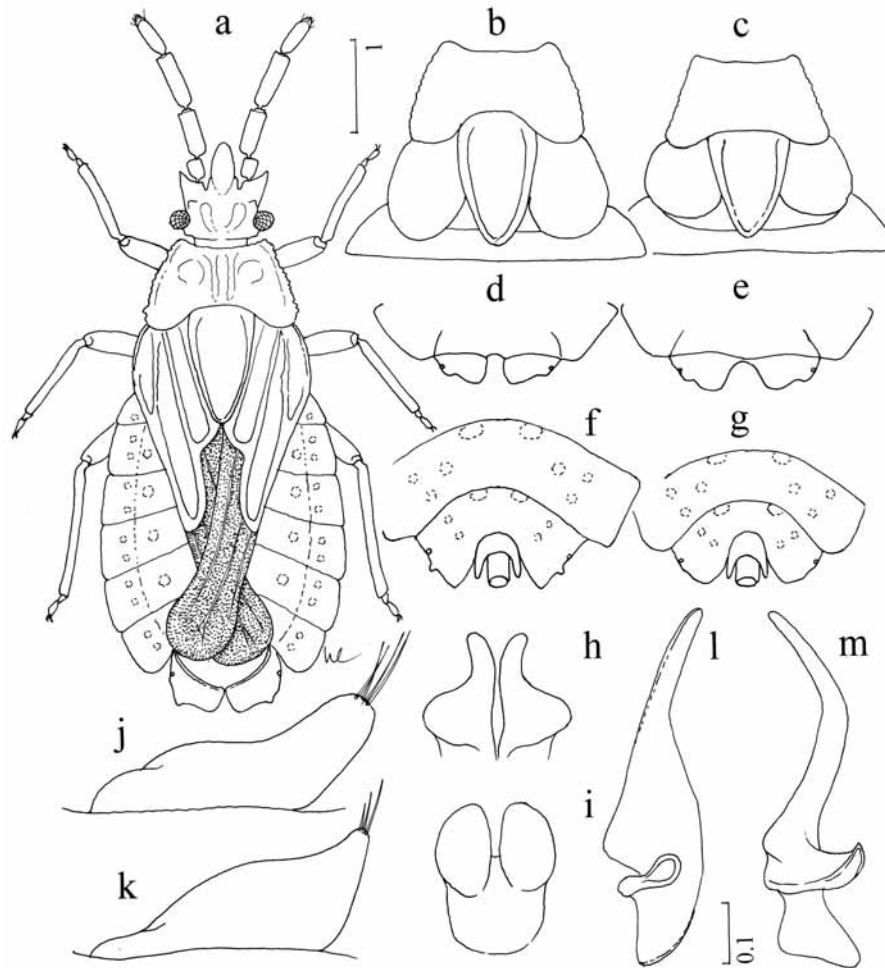


Fig. 1 a-m: 1a, b, d, f, h, j, l, m *Quilnus marcosi* spec. nov.; c, e, g, i, k *Q. mediterraneus*: (a) holotype ♂ habitus; (b, c) ♀ thorax; (d, e) ♀ terminal segments of abdomen; (f, g) larva stage V, terminal segments of abdomen; (h, i) tergite IX; (j, k) parandrium; (l, m) paramere. Scale in mm.