

Two new species of *Trixoscelis* Rondani from the Iberian Peninsula (*Diptera*, *Trixoscelididae*)

Dos especies nuevas de *Trixoscelis* Rondani de la Península Ibérica (*Diptera*, *Trixoscelididae*)

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Palabras clave: Diptera, *Trixoscelididae*, especies nuevas, Península Ibérica.

SUMMARY

Two new species of *Trixoscelis* Rondani, *T. gigans* sp. n. and *T. serpens* sp. n., are described from the Iberian Peninsula.

RESUMEN

Se describen dos especies nuevas de *Trixoscelis* Rondani, *T. gigans* sp.n. y *T. serpens* sp.n., de la Península Ibérica.

INTRODUCTION

This family is found mainly in arid areas and is best represented in the Holarctic, Ethiopian and Neotropical regions although lacking in the Oriental and Australian regions. *Trixoscelis* Rondani, 1856 is a genus containing more than 30 species described for the Palaearctic region (Papp, 1998). The Iberobalearcic fauna is represented by 16 species altogether, three of which have been described only recently (Carles-Tolrá, 1993a,b; Carles-Tolrá *et al.*, 2001). The immature stages and the biology of this family are unknown.

The new material studied in this paper was collected by three collectors: Dr. A. Baz (Madrid) and Dr. H.-P. Tschorsnig (Stuttgart) in Spain, and Dr.

J. Pujade (Barcelona) in Portugal. The material sent by Dr. Baz was caught in the Province of Madrid with a Malaise trap located in a *Quercus pyrenaica* wood at 1450 m, whilst the material sent by Dr. Tschorsnig was caught in the province of Salamanca in a Malaise trap and by sweeping from plants.

Chaetotaxy abbreviations: dc = dorsocentral, hu = humeral, mp = mesopleural, np = notopleural, oc = ocellar, ors = orbital, pa = postalar, prst = presutural, pvt = postverticals, sa = supraalar, sc = scutellar, st = sternopleural, vi = vibrissa, vte = outer vertical, vti = inner vertical.

Trixoscelis gigans sp. n.

Male: Head yellow, frontal triangle, vertex, occiput and postgena brownish, tomentose grey. Antennae yellow: joints 1 and 2 orangish; joint 3 brown externally, yellow on lower part and around the base of the arista; inner side yellow with a apicodorsal brown spot. Chaetotaxy: 2 ors, oc, vte, vti, pvt (short), vi.

Thorax brown, mesonotum dusted with grey except for 1 pair of longitudinal stripes between ac and dc rows. Chaetotaxy: 1 hu, 2 np, 1 prst, 2+3 dc, 1 sa, 2 pa (inner much shorter), 2 sc, 1 mp, 2 st.

Wing brownish, costal margin distinctly brown: brown band passing longitudinally over vein R2+3 and passing slightly over the apex of vein R4+5. Haltere whitish.

Fore leg completely dark brown except yellow coxa and base of femur. Midleg completely yellow; 5th tarsal joint brown, yellow basally. Hindleg yellow; femur brownish dorsally; tarsi: basitarsus dilated, brown, joint 2 brownish, joint 5 brown apically.

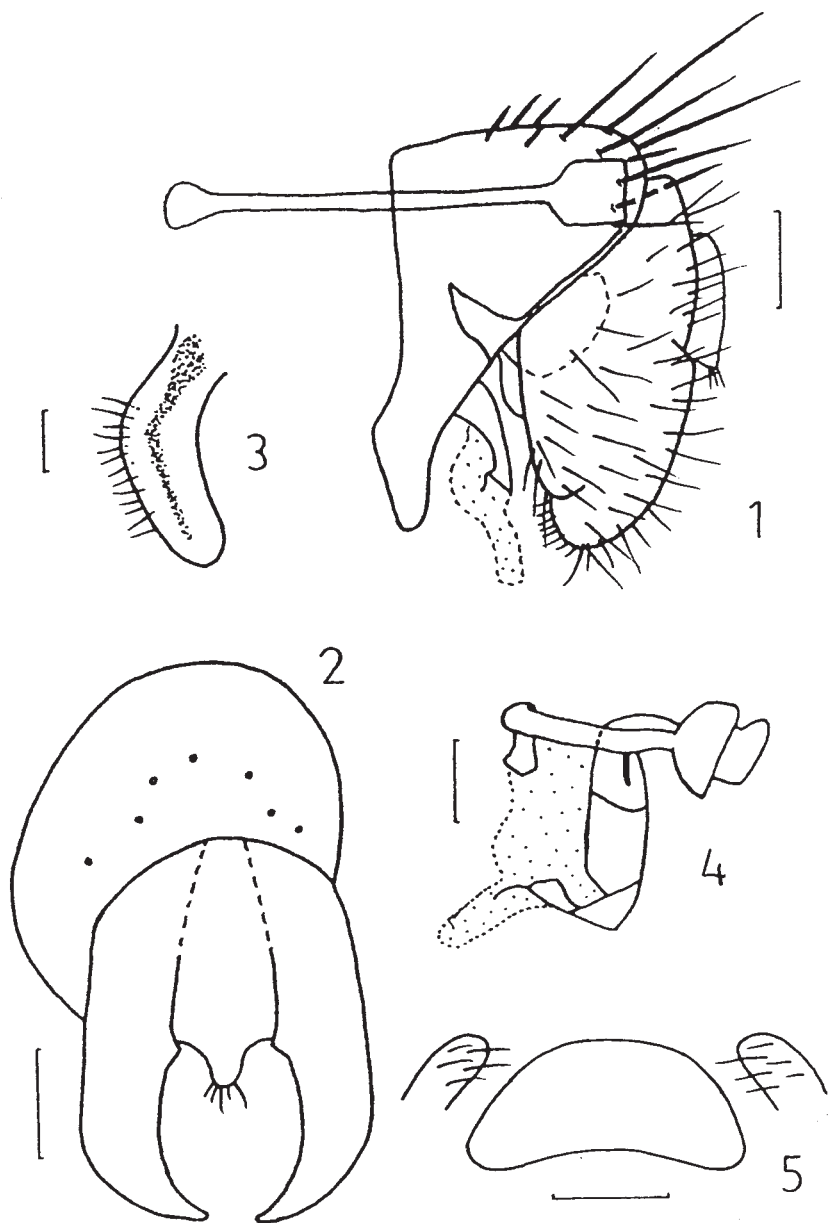
Abdomen dark brown, dusted with grey.

Genitalia (Figs. 1, 2) brown: syntergosternite 7+8 with long posterodorsal bristles. Epandrium and surstyli completely fused, forming a very big piece. Surstylus very big, wide, pointed, curved inwards. Gonite (Fig. 3) curved, wide, inner side with anterior hairs. Aedeagus (Fig. 4) with two sclerotized branches united by a broad, transparent membrane. Aedeagal apodeme long and narrow (Fig. 1).

Female: As the male except:

Hind leg completely yellow; basitarsus not dilated; joint 5 brownish apically. Wing: anterior brown band distinctly narrower than in the male, not reaching vein R2+3 longitudinally, except at the apex, which passes over it slightly.

Genitalia: sternite 7 not desclerotized posteromedially. Sternite 8 (Fig. 5) moreorless concave anteriorly and very convex posteriorly.



Figs. 1-5.—*Trixoscelis gigans* sp. n.: 1) lateral view of male genitalia; 2) posterior view of male genitalia; 3) lateral view of left gonite; 4) overall view of aedeagus; 5) female sternite 8. Scales = 0.1 mm.

Figs. 1-5.—*Trixoscelis gigans* sp. n.: 1) genitalia masculina en visión lateral; 2) genitalia masculina en visión posterior; 3) gonito izquierdo en visión lateral; 4) aedeagus en su máxima extensión; 5) esternito 8 de la hembra. Escalas = 0,1 mm.

Total body length: males 2.8-3.8 mm; females 2.6-3.5 mm (n = 10 males and 10 females).

Type material: Holotype ♂, SPAIN: Madrid, Rascafría, Puerto de la Morcuera, 12-20.7.1999, oak wood of *Quercus pyrenaica*, 1450 m.a.s.l., Malaise trap, A. Baz leg. Paratypes: SPAIN, Salamanca, Villar de Ciervo, Las Coronas, 18.6.-8.7.1995, 53 ♂♂ and 48 ♀♀, Malaise trap, H.-P. Tschorsnig leg. Holotype and 15 ♂♂ and 15 ♀♀ paratypes deposited in the author's collection; other paratypes deposited in the Staatliches Museum für Naturkunde (Stuttgart). Total: 54 ♂♂, 48 ♀♀.

Biology: unknown.

Distribution: hitherto known only from Spain (northwest and central).

Etymology: the specific name comes from the Greek "gigans" (= giant) and refers to the very big surstyli, as well as of the generally large size of this species.

Discussion: *Trixoscelis gigans* sp. n. is closely related to *T. frontalis* (Fallén, 1823), but can be easily differentiated by external characters: costal margin distinctly darkened and fore leg completely brown, dark (except yellow coxa and base of femur). With regards to its genital characters, *T. gigans* has a very peculiar male genitalia: very big surstyli fused with epandrium. Females can be also easily separated by the shape of sternite 8. Finally, the, in general, extremely big size of this species makes of *Trixoscelis gigans* a very unmistakable species.

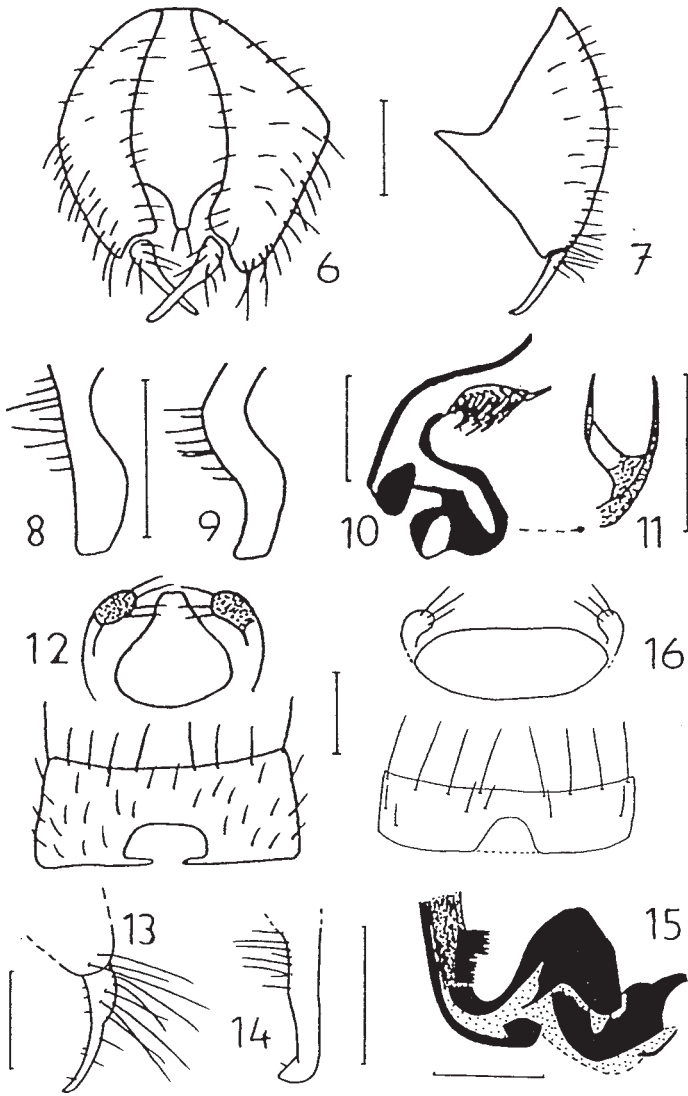
Trixoscelis serpens sp. n.

Male. Head yellow, grey dusted; frontal triangle, vertex, occiput and postgena brownish, grey dusted. Antennae completely yellow, with a brown spot under base of arista. Chaetotaxy: 2 ors, oc, vte, vti, pvt (short), vi.

Thorax brown, grey dusted; mesonotum with 1 pair of longitudinal brownish stripes between ac and dc rows. Chaetotaxy: 1 hu, 2 np, 1 prst, 2+3 dc, 1 sa, 2 pa (inner much shorter), 2 sc, 1 mp, 2 st.

Wing uniformly clear, not brown on anterior margin. Veins brownish.

Fore leg completely brown, except yellow coxa. Mid leg completely yellow, 5th tarsal joint brown apically. Hind leg yellow; femur more or less brownish dorsally; basitarsus few dilated, brownish; 5th tarsal joint brownish apically.



Figs. 6-12.—*Trixoscelis serpens* sp. n.: 6) posterior view of male genitalia; 7) lateral view of male genitalia; 8) lateral view of left gonite; 9) anterolateral view of left gonite; 10) ventrolateral view of aedeagus; 11) ventral view of apex of aedeagus; 12) female sternites 7 and 8. Figs. 13-16. *Trixoscelis curvata* Carles-Tolrà: 13) lateral view of surstylus; 14) lateral view of gonite; 15) ventrocaudal view of aedeagus; 16) female sternites 7 and 8. Scales = 0.1 mm.

Figs. 6-12.—*Trixoscelis serpens* sp. n.: 6) genitalia masculina en visión posterior; 7) genitalia masculina en visión lateral; 8) gonito izquierdo en visión lateral; 9) gonito izquierdo en visión anterolateral; 10) aedeagus en visión ventrolateral; 11) ápice del aedeagus en visión ventral; 12) esternitos 7 y 8 de la hembra. Figs. 13-16. *Trixoscelis curvata* Carles-Tolrà: 13) surstylus en visión lateral; 14) gonito en visión lateral; 15) aedeagus en visión ventrocaudal; 16) esternitos 7 y 8 de la hembra. Escalas = 0,1 mm.

Abdomen dark brown, grey dusted.

Genitalia: surstylus (Figs. 6, 7) long and narrow, somewhat dilated at the base (in posterior view). Gonite (Figs. 8, 9) dilated distally, with some anterior small hairs at base; distinctly S-shaped in anterolateral view. Aedeagus (Fig. 10) well sclerotized, base with a group of dense, similar spines; apex forked (Fig. 11), formed by two thin branches, bifurcation more or less perpendicular to the rest of the aedeagus.

Female. As the male, except:

3rd antennal joint brownish externally, yellow only below. Hind leg completely yellow; basitarsus yellow, not dilated; 5th tarsal joint brownish apically.

Genitalia: sternite 7 (Fig. 12) with a distinct desclerotized area in the middle of posterior margin, which has a pair of variable prolongations narrowing anteriorly the desclerotization. Sternite 8 (Fig. 12) subtriangular, somewhat narrower preapically.

Total body length: males 2.1-2.5 mm, females 2.2-2.9 mm (n = 6 males and 10 females).

Type material: Holotype ♂, SPAIN, Madrid, Rascafría, Puerto de la Morcuera, 12-20.7.1999, oak wood of *Quercus pyrenaica*, 1450 m.a.s.l., Malaise trap, A. Baz leg. Paratypes: 1 ♂ and 2 ♀♀ as for holotype. SPAIN, Salamanca: Villar de Ciervo, Las Coronas, 18.6.-8.7.1995, 10 ♂♂ 175 ♀♀ (Malaise trap), 23-27.5.1999, 4 ♀♀ (Malaise trap); Villar de la Yegua, Vado de la Viña, 29.6.1995, 1 ♀ (swept from *Umbelliferae*); all H.-P. Tschorsnig leg. PORTUGAL, Vila Real: Vila Real, 1.8.1995, 1 ♂, J. Pujade leg. Holotype and 6♂♂ and 32♀♀ paratypes deposited in the author's collection, other paratypes deposited in the Staatliches Museum für Naturkunde (Stuttgart). Total: 13♂♂, 182♀♀.

Biology: unknown.

Distribution: hitherto only known in northwest Spain and northern Portugal.

Etymology: the specific name comes from the Latin "serpens" (= snail) and refers to the S-shaped surstylus resembling a snail.

Discussion: *Trixoscelis serpens* sp. n. is closely related to *T. curvata* Carles-Tolrá, 1993. Both species clearly differ in their genital characters (cf. Figs. 13-16).

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