

TWO ACALYPTRATE SPECIES NEW FOR SCIENCE AND A NEW RECORD FOR SPAIN (DIPTERA: CARNIDAE, SPHAEROCERIDAE, TRIXOSCELIDIDAE)

Miguel Carles-Tolrá

Avda. Príncipe de Asturias 30, ático 1, E-08012 Barcelona, España. — diptera@outlook.com

Abstract: Two new acalyptrate species, *Meoneura obtusangula* sp. n. (Carnidae) and *Trixoscelis anichtiri* sp. n. (Trixoscelididae), are described from Spain. Furthermore, the sphaerocerid *Coproica rufifrons* Hayashi, 1991 is recorded from the Iberian Peninsula (in Spain) for the first time. All of them were collected with traps baited with a dead piglet.

Key words: Diptera, Carnidae, Sphaeroceridae, Trixoscelididae, new species, faunistics, Spain.

Dos especies nuevas de acalípteros y una nueva cita para España (Diptera: Carnidae, Sphaeroceridae, Trixoscelididae)

Resumen: Dos especies nuevas de acalípteros, *Meoneura obtusangula* sp. n. (Carnidae) y *Trixoscelis anichtiri* sp. n. (Trixoscelididae), se describen de España. Además, el esfrocérico *Coproica rufifrons* Hayashi, 1991 se cita de la Península Ibérica (en España) por primera vez. Todas ellas fueron capturadas con trampas cebadas con un lechón muerto.

Palabras clave: Diptera, Carnidae, Sphaeroceridae, Trixoscelididae, especies nuevas, faunística, España.

Taxonomy / Taxonomía: *Meoneura obtusangula* sp.n., *Trixoscelis anichtiri* sp.n.

Introduction

Recently, Carles-Tolrá *et al.* (2014) published a paper about the study of some dipterans collected on a dead piglet. The study was carried out in the province of Murcia (Spain). For the captures a Schoenly trap (with two pitfall traps inside) baited with a dead piglet was used. For more details see Carles-Tolrá *et al.* (2014).

In that paper 3 new dipterous species of the families Carnidae, Sphaeroceridae and Trixoscelididae were waiting to be described. Now, two of them (Carnidae and Trixoscelididae) are described in this paper, the third one (Sphaeroceridae) belongs to an already known species.

Results

CARNIDAE

Meoneura obtusangula sp.n.

DESCRIPTION: Head dark brown, frons brownish anteriorly. Frontal triangle brown, subshining, reaching only the middle of frons. Eye:gena = 3. Gena with a row of setae, 2 anterior ones longer, first one upwards. Genal edge with 2 strong vibrissae, between them with a short hair. Chaetotaxy: 2 anterior orbitals (inwards), 2 posterior orbitals (outwards), outer vertical, inner vertical, ocellar, postocellar, 1 interfrontal (forwards).

Thorax dark brown. 3 dorsocentrals.

Wing clear. Haltere whitish.

Legs brown. Fore femur with a ventral row of long setae.

Abdomen brown.

Genitalia brown. Epandrium (Fig. 1) brown, slightly concave anteriorly, haired (with some long hairs). Lamella (Fig. 1, 2) fused with surstylus, very small and short, wart-shaped, with short apical hairs. Surstylus (Fig. 1, 2) long, curved forwards, blunt, with 2 posterior long hairs and minute apical ones; surstyli curved inwards, convergent in

posterior view, forming a semicircle (Fig. 3). Postgonite (Fig. 4) hook-shaped. Aedeagus (Fig. 1, 4): proximal part brown, short, wide, stout, sclerotized, with extremely dense hairs, distal part fleshy, dilated towards tip, cup-shaped, membranous, translucent, with numerous spinules.

Total body length: 1.5-2 mm.

Female unknown.

TYPE MATERIAL: Holotype male: Spain, Murcia, Parque Regional de la Sierra de Espuña, El Morrón de Espuña, 11.10.2006 (Schoenly trap), M.I. Arnaldos, I. Begoña and M.D. García leg.

Other material: the following four specimens are in such a bad state of conservation (they are strongly discoloured, almost transparent, seeming a ghost), that they have been excluded from type material: same data as holotype, but 21.9.2006 1 male, 23.9.2006 1 male, 24.9.2006 2 males.

Material preserved in alcohol (70%), three specimens are deposited in the University of Murcia (Facultad de Biología, Departamento de Zoología y Antropología Física) and the holotype and one specimen are in the collection of the author.

DISCUSSION: according to the shape of the lamella, surstylus and postgonite *Meoneura obtusangula* sp.n. is closely related to *M. acuticerca* Gregor, 1973, but this species has an acute angle between the lamella and surstylus (Fig. 5) and the aedeagus is longer and narrower and lacks the fleshy distal part (Fig. 6) (see also Gregor, 1973: Fig. 4).

BIOLOGY: unknown. The specimens were collected with a Schoenly trap baited with a dead piglet.

ETYMOLOGY: the specific name comes from Latin and refers to the obtuse angle between the lamella and surstylus.

DISTRIBUTION: hitherto only known from Southeastern Spain.



Fig. 1-6. 1-4) *Meoneura obtusangula* sp.n.: 1) male genitalia, laterally; 2) surstylus + lamella, broadest view; 3) surstyli, posteriorly; 4) postgonite and aedeagus (proximal part), laterally. 5-6) *Meoneura acuticerca* Gregor: 5) surstylus + lamella, laterally; 6) male genitalia, laterally. Scales: 1,3,4,6 = 100 μ m; 2,5 = 50 μ m.

TRIXOSCELIDIDAE

Trixoscelis anichtiri sp.n.

DESCRIPTION: General color dark brown.

Head: vertex, occiput and postgena dark brown, grey tomentose. Frons, face and gena yellow. Frontal triangle dark brown, tip yellow. Antenna yellow, joint 3 paler distally. Chaetotaxy: 2 orbitals, ocellar, outer vertical, inner vertical, postvertical (short), vibrissa.

Thorax dark brown. Mesonotum uniformly grey dusted, without longitudinal stripes between acrostichal and dorsocentral rows. Chaetotaxy: 1 postpronotal, 2 notopleurals, 1 presutural, 2+3 dorsocentrals, 1 supraalar, 2 postalar (inner much shorter), 2 scutellars, 1 anepisternal, 2 katapisternal.

Wing uniformly clear, veins brownish. Haltere whitish.

Legs. Coxae brown. Fore femur dark brown, fore tibia brown, yellow basally, fore tarsus yellow, joint 1 brown. Mid femur dark brown, yellow apically, mid tibia and mid tarsi yellow. Hind femur dark brown, yellow apically, hind tibia yellow, hind tarsus yellow, basitarsus dilated, brown, joint 2 brownish. Abdomen dark brown, grey dusted.

Genitalia dark brown (Fig. 7). Surstylus (Fig. 8-10) long and narrow, base dilated, with long hairs, tip curved forwards, with a long hair. Postgonite (Fig. 11, 12) subtriangular, tip digitiform, curved anteriorly (Fig. 11), base with long hairs anteriorly (Fig. 12). Aedeagus (Fig. 7) long and narrow, few sclerotized, proximally with a group of pale spines (Fig. 7, 13), basal ones more spaced, tip (Fig. 7, 14) bifid (one of the branch translucent), old tin opener-shaped.

Total body length: 2.8 mm.

Female unknown.

TYPE MATERIAL: Holotype male: Spain, Murcia, Parque Regional de la Sierra de Espuña, El Morrón de Espuña, 7.7.2008 (Schoenly trap), M.I. Arnaldos, I. Begoña and M.D. García leg. Type material preserved in alcohol (70%) in the collection of the author.

DISCUSSION: *Trixoscelis anichtiri* sp.n. is similar to *T. lyneborgi* Hackman, 1970, but it clearly differs from it by the fore leg (tibia and tarsus yellow in *T. lyneborgi*, cf. Fig. 29 in Hackman, 1970), as well as by the genitalia (cf. Fig. 18 and 19 in Hackman, 1970).

BIOLOGY: unknown. The specimen was collected with a Schoenly trap baited with a dead piglet.

ETYMOLOGY: the specific name comes from modern Greek (anichtiri = tin opener) and refers to the shape of the tip of the aedeagus.

DISTRIBUTION: hitherto only known from Southeastern Spain.

SPHAEROCERIDAE

Coproica rufifrons Hayashi, 1991

MATERIAL STUDIED: Spain, Murcia, Parque Regional de la Sierra de Espuña, El Morrón de Espuña, 1.5.2007 1 male (Schoenly trap), 4.5.2008 1 male (Schoenly trap), 4.5.2008 1 male (pitfall trap), M.I. Arnaldos, I. Begoña and M.D. García leg. Material preserved in alcohol (70%) in the collection of the author.

In the paper by Carles-Tolrá *et al.* (2014) these three specimens were considered as belonging to a new species. Now, with the paper by Papp (2008), they have been identified as *C. rufifrons*, an almost cosmopolitan species. New record to Spain (and the Iberian Peninsula).

Acknowledgements

My most sincere thanks to M^o Isabel Arnaldos, Itsaso Begoña and M^o Dolores García (University of Murcia, Murcia, Spain) for the shipment of that interesting dipterological material for study. Many thanks also to Joana Danés (Barcelona) and to Fotios Christodoulou and Lourdes Gils (Barcelona) for their help in Latin and Greek, respectively, as well as to Jane Pérez (Barcelona) for reviewing the English.

References

- CARLES-TOLRÁ, M., M.I. ARNALDOS, I. BEGOÑA & M.D. GARCÍA 2014. Novedades faunísticas y entomosarcosaprófagas de la Región de Murcia, SE de España (Insecta: Diptera). *Boln. R. Soc. Esp. Hist. Nat. Sec. Biol.*, **108**: 21-35.
- GREGOR, F. 1973. Two new species of the genus *Meoneura* Rondani (Diptera, Milichiidae). *Acta ent. Bohemoslov.*, **70**: 137-141.
- HACKMAN, W. 1970. Trixoscelidae (Diptera) from Southern Spain and Descriptions of a New *Trixoscelis* Species from Northern Europe. *Ent. scand.*, **1**: 127-134.
- PAPP, L. 2008. A review of the Old World *Coproica* Rondani, 1861 (Diptera, Sphaeroceridae), with descriptions of twelve new species. *Acta Zool. Acad. Scien. Hung.*, **54** (Suppl. 2): 1-45.

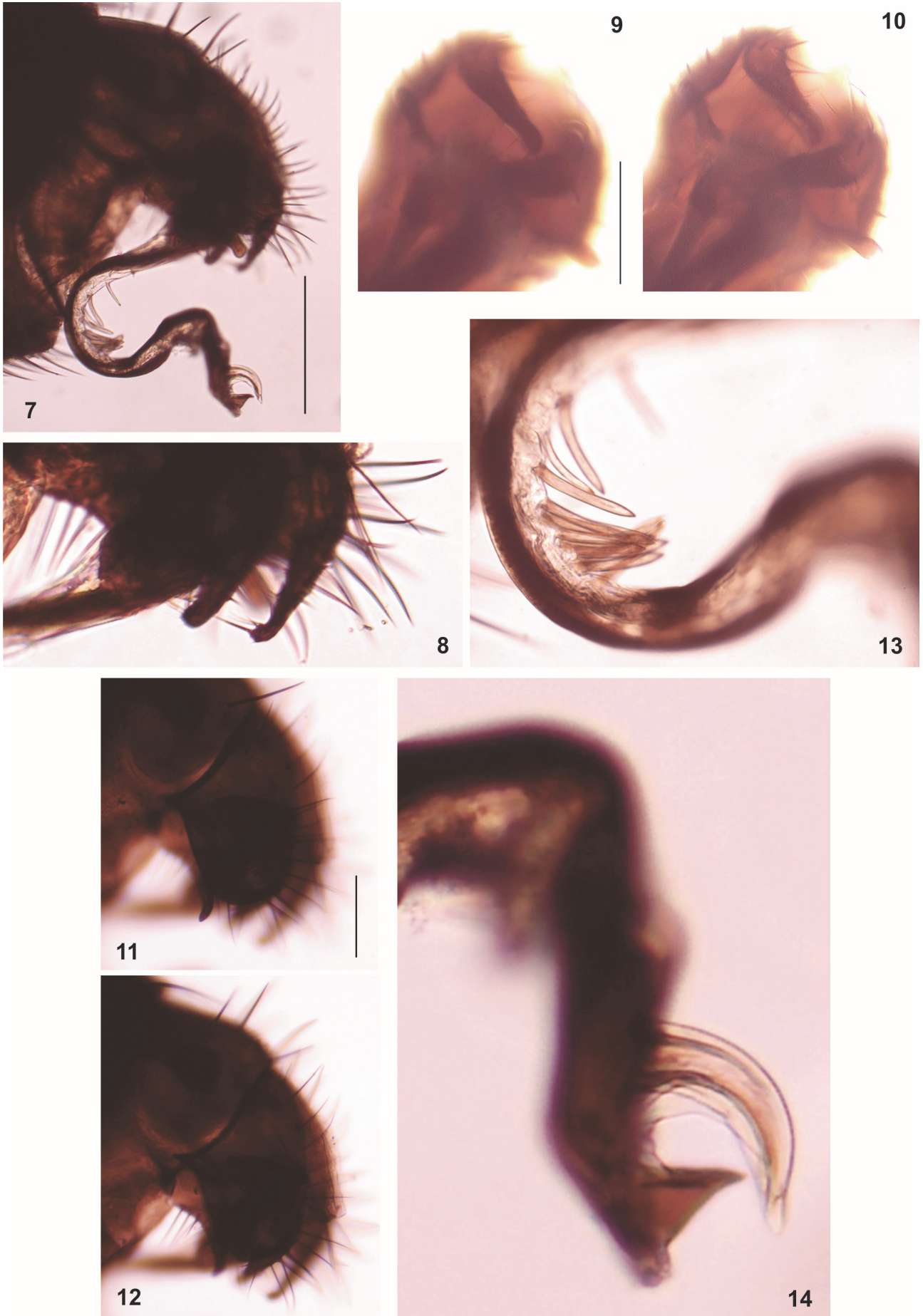


Fig. 7-14. *Trixoscelis anichtiri* sp.n.: **7)** male genitalia, laterally; **8)** surstylus, detail laterally; **9-10)** surstylus, ventrally; **11-12)** post-gonite, laterally; **13)** aedeagal spines, detail; **14)** aedeagal tip, detail. Scales: 7 = 200 μ m; 9,11 = 100 μ m.