



## Dolichopodidae (Diptera) from the Iberian Peninsula, with description of three new species

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### Abstract

Faunistic data is given for 43 species of Dolichopodidae from the Iberian Peninsula. Altogether nine species are recorded for the first time from Portugal and six species from Spain. Three species are described as new to science: *Chrysotimus meridionalis* sp. nov. (Spain, Portugal), *Hercostomus ibericus* sp. nov. (Spain), and *Sciapus negrobovi* sp. nov. (Portugal).

**Key words:** Dolichopodidae, Iberian Peninsula, Spain, Portugal, new species, new records

### Introduction

The Dolichopodidae, or long-legged flies, are small to medium sized flies of slender built with a body length of 1–12 mm. Most species have a conspicuous metallic green shiny body and relatively long legs. It is a large family of Diptera comprising some 7400 described species occurring in all biogeographical regions (Pape *et al.* 2011). In Europe more than 800 species and subspecies are recorded (Pollet 2004). Adults are predators on soft-bodied invertebrates and some are important control agents of pest species. The larvae are found in habitats such as soil, mud, and under bark, and some genera, as for example *Medetera*, are known as predators of bark beetles.

The long-legged flies (Dolichopodidae) of the Iberian Peninsula are poorly known. Recent contributions to the dolichopodid fauna were made by Carles-Tolrá (2001), Brunel & Blasco-Zumeta (2001) and Ventura *et al.* (2002). The following number of species have been recorded so far from the Ibero-Balearic area: Spanish mainland 187, Portuguese mainland 23, Andorra 4, Azores 20, Balearic Islands 7, Canary Islands 58, Gibraltar 1, Madeira 20 (Pollet 2004). That is a low number of species compared for example to the French mainland, where 393 species and subspecies are known (Pollet 2004). Thus, many new records and even new species may be discovered by intensive, specifically targeted collecting activities on the Iberian Peninsula.

### Material and methods

The material treated in this paper originates from three collecting trips to Spain and Portugal organized by the second author in the years 2006, 2008, and 2009. The material was collected by means of sweeping (SW) or yellow and white water pan traps (PT).

The complete list of studied localities is given below.

1. PORTUGAL: Guarda: Guarda: Fernão Joanes, Formalicão, 40°28'31"N, 7°21'32"W, 930 m, sweeping vegetation of old terraces in deciduous wood, 23.V.2008.

2. PORTUGAL: Guarda: Manteigas: Sameiro, 40°24'42"N, 7°28'04"W, 580 m, sweeping vegetation along river opposite of ski center, 23.V.2008.

3. PORTUGAL: Faro: Olhão: Quelfes, Ria Formosa, 37°01'45"N, 7°49'32"W, sweeping vegetation along seashore, 19.VII.2009.
4. PORTUGAL: Guarda: Gouveia: Mangualde da Serra, Serra da Estrela, 40°24'13"N, 7°35'10"W, 1450 m, sweeping undergrowth of pine wood, 16–17.VII.2009.
5. PORTUGAL: Guarda: Guarda: Valhelhas, 40°24'10"N, 7°24'16"W, 500 m, sweeping vegetation along river and yellow pan water traps, 16–17.VII.2009.
6. PORTUGAL: Beja: Odemira: Vila Nova de Milfontes, 37°43'33"N, 8°46'38"W, sweeping low vegetation of estuary, 19.VII.2009.
7. SPAIN: Andalucía: Almería: Chirivel, 37°34'49"N, 2°20'52"W, 1120 m, sweeping vegetation in abandoned camping, 14.VIII.2006.
8. SPAIN: Castilla y León: Burgos: Lerma, 42°01'51"N, 3°45'47"W, 820 m, sweeping vegetation along river, 19.VIII.2006.
9. SPAIN: Andalucía: Jaén: Santa Elena, 38°22'18"N, 3°30'31"W, 570 m, sweeping over residual pool in dry riverbed, 21.VII.2009.
10. SPAIN: Andalucía: Granada: Alpujarra de la Sierra, Mecina Bombarón, Sierra Nevada, 36°59'20"N, 3°9'00"W, 1100 m, sweeping vegetation, 18.VIII.2006.
11. SPAIN: Andalucía: Granada: Ferreira, Puerto de la Ragua, Sierra Nevada, 37°07'01"N, 3°01'48"W, 2000 m, sweeping vegetation in pine wood, 15.VIII.2006.
12. SPAIN: Andalucía: Granada: Trevélez, Sierra Nevada, 37°00'9"N, 3°15'43"W, 1440 m, sweeping vegetation along brook, 15.VIII.2006.
13. SPAIN: Castilla y León: Valladolid: Tordesillas, 41°31'2"N, 4°56'25"W, 686 m, sweeping park vegetation, 22.V.2008.

The material examined including the type specimens are deposited in the collection of Czech University of Life Sciences Prague (CULSP), except some specimens which are deposited in the private collection of the first author. For each species the number of specimens (males/females) and the exact collecting data is given. Distribution data are taken mainly from Pollet (2004) and Yang *et al.* (2006), but doubtful records are omitted. The subfamilies, genera and species are listed in alphabetical order.

Body length is measured from the base of the antennae to the tip of abdominal segment 6; wing length from wing base to wing apex. The positions of features on elongate structures such as leg segments are given as a fraction of the total length, starting from the base. The following ratios are used: relative podomere ratios: femur, tibia, tarsomere 1/2/3/4/5; length of crossvein dm-cu to distal section of CuA (= CuAx ratio); distance between veins  $R_{2+3}$  and  $R_{4+5}$  to distance between  $R_{4+5}$  and M at costal margin (= RMx ratio). Describing the hypopygium, dorsal and ventral refer to the position prior to rotation and flexion, i.e. in figures top is morphologically ventral and bottom is dorsal. If not otherwise indicated, the coloration of hairs and setae is black. Morphological terminology follows McAlpine (1981), except for genitalia which follows in general Sinclair & Cumming (2006) and for Dolichopodinae Brooks (2005).

Morphological abbreviations: ac = acrostichal setae; ad = anterodorsal; apv lobe = apicoventral epandrial lobe; av = anteroventral; dc = dorsocentral setae; pd = posterodorsal; ppls = proepisternal setae; pv = posteroventral.

## Descriptions of new species

### *Chrysotimus meridionalis* sp. nov.

(Fig. 1A)

**Type material.** HOLOTYPE ♂: PORTUGAL, Valhelhas, 500 m, SW+PT, 16–17.VII.2009, M. Barták (CULSP). PARATYPES: SPAIN, 1 ♂, Sierra Nevada, Mecina Bombarón, 1100 m, SW, 18.VIII.2006; 1 ♂, Sierra Nevada, Trevélez, 1440 m, SW, 15.VIII.2006; all M. Barták (CULSP).

**Diagnosis.** Antenna black, first flagellomere higher than long; arista dorsoapical; face metallic green, with white pruinosity; lower postocular setae white; thorax and abdomen bright metallic green, shining; first abdominal segment yellow; setae on thorax and abdomen yellow; legs including coxae entirely yellow; veins  $R_{4+5}$  and M parallel; CuA about 4 times as long as crossvein dm-cu; tergite 8 and epandrium yellow.

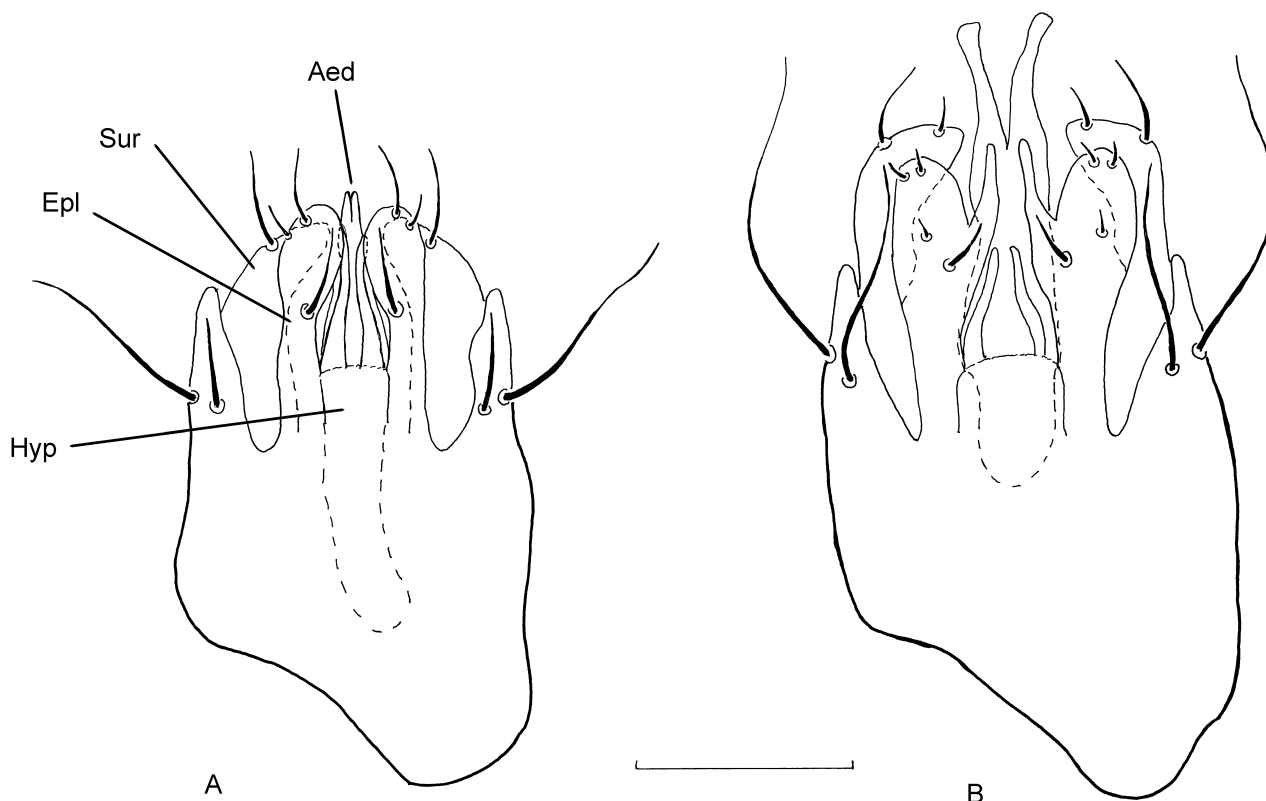
**Description. Male.** Body length (holotype): 1.9 mm, wing length 2.1 mm. **Head:** frons and face metallic green, shiny, with some white pruinosity, narrowest distance between eyes about 3 times the distance between ocellar setae; palpus pale yellow; proboscis dark brown; antennal segments black; first flagellomere 1.5 times as high as long, with long hairs; arista dorsoapical, pubescent; lower postocular setae white. **Thorax:** mesonotum bright metallic green, shiny, with white grey pruinosity; thoracic setae yellow; 5 pairs of strong dc; ac absent; scutellum with pair of strong marginal setae and 2 small lateral setae; 1 strong yellow ppls; pleura metallic green, shiny, with white pruinosity. **Legs:** entirely yellow including coxae, except tarsomere 5 dark brown, setae and hairs yellow. Fore leg: coxa with some anterior setae; femur, tibia and tarsomeres lacking major setae; tarsomere 5 slightly flattened dorsoventrally; relative podomere ratios: 47:52:28:12:10:5:6. Mid leg: coxa with some anterior and a strong anterolateral seta; femur with a strong anterior preapical seta; tibia with strong ad setae at 1/4 and 2/3, with small pd seta at 2/3, and with 3–4 apical setae; tarsomere 5 slightly flattened dorsoventrally; relative podomere ratios: 52:66:36:15:10:6:6. Hind leg: coxa with strong lateral seta; femur with strong anterior preapical seta; tibia with small ad seta at 1/3, with some small dorsal setae, and some apical setae; tarsomere 5 slightly flattened dorsoventrally; relative podomere ratios: 53:79:28:18:13:7:6. **Wing:** hyaline, veins yellow; basal section of CuA longer than distal section;  $R_{3+4}$  and M parallel and curved posteriad; CuAx ratio: 0.27; RMx ratio: 2.5; lower calypter whitish, with white setae; halter pale yellow. **Abdomen:** light metallic green, shiny, tergites 1 and 8 yellow; hairs and setae yellow. Hypopygium (Fig. 1A): epandrium yellow; cercus brown; epandrial lobe basally yellow, apically dark brown, surstylus dark brown. Epandrial lobe long, with oval apex, with 1 strong midventral and 2 smaller apical setae; hypandrium short, truncate; surstylus with strong, subapical seta. **Female:** unknown.

**Distribution.** Portugal, Spain, Turkey (Naglis, unpubl.).

**Etymology.** The name refers to the southern distribution of the species.

**Remarks.** In the Palearctic key (Negrobov 1978), *C. meridionalis* sp. nov. runs to *C. molliculus* (Fallén, 1823). Males of both species can be separated by the characters given below.

- 1 First abdominal segment entirely yellow; tergite 8 and hypopygium yellow; epandrial lobe ventral view without incision (Fig. 1A) ..... *C. meridionalis* sp. nov.  
 - First abdominal segment metallic green, sometimes with narrow yellow band basally; tergite 8 and hypopygium dark brown; epandrial lobe ventral view with deep incision (Fig. 1B) ..... *C. molliculus* (Fallén)



**FIGURE 1.** *Chrysotimus* species, hypopygium ventral: **A**, *Chrysotimus meridionalis* sp. nov.; **B**, *Chrysotimus molliculus* (Fallén). Aed = aedeagus; Epl = epandrial lobe; Hyp = hypandrium; Sur = surstylus (scale bar = 0.1 mm).

***Hercostomus ibericus* sp. nov.**

(Figs 2A–B)

**Type material.** HOLOTYPE ♂: SPAIN, Sierra Nevada, Puerto de la Ragua, 2000 m, SW, 15.VIII.2006, M. Barták (CULSP). PARATYPES: SPAIN, 5 ♂, same data as holotype, M. Barták (CULSP).

**Diagnosis.** Antenna black, first flagellomere 1.5 times as long as high; arista dorsal; face with dense greyish-white pruinosity; lower postocular setae white; thorax and abdomen dark metallic green, shiny; legs including coxae entirely black; fore tibia without apicoventral seta; hind tarsomeres slightly broadened; lower calypter yellow, with black setae; halter yellow; wing with dark brown infuscation;  $R_{4+5}$  and M strongly converging before wing margin; cercus greyish-white, with brownish apical border.

**Description. Male.** Body length (holotype): 2.8 mm, wing length 3.0 mm. **Head:** frons dark metallic green, shiny, with some grey pruinosity; face with dense greyish-white pruinosity, narrowest distance between eyes about 1.5 times the distance between ocellar setae; palpus black; proboscis yellowish brown; antennal segments black; first flagellomere 1.5 times as long as high; arista dorsal, bare, inserted at 2/3 from base, apical segment 4 times as long as basal segment; lower postocular setae white. **Thorax:** mesonotum dark metallic green shining, with some grey pruinosity; thoracic setae black; 6 pairs of strong dc; 6–7 pairs of long ac; scutellum with 2 strong marginal setae and 2 small lateral setae; 1 strong black ppls; pleura dark metallic green-blue, with grey pruinosity. **Legs:** including coxae entirely black, femora with metallic green reflection, setae and hairs black. Fore leg: coxa with some strong anterior setae; femur bare; tibia with pair of strong ad/pd setae at 1/3, 1 strong pd seta at 2/3, 2–3 small pv setae, and circlet of small apical setae; relative podomere ratios: 46:52:24:9:7:6:5. Mid leg: coxa with some anterior and a strong anterolateral setae; femur with strong anterior preapical seta; tibia with row of 4 strong ad setae; 2 strong pd setae at 1/5 and 2/3, 1 strong av seta at 2/3, and circlet of strong apical setae; relative podomere ratios: 67:77:33:19:14:10:8. Hind leg: coxa with strong lateral seta; femur with strong anterior preapical seta; tibia with 3 pairs of strong ad/pd setae at about 1/5, 1/2 and 3/4, and with circlet of strong apical setae; hind tarsomeres slightly broadened and flattened; relative podomere ratios: 72:89:25:29:20:13:9. **Wing:** brown infuscated, dark brown in anterior half between costa and M, veins dark brown; basal section of M shorter than distal section;  $R_{3+4}$  and M strongly convergent in apical third; M joining costa anteriorly of apex; CuAx ratio: 0.5; RMx ratio: 4.2; lower calypter whitish, with black setae; halter stem brown, knob yellow. **Abdomen:** dark metallic green shining, with black hairs and setae; tergite 7 dark brown, tergite 8 metallic green. Hypopygium (Figs 2A–B): epandrium dark brown; cercus greyish-white, apical border brownish infuscated; hypandrium pale white, epandrial lobes and surstyli brown. Cercus twice as long as wide, with claw-like subapical seta, and with setae on ventral border as long as diameter of cercus; apv lobe with long, projecting basoventral seta and 2 small apical setae. **Female:** unknown.

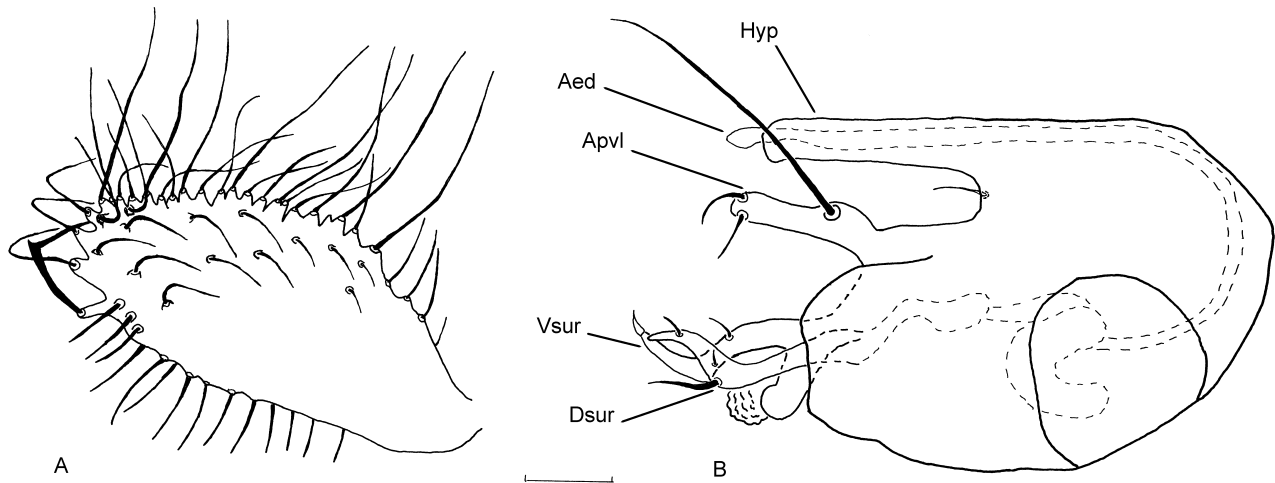
**Etymology.** The name refers to the Iberian Peninsula where the species was found.

**Remarks.** The new species belongs to *Hercostomus* Group IV according to Stackelberg (1933), with black femora and white or yellow postocular setae. In the Palaearctic key (Negrobov & Nechay 2009), *H. ibericus* runs to *H. albibarbus* Negrobov, 1976 described from Mongolia. Both species can be separated by the characters given in the key below.

**Key to Palaearctic species of the *Hercostomus albibarbus* species-group**

(lower calypter with black setae; legs entirely black; halter yellow; proboscis short; fore tibia without apicoventral seta)

- 1 Fore tibia with a row of short ad setae (Russia) ..... *H. sviridovae* Negrobov & Tshalaja
- Fore tibia without row of short ad setae ..... 2
- 2 Cercus with marginal setae on ventral border which are as long as diameter of cercus (Fig. 2A); apv lobe with 1 long, projecting basoventral seta which is longer than apv lobe (Fig. 2B) (Spain) ..... *H. ibericus* sp. nov.
- Cercus with marginal setae on ventral border which are half as long as diameter of cercus (Negrobov 1976, fig. 6); apv lobe with 1 small basoventral seta which is shorter than apv lobe (Mongolia) ..... *H. albibarbus* Negrobov



**FIGURE 2.** *Hercostomus ibericus* sp. nov.: **A**, cercus, lateral; **B**, hypopygium lateral (cercus removed). Aed = aedeagus; Apvl = apicoventral epandrial lobe; Hyp = hypandrium; Dsur = dorsal arm of surstylus; Vsur = ventral arm of surstylus (scale bar = 0.1 mm).

***Sciapus negrobovi* sp. nov.**

(Fig. 3)

**Type material.** **HOLOTYPE** ♂: **PORTUGAL**, Valhelhas, 500 m, near river, SW+PT, 16–17.VII.2009, M. Barták (CULSP). **PARATYPE:** **PORTUGAL**, 1 ♀ same data as holotype, M. Barták (CULSP).

**Diagnosis.** Scape and pedicel yellow, first flagellomere dark brown; frons with dense yellowish-grey pruinosity, face with dense silvery-white pruinosity; mesonotum with dense yellowish-grey pruinosity; abdomen metallic green, tergites 2–5 with large yellow dorsolateral patch; legs yellow, tarsomeres simple; lower calypter with white setae; halter pale yellow; hypopygium mainly yellow; “Organ X” with long, S-shaped ventral setae.

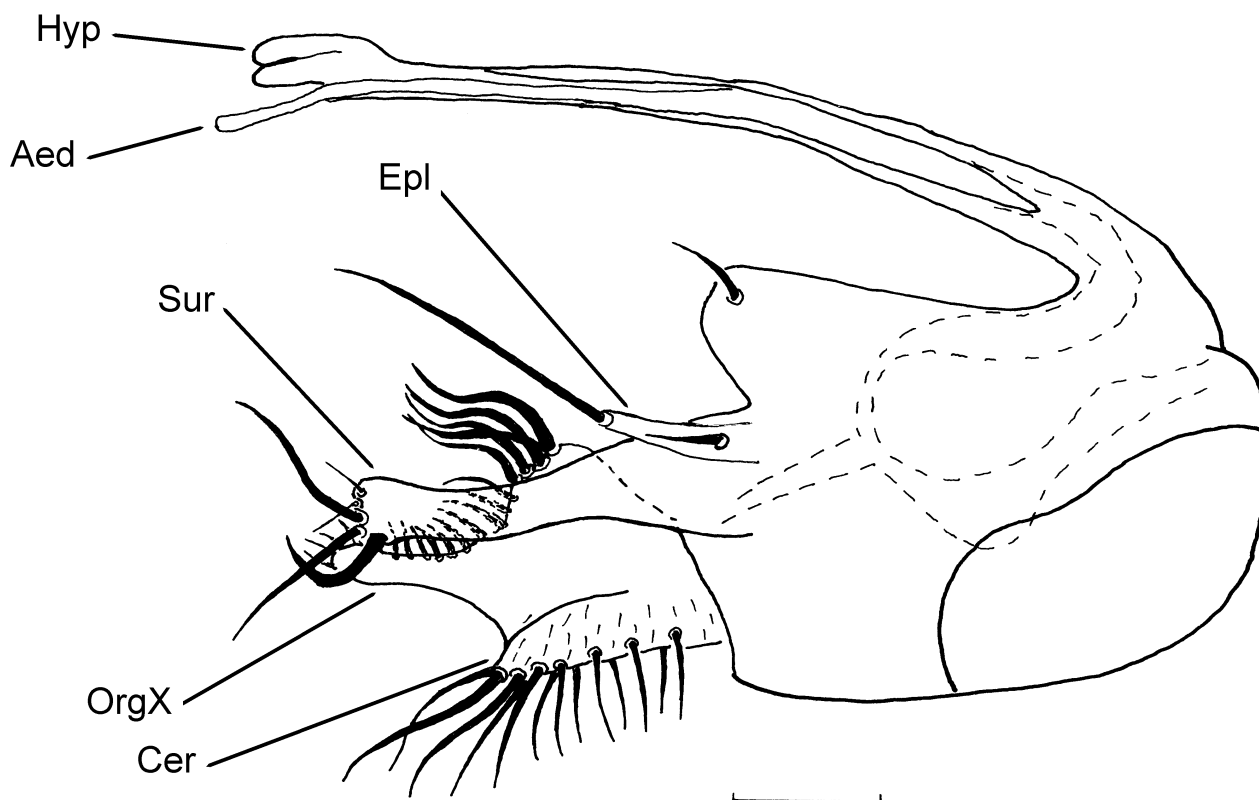
**Description. Male.** Body length (holotype): 3.5 mm, wing length 3.4 mm. **Head:** frons with dense yellowish-grey pruinosity, face with dense silvery-white pruinosity, below antennae about as wide as diameter of eyes; clypeus bulging; pair of strong vertical and ocellar setae; lower postoculars white; palpus pale yellow, with white apical setae; proboscis yellow. Antenna: scape and pedicel yellow, first flagellomere dark brown, as long as high; arista apicodorsal, bare. **Thorax:** mesonotum metallic green, with dense yellowish-grey pruinosity; ac strong, comprising 7–8 pairs; 5 pairs of strong dc, with additional small pair in front; 2 strong scutellar setae and small, hair-like lateral seta; pleura with dense greyish-white pruinosity; 2 small pale ppls. **Legs:** including coxae yellow, except hind tarsomeres slightly infuscated. Fore leg: coxa with white hairs and row of strong yellow lateral and some apical setae; femur with 4–5 white ventral setae, half as long as diameter of femur; tibia and tarsomeres bare; relative podomere ratios: 42:54:37:16:12:8:5. Mid leg: coxa with several strong yellow apical setae; femur bare; tibia with 1 strong black ad seta at 1/5; tarsomeres bare; relative podomere ratios: 48:75:50:21:16:9:6. Hind leg: coxa with 2 strong white lateral setae; femur with 1 small black anterior preapical seta; tibia with row of small black pd setae, and some small black apical setae; basitarsus with small black pv seta basally; relative podomere ratios: 65:92:33:31:17:10:5. All claws and pulvilli present but small. **Wing:** hyaline, veins yellow;  $R_1$  and  $R_{2+3}$  straight;  $R_{4+5}$  strongly curved posteriad at distal 4/5;  $M_1$  with almost right-angle bend at 1/3, then running straight and joining wing margin anterior of apex close to  $R_{4+5}$ ;  $M_2$  straight, not reaching wing margin, as long as dm-cu; section of M between dm-cu and  $M_2$  as long as dm-cu; CuAx ratio: 1.1; RMx ratio: 8.0; lower calypter white, with white setae; halter pale yellow. **Abdomen:** dark metallic green, tergites 2–5 with brown basal band and with large yellow dorsolateral patch, tergites 7 and 8 entirely yellow; all hairs and setae black. Hypopygium (Fig. 3): epandrium, cercus, and “Organ X” pale yellow, base of hypandrium and apical part of surstylus dark brown. Epandrial lobe with 1 long apical and 1 small basoventral setae; surstylus with 2 strong apical and 1 curved subapical setae; “Organ X” with midventral lobe bearing long, S-shaped setae. **Female:** similar to male but: fore coxa with yellow spine-like apical setae; fore femur with ventral row of 4–5 strong, yellow spine-like setae, longer

than diameter of femur; fore tibia with some small ad and pd setae; mid femur with 1 anterior preapical seta; mid tibia with 1 strong ad, 3 pd, and 1 av setae; hind tibia with 1 strong ad seta; tergite 1 yellow, tergites 2–4 metallic green with yellow lateral patch.

**Etymology.** The new species is dedicated to the Russian dipterist, Oleg Pavlovich Negrobov.

**Remarks.** The new species belongs to the *aberrans* species–group: tarsomeres simple; frons and thorax with dense pruinosity; cerci fused; “Organ X” fused, with long ventral setae; abdominal segments partly yellow. In the Palaearctic key (Grichanov & Negrobov 2014) *S. negrobovi* runs to *S. aberrans* Becker, 1918 and *S. subvicinus* Grichanov, 2007. The three species can be separated by the characters given in the key below.

- |   |   |                                |
|---|---|--------------------------------|
| 1 | “Organ X” with midventral lobe bearing long, S-shaped setae (Fig. 3A); epandrial lobe with 1 strong apical and 1 small basoventral seta. . . . .                          | <i>S. negrobovi</i> sp. nov.   |
| - | “Organ X” without midventral lobe, setae not S-shaped . . . . .   | 2                              |
| 2 | Cercus small and rounded; epandrial lobe with 2 apical setae (Grichanov & Negrobov 2014, fig. 1). . . . .   | <i>S. aberrans</i> Becker      |
| - | Cercus twice as long as wide; epandrial lobe with 1 apical and 1 midventral seta (Bulli & Negrobov 1987, figs 1–3, as <i>S. mediterraneus</i> Bulli & Negrobov) . . . . . | <i>S. subvicinus</i> Grichanov |



**FIGURE 3.** *Sciapus negrobovi* sp. nov.: hypopygium lateral. Aed = aedeagus; Cer = cercus; Epl = epandrial lobe; Hyp = hypandrium; OrgX = Organ X; Sur = surstylus (scale bar = 0.1 mm).

### Faunistic records

### Subfamily Diaphorinae

### *Chrysotus pennatus* Lichtwardt, 1902

**Material examined.** SPAIN: 2 ♂ Lerma, 820 m, SW, 19.VIII.2006; 1 ♂ Sierra Nevada, Puerto de la Ragua, 2000 m, SW, 15.VIII.2006.

**Distribution.** Italy, Germany, Hungary, Romania, Bosnia-Herzegovina, Greece, Turkey, Caucasus, Russia.

**Remarks.** New record for peninsular Spain.

## Subfamily Dolichopodinae

### *Dolichopus griseipennis* Stannius, 1831

**Material examined.** PORTUGAL: 3 ♂, Valhelhas, 500 m, SW+PT, 16–17.VII.2009. SPAIN: 1 ♂, Santa Elena 570 m, SW, 21.VII.2009.

**Distribution.** Spain (Peninsula and Balearic Islands)—Europe, Turkey, Caucasus, North Africa.

**Remarks.** New record for continental Portugal.

### *Dolichopus latilimbatus* Macquart, 1827

**Material examined.** SPAIN: 1 ♂, Lerma, 820 m, SW, 19.VIII.2006.

**Distribution.** Peninsular Spain—Europe, Turkey, Caucasus, Mongolia.

### *Dolichopus signifer* Haliday, 1838

**Material examined.** SPAIN: 9 ♂, Lerma, 820 m, SW, 19.VIII.2006; 1 ♂ Santa Elena 570 m, SW, 21.VII.2009.

**Distribution.** Peninsular Spain and Portugal (Azores)—Europe, Turkey, Caucasus, Afghanistan, North Africa.

### *Gymnopternus cupreus* (Fallén, 1823)

**Material examined.** PORTUGAL: 1 ♂, Serra da Estrela, 1450 m, SW, 16–17.VII.2009.

**Distribution.** Spain (Peninsula and Canary Islands)—Northern and Central Europe.

**Remarks.** New record for continental Portugal.

### *Hercostomus appendiculatus* (Loew, 1859)

**Material examined.** PORTUGAL: 7 ♂, Manteigas, 580 m, SW, 23.V.2008.

**Distribution.** Peninsular Spain—France, Czech Republic, Algeria, Morocco, Tunisia.

**Remarks.** New record for continental Portugal.

### *Hercostomus chetifer* (Walker, 1849)

**Material examined.** SPAIN: 1 ♂, Sierra Nevada, Trevélez, 1440 m, SW, 15.VIII.2006.

**Distribution.** Peninsular Spain—Europe, Turkey, Russia, India, Canada, USA.

### *Hercostomus discriminatus* Parent, 1925

**Material examined.** SPAIN: 7 ♂, 2 ♀, Santa Elena 570 m, SW, 21.VII.2009; 2 ♂, 1 ♀, Sierra Nevada, Trevélez, 1440 m, SW, 15.VIII.2006; 1 ♂, 1 ♀, Sierra Nevada, Mecina Bombarón, 1100 m, SW, 18.VIII.2006.

**Distribution.** Peninsular Spain—North Africa.

### *Hercostomus exarticulatus* (Loew, 1857)

**Material examined.** SPAIN: 1 ♂, Sierra Nevada, Trevélez, 1440 m, SW, 15.VIII.2006.

**Distribution.** Spain (Peninsula and Canary Islands)—Europe, Caucasus, North Africa.

***Hercostomus pilifer* (Loew, 1859)**

**Material examined.** SPAIN: 5 ♂, Sierra Nevada, Trevélez, 1440 m, SW, 15.VIII.2006.

**Distribution.** Peninsular Spain—Central and Southern Europe, North Africa.

***Poecilobothrus bigoti* Mik, 1883**

**Material examined:** SPAIN: 1 ♂, Sierra Nevada, Trevélez, 1440 m, SW, 15.VIII.2006.

**Distribution.** Peninsular Spain—France, Romania, Turkey.

***Sybistroma dufourii* Macquart, 1838**

**Material examined.** SPAIN: 1 ♂, Sierra Nevada, Mecina Bombarón, 1100 m, SW, 18.VIII.2006.

**Distribution.** Spain (Peninsula and Balearic Islands)—France, Italy, Macedonia, Greece, North Africa.

***Tachytrechus notatus* (Stannius, 1831)**

**Material examined.** SPAIN: 6 ♂, 1 ♀, Sierra Nevada, Trevélez, 1440 m, SW, 15.VIII.2006; 3 ♂, Sierra Nevada, Mecina Bombarón, 1100 m, SW, 18.VIII.2006; 1 ♂, Lerma, 820 m, SW, 19.VIII.2006.

**Distribution.** Spain (Peninsula and Canary Islands)—Europe, Turkey, Caucasus.

**Subfamily Hydrophorinae**

***Aphrosylus mitis* Verrall, 1912**

**Material examined.** PORTUGAL: 1 ♀, Vila Nova de Milfontes, estuary, SW, 19.VII.2009.

**Distribution.** France, Great Britain.

**Remarks.** New record for continental Portugal.

***Aphrosylus raptor* Haliday, 1851**

**Material examined.** PORTUGAL: 1 ♀, Vila Nova de Milfontes, estuary, SW, 19.VII.2009.

**Distribution.** Spain (Peninsula and Canary Islands), continental Portugal—France, Great Britain, Ireland, North Africa.

***Hydrophorus oceanus* (Macquart, 1838)**

**Material examined.** PORTUGAL: 11 ♂, 6 ♀ Vila Nova de Milfontes, estuary, SW, 19.VII.2009; 2 ♂ Ria Formosa, Olhão, seashore, SW, 19.VII.2009.

**Distribution.** Peninsular Spain, continental Portugal—Central and Northern Europe, North Africa.

***Liancalus virens* (Scopoli, 1763)**

**Material examined.** SPAIN: 1 ♀, Sierra Nevada, Trevélez, 1440 m, SW, 15.VIII.2006.

**Distribution.** Peninsular Spain, Portugal (Madeira)—Europe, Turkey, Caucasus, North Africa.



***Machaerium maritimae* Haliday, 1832**

**Material examined.** PORTUGAL: 7 ♂, Vila Nova de Milfontes, estuary, SW, 19.VII.2009; 11 ♂, 5 ♀, Ria Formosa, Olhão, seashore, SW, 19.VII.2009.

**Distribution.** Peninsular Spain, continental Portugal—France, Great Britain, Ireland, Belgium, Netherlands, Germany, Denmark, North Africa.

***Orthoceratium lacustre* (Scopoli, 1763)**

**Material examined.** PORTUGAL: 15 ♂, 8 ♀, Serra da Estrela, forest, SW, 1450 m, 16–17.VII.2009.

**Distribution.** Peninsular Spain, Portugal (continental and Madeira)—Europe, Turkey, North and Afrotropical Africa.

***Scellus notatus* (Fabricius, 1781)**

**Material examined.** PORTUGAL: 2 ♀, Serra da Estrela, forest, SW, 1450 m, 16–17.VII.2009. SPAIN: 1 ♂, Tordesillas, 686 m, 22.V.2008.

**Distribution.** continental Portugal—Europe, Turkey, Russia.

**Remarks.** New record for peninsular Spain.

***Thinophilus flavipalpis* (Zetterstedt, 1843)**

**Material examined.** PORTUGAL: 14 ♂, 7 ♀, Vila Nova de Milfontes, estuary, SW, 19.VII.2009; 2 ♂, 1 ♀, Ria Formosa, Olhão, seashore, SW, 19.VII.2009.

**Distribution.** Peninsular Spain, continental Portugal—Europe, Turkey, Caucasus, Russia, Mongolia, China, North Africa.

**Subfamily Medeterinae**

***Medetera flavipes* Meigen, 1824**

**Material examined.** SPAIN: 4 ♂, Santa Elena 570 m, SW, 21.VII.2009; 1 ♀, Sierra Nevada, Trevélez, 1440 m, SW, 15.VIII.2006.

**Distribution.** Spain (Peninsula and Canary Islands), continental Portugal—Central and Southern Europe, Ukraine, Turkey, North Africa.

***Medetera petrophiloides* Parent, 1925**

**Material examined.** SPAIN: 1 ♂, Chirivel, 1120 m, SW, 14.VIII.2006; 1 ♂, Tordesillas, 686 m, 22.V.2008.

**Distribution.** France, Belgium, Germany, Netherlands, Great Britain, Ireland, Czech Republic, Slovakia, Bulgaria, Russia.

**Remarks.** New record for peninsular Spain.

**Subfamily Neurigoninae**

***Neurigona biflexa* Strobl, 1909**

**Material examined.** PORTUGAL: 1 ♂, 1 ♀, Manteigas, 580 m, SW, 23.V.2008. SPAIN: 1 ♂, Tordesillas, 686 m, 22.V.2008.

**Distribution.** Peninsular Spain, continental Portugal—France, Great Britain, Austria, Poland, Bulgaria.

### Subfamily Peloropeodinae

#### *Acropsilus niger* (Loew, 1869)

**Material examined.** PORTUGAL: 1 ♂, Valhelhas, 500 m, SW+PT, 16–17.VII.2009. SPAIN: 1 ♀, Lerma, 820 m, SW, 19.VIII.2006.

**Distribution.** Peninsular Spain—Central and Eastern Europe, North Africa.

**Remarks.** New record for continental Portugal.

#### *Peloropeodes meridionalis* (Parent, 1928)

**Material examined.** PORTUGAL: 4 ♂, Valhelhas, 500 m, SW+PT, 16–17.VII.2009.

**Distribution.** Peninsular Spain—Bulgaria.

**Remarks.** New record for continental Portugal.

### Subfamily Rhapsiinae

#### *Rhaphium auctum* Loew, 1857

**Material examined.** SPAIN: 1 ♂, Sierra Nevada, Mecina Bombarón, 1100 m, SW, 18.VIII.2006.

**Distribution.** Europe.

**Remarks.** New record for peninsular Spain.

#### *Rhaphium brevicorne* Curtis, 1835

**Material examined.** PORTUGAL: 1 ♂, Manteigas, 580 m, SW, 23.V.2008; 1 ♂, Valhelhas, 500 m, SW+PT, 16–17.VII.2009. SPAIN: 2 ♂, Sierra Nevada, Puerto de la Ragua, 2000 m, SW, 15.VIII.2006.

**Distribution.** Spain (Peninsula and Canary Islands)—Central and Southern Europe, Turkey, Caucasus, Russia, Iraq, North Africa.

**Remarks.** New record for continental Portugal.

#### *Rhaphium laticorne* (Fallén, 1823)

**Material examined.** SPAIN: 1 ♂, Lerma, 820 m, SW, 19.VIII.2006.

**Distribution.** Europe, Turkey, Russia.

**Remarks.** New record for peninsular Spain.

### Subfamily Sciapodinae

#### *Sciapus albovittatus* Strobl, 1909

**Material examined.** SPAIN: 2 ♂, Tordesillas, 686 m, 22.V.2008.

**Distribution.** Peninsular Spain—Algeria.

## Subfamily Sympycninae

### *Campsicnemus crinitarsis* Strobl, 1906

**Material examined.** SPAIN: 1 ♂, Sierra Nevada, Trevélez, 1440 m, SW, 15.VIII.2006.

**Distribution.** Spain (Peninsula and Canary Islands)—Italy, Greece, Turkey, North Africa.

### *Campsicnemus curvipes* (Fallén, 1823)

**Material examined.** SPAIN: 1 ♂, 1 ♀, Lerma, 820 m, SW, 19.VIII.2006.

**Distribution.** Spain (Peninsula and Canary Islands), Portugal (Azores and Madeira)—Europe, Turkey, Caucasus, North Africa.

### *Campsicnemus umbripennis* ssp. *hispanicus* Strobl, 1899

**Material examined.** PORTUGAL: 1 ♂, 1 ♀, Valhelhas, 500 m, SW+PT, 16–17.VII.2009; 3 ♂, 1 ♀, Serra da Estrela, 1450 m, SW, 16–17.VII.2009; 1 ♂, Manteigas, 580 m, SW, 23.V.2008. SPAIN: 5 ♂, 3 ♀, Sierra Nevada, Puerto de la Ragua, 2000 m, SW, 15.VIII.2006.

**Distribution.** Peninsular Spain, continental Portugal (Perry 1999)—France.

### *Sympycnus pulicarius* Fallén, 1823

= *Sympycnus annulipes* (Meigen, 1824)

**Material examined.** SPAIN: 6 ♂, Sierra Nevada, Trevélez, 1440 m, SW, 15.VIII.2006; 1 ♂, Sierra Nevada, Puerto de la Ragua, 2000 m, SW, 15.VIII.2006; 4 ♂, Lerma, 820 m, SW, 19.VIII.2006.

**Distribution.** Spain (Peninsula and Canary Islands)—Europe, Turkey, Russia, USA.

### *Syntormon denticulatum* (Zetterstedt, 1843)

**Material examined.** PORTUGAL: 1 ♀, Valhelhas, 500 m, SW+PT, 16–17.VII.2009. SPAIN: 1 ♂, Sierra Nevada, Mecina Bombarón, 1100 m, SW, 18.VIII.2006; 1 ♂, Lerma, 820 m, SW, 19.VIII.2006.

**Distribution.** Spain (Peninsula and Canary Islands)—Europe, Turkey, Russia.

**Remarks.** New record for continental Portugal.

### *Syntormon mikii* Strobl, 1899

**Material examined.** PORTUGAL: 1 ♀, Valhelhas, 500 m, SW+PT, 16–17.VII.2009.

**Distribution.** Peninsular Spain, continental Portugal—Europe, North Africa.

### *Syntormon pseudospicatum* Strobl, 1899

**Material examined.** PORTUGAL: 4 ♂, 3 ♀, Serra da Estrela, 1450 m, SW, 16–17.VII.2009. SPAIN: 9 ♂, 3 ♀, Sierra Nevada, Puerto de la Ragua, 2000 m, SW, 15.VIII.2006; 4 ♂, 1 ♀, Sierra Nevada, Trevélez, 1440 m, SW, 15.VIII.2006.

**Distribution.** Peninsular Spain, continental Portugal—Italy, Belgium, Great Britain, Hungary, Greece, Iraq, Afghanistan.

### ***Syntormon zelleri* (Loew, 1850)**

**Material examined.** SPAIN: 1 ♂, Sierra Nevada, Mecina Bombarón, 1100 m, SW, 18.VIII.2006.

**Distribution.** Peninsular Spain—Central and Southern Europe, Turkey, Russia.

### ***Teuchophorus simplex* Mik, 1881**

**Material examined.** SPAIN: 1 ♂, Sierra Nevada, Trevélez, 1440 m, SW, 15.VIII.2006.

**Distribution.** Central and Northern Europe, Greece.

**Remarks.** New record for peninsular Spain.

## **Subfamily Xanthochlorinae**

### ***Xanthochlorus tenellus* (Wiedemann, 1817)**

**Material examined.** PORTUGAL: 1 ♀, Formalição, 930 m, SW, 23.V.2008.

**Distribution.** Europe.

**Remarks.** New record for continental Portugal.

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