Three new species of *Estheria* Robineau-Desvoidy (Diptera: Tachinidae) from the Mediterranean, with a key to the European and Mediterranean species of the genus

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Abstract

Three new Mediterranean species of *Estheria* Robineau-Devoidy are described: *E. birtelei* **n. sp.** (Sardinia), *E. hertingi* **n. sp.** (Sardinia, Corsica), and *E. mesnili* **n. sp.** (Israel). Lectotypes are designated for *Zeuxia bohemani* Rondani, 1862 [= *Estheria*], *Dexia cristata* Meigen, 1826 [= *Estheria*], *Paramyiostoma latigenum* Villeneuve, 1911 [= *Estheria*], *Dexia patruelis* Pandellé, 1896 [= *Estheria microcera* (Robineau-Desvoidy, 1830)], *Deximorpha nigripes* Villeneuve, 1920 [= *Estheria*], *Deximorpha marittima* Rondani, 1862 [= *Estheria picta* (Meigen, 1826)], and *Dexia (Deximorpha) breviciliata* Pandellé, 1896 **n. syn.** [= *Estheria picta* (Meigen, 1826)]. An identification key for all species of *Estheria* known from Europe and the Mediterranean countries is presented.

Keywords: Identification key, new species, lectotype designation, Italy, Sardinia, Israel.

Zusammenfassung

Drei neue mediterrane Arten von *Estheria* Robineau-Devoidy werden beschrieben: *E. birtelei* **n. sp.** (Sardinien), *E. hertingi* **n. sp.** (Sardinien, Korsika) und *E. mesnili* **n. sp.** (Israel). Lectotypen werden designiert für *Zeuxia bohemani* Rondani, 1862 [= *Estheria*], *Dexia cristata* Meigen, 1826 [= *Estheria*], *Paramyiostoma latigenum* Villeneuve, 1911 [= *Estheria*], *Dexia patruelis* Pandellé, 1896 [= *Estheria microcera* (Robineau-Desvoidy, 1830)], *Deximorpha nigripes* Villeneuve, 1920 [= *Estheria*], *Deximorpha marittima* Rondani, 1862 [= *Estheria picta* (Meigen, 1826)] und *Dexia (Deximorpha) breviciliata* Pandellé, 1896 **n. syn.** [= *Estheria picta* (Meigen, 1826)]. Für die europäischen und mediterranen Arten von *Estheria* wird ein Bestimmungsschlüssel gegeben.

Contents

1 Introduction

The Dexiine genus *Estheria* Robineau-Desvoidy, 1830 is known from the Palaearctic and, to a lesser extent, also from N Oriental, Afrotropical, and Nearctic regions, see Herting & Dely-Draskovits (1993), Crosskey (1976) (as *Dolichodexa* and *Myostoma*), Crosskey (1980, 1984) (as *Dolichodexia*), O'Hara & Wood (2004). Including the three new species of this paper, it currently comprises 32 described (27 of them occurring in the Palaearctic) and several undescribed species.

The genus *Estheria* keys out in the generic keys of Mesnil (1980), Wood (1987), Zimin et al. (1989) (as *Estheria*, *Myiostoma*, and *Dexiomorpha*), Tschorsnig & Herting (1994), Tschorsnig & Richter (1998), Richter (2004), Cerretti (2010), and in the digital key of Cerretti et al. (2010). It can be recognized by the following characters: Eye bare; antenna at most as long as height of gena; arista with trichia 0.3–3.0 times as wide as postpedicel, trichia at least as long as basal diameter of arista, usually distinctly longer; frontal setae descending at most to level of upper margin of pedicel; vibrissa arising distinctly above level of lower facial margin; proepisternum and prosternum bare; anterior and posterior lappets of posterior thoracic spiracle unequal in size; second costal sector usually bare ventrally (some fine hairs can occasionally be found in several species); inner anterior surface of fore coxa bare or predominantly bare; mid-dorsal depression on abdominal syntergite 1+2 extending back to hind margin of that segment

(Figs. 35–37) (except in *E. iberica*, Fig. 34); abdominal syntergite 1+2 without median marginal setae (occasionally present only in *E. iberica* and *E. mesnili* n. sp.); abdominal tergites 3–5 with discal setae (Figs. 34–37); male postabdomen showing the groundplan of Dexiini sensu HERTING (1984) (hinged connection between basiphallus and distiphallus; pregonite strap-like; an acrophallus present with granulate or lamellate structure; surstylus wide, massive, almost auriculate; processus longi short, platelike; cf. TSCHORSNIG 1985, Figs. 30–33). Additional characters of importance are: Male frons at its narrowest point 0.05–0.60 times as wide as eye in dorsal view, female frons 1.0–2.3 times as wide; parafacial bare or setose; facial carina more or less developed; lower facial margin protruding or not; dorsal half of occiput with or without black setulae; prementum usually shorter than height of head (much longer only in *E. simonyi*, Fig. 1); postpronotum with 4–7 setae, the three strongest usually arranged in a triangle (e. g. Fig. 20), or sometimes in a more or less straight line (Fig. 10); usually three katepisternal setae (two in one species); katepimeron usually setose; costal spine of variable length; wing cell r_{4+5} open (Fig. 26), closed at wing margin (Fig. 28) or with a petiole up to 0.45 times as long as postangular section of M (Figs. 23, 25, 27).

HERTING (1957) found tergite 8 of the female postabdomen strongly reduced (but still present), but as this finding was based only on a few species it must be confirmed whether it is valid for all members of the genus or not. Another character known from *Estheria* and very uncommon in Tachinidae are the posterior spiracles of the puparium which are sunken within a common cavity (cf. ZIEGLER 1998), but as puparia are known only from a few species (cf. TSCHORSNIG & RICHTER 1998) we can currently no be sure that this feature is generally valid for all species of the genus. As far as known, *Estheria* parasitizes larvae of Coleoptera Scarabaeidae (cf. HERTING 1960).

STEIN (1924) (as *Estheria*, *Parestheria*, *Myiostoma*, *Dolichodexia*, and *Dexiomorpha*), TSCHORSNIG & HERTING (1994), and CERRETTI (2010) provide keys for a restricted number of European species, but as a complete identification key for all species known from Europe and the Mediterranean was lacking before, this gap will now be filled with the present paper. Another aim of this paper is to describe three new species from the Mediterranean.

Acronyms of repositories

FVCP Collection FILIPPO VENTURI, Università di Pisa (Pisa, Italy)
MNHN Muséum National d'Histoire Naturelle (Paris, France)
MZUF Museo Zoologico "La Specola" (Florence, Italy)
MZUR Museo di Zoologia, Sapienza Università di Roma (Rome, Italy)
PC Collection of P. CERRETTI (Verona, Italy)
RBINS Royal Belgian Institute of Natural Sciences (Brussels, Belgium)
SMNS Staatliches Museum für Naturkunde (Stuttgart, Germany)
TAU Tel Aviv University (Tel Aviv, Israel)

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Unpublished notes and descriptions from the inheritance of the late BENNO HERTING (1923–2004) were very helpful to complete the key.

Thanks are extended to CHRIS RAPER (Reading) and JOACHIM ZIEGLER (Berlin) for valuable suggestions.

2 Methods and materials, with remarks on several types

Methods

Male terminalia were prepared following the method described in detail by O'HARA (2002). The dissected terminalia were mounted, in glycerol, on a slide, examined with a Leica DMLS microscope and are preserved in glycerol in a small plastic vial and pinned together with the specimen. Composite photomicrographs of head, thorax and abdomen were produced from images captured using a Nikon DS-L1/DS-5M digital camera mounted on a Leica MZ 12.5 stereoscopic microscope, and processed with Helicon Focus Pro software. Pinned specimens were examined, uncoated, with a Hitachi TM1000 environmental scanning electron microscope (ESEM).

Terminology of the external morphology (other than male terminalia) follows MERZ & HAENNI (2000), except for antenna that follows STUCKENBERG (1999). Measurements and ratios of head follow TSCHORSNIG & RICHTER (1998).

Characters used to elaborate the dichotomic key to species were retrieved from examination of the type- or non-type-materials listed below.

Materials

Estheria acuta (Portschinsky, 1881)
11 ♂♂, 3 ♀♀ from Turkey and Azerbaijan (SMNS, PC).

Estheria atripes Villeneuve, 1920
25 ♂♂, 2 ♀♀ from Morocco (MNHN, RBINS, SMNS).

Estheria bohemani (Rondani, 1862)
Type material: Lectotype ♀ of *Zeuxia bohemani* Rondani, 1862 (the lectotype is hereby designated by selecting a female specimen among the three preserved in MZUF): "393 / 360 [rhombic label, bordered in green, printed] // Museo "La Specola" / coll. Rondani / Syntypus // *Zeuxia* / *Bohemani* / 360 ♀ R. Alpi [label pinned separately from specimen] // Lectotype ♀ / *Zeuxia bohemani* Rondani / CERRETTI & TSCHORSNIG des. 2011 // *Estheria* / *bohemani* (Rondani) / CERRETTI & TSCHORSNIG det. 2011" (MZUF, coll. RONDANI, drawer "C"). – Two paralectotypes ♀ of *Zeuxia bohemani* Rondani, 1862: "984 // Museo "La Specola"

/ coll. Rondani / Syntypus // *Bohemani* / Rnd ♀ [label pinned separately from specimen] // Paralectotype ♀ / *Zeuxia bohemani* Rondani / CERRETTI & TSCHORSNIG des. 2011 // *Estheria* / *bohemani* (Rondani) / CERRETTI & TSCHORSNIG det. 2011" (MZUF coll. RONDANI, drawer "18").

Additional material: 1 ♂: "984 // *Bohemani* / Rnd ♂? [label pinned separately from specimen] // *Estheria* / *bohemani* (Rondani) / CERRETTI & TSCHORSNIG det. 2011" (MZUF); many specimens from several European countries (SMNS, PC).

Estheria cristata (Meigen, 1826)

Type material: L e c t o t y p e ♂ of *Dexia cristata* Meigen, 1826 (the lectotype is hereby designated by selecting the male specimen among the two specimens, ♂ and ♀, preserved in MNHN, coll. MEIGEN): "[back of label] 2035 / 40 // *Dexia* / *cristata* / ♂" (MNHN, coll. MEIGEN). – Paralectotype ♀ of *Dexia cristata* Meigen, 1826: "[back of label] 2035 / 40 [round grey label] // *Dexia* / *cristata* / ♀" (MNHN, coll. MEIGEN).

Additional material: Many specimens from several European countries (SMNS, MNHN, RBINS, PC).

Estheria crosi (Villeneuve, 1920) and *E. lesnei* (Villeneuve, 1912)

No material was available for the present paper, but BENNO HERTING who studied the type material of both Algerian species left an unpublished redescription. See also the remark in the key below (chapter 4).

Estheria decolor (Pandellé, 1896)

Type material: Holotype ♀ of *Dexia (Deximorpha) decolor* Pandellé 1896: "♀ / 6499 // Hyeres // *Decolor* // 2771 [label pinned separately from specimen]" (MNHN).

Additional material: A large series of males and females from Spain (SMNS).

Remark: *Estheria decolor* is a separate species which was still treated as a synonym of *E. picta* by HERTING (1978) and HERTING & DELY-DRASKOVITS (1993), but already published as own species (based on HERTING's suggestion) since TSCHORSNIG (1992).

Estheria iberica Tschorsnig, 2003

Type material: Holotype and numerous paratypes from Spain and Portugal (SMNS).

Additional material: Many specimens from Spain (SMNS).

Estheria latigena (Villeneuve, 1911)

Type material: L e c t o t y p e ♂ of *Paramyiostoma latigenum* Villeneuve, 1911 (the lectotype is hereby designated by selecting the male specimen among two specimens labeled as types preserved in RBINS): "Korsika / 55362.VI // *Paramyiostoma* / *latigenum* / type VILLEN. // Coll. J. VILLENEUVE: / *Paramyiostoma* / *latigenum* Vill. / R. M. H. N. Belg. 15.392 // Ex-Typis // cf. Deutsche Ent. / Zeitschr. 1911. P. 124 // Lectotype ♂ / *Paramyiostoma* / *latigenum* / Villeneuve 1911 / P. CERRETTI & H.-P. TSCHORSNIG des. 2011 // *Estheria* / *latigena* / (Villeneuve, 1911) / P. CERRETTI & H.-P. TSCHORSNIG det. 2011 (RBINS). – Paralectotype ♀ of *Paramyiostoma latigenum* Villeneuve 1911: "Korsika / V. 1907 // *Paramyiostoma* / *latigenum* / type VILLEN. // Coll. J. VILLENEUVE: / *Paramyiostoma* / *latigenum* Vill. / R. M. H. N. Belg. 15.392 // Ex-Typis // cf. Deutsche Ent. / Zeitschr. 1911. P. 124 // *Estheria* / *latigena* / (Villeneuve, 1911) / P. CERRETTI & H.-P. TSCHORSNIG det. 2011" (RBINS).

Additional material: 1 ♀, Sardinia (Oristano prov.), Arborea, 4.VI.2002, leg. FANCELLO (PC) (= new record to Italy).

Estheria litoralis (Rondani, 1862)

Type material: Holotype ♀ of *Deximorpha litoralis* Rondani, 1862: "65–19 57 // 975 // *Deximorpha* / *littoralis* [sic] Rond. / B. HERTING det. / Holotype" (MZUF).

Additional material: 2 ♂♂, Tenne [France], 15.VIII.[18]99 (RBINS, SMNS).

Estheria microcera (Robineau-Desvoidy, 1830)

Type material: L e c t o t y p e ♂ of *Dexia patruelis* Pandellé, 1896: 155 (the lectotype is hereby designated by selecting a male specimen among 2 ♂♂, 2 ♀♀ preserved in MNHN coll. Pandellé): "♂ / 236 // Col. Soc. ent. Fr. / *Myostoma pectinatum* / (Meig.) 13.13. / J. VILLENEUVE vid. // 236 / *Dexia* Meig. / *patruelis* Pand. / Tarbes [label pinned separately from specimen] // 2759 [label pinned separately from specimen]" (MNHN). – Paralectotypes of *Dexia patruelis* Pandellé, 1896: 1 ♂ "♂ / 236 // 236 / *Dexia* Meig. / *patruelis* Pand. / Tarbes [label pinned separately from specimen] // 2759 [label pinned separately from specimen]" (MNHN); 2 ♀♀ "♀ / 236 // 236 / *Dexia* Meig. / *patruelis* Pand. / Tarbes [label pinned separately from specimen] // 2759 [label pinned separately from specimen]" (MNHN).

Additional material: Many specimens from several Mediterranean countries and the Caucasus (SMNS, MNHN, RBINS, PC).

Estheria nigripes (Villeneuve, 1920)

Type material: L e c t o t y p e ♂ of *Deximorpha nigripes* Villeneuve, 1920 (the lectotype is hereby designated by choosing the same male specimen, preserved in RBINS, selected and labeled by BENNO HERTING as lectotype but not published): "Tabarka. [unintelligible symbol] / 52901 // *nigripes* / Villen. / *appendicula*- / Macq. ? *ta* // *Deximorpha* / *nigripes* Vill. / B. HERTING det. / Lectotype // Coll. J. VILLENEUVE: / *Deximorpha* / *nigripes* Vill. / R. M. H. N. Belg. 15.392 // Lectotype ♂ / *Deximorpha* / *nigripes* Villeneuve, 1920 / P. CERRETTI & H.-P. TSCHORSNIG des. 2011 (RBINS). – Holotype ♂ of *Deximorpha smyrnaea* Villeneuve 1928: "Smyrne / V. // *Deximor*- / *pha* / *smyrnaea* / Type Villen. / ♂ // Coll. J. VILLENEUVE: / *Deximorpha* / *smyrnae* [sic] Vill. / R. M. H. N. Belg. 15.392 // Type // cf. Bull. Soc. Amis / Sc. Nat. Rouen, 62–63, / 1926–27, p. 59. // *Estheria* / *(Deximorpha)* / *nigripes* Vill. ♂ / B. HERTING det." (RBINS).

Additional material: 30 ♂♂, 18 ♀♀ from Greece, Algeria, Morocco, Tunisia, Israel, and Turkey (SMNS, MNHN, TAU, PC).

Estheria pallicornis (Loew, 1873)

39 specimens from Greece, Turkey, Iran, Kyrgyzstan, Afghanistan, and China (SMNS).

Estheria petiolata (Bonsdorff, 1866)

Many specimens from several European countries (SMNS, PC, MNHN, RBINS, FVCP).

Estheria picta (Meigen, 1826)

Dexia (Deximorpha) breviciliata Pandellé, 1896 **n. syn.**, type locality: "Apt", Vaucluse, France.

Type material: L e c t o t y p e ♂ of *Deximorpha marittima* Rondani, 1862 (the lectotype is hereby designated by selecting the male specimen preserved in MZUF, being the only specimen preserved in the RONDANI collection; the original description is based also on two females from Sardinia which RONDANI received from SPINOLA for study): "78 // *Deximorpha* / *maritima* [sic] Rond. / B. HERTING det. / Holotype // Lectotype ♂ / *Deximorpha* / *marittima* Rondani, 1862 / P. CERRETTI & H.-P. TSCHORSNIG des.

2011". – Lectotype ♀ of *Dexia (Deximorpha) breviciliata* Pandellé, 1896 (the lectotype is hereby designated choosing the female specimen preserved in MNHN): "♀ / 5892 // *Deximorpha* / *breviciliata* / 2770 [label pinned separately from specimen]" (MNHN).

Additional material: 23 ♂♂, 10 ♀♀ from Austria, Germany, and Italy (SMNS, RBINS, PC, FVCP).

Remark: The type specimen of *Dexiomorpha breviciliata* was not found by Herting (1978) in MNHN, but could be located by the senior author of this paper.

Estheria simonyi (Brauer & Bergenstamm, 1891)

Many specimens from the Canary Islands (PC, RBINS, SMNS).

3 Descriptions of new species

3.1 *Estheria birtelei* **n. sp.**

Holotype ♂: "I: Sardinia, Carbonia-Iglesias prov. / Domusnovas, Sa Duchessa, 308 m / UTM WGS84 32S 464911 4358386 / 25.IX.2004 / P. Cerretti, D. Birtele, F. Mason, D. Whitmore leg." (MZUR).

Paratypes: 5 ♂♂, 1 ♀, same data as holotype (PC, SMNS). – 1 ♂, same data as holotype, but 24.IX.2004 (PC). – 1 ♂, "I: Sardinia, Carbonia-Iglesias prov. / Monti Marganai, Case Marganai, 725 m / UTM WGS84 32S 463890 4355925 / 2.IX.2003 / D. Birtele leg." (PC). – 1 ♂, "I – Sardegna (Carbonia-Iglesias) / Iglesias, Conca Margiani, rad. Strada, 700 m / UTM WGS84 32S 0462635 4356866 / 16.VII.2006, retino / P. Cerretti, D. Avesani, M. Bardiani, / D. Birtele, D. Whitmore leg. / Progetto Sardegna – CNBF" (PC). 2 ♂♂, same data, but 17.VII.2006 (PC). – 1 ♂, "I – Sardegna (Ogliastra) Seui / dint. M. Tonneri, Sorg. Nuletta, 892 m / UTM WGS84 32S 0531716 4412341 / 5.IX.2006, retino / M. Bardiani, D. Avesani, D. Birtele / G. Nardi leg. / Progetto Sardegna – CNBF" (PC).

All specimens were swept in the late afternoon while they were sitting on stones.

Etymology

The new species is dedicated to the colleague Daniele Birtele (Verona) who caught the first specimens in September 2003.

Description

Male (measurements in square brackets refer to the holotype):

Body length: [11.0]–13.1 mm.

Coloration: Head black except for gena which is reddish, covered with yellowish-grey microtomentum; scape and pedicel yellow, red or brown, postpedicel black, usually reddish at least basally; palpus yellow, at most basally brown. Thorax mainly black with postpronotum, sides of scutum, postalar callus and scutellum yellow; scutum covered with yellow microtomentum, presutural area with four longitudinal dark vittae (lateral pair sub-triangular). Legs mainly black except for yellow areas on anterior surface of fore coxa (bare inner anterior portion of fore coxa black or dark brown) and basoventral side of femora (sometimes femora entirely black). Lower and upper calypters white. Wing membrane hyaline, more or less darkened around crossveins R-M and DM-Cu; tegula and basicosta black. Abdomen (Fig. 35) yellowish-red with a narrow black longitudinal stripe which usually tapers towards the back and reaches posterior margin of tergite 5, covered with slight yellowish-grey microtomentum with dark reflecting pattern.

Head (Fig. 16): Head slightly higher than long. Eye bare. Arista thickened on its basal 1/5–1/4, with trichia 0.39–0.64[0.57] times as wide as postpedicel. Second aristomere short, at most as long as wide. Postpedicel 1.26–1.75[1.54] times as long as pedicel. Frons at its narrowest point 0.32–0.40[0.34] times as wide as eye in dorsal view. Ocellar setae well developed, proclinate. Medial vertical setae 0.45–0.59[0.53] times as long as eye height, convergent or crossed; lateral vertical setae not differentiated from postocular row. No proclinate orbital setae. Frontal setae descending to level of base of antenna. Fronto-orbital plate with a few scattered proclinate setulae lateral to frontal row. Parafacial entirely bare, at its midpoint [2.8]–3.0 times as wide as postpedicel. Facial ridge concave in profile with a few setulae on lower 1/6–1/5. Vibrissa arising above level of lower facial margin, the latter slightly protruding and visible in lateral view. Face visible in lateral view; carina only weakly developed. Gena in profile 0.46–0.58[0.49] times as high as compound eye. Postocular setae robust, slightly bent forwards. Occiput with white hair-like setulae on lower half. Genal dilation and dorsal half of occiput with black setulae only. Prementum about 5–8 times as long as wide. Palpus well developed, sub-cylindrical or slightly enlarged apically, with black setulae, 0.53–0.62 times as long as prementum.

Thorax: Prosternum and proepisternum bare. Postpronotum with 3 strong setae arranged in a triangle, 1 inner anterior seta, and 1 parabasal seta of variable length. Scutum with 3 + 3–4 acrostichal (rarely a short seta present in addition anterior to the first presutural acrostichal), 3–4 + 4 dorsocentral, 0 + 3 intra-alar setae. Anatergite with a patch of minute setulae below lower calypter. Three katepisternal setae; ventrolateral surface of katepisternum with several fine setulae. One anepimeral seta, shorter than katepisternal setae. Scutellum with strong basal, subapical and crossed apical setae and relatively short lateral setae; surface of scutellum with erect setulae and one pair of preapical setae.

Legs: Fore claws 1.13–1.27[1.14] times as long as fifth tarsal segment. Fore coxa with bare inner anterior surface. Fore tibia with a more or less regular row of anterodorsal setae, 2 posterior setae; preapical anterodorsal seta longer than preapical dorsal seta. Mid tibia with 2 (rarely 3) anterodorsal setae, 2 posterior setae, 1 ventral seta. Hind coxa

bare on posterodorsal margin. Hind tibia with an irregular row of 4–7 anterodorsal setae, 3–5 posterodorsal setae, 2–4 anteroventral setae, 2 dorsal preapical setae; preapical anteroventral seta hair-like.

Wing (Fig. 27): Costal spine not or only slightly differentiated from costal setulae. Second costal portion bare ventrally. Base of R_{4+5} with 3–7 setulae. R_1 and CuA_1 bare. Fourth costal section 1.7–2.3 times as long as sixth costal section. Section of M between crossveins R-M and DM-Cu 2.45–3.11 times as long as section between DM-Cu and bend of M. Bend of M with an extension of variable length. Petiole of wing cell r_{4+5} as long as 0.11–0.20 of postangular section of M.

Abdomen (Fig. 35): Tergites not fused. Ventral edges of tergites 2, 3 and 4 almost entirely overlapping corresponding sternites. Mid-dorsal depression on abdominal syntergite 1+2 extending posteriorly to hind margin of that segment. Syntergite 1+2 without median marginal setae, 1 (rarely 2) pair(s) of lateral marginal setae. Tergite 3 with 1 pair of median marginal setae, 2 (rarely 3) pairs of lateral marginal setae, 4–7 irregular median discal and no lateral discal setae. Tergite 4 with a complete row of marginal setae and 3–6 median discal setae. Tergite 5 with a row of marginal setae and several long and robust discal setae.

Postabdomen: Epandrium short, convex, with a well developed posterior lobe. Surstylus, in lateral view, wide and apically rounded (Dexiini ground-plan) with only a few fine setulae posteriorly. Cerci robust, gently bent anteriorly, medially unfused, pointed apically. Epiphallus very long and robust. Distiphallus ending with more or less pointed acrophallus, ventrally covered with micro-scales (Fig. 32).

F e m a l e , differs from male as follows:

Body length: 10.1 mm. Coloration: Abdominal ground colour mainly black except for small areas of tergites 2 and 3 laterally; microtomentum grey, denser than in males. Frons at its narrowest point 1.34 times as wide as eye in dorsal view. Fronto-orbital plate with 2 proclinate orbital setae. Outer vertical setae well developed and differentiated from postocular row. Fore claws shorter than last tarsal segment.

Diagnosis

The Sardinian endemic *Estheria birtelei* n. sp. is well characterised by having parafacial entirely bare, arista with short trichia (arista with trichia 0.39–0.64 times as wide as postpedicel), the three strongest postpronotal setae arranged in a triangle, petiole of wing cell r_{4+5} relatively long, basicosta black or dark brown, male abdomen yellowish-red in ground colour with a narrow black longitudinal stripe which usually tapers posteriorly, reaching the posterior margin of tergite 5. For differences to other species see the key (chapter 4).

3.2 *Estheria hertingi* **n. sp.**

H o l o t y p e ♂: "I – Sardegna (Medio Campidano) / Arbus Piscinas 5 m [sand dunes] / UTM-WGS84 32S 0452927 4376897 / 10.IX.2006, retino [hand net] / D. Avesani, M. Bardiani, D. Birtele, G. Nardi leg. / Progetto Sardegna – CNBF // *Estheria* / *petiolata* / (Bonsdorff, 1866) / P. Cerretti det. 2007" (MZUR).

P a r a t y p e s : 1 ♂, same data as holotype, but "0 m", "14. VII.2006", and "P. Cerretti, D. Avesani, M. Bardiani, D. Birtele, M. Mei, D. Whitmore leg." (PC). – "[France] Corsica, VII.[19]10 / Vizzavona / H. Fischer // *Dexiomorpha* / *petiolata* Bonsd. / Villeneuve det." (SMNS).

Etymology

The new species is dedicated with pleasure to our deceased colleague Benno Herting (1923–2004) who was an outstanding specialist on Tachinidae and who spent a lot of time on the study of the genus *Estheria*.

Description

M a l e (measurements in square brackets refer to the holotype):

Body length: 9.0–11.1 [10.5] mm.

Coloration: Head mainly black with reddish-brown gena, covered with grey microtomentum; scape and pedicel reddish-brown, postpedicel mainly black (at most reddish basally); palpus yellow. Thorax, except scutellum, black; posterior third of scutellum red; scutum covered with brownish-grey microtomentum, presutural area with four longitudinal dark vittae (lateral pair sub-triangular, Fig. 19). Femora black with yellow knees; fore and mid tibiae black or dark brown; hind tibia largely reddish. Lower and upper calypters white. Wing membrane mostly hyaline, slightly brownish around crossveins R-M and DM-Cu (Fig. 29); tegula black, basicosta brown. Abdomen entirely black, covered with grey microtomentum with shifting spots.

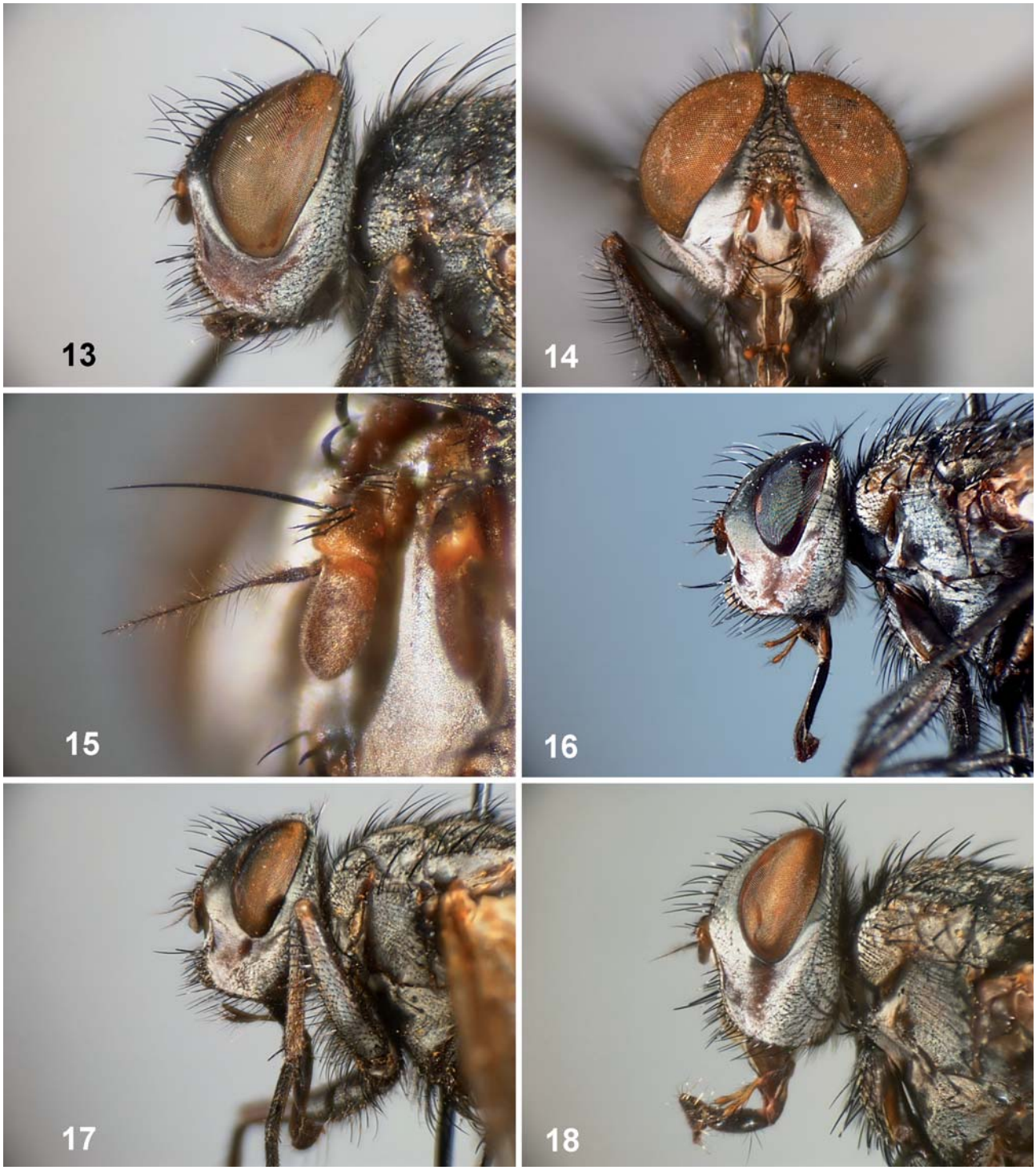
Head: Head higher than long. Eye bare. Arista thickened on its basal 1/5–1/4 , with trichia 0.7–0.9 [0.8] times as wide as postpedicel. Second aristomere short, at most as long as wide. Postpedicel [1.10]–1.17 times as long as pedicel. Frons at its narrowest point 0.24–[0.27] times as wide as eye in dorsal view (Fig. 19). Ocellar setae well developed, proclinate. Medial vertical setae 0.53–0.54 times as long as eye height [lacking in the holotype]; lateral vertical setae not differentiated from postocular row. No proclinate orbital setae. Frontal setae descending to level of base of antenna. Fronto-orbital plate with short, proclinate, hair-like setulae lateral to frontal row. Parafacial finely setose (parafacial setae about same size of fronto-orbital setae), at its midpoint [3.1]–3.2 times as wide as postpedicel. Facial ridge concave in profile with a few setulae above vibrissa. Vibrissa arising above level of lower facial margin, the latter slightly protruding and visible in lateral

Figs. 1–6. *Estheria* spp., head and anterior part of thorax in lateral, anterior and oblique anterior views. – **1**. *E. simonyi*. **2–4**. *E. litoralis* (2 ♂, Tenne; 3, 4 holotype ♀). **5–6**. *E. iberica*, paratype ♂. – Scale of Fig. 4: 0.5 mm.

view. Face visible in lateral view; carina well developed and separating antennae. Gena in profile 0.50–[0.57] times as high as compound eye. Postocular setae robust, slightly bent forwards. Occiput with white hair-like setulae and 1–2 rows of irregular black setae behind postocular row. Genal dilation with black setulae only. Prementum about 3.5–4.5 times as long as wide. Palpus well developed, subcylindrical or slightly enlarged apically, with black setae.

Figs. 7–12. *Estheria* spp., head and anterior part of thorax in lateral, anterior and oblique anterior views. – **7–8**. *E. bohemani* ♂ (Italian Alps). **9–10**. *E. cristata* ♂. **11–12**. *E. mesnili* n. sp., paratype ♂ (Mt. Hermon).

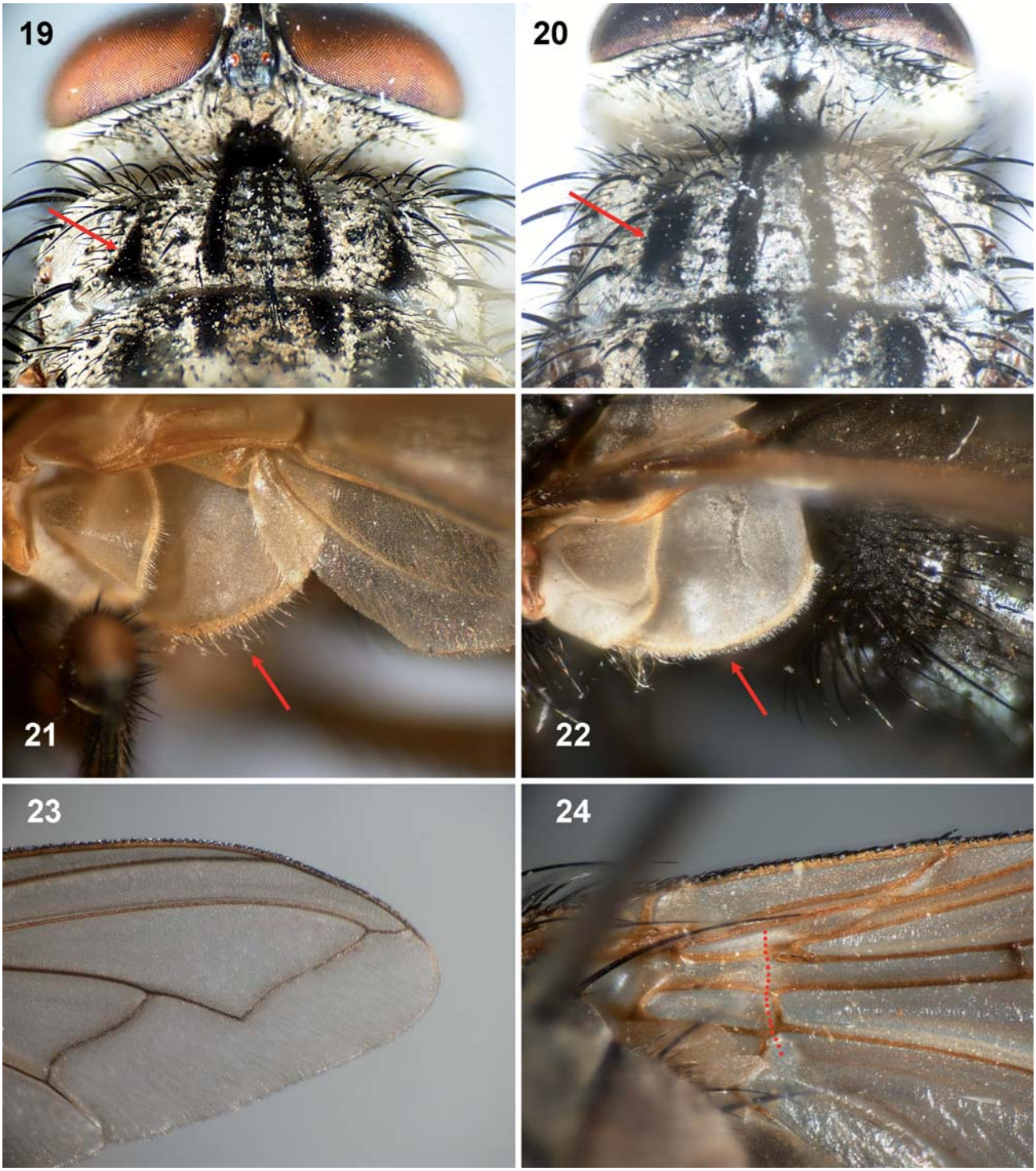
Thorax: Prosternum and proepisternum bare. Postpronotum with 5[–7] robust setae, the 3 strongest arranged in a triangle. Scutum with 3 + 2–5 acrostichal, 3 + 4 dorsocentral, 0 + 3 intra-alar setae. Anatergite with a patch of minute setulae below lower calypter. Three katepisternal setae; ventrolateral surface of katepisternum with several fine setulae. One anepimeral seta, shorter than katepisternal setae. Scutellum with strong basal, subapical and



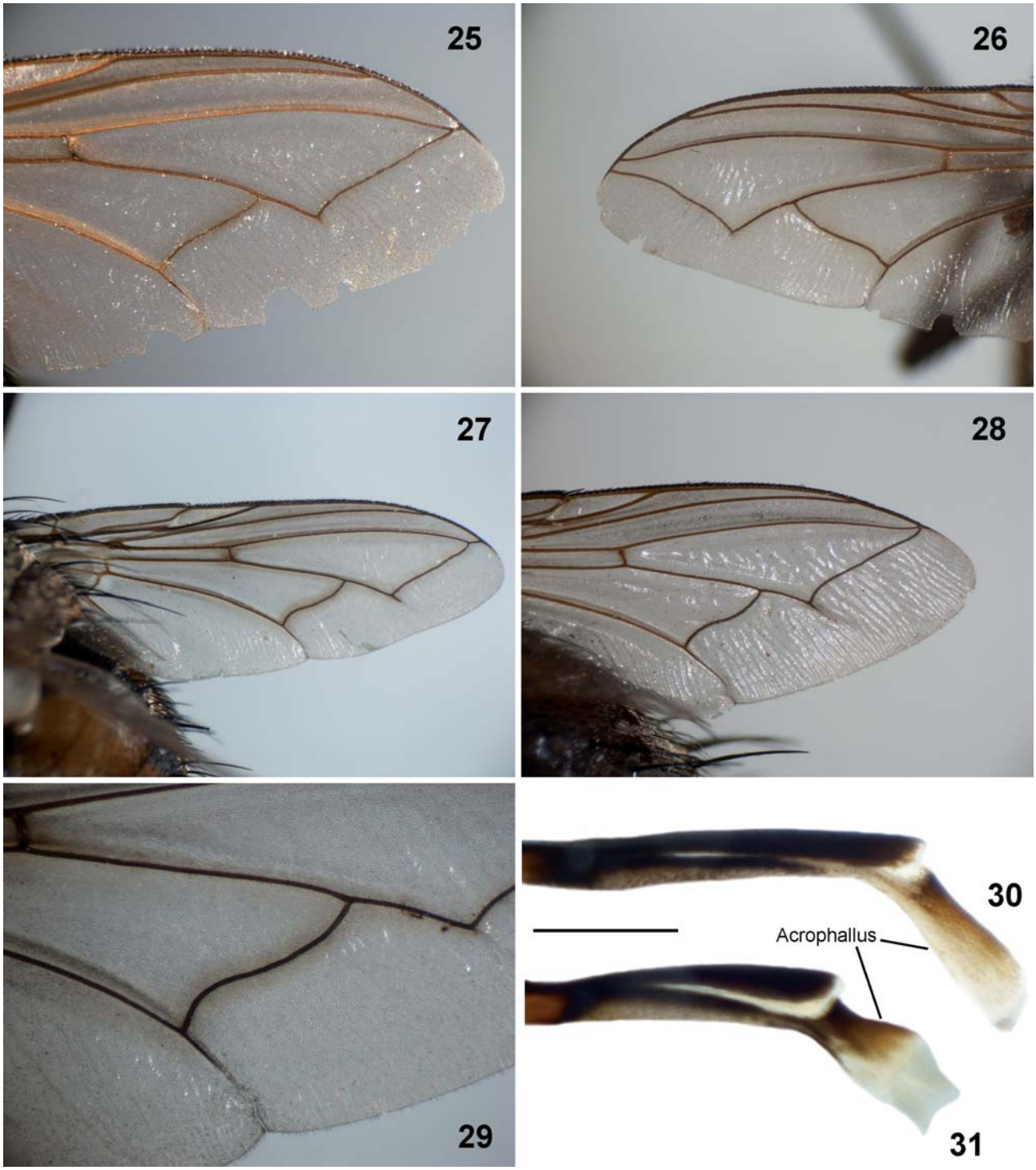
Figs. 13–18. *Estheria* spp., head and anterior part of thorax in lateral, anterior and oblique anterior views. – **13–15**. *E. microcera*, ♂ (Italian Apennines). **16**. *E. birtelei* n. sp., paratype ♂. **17**. *E. latigena*, lectotype ♂. **18**. *E. decolor*, ♂ (Southern France)

crossed apical setae and short and fine lateral setae; surface of scutellum with erect discal setae.

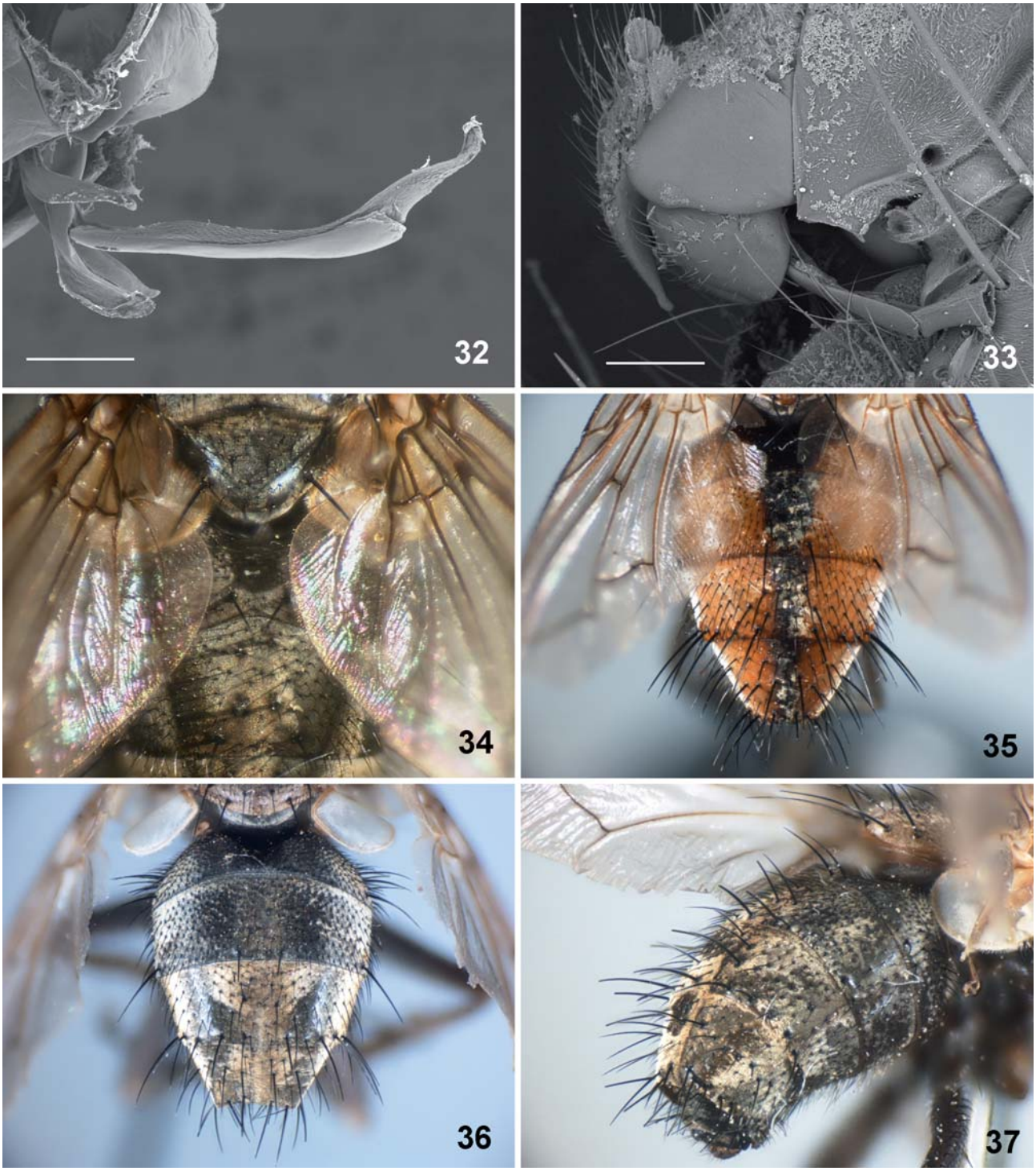
Legs: Fore claws about 1.1 times as long as fifth tarsal segment. Fore coxa with bare inner anterior surface. Fore tibia with an irregular row of 3–5 anterodorsal setae, 2 posterior setae; preapical anterodorsal seta longer than preapical dorsal seta. Mid tibia with 2–3 anterodorsal setae, 2 posterior setae, 1 ventral seta. Hind coxa bare on



Figs. 19–24. *Estheria* spp., anterior part of thorax and posterior part of head in dorsal view (19, 20), calypters in lateral view (21, 22), right wing distally (23) and proximally (24). – **19**. *E. hertingi* n. sp., holotype ♂. **20**. *E. petiolata*, ♂(Piedmont, Italy). **21**. *E. litoralis*. **22**. *E. petiolata*. **23**. *E. bohemani* (Italian Alps). **24**. *E. mesnili* n. sp., holotype ♂. – The red arrows indicate the lateral presutural thoracic vitta and the outer margin of the lower calypter, respectively. The red dotted line indicates the position of the transversal milky band.



Figs. 25–31. *Estheria* spp., right (25, 27, 28) and left (26) wing, detail of right wing (29), apical part of male distiphallus with acrophallus (30, 31). – **25**. *E. microcera*, ♂(Italian Apennines). **26**. *E. latigena*, lectotype ♂. **27**. *E. birtelei* n. sp., paratype ♂. **28**. *E. atripes*, ♂(Morocco). **29**. *E. hertingi* n. sp., holotype ♂. **30**. *E. petiolata* (French Alps). **31**. *E. hertingi* n. sp., paratype (Corsica). – Scale of Figs. 30, 31: 0.2 mm.



Figs. 32–37. *Estheria* spp., aedeagus in lateral view (32), male postabdomen in lateral view (33), abdomen in dorsal and oblique posterior views (34–37). – **32**. *E. birtelei* n. sp., paratype ♂. **33**. *E. mesnili* n. sp., holotype ♂. **34**. *E. iberica*, paratype ♂. **35**. *E. birtelei* n. sp., paratype ♂. **36**. *E. mesnili* n. sp., paratype ♂ (Mt. Hermon). **37**. *E. mesnili* n. sp., paratype ♂ (Mt. Meron). – Scale of Figs. 32, 33: 0.2 mm.

posterodorsal margin. Hind tibia with an irregular row of 4–6 anterodorsal setae, 3–5 posterodorsal setae, 2–4 anteroventral setae, 2 dorsal preapical setae; preapical anteroventral seta hair-like.

Wing: Costal spine not differentiated from costal setulae. Second costal portion bare ventrally. Base of R_{4+5} with a few setulae. R_1 and CuA_1 bare. Fourth costal section 1.12–[1.35] times as long as sixth costal section. Section of M between crossveins R-M and DM-Cu 2.32–[2.63] times as long as section between DM-Cu and bend of M (Fig. 29); the latter [0.87]–0.97 times minimum distance between bend of M and wing margin. Bend of M with or without [holotype] extension, when present distinctly shorter than R-M. Wing cell r_{4+5} closed at wing margin [holotype] or with a petiole as long as 0.03–0.09 times of postangular section of M.

Abdomen: Tergites not fused. Ventral edges of tergites 2, 3 and 4 almost entirely overlapping corresponding sternites. Mid-dorsal depression on abdominal syntergite 1+2 extending posteriorly to hind margin of that segment. Syntergite 1+2 without median marginal setae, 1 or 2 pairs of lateral marginal setae. Tergite 3 with 1 pair of median marginal setae, 1 pair of lateral marginal setae, 1 pair of median discal and no lateral discal setae. Tergite 4 with a row of 8 marginal setae and 1 pair of median discal setae; median discal setae on tergite 4 placed side by side with several robust erect setulae. Tergite 5 with a row of marginal setae and several long and robust discal setae.

Postabdomen: Epandrium short, convex, with a well developed posterior lobe. Surstylus convex, wide and apically rounded in lateral view (Dexiini ground-plan), with fine setulae on its proximal posterior two-thirds. Cerci robust, gently bent anteriorly, medially unfused, pointed apically. Epiphallus long, membranous apically. Distiphallus ventrally covered with micro-scales. Acrophallus tube-shaped, slightly widened at midlength, with sclerotisation or fine granula on anterior half (Fig. 31).

Diagnosis

Estheria hertingi n. sp. strongly resembles *E. petiolata* by having parafacial covered with setae, postpronotum entirely black, abdominal ground colour black, basicosta black or dark brown, tibae at least partly yellow at middle, wing cell r_{4+5} petiolate or just closed at wing margin, abdominal tergite 4 with 1–3 pairs of median discal setae often accompanied by several robust erect setulae, and male frons 0.20–0.36 times as wide as eye in dorsal view. The differences to *E. petiolata* (see couplet 18 of the key, chapter 4) are weak, but because they are stable characters it is likely that *E. hertingi* represents a separate species.

The citation of *E. petiolata* from Sardinia (cf. CERRETTI 2010) was based on a misidentification of specimens of *E. hertingi* n. sp.

3.3 *Estheria mesnili* **n. sp.**

Material

Holotype ♂: "Israel / Mt. Hermon / 1400–1650 m / 18.V.1976 / A. FREIDBERG leg. // *Estheria* / *murina* Mesnil / L.-P. MESNIL det. 1981 // Type // T 420 // Holotype ♂ / *Estheria* / *mesnili* n. sp. / P. CERRETTI & H.-P. TSCHORSNIG det. 2010" (TAU).

Paratypes: 1 ♂, same data as holotype, but "// *Estheria murina*? / Mesnil / J. KUGLER det. 1986" (TAU). – 1 ♂, "Israel, Mount Hermon 1700–1800 m, 18.V.2009, P. CERRETTI leg." (PC). – 1 ♂, "Israel: Har [= Mount] / Meron Reserve / 'En haZaqen / 32° 58′ N 35° 25′ E / 24.iv.2002 / A. FREIDBERG" (TAU). – 1 ♀, "Jerusalem / 26.4.63 / D. AMITAI // *Estheria* / *murina* Mesnil / L.-P. MESNIL det., 1981 // T 420" (TAU).

Etymology

The new species is dedicated to the outstanding specialist on the family Tachinidae LOUIS-PAUL MESNIL (1904–1986) who firstly identified it, but never published a description.

Description

Male (measurements in square brackets refer to the holotype):

Body length: 9.9–[10.0] mm.

Coloration: Head (Figs. 11, 12) mainly black, covered with yellowish-grey microtomentum; frontal vitta, face, gena and (rarely) ventral half of occiput reddish; antenna yellowish-red; palpus yellow. Thorax mainly black with sutures between pleurae and most of scutellum yellowish-red; scutum covered with yellow microtomentum, presutural area with four (five in the specimen collected on Mt. Hermon in 2009) longitudinal dark vittae (lateral pair subtriangular). Femora basally black or brown, shading into reddish-yellow distally (light colour more widespread ventrally); tibiae yellow; tarsi dark brown, pulvilli infuscate. Lower and upper calypters whitish. Wing membrane hyaline, slightly darkened around crossvein R-M; a transversal milky band at base of wing usually visible (Fig. 24); tegula varying from brown to yellow, basicosta yellow or red. Abdomen entirely black in ground colour, covered with dense, yellow microtomentum with light reflecting pattern (Figs. 36, 37).

Head (Figs. 11, 12): Head higher than long. Eye bare. Arista thickened on its basal 1/5–1/4, with trichia [0.51]–0.71 times as wide as postpedicel. Second aristomere short, at most as long as wide. Postpedicel 0.90–1.28[0.91] times as long as pedicel. Frons at its narrowest point 0.44–[0.55] times as wide as eye in dorsal view. Ocellar setae well developed, proclinate. Medial vertical setae [broken off in the holotype] 0.49–0.57 times as long as eye height, crossed; lateral vertical setae varying from not to slightly differentiated from postocular row. No proclinate orbital setae. Frontal setae descending to level of base of antenna. Fronto-orbital plate with some scattered proclinate setulae lateral to frontal row. Parafacial entirely bare, at its midpoint 2.4–[2.6] times as wide as postpedicel.

Facial ridge concave in profile with a few setulae above vibrissa. Vibrissa arising above level of lower facial margin, the latter slightly protruding and occasionally visible in lateral view. Face visible in lateral view in two of the four available specimens; carina only weakly developed. Gena in profile 0.49–[0.51] times as high as compound eye. Postocular setae robust, slightly bent forwards. Lower half of occiput with white hair-like setulae; dorsal half of occiput with at least some irregular black setulae behind postocular row (in some specimens white setulae present also on dorsal half). Genal dilation with black setulae only. Prementum about 2.3–3.7 times as long as wide. Palpus well developed, slightly enlarged apically, with black setulae.

Thorax: Prosternum and proepisternum bare. Postpronotum with 3 strong setae arranged in a triangle and 1 parabasal seta of variable size; inner anterior seta usually not developed. Scutum with 2–3 + 2(rarely 3) acrostichal, 3 + 4 dorsocentral, 0 + 3 intra-alar setae. Anatergite with a patch of minute setulae below lower calypter. Three katepisternal setae; ventrolateral surface of katepisternum with several fine setulae. Usually one anepimeral seta, shorter than katepisternal setae (the specimen from Mt. Meron has 2, while the anepimeral seta is not differentiated in the specimen from Mt. Hermon collected in 2009). Scutellum with strong basal, subapical and crossed apical setae (apical pair absent in the quite aberrant specimen collected on Mt. Hermon in 2009); surface of scutellum with several discal setae.

Legs: Fore claws [0.90]–1.01 times as long as fifth tarsal segment. Fore coxa with bare inner anterior surface. Fore tibia with a more or less regular row of anterodorsal setae, 2 posterior setae; preapical anterodorsal seta longer than preapical dorsal seta. Mid tibia with 2–3 anterodorsal setae, 2 posterior setae, 1 ventral seta. Hind coxa bare on posterodorsal margin. Hind tibia with an irregular row of 3–4 anterodorsal setae, 3–5 posterodorsal setae, 2 anteroventral setae, 2 dorsal preapical setae; preapical anteroventral seta hair-like.

Wing: Costal spine about as long as $^1/_2$–$^2/_3$ of crossvein R-M. Second costal portion bare ventrally. Base of R_{4+5} with 3–7 setulae. CuA_1 bare, R_1 usually bare (2 setae are present dorsally on distal half in the holotype). Fourth costal section 1.57–1.83 times as long as sixth costal section. Section of M between crossveins R-M and DM-Cu 2.27–3.27 times as long as section between DM-Cu and bend of M; the latter 0.60–0.85 times minimum distance between bend of M and wing margin. Bend of M with an extension of variable length. Petiole of wing cell r_{4+5} 0.16–0.18 times as long as postangular section of M.

Abdomen (Figs. 36, 37): Tergites not fused. Ventral edges of tergites 2, 3 and 4 almost entirely overlapping corresponding sternites. Mid-dorsal depression on abdominal syntergite 1+2 extending posteriorly to hind margin of that segment, or very nearly so. Syntergite 1+2 usually without median marginal setae (a strong pair present in the specimen from Mt. Meron), 1 (rarely 2) pair(s) of lateral marginal setae. Tergite 3 with 1 pair of median marginal setae, 1–2 pairs of lateral marginal setae, 2–4 irregular median discal and no lateral discal setae (some long setulae occasionally present). Tergite 4 with a complete row of marginal setae and 3–6 median discal setae. Tergite 5 with a row of marginal setae and several long and robust discal setae.

Postabdomen (undissected but partly pulled out and fairly visible in the holotype, Fig. 33): Epandrium short, convex, with a well developed posterior lobe. Surstylus, in lateral view, wide and apically rounded (Dexiini groundplan) but gently slanted posteriorly; covered with a few fine, short setulae, slightly longer posteriorly. Cerci robust, gently bent anteriorly, medially unfused, pointed apically. Epiphallus long and robust. Distiphallus well sclerotized and ventrally covered with micro-scales. Acrophallus tube-shaped, apically truncate.

F e m a l e , differs from male as follows:

Body length: 9.8 mm. Frons at its narrowest point 2.12 times as wide as eye in dorsal view. Fronto-orbital plate with 3–4 proclinate orbital setae. Outer vertical setae well differentiated from postocular row. Fore claws shorter than last tarsal segment.

Diagnosis

Estheria mesnili n. sp. is well characterized by having the body covered with thick yellow to yellowish-grey microtomentum, male frons very wide, 0.44–0.55 times as wide as eye in dorsal view, and the petiole of wing cell r_{4+5} as long as 0.16–0.18 times of postangular section of M. For differences to *E. microcera* and *E. acuta* see the key below.

4 Key to the European and Mediterranean species of *Estheria*

1 Prementum thin and very long, about 1.7–1.8 times as long as head height (Fig. 1). Scape prominent and well visible in lateral view. – Canary Islands. ..... ***E. simonyi***

– Prementum distinctly shorter, at most 0.6 times head height (e. g. Figs. 16, 18). Scape not prominent, not or only barely visible in lateral view. **2**

2 Parafacial entirely bare or, at most, with 1–6 short hair-like setae just below the first frontal seta (Figs. 2–17). **3**

– Parafacial with hair-like setae at least on upper half (Fig. 18)..... **15**

3 Lower calypter along outer margin with long hairs which are much longer than the marginal hairs of the upper calypter (Fig. 21). Facial carina strongly developed (Figs. 3, 4), straight in lateral view (Fig. 2). Dorsal half of occiput without or at most with a few scattered black hair-like setulae. Arista with trichia 1.7–2.2 times as wide as postpedicel (Fig. 4). – Italy, southern France. ..... ***E. litoralis***

– Lower calypter only at base with long hairs, remaining marginal hairs shorter than or at most as long as marginal hairs of upper calypter (Fig. 22). Facial carina not or distinctly less developed (Figs. 5–18). Dorsal half of occiput usually with at least a row of black hair-like setulae and arista with trichia narrower (except in the following species with large labella and yellow hairs on thoracic pleurae). **4**

4 Hairs on genal dilation, thoracic pleurae, coxae, trochanters, femora and ventral surface of abdominal tergites 1+2 and 3 pale-yellow. Proboscis short, labella longer than prementum. Arista with trichia about 2–3 times as wide as postpedicel. Dorsal half of occiput without or at most with a few scattered black hair-like setulae. – Eastern Europe till Mongolia.... ..... ***E. pallicornis***
[Remark: *E. pallicornis* is a Central Asiatic-Mediterranean element (sensu VIGNA TAGLIANTI et al. 1999), cited from Europe only from Romania (STEIN 1924, as *Dolichodexia rufipes*), Greece (HERTING & DELY-DRASKOVITS 1993) and northern Italy (RICHTER in PAPE et al. 1995). The senior author collected extensively in Italy in the last ten years and examined material preserved in all major Italian museums, but not a single specimens of this species was found, hence RICHTER's (l. c.) citation from Italy needs to be confirmed.]

– General pubescence of genal dilation, thoracic pleurae, coxae, trochanters, femora and ventral surface of abdominal tergites 1+2 and 3 black. Labella distinctly shorter than prementum. Arista with trichia narrower. Dorsal half of occiput with at least a row of black hair-like setulae. **5**

5 Scutellum entirely black. Petiole of wing cell r_{4+5} 0.25–0.45 times as long as postangular section of M (Fig. 23)..... **6**

– Scutellum reddish or yellowish at least apically. Wing cell r_{4+5} open (Fig. 26), closed at wing margin (Fig. 28) or with a petiole at most 0.20 times as long as postangular section of M (Figs. 25, 27). **7**

6 Head about as high as long (Figs. 5, 6). Arista with trichia 0.6–0.8 times as wide as postpedicel. Usually 3 pairs of postsutural dorsocentral setae (rarely 4 pairs). Mid-dorsal depression on abdominal syntergite 1+2 confined to anterior 0.6–0.9 of that segment (Fig. 34). Palpus, basicosta, and tibia black, veins dark brown at wing base. Microtrichosity of parafacial nearly always with a brown spot (in dorsal view, near the eye at the level of base of antenna). – ♂: Inner vertical setae 0.6–0.8 times as long as eye height, parallel or slightly divergent; median presutural longitudinal stripes on thorax fused to a common dark stripe. – Iberian Peninsula..... ..... ***E. iberica***

– Head distinctly higher than long (Fig. 7). Arista with trichia 0.9–1.2 times as wide as postpedicel. 4 pairs of postsutural dorsocentral setae. Mid-dorsal depression on abdominal syntergite 1+2 extending back to hind margin of that segment. Palpus and basicosta yellow, tibia predominantly yellow, veins yellow at wing base. Microtrichosity of parafacial without a brown spot. – ♂: Inner vertical setae 0.4–0.5 times as long as eye height, crossed; median presutural longitudinal stripes on thorax widely separated. – Europe northwards to Sweden..... ..... ***E. bohemani***

7 Postpronotum with 4 setae, the three strongest arranged in a more or less straight line (Figs. 9, 10). Abdomen without lateral discal setae. – Europe northwards till England, Transcaucasia..... ***E. cristata***

– Postpronotum with 4–6 setae, the three strongest arranged in a triangle (Figs. 11, 13, 16, 17). Abdomen with or without lateral discal setae. **8**

8 Prementum short, about 0.25 times as long as head height. Last section of CuA_1 as long as 0.85–1.00 of DM-Cu. Wing membrane darkened around postangular section of vein M and crossveins DM-Cu and R-M. **9**

– Prementum longer. Last section of CuA_1 as long as 0.40–0.75 of DM-Cu. Wing membrane entirely hyaline or at most slightly darkened around crossveins DM-Cu and R-M. **10**

9 Wing membrane nearly entirely slightly brownish, only near base with several small hyaline spots. Female frons 1.5 times as wide as eye in dorsal view, distance between vibrissae 0.5 times facial height. – Algeria. ..... ***E. lesnei***

– Only about half of wing membrane (apically and posteriorly) brownish, basally, anteriorly and along veins R_{4+5} and CuA_1 more or less hyaline. Female frons twice as wide as eye in dorsal view, distance between vibrissae 0.3 times facial height. – Algeria. ..... ***E. crosi***
[Remark: Only the female holotype of *E. crosi* is known. According to an unpublished note of HERTING, who studied the type material of both species, it cannot be ruled out that *E. crosi* might represent only an aberrant specimen of *E. lesnei*.]

10 Lower facial margin not or only barely protruding, lower part of face nearly in the same plane with the upper part (Figs. 11, 13, 15). Prementum about 0.30–0.45 times as long as head height, 3.5–5.0 times as long as wide (Fig. 11). Basicosta yellow to brown. **11**

– Lower facial margin slightly protruding, lower two-fifths of face nearly in the same angle as the lower two-fifths of posterior eye margin (Figs. 16, 17). Prementum about 0.45–0.60 times as long as head height, 5.0–8.0 times as long as wide (Figs. 16, 17). Basicosta yellowish brown to black. **13**

11 Arista with trichia 0.5–0.7 times as wide as postpedicel (Fig. 11). Petiole of wing cell r_{4+5} as long as 0.15–0.20 times of postangular section of M. Male frons 0.45–0.55 times as wide as eye in dorsal view (Fig. 12), 2.1 times in female. – Israel... ..... ***E. mesnili* n. sp.**

– Arista with trichia 0.8–1.3 times as wide as postpedicel (Fig. 15). Wing cell r_{4+5} closed at wing margin or with a short petiole at most as long as 0.05 times of postangular section of M (Fig. 25). Frons in male 0.10–0.35 times as wide as eye in dorsal view, 1.35–1.60 times in female..... **12**

12 Prementum about 0.40–0.45 times as long as head height. Male frons 0.10–0.15 times as wide as eye in dorsal view (Figs. 13, 14). Male and female abdomina black. – Southern Europe..... ***E. microcera***

– Prementum about 0.35–0.40 times as long as head height. Male frons 0.20–0.35 times as wide as eye in dorsal view. Male abdomen usually more or less dark red in ground colour, female abdomen predominantly red or yellow. – Azerbaijan, Turkey, Romania, Hungary. ..... ***E. acuta***

13 Wing cell r_{4+5} with a petiole as long as 0.10–0.20 times postangular section of M (Fig. 27). Arista with trichia 0.40–0.65 times as wide as postpedicel. Male abdomen yellowish-red with a narrow black longitudinal stripe which usually tapers towards the back and reaches the posterior margin of tergite 5 (Fig. 35). – Sardinia. ..... ***E. birtelei* n. sp.**

– Wing cell r_{4+5} open or closed at wing margin. Arista with trichia 0.65–1.45 times as wide as postpedicel. Male abdomen black..... **14**

14 Section of M between DM-Cu and bend of M shorter than minimum distance between bend of M and wing margin (Fig. 28). Arista with trichia 1.00–1.45 times as wide as postpedicel. Costal spine about as long as crossvein R-M. Legs dark brown to black. Male frons 0.40–0.50 times as wide as eye in dorsal view. – Algeria, Morocco. .....***E. atripes***

– Section of M between DM-Cu and bend of M longer than minimum distance between bend of M and wing margin (Fig. 26). Arista with trichia 0.65–1.0 times as wide as postpedicel (Fig. 17). Costal spine only slightly differentiated from costal setulae. Tibia and occasionally also parts of the femora yellowish brown or red. Male frons about 0.25 times as wide as eye in dorsal view. – Corsica, Sardinia..... ..... ***E. latigena***

15 Postpronotum at least partly yellow (Fig. 18). Abdominal ground colour varying from black to mostly reddish-yellow. Basicosta yellow to light brown (distinctly lighter than tegula). Postpedicel yellow, rarely light brown. Male scutellum entirely yellow. Male frons 0.25–0.45 times as wide as eye in dorsal view. **16**

– Postpronotum entirely black. Abdominal ground colour black. Basicosta varying from yellow to black. Postpedicel light brown to black. Male scutellum darker near anterior margin. Male frons 0.20–0.35 times as wide as eye in dorsal view..... **17**

16 Lateral presutural black vitta sharply outlined, wedge-shaped, anteriorly reaching to level of medial posthumeral seta. Median presutural vittae narrow, separated by a distance of 5–10 times width of a vitta (in posterior view). Wing membrane almost entirely hyaline, brownish around R-M. Outer posthumeral seta and presutural seta on yellow ground. Abdominal ground colour varying from reddish-yellow with a narrow black mid-dorsal vitta to black. Male frons 0.25–0.35 times as wide as eye in dorsal view. – Southwestern Europe..... .....***E. decolor***

– Lateral presutural black vitta less distinctly outlined, more or less rectangular, reaching beyond medial posthumeral seta. Median presutural vittae wider, separated by a distance of 2–5 times width of a vitta. Wing membrane usually brownish also around DM-Cu and postangular section of M. Outer posthumeral seta and presutural seta on black ground. Abdominal ground colour varying from black to brown (lighter specimens have a wide longitudinal mid-dorsal black vitta). Male frons 0.35–0.45 times as wide as eye in dorsal view. – Europe till Mongolia.....***E. picta***

17 Inner margin of lower calypter along scutellum dark brown or black, distinctly darker than outer margin. Arista with trichia 0.9–1.4 times as wide as postpedicel. Basicosta yellow to light brown. Parafacial with 4–6 rows of long setae, the longest setae varying between 5/6 (♂) and 1/3 (♀) of parafacial width at midlength. Legs black except reddish-yellow knees. Abdominal tergite 4 usually with 1 pair of median discal setae (2 pairs sometimes in male). – Mediterranean..... ..... ***E. nigripes***

– Inner margin of lower calypter yellow or brownish, barely distinct in colour from outer margin. Arista with trichia 0.5–0.9 times as wide as postpedicel. Basicosta black or dark brown. Parafacial with 3–4 rows of short setae, the longest setae varying between 1/2 (♂) and 1/6 (♀) of parafacial width. Tibiae at least partly yellow at middle. Abdominal tergite 4 usually with 2, 3 or even more pairs of median discal setae (1 pair sometimes in female). **18**

18 Lateral presutural dark vitta sub-triangular, ending wedge-shaped near (and posterior to) medial posthumeral seta (Fig. 19). Male acrophallus slightly thickened at midlength, with sclerotisation or granula on anterior half (Fig. 31). – Sardinia, Corsica .....***E. hertingi* n. sp.**

– Lateral presutural black vitta almost rectangular in shape, reaching further anterior than to medial posthumeral seta (Fig. 20). Male acrophallus not thickened at midlength, with granula nearly to apex (Fig. 30). – Europe till Middle Asia.... .....***E. petiolata***

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