

# New and little known Rhinophoridae (Diptera) from Turkey

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## Abstract

Three new species of Rhinophoridae are described from Turkey: *Phyto anatolica* n. sp., *Oplisa hertingi* n. sp. and *O. nudiseta* n. sp. A key to the species of *Oplisa* subgenus *Anoplisa*, a diagnosis of *Oplisa (Anoplisa) oldenbergi* Herting, 1961, and a redescription of *O. (A.) pollinosa* Kugler, 1978 (from Israel) are provided. Notes on the identity of *Stevenia kugleri* Herting, 1961 are given.

**Key words:** Rhinophoridae, Turkey, new species, new records.

## Zusammenfassung

Drei neue Arten der Dipteren-Familie Rhinophoridae aus der Türkei werden beschrieben: *Phyto anatolica* n. sp., *Oplisa hertingi* n. sp. und *O. nudiseta* n. sp. Ein Schlüssel für die Arten der Untergattung *Anoplisa* der Gattung *Oplisa*, eine Diagnose von *Oplisa (Anoplisa) oldenbergi* Herting, 1961 und eine erweiterte Beschreibung von *O. (A.) pollinosa* Kugler, 1978 (aus Israel) werden gegeben. Angaben zur Identität von *Stevenia kugleri* Herting, 1961 werden gemacht.

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## 1 Introduction

Rhinophoridae is a relatively small family of Diptera consisting of mostly small, sometimes medium-sized calyptrate flies (PAPE 1998). The current understanding of the limits of this family has been formulated by CROSSKEY (1977), PAPE (1986), and PAPE & ARNAUD (2001). Keys for identification of the species of the Palaeartic fauna are given by HERTING (1961), supplemented by KUGLER (1978) with additions for Israel and PAPE & KURAHASHI (1994) for Japan. HERTING (1993) lists the Palaeartic genera and species. CROSSKEY (1977) provides a key to the Afrotropical species. Recently some new Palaeartic species have been described in the genera *Stevenia*, *Baniassa*, and *Melanophora* (CERRETTI & PAPE 2007, 2009; ZEEGERS 2008); a new genus *Alvamaja* was described by ROGNES (2010).

Collecting by several dipterologists in Turkey in the last decades has revealed three new species of Rhinophoridae which are described here: one in the genus *Phyto* and two in the genus *Oplisa*, subgenus *Anoplisa*.

To prevent the few available males from damage, it was decided not to make genital preparations. All new species are well recognizable by their outer morphology.

The morphological terminology follows OOSTERBROEK et al. (2005).

## Acknowledgements

The author is grateful to NIKITA VIKHREV (Moscow) who made much material available, to HANS-PETER TSCHORSNIG (SMNS) who loaned material of *Oplisa hertingi* n. sp. and *O. pollinosa* and commented on an earlier version of the manuscript, and to JOACHIM ZIEGLER (Berlin) who shared his views on *Oplisa oldenbergi* and the genus *Stevenia*. Thanks are also due to the referees PIERFILIPPO CERRETTI (Rome) and THOMAS PAPE (Copenhagen) who provided valuable suggestions.

## Acronyms of depositories

CJZ	Collection JOACHIM ZIEGLER, Berlin, Germany
CTZ	Collection THEO ZEEGERS, Soest, the Netherlands
SDEI	Senckenberg Deutsches Entomologisches Institut, Müncheberg, Germany
SMNS	Staatliches Museum für Naturkunde, Stuttgart, Germany

## 2 Genus *Phyto* Robineau-Desvoidy, 1830

The genus *Phyto* is – within the Palaeartic Region – generally well characterized by the shape of the head and the wing venation (HERTING 1961). The first postsutural supra-alar (or pre-alar) seta is long for all known species, with the exception of *P. pauciseta* Herting, 1961 and the newly described species.

*Phyto anatolica* n. sp.

(Figs. 1–6)

**Holotype** (♂): Turkey, Province Aksaray, Sultanhanı, 1050 m, 17.V.2002, leg. T. ZEEGERS (SMNS).

**Paratypes**: 2 ♀♀, same data as holotype (SMNS, CTZ); 1 ♀, same data as holotype, but 19.V.2002 (CTZ).

**Collection circumstances**: The type locality is situated in Central Anatolia just east of Sultanhanı. The specimens were collected at evening in a ditch along the road to Aksaray, at a site consisting of meadows with remnants of wetlands. No material was found in the middle of the day.

## Etymology

The species name is derived from the Turkish region Anatolia where the type material has been collected. It should be treated as a Latin adjective.

## Description

Male:

Body length 6–7 mm.

General colouration black with greyish pruinescence. Fronto-orbital plate (= parafrontal) and parafacial silvery grey. Legs, palpus and antenna black, only second segment of antenna brownish at apex. Thorax greyish with 3 very narrow central black vittae and 1 pair of very broad sublateral dark vittae. Syntergite 1+2 dark, other tergites dark with greyish band on anterior half, broadly interrupted at middle. Wings slightly yellowish, tegula black, basicoxa light yellow, lower calypter white, halter yellow.

Head: Vertex narrow, width of frons at its narrowest point about two-fifths of an eye in dorsal view (Fig. 2). Frontal stripe very narrow before ocelli, fronto-orbital plates nearly touching each other. Lunula bare. Head in lateral view with slightly projecting lower facial margin, vibrissa high above lower facial margin (Fig. 1). Parafacial more than twice as wide as third antennal segment. Gena similarly wide, about one-third of greater diameter of the eye and about as long as third antennal segment. Antenna short, third segment widening towards apex, about 2.5 times as long as broad at its base and slightly less than twice as long as second segment. Arista thickened only at basal quarter, long plumose. Fronto-orbital plates with a row of crossed frontal setae on anterior three-fourths, otherwise bare; parafacial over its total length sparsely covered with very small setulae. Ocellar setae strong, proclinate, inner vertical seta slightly smaller, outer vertical seta absent. Prementum nearly as long as height of head [lacking in ♂ holotype but present in ♀♀ paratypes]. Setulae on gena and occiput all black.

Thorax with 2+1 acrostichal setae (only the pair before the scutellum distinct), 2+3 dorsocentral setae, 0+2 intra-alar setae (presutural intra-alar seta hair-like), 3 katepisternal (sternopleural) setae, the lower one smaller; postpronotum with 3 setae, the inner one much smaller, the middle one placed slightly anteriorly. First postsutural

supra-alar seta short, about half as long and strong as the notopleural setae (Fig. 3). Anepimeral (pteropleural) seta weak, hair-like, katepimeron (barette) bare, notopleura with 2 setae, otherwise bare (with 1–2 additional hairs in some female paratypes). Metathoracic spiracle with two fringes of hairs, without obvious cover ('operculum'). Scutellum with strong crossed apicals and strong sub-apicals; basals hair-like.

Front tibia with 2 anterodorsal and 1 posteroventral setae, anterodorsal and dorsal preapical seta strong, subequal in length; middle tibia with 2 anterodorsal, 2 posterodorsal and 1 posteroventral setae; hind tibia with 1–2 anteroventral, 2–3 anterodorsal and 2–3 posterodorsal setae, with 3 dorsal preapicals. Claws and pulvilli about as long as last tarsal segment.

Wings with a strong costal spine, about as long as cross-vein r-m; base of vein R<sub>4+5</sub> with 2 setulae dorsally. Cell r<sub>4+5</sub> with a short petiole which is twice as long as its width, postangular section of vein M straight (as in Fig. 5).

Abdomen elongated (Fig. 4). Tergites without discal setae; syntergite 1+2 without marginal setae; tergite 3 with a row of hair-like marginal setae which become stronger towards the lateral margin; tergites 4 and 5 with a row of marginal setae.

Female differs from male as follows:

Width of frons at its narrowest point about four-fifths of an eye in dorsal view, frontal stripe nearly as wide as fronto-orbital plate (Fig. 6). Fronto-orbital plate with 2 proclinate and one latero-clinate orbital setae. Outer vertical seta present, half as long as inner vertical. Abdomen strongly flattened dorsoventrally, tergites black, tergites 3 and 4 with a pair of silvery spots on the posterior fourth. Tergite 5 entirely shining black.

## Differential diagnosis

First postsutural supra-alar seta short, a feature otherwise in *Phyto* only known from *P. pauciseta*. *P. anatolica* n. sp. can be recognized in the genus *Phyto* by the following key:

- 1 First postsutural supra-alar seta strong, about as long as first dorsocentral seta behind the suture and the strongest notopleural seta. ♂ with strong anteroventral seta on middle tibia. .... all other *Phyto*
- First postsutural supra-alar seta weak, at most half as long as first dorsocentral seta behind the suture and the strongest notopleural seta. ♂ without a strong anteroventral seta on middle tibia. .... 2
- 2 Middle tibia with 1 anterodorsal seta. Wing cell r<sub>4+5</sub> open or just closed at the wing margin. Katepimeron and lunula with setulae (according to PAPE 1998). .... *P. pauciseta* Herting, 1961
- Middle tibia with 2 anterodorsal setae. Wing cell r<sub>4+5</sub> shortly petiolate (Fig. 5). Katepimeron and lunula bare. .... *P. anatolica* n. sp.

### 3 Genus *Oplisa* Rondani, 1862

The genus *Oplisa* is characterized by the narrow parafacial without setae and the postpronotum having three setae standing in a distinct triangle (PAPE 1998). HERTING (1961) included three species of *Oplisa* (as *Hoplisa*) from the Palaearctic region and splitted the genus into two subgenera, *Oplisa* s. str. and the newly established *Anoplisa*. KUGLER (1978) added two new species, of which *O. pollinosa* fits into the subgenus *Anoplisa*, but shares one feature with *Oplisa* s. str. (the strong setula on the base of vein  $R_{4+5}$ ). In the present paper, I describe two additional species of *Oplisa*, *O. nudiseta* and *O. hertingi*, both fitting into the subgenus *Anoplisa*.

#### *Oplisa hertingi* n. sp.

(Figs. 9–12)

**H o l o t y p e** (♂): Turkey, Province Hakkari, Habur Deresi-Tal [= valley], S 'Beylisebap' [= Beytüşşebap], 1100 m, 10.VIII.1983, leg. W. SCHACHT (SMNS).

**P a r a t y p e s**: 1 ♀, same data as holotype; 1 ♂, 2 ♀♀, Turkey, Province Hakkari, Habur, Sat Dağ [i], Vargös, SW Yüksekova, 1700 m, 4.–8.VIII.1983, leg. W. SCHACHT (all SMNS).

#### Etymology

The material of the new species was found stored in the collection of SMNS, bearing a label '*Oplisa* sg. *Anoplisa* spec. nov.' in the handwriting of the late BENNO HERTING (1923–2004). HERTING never got to publish his discovery. It is my pleasure to name this new species after this excellent Tachinidae and Rhinophoridae specialist.

#### Description

##### Male:

Body length 4.0–5.5 mm.

Generally greyish species (Fig. 9). Antenna dark, tip of second segment orange. Palpus dark yellow, darker to the tip. Thoracic dorsum with silvery greyish pruinescence, leaving a narrow median dark vitta (not quite reaching the scutellum) and a pair of broader lateral vittae, interrupted at suture (pattern best seen obliquely from behind). Scutellum dark grey with yellowish tip. Legs black. Wings clear, yellowish at base, veins brown, more yellow near base. Lower calypter white, basicosta yellow, tegula black. Abdomen dorsally with silvery greyish pruinescence, leaving very narrow black hind margin to tergites and a narrow central black vitta (at most 1/7th of tergal width) with sharp border (Fig. 11). Greyish pattern folds over to ventral side, however, it does not reach the sternites. Epandrium dark.

**Head:** Dorsal view: width of frons at its narrowest point slightly narrower than an eye; frontal-orbital plate narrow, frontal stripe twice as broad. Lateral view (Fig. 10): eye very large, parafacial very narrow, not broader than base of arista, gena narrow, about as broad as width of third

antennal segment, face much shorter than frons, lower facial margin slightly projecting. Antenna inserted slightly above middle of eye. Eye bare. Occiput completely covered with black hairs, inner vertical setae strong, converging near tip, outer vertical seta half as strong, differentiated from occipital hairs, ocellar setae rather strong, proclinate. Frontal setae descending to antennal base, 2 pairs of reclinate inner orbital setae, the posterior one directed obliquely outward and 2 pairs of proclinate outer orbitals, the posterior one smaller. Below these 3–4 pairs of much smaller, hair-like setae. Vibrissa very strong, facial ridge with 2 setae above vibrissa. Third antennal segment twice as long as broad and twice as long as second segment or slightly longer. Arista long (as long as vibrissa), long plumose, second segment slightly longer than broad, third segment thickened at basal eighth.

Thoracic dorsum with one pair of strong acrostichal setae (and an anterior hair-like pair) before suture, 1 pair of weaker acrostichal setae behind suture just before scutellum, other acrostichal setae present as hairs only, 2+3 dorsocentral setae, 0+2 intra-alar setae, first posterior supra-alar seta hair-like, third supra-alar seta weak, 2 posthumeral. 3 katepisternal setae, anepimeral seta strong, accompanied by a second, smaller one. Scutellum with 2 pairs of strong marginal setae, basal and apical, the latter crossed. Lower calypter diverging from thorax and metathoracic spiracle with two fringes of hairs, without obvious cover ('operculum').

Front tibia with 1 anterodorsal and 1 posteroventral seta, anterodorsal and dorsal preapical seta subequal in length or anterodorsal one slightly shorter; middle tibia with 1 anterodorsal and 2 posterodorsal setae; hind tibia with 2 anterodorsal, 2 posterodorsal, 2 anteroventral setae and 3 dorsal preapicals (anterodorsal, dorsal and posterodorsal). Tarsi, especially front and middle tarsi, elongated, metatarsus nearly as long as remainder of tarsus, claws and pulvilli nearly as long as last tarsal segment.

Wing with open cell  $r_{4+5}$  (Fig. 12). Bend of vein  $R_{4+5}$  gently curved. Crossvein dm-cu reaches vein M midway between crossvein r-m and bend of M. Section of M between dm-cu and bend 1.6–1.8 times postangular section of M. Base of vein  $R_{4+5}$  dorsally with 2–4 setulae of normal size, ventrally with 1–2 setulae. Setulae on first section of costa only slightly larger and less dense than on other sections of costa, costal spine hardly differentiated.

Abdomen with excavation of syntergite 1+2 reaching halfway the segment. Syntergite 1+2 and tergite 3 without median marginal and discal setae, tergites 4 and 5 with a row of marginal setae, no discal setae. Sternite 5 very large.

Female differs from male as follows:

Dark hind margins of tergites broader, occupying up to one-fourth of the segments. Width of frons at its narrowest

point slightly larger than width of an eye. Tergite 3 with indistinct marginal setae. Sternite 5 and genitalia inconspicuous. Tarsi less elongated, claws and pulvilli short. Middle tibia with an additional ventral seta.

#### Differential diagnosis

See key below.

#### *Oplisa nudiseta* n. sp.

(Figs. 13, 14)

**Holotype** (♀): Turkey, East 'Antalia' [= Antalya], 29.V.2006, leg. N. VIKHREV (SMNS).

#### Etymology

The species name refers to the characteristic, nearly bare [= nudus] arista [= seta] and should be treated as a Latin noun.

#### Description

Female:

Body length 5 mm.

Generally black and greyish species. Antenna dark, base of third segment orange. Palpus yellow. Thoracic dorsum with silvery greyish pruinescence and a rather indistinct pattern of dark vittae. Scutellum grey. Legs dark. Wings clear, veins brown. Lower calypter white, basicosta yellow, tegula black. Abdominal tergites 3–5 black, anterior third with silvery pruinescence which is broadly interrupted in the middle; the pattern is shifting and might occupy up to half of the tergites in posterior view (Fig. 14). Syntergite 1+2 with very small silvery transversal spots. Ventral side of tergites dark, however, strongly silvery shining when seen under specific angles.

**Head:** Dorsal view: width of frons at its narrowest point slightly narrower than an eye; fronto-orbital plate about as broad as frontal stripe at narrowest point, frontal stripe distinctly broadening towards antennal base. Lateral view (Fig. 13): eye very large, parafacial very narrow, not broader than base of arista, gena narrow, somewhat narrower than width of third antennal segment, face shorter than frons, lower facial margin slightly projecting. Antenna inserted slightly above middle of eye. Eye bare. Occiput completely covered with black hairs, inner vertical setae strong, converging near tip, outer vertical seta half as strong, ocellar setae weak, proclinate. Frontal setae descending beyond antennal base, 1 pair of reclinate inner orbital setae and 1 pair of proclinate outer orbitals present. Fronto-orbital plate with several hairs, 1–2 hairs posterior to outer orbitals stronger. Vibrissa very strong, facial ridge with 2 setae above vibrissa. Third antennal segment twice as long as broad and 2.5 times as long as second segment. Arista long (as long as vibrissa), apparently bare, at high magnification with hairs shorter than width of arista

at base, second segment slightly longer than broad, third segment thickened only at basal one-sixth.

Thoracic dorsum with irregular acrostichal setae, 2+3 dorsocentral setae, 0+2 intra-alar setae, first posterior supra-alar seta and third superalar seta weak, 2 posthumeral. 3 katepisternal setae, anepimeral seta strong, accompanied by a second, smaller one.

Scutellum with 2 pairs of strong marginal setae, (sub) basal and apical, the latter crossed. Metathoracic spiracle with two fringes of hairs, without obvious cover ('operculum').

Front tibia with 2 anterodorsal and 1 posteroventral setae, dorsal and anterodorsal preapical seta of subequal length; middle tibia with 1 anterodorsal, 2 posterodorsal and 1 ventral seta, hind tibia with 2 anterodorsal, 2 posterodorsal, 2 anteroventral and 3 dorsal preapical setae (anterodorsal, dorsal and posterodorsal). Tarsi, especially front and middle tarsi, elongated, metatarsus as long as next two segments, claws and pulvilli short.

Wing cell  $r_{4+5}$  open. Bend of vein  $R_{4+5}$  gently curved. Crossvein dm-cu slightly closer to crossvein r-m than to bend. Distance from dm-cu to bend 1.6 times as long as postangular section of vein M. Base of vein  $R_{4+5}$  dorsally with 2–3 setulae, ventrally with 1–2 setulae. Setulae on first section of costa only slightly larger and less dense than on other sections of the costa, costal spine distinct but small.

Abdomen with excavation of syntergite 1+2 reaching halfway the segment. Syntergite 1+2 and tergite 3 without discal setae, marginal setae hair-like, tergites 4 and 5 with a row of marginal setae. Discal seta on tergite 4 small and indistinct, on tergite 5 larger.

#### Differential diagnosis

See key below.

#### *Oplisa oldenbergi* Herting, 1961

(Figs. 15, 16)

#### Material

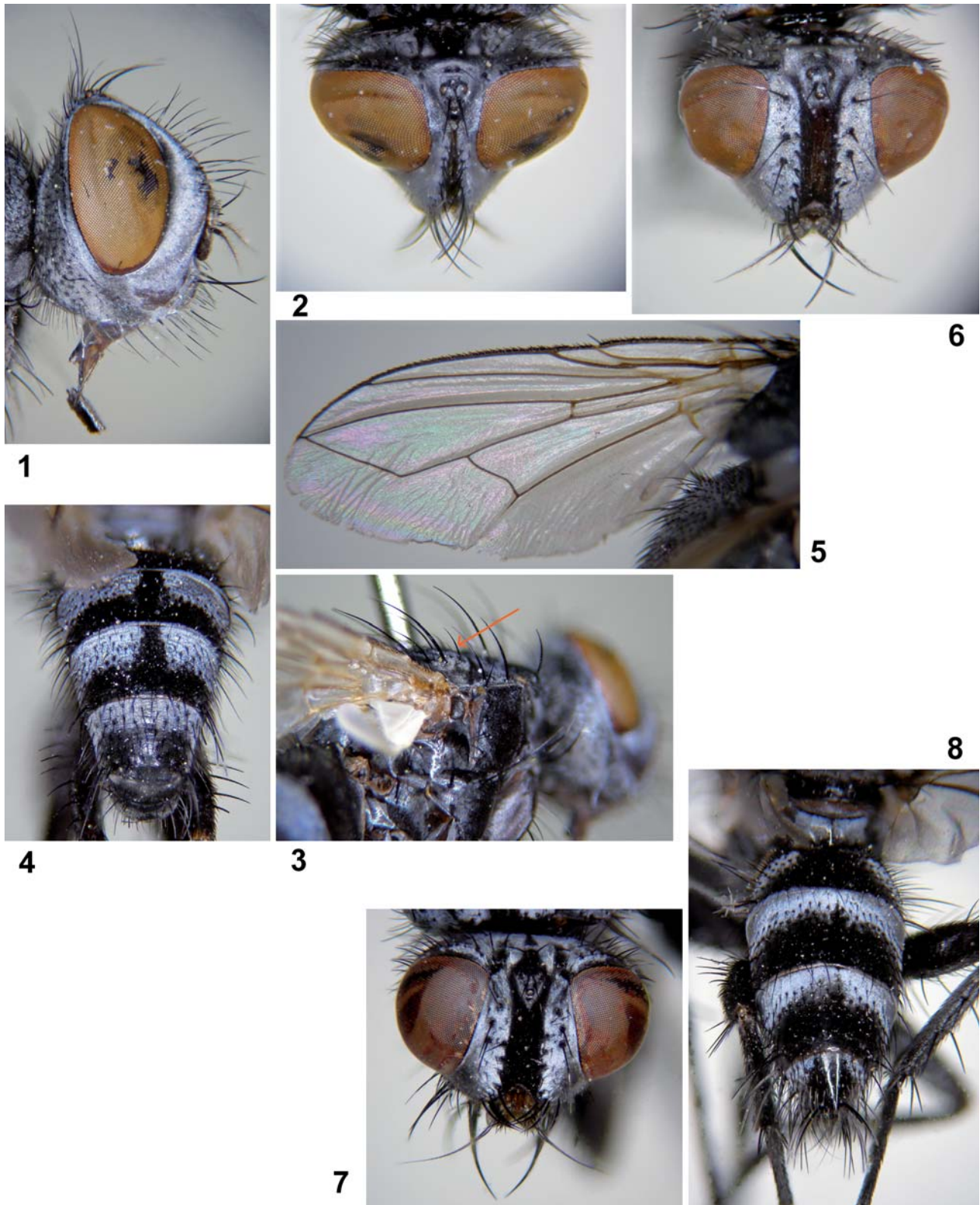
**Turkey:** 3 ♂♂, Province Rize, Sivrikaya S Rize (Doğu Karadeniz Dağları), 40°42'23.0N 40°37'36.6E, 1200 m, 22.VII.2002, leg. C. LANGE & J. ZIEGLER (CJZ). – **Bulgaria:** 1 ♂, 1 ♀, E Bulgaria, Sv. [= Sveta] Vlas, near Nesebar, ca. 20 m, 8.–31.V.1998, Malaise trap, leg. C. V. ACHTERBERG, R. DE VRIES, P. V. ATANASSOVA; 1 ♂, same locality and collectors, 1.–31.VIII.1998, 1 ♀, same locality and collectors, 1.–30.VI.1998 (all CTZ).

Previously recorded from Mehadia in Romania (holotype, HERTING 1961), the Pieniny mountains in Poland (DRABER-MOŃKO 1989) and several localities in Ukraine (VERVES 2005).

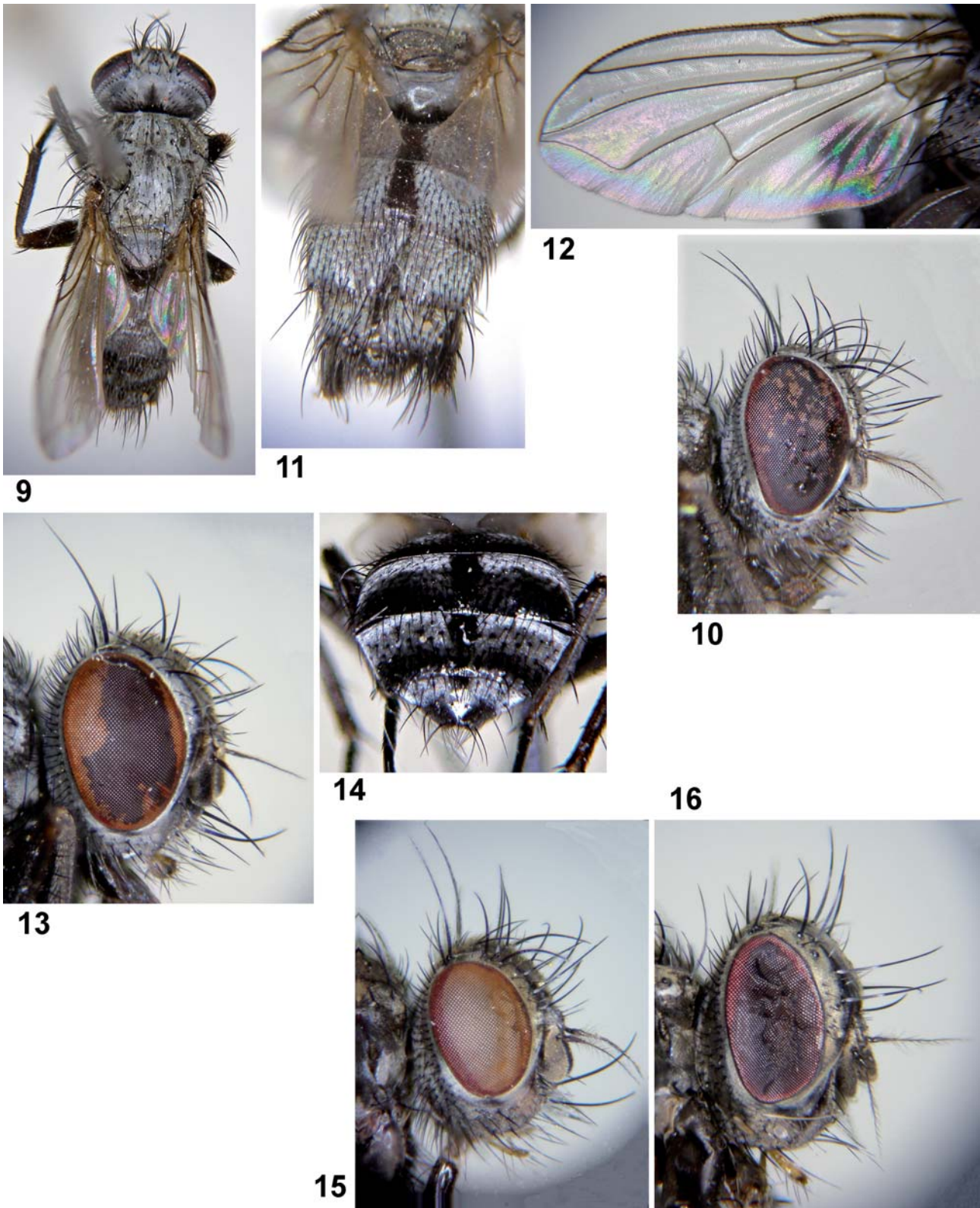
#### Diagnosis

Arista plumose. Ocellar setae proclinate. Parafacial broad, twice as broad as arista at base (Figs. 15, 16). Basal





**Figs. 1–8.** Rhinophoridae. – **1–6.** *Phyto anatolica* n. sp., ♂ holotype (1–4), ♀ paratype (5–6). **7–8.** *Stevenia kugleri*, ♂. **1.** Head, lateral view. **2.** Head, dorsal view. **3.** Thorax, slightly oblique lateral view (the red arrow indicates the first posterior supra-alar seta). **4.** Abdomen, dorsal view. **5.** Wing. **6.** Head, dorsal view. **7.** Head, dorsal view. **8.** Abdomen, dorsal view.



**Figs. 9–16.** *Oplisa* spp. – 9–12. *O. hertingi* n. sp. ♂ holotype. 13–14. *O. nudiseta* n. sp. ♀ holotype. 15–16. *O. oldenbergi*. 9. Habitus, dorsal view. 10. Head, lateral view. 11. Abdomen, dorsal view. 12. Wing. 13. Head, lateral view. 14. Abdomen, dorsal view. 15. ♂ head, lateral view. 16. ♀ head, lateral view.



proclinate orbital seta small, so at first glance only 1 pair of distinct proclinate orbital setae present. Abdominal tergites with broad black hind margins and a central black vitta. No central marginal setae on syntergite 1+2 (HERTING 1961 mentions small marginal setae in the type), a row of marginal setae on the other tergites. Smaller discal setae present on tergites 4 and 5. Setulae on basal section of costa as long as on apical section, costal spine about twice as long. Base of vein  $R_{4+5}$  with 2 or more strong setulae and several smaller ones.

J. ZIEGLER (pers. comm.) has compared males in his collection with the type of *O. oldenbergi* (SDEI) and found them to be conspecific. Both have a relatively broad parafacial.

### *Oplisa cf. oldenbergi*

#### Material

**Turkey:** 1 ♀, S Turkey, Kuşunlu waterfall [north of Antalya], 28.IX.2007, leg. N. VIKHREV (CTZ).

#### Diagnostics

The specimen is very similar to *O. oldenbergi*, but the parafacial is narrow as in *O. hertingi*. Moreover, the palpus is unusually short. Given the paucity of the material, I mention this form without describing it formally.

### *Oplisa pollinosa* Kugler, 1978

KUGLER's original description does not mention some striking characteristics in the colouration, e. g. the legs. Therefore, I give a short redescription, based on the two paratypes from Israel which are present in SMNS (1 ♂, Hula, 6.VII.1977, leg. A. FREIDBERG; 1 ♀, Haifa, 16.V.1971, leg. J. KUGLER). My description differs in some details from the original one, e. g. in the presence of discal setae on tergite 4.

#### Redescription

Ocellar setae proclinate. Parafacial very narrow, as in *O. hertingi* n. sp. Third antennal segment 2.5 times as long as second, second segment and basal third of third segment brightly orange, remainder of third segment dark brown. Arista long plumose, hairs on upper side of arista longer. Inner vertical seta very strong, outer vertical seta 0.5 times inner vertical. Male with one strong proclinate orbital seta. Palpus yellow.

Thoracic dorsum with 0+1 acrostichal setae (presutural indistinct), 2+3 dorsocentral setae, 0+2 intra-alar setae, 3 katepisternal setae, first posterior supra-alar seta smaller than notopleural seta but still relatively strong. Scutellum completely grey, with 2 pairs of strong marginal setae

(crossed apicals and subbasals), subbasal setae weaker. Front tibia with 2 anterodorsal setae, middle tibia with 2 anterodorsal setae, the upper one smaller (only 1 in type according to KUGLER 1978).

Tergites largely grey with very narrow dark hind margins, with a narrow dark central vitta. All tergites with strong lateromarginal and laterodiscal setae, syntergites 1+2 otherwise without setae, tergite 3 with marginal setae, tergite 4 with a pair of discal setae and a row of marginal setae, tergite 5 with a row of both.

Legs largely orange, femora darkened in middle, tarsi dark. Pulvilli short in both sexes.

Wings with short setulae on costa, one very strong seta on base of vein  $R_{4+5}$ . Bend of vein M close to wing margin, distance from bend to crossvein dm-cu nearly twice as long as postangular section of vein M.

#### Key to the species of *Oplisa* subgenus *Anoplisa*

The following key separates the subgenera of *Oplisa* and the known species of the subgenus *Anoplisa* from the western Palaearctic:

- 1 Costa with large setulae between base and end of subcosta (about 1–2 times as long as diameter of costa in this section) and with a strong costal spine (as long as 1–3 times crossvein r-m). Ocellar setae either reclinate, latero-clinate or proclinate. .... Subgenus *Oplisa* s. str.  
(see HERTING 1961, KUGLER 1978)
- Costa without large setulae at base (about as long as diameter of costa); costal spine, if differentiated, at most as long as 1.5 times crossvein r-m. Ocellar setae proclinate. .... Subgenus *Anoplisa*
- 2 Abdominal tergites 3–5 dark on about posterior half (Fig. 14). Front tibia with 2 anterodorsal setae. .... 3
- Abdominal tergites without dark hind margins or dark hind margins at most as wide as one-fourth of the segments (Fig. 11). Front tibia with 1 or 2 anterodorsal setae. .... 4
- 3 Arista strongly plumose (Figs. 15, 16). Parafacial (seen in profile) wider than arista at base. Tergite 3 with strong and erect marginal setae. Minimum distance of bend of vein M to wing margin at least half length of postangular section of M. .... *O. oldenbergi*
- Arista virtually bare (Fig. 13). Parafacial narrow, about as wide as arista at base. Tergite 3 with adpressed and indistinct marginal setae, hardly differentiated from surrounding hairs. Minimum distance of bend of vein M to wing margin one-third length of postangular section of M. .... *O. nudisetia* n. sp.
- 4 Wing with 1 very strong setula (and occasionally 1–3 distinctly shorter ones) at base of vein  $R_{4+5}$  (resembling *Oplisa* s. str.). Front tibia with 2 anterodorsal setae. Scutellum entirely black. Tibiae and femora mostly reddish or yellowish. Tergite 4 with discal setae, tergite 3 with marginal setae. .... *O. pollinosa*
- Wing with 2–4 setulae of normal size at base of vein  $R_{4+5}$  (as in other *Anoplisa*). Front tibia with 1 anterodorsal seta. Scutellum with a yellowish apex. Legs black. Tergite 4 without discal setae, tergite 3 without (♂) or with very indistinct (♀) marginal setae. .... *O. hertingi* n. sp.

#### 4 Genus *Stevenia* Robineau-Desvoidy, 1830

*Stevenia kugleri* Herting, 1961  
(Figs. 7, 8)

##### Material

**Turkey:** 3 ♂♂, S Turkey, 'Silion ruins' [= Sillyon ruins east of Antalya], 2.X.2007, leg. N. VIKHREV (CTZ).

Previously recorded from Israel by HERTING (1961) and KUGLER (1978).

##### Diagnosis

Male with an indistinct posteroventral ctenidium on middle femur; claws and pulvilli short; fronto-orbital plate with at least one pair, often two pairs of proclinate orbital setae. Frons at the narrowest point slightly narrower than an eye. General colouration dark, with rather strong bands of pruinescence on abdominal tergites, also on syntergite 1+2 and tergite 5; wings strongly infuscated along veins, especially anteriorly.

The species is most close to *S. triangulata* (Loew, 1847), but it is much darker and the vertex is narrower. The presence of 2 pairs of proclinate orbital setae in the male is unusual in *Stevenia*, otherwise found in *S. flaviventris* Kugler, 1978.

#### 5 References

- CERRETTI, P. & PAPE, T. (2007): Two new species of European *Stevenia* (Diptera: Rhinophoridae) and a key to the Palaearctic species. – *Zootaxa* **1624**: 31–41.
- CERRETTI, P. & PAPE, T. (2009): Phylogeny and re-definition of the genus *Melanophora* (Diptera: Rhinophoridae), with description of a new species from Sardinia. – *Zootaxa* **2318**: 552–565.
- CROSSKEY, R. W. (1977): A review of the Rhinophoridae (Diptera) and a revision of the Afrotropical species. – *Bulletin of the British Museum (Natural History), Entomology series* **36** (1): 66 pp.
- DRABER-MONKO, A. (1989): Rhinophoridae. – In: *Klucze do oznaczania owadów Polski, XXVIII Muchówki – Diptera*, **73c**, 60 pp; Warszawa (Państwowe Wydawnictwo Naukowe).
- HERTING, B. (1961): Rhinophoridae. – In: LINDNER, E. (ed.): *Die Fliegen der palaearktischen Region* **64e**: 36 pp; Stuttgart (Schweizerbart).
- HERTING, B. (1993): Family Rhinophoridae. – In: SOÓS, Á. & PAPP, L. (eds.): *Catalogue of Palaearctic Diptera* **13**: 102–117; Budapest (Hungarian Natural History Museum).
- KUGLER, J. (1978): The Rhinophoridae (Diptera) of Israel. – *Israel Journal of Entomology* **12**: 65–106.
- OOSTERBROEK, P., JONG, H. DE & SUIJSTERMANS, L. (2005): *De Europese families van muggen en vliegen (Diptera)*, 205 pp; Utrecht (KNNV).
- PAPE, T. (1986): A phylogenetic analysis of the woodlouse-flies (Diptera, Rhinophoridae). – *Tijdschrift voor Entomologie* **129**: 15–34.
- PAPE, T. (1998): 3.53 Family Rhinophoridae. – In: PAPP, L. & DARVAS, B. (eds.): *Contribution to a Manual of Palaearctic Diptera (with special reference to flies of economic importance)* **3**: 679–689; Budapest (Science Herald).
- PAPE, T. & ARNAUD, P. H. Jr. (2001): *Bezzimyia* – a genus of native New World Rhinophoridae (Insecta, Diptera). – *Zoologica Scripta* **30**: 257–297.
- PAPE, T. & KURAHASHI, H. (1994): First records of Rhinophoridae (Insecta: Diptera) from Japan. – *Japanese Journal of Entomology* **62**: 475–481.
- ROGNES, K. (2010): *Alvamaja chlorometallica* gen. n., sp. n. from Europe – the first metallic Rhinophoridae (Diptera). – *Tijdschrift voor Entomologie* **153**: 3–13.
- VERVES, YU. G. (2005): A check-list of the Ukrainian Rhinophoridae (Diptera). – *Entomological Problems* **35**: 69–74.
- ZEEGERS, T. (2008): Order Diptera, family Rhinophoridae. – In: HARTEN, A. VAN (ed.): *Arthropod fauna of the United Arab Emirates* **1**: 732–740; Abu Dhabi (Dar Al Ummah).

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