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FIRST RECORDS OF THE FRIUT FLIES (DIPTERA, TEPHRITIDAE) IN THE FAUNA OF IRAN

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First Records of the Fruit Flies (Diptera, Tephritidae) in the Fauna of Iran. **Zarghani, E., Khaghaninia, S., Mohamadzade Namin, S., Karimpour, Y., Korneyev, V. A.** — As a result of studies on fruit flies in Iran during 2013–2015, two genera (*Eurasimona* Korneyev & White 1991 and *Inuromaesa* Korneyev & White 1991) and eight species: *Eurasimona stigma* (Loew, 1840) *Inuromaesa maura* (Frauenfeld, 1857), *Myopites inulaedyssentericae* Blot, 1827, *Oxyna flavipennis* (Loew, 1846), *Terellia ermolenkoi* Korneyev, 1985, *T. odontolophi* Korneyev 1993, *T. pseudovirens* (Hering, 1940), and *Euleia kovalevi* (Korneyev 1991), are recorded for the first time from Iran. The host plants, collection data as well as general distribution and diagnostic characters of them are given. Detailed illustrated redescription for *T. ermolenkoi* previously known from a unique holotype male is provided. The presence of *Noeeta pupillata* (Fallén, 1814) in the fauna of Iran is confirmed.

K e y w o r d s: Diptera, Tephritidae, fruit flies, Iran, new records.

Introduction

The family Tephritidae with more than 4,400 described species is one of most economically important groups of dipteran insects of the world. Larvae develop in fruits, mines leaves, stems and flower buds, induce galls in stems, rhyzome or flower heads of plants; most Palaearctic species are specialized for development in the flower heads of asteraceous plants, usually inducing no galls. Some species are serious pests, whereas others are beneficial insects controlling seed productivity of weeds (White & Elsson-Harris, 1992).

The Iranian fruit fly fauna was intensively studied in the last decade: over 50 species were recorded (see Fazel et al. (2011); Karimpour (2011); Mohamadzade Namin & Nozari (2011, 2015); Zarghani et al. (2012); Gharajedaghi et al. (2012); Khaghaninia & Gharajedaghi (2012); Korneyev et al. (2013); Seddighi Sadr & Mohamadzade Namin (2016) for references), but still remains fairly studied.

Material and methods

Adult specimens were collected by the authors during collecting trips in East Azerbaijan, West Azerbaijan, Alburz and Mazandaran Provinces of Iran and Russian North Caucasus during 2013–2015, and the collection material. The voucher specimens are deposited in the Insect Collection of Professor Hasan Maleki Milani (ICHMM), Plant Protection Department, Faculty of Agriculture, University of Tabriz, Iran (FAUT), S. Mohamadzade Namin Collection (SMNC), and I. I. Schmalhausen Institute of Zoology, Kyiv, Ukraine (SIZK).

Results

As the result of this study, eight species and two genera (*Eurasimona* V. Korneyev & White and *Inuromaesa* V. Korneyev & White) are recorded from Iran for the first time. Of them, *Terellia ermolenkoi* V. Korneyev, 1985 hitherto known only from the original description based on the holotype male is redescribed in details and figured based on a vast material with information on its host plants.

Subfamily Tephritinae
Tribe Myopitini
Genus *Eurasimona* Korneyev and White 1991

Diagnostic characters. Proboscis with long and narrow labellum; ventral part of face not protruding; wing mostly hyaline (with or without dark spot in pterostigma and sometimes dark apical crossband); vein M ending at wing apex, cell r_{4+5} not narrowed distally (fig. 1, *c*); anepisternum entirely microtrichose; scutellum with yellow medial spot; medial and lateral surstyls without additional lobes; phallus glans moderately wide and short, apically extended, extensively sclerotized; aculeus short, 4–4.5 times as long as wide, apex moderately narrowed to apex; spermatheca rugose, with duct not dilated nor more sclerotized than spermatheca itself. Two species, *E. fedotovae* (Korneyev & White, 1991) and *E. stigma* (Loew, 1840) in the Palaearctic Region (Korneyev & White, 1999). **First record from Iran.**

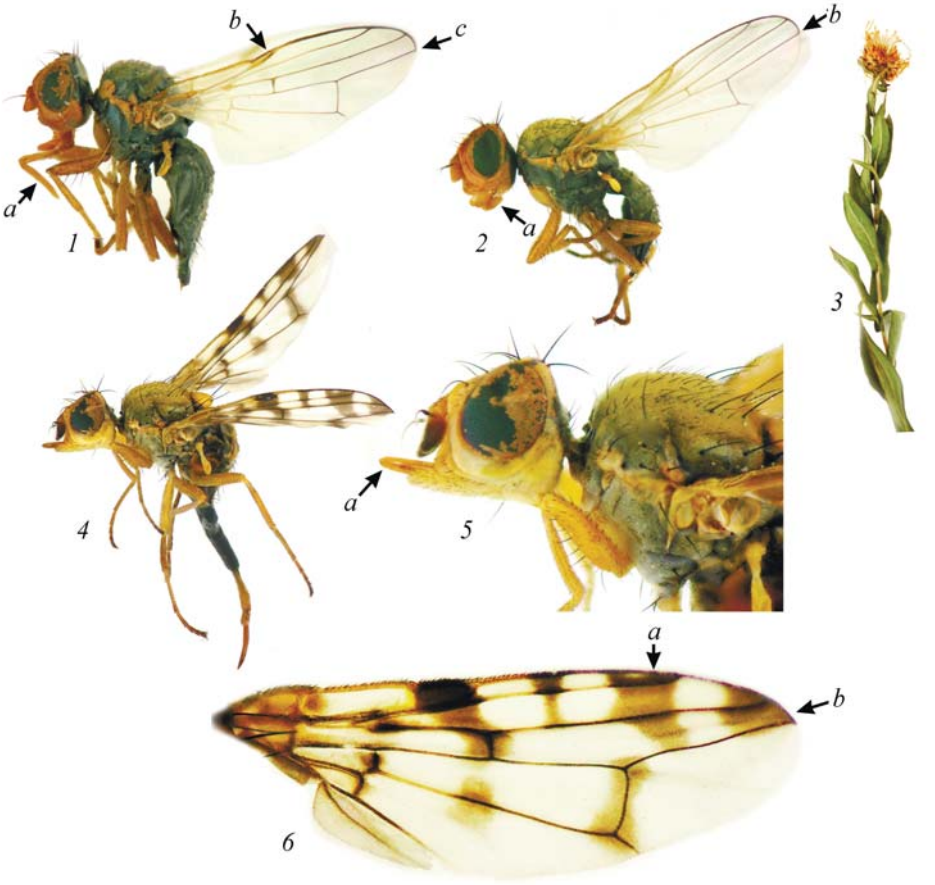

Fig. 1–6. Flies of the tribe Myopitini (1–2, 4–6): (1, 2, 4 — habitus, left; 5 — head, left, enlarged; 6 — wing): 1 — *Eurasimona stigma,* ♀; 2 — *Inuromaesa maura,* ♀, 3 — its host plant, *Inula salicina*, ♀; 4–6 — *Myopites inulaedyssentericae*.

Eurasimona stigma (Loew, 1840) (fig. 1)

Material examined. East Azerbaijan Province: at road near Hovrand [38.77 N, 47.10 E], h = 1725 m, 17.05.2014, 3 ♂, at road near Youzband [38.73 N, 47.10 E], 1580 m, 17.05.2014, 1 ♀ (S. & V. Korneyev) (SIZK).

Diagnostic characters**.** Labellum long and narrow (fig. 1, *a*), more than 2.6 times as long as flagellomere 1; scutum densely microtrichose; scutellum largely black, medially with yellow area, with basal scutellar seta based within the black area; wing hyaline except for yellow pterostigma (fig. 1, *b*); in European specimens pterostigma usually entirely black and anteroapical margin of wing with narrow apical band; crossvein dm-cu well developed; glans of phallus without membranous anterior lobes.

Host plants. Biology of *E. stigma* is poorly known; it has been reported to be reared from the flower heads of various Asteraceae Anthemideae (*Achillea*, *Leucanthemum* and *Anthemis* — see Korneyev & White (1991) for references), but neither the mode of feeding, nor larvae or puparia are described. Adults are usually collected on the possible host plants in May–June (Korneyev, unpublished data).

Distribution. Europe (except British Isles, North and Mediterranean countries) (Merz & Korneyev, 2004); Russia to southern Siberia (Krasnoyarsk); Caucasus; Middle Asia (N and E Kazakhstan; Turkmenistan; E Uzbekistan; Kyrghyzstan) (Korneyev & White, 1999). **First record from Iran.**

Genus ***Inuromaesa*** Korneyev and White 1991

Diagnostic characters. Face variously produced; proboscis short, spatulate (fig. 2, *a*) or with short labella and long haustellum; anepisternum, anepimeron, and katepisternum sparsely but entirely microtrichose; scutellum yellow; wing entirely hyaline; cell r_{4+5} not or slightly narrowed apically (fig. 2, *b*); tergites entirely black or entirely yellow, broad in male; lateral and medial surstyls without additional lobed; glans with small basal sclerite, long to extremely long, gradually tapering, sometimes irregularly, to slender, nonsclerotized apex; spermatheca membranous, with apex of duct moderately sclerotized; puparium posteriorly with black plate including spiracles, without spines. Three species, *Inuromaesa* (s. str.) *maura* (Frauenfeld, 1857) infesting flower heads of *Inula* spp. (Inuleae) in the Middle Europe, from France to through most of European Russia to Western Siberia and Kazakhstan (White & Korneyev, 1989), *I.* (s. str.) *sogdiana* (Korneyev & Merz, 1998) reared from *Jurinea* (Cardueae) in Kyrghyzstan, and *I.* (*Promyopites*) *circumflava* (Korneyev, 1998) from an unknown host in Middle Asia (Komeyev & Merz, 1998). **First record from Iran.**

Inuromaesa maura (Frauenfeld 1857) (fig. 2, 3)

Material examined. West Azerbaijan Province: Khoy: Zarabad, Mamesh Khan Village 35 km to Khoy [38.80 N, 44.58 E], h = 1796 m, swept from *Inula* sp. cf. *salicina*, 21.07.2015, 3 ♂, 3 ♀ (E. Zarghani) (FAUT; ICHMM); Mazandaran: Demavand Mt. [35.87 N, 52.11 E], h = 2560 m, 10.07.2013, 1 ♀ (S. & V. Korneyev) (SIZK).

Diagnostic characters. Head short, labellum elongate, 1–1.5 times as long as flagellomere 1; scutum black, densely yellowish microtrichose; scutellum yellow, with basal scutellar seta based within yellow area; femora yellow; wing hyaline except for yellowish pterostigma; glans of phallus without memranous anterior lobes.

Host plants. Larvae in flower heads of various *Inula*: *Inula hirta*, *I. oculus-christi*, *I. ensifolia*, *I. salicina* and *I. britannica* (see Korneyev & White (1991) for references), inducing soft galls in achenes; larvae and puparia with black posterior end; in Iran, it was collected on *Inula* sp. cf. *salicina* L. (fig. 3).

Distribution. Europe from northern Spain to European Russia (except British Isles, North and Mediterranean countries) (Merz & Korneyev, 2004); West Siberia (Tomsk); Kazakhstan (Korneyev & White, 1999); Iran (**first record**).

Genus *Myopites* Blot, 1827

Diagnostic characters. Proboscis with extermely long haustellum and labellum (fig. 5, *a*); ventral part of face of variable shape: in Mediterranean species strongly protrudent (fig. 5), in south-eastern Iranian *M. flavovaria* (Becker, 1908) not protrudent at all; wing hyaline with five broken crossbands (fig. 6), rarely hyaline; vein M ending at or anteriorly of wing apex (fig. 6, *b*); cell r_{4+5} narrowed in apical portion. Male abdomen with narrow tergites and pleural membrane visible from above. Glans very long, 10–12 times as long as wide, apically with remnants of apico-dorsal rod. Hitherto, only one species was known to occur in Iran: *M. flaviventris* from Sistan (= *Nearomyia flavovaria* Becker) (Becker, 1908).

Myopites inulaedyssentericae Blot, 1827 (fig. 4–6)

Material examined. East Azerbaijan Province: Arasbaran [38.86 N, 46.84 E], h = 1997 m, 23.06.2014, 1 ♀ (S. & V. Korneyev) (SIZK).

Diagnostic characters. Mesonotum and pleura mostly black, scutellum yellow. Wing with wide preapical crossband (fig 6, *a*) wider than the hyaline space between it and apical spot, broken into two spots by hyaline space on vein M; veins R_{4+5} and M convergent (fig 6, *a*); aculeus smooth (not tuberculate).

Host plants. *Pulicaria dysenterica* (L.) Bernh., *Inula hirta* L., *I. salicina* L. (Hendel, 1927) and possibly some other plants (records needing checking); in Iran, it was collected on *Inula* sp. cf. *salicina* L.

Distribution. Great Britain, most of Middle Europe from northern Spain to Russia and Turkey (Merz & Korneyev, 2004), but many records need checking. **New record for Iran.**

Tribe Noeetini
Noeeta pupillata Hering, 1956 (fig. 7)

Zarghani et al. (2010).

Material examined. East Azerbaijan Province: Arasbaran [38.86 N, 46.84 E], h = 1997 m, 23.06.2014, 1 ♂; Varzaghan, Dizmar Protected Area, Chichakli Valley [38.679917 N, 46.534763 E], 2215 m, 26.06.2014, 1 ♀ (S. & V. Korneyev) (SIZK).

Distribution. Widespread throughout forest zone of the Palaearctic Region; confirmed record from Iran.

Tribe Tephritini
Oxyna flavipennis Loew, 1956 (fig. 8)

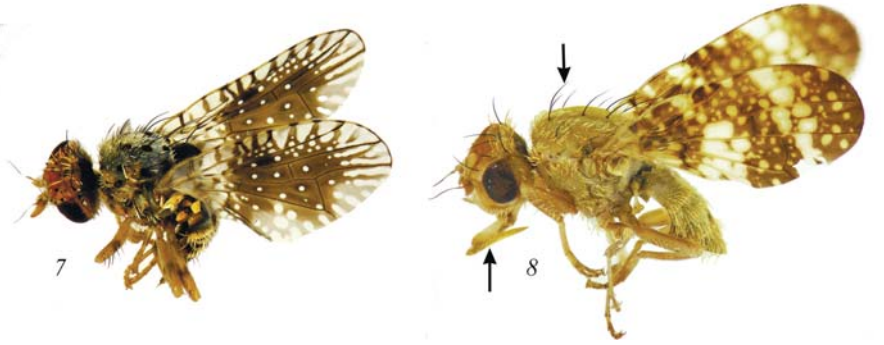

Fig. 7–8. Flies of the tribes Noeetini and Tephritini, habitus, left: 7 — *Noeeta pupillata*; 8 — *Oxyna flavipennis*.

Material examined. West Azerbaijan Province: Qazemloo Valley [37.30 N, 45.12 E] 1810 m, 19.06.2014, 1 ♂, 1 ♀ (S. & V. Korneyev & Karimpour) (SIZK); 10 km West of Ziveh [37.12 N, 44.80 E], 3050 m, 24.07.2011, 1♂ (Mohamadzade) (SMNC).

Distribution. Widespread in the Palaearctic Region (Norrbom et al., 1999) including Russian Caucasus, as well as Georgia and Armenia (Zaitzev, 1947). **First record from Iran.**

Tribe Terellini

Terellia ermolenkoi Korneyev, 1985 (fig. 9–33)

Korneyev, 1985.

Material examined. **Type**. Holotype ♂: Azerbaijan: Alty-Agac [40.92 N, 49.03 E], 1200 m, 30.05.1981 (Ermolenko) (ZISP).

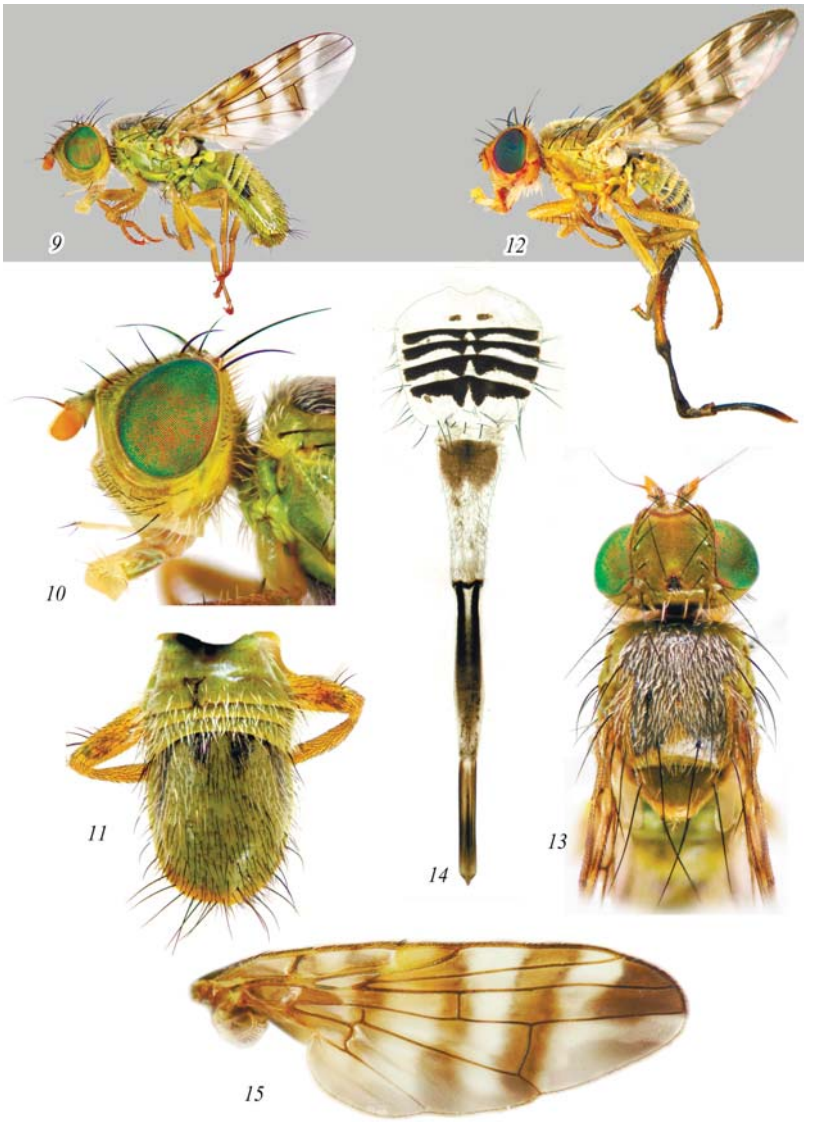

Fig. 9–15. *Terellia ermolenkoi,* ♂ (9–11) and ♀ (12–16): 9, 12 — habitus, left; 10 — head, left; 11, 14 — abdomen (11, intact of a fresh male specimen; 14, dissected female with everted ovipositor); 13 — head and mesonotum, dorsal view; 15 — wing.

Non-type. **Russian Federation:** Stavropolskiy Kray: Beshtau, Lermontov [44.095371 N, 43.004620 E], h = 810–900 m, ex *Psephellus dealbatus*, 30.05.2013 — exit 2.12.2013–1.01.2014; Teberda: Jamagat Valley [43.467632 N, 41.790394 E], h = 1600 m, ex flower heads of *Ps.* cf. *vvedenskyi*, 26.06.2013 — exit 5.12.2013–22.03.2014 (S. & V. Korneyev) (SIZK). **Armenia:** Lichk [40.14 N, 45.22 E], h = 1900 m, 9.06.1982, 1 ♀ (M. Nesterov); Khosrov Forest State Reserve [40.03N, 44.88E], h = 1400 m, 8.05.1985, 1 ♂ (Ermolenko) (SIZK); "Kizildash Kafanskiy distr." [Karmravan, 41.01 N, 43.87 E], 17.06.1955, 1 ♀ (Zagulyaev) (ZISP). **Iran**: East Azerbaijan Province, Varzaghan, Dizmar Protected Area, Chichakli Valley [38.679917 N, 46.534763 E], 2215 m, swept from *Psephellus* sp., 26.06.2014, 10 ♂, 15 ♀; Alburz Province: [Ebrahimabad E of] Khoznan,[36.114901 N, 50.655783 E, 2140 m], swept from *Psephellus* sp., 3, 5.06.2014, 12 ♂, 3 ♀ (S. & V. Korneyev) (SIZK, SMNC).

Description. Head (fig. 10, 13): higher than long; HR = 1 : 1.2–1.25 : 1.5–1.52; frontofacial angle blunt; frontal ratio 1.05–1.1; first flagellomere ratio 1.4–1.5; ratio of genal height/length of first flagellomere 1.0–1.1; genal height/height of eye ratio 0.32–0.5; haustellum-antennal ratio 1.2. Frontal plates with black setulae. Postocular setae mostly white; 2–3 vestralmost ones black. Peristomal setulae dense, moderately strong, 3–5 of them antero-dorsally of vibrissal edge, shorter than 0.5 of distance between genal groove and lower margin of gena; genal seta strong, black; setulae anteriorly of genal seta stout, black, subequal to peristomal; occipital setae white. Flagellomere 1 oval, brownish yellow.

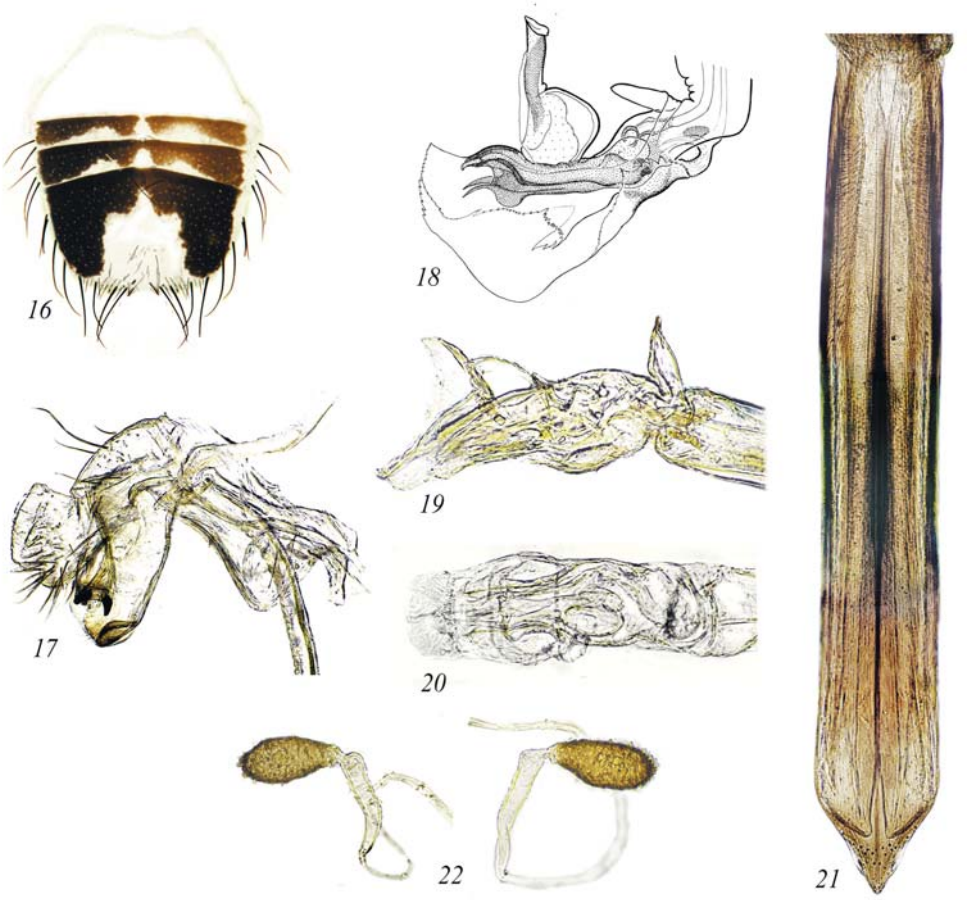

Fig. 16–22. *Terellia ermolenkoi,* ♂ (15–20) and ♀ (21–22): 16 — dissected abdomen, dorsal view, showing dark pattern; 17 — epandrium and hypandrium, right; 18–20 — glans (18, holotype, from Korneyev (1985); 19, 20 — male from Chichakli Valley, photograph); 21 — aculeus, dorsal view; 22 — spermathecae.

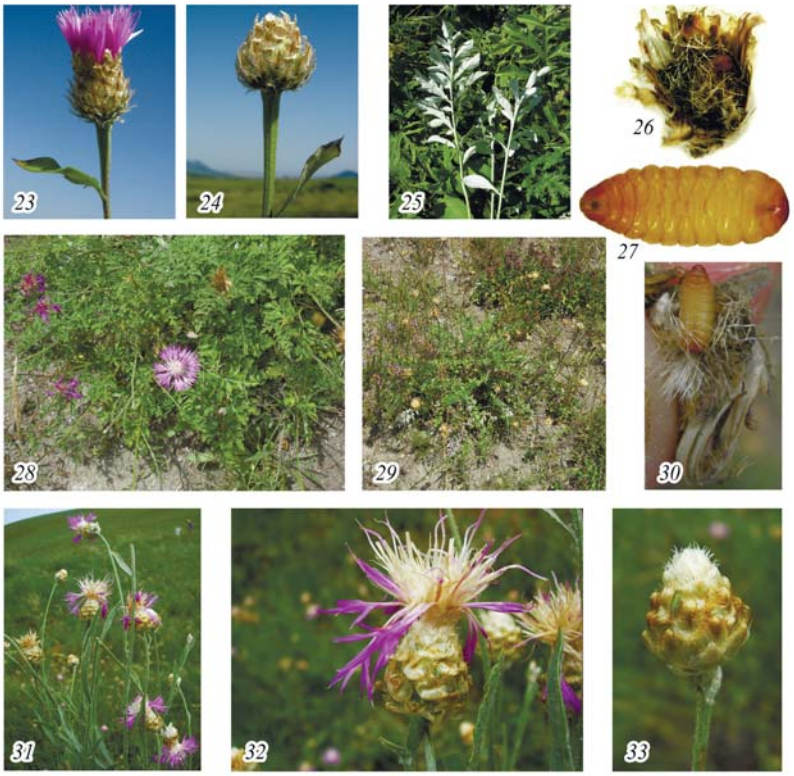

Fig. 23–33. *Terellia ermolenkoi*, host plants (23–25, 28–29, 31–34) and larvae damaging flower heads (26–27, 30): 23–27 — *Psephellus dealbatus*, Russian Federation, Pyatigorsk, Beshtau; 28–30 — *Ps.* cf. *vvedenskyi*, Russian Federation, Teberda; 31–32 — *Ps.* sp. indet., Iran, Khoznan.

Scape and pedicel with dense black setulae. Palp pale yellow, moderately long, narrow, with white and 2–3 black setae at apex; not extending beyond oral cavity.

Thorax greenish or brownish yellow (fig. 9, 13): scutum with black lyrate pattern, with all vittae widely consolidated into one patch with posterior incision, sparsely white microtrichose; central mark usually reaching acrostichal setae; one postsutural dorsocentral seta aligned with postsutural supra-alar setae, presutural dorsocentral setae not developed; black shining spots at bases of dorsocentral and acrostichal setae small but clearly expressed; pleura dark greenish to brown yellow with wide black marks on katepisternum and meron; pleura sparsely microtrichose; postpronotum and dorsal portion of anepisternum densely and moderately long white setulose; scutellum bright shining yellow, without black spots, with 2 pairs of subequal setae and 7–9 white marginal setulae; bases of scutellar setae in yellow field; mediotergum black, tomentose laterally.

Legs orange-yellow, fore femur with two rows of posterodorsal brownish-white setae (apically with 2–3 short black setae in row) and one row of black posteroventral setae.

Wing: with dark basicostal cell and four wide brown or yellow-brown crossbands separated by hyaline, whitish microtrichose interspaces and also with greyish posterior margin (fig. 9, 12, 15); costal cell widely grey or brown in basal one-quarter and apical half, pterostigma yellow, with brown apex, discal crossband sometimes broken into spots or fused to subapical crossband along posterior margin; apical crossband (spot) very large anteriorly not extending into cell r_1, but strongly widened posteriorly and sometimes connected to subapical crossband along vein M; distal section of vein M 2–2.5 times longer than section between crossveins r-m and dm-cu; cell bcu (=cup) with short posteroapical lobe not reaching level of bm-cu crossvein. WL ♂ = 4.5–5.7 (mean 5.1), WL ♀ = 4.5–6.0 (mean 5.3) mm.

Abdomen: dark greenish (in live or fresh specimens — fig. 11) yellow; all tergites white setulose, with strong black marginal setae; male tergite 5 very large, half of abdomen length, sparsely microtrichose laterally, densely black setulose in postero-medial sector, with elongated triangular submedial and very long (half as long as tergite 5) triangular sublateral black spots, but without lateroapical black marks (fig. 11, 16); tergites 3–4 of male and 3–6 of female with 2 pairs of short black spots (fig. 14, 16).

Male terminalia: epandrium oval, yellow, without black spots; cerci or lateral surstylus neither papillose nor wrinkled (fig. 16); phallus with large juxta, well sclerotized apicodorsal rod and paired, short filaments of acrophallus (fig. 18–20).

Female terminalia: oviscape as long as tergites 1–6 combined, red to reddish yellow, with large antero-dorsal black spot (fig. 12, 14); eversible membrane widely black, with strongly melanised taeniae and scales; aculeus subparallel, apically widely pointed (fig. 7, 12); AL = 2.4–2.6 mm, AL/C2 = 25/11 = 1.7–2.1; spermathecae with short and narrow apical portion of duct (fig. 6).

H o s t p l a n t (fig. 16–17). The larvae develop in flower heads of various species of the cornweeds *Psephellus* spp. (Asteraceae: Asteroideae: Cardueae: Centaureinae), previously considered a part of the genus *Centaurea*, but currently accepted as a separated genus (Wagenitz & Hellwig, 2000) among them *Ps. dealbatus* (Boiss.); the latter plant is a common cultivated decorative species of the cornweeds, which can be affected by this pest beyond its natural area of distribution. Another plants these flies are associated, are provisionally identified *Ps.* cf. *vvedenskyi* Sosn. growing on semidry mountain slopes in Teberda (Russian Caucasus) at altitude 1600 m. The species of *Psephellus,* from which these flies were swept in Iran, still need identification, but it is clear that *T. ermolenkoi* can feed on several different species of the genus. Brownish-yellow larvae (fig. 27) feed in flower heads inducing no galls and overwintering in cocoons made of pappi remainders inside dry seed heads (fig. 26, 30). One generation per year.

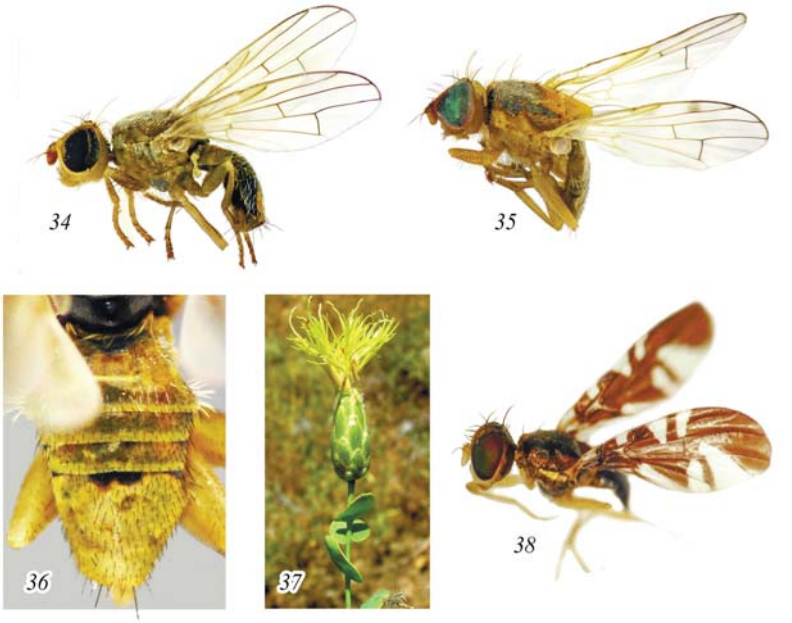

Fig. 34–38. Tephritid flies (34–36, 38) and *Klasea cerinthifolia*, new host plant of *T. pseudovirens*, (37)*:* 34 — *Terellia odontolophi,* ♂, habitus, left; 35–36— *T. pseudovirens*, 37 — its host plant, *Inula salicina*, ♀; 38 — *Euleia kovalevi* (photo by E. Zarghani).

Discussion. *T. ermolenkoi* was hitherto known only from the holotype male. The new material including previously unknown females, is sufficiently completed by the new characters.

Distribution. Azerbaijan (Korneyev, 1985). **First records from Russian Federation** (North Caucasus), **Armenia**, and **Iran** (East Azerbaijan and Alburz Provinces).

Terellia odontolophi Korneyev, 1993 (fig. 34)

Korneyev, 1993; Evstigneev, 2013; Korneyev et al., 2013.

Material examined. East Azerbaijan Province: Varzaghan, Dizmar Protected Area, Chichakli Valley [38.679 N, 46.542 E], h = 2215 m, 26.06.2014, 3 ♂, 4 ♀ (Zarghani) (FAUT; ICHMM); Arasbaran near Kaleybar, h = 1797 m [38.867 N, 46.851 E], 23.06.2014 (S. & V. Korneyev) (SIZK); Alburz Province: [Ebrahimabad E of] Khoznan [36.114901 N, 50.655783 E, 2140 m], 3.06.2014, 7 ♂ (Mohamadzade) (SMNC).

Diagnostic characters**.** Mesonotum greenish yellow, with black lyrate pattern; wing hyaline; abdomen mostly white setulose; male tergite 5 with pair of long triangular lateral spot almost reaching posterior margin in addition to pair of smaller medial spots; female abdomen with 2 pairs of large partly fused black spots on tergites 3–6; oviscape slightly longer than preceding 3 abdominal tergites; aculeus apically blunt (see Korneyev et al., 2013).

Host plants. Larvae in flower heads of *Psephellus trinervius* (Willd.) Wagenitz (Korneyev et al. 2013) (syn. *Centaurea trinervia* Steven ex Willd.; *Odontolophus trinervius* (Steph. ex Willd.) Dobrocz.; *Phaeopappus trinervius* (Willd.) Boiss.) and *Ps. sumensis* (Kalen.) Greuter (Evstigneev, 2013) (syn. *Centaurea sumensis* Kalen.).

Distribution. Ukraine, East of European Russia (Evstigneev, 2013; Korneyev et al., 2013). **First record from Iran**.

Terellia pseudovirens (Hering, 1940) (fig. 35–37)

Hering, 1940; Korneyev, 1982; Freidberg & Kugler, 1989 (*Orellia*); Korneyev, 1985 (*Terellia pseudovirens*). — Evstigneev & Korneyev, 2006 (*Terellia vectensis*).

Material examined. **Iran:** West Azerbaijan Province: Qazemloo Valley, 1450 m [37.300 N, 45.119 E], reared from *Klasea cerinthifolia*, coll. 03.2006, exit 05.06.2006, 5 ♂, 3 ♀ (Karimpour), idem, swept from *K. cerinthifolia*, coll. 15.05.2014, 9 ♂, 12 ♀ (S. & V. Korneyev, Karimpour), idem, 19.06.2014, 11 ♂, 5 ♀ (S. & V. Korneyev, Mohamadzade & Karimpour) (SIZK, SMNC); **Greece:** Nea Kallikrateia [40.308956, 23.069023], h = 8 m, near sea shore, swept from *Serratula* sp., 31.05.2002, 30 ♂, 25 ♀ (S. & V. Korneyev, Kameneva) (SIZK). **Ukraine:** Odessa Region, Tilihul Lagoon bank slopes [47.023 N, 30.993 E], ex *"Serratula xeranthemoides"* [= *Klasea erucifolia*], coll. 19.08.1991 — exit 22.03.1992, 2 ♂, 1 ♀ (V. Korneyev); Donetsk Region: Khomutovskiy Steppe Natural Reserve [47.285 N, 38.186 E], ex flower heads of *Serratula radiata*, coll. 10.1992 — exit 03.1993, 9 ♂, 4 ♀ (V. Korneyev) (SIZK).

Diagnostic characters. Gena narrow, at most as wide as flagellomere 1 length; mesonotum with black lyrate pattern; dorsocentral and acrostichal setae without black spots at bases; wing hyaline, usually at least with one dark spot in the middle of cell r_1 (fig. 35), often also on crossveins, at pterostigma and apex of cell r_1; abdomen black setulose male tergite 5 as long as tergites 1–4 combined, basally with pairs of short spots partly fused together (fig. 36); no apicolateral black spots present; female abdomen with 2 pairs of small partly fused black spots on tergites 3–6; oviscape slightly longer than preceding 3 abdominal tergites; aculeus apically blunt.

Host plants. In Iran, this species is reared by Y. Karimpour from *Klasea cerinthifolia* (Sm.) Greuter & Wagenitz (syn. *Serratula cerinthifolia* (Sm.) Boiss.) (fig. 37); this plant occurs also in Cyprus (type locality of *T. pseudovirens*), Turkey, north-western Iran, Lebanon, Syria, Jordan, and Israel (Klasea…, 2013). In Ukraine, *T. pseudovirens* was reared from flower heads of *Klasea erucifolia* (L.) Greuter & Wagenitz (syn. *Serratula xeranthemoides* M. Bieb.) and *Serratula radiata* (Waldst. & Kit.) M. Bieb. (Korneyev, previously unpublished data).

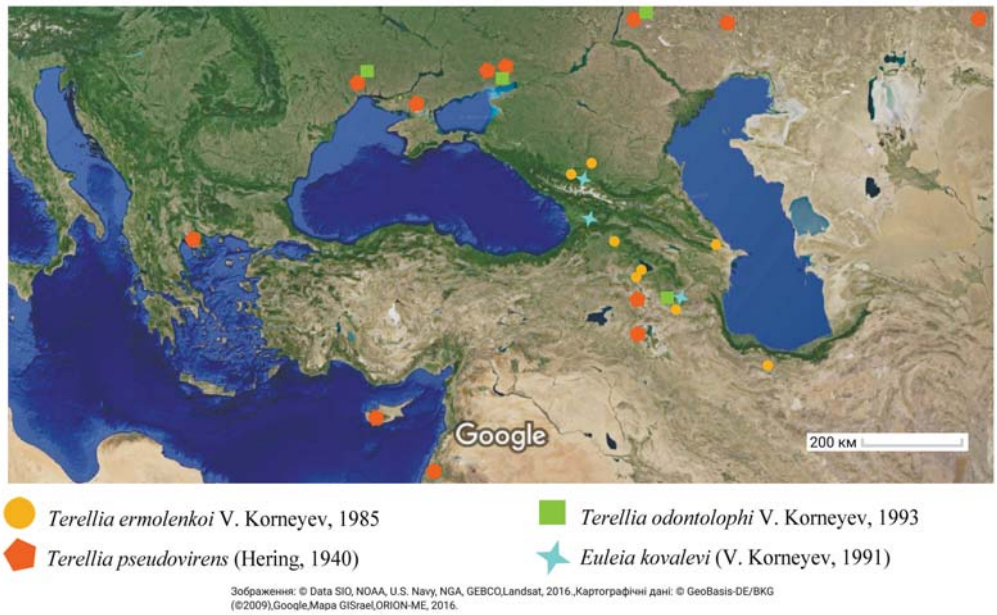

Fig. 39. Distribution of tephritids in the Caucasus, Near East and adjoining territories.

Distribution. Cyprus; southern part of Ukraine (Korneyev, 1982); Israel (Freidberg & Kugler, 1989); Russia (Korneyev & Evstigneev, 2006); Kazakhstan (Korneyev, unpublished data). **First records from Iran and Greece**.

Subfamily Trypetinae
Tribe Trypetini

Korneyev, 1991 (*Cryptaciura kovalevi*); Norrbom et al., 1999 (*Euleia*).

Material examined. East Azerbaijan Province: Kaleibar: Makidi valley, 22 km from Kaleibar, 38°50′ N 46°53′ E, 1678 m, swept from *Heracleum* sp., 22.06.2014, 1 ♂ (Zarghani) (FAUT).

Diagnostic characters. Shining brown flies with all setae and setulae black, mesonotum and abdomen shining black, wing with dark brown pattern as on fig. 38, apical hyaline spot in cell dm open and reaching posterior margin of wing; scutellum usually with two pairs of setae (in males sometimes with one pair).

Distribution. Russian Caucasus, Georgia (Korneyev, 1991). **First record from Iran.**

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