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## New data on the distribution and host plants of tephritid flies (Diptera: Tephritidae) from Armenia and selected regions of Russia

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**Abstract.** *Urophora cuspidata* (Meigen, 1826) and *Tephritis nozarii* Mohamadzade, 2012 are recorded for the first time for Armenia, and the latter species for the first time for Transcaucasia. *Centaurea pseudoscabiosa glehnii* (Trautv.) Wagenitz and *Cousinia fedorovii* Takhtajan are identified as new host plants of *Urophora cuspidata* and *Tephritis nozarii*, respectively. First records for selected areas of Russia are presented: *Urophora cardui* (Linnaeus, 1758) for Samara Region and Mordovia, *U. cuspidata* for North Ossetia, Mordovia and Samara Region, *Oxyna flavipennis* (Loew, 1844) for Nizhny Novgorod Region and Mordovia, *O. parietina* (Linnaeus, 1758) for Mordovia, *Merzomyia westermanni* (Meigen, 1826) for Saratov Region.

**Key words:** Tephritidae, new distribution records, host plants, Armenia, Russia.

### Новые данные по распространению и кормовым растениям мух-пестрокрылок (Diptera: Tephritidae) в Армении и некоторых областях России

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**Резюме.** Муха-пестрокрылка *Tephritis nozarii* Mohamadzade, 2012 впервые приводится для Армении и Закавказья. Личинки *T. nozarii* развиваются в корзинках *Cousinia fedorovii* Takhtajan. Данный вид впервые указывается в качестве кормового растения *T. nozarii*. Пестрокрылка *Urophora cuspidata* (Meigen, 1826) также впервые зарегистрирована в Армении, где развивается в корзинках *Centaurea pseudoscabiosa glehnii* (Trautv.) Wagenitz – вида, ранее не приводимого в качестве кормового растения. Новые находки для отдельных регионов России: пестрокрылка *Urophora cardui* (Linnaeus, 1758) впервые указана для Самарской области и Мордовии, *U. cuspidata* – для Северной Осетии, Мордовии и Самарской области, *Oxyna flavipennis* (Loew, 1844) – для Нижегородской области и Мордовии, *O. parietina* (Linnaeus, 1758) – для Мордовии, *Merzomyia westermanni* (Meigen, 1826) – для Саратовской области.

**Ключевые слова:** Tephritidae, первые находки, кормовые растения, Армения, Россия.

This article extends the on-going series of publications dealing with exploration the tephritid flies fauna across Russia and Armenia [Evstigneev, V. Korneyev, 2006; V. Korneyev, Evstigneev, 2007, 2013; Evstigneev, 2011, 2013, 2016, 2020a, b, c, 2022, 2023; Korneyev et al., 2013; Evstigneev, S. Korneyev, 2018; S. Korneyev, Evstigneev, 2019; Evstigneev, Evstigneev, 2020a, b; Evstigneev, Glukhova, 2020, 2022; Evstigneev, Przhiboro, 2021, etc.]. The article presents new records for Armenia, European Russia and the Russian Caucasus.

The specimens were collected during multiple expeditionary journeys from 2000 to 2023 and deposited in the first author's private collection. The comprehensive description of the methodologies including sample collection, rearing and identification is presented in preceding articles [Evstigneev, Glukhova, 2020; Evstigneev, Przhiboro, 2021].

*Merzomyia westermanni* (Meigen, 1826)  
(Fig. 1)

**Material.** Russia. 1♂, Saratov Region, Petrovsk District, Sinenkie vill., 52.34015°N / 45.54045°E, 20.08.2020 (A.B. Ruchin).

**Notes.** This beautifully marked species is readily recognized by the pattern of markings on the wings (Fig. 1).

**Distribution.** British Isles [White, 1988], Switzerland [Merz, 1994]. Russia: Crimea [Richter, 1960: as the Ukrainian SSR of the USSR], Dagestan [Richter, 1960], Samara Region [Evstigneev, 2016]. The species is recorded from Saratov Region for the first time.

*Oxyna flavipennis* (Loew, 1844)  
(Figs 2–4)

**Material.** Armenia. 2♀, Tavush Region, Dilijan, meadow, 15.07.2023 (D.A. Evstigneev).

Russia. 1♀, 1♂, Nizhny Novgorod Region, Steklyanny, 54.8961°N / 43.6057°E, 8–13.07.2020 (K. Tomkovich); 2♂, Mordovia, National Reserve "Smolny", cordon Steklyanny, 54.894°N / 43.601°E, 9–11.07.2020 (K. Tomkovich).

**Notes.** A species with 2 pairs of scutellar setae, presutural dorsocentral setae, 1 pair subapical steps and steps about two-thirds the way from base to apex. Female wing, aculeus and aculeus apex of *O. flavipennis* are illustrated in Figs 2–4.

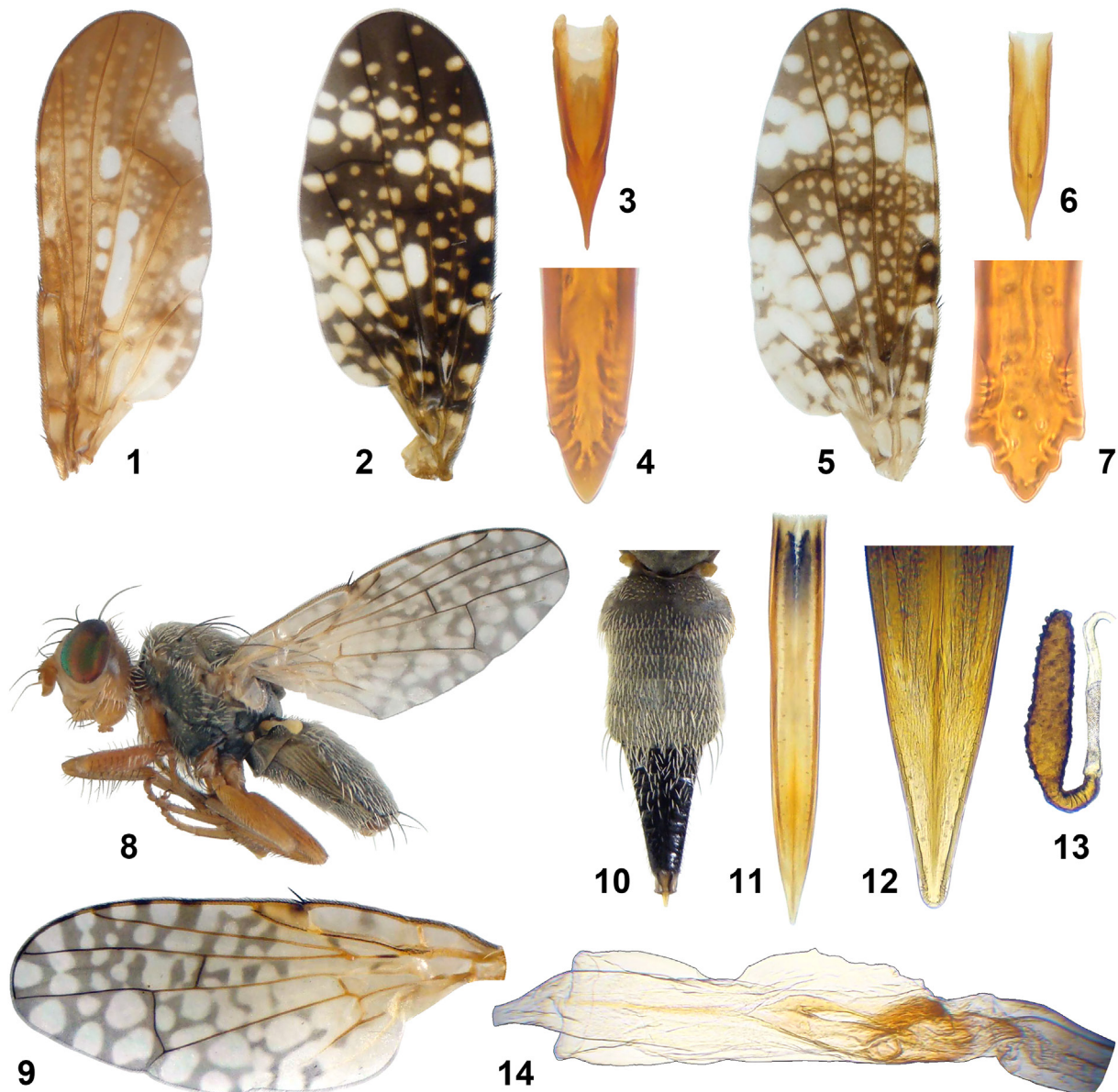
**Distribution.** British Isles [White, 1988], Switzerland [Merz, 1994], Latvia [Karpa et al., 2005], Lithuania

[Lutovinovas, 2014], Ukraine (Cherkassy Region [Korneyev, 1985]), Turkey [Koçak, Kemal, 2013], Georgia [Zaitzev, 1947], Armenia [Zaitzev, 1947], Iran [Mohamadzade Namin, Korneyev, 2018], Kazakhstan [Richter, 1965]. Russia: Leningrad Region [Stackelberg, 1958], Moscow Region [Rozkov, 1956], Samara and Ulyanovsk regions [V. Korneyev, Evstigneev, 2013], North Ossetia, Ingushetia, Stavropol Region [Zaitzev, 1947], Khakassia [Shcherbakov, Maximova, 2022]. The species is recorded from Mordovia and Nizhny Novgorod Region for the first time.

*Oxya parietina* (Linnaeus, 1758)  
(Figs 5–7)

**Material.** Russia. 2♀, 2♂, Mordovia, Ichalkovskiy District, National Park "Smolny", cordon Rezovatovskiy, 54.740°N / 45.475°E, 4–8.06.2021 (G.B. Semishin); 2♀, Mordovia, National Park "Smolny", Barakhmanovskoe forestry, quarter 113, sweeping, 21–24.06.2022 (G.B. Semishin).

**Notes.** A species with 2 pairs of scutellar setae, 2 pairs of prominent subapical steps and no other steps, without presutural dorsocentral setae. Female wing, aculeus and aculeus apex of *O. parietina* are illustrated in Figs 5–7.



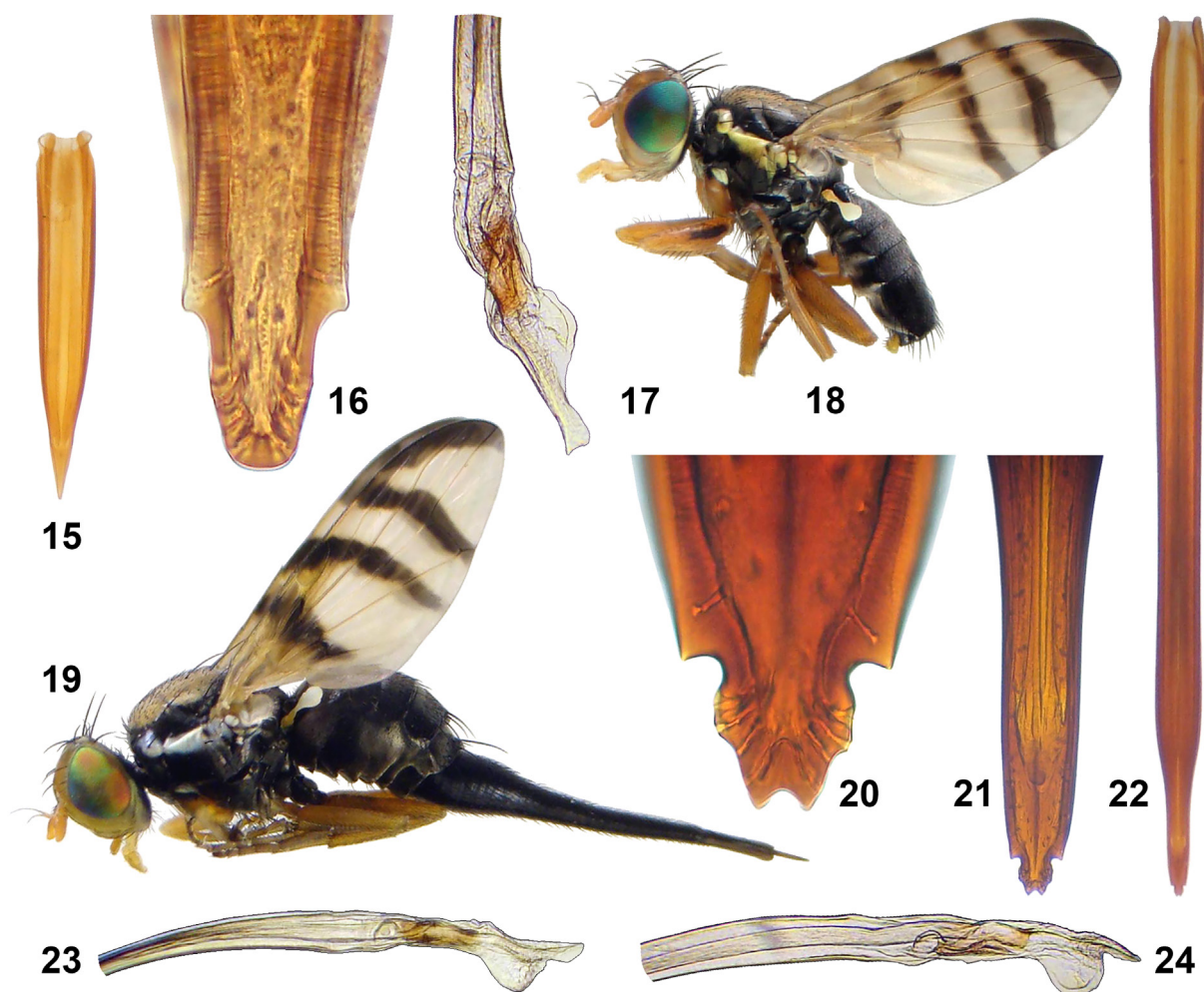
Figs 1–14. Tephritidae species, details of structure.

1 – *Merzomyia westermanni*; 2–4 – *Oxya flavipennis*; 5–7 – *O. parietina*; 8–14 – *Tephritis nozarii*. 1 – male wing; 2, 5, 9 – female wing; 3, 6, 11 – aculeus; 4, 7 – apex of aculeus; 8 – male habitus, lateral view; 10 – female abdomen, dorsal view; 12 – distal part of aculeus; 13 – spermatheca; 14 – glans of phallus.

Рис. 1–14. Виды Tephritidae, детали строения.

1 – *Merzomyia westermanni*; 2–4 – *Oxya flavipennis*; 5–7 – *O. parietina*; 8–14 – *Tephritis nozarii*. 1 – крыло самца; 2, 5, 9 – крыло самки; 3, 6, 11 – акулеус; 4, 7 – вершина акулеуса; 8 – самец, общий вид сбоку; 10 – брюшко самки, сверху; 12 – дистальная часть акулеуса; 13 – сперматека; 14 – гланс фаллуса.





Figs 15–24. Tephritidae species, details of structure.

15–17 – *Urophora cardui*; 18–24 – *U. cuspidata*. 15, 22 – aculeus; 16, 20 – apex of aculeus; 17, 23, 24 – glans of phallus; 18 – male habitus, lateral view; 19 – female habitus, lateral view; 21 – distal part of aculeus.

Рис. 15–24. Виды Tephritidae, детали строения.

15–17 – *Urophora cardui*; 18–24 – *U. cuspidata*. 15, 22 – акулеус; 16, 20 – вершина акулеуса; 17, 23, 24 – гланс фаллуса; 18 – самец, общий вид сбоку; 19 – самка, общий вид сбоку; 21 – дистальная часть акулеуса.

**Distribution.** British Isles [White, 1988], Switzerland [Merz, 1994], Lithuania [Lutovinovas, 2014], Latvia [Karpa et al., 2005], Ukraine (Kiev and Cherkassy regions [Korneyev, 1985]), Kazakhstan [Korneyev, 1990]. Russia: Leningrad Region [Stackelberg, 1958], Moscow Region [Rozkov, 1956], Lugansk People's Republic [Volkov et al., 1984; as Voroshilovgrad Region of the Ukrainian SSR of the USSR], Ulyanovsk Region [V. Korneyev, Evstigneev, 2013], Kemerovo Region [Shcherbakov, 2002]. The species is recorded from Mordovia for the first time.

*Tephritis nozarii* Mohamadzade, 2012  
(Figs 8–14)

**Material.** Armenia. 3♀, 4♂, Gegharkunik Region, Artanish Peninsula, 23.07.2019, reared from *Cousinia fedorovii* Takhtajan 28.07–1.08.2019 (D.A. Evstigneev).

**Notes.** *Tephritis nozarii* is a capitula-infesting species with reticulated wing pattern, widely rounded aculeus apex and long slender glans of phallus. The morphological details of both sexes are illustrated in Figs 8–14.

Larvae develop in the capitula of *Cousinia fedorovii*. This is the first host plant record for *T. nozarii* based on reared material.

**Distribution.** Iran [Mohamadzade Namin, 2012; Korneyev, 2016], Armenia (the first record for the country and for Transcaucasia).

*Urophora cardui* (Linnaeus, 1758)  
(Figs 15–17)

**Material.** Russia. 1♂, Samara Region, Elkhovka District, near Elkhovka vill., meadow, 3.06.2012 (D.A. Evstigneev); 1♀, Mordovia, Ichalkovskiy District, National Park "Smolny", sanatorium "Alatyr", quarter 93, 54.740°N / 45.377°E, sweeping, 4–8.07.2022 (G.B. Semishin).

**Notes.** This species is a gall-former on the stems of *Cirsium* species. The genitalia of both sexes are illustrated in Figs 15–17.

**Distribution.** British Isles [White, 1988], Switzerland [Merz, 1994], Lithuania [Lutovinovas, 2014], Moldova [Korneyev, White, 1996], Ukraine (Kiev and Cherkassy regions [Korneyev, 1985]), Kazakhstan [Korneyev, White,

1996]. Russia: Crimea [Dirlbek, Dirlbek, 1964: as the Ukrainian SSR of the USSR], Ulyanovsk Region [Evstigneev, 2011], Chelyabinsk Region [Korneyev, White, 1996], Khakassia [Shcherbakov, Maximova, 2022]). The species is recorded for Mordovia and Samara Region for the first time.

*Urophora cuspidata* (Meigen, 1826)  
(Figs 18–24)

**Material.** Armenia. 1♀, 1♂, Vayots Dzor Region, neighborhood of Mozrov vill., mountain steppe, 11.07.2021, reared from *Centaurea pseudoscabiosa glehnii* (Trautv.) Wagenitz 13.04.2022 (D.A. Evstigneev).

Russia. 8♀, 4♂, Samara Region, Pestravka District, near Mayskoe vill., 16.08.2000, reared from *Centaurea* sp. 04.2001 (D.A. Evstigneev); 1♀, Mordovia, Atyashevo District, near Kamenka vill., 54.716°N / 46.004°E, 24.06.2016 (A.B. Ruchin); 1♀, 1♂, North Ossetia, 18.08.2020, reared from *Centaurea* sp. 25.04.2021 (D.A. Evstigneev).

**Notes.** *Urophora cuspidata* is a cecidogenous species whose larvae form galls in the capitula of *Centaurea* species. The morphological details of both sexes are illustrated in Figs 18–24. *Centaurea pseudoscabiosa glehnii* (Trautv.) Wagenitz is recorded for the first time as a host plant of *U. cuspidata*.

**Distribution.** Northern, Western and Central Europe, east to Central Asia [White, Korneyev, 1989], Lithuania [Lutovinovas, 2014], Moldova [Korneyev, Kameneva, 1992], Ukraine (Cherkassy Region [Korneyev, 1985]), Georgia, Azerbaijan, Turkey [Zaitzev, 1947], Iran [Mohamadzade Namin, Korneyev, 2018], Kazakhstan [Korneyev, White, 1996]. Russia: Leningrad Region [Stackelberg, 1958], Tver Region (as Bologoe of Novgorod Province of the Russian Empire), Lipetsk Region, Chelyabinsk Region, Krasnoyarsk Region, Khabarovsk Region [Korneyev, White, 1996], Zaporozhye Region [Verves et al., 1984: as the Ukrainian SSR of the USSR], Lugansk People's Republic [Volkov et al., 1984: as Voroshilovgrad Region of the Ukrainian SSR of the USSR], Astrakhan Region [Ovtshinnikova, 2004], Lagonaki Plateau in Adygea [Shcherbakov, 2017], Krasnodar Region, Dagestan, Stavropol Region [Zaitzev, 1947], Ulyanovsk Region [Evstigneev, 2011], Khakassia [Shcherbakov, Maximova, 2022]. This species is recorded from Armenia and some areas of Russia (North Ossetia, Mordovia and Samara Region) for the first time.

**Comment.** Zaitzev's records of *U. cuspidata* need confirmation. Zaitzev [1947: 4] listed this species for Georgia: "Гр. Тбилиси VI–VIII, *Cirsium ciliatum* (Кн.); Мцхета 24.VII (Уваров); VII (Карпов), VIII (3.)". However, it is well known that larvae of *U. cuspidata* develop in *Centaurea*, not *Cirsium*.

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