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NEW RECORDS AND A REVISED CHECKLIST OF FRUIT FLIES OF THE GENUS *TEPHRITIS* (DIPTERA, TEPHRITIDAE) FROM UKRAINE

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New Records and a Revised Checklist of Fruit Flies of the Genus *Tephritis* (Diptera, Tephritidae) from Ukraine. Korneyev, S. V., Klasa, A. — Thirty-one *Tephritis* species are recorded from Ukraine. Six species (*T. brachyura* Loew, *T. conyzifoliae* Merz, *T. heliophila* Hendel, *T. mutabilis* Merz, *T. separata* Rondani, *T. tanacetii* Hering, and *T. valida* Loew) are recorded for the first time from Ukraine; two species (*T. crepidis* Hendel and *T. leontodontis* De Geer) listed before without any references to material or locality are confirmed to occur in Ukraine, and two species on the list (*T. conura* Loew and *T. hendeliana* Hering) have not been confirmed yet by any available material, but possibly present in western and southern regions.

Key words: Diptera, Tephritidae, *Tephritis*, Ukraine, new records, checklist.

Introduction

Tephritis Latreille, 1804 includes over 160 described species mainly occurring in the Palearctic Region (Norrbonm et al., 1999). They are widespread in most climatic zones and altitudes, except tundra, tropics and polar deserts. Larvae of *Tephritis* species usually feed in flower heads of asteraceous plants of the tribes Anthemideae, Astreae, Cardueae, Cichorieae, Inuleae, and Senecioneae.

The knowledge on distribution of the *Tephritis* in Ukraine remained insufficient by far. It was based on the literature data given in Jaroszewski (1877), Bukowsky (1940), and Richter (1970) in the key to tephritids of the European Territory of the Soviet Union from the “South”, which included Moldova, most of Ukraine and south of European Russia in most cases are not confirmed by the references to any collection material; the latter source was summarized by Kameneva, Korneyev (1985) and the species given in that list needed confirmation. Additional casual records, including those on the lists by Kryshtal (1949) and Korneyev (1983) also needed confirmation or thorough re-identification.

Material

The material is deposited in collections of the I. I. Schmalhausen Institute of Zoology, National Academy of Science of Ukraine, Kyiv (SIZK), Zoological Institute, Russian Academy of Sciences, St. Petersburg (ZISP), Museum für Naturkunde, Berlin, Germany (MNKB), Ojców National Park, Ojców, Poland (OPN), and Anna Klasa private collection (AKC).

Results

While revising the Western Palaearctic species of *Tephritis* extensive material from Ukraine was examined and re-identified. Most of it has been listed elsewhere (V. Korneyev, 1983, 1987, 2003; S. Korneyev & Karpyuk, 2009; S. Korneyev, 2011, 2016 b) and we do not repeat it here. Material for the new and confirmed records is listed, and a revisited checklist of Ukrainian *Tephritis* species is provided below.

Tephritis brachyura Loew, 1869 (figs 1–2)

Richter, 1970 (apparently referring to the Volgograd Region of Russia, the type locality); Kameneva, Korneyev, 1985 (referring to Richter, 1970).



Figs 1–10. *Tephritis* spp., habitus (4, 10), wing (2, 5, 6, 8, 9), female abdomen (1), phallus glans (3), label and specimen (7): 1–2 — *T. brachyura*; 3 — *T. conyzifoliae*; 4 — *T. crepidis*; 5 — *T. heliophila*; 6 — *T. mutabilis*, fragment; 7–8 — *T. separata*, specimen from Slaviansk (ZISP); 9 — *T. tanacetii*; 10 — *T. valida*.

Material. Ukraine, Crimea, Salgyr valley, 22.07.1899, 1 ♀ (Bazhenov) (ZISP).

First record from Ukraine.

***Tephritis conyzifoliae* Merz, 1992 (fig. 3)**

Material. Transcarpatian Region, Uzhans'kyi National Park, Beskydy (Bieszczady) Mts.: 49.034 N 22.808 E, Kinchyk Bukovs'ky, 1120 m a. s. l., 6.07.2004, 1 ♂, 1 ♀; 1200–1245 m a. s. l., 20.06.2005, 2 ♂, 2 ♀; 1130 m a. s. l., 25.06.2008, 4 ♂, 2 ♀, all on alpine grassland (A. Klasa) (OPN; AKC).

Larvae develop in the flower heads of *Crepis conyzifolia* (Gouan) A. Kern. (Merz, 1994), *C. sibirica* L., and *C. pannonica* (Jacq.) K. Koch. (see: Korneyev, 2016 b for references).

Distribution. Czech Republic, Switzerland, France, Russia (Central, East; West Siberia, incl. Altai), Kazakhstan, Kyrgyzstan (Korneyev, 2016 b), Poland (Klasa, Palaczyk 2005). First record from Ukraine.

***Tephritis crepidis* Hendel, 1927 (fig. 4)**

Richter, 1970; Kameneva, Korneyev, 1985.

Material. Ivano-Frankivsk Region: Carpathians, Hoverla mountain, 16.08.1979, 1 ♂, 1 ♀ (V. Korneyev) (SIZK).

Confirmed record from Ukraine.

***Tephritis heliophila* Hendel, 1927 (fig. 5)**

Material. Ivano-Frankivsk Region: Bystritsa, Carpathians nr Chernovyda mt., h = 1000 m, 20.08.2010, 1 ♀ (R. Andreeva) (SIZK).

Larvae develop in *Tragopogon dubius* Scop. (Merz, 1994).

Distribution. Austria; France; Germany; Greece Italy; Spain; Switzerland (Merz, Korneyev 2004). First record from Ukraine.

***Tephritis leontodontis* (De Geer, 1776)**

Material. Kyiv Region: Polis'ke, [51.261° N 29.396° E] 135 km NE Kyiv, 16.08.1984, 6 ♂, 7 ♀ (V. Korneyev) (SIZK).

Larvae develop in the flower heads of *Leontodon autumnalis* L., *L. helveticus* L., and *L. hispidus* L. (Merz, 1994).

Confirmed record from Ukraine.

***Tephritis mutabilis* Merz, 1992 (fig. 6)**

Material. Transcarpatian Region, Uzhans'kyi National Park, Beskydy (Bieszczady) Mts.: 49.034 N 22.808 E, Kinchyk Bukovs'ky, 1120 m a. s. l., 6.07.2004, 1 ♀; — 1200 m a. s. l., 20.06.2005, 1 ♂, on alpine grassland (A. Klasa) (OPN).

Larvae develop in the flower heads of *Leontodon hispidus* L. (Merz, 1994).

Distribution. Czech Republic; France; Switzerland, Germany; Italy; Poland; Slovakia (Merz, Korneyev, 2004); Russia (Korneyev, 2016 a). First record from Ukraine.

Tephritis separata Rondani, 1871 (figs 7–8)

Korneyev, 1983 (misidentification); Kameneva, Korneyev, 1985 (reference to Korneyev, 1983).

Material. Chernivtsy Region: Kitsman distr., Stavchany vill., 9.08.1959, 1 ♂ (no collector given) (SIZK); Donetsk Region: near Slaviansk, 6.06.1878, 2 ♂ (Jaroszewski) (ZISP); Mykolaiv Region: Kalynivka, 14–16.08.1985, 1 ♂, 1 ♀ (Karachevska); Kharkiv Region: Chuguev distr., Kitsenka vill., ex *Hieracium umbellatum* (misidentification of plant?), coll. 26.07.2014, exit 1.08.2014, 1 ♀ (Guglia) (SIZK).

Larvae develop in flower heads of *Picris hieracioides* L. (Merz, 1994).
First record from Ukraine.

Tephritis tanacetii Hering, 1956 (fig. 9)

Material. Kyiv Region: Hodosievka — Mrygi, 29.07.2006, 1 ♀ (V. Korneyev & E. Kameneva) (SIZK).

Larvae develop in *Tanacetum vulgare* L. (Merz, 1994).

Distribution. Austria; France; Germany; Hungary; Slovakia, Switzerland (Merz, Korneyev 2004). First record from Ukraine.

Tephritis valida (Loew, 1858) (fig. 10)

Richter, 1970 (obviously referring to South of European Russia, the type locality of *T. procera* Loew, synonym of *T. valida*); Kameneva, Korneyev, 1985 (reference to Richter, 1970).

Material. Ternopil Region (?): “Podolien”, 15.07.1869, 2 ♂, 2 ♀ (Coll. H. Loew) (MNKB).

First record from Ukraine.

Revised checklist of *Tephritis* species of Ukraine

T. angustipennis (Loew, 1844) (Richter, 1970; Kameneva, Korneyev, 1985; Korneyev, 2016 b); ***T. arnicae*** (Linnaeus, 1758) (Kameneva, Korneyev, 1985; Korneyev, 2011); ***T. bardanae*** (Schrank, 1803) (Bukowsky, 1940; Richter, 1970; Korneyev, 1983; Kameneva, Korneyev, 1985; Lezhenina, 2002; Korneyev, Konovalov, 2010); ***T. brachyura*** Loew, 1869 (Kameneva, Korneyev, 1985; this paper); ***T. cometa*** (Loew, 1840) (Korneyev, 1983; Kameneva, Korneyev, 1985; Lezhenina, 2002; Korneyev, Konovalov, 2010); ***T. conura*** (Loew, 1844) (Korneyev, 1983; Kameneva, Korneyev, 1985 (misidentification of *T. ruralis*; unconfirmed, but possibly present in Ukraine); ***T. conyzifoliae*** Merz, 1992 (this paper); ***T. crepidis*** Hendel, 1927 (Richter, 1970; Kameneva, Korneyev, 1985; this paper); ***T. dilacerata*** (Loew, 1846) (Korneyev, 1983; Kameneva, Korneyev, 1985); ***T. dioscurea*** (Loew, 1856) (Bukowsky, 1940; Richter, 1970; Kameneva, Korneyev, 1985); ***T. divisa*** Rondani, 1871 (Korneyev, 2003); ***T. dudichi*** Aczél, 1939 (Korneyev, 2011); ***T. fallax*** (Loew, 1844) (Jaroszewski, 1877; Kameneva, Korneyev, 1985); ***T. formosa*** (Loew, 1844) (Richter, 1970; Kameneva, Korneyev, 1985); ***T. heliophila*** Hendel, 1927 (this paper); ***T. hendeliana*** Hering, 1944 (Richter, 1970; Kameneva, Korneyev, 1985 (unconfirmed by material, but possible in southern regions of Ukraine); ***T. hurvitzi*** Freidberg, 1981 (Richter, 1970, as “*T. recurrens* Loew” (misidentification); Korneyev, 2003); ***T. hyoscyami*** (Linnaeus, 1758) (Bukowsky, 1940 (as “*T. heiseri* Frauenfeld”); Richter, 1970; Korneyev, 1983; Kameneva, Korneyev, 1985); ***T. leontodontis*** (De Geer, 1776) (Kryshtal, 1949; Korneyev, 1983; Kameneva, Korneyev, 1985 (reference to Kryshtal, 1949); this paper); ***T. mutabilis*** Merz, 1992 (this paper); ***T. neesii*** (Meigen, 1830) (Korneyev, 2011); ***T. oedipus*** Hendel, 1927 (Korneyev, Karpyuk, 2009; Korneyev, Konovalov, 2010); ***T. postica*** (Loew, 1844) (Richter, 1970; Kameneva, Korneyev, 1985); ***T. praecox*** (Loew, 1844) (Korneyev, 1987); ***T. pulchra*** (Loew, 1844) (Bukowsky, 1940; Richter, 1970; Kameneva, Korneyev, 1985; Lezhenina, 2002); ***T. ruralis*** (Loew, 1844) (Korneyev, 1983; Kameneva, Korneyev, 1985); ***T. separata*** Rondani, 1871 (this paper); ***T. tanacetii*** Hering,

1956 (this paper); *T. truncata* (Loew, 1844) (Kryshtal, 1949 (possible misidentification); Richter, 1970 (Crimea)); *T. valida* (Loew, 1858) (this paper); *T. vespertina* (Loew, 1844) (Kryshtal, 1949 (possible misidentification); Kameneva, Korneyev, 1985 (reference to Kryshtal, 1949); S. Korneyev, 2011).

Conclusion

As the result of this paper, data on the thirty-one *Tephritis* species recorded from Ukraine are summarized; of them two species on the list (*T. conura* and *T. hendeliana*) have not been confirmed by an available material, but possibly present in southern and western regions, two species (*T. crepidis* and *T. leontodontis*) listed before without any references to material or locality are confirmed in this paper, and six species (*T. brachyura*, *T. conyzifoliae*, *T. heliophila*, *T. mutabilis*, *T. separata*, *T. tanaceti*, and *T. valida*) are recorded for the first time from Ukraine.

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