

## Some Trypetidae (Diptera) from Southern Spain.

By

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Dr. Leif Lyneborg has kindly requested me to study the material of Trypetidae originating from a collecting trip to Spain in 1966. Dr. Lyneborg also suggested that the trypetids collected in the same area by Dr. J. R. Vockeroth in 1960 should be named and published together with his collection. A total of 150 specimens were available for study: 70 were collected by Leif Lyneborg, Ole Martin and Søren Langemark of the Zoological Museum, Copenhagen; 6 by Walter Hackman of the Zoological Museum, Helsinki; and 74 by J. R. Vockeroth of the Entomology Research Institute, Ottawa. The material comprises 33 species, plus two taxa which could not be identified due to lack of comparative material.

Regarding fruit flies, Spain is a rather well investigated country. A list of Spanish Diptera was compiled from the literature and issued as early as 1912 by Encobet. In his 1912 a paper he listed 63 species of Trypetidae and, in his 1912 b paper he added 10 more. The list was completed by Hering (1933) after his collecting trip in Spain. Also the monographs of Hendel (1927) and Séguy (1934) contain many references to the Spanish fauna.

As the library at my disposal is rather incomplete in faunistical papers on Spanish Diptera, there has been some doubt as to which species of the present material are new to the country. I assume that four of the species listed below (*Hyphenidium novaki* Strobl, *Actinoptera filaginis* Loew, *Acanthiophilus ramulosus* Loew and *Tephritis posis* Hering) may be new to Spain.

I express my thanks to Dr. Leif Lyneborg and Dr. J. F. McAlpine for giving me the opportunity to study this very interesting material.

**Dacus oleae** Gmelin, 1788

Material. — ALMERIA: Rioja, 50—100 m, 1 ♀, 7—14 March 1966 (W. Hackman); Alhama 5 km W, 200—500 m, 1 ♂, 19 March 1966. — GRANADA: Barranco de Miranda 8 km SW Orgiva, 300 m, 2 ♂ 1 ♀, 20 April 1966; Rio Guadalfeo, Orgiva, 300 m, 1 ♀, 5 April 1966; Rio Lanjaron 9 km NW Orgiva, 1600 m, 1 ♀, 15 April 1966.

Distribution. — The entire Mediterranean area, Canary Islands, western Asia, Himalaya, India, North, East and South Africa (Hendel, 1927:31). Recorded from Spain by Encobet (1912: 133).

**Hypenidium novaki** Strobl, 1893

Material. — GRANADA: Sierra Nevada Highway, 1650 m, 1 ♂, 27 July 1960 (J. R. Vockeroth).

Distribution. — Dalmatia (Yugoslavia), Hungary (Mihályi, 1959: 339). Probably new to Spain.

**Euribia affinis** Frauenfeld, 1856

Material. — GRANADA: Pinus Puente 15 km NW Granada, 500—1000 m, 1 ♂ 1 ♀, 27 April 1966.

Distribution. — Central Europe (Hendel, 1927: 40). Reported from Spain by Encobet (1912: 67).

**Euribia stylata** Fabricius, 1775

Material. — GRANADA: Rio Guadalfeo, Orgiva, 300 m, 1 ♂ 1 ♀, 11 April 1966.

Distribution. — Europe. Recorded from Spain by Encobet (1912: 157) and Hering (1933: 249).

**Ceratitis capitata** Wiedemann, 1824

Material. — ALMERIA: Almeria, 0—50 m, 1 ♂, 26 April 1966 (W. Hackman).

Distribution. — Throughout the world in subtropical and tropical countries. Recorded from Spain by Encobet (1912: 81).

**Oedaspis fissa** Loew, 1862

Material. — ALMERIA: Tabernas 8 km N, 200—500 m, 4 ♂ 5 ♀, 14 March 1966 (also W. Hackman).

Distribution. — Recorded from Spain by Encobet (1912: 99) and Hendel (1927: 85).

**Philophylla heraclei** Linné, 1758

Material. — GRANADA: Granada, 700 m, 1 ♀, 13 July 1960 (J. R. Vockeroth).

Distribution. — Europe (Sicily), Asia Minor, Caucasus (Hendel, 1927: 99). Recorded from Spain by Encobet (1912: 108), Hering (1933: 249).

Remarks. — The specimen is reddish-yellow, therefore it belongs to the form *Ph. heraclei* L. s. str. (syn. *onopordinis* Fabr.).

**Spheniscomyia filiola** Loew, 1869

Material. — GRANADA: Barranco de Miranda 8 km SW Orgiva, 300 m, 1 ♂, 23 April 1966; Almunecar, 0—30 m, 1 ♂, 16 July 1960 (J. R. Vockeroth).

Distribution. — Recorded from Spain by Encobet (1912: 99). Canary Islands, Egypt (Hendel, 1927: 106).

**Aciura coryli** Rossi, 1792

Material. — GRANADA: Maitena, 900 m, 1 ♂, 11 July 1960 (J. R. Vockeroth).

Distribution. — Mediterranean area: Southern Europe, North Africa, Asia Minor, Canary Islands; Central Asia (Hendel, 1927: 109). Recorded from Spain by Hering (1933: 249).

**Oxyaciura tibialis** Robineau-Desvoidy, 1830

Material. — GRANADA: Sierra Nevada near Padul, 1300 m, 1 ♀, 1 May 1966; Maitena, 900 m, 1 ♀, 10 July 1960 (J. R. Vockeroth).

Distribution. — Mediterranean area: Southern Europe, North Africa, Madeira, Persia (Hendel, 1927: 112). Recorded from Spain by Encobet (1912: 160).

**Spathulina tristis** Loew, 1869

Material. — ALMERIA: Alhama, 200—500 m, 1 ♂ 1 ♀, 22 March 1966; Alhama 5 km W, 200—500 m, 1 ♂, 19 March 1966. — GRANADA: Barranco de Algarrobo 12 km SW Orgiva, 300 m, 1 ♂, 25 April 1966; Barranco de Miranda 8 km SW Orgiva, 300 m, 3 ♂ 1 ♀, 16—20 April 1966; Rio Lanjaron near Lanjaron, 600 m, 2 ♀, 26—28 April 1966.

Distribution. — Spain, Sicily, Dalmatia, Canary Islands (Hendel, 1927: 118). Recorded from Spain by Hering (1933: 249).

**Chaetorellia jaceae** Robineau-Desvoidy, 1830

Material. — GRANADA: Rio Lanjaron near Lanjaron, 600 m, 1 ♂, 26 April 1966.

Distribution. — Europe, Asia Minor, Persia (Hendel, 1927: 123). Recorded from Spain by Encobet (1912: 113).

**Terellia longicauda** Meigen, 1838

Material. — GRANADA: Sierra Nevada Highway, 1800 m, 1 ♀, 27 July 1960 (J. R. Vockeroth).

Distribution. — Central Europe, North Africa, Canary Islands, Siberia (Hendel, 1927: 127). Recorded from Spain by Seyrig, Antiga (according to Séguy, 1934: 131).

**Terellia serratulae** Linné, 1758

Material. — GRANADA: N. slope Veleta, Sierra Nevada, 2800—3000 m, 1 ♀, 20 July 1960 (J. R. Vockeroth).

Distribution. Throughout Europe, North Africa, Syria, Persia, (Hendel, 1927: 128). Recorded from Spain by Encobet (1912: 152).

**Styilia ? aragonensis** Hering, 1933

Material. — GRANADA: N. slope Veleta, Sierra Nevada, 2200—2550 m, 3 ♀, 20—30 July 1960 (J. R. Vockeroth).

Distribution. — Described from Spain by Hering (1933: 250).

Remarks. — With their short ovipositor, darkened antennae and wing pattern, the specimens correspond to the original description and drawing of Hering (1933: 250), but in Csm there are two to four dots before the  $r_1$  vein, and not two. As I have no comparative material, I give this species here with a question mark.

**Styilia** sp.

Material. — GRANADA: N. slope Veleta, Sierra Nevada, 2200 m, 1 ♂, 30 July 1960 (J. R. Vockeroth).

Remarks. — It may be *S. difficilis* Hering. There is a smaller white spot at the ending of  $r_1$  vein, half as broad as the Cm cell.

**Styilia sororcula** Wiedemann, 1830

Material. — GRANADA: Barranco de Algarrobo 12 km SW Orgiva, 300 m, 2 ♂ 1 ♀, 25 April 1966; Almunecar, 0—30 m, 4 ♂ 4 ♀, 16 July 1960 (J. R. Vockeroth).

Distribution. — In the tropical and subtropical parts of both the Old and New World.

**Stylia tesselata** Loew, 1844

Material. — GRANADA: Barranco de Miranda 8 km SW Orgiva, 300 m, 1 ♀, 16 April 1966; Rio Guadalfeo, Orgiva, 300 m, 1 ♂, 4 April 1966; N. slope Veleta, Sierra Nevada, 2300—2550 m, 2 ♂ 8 ♀, 20—30 July 1960 (J. R. Vockeroth).

Distribution. — Europe, North Africa, Canary Islands, Asia Minor and Central Asia (Hendel, 1927: 160). Recorded from Spain by Encobet (1912: 160) and Hering (1933: 250).

**Actinoptera ? filaginis** Loew, 1862

Material. — GRANADA: Sierra de Contraviesa, Rabite, 1300 m, 1 ♂, 2 May 1966; Maitena, 900 m, 1 ♂, 10 July 1960 (J. R. Vockeroth).

Distribution. — Central Europe, northern Italy (Hendel, 1927: 163). Probably new to Spain. It is possible that *Urellia mamulae* Frfld. in the list of Encobet (1912: 121) is the same species.

Remarks. — The specimens do not correspond exactly to any of the descriptions of European species in Hendel's monograph. The dark band from Csc to ta is very oblique as in *discoidea* Fall., but the two white spots in the Cm do not touch the  $r_{2+3}$ , and there is a dark spot in Cc as found in *filaginis*. *A. discoidea* is distributed in northern and central Europe, *filaginis* in central and southern Europe. The Spanish specimens resemble even more *A. espunensis* Hering, 1933, the wing pattern being practically the same, but *espunensis* has one ori while the Spanish specimens have two. It is, therefore, with some hesitation that I treat the specimens as *filaginis* Lw.

**Ensina sonchi** Linné, 1767

Material. — GRANADA: Rio Guadalfeo, Orgiva, 300 m, 1 ♂, 19 April 1966; Maitena, 900 m, 2 ♂ 1 ♀, 10—11 July 1960 (J. R. Vockeroth); N. slope Veleta, Sierra Nevada, 2400 m, 1 ♂ 2 ♀, 22—30 July 1960 (J. R. Vockeroth).

Distribution. — Throughout Europe (Hendel, 1927: 172). Recorded from Spain by Encobet (1912: 154).

**Tephritis conjuncta** Loew, 1862

= *separata* f. *conjuncta* Rondani, 1871

Material. — GRANADA: N. slope Veleta, Sierra Nevada, 2300—2550 m, 1 ♀, 22 July 1960 (J. R. Vockeroth).

Distribution. — Greece, Italy, Spain, southern Russia, Siberia (Hendel, 1927: 185). Recorded from Spain by Encobet (1912: 87).

**Tephritis formosa** Loew, 1844

Material. — ALMERIA: Rioja, 50—200 m, 1 ♂, 7 March 1966.  
— GRANADA: Barranco de Miranda 8 km SW Orgiva, 300 m, 1 ♀, 16 April 1966.

Distribution. — Southern and central Europe. Spain: Saragosse (L. Navas after Séguy, 1934: 159), Albarracin (Hering, 1933: 251); also recorded by Encobet (1912: 101).

**Tephritis matricariae** Loew, 1844

Material. — GRANADA: Rio Guadalfeo, Orgiva, 300 m, 1 ♀, 3 May 1966; Sierra de Contraviesa, Rabite, 1300 m, 2 ♀, 2 May 1966.

Distribution. — Mediterranean area, including Asia Minor (Hendel, 1927: 190). Recorded from Spain by Hering (1933: 251).

**Tephritis nigricauda** Loew, 1856

Material. — ALMERIA: Pechina, 50—200 m, 1 ♂, 5 March 1966. — GRANADA: N. slope Veleta, Sierra Nevada, 2400 m, 1 ♀, 25 July 1960 (J. R. Vockeroth).

Distribution. — Throughout Europe, North Africa, Syria, Asia Minor (Hendel, 1927: 192). Recorded from Spain by Hering (1933: 251).

Remarks. — Not typical specimens. In the Cd there is only one white dot in the dark border of tp, as in *dioscurea* Lw., both the dark pattern in Cp<sub>3</sub> reaches the hinder border of the cell and is connected with the dark spot at the root of the anal vein.

**Tephritis poecilura** Loew, 1869

Material. — GRANADA: Maitena, 900 m, 1 ♂ 1 ♀, 10 July 1960 (J. R. Vockeroth); N. slope Veleta, Sierra Nevada, 2550—3000 m, 4 ♂ 1 ♀, 20 July 1960 (J. R. Vockeroth); Sierra Nevada Highway, 1650 m, 1 ♂ 2 ♀, 27 July 1960 (J. R. Vockeroth); Almunecar, 0—30 m, 1 ♀, 16 July 1960 (J. R. Vockeroth).

Distribution. — Southern Europe, North Africa (Hendel, 1927: 193). Recorded from Spain by Encobet (1912: 139).

**Tephritis posis** Hering, 1939

Material. — ALMERIA: Cabo de Gata, 0—50 m, 1 ♀, 26 March 1966; Alhama 5 km W, 200—500 m, 1 ♂, 19 March 1966.

Distribution. Mediterranean area (Hering, 1944: 28), Hungary (in the collection of the Hungarian Natural History Museum). Probably new to Spain.

Remarks. — The two specimens have a dark coloration and are thus rather typical. As *T. posis* Her. and *postica* Lw. differ only in coloration and many intermediate specimens between the two forms occur, I regard the dark *posis* as the ancestral form from which *postica* Lw. has developed.

#### **Tephritis postica** Loew, 1844

Material. — GRANADA: Sierra Nevada Highway, 1650 m, 1 ♀, 27 July 1960 (J. R. Vockeroth).

Distribution. — Central and southern Europe (Hendel, 1927: 193). Recorded from Spain by Encobet (1912: 139) and Hering (1933: 251).

Remarks. — The specimen has yellow pleura, abdomen, and legs, and orange-coloured ovipositor as in typical specimens.

#### **Tephritis praecox** Loew, 1844

Material. — ALMERIA: Pechina, 50—200 m, 1 ♂, 9 March 1966; Alhama 5 km W, 200—500 m, 1 ♂ 1 ♀, 17 March 1966; Tabernas 8 km N, 200—500 m, 1 ♀, 14 March 1966. — GRANADA: Sierra de Contraviesa, Rabite, 1300 m, 1 ♀, 2 May 1966; Rio Lanjaron 9 km NW Orgiva, 1600 m, 1 ♀, 7 May 1966; N. slope Veleta, Sierra Nevada, 2200—2550 m, 3 ♀, 22—30 July 1960 (J. R. Vockeroth); Sierra Nevada Highway, 1650 m, 1 ♂ 1 ♀, 27 July 1960 (J. R. Vockeroth); Almunecar, 0—30 m, 2 ♂ 1 ♀, 16 July 1960 (J. R. Vockeroth).

Distribution. — Southern Europe, Asia Minor, North Africa, Canary Islands (Hendel, 1927: 194). Recorded from Spain by Encobet (1912: 139).

Remarks. — There are only colour differences between *T. praecox* Lw. and *poecilura* Lw. and I have some doubt whether they are really different species, because intermediate specimens occur.

#### **Tephritis pulchra** Loew, 1844

Material. — GRANADA: Sierra Nevada near Padul, 1300 m, 1 ♂, 4 May 1966.

Distribution. — Central Europe, Mediterranean area including Asia Minor (Hendel, 1927: 194). Recorded from Spain by Encobet (1912: 141).

#### **Tephritis simplex** Loew, 1844

Material. — ALMERIA: Albufera, 0—50 m, 2 ♀, 8 March 1966. — GRANADA: Torrenueva E. Motril, 0—50 m, 1 ♀, 12 April 1966;

Barranco de Algarrobo 12 km SW Orgiva, 300 m, 1 ♂ 1 ♀, 25 April 1966; Barranco de Miranda 8 km SW Orgiva, 300 m, 2 ♂ 3 ♀, 16—23 April 1966; Rio Guadalfeo, Orgiva, 300 m, 2 ♂ 1 ♀, 3—18 April 1966. — GIBRALTAR: 2 ♀, 4 August 1960 (J. R. Vockeroth).

Distribution. — Asia Minor, Dalmatia, Spain, Tunisia (Hendel, 1927: 195).

#### **Tephritis** sp.

Material. — GRANADA: Maitena, 900 m, 1 ♂ 1 ♀, 10—11 July 1960 (J. R. Vockeroth).

Remarks: The two specimens resemble *T. formosa* Lw. but surely do not belong to this species. They have much more regular round spots and there is a big transparent drop before ta in the Csm.

#### **Trupanea amoena** Frauenfeld, 1856

Material. — GRANADA: Torrenueva E Motril, 0—50 m, 2 ♀, 14—17 April 1966; Barranco de Miranda 8 km SW Orgiva, 300 m, 1 ♀, 16 April 1966; N. slope Veleta, Sierra Nevada, 2200 m, 1 ♂, 30 July 1960 (J. R. Vockeroth).

Distribution. — Central and southern Europe, Canary Islands, North Africa, Persia, Central Asia, India, Philippine Islands, Formosa (Hendel, 1927: 199). Recorded from Spain by Encobet (1912: 69).

#### **Trupanea stellata** Fuessly, 1775

Material. — GRANADA: Rio Guadalfeo, Orgiva, 300 m, 1 ♂, 2 April 1966; Sierra Nevada, Alb. Universitaria, 2600 m, 1 ♂, 6 May 1966; N. slope Veleta, Sierra Nevada, 2400—3000 m, 5 ♂ 2 ♀, 20—30 July 1960 (J. R. Vockeroth).

Distribution. — Europe, North and East Africa, Canary Islands, Asia Minor, Central Asia, Persia, ? Australia (Hendel, 1927: 202). Recorded from Spain by Encobet (1912: 155) and Hering (1933: 252).

#### **Acanthiophilus helianthi** Rossi, 1790

Material. — GRANADA: Maitena, 900 m, 1 ♂ 2 ♀, 10—11 July 1960 (J. R. Vockeroth); N. slope Veleta, Sierra Nevada, 2400 m, 1 ♀, 25 July 1960 (J. R. Vockeroth).

Distribution. — Europe, North Africa, Asia Minor, Turkmenia, Persia, Central Asia, Erythrea, Canary Islands (Hendel, 1927: 204). Recorded from Spain by Hering (1933: 252).



**Acanthophilus ramulosus** Loew, 1844

Material. — GRANADA: Barranco de Miranda 8 km SW Orgiva, 300 m, 2 ♂ 1 ♀, 16—20 April 1966; Sierra Nevada near Padul, 1300 m, 1 ♂, 4 May 1966.

Distribution. — Dalmatia, Sicily, Canary Islands, Syria, Egypt, Algeria (Hendel, 1927: 205). May be new to Spain.

**Summary**

Thirty-three species of Trypetidae are recorded from southern Spain based on collections made in 1960 and 1966. Two more taxa occur but are not identified to species due to lack of comparative material. Four of the species are recorded from Spain for the first time.

**References**

- D u f o u r, L., 1850: Description et iconographie de quelques Diptères de l'Espagne. — Ann. Soc. Ent. France, (2) 8: 131—155.
- E n c o b e t, J. A r i a s, 1912 a: Datos para el conocimiento de la distribución geográfica de los Dipteros de España. — Mem. R. Soc. esp. Hist. nat. Madrid, 7: 61—246.
- , 1912 b: Adiciones a la fauna dipterológica de España. — Bol. R. Soc. esp. Hist. nat. Madrid, 12: 385—426.
- H e n d e l, F., 1927: 49. Trypetidae, in Lindner: Die Fliegen der palaearktischen Region, Band 5<sub>2</sub>, 221 pp. Stuttgart.
- H e r i n g, M., 1933: Spanische Bohrfliegen (Dipt.). — Bol. R. Soc. esp. Hist. nat. Madrid, 33: 249—252.
- , 1944: Bestimmungstabelle der Gattung *Tephritis* Latreille, 1804. — Siruna Seva, Folge 5: 17—31.
- M i h á l y i, F., 1959: A revision of the Trypetids of the Carpathian Basin (Diptera). — Ann. Hist.-nat. Mus. Nat. Hung., 51: 339—362.
- S é g u y, E., 1934: Diptères (Brachycères), (Muscidae Acalypterae et Scatophagidae). — Faune de France, 28, Paris. 832 pp.
-