

## Some Lonchopteridae and Chamaemyiidae (Diptera) collected in Southern Spain.

With an appendix.

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The family Lonchopteridae has only one genus, *Lonchoptera* Meigen, which is represented in the Palaearctic region by 14 species. The species are very variable in colour and numerous varieties have been described and named, but these are ignored in the present paper since they have no true taxonomic status. Three species have been recorded from Spain (Strobl 1899, 1906; Czerny and Strobl, 1909). Two of these are present in the material reported upon.

The family Chamaemyiidae is represented in the Palaearctic region by 9 genera and subgenera containing some 72 described species. There was much confusion in the determination of species until modern workers, notably Tanasijtshuk in the U.S.S.R., began biological studies coupled with detailed descriptions and illustrations of the male genitalia. In the present author's opinion the genus *Leucopis* in particular should be regarded by Dipterists in the same way that Hymenopterists regard many Chalcidoidea, and descriptions or even determinations of some groups of species should be avoided unless reared series are available for study. The immature stages should be sought among colonies of Hemiptera-Homoptera of the families Aphididae, Adelgidae and Coccidae upon which the larvae are predaceous.

Eleven species have previously been recorded from Spain of which 6 are present in the collections reported upon. The recorded species not present are *Chamaemyia flavipalpis* Haliday (= *maritima* Zetterstedt) and *C. geniculata* Zetterstedt (Strobl, 1900); *Leucopis griseola* Fallén, *L. lusoria* Meigen and *L. aphidivora*

Rondani (Czerny and Strobl, 1909). In the present paper six species are recorded from Spain for the first time: *Chamaemyia herbarum* Desvoidy, *C. aridella* Fallén, *Parochthiphila inconstans* Becker, *Leucopis (Leucopomyia) ? alticeps* Czerny, *L. (Leucopis) grandis* Tanasijtshuk, and *L. (L.) ? palumbii* Rondani.

The specimens dating from 1966 were collected by an expedition from the Zoological Museum, Copenhagen, while the specimens dating from 1960 were collected by Dr J. R. Vockeroth, Ottawa. The material is deposited in the Zoological Museum, Copenhagen, and the Canadian National Collection, Ottawa, respectively, with duplicates in the British Museum (Natural History), London. An appendix lists Spanish species present in the British Museum (Natural History), London.

## LONCHOPTERIDAE

### *Lonchoptera lutea* Panzer, 1809.

Material. — ALMERIA: Alhama 5 km W, 200—500 m, 1 ♀, 28 March 1966. — GRANADA: Torrenueva E Motril, 0—50 m, 1 ♀, 17 April 1966; Barranco de Algarrobo 12 km SW Orgiva, 300 m, 1 ♀, 25 April 1966; Rio Guadalfeo, Orgiva, 300 m, 1 ♂ 5 ♀, 3—11 April 1966; Rio Lanjaron near Lanjaron, 600 m, 3 ♂ 4 ♀, 26—28 April 1966; Pampineira, 900 m, 4 ♂ 1 ♀, 9 April 1966; Rio Lanjaron 9 km NW Orgiva, 1600 m, 1 ♂ 4 ♀, 15 April — 7 May 1966; Sierra Nevada near Padul, 1300 m, 1 ♀, 4 May 1966; Granada, 700 m, 13 ♂ 2 ♀, 19 July 1960; Maitena, 900 m, 8 ♂ 18 ♀, 11 July 1960; N. slope Veleta, Sierra Nevada, 2300—2550 m, 11 ♂ 6 ♀, 22 July 1960.

Distribution. — Europe, Canary Islands, Asia, a very common and widely distributed species. Previously recorded from Spain by Strobl (1906), and by Czerny and Strobl (1909).

### *Lonchoptera furcata* Fallén, 1823.

Material. — ALMERIA: Rioja, 50—200 m, 1 ♀, 9 March 1966; Alhama 5 km W, 200—500 m, 1 ♀, 28 March 1966. — GRANADA: Rio Guadalfeo, Orgiva, 300 m, 7 ♀, 11 April — 3 May 1966; Rio Chico, Orgiva, 450 m, 1 ♀, 2 April 1966; Rio Lanjaron 9 km NW Orgiva, 1600 m, 1 ♀, 6 April 1966; Maitena, 900 m, 3 ♀, 11 July 1960; N. slope Veleta, Sierra Nevada, 2300—2550 m, 5 ♀, 22 July 1960.

Distribution. — Europe, Madeira, North and South America,

Hawaii, New Zealand and possibly Tasmania and Australia. Previously recorded from Spain by Czerny and Strobl (1909).

Remarks. — A common species, but males are very rarely taken on the continent and are unknown in the Americas, New Zealand and Hawaii and it has been suggested that the species is parthenogenetic. However males have been taken more frequently in Britain and Collin (1938) suggests that this sex may be crepuscular in habit and thus overlooked by diurnal collectors.

### CHAMAEMYIIDAE

#### **Chamaemyia aridella** (Fallén), 1823.

Material. — GRANADA: N. slope Veleta, Sierra Nevada, 2200 m, 1 ♀, 30 July 1960.

Distribution. — Europe; precise distribution uncertain as the species has been regarded as a synonym of *C. juncorum* Fallén (Czerny, 1936). The species is usually found in dry areas. Not previously recorded from Spain.

Remarks. — The male genitalia are figured by Coe (1942) and Collin (1966), the shape of the aedeagus in lateral view being quite distinct.

#### **Chamaemyia herbarum** (Desvoidy), 1830.

Material. — ALMERIA: Cabo de Gata, 0—50 m, 11 ♂ 7 ♀, 24 March 1966. — GRANADA: Rio Lanjaron 9 km NW Orgiva, 1600 m, 1 ♀, 22 April 1966; N. slope Veleta, Sierra Nevada, 2200—3000 m, 15 ♂ 7 ♀, 27—30 July 1960.

Distribution. — Europe. The precise distribution of *herbarum* is not known due to its inclusion in the synonymy of *juncorum* by authors previous to Coe (1943). Not previously recorded from Spain.

#### **Chamaemyia juncorum** (Fallén), 1823.

Material. — GRANADA: N. slope Veleta, Sierra Nevada, 2200—2400 m, 2 ♂ 2 ♀, 27—30 July 1960.

Distribution. — Europe. Previously recorded from Spain by Strobl (1900), Czerny and Strobl (1909) thought the name probably covered several species.

#### **Chamaemyia polystigma** (Meigen), 1830.

Material. — GRANADA: Torrenueva E Motril, 0—50 m, 2 ♂, 10—12 April 1966; Barranco de Algarrobo 12 km SW Orgiva, 300

m, 1 ♂, 25 April 1966; Barranco de Miranda 8 km SW Orgiva, 300 m, 1 ♂, 20 April 1966; Rio Guadalfeo, Orgiva, 300 m, 2 ♂, 4—18 April 1966; Rio Lanjaron near Lanjaron, 600 m, 6 ♂ 6 ♀, 28 April 1966; Pampineira, 900 m, 1 ♂, 9 April 1966; Rio Lanjaron 9 km NW Orgiva, 1600 m, 1 ♀, 7 May 1966; N. slope Veleta, Sierra Nevada, 2500 m, 1 ♀, 25 July 1960.

**Distribution.** — Europe and N. Africa. A common species previously recorded from Spain by Strobl (1900), Czerny and Strobl (1909).

**Remarks.** — In Collin's (1966) key to the British species of *Chamaemyia* (which includes all the known Palaearctic species) a small typographical error has occurred in couplet 18 (19), 19 (18): the comments on setae refer to the mid femora, not the tibiae as stated.

***Euestelia nigripes* (Strobl), 1900.**

**Material.** — GRANADA: Rio Guadalfeo, Orgiva, 300 m, 1 ♂, 3 May 1966; Rio Lanjaron near Lanjaron, 600 m, 1 ♂, 28 April 1966.

**Distribution.** — Southern Europe. Described from Spain by Strobl (1900) as a variety of *E. coronata* Loew.

**Remarks.** — Czerny (1936) treated *nigripes* as a species distinguished from *coronata* by the dark tibiae. I have examined the male genitalia of both and find them to be good species. In ventral

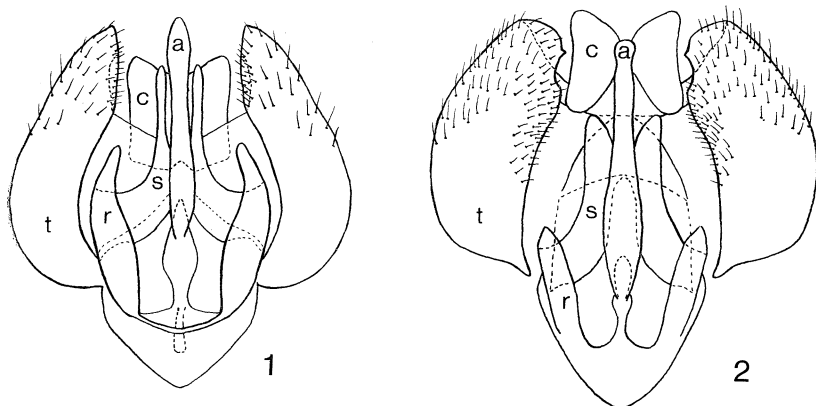


Fig. 1. Male genitalia of *Euestelia coronata* (Loew) in ventral view.

Fig. 2. Male genitalia of *E. nigripes* (Strobl) in ventral view. t = 9th tergite, c = cerci, a = aedeagus, r = anterior paramere, s = posterior paramere.

view (Figs. 1—2) the upper inner margin of the 9th tergite is excised in *nigripes*; the tip of the aedeagus is rounded in *nigripes* and pointed in *coronata*; the anterior parameres are shorter and blunter in *nigripes* while the posterior parameres are much thicker; the cerci project above the aedeagus in *nigripes*.

In these two males there is variation in the length of the dorso-centrals such that they might variously be interpreted as 1+2 or 1+4 which could be misleading at couplet 8 in McAlpine's (1960) key to world genera.

***Euestelia coronata*** (Loew), 1858.

Material. — GRANADA: Sierra Nevada Highway, 900 m, 1 ♂, 27 July 1960; Maitena, 900 m, 1 ♀, 11 July 1960.

Distribution. — Central and southern Europe, Asia and N. Africa. Previously recorded from Spain by Czerny (in Czerny and Strobl, 1909).

Remarks. — Tanasijtshuk (1963) states that *E. coronata* larvae are predaceous on the scale insect *Pseudococcus aberrans* Goux in the leaf sheath of couchgrass; he also figures the male genitalia in lateral view. The genitalia in ventral view are figured here and compared with those of *E. nigripes* (Figs. 1—2).

***Parochthiphila inconstans*** Becker, 1902.

Material. — ALMERIA: Rioja, 50—200 m, 1 ♀, 20 April 1966.

Distribution. — Southern Europe and North Africa. Not previously recorded from Spain.

Remarks. — This specimen has 1 presutural dorsocentral and only 2 distinct postsutural dorsocentrals which would take it to *Chamaemyia* in McAlpine's (1960) key to genera, see also above under *Euestelia* for further comment on this.

***Leucopis (Leucopis) albostriata*** Czerny, 1936.

Material. — GRANADA: Sierra de Contraviesa, Rabite, 1300 m, 1 ♀, 2 May 1966.

Distribution. — This very distinct species was described from Spain by Czerny (1936) and has not been recorded since.

***Leucopis (Leucopomyia) ? alticeps*** Czerny, 1936.

Material. — GRANADA: Barranco de Miranda 8 km SW Orgiva, 300 m, 1 ♂, 16 April 1966.

Distribution. — *Leucopis (Leucopomyia) alticeps* was described from Germany.

Remarks. — This male agrees closely in genital characters with Tanasijtshuk's (1965) figure of *L. (L.) alticeps* but the tibiae are only yellow at the base.

In my treatment (Smith, 1963) of the British *Leucomyia*, without seeing types, but in agreement with unpublished views of other workers, I sank *L. alticeps* Czerny as a synonym of *L. annulipes* Zetterstedt. Dr. V. S. Tanasijtshuk (1965) doubted the validity of this synonym and Dr. Frank McAlpine informs me (in litt.) that he has now examined the syntypic series of *annulipes* and finds them not to belong to *Leucomyia*. Incidentally, the study of further material of *Leucomyia* reared from *Eriopeltis* ovisacs by Professor G. C. Varley in England has established the identity of the British species as *L. silesiaca* Egger. Mr. M. Ackland suggested this identity to me after a preliminary study of Professor Varley's material and Dr. Tanasijtshuk has since confirmed this (in litt.).

The slight difference in tibial colouration of the Spanish specimen, if coupled with other characters may indicate the presence of a subspecies or species, but any decisions of this nature are better deferred until a complete revision of the genus, based upon reared series, can be undertaken by some future worker.

**Leucopis (Leucopis) grandis** Tanasijtshuk, 1959.

Material. — GRANADA: N. slope Veleta, Sierra Nevada, 2400 m, 1 ♂, 25 July 1960.

Distribution. — Crimea, new to Spain.

Remarks. — A distinct species because of its size (3.7 mm) and yellow antennae. Tanasijtshuk (1959) reared and described this species from larvae feeding upon *Aphis cytisorum* Htg. (= *laburni* Kalt.) on Spanish gorse (*Genista hispanica* L.). He figures the male genitalia in lateral view and a figure of the male genitalia in ventral view is given here (Fig. 3).

**Leucopis (Leucopis) magnicornis** Loew, 1856.

Material. — MALAGA: Torremolinos, 1 ♂, 3 May 1966.

Distribution. — Spain.

**Leucopis (Leucopis) ? palumbii** Rondani, 1874.

Material. — GRANADA: Barranco de Miranda 8 km SW Orgiva, 300 m, 1 ♂, 16 April 1966; Sierra Nevada Highway, 1650 m, 1 ♂, 22 July 1960.

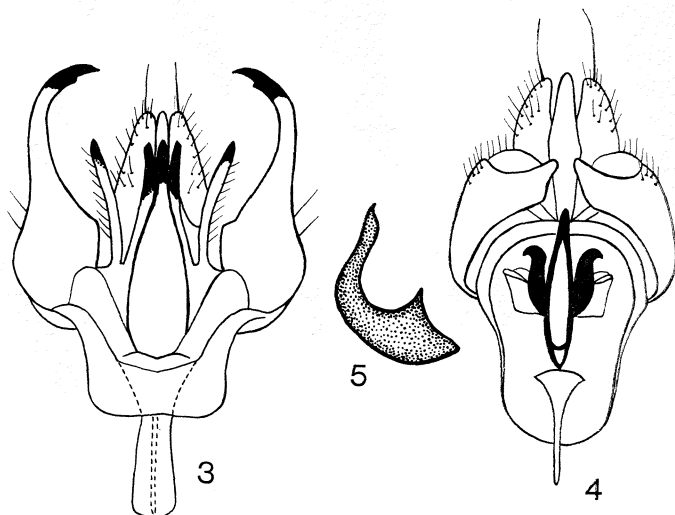


Fig. 3. Male genitalia of *Leucopis grandis* Tan. in ventral view. Fig. 4. Male genitalia of *L. ? palumbii* Rond. in ventral view. Fig. 5. Aedeagus of *L. ? palumbii* in lateral view.

**Distribution.** — *L. palumbii* was described from Sicily.

**Remarks.** — A species with completely yellow tibiae and tarsi. Genitalia (Figs. 4—5) similar to Tanasijtshuk's (1959) figure for *L. palumbii* from the Crimea, but the penis is strongly curved (Fig. 5). It seems probable that two species are involved, but which (if either) is true *palumbii* is better resolved when Rondani's types can be studied against series of reared specimens.

Rondani (1874) described *L. palumbii* from larvae and pupae found in galls on *Pistacia terebinthus* (L.) in Sicily, the larvae feeding on *Geoica* (= *Pemphigus*) *utricularia* (Pass.) and other aphids of the same genus inside galls on *Pistacia*.

#### ***Leucopis* (*Leucopis*) spp.**

**Material.** — ALMERIA: Rioja, 50—200m, 1 ♂ 1 ♀, 7 March & 26 April 1966; Pechina, 50—200 m, 2 ♀, 9 March 1966; Alhama 5 km W, 200—500 m, 1 ♀, 19 March 1966. — GRANADA: Rio Guadalfeo, Orgiva, 300 m, 1 ♀, 19 April 1966; N. slope Veleta, Sierra Nevada, 2400—3000 m, 2 ♂ 3 ♀, 20—30 July 1960; Granada, 700 m, 1 ♂, 15 July 1960. — CADIZ: La Linea, 1 ♀, 2 August 1960.

**Remarks.** — These specimens are allied to *puncticornis* and I

am reluctant to comment further until the types of Rondani's southern European species and varieties of *puncticornis* can be studied and dissected.

### Appendix.

Spanish Lonchopteridae and Chamaemyiidae in the British Museum (Natural History), London.

#### **Lonchoptera tristis** Meigen, 1824.

Material. — N. SPAIN: Gerona, Las Planas, 3 ♂ 3 ♀, 12—18 July 1965 (A. M. Hutson) (B. M. 1965 — 632).

Distribution. — Europe. Not uncommon, but usually more numerous in woodland. Previously recorded from Spain by Strobl (1899).

#### **Lonchoptera lutea** Panzer, 1809.

Material. — C. SPAIN: Sierra de Guadarrama, 6—800 ft., 1 ♂ 1 ♀, August 1927 (B. P. Uvarov) (B. M. 1928 — 95).

#### **Lonchoptera furcata** Fallén, 1823.

Material. — C. SPAIN: Sierra de Guadarrama, 6—800 ft., 3 ♀, 3 August 1927 (B. P. Uvarov) (B. M. 1928 — 95). N. SPAIN: Gerona, Las Planas, 4 ♀, 12—18 July 1965 (A. M. Hutson) (B. M. 1965 — 632).

#### **Chamaemyia aridella** (Fallén), 1823.

Material. — C. SPAIN: Sierra de Guadarrama, San Rafael, above tree-zone, 1400—1600 m, 1 ♀, 19 August 1963 (A. C. Pont); San Rafael, pine forest and bracken hills, 1260—1500 m, 1 ♀, 19 August 1963 (A. C. Pont).

#### **Chamaemyia herbarum** (Desvoidy), 1830.

Material. — N. SPAIN: Gerona: Las Planas, 2 ♂ 2 ♀, 12—18 July 1965 (A. M. Hutson) (B.M. 1965—632).

#### **Chamaemyia polystigma** (Meigen), 1830.

Material. — C. SPAIN: Sierra de Guadarrama, 6—8000 ft., 1 ♀, Aug. 1927 (B.P. Uvarov) (B.M. 1929—95). — N. SPAIN: Gerona, Las Planas, 3 ♀, 12—18 July 1965 (A. M. Hutson) (B.M.) (B.M. 1965—632).

#### **Euestelia coronata** (Loew), 1858.

Material. — C. SPAIN: Sierra de Guadarrama, 6—8000 ft., 3 ♂, August 1927 (B.P. Uvarov) (B.M. 1929—65). — N. SPAIN: Gerona,



Las Planas, 1 ♀, 12—18 July 1965 (A. M. Hutson) (B.M. 1965—132).

Remarks. — One of the three males has no distinct presutural and only two of the usual three postsutural dorsocentrals present.

### Summary.

The paper presents records from Southern Spain of 2 species of Lonchopteridae and 12 species of Chamaemyiidae. 6 of the 12 species of Chamaemyiidae have not earlier been recorded from Spain. In an appendix is listed 3 species of Lonchopteridae and 4 species of Chamaemyiidae from other parts of Spain based on material in the British Museum (Nat. Hist.), London.

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