

of Dr. H. Schumann, Berlin, I was able to borrow the lectotype and a paratype to *ibizana* which is only known from Ibiza. The three species is question form a natural group clearly separated from other Palaearctic *Asteia* species by the elongated head, which makes the eyes distinctly longer than high (Fig. 15). *A. ibizana* is most nearly related to *inanis*. Both have the arista distinctly pubescent (Figs. 16—17) whereas *caesia* n. sp. has a naked arista (Fig. 15). Also in colour-pattern *ibizana* and *inanis* come near to each other. *A. ibizana* differs, however, from *inanis* in size and a few other characters as will appear from the following (compare with the above description): Index of head 30: 24; of eye 27: 18; gena 6; third antennal joint more triangular and darkened all over; arisal hairs shorter; mesonotal stripes darker and mesonotum distinctly dusted; index of mesonotum 38:30; second vein (Fig. 12) ends as in *inanis* but joining area not infuscated; t_2 and t_3 without dark rings; total length: 1.1 mm.

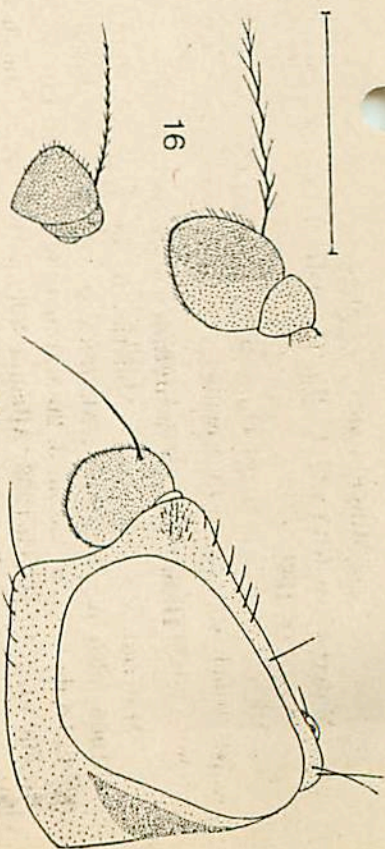
Asteia caesia n. sp. (Figs. 14—15).

Material. — ALMERIA: Almeria, 0—50 m, 1 ♀ holotype, 21—31 March 1966 (W. Hackman). In Zoological Museum, Helsinki.

Description. — Holotype, female.

Head. The length is equal to the height (37:37). Eye longer than high (28:25). Width of gena 8. Two pairs of vertical setae of equal size. Small, hairlike postvertical setae. Ocellar setae stronger than postverticals. A distinct orbital seta on each side. Middle stripe of frons yellowish-brown, becoming gradually darker towards ocellar tubercle. The linear, blackish, interfrontal stripe reaches to orbital seta. Parafrontalia (orbis) whitish, with a few blackish hairs anterior to orbital seta. Middle stripe with a more dense cover of blackish hairs. Ocellar tubercle blackish-brown. The area in front of eye orange. Gena, face and mouth-parts whitish-yellow. A pair of short, whitish vibrissae. Antenna (Fig. 15) yellowish, third joint darkened on dorsal part. Arista blackish, absolutely bare. The occiput dark brownish, ventrally with blackish wedges following lower eye-margin.

Thorax. Mesonotum with an index of 47: 42. Seen dorsally the mesonotum is bluish-grey pollinose, with two narrow darker (less pollinose) stripes which are narrowly separated. Laterally the mesonotum becomes gradually dark brownish. Chaetotaxy: 2 pairs of dorsocentral setae, in front of anterior dc a row of five



Figs. 15—17. 15. Head in profile of *Asteia caesia* n. sp., ♀ holotype, Spain, Almeria; Almeria, 21—31 March 1966; 16. Right antenna from inside of *A. inanis* n. sp., ♂ holotype, Spain, Almeria; Almeria, 22 March 1966; 17. Right antenna from inside of *A. ibizana* End., ♂ lectotype, Ibiza. Scale: 0.25 mm.

distinct hairs. Moreover, 2 notopleural and 2 sternopleural setae. Scutellum whitish with central area orange; a pair of strong apical setae, and a subapical, hairlike pair. Pleura extensively darkened. The palest area is the dorsal part of sternopleuron which is yellowish; rest of pleura yellowish-brown to dark brownish.

Wing. Length: 1.8 mm. Colour hyaline, veins pale yellowish. Second vein ends in an abruptly curve (Fig. 14) and reaches first vein where this joins the costa. The joining area is distinctly infuscated. Knob of halteres large and darkened.

Legs. Yellowish-white; hind tibiae with two indistinctly darkened rings.

Abdomen yellowish-white, the small tergites not darkened. Length. Total: 1.5 mm.

MELICHIDAE

Milichia albomaculata Strobl, 1900.

Material. — Granada: Rio Guadalfeo, Orgiva, 300 m, 2 ♂, 5—19 April 1966; Rio Sucto 5 km NW Orgiva, 700 m, 1 ♀, 3 April 1966; Sierra de Contraviesa near Rabite, 1300 m, 4 ♂, 2 May 1966.

Distribution. — Only known from Spain. Further localities gives Encobet (1912:68).

Egnborg
1969

Some Micropezidae, Psilidae, Platytonidae, ... and Hiliidiidae (Diptera) collected in Southern Spain with descriptions of six new species.

Milichia speciosa Meigen, 1830.

Material. — GRANADA: Rio Guadalquivir, Orjiva, 300 m. 2 ♀, 2—18 April 1966.

Distribution. — Mediterranean subregion, East Asia. Further recorded from Spain by Encobet (1912:154) and Séguin (1934:19).

Desmometopa m-nigrum Zetterstedt, 1848.

Material. — ALMERIA: Almeria, 0—50 m. 7, 6—22 March 1966 (also W. Hackman); Albufera, 0—50 m. 2, 29 March 1966; Cabo de Gata, 0—50 m. 3, 26 March 1966; Rioja 10 km N, 200—500 m. 2, 12 March 1966; Alhama, 200—500 m. 1, 22 March 1966. — GRANADA: Torrenueva E Motril, 0—50 m. 8, 10—14 April 1966; Rio Guadalquivir, Orjiva, 300 m. 1, 14 April 1966; Sierra de Contraviesa near Rabile, 1300 m. 1, 8 April 1966; Granada, 700 m. 1, 10—14 July 1966 (J. R. Vockeroth); N. slope Velela, Sierra Nevada, 2200—3000 m. 5, 20—30 July 1966 (J. R. Vockeroth); Sierra Nevada Highway, 2000 m. 1, 27 July 1966 (J. R. Vockeroth); Almuñecar, 0—30 m. 1, 16 July 1966 (J. R. Vockeroth).

Distribution. — The main distribution lies in the Mediterranean subregion. Also in Central Europe up to Central Sweden, in North America etc. Localities from Spain are summarized by Encobet (1912:126).

Leptomelopa niveipennis Strobl, 1900.

Material. — GIBRALTAR: 1 ♀, 4 August 1960 (J. R. Vockeroth). Distribution. — Central and South Europe, North Africa, Central Asia. Recorded from Spain by Czerny & Strobl (1909: 278).

Madiza glabra Fallén, 1820.

Material. — ALMERIA: Rioja 10 km N, 200—500 m. 1 ♂, 12 March 1966. — GRANADA: Mañena, 900 m. 1 ♀, 10 July 1960 (J. R. Vockeroth); N. slope Velela, Sierra Nevada, 2800—3000 m. 1 ♂, 20 July 1960 (J. R. Vockeroth).

Distribution. — Widely distributed in the Palearctic Region. Encobet (1912: 105) summarizes the distribution in Spain.

Meoneura Rondani, 1856.

At least five species are represented in the Spanish material. Two of them are easily identified as *obscurella* Fallén, 1823, and *seducta* Collin, 1937. One of the remaining three species is obviously conspecific with *freta* Collin, 1937, the other two are apparently undescribed. The first of these, *M. nevadensis* n. sp., seems by its

brownish halteres and other characters related to the Palearctic *elongella* Zetterstedt, 1838, and the Nearctic *viridis* Sabrosky, 1959, and *nigritrons* Malloch, 1915. As *elongella* is only known in the female type specimen from Lapland, it seems unjustifiable to adopt the Zetterstedt name for the Spanish specimen. The Nearctic species are quite different in their male genitalia. The second new species, *M. grandensis* n. sp., is very distinct from any other Palearctic species. It shows most affinity to the Nearctic *polita* Sabrosky, 1959. The genitalia of actual Spanish specimens of *nevadensis* n. sp., *grandensis* n. sp., *freta* Coll. and *seducta* Coll. are figured. A few additional female specimens of the genus are listed as *Meoneura* sp.

Meoneura nevadensis n. sp. (Figs. 20—21)

Material. — GRANADA: N. slope Velela, Sierra Nevada, 2400 m. 1 ♂ holotype, 25 July 1960; 1 ♀ paratype, 30 July 1960; Same locality, 2800—3000 m. 1 ♂ paratype, 20 July 1960 (J. R. Vockeroth). Holotype and ♀ paratype in Canadian National Collection. Ottawa: ♂ paratype in Zoological Museum, Copenhagen.

Description. — Holotype, male.

Head absolutely black, only extreme anterior margin of frons a little brownish. Ocellar triangle only little differentiated from rest of frons, being less dulled by microscopic punctation. Tip of ocellar triangle situated a little more than half-way of the distance from anterior ocellus to anterior margin of frons. Thorax black, slightly covered by brownish dust. Only one pair of distinct dorsocentral setae.

Wings as normal for the genus, not milky. Halteres with a "dark" knob; its colour being dirty yellowish-brown, not the luminous whitish-yellow as is normal in the genus.

Legs blackish. Fore femora with two anteroventral setae at tip. Abdomen dull blackish with normal pubescence. Basal shell of hypopygium (Figs. 20—21) short, with short setose hairs only. Anal lamellae (Lamellen 3 of Hennig, 1937) very small, not visible in a lateral view, and finely pubescent. Side lamellae (Lamellen 1+2 of Hennig, 1937) shaped like a boxing-glove, the anterior part being larger than the posterior part. The aedeagus has a very stout apical part.

Length. Total: 1.2 mm.

The female paratype agrees closely with the holotype except

for the usual sexual differences in the end of abdomen. The male paratype has the frons entirely black (without brownish anterior margin), and the thorax seems a little more dusted. However, the genitalia are identical with those of the holotype.

***Meoneura freta* Collin, 1937. (Figs. 22—23)**

Material. — GRANADA: Matiena, 900 m, 1 ♂ 2 ♀, 10—11 July 1960 (J. R. Voekeroth).

Distribution. — In fact, hitherto only known in the type-series (4 ♂ 2 ♀) from Blackney Point on the Norfolk coast of England, New to Spain.

Remarks. — The specimens agree closely with Collin's description, and the genitalia of the single Spanish male specimen (Figs. 22—23) are practically identical with those figured by Collin of one of the type-specimens.

***Meoneura granadensis* n. sp. (Figs. 24—25)**

Material. — GRANADA: Granada, 700 m, 1 ♂ holotype, 10 July 1960 (J. R. Voekeroth). In Canadian National Collection, Ottawa.

Description. — Holotype, male.

Head. Frons yellowish-brown with blackish ocellar triangle. The tip of the latter nearly reaches anterior margin of frons. Both parts slightly dulled by microscopic punctation. Frontal setae (2 ors and 2 ori) much shorter than usual in the genus, especially the anterior ors very short and not longer than the postvertical hairs. Face and a wedged-formed area below eyes also yellowish-brown. Rest of gena and whole occiput black. Basal joints of antennae brownish, third joint blackish.

Thorax shining black, absolutely undusted, but slightly dulled by punctation. Thoracic pubescence very scanty and short. Only one distinct pair of dorsocentral setae.

Wings not milky. Halteres with a whitish knob.

Legs blackish, fore femora brownish at base and tip, and with two anteroventral setae at tip. All tarsi annulated.

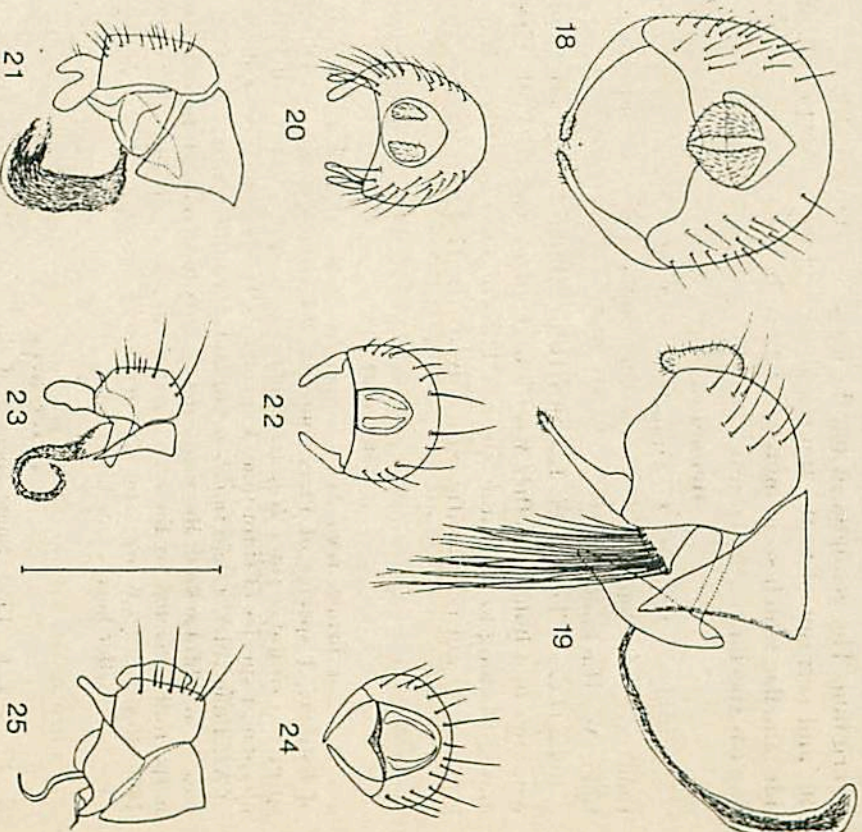
Abdomen coloured as thorax. Hypopygium (Figs. 24—25) with a basal shell shaped as in *freta*, but with three pairs of setae. Anal lamellae (Lamellen 3) distinctly visible in a lateral view, though very weakly sclerotized. Side lamellae (Lamellen 1+2) simple as in *freta*, but of quite different shape. The aedeagus is very slender compared with that of *freta*, the inner copulatory complex on the other hand much larger.

Length. Total: 1.3 mm.

***Meoneura obscurula* Fallén, 1823.**

Material. — ALMERIA: Almeria, 0—50 m, 1 ♂, 22 March 1966. Distribution. — From South Sweden and Great Britain through Central Europe to Greece. Also recorded from Spain.

Remarks. — The female specimens recorded below as *Meoneura* spp. and collected in the same house (on windows) in Almeria as the male above may belong to *obscurula*.



Figs. 18—25. Male genitalia of Spanish *Meoneura*. 18—19, *M. seducta* Coll., Granada: Rio Lanjaron near Lanjaron, 28 April 1966; 20—21, *M. neudentis* n. sp., ♂ holotype, Granada: N. slope Velela, Sierra Nevada, 25 July 1960; 22—23, *M. freta* Coll., Granada: Matiena, 11 July 1960; 24—25, *M. granadensis* n. sp., ♂ holotype, Granada: Granada, 10 July 1960. Figs. 18, 20, 22 and 24 show the genitalia in caudal (ventral) view; figs. 19, 21, 23 and 25 in lateral view. Scale: 0.25 mm.

Meoneura seducta Collin, 1937. (figs. 18—19)

Material. — GRANADA: Rio Lanjaron near Lanjaron, 600 m, 3 ♂, 26—28 April 1966.

Distribution. — Originally described from four pairs, all taken on Grasholm Island off the Pembrokeshire coast, England. Sabrosky (1959a: 23) records it from several states of the U.S.A., and from Greece and Jordan. New to Spain.

Remarks. — The Spanish specimens agree well with Collin's description. The genitalia of one of them are figured (figs. 18—19), and correspond to the figures given by Collin, except for the side lamellae which seem more straight in the Spanish than in the English specimen.

Meoneura spp.

Material. — ALMERIA: Almeria, 0—50 m, 7 ♀, 4—22 March 1966 (also W. Hackman); Rioja, 50—200 m, 1 ♀, 7—14 March 1966 (W. Hackman).

Remarks. — The seven females from Almeria were taken on windows in a house together with a male of *obscurella* Fall. They may all belong to the same species. The single female from Rioja is certainly not conspecific with any of the five species recorded above.

Summary

The paper brings records of 2 species of Micropezidae, 2 species of Psilidae, 1 species of Platystomidae (*Rivellia hispanica* n. sp.), 6 species of Otitidae (incl. *Hypochira abufera* n. sp.), 2 species of Pallopteridae, 1 species of Odiniidae, 1 species of Anthagasteridae, 4 species of Asteiidae (incl. *Asteia trauts* n. sp. and *A. caesia* n. sp.), and 10 species of Miliichidae (incl. *Meoneura nevadensis* n. sp. and *M. grandensis* n. sp.), all collected in the southern provinces of Spain in 1960 and 1966. Besides the 6 new species mentioned above, further 6 species have not earlier been recorded from Spain.

References

- Collin, J. E., 1930: Some species of the genus *Meoneura* (Diptera). — Ent. mon. Mag., 66: 82—89, pl. III.
- , 1937: Two new species of the genus *Meoneura* (Diptera, Carnidae). — Ent. mon. Mag., 73: 250—252, 2 figs.
- , 1952: On the European species of the genus *Odinia* R.-D. (Diptera: Odiniidae). — Proc. R. Ent. Soc. Lond. (B), 21: 110—116.
- Czerny, L. & P. G. Stöckl, 1909: Spanische Dipteren. III. Beiträge. — Verh. zool.-bot. Ges. Wien, 59: 121—301.

- Czerny, L. & E. A. Lander, 1930: 42a. Tylidae und 42b. Neridae, in Lindner: Die Fliegen der palaearktischen Region, Band 5, 18 pp. Stuttgart.
- , 1934: 43. Lonchaeidae, in Lindner: Die Fliegen der palaearktischen Region, Band 5, 40 pp. Stuttgart.
- Duda, O. & W. A. Lander, 1934a: 58b. Asilidae, in Lindner: Die Fliegen der palaearktischen Region, Band 6, 15 pp. Stuttgart.
- , 1934b: 58c. Anthagasteridae, in Lindner: Die Fliegen der palaearktischen Region, Band 6, 5 pp. Stuttgart.
- Encolet, J. A. & A. A. Lander, 1912: Datos para el conocimiento de la distribución geográfica de los Dipteros de España. — Mem. R. Soc. esp. Hist. nat. Madrid, 7: 61—246.
- Freij, R. & A. Lander, 1964: Beitrag zur Kenntnis der ostasiatischen Platystomiden (Diptera). — Not. Ent., 44: 1—19.
- Hennig, W., 1937: 60a. Miliichidae et Carnidae, in Lindner: Die Fliegen der palaearktischen Region, Band 6, 91 pp. Stuttgart.
- , 1938: 60b. Odiniidae, in Lindner: Die Fliegen der palaearktischen Region, Band 6, 11 pp. Stuttgart.
- , 1939: 46/47. Otitidae, in Lindner: Die Fliegen der palaearktischen Region, Band 5, 78 pp. Stuttgart.
- , 1940: 45. Uliidae, in Lindner: Die Fliegen der palaearktischen Region, Band 5, 34 pp. Stuttgart.
- , 1941: 41. Psilidae, in Lindner: Die Fliegen der palaearktischen Region, Band 5, 38 pp. Stuttgart.
- Lignborg, L., 1964: Danske acalyptratae II. 2. Psilidae, Platystomidae og Otitidae (Diptera). — Ent. Medd., 32: 367—88.
- Nambu, R. & J. Lander, 1956: A revision of the flies of the genus *Rivellia* (Otitidae, Diptera) of America north of Mexico. — Proc. U.S. Natl. Mus., 106: 21—84.
- Sabrosky, C. & L. W., 1943: New genera and species of Asteiidae (Diptera), with a review of the family in the Americas. — Ann. Ent. Soc. Amer., 36: 501—514.
- , 1956: Additions to the knowledge of Old World Asteiidae. — Rev. fr. d'Ent., 23: 216—243.
- , 1957: Synopsis of the New World species of the dipterous family Asteiidae. — Ann. Ent. Soc. Amer., 50: 43—61.
- , 1959a: The Nearctic species of the fifth fly genus *Meoneura* (Diptera, Miliichidae). — Ent. Soc. Amer. Ann., 52: 17—26, 1 pl.
- , 1959b: Flies of the genus *Odinia* in the Western Hemisphere. (Diptera: Odiniidae). — Proc. U.S. Natl. Mus., 109: 223—236.
- Séguy, E., 1934: Diptères (Brachycères), (Muscidae Acalyptratae et Scaphophagidae). — Faune de France, 28, 832 pp. Paris.
- Stöckl, A., 1957: Neue Angaben über die palaearktischen Otitiden (Diptera). — Ann. hist.-nat. Mus. nat. Hung., 8: 389—399.