

NOTES ON SOME ANTHOMYIIDAE (DIPTERA) FROM ISRAEL, INCLUDING
THE DESCRIPTION OF A NEW SPECIES OF LEUCOPHORA ROBINEAU DESVOIDY

by D. M. Ackland

Hope department of Entomology, University Museum Oxford

In a small collection of Anthomyiidae made in Israel by Mr. Y. Palmoni, of the A. D. Gordon Agriculture and Nature Study Institute was a single male specimen of the following undescribed species.

Leucophora palmonii sp. n. male

(Figs. 1-5)

Similar in general appearance to *L. uni striata* Zetterstedt, with which it is compared in the following description.

MALE:

Head: eyes separated on frons at narrowest part by nearly twice diameter of anterior ocellus. Interfrontalia black, rather more constricted at narrowest part than in uni striata, and with a pair of short fine cruciate setulose hairs in front of ocellar tubercle, which are absent in unistriata. Third antennal segment and arista short, the latter distinctly pubescent, the total width of hairing equal to about half width of third segment, the hairs on dorsal surface rather longer than the ventral hairs. Parafacials and jowls in front view less shining whitish grey pollinose than in unistriata. Thorax: darker and more brownish grey pollinose than in unistriata, hence the darker mid-stripe much less distinct. pra seta shorter and finer than posterior notopleural seta, as in unistriata. Prosternum (in holotype) without lateral setulae, which are sometimes present in unistriata. Notopleuron bare apart from the two strong setae. Wings and abdomen as in unistriata. Legs: Fore tibia with two pv setae. Mid tibia with one small ad, one pd, two p and a strong ventral seta. Hind femur with a complete row of strong av setae which are well differentiated from the adjacent anterior hairs, and a nearly complete row of pv setae which are shorter and finer. Hind tibia with 3 ad, 3 pd (not counting the pre-apicals) and 4-5 av (in unistriata apparently varying between 5-8). ♂ genitalia: epan-drium with rather long setulose hairs, especially along lower margin. Surstyli long and slender, with lateral fringes of long fine setulose hairs on basal two thirds; in profile quite different from unistriata, in which the surstyli are widened, and more resembling those of sponsa Meigen or grisella Hennig. Cereal plate only bluntly pointed and with very long lateral setae. Aedeagus apparently without lateral lobes, only short sclerotized side pieces which are not free apically.

Body length 5.5 mm., wing length 5 mm.

FEMALE: Unknown.

Holotype male ISRAEL: Kinneret, western shore of the Sea of Galilee, 9. III. 1942, on the body of a living beetle, Scarabaeus sacer L., among a crowd of Ceroptera rufitarsis (Dipt., Sphaeroceridae)(Y. Palmonii). In the A. D. Gordon Agriculture and Nature Study Institute, Deganya A, Israel.

In Hennig's (1967:112) key to males of Palaearctic Leucophora, palmonii would appear to run to the first group of species (grisella, cinerea R. D., sociata Mg.) in which the arista is "lang gefiedert oder lang pubeszent," as opposed to "sehr kurz pubeszent bis praktisch nackt." However these three species are all without a ventral seta on the mid tibia, present in palmonii. The palaearctic species of Leucophora (♂) with a ventral seta on the mid tibia differ from palmonii as follows: unilineata Zett. has the mid tibial ventral seta in a more anteroventral position, cross-vein r-m more sinuate, surstyli without long lateral setulose hairs; tavastica Tiensuu has 5 pv setae on the fore tibia; personata Collin has a setulose notopleuron and longer cercal plate; unistriata Zett., obtusa Zett., and dissimilis Vill. all have a wider surstyli in profile.

L. Palmonii can be incorporated into Hennig's key as follows:

Couplet 1(6) add...... t₂ ohne Ventralborste

6(1) add...... oder wenn länger behaart dann t₂ mit einer Ventralborste

13(14) add...... Notopleura in der Umgebung der beiden n oder zwischen diesen mit einigen Härchen
personata Collin

14(13) add...... Notopleura ganz nackt, mit Ausnahme von den zwei starken Borsten ... and delete... unistriata Zett.

Insert after couplet 14(13)

14a (14b) Fühlerborste mit längerer Behaarung. Kreuzborsten vorhanden, fein und kurz. Die Bestäubung des Thorax ist bräunlichgrau. Paralobi in Profilansicht schlank
palmonii sp. n

14b(14a) Fühlerborste praktisch nackt. Kreuzborsten fehlen. Die Bestäubung des Thorax ist weisslichgrau. Paralobi in Profilansicht verbreitert.
unistriata Zett

Delia arambourgi (Séguy) comb. nov.

(Figs. 8-10)

Hylemyia Arambourgi Séguy, 1938 : 365.

Delia arambourgi was described from specimens of both sexes, captured on Mount Elgon, Kenya. In his figures of the male genitalia Séguy showed (fig. 36) a complicated apical part to the distiphallus, which is not so apparent in the material I consider to be this species from Kenya and Israel; this apical portion is rather membranous and can be seen clearly only when the aedeagus is stained (fig. 10). The profile view of the surstyli in Séguy's fig. 37 shows the apical part slightly curved backwards. In the material from Israel this is not so, but I have examined the male genitalia of specimens from Mt. Elgon (in the British Museum (Nat. Hist.) det. van Emden), Nigeria and Spain, and they all have the surstyli in profile slightly but evenly curving forwards; the appearance in Séguy's figure may be due perhaps to twisting of the surstyli. In the closely related D. flavibasis (Stein) which often occurs with arambourgi the surstyli are slightly curved backwards (fig. 7) but Séguy's description of arambourgi "Abdomen aplati, tergites longuemont ciliés, marquée par une tache triangulaire noire à pointe postérieure" (my italics), clearly points to the species to which I have applied the name.

Van Emden (1951:357) records arambourgi from Uganda, Kenya, Yemen, W. Aden Protectorate, Sudan, Natal, Transvaal, Orange Free State and S. Rhodesia. It has been bred from the stems of rapoko (Eleusine coracana) van Emden, 1951), and Bullock (1965) gives information about its control as a pest of barley in Kenya.

ISRAEL: Deganya A, 2♂, 1.III.1939, 8.III.1965; 18.III.1939, 10.IV.1940, 30.III.1943. Ramat-David (Jezreel Plain) 1♂, 20.VI.1945, reared from stalks of Setaria italica. Tiberias Hot springs, 1♂, 17.XI.1945.

Delia flavibasis (Stein)

(Fig. 6-7)

Chortophila flavibasis Stein, 1903:121

The figures of the male hypopygium are made from a specimen captured in Spain. They differ slightly from the figures I gave of a male from Nepal (Ackland, 1967: 119, Figs. 25-28), mainly in the shape of the cercal plate; these small differences are probably not important, considering the wide distribution of the species.

ISRAEL; DeganyaA, 1 male, 23.IV.1965; 3 females 13.II.1939, 5.III.1939, 7.IV.1966.

Delia arambourgi and flavibasis belong to a group of species in the males of which the prealar seta is absent; there is no blunt posteroventral apical spur on the fore tibia, and the mid and hind legs and abdomen do not have any striking arrangement of setae or setulose hairs. They can be separated by the following key:

- 1(2) Mid tibia with a very small av seta in apical quarter. Fore tibia with only one median pv seta. Abdomen in ♂, viewed from behind, with the dark median stripe narrow, and not widened out on fore-margins of tergites; in ♀ with a very faint narrow dark median vitta. ♂ genitalia: surstyli in caudal view distinctly narrower in apical half than near base. ♀: parafacials without a spot of darker reflections at level of second antennal segment.

flavibasis Stein

- 2(1) Mid tibia without an av seta. Fore tibia generally with 2 small pv setae. Abdomen in ♂ with the dark median stripe widened and diffused along fore-margins of tergites; in ♀ with rather faint median markings which are wider on fore-margins of tergites. ♂ genitalia: surstyli in caudal view distinctly wider in apical two-thirds than near base. ♀: parafacials with a spot of darker reflections at level of second antennal segment.

arambourgi Séguy

Acknowledgements

I should like to thank Mr. Y. Palmoni for sending me this material to study; also Prof. W. Hennig for much help in this and other matters relating to the Anthomyiidae.

References:

- Ackland, D. M., 1967. Diptera from Nepal. Anthomyiidae. Bull. Br. Mus. nat. Hist. (Ent.). 20 (4):107-139
- Bullock J. A., 1965. The control of Hylemya arambourgi Séguy (Dipt. Anthomyiidae) on barley. Bull. ent. Res. 55: 645-661
- Hennig, W., 1967. In Lindner, E. Die Fliegen der Palaearktischen Region 7 63a. Anthomyiidae (Lief. 271): 97-144
- Séguy, E., 1938. Mission scientifique de l'Omo. Diptera I. Nematocera & Brachycera. Mém. Mus. Hist. nat. Paris (N.S.) 8: 319-380
- Stein, P., 1903, In Becker, T. Aegyptische Dipteren. Mitt. zool. Mus. Berl. 2: 1-195
- van Emden, F.L., 1951. Ruwenzori Expedition 1934-5. Muscidae, C. - Scatophaginae, Anthomyiinae, Lispinae, Fanniinae and Phaoniinae. British Museum (Nat. Hist.) 2: 325-710.