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Lispocephala ungulata (Rondani, 1866) (Diptera: Muscidae), a species distinct from *L. alma* (Meigen, 1826)

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With 13 Figures

HENNIG (1961: 482), in his revision of the palaearctic species of *Lispocephala* Pokorny, redescribed *Anthomyia alma* Meigen, 1826, and listed as synonyms, *spuria* (Zetterstedt, 1838), *pallipalpis* (Zetterstedt, 1845) and *ungulata* (Rondani, 1866). COLLIN (1963: 277 ff.) showed that *spuria* is a prior name for the species hitherto known as *vitripennis* Ringdahl, 1951 (= *serena* Collin, 1951), and that *pallipalpis* is a distinct species closely related to *alma*. He also described *falculata* Collin, a new species related to *alma*. HENNIG (1964: 1078), in the additions and corrections to his revision, followed COLLIN's treatment of this group.

The capture by one of us (A. C. P.) of a further species of the *alma*-group in Spain and Morocco, extremely closely related to *falculata*, suggested the possibility that it might be *ungulata* Rond., which HENNIG recorded as a synonym of *alma*. Professor HENNIG, who kindly examined RONDANI's material at our request whilst on a visit to Florence, reported that it possessed a slender cercal plate unlike the broad one of *alma* but similar to that of *falculata* (personal communication, 1. 12. 1964).

Through the courtesy of Professor L. PARDI and Signor A. MARTELLI of the Museo Zoologico de "La Specola", Florence, we have been able to examine RONDANI's material of *ungulata* which consists of two conspecific males, No. 1228 of the RONDANI collection. RONDANI described his species from a single male, but the males we studied were both without any label that might indicate their status. We have dissected and labelled as holotype the male that we consider to fit RONDANI's description most closely. We have concluded that *ungulata* is conspecific with our species from Spain and Morocco, and that it represents a further European species of the *alma*-group.

The holotype bears a small white oval label with the printed legend "1228". We have also labelled it "Holotype ♂ *Coenosia ungulata* Rond. 1866" and have mounted the genitalia on a separate slide labelled "Holotype ♂ *Coenosia ungulata* Rond. 1866, ♂ hypopygium and 5th sternite".

Lispocephala ungulata (Rondani), **comb. nov., stat. rev.**

Coenosia ungulata Rondani, 1866, Atti Soc. ital. sci. Nat., 9: 200.

In some respects the holotype is defective, and the description has been completed by reference to material from Spain. Such additional characters are given in *italics* below.

♂. Head: Eyes practically bare, with only very short sparse microscopic hairs. Eye in profile almost exactly twice as high as wide. *Occiput light grey dusted*. Ocellar triangle, parafrontalia, parafacialia, face and jowls yellowish-grey (*or greyish*) dusted. Frons at vertex one-third of head-width. Ocellar setae strong, directed forwards and

outwards. The strong reclinate vti about twice length of the outcurved vte. Pvt outcurved, subequal to the vte. Upper ors weaker than lower, midway between lower ors and vti or slightly closer to lower ors. Ori crossed, lower pair strong. A few weak proclinate parafrontal setulae level with ori. Parafrontalia slender, at middle of frons parafrontale about one-third width of interfrontalia. Interfrontalia black, rather matt viewed from above, bare and without a furrow. Viewed from in front, epistoma and vibrissal angle *sometimes* rather yellowish. 1st and 2nd antennal segments yellowish, rather infuscated dorsally, 3rd segment dark brown. 3rd segment twice as long as broad. *Arista pubescent, the longest hairs slightly longer than basal arisal diameter.* Parafacialia slender, hardly visible in profile, swollen towards lower anterior eye-angle. Peristoma strongly curved, with strong setulae, jowls at lowest eye-margin as broad as width of 3rd antennal segment. Lower occiput very swollen. Vibrissae strong, crossed. Mentum of proboscis brownish-black, glossy. Palpi yellow.

Thorax: Ground-colour black. *Mesonotum, pleura, metanotum and scutellum densely grey dusted. Mesonotum without vittae, but the brown bristle-dots of dc and ac rows (the former very large) tending to indicate a brownish suffusion in caudal view.* 2 pairs of prst acr, closer to each other than to dc. post acr weak, irregularly biserial. dc 2+3. 2 h, the outer one stronger. 2 ph, the posterior one stronger. 2 ia. 1 sa. pra absent. 2 post-alars, the inner twice the outer. 2 subequal npl, disc of notopleuron otherwise bare. 2 propleurals, the lower one weak. 2 prostigmatala, the lower one curved downwards. Mesopleuron with 3 (—4) setae in caudal row, and with a stronger setula in upper anterior corner. Upper hind stpl the strongest, lower stpl the weakest. Prosternum, pteropleuron, hypopleuron and metanotum bare. *Scutellum with a large dark spot in each basal lateral corner which extends around the base of the sub-basal lateral seta.* 1 pair of apical and 1 pair of sub-basal lateral setae. A few discal setulae. Bare on sides and beneath.

Wings: Clear, cross-veins brownish-clouded. Veins yellow, whitish towards base. Costal spine inconspicuous. Small cross-vein placed somewhat beyond the point where r_1 enters costa. Hind cross-vein slightly curved, hardly sinuate. Squamae white, margins pale yellow, fringes white. *Halteres pale yellow, stalk slightly darker.*

Abdomen: *Tergite 1+2 darkened medially and anteriorly; tergite 3 with a large dark triangular median mark; tergites 4 and 5 wholly dark except for hind margin of tergite 4; otherwise abdomen yellow in ground-colour. Tergites 3, 4 and 5 each with a pair of black spots, placed on a median transverse line. In caudal view with indications of a brown median vitta on tergites 1+2 to 5. Sternite I grey-dusted, bare. Sternites II to V grey basally, otherwise yellow. Tergites 3 and 4 with some erect lateral and marginal setae. Tergite 5 with a row of erect marginals, and a row of erect discals that is very close to fore-margin of tergite.*

Legs: Trochanters, knees and tibiae yellow; coxae and femora black, grey dusted. Tarsi yellow, but 5th segment rather infuscated. The holotype is faded, recent material has the 5th tarsal segment as follows: *on fore tarsus wholly black, on mid and hind tarsus brown except for a narrow basal yellow ring.* Pulvilli pale, claws brown. Fore femur with 7 (—8) long pv setae, and 4 erect av setulae in basal half. Fore tibia with 1 rather long d preapical, *longer than the pd preapical* (which has been knocked off in holotype); 1 pv preapical; no median setae. 4th fore-tarsal segment slightly shorter than 5th. Mid femur with 3 (—4) long pv setae in basal half; without av setae. Mid tibia with 1 submedian p seta. Hind femur with 6 long av setae, as long as or longer than femoral diameter; (3—) 4 weaker pv setae in basal two-thirds. Hind tibia with 1 very strong d preapical; 2 weak pd setae in basal half; 2 ad setae, and a stout ad preapical; 1 av in apical half.

Length: Body 4.5—5.5 mm, wing 4.0—5.0 mm.

Material examined:

Except for the holotype, all material is in the British Museum (Natural History), London. Specimens have also been sent to the Hope Department of Entomology, Oxford; Staatliches Museum für Naturkunde, Stuttgart; Deutsches Entomologisches Institut, Eberswalde bei Berlin; Museo Zoologico de "La Specola", Florence.

Holotype ♂, ITALY: near Bologna, ——— (TACHETTI). SPAIN: Sierra de Guadarrama, swept around stream near Gudillos, circa 1400 m, 18. and 19. VIII. 1963 (A. C. PONT), 82 ♂♂, 30 ♀♀; San Rafael, pine forest and bracken hills, 1260–1500 m, 19. VIII. 1963 (A. C. PONT), 6 ♂♂, 4 ♀♀. MOROCCO: Haut Atlas, Jebel Ayachi, numerous localities between 13. VII. 1963 and 9. VIII. 1963 (A. C. PONT), 18 ♂♂, 14 ♀♀. ———: ———, ——— (F. WALKER), 1 ♂ (identified as *ungulata* by MEADE).

Key to the males of the *alma*-group of *Lispocephala*

The *alma*-group includes species of *Lispocephala* with 1 pd and 0 ad seta on mid tibia, mid and hind femur dark, and both cross-veins clouded. Females of *alma*, *falculata* and *ungulata* cannot be distinguished at present.

- 1. Mesonotum with two broad brown lateral longitudinal vittae, the inner margins of which lie between the dc and acr, and the outer margins above the ia setae *bistriata* (Stein)
- Mesonotum with at most a narrow brown longitudinal line along the dc setae 2
- 2. Cercal plate wider, apical section about half as wide as long, and rapidly narrowing to apex (fig. 12). Base of lobes of 5th sternite with a group of 3–4 strongly flattened setae (fig. 6); postgonite with a rounded, partly membraneous area below the hook-like apex (fig. 9). (Fore tarsi with the 4th segment as long as the 5th, the latter with the basal third yellowish, the rest black. Longest arisal hairs not longer than basal diameter of arista) *alma* (Mg.)
- Cercal plate narrower, apical section at most one-third as wide as long, and gradually narrowing to a point at apex (figs. 1, 11, 13) 3
- 3. Hind tibia on outer (anterior) surface with some setulae which are stronger and more erect than those on other surfaces. Lobes of 5th sternite rather long, setae at their bases normal and rather sparsely grouped; postgonite with a long ventral projection which is constricted basally (fig. 10). (Fore tarsi with 4th segment slightly shorter than 5th, the latter wholly black. Longest arisal hairs not longer than basal diameter of arista) *pallipalpis* (Zett.)
- Hind tibia with only normal fine setulae on all surfaces. Lobes of 5th sternite shorter. Longest arisal hairs slightly longer than basal diameter of arista 4
- 4. Fore tarsi with 4th segment slightly shorter than 5th, the latter almost completely black, except extreme base which is yellowish. Aedeagus: postgonite with a blunt projection below the sharply pointed apex (fig. 4) *ungulata* (Rond.)
- Fore tarsi with 4th segment as long as 5th, latter with almost the basal third yellowish. Aedeagus: postgonite of simple shape, without projections below apex (fig. 8) *falculata* Collin

Summary

Coenosia ungulata Rondani, 1866, is raised from the synonymy of *Lispocephala alma* (Meigen, 1826), and the redescription is based on material from Italy, Spain and Morocco. A key to the European males of the *alma*-group is given, with illustrations of the genitalia.

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Zusammenfassung

Coenosia ungulata Rondani, 1866, wird aus der Synonymie von *Lispocephala alma* (Meigen, 1826) erhoben und nach Exemplaren aus Italien, Spanien und Marokko wiederbeschrieben. Eine Bestimmungstabelle für die europäischen Männchen der *alma*-Gruppe wird mit Abbildungen der Kopulationsapparate dargestellt.

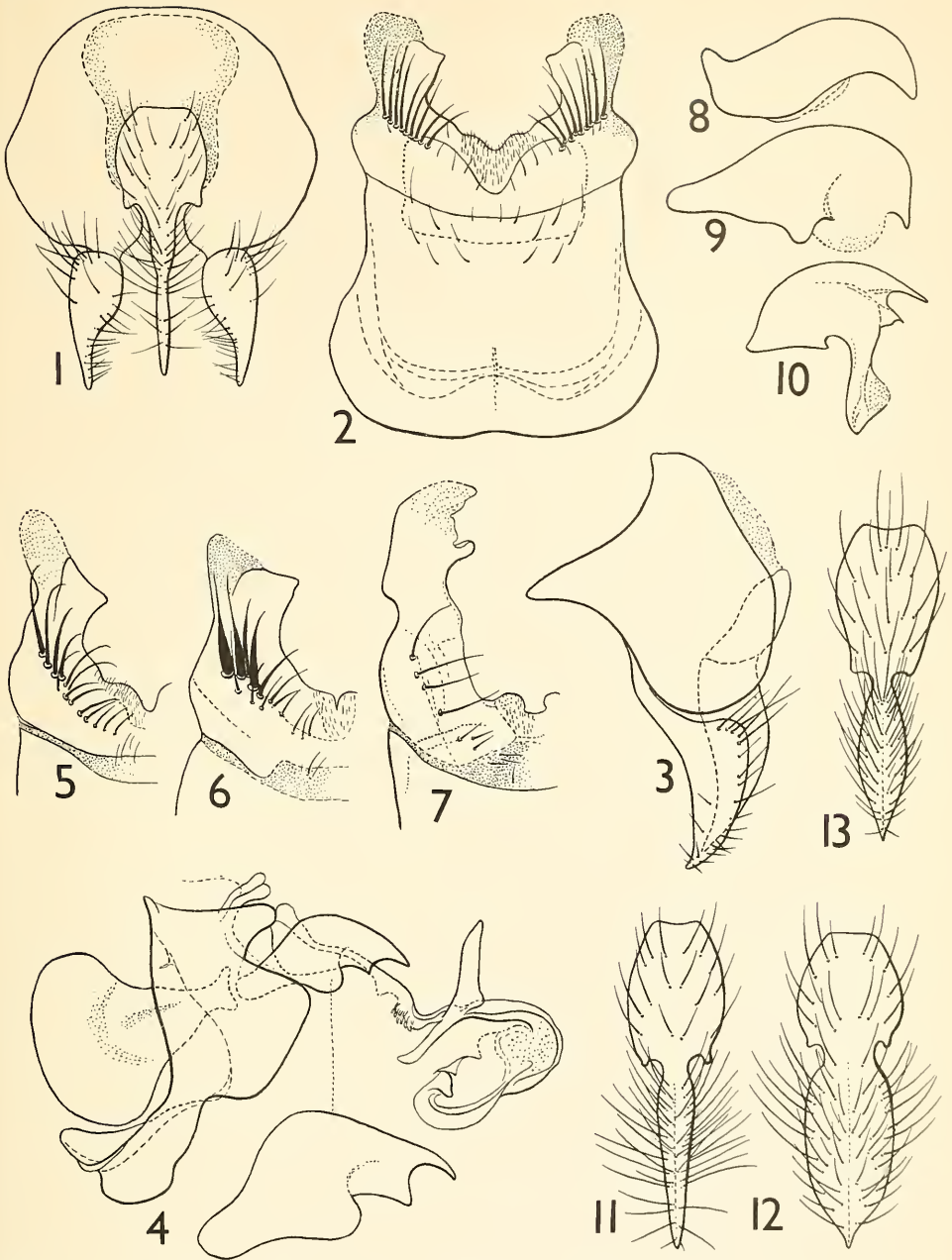
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Figs. 1—4: *Lispocephala ungulata* (Rond.), holotype, 1, hypopygium, caudal aspect, 2, 5th sternite, 3, hypopygium, lateral aspect, 4, aedeagus; figs. 5—7: left lobes of 5th sternites, 5, *L. falculata* Collin, 6, *L. alma* (Mg.), 7, *L. pallipalpis* (Zett.); figs. 8—10: postgonites, 8, *L. falculata* Collin, 9, *L. alma* (Mg.), 10, *L. pallipalpis* (Zett.); figs. 11—13: cercal plates, caudal aspect, 11, *L. falculata* Collin, 12, *L. alma* (Mg.), 13, *L. pallipalpis* (Zett.).

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