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Baeoura directa (KUNTZE, 1914), with the Description of a New Species from Spain (Diptera, Limoniidae)

With 10 Figures

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Abstract. A redescription is given of *Baeoura directa* (KUNTZE, 1914) and the lectotype of this species is designated. *Baeoura ebenina* sp. n. is described from Spain. A key to European *Baeoura* species is presented.

Baeoura ALEXANDER, 1924 (type-species *Erioptera nigrolatera* ALEX. (Afrotropical); orig. des.) was originally described as a subgenus of *Erioptera* MEIGEN, 1803. Subsequently, it was transferred to the genus *Cryptolabis* OSTEN-SACKEN, 1859 and finally raised to full generic rank comprising at present some 60 species. The centre of distribution of *Baeoura* seems to be in the Oriental region where more than 40 forms are known to occur; fewer representatives are Afrotropical and East Palearctic, with a single species known from Chile. In Europe, the genus was recorded only recently by MENDL & TJEDER (1974) who described a new species from the isle of Crete, *B. alexanderi*, and, later (MENDL & TJEDER, 1976), added another one from the Greek mainland and the isle of Rhodos, viz. *B. malickyi*.

During the study of *Psiloconopa directa* KUNTZE, 1914 I have found that two species are involved, both belonging to *Baeoura*. Though very similar in general appearance they differ considerably in the structure of the male and female genitalia. In the present paper, *B. directa* is redescribed, with lectotype designation, and the description is provided of a new species from Spain. A key is attached for all the four European *Baeoura* species.

For providing me with the material of *Baeoura* I am much indebted to Dr. R. KRAUSE (Staatliches Museum für Tierkunde, Dresden), Dr. R. CONTRERAS-LICHTENBERG (Naturhistorisches Museum, Wien), Dr. J. ROHÁČEK (Slezské muzeum, Opava) and Dr. Theowald VAN LEEUWEN (Instituut voor taxonomische Zoölogie, Amsterdam). Mr. A. M. HUTSON (British Museum (Natural History), London) has kindly checked the English of this article.

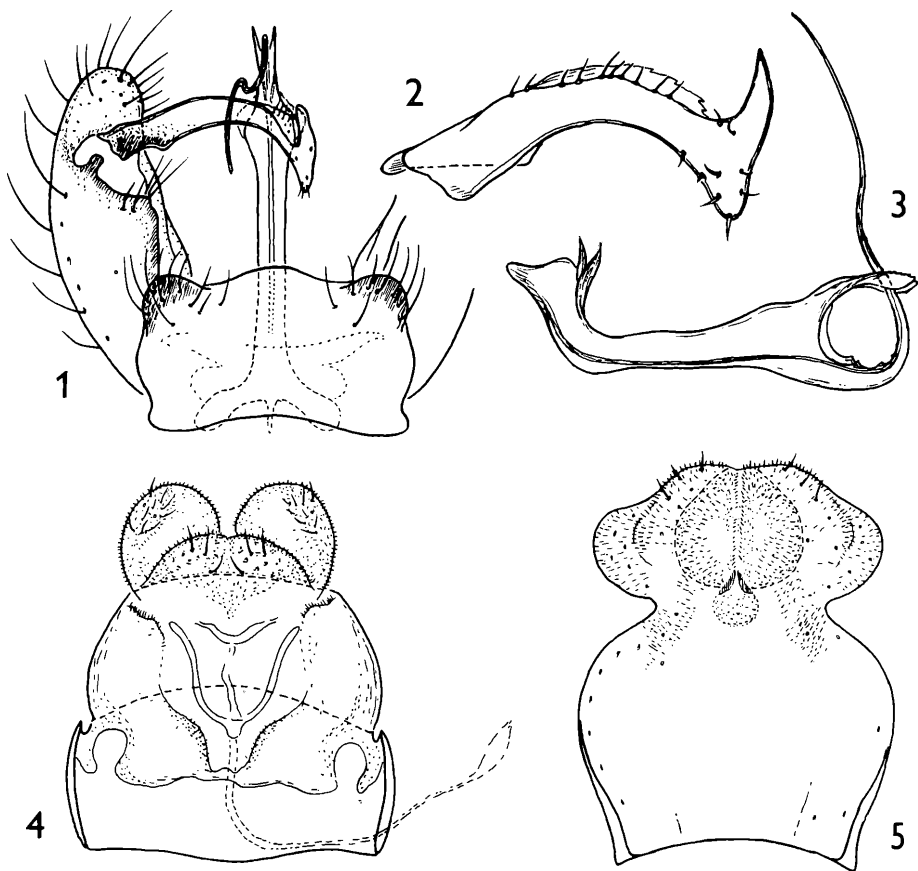
***Baeoura directa* (KUNTZE) (Figs. 1–5)**

Psiloconopa directa KUNTZE, 1914, Ann. k.k. naturhist. Hofmus. 28: 384–385, Fig. 61 (wing).

Other references PIERRE, 1924: 111 (Fig., key); EDWARDS, 1928: 184; (both records only refer to the data from KUNTZE, 1914).

Body colouration generally polished brownish black (described as black by KUNTZE, 1914 possibly discoloured by fading in the examined specimens; see the discussion under *directa*). Thorax with a light yellow pleural stripe along the lateral suture of mesoscutum and with light yellow scutellum. Wings infuscated, Sc₁ ending approximately opposite the mid-length of R₂₊₃. Body length 3.5–4 mm, wing length 4.5–5

Head heavily grey pruinose on vertex. Rostrum and palpi brown. Antennae 15-segmented as usual in the genus, bent backwards reaching to about the

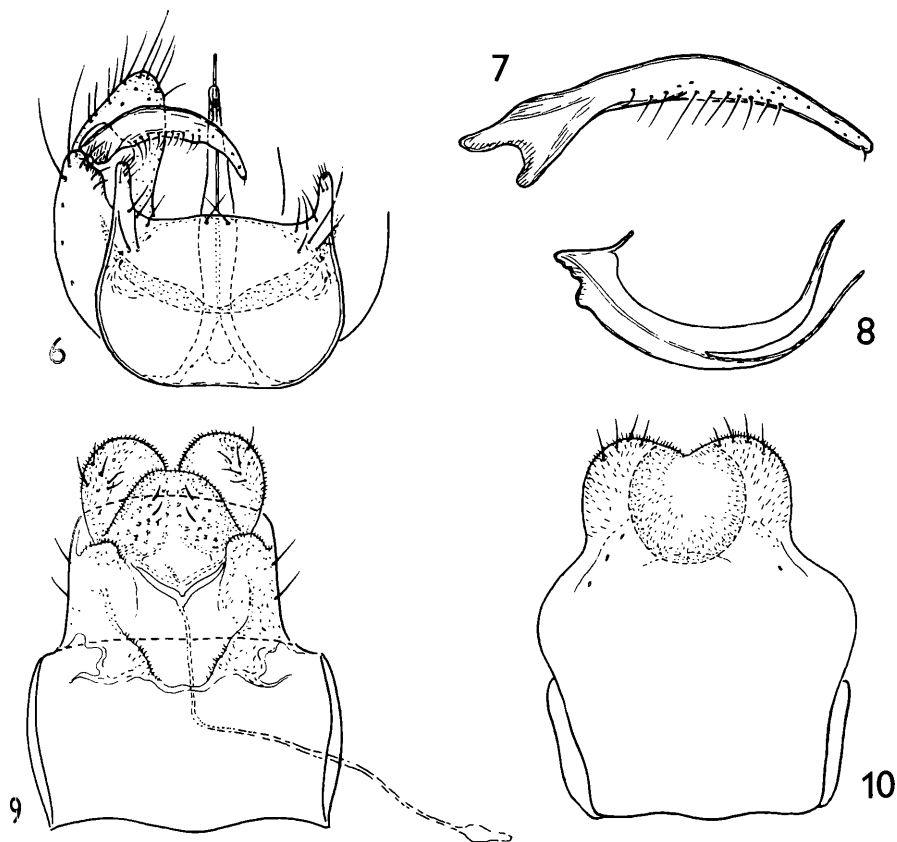


Figs. 1–5. *Baeoura directa* (KUNTZE).

1–3: Male genitalia (specimen from Corsica, Vizzavona, 4.–10. VIII. 1971), general view, dorsal (1), dististyle, dorsal (2) and penis, lateral (3). 4–5: Female genitalia (specimen labelled „Corse, 14. VIII. 99, Monte d'Oro“), dorsal portion (distal tergites and cerci), ventral (4) and ventral portion (subgenitale and the fused valves), ventral (5).

bases of wings. Scape cylindrical, pedicel relatively large, oval. Proximal flagellar segments short-oval, gradually decreasing in width towards the apex of the antenna; distal segments elongate, rather slender. The longest verticils about twice as long as the respective segments.

Thorax generally brownish black in the examined specimens, mostly shining; restrictedly grey pruinose. Pronotum yellowed laterally. Praescutum brownish black, shining, without any stripes on the disc, patterned with light yellow on extreme lateral margin in humeral region and near the bases of wings. Scutum with little distinct obscure yellow markings near the bases of wings. Scutellum light yellow, dark brown only medially on extreme anterior margin. Postscutellum brownish black, shining, anterior corners yellowed. Pleurae of much the same basic colouration as the dorsal parts of thorax, however, sparsely silvery grey pruinose. Areas along

Fig. 6-10: *Baeoura ebenina* sp. n.

6-8: Male genitalia (paratype, Andalusia, Algeciras, 22.-27. V 1925), general view, dorsal (6), dististyle, dorsal (7) and penis, lateral (8). 9-10: Female genitalia (paratype, Andalusia, Algeciras, 12.-20. V 1925), dorsal portion (distal tergites and cerci), ventral (9) and ventral portion (subgenitale and the fused valves), ventral (10).

lateral suture of praescutum with a light yellow pattern that forms, together with the praescutal markings, a conspicuous, nearly continuous longitudinal stripe. Wings infuscated, generally appearing somewhat broader than in *B. ebenina* sp. n. Stigma not indicated or very faint. Venation generally usual for the genus. Sc_1 ending beyond the fork of R_s , at about half the length of R_{2+3} or a little beyond. Halteres infuscated with the base yellowed. Coxae and trochanters yellowish brown to brown. The rest of legs brown to dark brown, bases of femora somewhat paler.

Abdomen dark brown, sparsely grey pruinose. Male genitalia (Figs. 1-3): 9th tergite transversely oblong, its posterior margin trilobed, the lobes short and broad, lateral ones darkened and each provided with a loose tuft of setae. Basistyle broad basally, with somewhat bilobed dorsal extension and produced into a broad and blunt apical lobe beyond the insertion of the dististyle. Dististyle subterminal, long and powerful, of somewhat scythe-like shape, curved and gradually narrowed distally, outwardly broken subapically to form a somewhat recurved conspicuous subacute

spine. Outer surface of the dististyle with a serrate membraneous crest. Penis conspicuous and complex, proximal half relatively stout, gradually broadening distally, especially in lateral aspect, with a fork-shaped dorsal structure at about mid-length, then strongly curved upwards and produced into an extremely long sinuous filament that passes between the prongs of the fork. Other details are evident from Figs. 1–3.

♀: In general appearance resembling the male.

Female genitalia (Figs. 4–5) strongly modified as usual in the genus. 9th tergite about as long as 8th tergite and nearly as wide at base, narrowed distally. Cerci and valves reduced, fleshy. Cerci appearing as two broad and short rounded scales, subequal in length to 9th tergite. Subanale broad and very low, posterior margin broadly rounded. Subgenitale broad, dilated, with rounded lateral margins. It is fused to the valves which are fused to each other. The whole structure shaped as shown in Fig. 5, strongly constricted near the bases of valves, the valves conspicuously expanded laterally. Internal structures, including the spermatheca, as in Fig. 4, very pale and inconspicuous.

Lectotype ♂ (by present designation): Corsica, V 1907 (without collector's name); deposited in coll. Staatliches Museum für Tierkunde, Dresden. Labels: „Korsika V 1907“ „Samml. A. Kuntze Vermächtn. 1933. I“ „Staatl. Museum für Tierkunde, Dresden“ „Lectotypus *Baeoura directa* Kuntze ♂ Starý des. 1979“ (red).

Paralectotype Corsica, V 1907, 1 ♀ (without collector's name); deposited with lectotype. Labelled as for lectotype (first 3 labels) and accordingly labelled as paralectotype by the present author.

Other material examined (5 ♂♂, 2 ♀♀)

4 ♂♂ and 2 ♀♀ from Corsica: 3 ♂♂ and 1 ♀ labelled „VII Corsica 99. W Schnuse“ 1 ♂ „Corsica 10. VII. 99. W Schnuse“ and 1 ♀ „Corse 14. VIII. 99 Monte d'Oro“ each specimen with further labels „Samml. A. Kuntze Vermächtn. 1933. I“ „Staatl. Museum für Tierkunde, Dresden“ and my identification label; all in coll. Staatliches Museum für Tierkunde, Dresden (the latter female now in author's collection). Corsica, Vizzavona (850–950 m), 4.–10. VIII. 1971, 1 ♂ (A. C. et W. N. ELLIS leg.); deposited in coll. Instituut voor taxonomische Zoölogie, Amsterdam.

Altogether 5 male and 3 female specimens, as listed above, are deposited under „*directa*“ in KUNTZE's collection in the Staatliches Museum für Tierkunde, Dresden (1 ♀ now in author's collection; see material examined). They were sent to me for study through the kind assistance of Dr. R. KRAUSE. All the specimens belong to the single species and were collected in Corsica. None is, however, labelled as type or the like. Judging from particular labels they come from two sources. 4 males and 2 females were collected in 1899 by W SCHNUSE and 1 male and 1 female, without collector's name, in 1907¹⁾. KUNTZE's original description is based on 4 males (KUNTZE, 1914: „Ich besitze vier ♂ aus Korsika“) and, consequently, only 4 syntypes are acceptable. I have selected the male and the female collected in 1907, e. the specimens lacking the name of collector, and designated them as lectotype and paralectotype respectively. It is assumed here that if KUNTZE had based his description on any of the specimens indicated as collected by W. SCHNUSE he would

¹⁾ W SCHNUSE collected Diptera at Vizzavona, Corsica, in June and July 1899 (cf. KUNTZE, 1913), the data on the labels thus coinciding exactly this period of time. As follows further from the cited paper, KUNTZE himself took part in an expedition to Corsica in 1905. It remains in question whether the two 1907 specimens, if correctly labelled, were collected by KUNTZE or not. Anyhow, the problem appears irrelevant in respect to the following discussion on the lectotype designation.

have mentioned the name of the collector, as he did in comparable cases throughout the relevant paper (viz. KUNTZE, 1914). Accordingly, it may be concluded that (1) the other two syntypes are lost or deposited elsewhere, (2) due to strong modification of female ovipositor in *Baeoura*, the paralectotype female was erroneously considered by KUNTZE to be a male and that (3) the other 6 specimens deposited in the Dresden Museum were not known to KUNTZE at the time he described the species or were not taken into consideration.

KUNTZE's description of *Psiloconopa directa* generally applies to both species treated in this paper, his statement that the antennae are 16-segmented being evidently erroneous. Body colouration, especially on the thorax, is, however, indicated as being „glänzend schwarz“ by KUNTZE (1914) whilst the specimens listed above proved to be brownish black rather than black. Most probably, this is due to discolouration by fading of this old material. It may therefore be assumed that the fresh specimens of *B. directa* are, in fact, polished black, practically identical with *B. ebenina* sp. n. in this respect. The same is possibly true for the colouration of wings and some other parts of the body which almost certainly will prove to be somewhat darker than described above. The one specimen collected in 1971 (see material examined) is discoloured by grease.

Accordingly, *B. directa* seems to be very similar to *B. ebenina* sp. n. in general appearance, being just a little smaller and differing slightly in the yellow thoracic markings. The pattern appears to be brighter in the former species, light yellow, and somewhat more extensive, forming a conspicuous, nearly continuous longitudinal pleural stripe along the lateral suture of praescutum (more obscure in *B. ebenina* sp. n., rather dirty white to pale yellow, and less extensive, the pleural stripe broken into individual patches). Sc_1 is distinctly longer in *B. directa*, ending beyond the fork of R_s , at about half the length of R_{2+3} or a little farther (shorter in *B. ebenina* sp. n., ending before the fork of R_s , at about $\frac{4}{5}$ to $\frac{5}{6}$ the length of R_s). The distinctions in the structure of the antennae and the outline of wings are somewhat less evident. However, the principal diagnostic features for the two species may be found in the structure of the male and female genitalia. These organs are highly species-specific differing in nearly every detail, including, above all, the shape of 9th tergite, the dististyle and penis in males and the shape of 9th tergite and subgenitale in females, as illustrated in the attached figures.

Distribution Corsica (material examined; cf. also KUNTZE, 1914; PIERRE, 1924; EDWARDS, 1928). The record from Spain by LACKSCHEWITZ (1940) refers to *B. ebenina* sp. n.

***Baeoura ebenina* sp. n. (Figs. 6–10)**

Psiloconopa directa; LACKSCHEWITZ, 1940, Ann. naturhist. Mus. Wien 50 (1939): 47 (nec *Psiloconopa directa* KUNTZE, 1914).

Body colouration generally polished black. Thorax with a dirty white to pale yellow pattern along the lateral suture of praescutum and with pale yellow scutellum. Wings strongly infuscated, Sc_1 ending before the fork of R_s , at about $\frac{4}{5}$ to $\frac{5}{6}$ the length of R_s . Body length 3.5–5 mm, wing length 4.5–5.5 mm.

♂ **Head** heavily grey pruinose on vertex. Rostrum and palpi black. Antennae dark brown, 15-segmented, appearing somewhat longer than in *B. directa*, with the flagellar segments more elongate, proximal ones oval to long-oval, distal ones nearly cylindrical. Verticils comparatively shorter, at most 1.5 times as long as the respective segments.

Thorax generally polished black, restrictedly grey pruinose. Pronotum entirely

black. Praescutum polished black, patterned with pale yellow on extreme lateral margin in humeral region and near the bases of wings. Scutum with the yellow markings near the bases of wings indistinct. Scutellum yellow, blackened medially on extreme anterior margin. Postscutellum entirely black. Pleurae of much the same basic colouration as the dorsal parts of thorax, but sparsely silvery grey pruinose. Areas along the lateral suture of praescutum restrictedly patterned with dirty white to pale yellow. Generally, the pattern is more obscure and less extensive than in *B. directa*, the pleural stripe being not so apparent. Wings strongly infuscated, somewhat narrower than in the latter species. Stigma not indicated or very faint. Venation generally usual for the genus differing from that of *B. directa* in that Sc_1 is shorter, ending distinctly before the fork of Rs, at about $\frac{4}{5}$ to $\frac{5}{6}$ the length of Rs. Halteres infuscated, including the base. Coxae brownish black, trochanters brown. The rest of legs dark brown to black, bases of femora somewhat paler.

Abdomen black, sparsely grey pruinose. Male genitalia (Figs. 6–8) 9th tergite transversely oblong to nearly subquadrate, each lateral angle of its posterior margin produced into a conspicuous straight rod-like projection that is obtuse and haired apically. Margin between the projections nearly straight. Basistyle generally similar to that of *B. directa*, dorsal extension and apical lobe somewhat differently shaped, the latter longer and more slender apically. Dististyle subterminal, simple, moderately curved and gradually narrowed to an obtuse apex. Penis of quite different structure, as compared with *B. directa*, shaped as in Fig. 8, curved upwards, deeply bifid in lateral aspect, with a relatively long and somewhat sinuous simple prong above the actual penial filament. Both parts subequal in length. Other details are evident from Figs. 6–8.

♀: In general appearance resembling the male.

Female genitalia (Figs. 9–10) 9th tergite about as long as 8th tergite, however, distinctly narrower, subquadrate. Cerci of much the same shape as those of *B. directa*, broad and short, scale-like. Subanale higher and narrower than in the latter species. Subgenitale and the fused valves shaped as in Fig. 10, the former approximately quadrate, the latter not expanded laterally. Internal structures, including the spermatheca, as in Fig. 9, very pale and inconspicuous.

Holotype ♂ Spain, Zanara nr. Ronda (Andalusia), 18.V 1979 (J. ROHÁČEK leg.); deposited in author's collection.

Paratypes Spain, Zanara nr. Ronda (Andalusia), 18.V 1979, 1 ♀ (J. ROHÁČEK leg.); deposited with holotype. Spain, Andalusia, Algeciras, 22.–27.V 1925, 1 ♂ (H. ZERNY leg.) (a quite teneral specimen; recorded as *directa* by LACKSCHEWITZ, 1940), 12.–20.V 1925, 1 ♀ (H. ZERNY leg.) (possibly likewise recorded as *directa* by LACKSCHEWITZ, 1940 but considered a male); both specimens in coll. Naturhistorisches Museum, Wien.

The new species resembles considerably *B. directa* in general appearance differing in details of body colouration, the length of Sc_1 and other features as discussed under the latter species and indicated in the key. It is readily separable by striking distinctions in the structure of the male and female genitalia as shown in the attached figures.

Distribution Spain (Andalusia) (material examined; cf. also LACKSCHEWITZ, 1940 under *directa*).

Key to European species of *Baeoura*

1 Body colouration yellowish brown.

— Body colouration polished brownish black to black.

2

3

2 Smaller species (wing length 3–3.2 mm); Sc_1 ending shortly beyond the fork of Rs ; male genitalia: 9th tergite relatively broad, its posterior margin with a broad shallow emargination and projecting corners; dististyle short, gradually narrowed, obtuse and simple apically; penis dilated in proximal half, spindle-shaped in dorsal aspect, produced into a long filament; female genitalia: subgenitale with the projections near the bases of the fused valves small and inconspicuous; (cf. MENDEL & TJEDER, 1974, Figs. 1–10). — Isle of Crete. **B. alexanderi** MENDEL & TJEDER

— Larger species (wing length 4.4–5 mm); Sc_1 ending opposite or just before the fork of Rs ; male genitalia: 9th tergite narrow, its posterior margin with a U-shaped medial notch, lateral projections low, obliquely truncate to very shallowly emarginated; dististyle longer, dilated and twisted apically; penis slender, not dilated, its filament shorter; female genitalia: subgenitale with the projections near the bases of the fused valves relatively long and well separated; (cf. MENDEL & TJEDER, 1976, Figs. 1–9). — Greek mainland, Isle of Rhodes.

B. malickyi MENDEL & TJEDER

3 Pattern on thorax light yellow forming a conspicuous, almost continuous longitudinal stripe on pleurae; Sc_1 long, ending beyond the fork of Rs , at about half the length of R_{2+3} ; male genitalia: 9th tergite trilobed posteriorly, the lobes short and broad; dististyle long, somewhat scythe-shaped, with a conspicuous recurved subapical spine; penis stout in proximal half, with a fork-shaped dorsal structure at about mid-length, then strongly curved upwards and produced into an extremely long sinuous filament; female genitalia: subgenitale broad, dilated, strongly constricted near the bases of the fused valves, the valves conspicuously expanded laterally (cf. Figs. 1–5). — Corsica.

B. directa (KUNTZE)

— Pattern on thorax more obscure, dirty white to pale yellow, and less extensive, a continuous pleural stripe not apparent; Sc_1 shorter, ending before the fork of Rs , at about $4/5$ to $5/6$ the length of Rs ; male genitalia: 9th tergite with each lateral angle of its posterior margin produced into a straight rod-like projection; dististyle simple, moderately curved and gradually narrowed to an obtuse apex; penis deeply bifid in lateral aspect, moderately curved upwards, with a long simple prong above the actual penial filament; female genitalia: subgenitale subquadrate, the valves not expanded laterally (cf. Figs. 6–10). — Spain (Andalusia).

B. ebenina sp. n.

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