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Two new *Rhopalopterum* species from England (U. K.) and Hungary

(Insecta, Diptera, Chloropidae)

With 3 Plates

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Introduction

A series of *Rhopalopterum* specimens similar in general fascies to *Rh. femoralis* (COLLIN) have been studied in this partial review of the genus. Two new species have been recognised in Hungarian and British collections. A Lectotype is formally designated for *Rh. femoralis*.

Lectotype Designation

COLLIN (1946) did not designate or label any specimen as "Type" of *Lioscinella femoralis*. In the VERRALL-COLLIN Collection there are 5 ♂♂ and 7 ♀♀ from Cambridgeshire, Chippenham Fen, 29. V 1930 and a ♂ and ♀ from Suffolk, Newmarket, Sussex Lodge, dry artificial pond; 5. VI. 1942 and 29. V 1943 respectively. A ♂ labelled Chippenham Fen 29. 5. 1930 with the genitalia etc. mounted either in Canada Balsam or Euparol on a piece of clear acetate sheet is hereby designated Lectotype ♂ of *Lioscinella femoralis* COLLIN, 1946 in new combination **(comb. n.)** with *Rhopalopterum* DUDA, 1927 (SABROSKY, 1980) and is in the Hope Entomological Collections, Oxford.

Rhopalopterum crucicarinatus sp. n. (Plate 1)

Mesonotum shining, humerus, notopleuron and scutellum dusted, f_{1-3} black with yellow tips, t_{1-3} yellow-brownish with median dark band.

Male Head higher than long (fig. 1–1). Frons a little longer than wide and slightly narrowed anteriorly; frontal triangle shining black posteriorly almost as broad as frons with slightly convex side margins, extending nearly ⅔ length of the frons. Face concave without cheeks. Eyes large and hairy, almost vertical with straight posterior margin (fig. 1–1). Gena narrower than the diameter of t_1; vibrissal corner rounded. Antenna genotypical; the flagellum of the arista 2x longer than basal segment, with pubescence as long as the diameter of the basal segment, with pubescence as long as the diameter of the basal part. Proboscis and palpi black-brown. Pubescence and bristles genotypical, dark; pstm undistinguishable from vi.

Thorax shining black; humerus, notopleuron, scutellum, scutellar suture and upper ⅓ of the meso- and pteropleuron dusted. The pubescence with thick hairs arranged in rows in the first ⅓ of the mesonotum only. Bristles genotypical with chaetotaxy: h – 1 normal + 2 smaller; a npl smaller than p npl. Legs predominantly black; f_{1-3} black with yellow tips; t_{1-3} yellow-brown with black-brown band in the middle, especially t_3; $tars_{1-3}$ yellow, the last 2 joints dark brown; f_2 with femoral organ (fig. 1–5). Wing slightly yellowish, 2.3 times longer than wide; ta–tp almost 3 times longer than tp and equal to ba.

Abdomen long, oval, black, thiny dusted with long brownish hairs and bristles. The tergites approximately equal in length. Sternites 2–5 relatively wide with rounded corners (fig. 1–6).

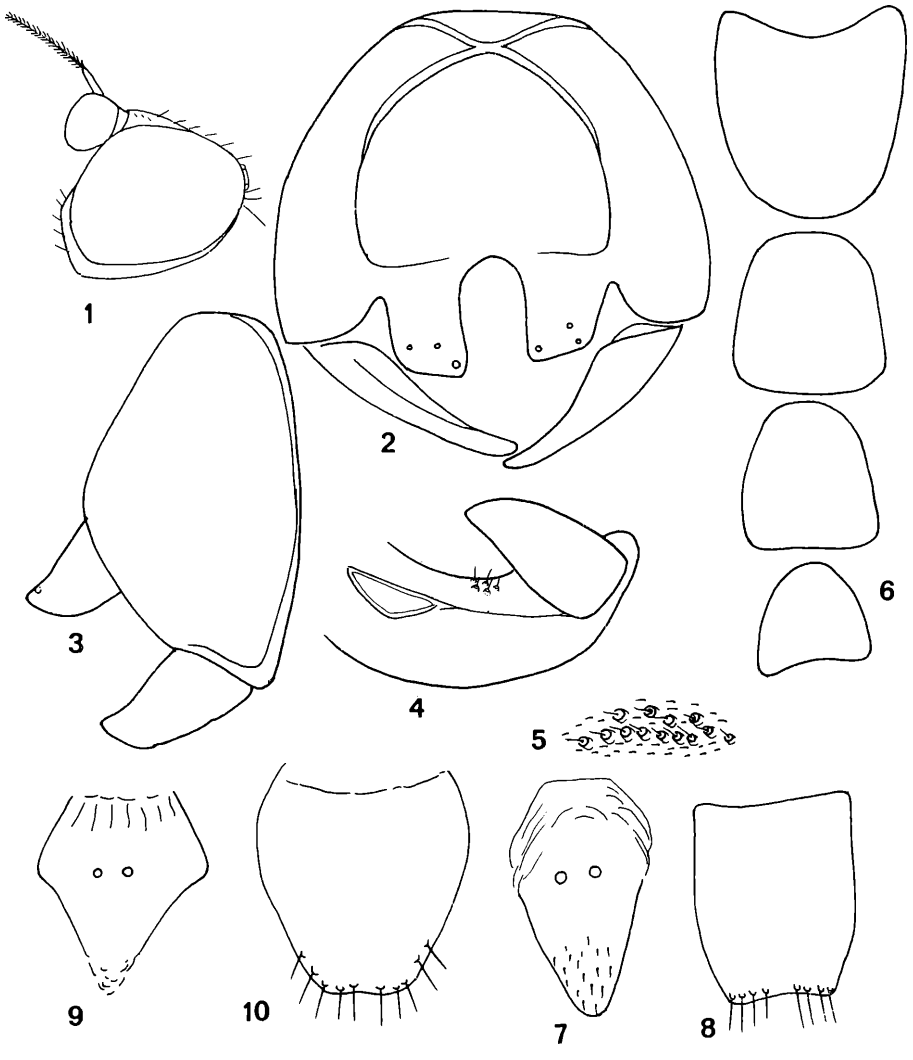

Plate 1. *Rhopalopterum crucicarinatus* sp. n.
1 – Head, lateral; 2 – epandrium, posterior; 3 – epandrium, lateral; 4 – epandrium, left part, antero-ventral; 5 – femoral organ; 6 – male abdominal sternites 2–5, ventral. 7–8. Female from England: 7 – supraanal plate; 8 – subanal plate. 9–10. Female from Hungary: 9 – supraanal plate; 10 – subanal plate.

Genitalia Epandrium short and high (fig. 1–3); cerci wide and long, widely separated, parallel or slightlyl convergent disstally (fig. 1–2); the distance between cerci almost equa to the width of the cercus; on the inner side of the epandrium between the cercus and surstylus a small group of hairs arising from distinct granulae (fig. 1–4); on the upper part of the interior of the epandrium an X-shaped thickened edge (fig. 1–2). Hypandrium open distally; surstylus and cercus tapering lateraly (fig. 1–3).

Length 1.8–2.1 mm.

The females resemble the male. Sternites 2–5 are narrow and prolonged. Supraanal plate narrow with hairly apical end (fig. 1–7); subanal plate prolonged with straight or convex sides without hairs exept on the margin (fig. 1–8).

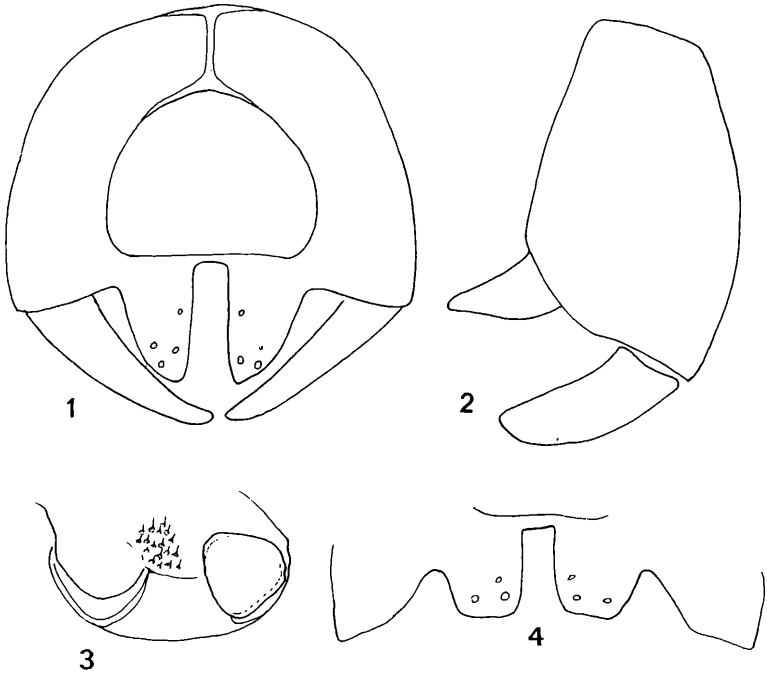

Plate 2. *Rhopalopterum femoralis* (COLLIN).
1 – Epandrium, posterior, slightly dorso-apical; 2 – epandrium, lateral; 3 – epandrium, left part, antero-ventral (inside); 4 – cerci, slightly postero-ventral.

Material studied 1 ♂ holotype, England, Norfolk, Horning Ferry, 26. V 1954, leg. J. E. COLLIN; paratypes: 2 ♂ – same locality, 25. V 1954; 3 ♀ – same locality, 7 VI. 1954; all in the Hope Entomological Collections University Museum Oxford; 2 ♂, 1 ♀ from Hungary, Darany, 23. VI. 1982, leg. V BESCHOVSKI; all in the author's collection in the Zoological Institute, Bulgarian Academy of Sciences.

Distribution England and Hungary.

Remarks The material studied belongs to two different population from England and Hungary. The coloration of the legs, the density of the pilosity of the mesonotum and the genital structures of the specimens are almost the same. There are differences between these two populations in the male and female genitalia; the cerci of the male from England are a little convergent (fig. 1–2) while these from Hungary – parallel; the dorsal and ventral plates of the females from Hungary are shorter and wider (fig. 1–9, 10) than these from Engand (fig. 1–7, 8).

Rhopalopterum crucicarinatus sp. n. is similar to *Rh. femoralis* from which it is well distinguished by the dusting: humerus and notopleuron of *Rh. femoralis* are shining; the cerci of *Rh. femoralis* are prolonged and pointed (fig. 2–1, 2); the distance between them is narrower than $^1/_2$ of width of the one cercus (fig. 2–4, 4); the patch of hairs on the inner side of the epandrium is larger (fig. 2–3); the thickened edge of the interior upper part of the epandrium is shorter and longitudinal (fig. 2–1). The horizontal X-shaped thickened edges of the upper inner side of the epandrium is a very characteristic for *Rh. crucicarinatus* sp. n. (fig. 1–2).

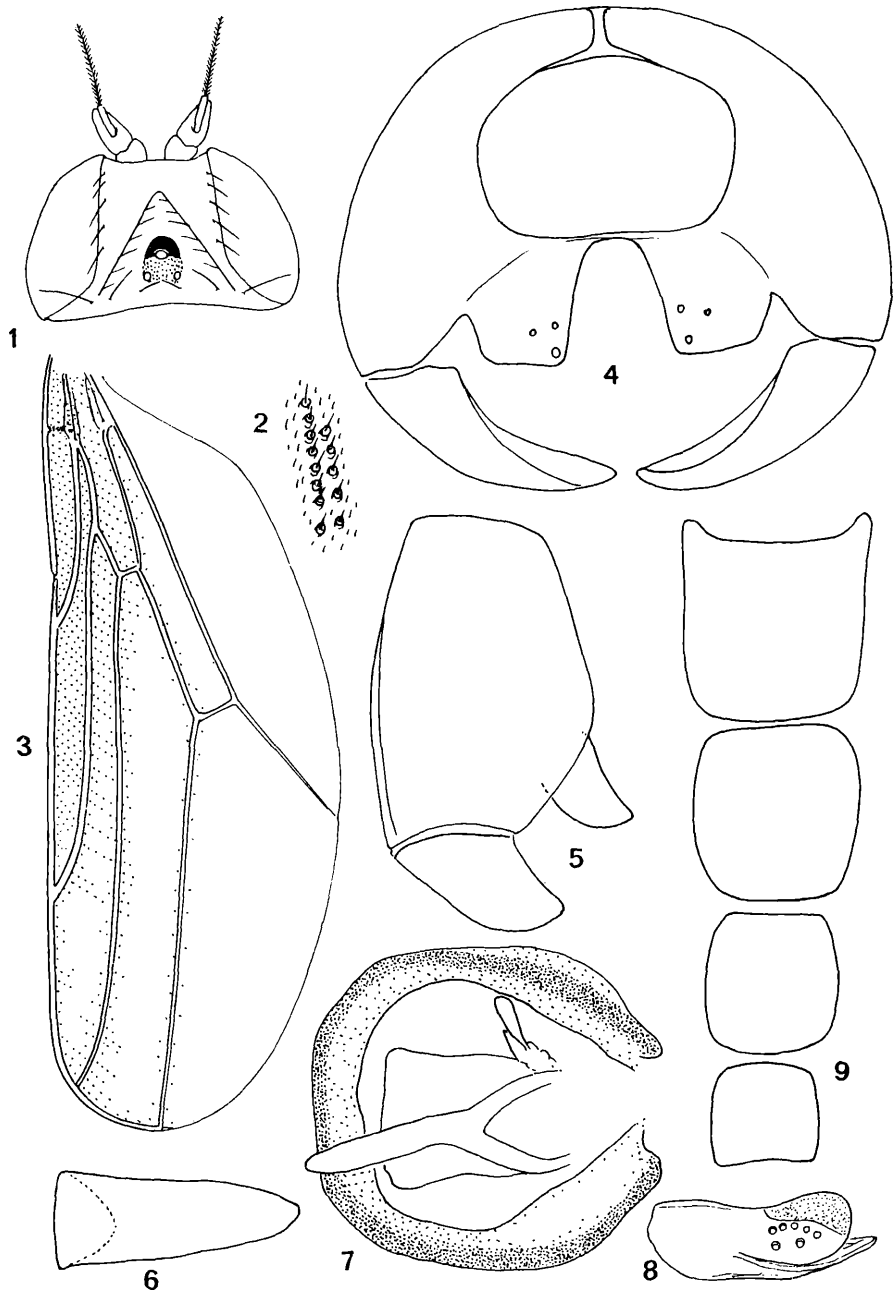

Plate 3. *Rhopalopterum brunneipennis* sp. n.

1 – Head, dorsal; 2 – left f_2, femoral organ; 3 – wing; 4 – epandrium, posterior; 5 – epandrium, lateral; 6 – surstylus, lateral; 7 – hypandrium, dorsal; 8 – gonite; 9 – male abdominal sternites 2–5.

Rhopalopterum brunneipennis sp. n. (Plate 3)

Humerus shining, notopleuron dusted, frons with a small black shining halfmoon-shaped spot in front of the ocellus, wing relatively long and brownish.

Head a little higher than long. Frons a little longer than wide at the middle and narrowing anteriorly (fig. 3–1); frontal triangle shining, reaching to about ¾ of frons with straight sides; in front of the ocellar tubercule before the first ocellus a small black metallic shining halfmoon-shaped spot. Face concave, cheeks invisible, vibrissal angle rounded. Eyes hairy, very large, almost vertical. Gena narrower than diameter of t_1. Antenna genotypical; arista pubescent, flagellum 2 times longer than basal segment, its hairs as long as diameter of the basal part. Proboscis short, palpi black-brown, hairs and bristles genotypical.

Thorax black shining, only scutellum, mesonotum before the scutellum, notopleuron and upper half of the meso- and pteropleuron dusted, humerus indistinctly shining. Mesonotum evenly and thickly covered with dark hairs. Bristles genotypical with the same particularity as *Rh. crucicarinatus* sp. n. Legs predominantly dark; f_{1-3} black with yellow tips; t_{1-2}, trochanters and $tars_{1-3}$ black-brown, exept the last 2–3 segments of the tarsi and the median band of the t_3, that are black; f_2 with a femoral organ (fig. 3–2).

Wing relatively long with width/length = 1 2,7 (fig. 3–3), distinctly brownish especially in the anterior half; tp/ta–tp = 3,5 and ta–tp a little longer than ba.

Abdomen black-brown, the tergites subequal in length, hairs and bristles dark. Sternites almost square (fig. 3–9). St_2 a little slender, st_{3-4} with rounded apical angles.

Genitalia Epandrium relatively wide and short (fig. 3–4, 5), without hairy spot on the inner side between cercus and surstylus, and with a longitudinal thickened edge in the upper part; hypandrium open with approached apical ends (fig. 3–7), or may be the apodeme connecting the apical ends is damaged in making the preparation; cerci wide and widely separated with deep medioventral incision (fig. 3–4); surstylus and cercus tapering laterally (fig. 3–5, 6); gonites large, elongated (fig. 3–8).

Length 2.0 mm.

Female unknown.

Distribution England.

Material studied Holotype ♂, England, Norfolk, Horning Ferry, 7 VI. 1954, leg. J. E. COLLIN, in the Hope Entomological Collections, University Museum, Oxford.

Remarks The species is similar to *Rh. crucicarinatus* sp. n. by the dark legs and partly dusted sides of the mesonotum. But it is well distinguished with the longer and more brownish wings. The related species in the genus as *Rh. femoralis, Rh. fasciola and Rh. crucicarinatus* sp. n. have relatively short wings with wide/length = 1,2–1,3 and ta–tp approximately equal to ba. The absence of the inner epandrial hairy spot distinguished the genitalia of the *Rh. brunneipennis* sp. n. from other black-leged species, that have a hairy inner epandrial spot and closed hypandrial arc.

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Summary

A series of *Rhopalopterum* species similar in general fascies to *Rh. femoralis* (COLLIN) have been studied in this partial review of the genus. Two new species have been recognised from Hungary and in British collections: *Rhopalopterum crucicarinatus* sp. n. and *Rh. brunneipennis* sp. n. A Lectotype is formally designated for *Rh. femoralis*.

References

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