

Redescription of the type species of
Robigus Distant, 1911 and **Leptaleocera** Muir, 1913
(Homoptera, Derbidae)

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Summary

Robigus sanguineus DISTANT (Sri Lanka) and *Leptaleocera coccinea* MUIR (Borneo) are red-described and the male genitalia are illustrated.

Introduction

Otiocerine Derbidae occur in all tropical areas and reach their highest diversity in the Oriental region. They have never been the subject of a major taxonomic study. A key was published by FENNAH (1952 and 1956), the African species were revised by SYNAVE (1973) and partly by WILSON (1987), and revisionary studies on four Australasian genera were recently published by myself (VAN STALLE 1986a, 1986b, 1986c, and 1987).

I have recently pointed out some of the difficulties in the taxonomy of otiocerine Derbids (VAN STALLE, op. cit.). Many of the problems are related to the generic definition in the tribe and the characters used for this purpose. WILSON (1987) also expressed the need for a thorough study of the Oriental genera while working on African species of *Robigus*. A redescription of the type species is undoubtedly the first step in the redescription of these genera and in the recognition of further congeneric species. This paper deals with the redescription of the type species of *Robigus* and *Leptaleocera* two closely related taxa, both deeply red and distinguished from other Otiocerini by the simple outline of the head (border of frons running parallel to eyes), the relatively simple shape of the antennae (not forked), the venation of the tegmina with a short subcostal cell (Sc+R forking distad of middle) and the median sectors forking in the apical third of the tegmina.

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Accepted for publication: 14.IV.1987

Robigus DISTANT, 1911

The genus *Robigus* was erected by DISTANT (1911) for a Sri Lankan species redescribed below. No further Oriental species have been assigned to it. The two known African taxa and two further new species were keyed and illustrated by WILSON (1987). As correctly stated by this author, the generic placing of the African species is tentative.

Dr M. WILSON (London) kindly send a *Robigus* male from South India which was compared to the female holotype and proved to agree with it in all features; this female holotype and the male genitalia of the additional South Indian specimen are described below. As already mentioned by WILSON (1987), the four African species are all very similar but do not closely resemble the type species: they have hyaline tegmina with a distinct colour pattern of oblong reddish marks; the venation is the same except for the fact that the cubital cell is shorter than in the type species. The head is larger in profile, produced more anterior to the eyes than is the case in the type species, and the second segment of the antennae is longer and flattened, while shorter and cylindrical in *Robigus sanguineus*.

The genus *Robigus* can be distinguished from other known genera by the combination of the following characters: general colour red; lateral borders of frons in profile parallel to eye; antennae simple (not branched); no subantennal processes; no prominent keels on pronotum; three longitudinal keels on mesonotum and venation of tegmina as illustrated. *Robigus* differs from *Interamma* WALKER, 1870, *Nicerta* WALKER, 1857, *Megatropis* MUIR, 1913 and *Vivaha* DISTANT, 1906 in the presence of a short subcostal cell (Sc₁R forking distad of middle of tegmina) while much longer in the four genera mentioned above (see VAN STALLE, 1987). *Robigus* differs from *Pyrrhoneura* in the fact that the M-vein is arising from Sc₁R and not separately from the basal cell as in *Pyrrhoneura*. Finally, *Robigus* differs from *Leptaleocera* in the shape of the antennae, the presence of three keels on the mesonotum and the presence of a transverse vein on halfway length of tegmina between costal margin and Sc₁R.

Robigus sanguineus DISTANT, 1911
(figs 1-6)

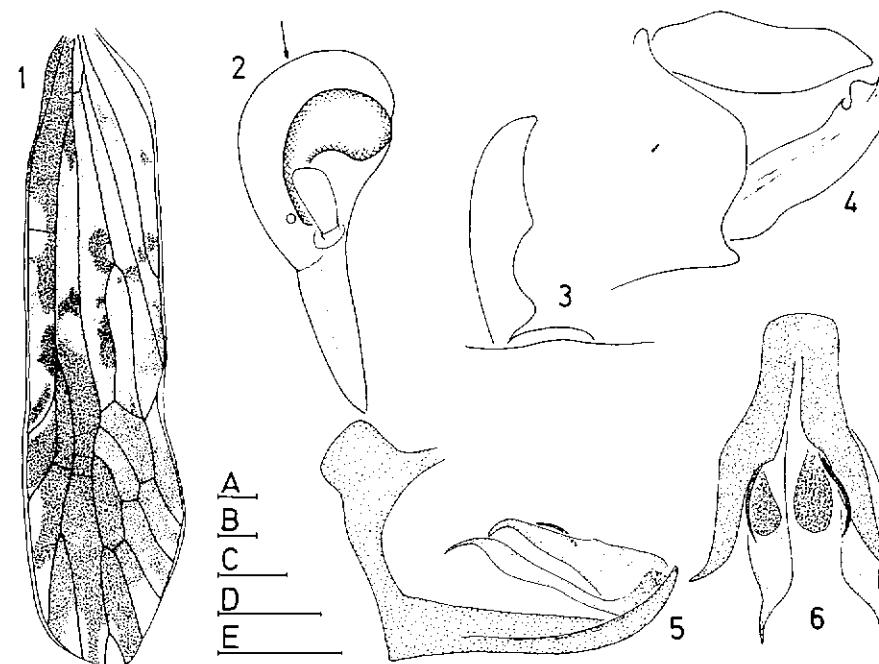
Robigus sanguineus DISTANT, 1911: 641.

Material examined: holotype female, 'Ceylon, Kandy', V.1909, British Museum (Natural History); 1 male, N. Malabar, Taliparamba, 16.XI.1924, 'on pepper leaves', BMNH.

Colour entirely red. Head in profile semicircular (fig. 1), border parallel to eyes. Lateral margins of frons meeting each other along median line; postclypeus with a sharp median keel. Vertex damaged, lateral margins probably separate over basal half. Antennae small, simple, cylindrical; no subantennal process. Eyes reniform. Pronotum without prominent keels, lateral margins bent forward on each side of eye, possibly due to dessication. Mesonotum mutilated by pin, with three longitudinal keels according to DISTANT (1911). Venation of tegmina as illustrated in fig. 2: Sc₁R forking distad of middle and medial sectors situated in apical third; a crossvein present on 1/3 of base between costal margin and Sc₁R; colour as indicated in fig. 2, with dark and pale areas of red. Wings deeply red, completely developed.

Male genitalia: anal segment, pygofer and genital styles as illustrated in fig. 3 and 4. Genital styles fused together at their base by a common process (fig. 3). Aedeagus (figs 5 and 6) bilaterally symmetrical, with four paired processes, one of which consisted of a pair of small, thin spines as illustrated in the dorsal view of the flagellum in fig. 6.

Female genitalia: pregenital sternite triangular, angulately bent in middle.



Figs 1-6: *Robigus sanguineus* DISTANT, 1911 - 1: left tegmen, holotype. 2: head, lateral view, holotype; arrow: point where vertex is damaged. 3: left genital style, common medioventral process of genital styles and caudal border of pygofer, ventral view. 4: anal segment, pygofer and genital style. 5: aedeagus, lateral view. 6: flagellum, dorsal view (other scale than preceding). Scale: A (1 mm): 1; B (0.2 mm): 2; C (0.2 mm): 3, 4; D (0.2 mm): 5; E (0.2 mm): 6.

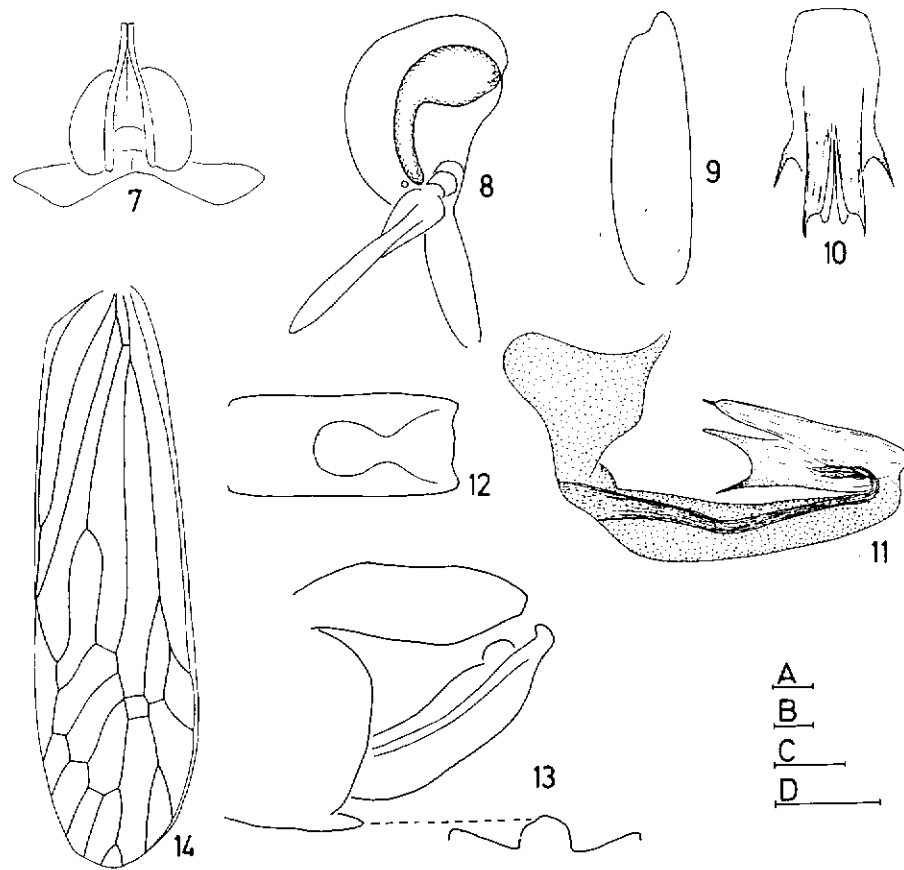
Leptaleocera MUIR, 1913

The genus *Leptaleocera* was described by MUIR (1913) for one species from Borneo; four additional species have been assigned to it: *Leptaleocera bakeri* MELICHAR, 1914, *L. banksi* MUIR, 1917, *L. coccinella* MUIR, 1915 and *L. nigrofasciata* MUIR, 1917.

Leptaleocera can be distinguished from allied genera by the combination of the following characters: colour deeply red; frons with lateral margins in profile running parallel to eyes; antennae with second segment moderately long, flattened; no subantennal

process; no prominent keels on pronotum; mesonotum without longitudinal keels; tegmina deeply red, with venation as illustrated, without a small transverse vein halfway their length between costal margin and Sc+R. *Leptaleocera* differs from *Interamma* WALKER, 1870, *Nicerca* WALKER, 1857, *Megatropis* MUIR, 1913 and *Vivaha* DISTANT, 1906 in the presence of a short subcostal cell. It differs from *Pyrrhoneura* in the fact that the media is inserted on Sc+R and it differs from *robigus* in the larger shape of the antennae, in the absence of a transverse vein on costal margin and in the absence of longitudinal keels on the mesonotum.

Leptaleocera coccinea MUIR, 1913
(figs 7-14)



Figs 7-14: *Leptaleocera coccinea* MUIR, 1913, holotype. - 7: head and pronotum, dorsal view. 8: head, lateral view. 9: second segment of antenna. 10: flagellum, dorsal view. 11: aedeagus, lateral view. 12: anal segment, dorsal view. 13: anal segment, pygofer and genital style, with a ventral view of the medioventral process of the pygofer. 14: right tegmen. Scale: A (1 mm); 14: B (0.2 mm); 7-9; C (0.2 mm): 12, 13; D (0.2 mm): 10, 11.

Leptaleocera coccinea MUIR, 1913: 59; Pl. II, Fig. 5; Pl. III, Fig. 15.

Material examined: holotype male, W. Borneo, Telok Ayer, Bishop Museum.

Colour deeply red, ventral side and legs paler. Frons semicircular in profile (fig. 8), lateral borders meeting each other on median line; clypeus obscurely carinate in middle. Eyes reniform. Antennae with a second segment large, flattened, lateral borders slightly thickened (fig. 9), and whole surface covered with small sensilla. No subantennal process. Vertex with elevated lateral margins which are covered with sensory organs. Pronotum without prominent keels, only with a small median keel. Mesonotum without carinae, but mutilated by pin. Tegmina entirely deep reddish, long, exceeding tip of abdomen, venation as illustrated in fig. 14: Sc+R forking in apical half thus forming a short subcostal cell; median sectors situated in apical third; no transverse vein going from Sc+R to costal margin. Wings normally developed. Length: 6.5 mm.

Male genitalia: bilaterally symmetrical; anal segment excavated on dorsal margin. Pygofer with lateral margins almost straight, ventrally provided with a medioventral process. Aedeagus (fig. 11) with flagellum bearing three pairs of spinose processes at its apex (fig. 10).

Acknowledgements

The author wishes to express his sincere gratitude to Dr G. M. NISHIDA (Bishop Museum) and Dr W. J. KNIGHT and Mr M. D. WEBB for the loan of material in their charge. Dr M. WILSON (C.A.B. International) is thanked for critically reading the manuscript.

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