

## **Muinocerus qadirii gen. et sp. nov. (Idiocerinae : Cicadelloidea : Homoptera) from Malaysia**

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### **Summary**

*Muinocerus qadirii* gen. et sp. novum, easily confused with *Busonia amentata* Distant (1908), is described from Malaysia. The new genus is also compared with *Philipposcopus* and *Angusticella*, both described by Maldonado-Capriles (1972).

### **Introduction**

Amongst a collection received for identification from Malaysia, were a ♂ and a ♀ specimen of an idiocerine leafhopper which were collected resting on a leaf of *Shorea hemsleyana* (?*hemalyana*). The two specimens represent hitherto undescribed genus and species and although not yet established as pests of economic importance, they are taxonomically very interesting. Superficially, in coloration, size etc., they resemble *Busonia amentata* Distant (1908) described from India and Burma. A closer examination, however, revealed that the generic characteristics of *Busonia*, such as the absence of lateral sutures of frons, were present in these specimens. A similar position was found on comparing them with other closely related genera, *Philipposcopus* and *Angusticella* Maldonado-Capriles (1972).

### *Muinocerus* gen. nov.

Surface of vertex and frons finely and of pronotum visibly shagreen; head across eyes wider than pronotum, eyes wider, more than half width of vertex, vertex slightly longer in middle than next to eye; frons only gently

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convex, vertex, pronotum and scutellum not tumid; upper lateral stures of frons well developed, ending near but below inner margins of ocelli which are much nearer to eyes than to midline of frons, very low on frons, invisible in dorsal view; ledges of antennae absent; clypeus (anteclypeus and clypellus of others) flat, subrectangular, as long as wide at base, lateral margins very slightly insinuate, genae narrow, depressed below eyes and deeply so near antennephores; lorae not elevated, narrow, open, their suture not joining margin of frons, but ending in a pit, starting at mid-point of clypeus and extending twice this space towards frons; a spine on genae below eyes; eyes moderately protruding beyond genae in facial view, genae not sharply incurved below eyes, face wider than long; antennae very fine and moderately long; pronotum very wide and much shorter, median length almost one third of its maximum width, anterior margin gently arched, base almost straight; scutellum not extraordinarily large, almost equilateral triangular, median length almost as much as median length of pronotum and vertex together; hind femoral apical spines formula 0+2 (1 large + 1 small) in this genus as well as in *Busonia* (*B. amentata* Distant being type species of *Busonia*).

Tegmina with wide appendix, anterior half of corium and basal half of clavus opaque, almost coriaceous, four apical cells, second apical quadrate, second subapical cell open, third subapical cell with a crossvein near base; some veins both in corium and clavus represented only by granules. Pygofers with a long, sharp upper apical marginal spur, basal membranous suture of pygofers absent, anal tube very large with a pair of large apodemal papery appendages; apodeme of anal tube hinged with that of pygofers as shown in figure 8; valve septagonal, with a straight base; subgenital plates elongate although expanded in middle, with fine and thick growth of setae; paramere (style), apophysis of paramere sparingly setose, its lower margin smooth, almost right-angled to stem of paramere; aedeagus without spines or filaments, with a short dorsal median apodeme; basal plate (connective) long and narrow. Seventh sternum of female - posterior margin almost straight, pygofers smooth, ventral margin curved upwards, apex truncate; ovipositor curving along with pygofers, apex a little extended beyond truncate margin of apex of pygofers.

Type species : *Muinocerus qadirii* gen. et. sp. novum.

*Muinocerus qadirii* sp. n.

(Figs. 1-15)

*Colour.* General colour similar to *Busonia amentata* Distant (i.e., shades of dark brown to pale creamy, except that of tegmen with extensive dark blotches); eyes dark brown, a brown band on face between eyes, dorsally

limited by a boundary between ocelli and ventrally by an imaginary line between bases of antennae, upper or basal half frons and vertex light brown, ocelli yellowish with a light circle around them, antennae light brown, face below eyes up to clypeus pale creamy, disc of pronotum brown, lateral area pale creamy, lateral margin brown, scutellum pale creamy, with a central, wide, half, fascia brown, lateral triangulars almost black, apex pale yellow; tegmen basal half brown with lighter areas, apical half lighter brown, division not clear-cut, basal half anterior and posterior margins dark brown, claval veins and basal part of costal and subcostal veins indicated by pustules, other veins light brown, hindwing smoky with brown veins; thorax underneath and legs pale creamy, spines on tibia, and apices of femora, tibiae, tarsal segments and claws brown; abdomen under, anterior half pale yellow, posterior including pygofer brown, ovipositor black, terga pale yellow, with posterior margin brown.

*Measurements (mm.)* ♂ & (♀), Width of head across eyes 1.16 (1.13), width of vertex between eyes 0.51 (0.52), width of an eye 0.33 (0.31), median length of vertex 0.21 (0.17), length of vertex next to eye 0.20 (0.15); space between eyes on face 0.62 (0.68), space between ocelli 0.38 (0.41), space between ocellus and eye 0.10 (0.03), space between bases of antennae 0.62 (0.56), maximum width of frons 0.66 (0.71), length of frons 0.77 (0.82); length of clypeus 0.23 (0.29), width of clypeus at base 0.31 (0.27), the same at apex 0.28 (0.25); width of pronotum 0.97 (1.05), median length of pronotum 0.35 (0.36), width of scutellum at base 0.80 (0.77), length of side of scutellum 0.62 (0.62), median length of scutellum 0.53 (0.51), length of clavus 0.93 (1.08), length of tegmen 2.56 (2.56), total body length 2.80 (3.26).

*Structures.* Most of the structural detail same as in generic description, anal tube or tenth segment longer than pygofers, which is of moderate size; eleventh segment with few setae, pygofers without setae, upper margin coriaceous and extended as a dark spur, this margin adjoining large appendage of tenth segment; subgenital plates as long as pygofers, fingerlike but semi-membranously expanded in middle - this expansion without setae, brush-like fine setae arising submarginally in rows, near base a few short setae; basal plate as long as half length of aedeagus which is gently bisinuate, gonopore apical, without any spurs or filament; paramere - apical apophysis more than half as long as and at almost right angle to its shaft.

*Material examined.* Holotype ♂. Malaysia, Sarawak, Semengoh, Engkabang Plantation, 23.IX.1930 (Alexander K. Sayok F.R.O. Sarawak) S. No. AS 80.687, C.I.E. A. 15794, found resting on leaf of *Shorea hemsleyana* (?*hemalyana*). Paratype 1 ♀, same data as holotype ♂ except S. No. AS 80.688. Both in B.M. (N.H.), London.

Table 1. Tabulation of closely related generic characters.

	Philipposcopus	Angusticella	Muinocerus
I. vertex.	shagreen	shagreen	finely shagreen
II. membranous suture of pygofer.	absent	absent	absent
III. anteclypeus.	subrectangular	subrectangular	subrectangular
IV. second apical cell.	quadrangular	pedunculate	quadrangular
V. filaments on aedeagus.	none	none or two short, subapical	none
VI. apophysis of style - apex	bare	bare	sparingly spinose
VII. apophysis of style lower margin.	smooth	smooth	smooth
VIII. anal tube of tenth segment.	well developed	not developed	well developed
IX. anal tube apodemal appendages.	absent	present	well developed
X. pygofer, apical margin.	with strong spine	entire	with strong spur
XI. upper apodeme of genital capsule origin.	no apodeme	from tenth segment	from tenth segment
XII. coloration of pronotum.	unicolorous	unicolorous	disc brown, laterally pale creamy
XIII. clavus.	unicolorous	basal half opaque yellow	anterior basal half of corium and basal half of clavus opaque and smoky

*Muinocerus* gen. nov though superficially resembling *Busonia* Distant (1908) and *Busoniomimus* Maldonado - Capriles (1977) on account of its colour, especially of the face as a whole, is different from both because of its well-developed lateral sutures of the frons, but is really closely related to *Philipposcopus* and *Angusticella* Maldonado - Capriles (1972). The easiest way to show its relationship with the last-mentioned genera is to tabulate some characters, following the table No. 1 by Maldonado-Capriles in his paper (1972).

The shape of pygofers of the new genus strangely resembles those of *Austrocerus emarginatus* Evans and *Austrocerus asymmetricus* Webb. (1983) in that the posterior marginal spur in these species is ventral, whereas in the new genus it is dorsal (cf. Webb, 1983, figs. 476 & 479 with fig: 8). Also the form of clypeus (clypealus) is very similar in these species, other features being quite different.

A comparison was also made with several other idiocerine specimens with wide-base clypeus, especially the type of *Bythoscopus cephalotes* Walker (1874) and *Tasnimocerus clypeolatus* Ghauri (1975) but none of them could agree with the generic concept of *Muinocerus*. These are being studied now and the results will be published in the near future as a separate paper.

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The generic as well as the specific names, *Muinocerus qadirii* gen. et sp. novum are dedicated to my friend Sayyid Muinud-din Shah Qadiri, in recognition of, and my personal tribute to him for his academic contributions to the literary scene of London. He has been one of the pioneers in promoting cultural activities, underlining the good image of the newcomers in the United Kingdom, both from India and Pakistan.

## Özet

### Malezya'dan yeni bir cins ve tür : *Muinocerus qadirii* (Idiocerinae : Cicadelloidea : Homoptera)

Malezya'dan gönderilen örnekler arasında *Shorea hemsleyana* (?hemalyana) bitkisi üzerinden toplanan bir erkek, bir dişi olmak üzere 2 birey göze çarpmıştır. Bu örnekler incelendiğinde bunların bugüne kadar cins ve türünün bilinmediği anlaşılmıştır. Her ne kadar bunların bugüne kadar ekonomik önemine ait literatürde kayıt bulunmamaktaysa da taksonomik açıdan çok önemli oldukları görülmüştür. Bunlar iyi şekilde incelendiğinde Hindistan ve Burma'da bulunan *Busonia amentata* Distant (1908)'a dıştan renk ve büyüklük bakımından çok benzediğini, fakat cins karakterleri bakımından *Busonia*'dan ve diğer yakın akraba cinslerden farklı oldukları anlaşıldığından burada tanımları yapılmıştır.

## References

- Distant, W. L., 1908. Rhynchota-Homoptera. The Fauna of British India including Ceylon and Burma, 4, i-v + 501 pp. London.
- Ghuri, M. S. K., 1975. A new genus and species of Idiocerine leafhopper (Cicadelloidea, Auchenorrhyncha, Homoptera) on pear tree from India. *Nouv. Rev. Ent.*, 3 : 287—290.
- Maldonado-Capriles, J., 1972. Studies on Idiocerine leafhoppers, VIII. The Papuan genus *Pedioscopus* and two allied new genera from the Philippine Islands (Homoptera : Cicadellidae). *Pacif Insects*, 14 (3) : 529 - 551.
- , 1977. Studies on Idiocerine leafhoppers. XV. *Busonia* Distant and an allied new genus from the Oriental Region (Cicadellidae: Idiocerinae). *Ibid.*, 17 (4) : 491 - 501.
- Webb, M. D., 1933. Revision of the Australian Idiocerinae (Hemiptera : Homoptera : Cicadellidae). *Aust. J. Zool.*, Ser. 1933. No: 92 : 1 - 147.

## Explanation of figures

*Muinocerus qadirii* gen. et sp. n. (♂) Figs. 1-15.

1, Head and thorax, dorsal view; 2, face; 3, head+pronotum, lateral view; 4, tegmen; 5, hind wing; 6, valve, fully flattened under coverslip; 7, the same in its natural position; 8, pygofer and tenth (anal) segment, lateral view; 9, the same, in dorsal view, on much smaller scale; 10, subgenital plate, ventral view; 11, basal plate (connective), dorsal view; 12, paramere (style), dorsal view; 13, aedeagus and basal plate, lateral view; 14, aedeagus, dorsal view; 15, base of abdomen, showing ventral apodemes.

