New and little-known Fulgoroidea in the British Museum (Homoptera)

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Series 10, v. 7

1931

297-314

0374-5481

1481361

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Borrower: RAPID:DLM
Lending String:
Patron:
Journal Title: The Annals and magazine of natural history.
Volume: Series 10, v. 7 Issue:
Month/Year: 1931 Pages: 297-314
Article Author: Muir, F. A. G.
Article Title: New and little-know Fulgoroidea in the British Museum (Homoptera)
OCLC Number: 1481361
RAPID Number: -8900724

Location: mem
Call #: AP A6059 A54
Request Date: 2/6/2015 7:37:35 AM
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Borrowing Notes:
XXXI.—New and little-known Fulgoroidea in the British Museum (Homoptera). By F. Muir.

The material dealt with below is in the collection of the British Museum (Natural History) or belongs to the Imperial Institute of Entomology, and will be placed eventually in that collection. The presence of a new genus (*Stenochyoptera*), taken by Charles Darwin in South Africa, is of interest. This appears never to have been taken again until 1921, when R. E. Turner took it at Ceres and Witzenberg Vall.

**Tropiduchidae.**

*Daradax grandis*, sp. n. (Fig. 1.)

*Female.*—Length 9 mm.; tegmen 11 mm.

Vertex a little longer than wide, sides nearly straight from apex to near eyes; the pro- and mesonota together about double the length of vertex; a small oblong depression at each basal angle, a very fine carina down middle. Sides of frons very slightly sinuate, widest on apical half. Apical cells of tegmina numerous, about twice as long as wide.

Stramineous; a dark mark at base of frons. Tegmina green, with green veins, the commissure and outer claval.
cell and basal part of costal area stramineous. A small brown mark at apex of clavus and the following apical cells brownish. Wings light greenish white with light green veins.

![Dorsal view of head.]

One female specimen from S. Siam (Mouhot), Chantabun. It is possible that this insect was green when alive.

*Malucha variotata*, sp. n.

**Female.**—Length 6 mm.; tegmen 8 mm.

In build similar to *M. castigator*, Mel., the costal margin is straighter, the fork of Sc and R a little more distad, and the apical cells a little longer.

Frons and genae light brown, the carinae and a row of small spots down each side lighter. Vertex, pronotum, and mesonotum dark brown, carinae light brown, the lateral portions of pronotum and the tegulae pale. Legs and abdomen dark brown. Tegmina light and dark brown, the dark brown over clavus, across base of Cu to costal margin, and from the apex of clavus to node; from the fork of Cu mottled to costal margin, irregularly over apical cells. Wings light brown with dark veins.

The middle of seventh abdominal sternite produced into a subquadrate process, longer than broad, the apex slightly rounded.

_Hab._ Gold Coast (G. S. Cotterell, 1921), one female specimen.

*Numicia dorsalis*, Jacobi (?). One female from Sierra Leone, Nyaia (E. Hargreaves, 17, ix. 27), which agrees with the description, but is lighter in colour; it has the two small dark spots characteristic of this species and *punctula*, Mel. There appears to be considerable difference in the intensity of the markings in this genus.

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new and little-known *Rulgoroides.*

*Numicia viridis*, sp. n.

**Male.**—Length 3·5 mm.; tegmen 4 mm.

Except in the length of the vertex, this species is typical of the genus, and cannot be placed elsewhere. In the shortness of the vertex it appears to agree with *Haliartus*, but that genus is described as having the medio-frontal carina "stark white," whereas this species has the fine carina of the genus.

Vertex short, the width at base nearly double the length in the middle, the middle of the base being nearly in line with the anterior margin of the eyes; lateral carinae fairly elevated towards the base; in outline gradually narrowing from base to the rounded apex, which is slightly narrower than base (1 to 1·3).

Light green, which becomes light stramineous in some specimens. In one specimen there is a faint infuscation in the first and second *M* apical cells.

**Female.**—Length 4·5 mm.; tegmen 6 mm.

Except in size, the female is similar to the male.

_Hab._ Natal, Weenen (H. P. Thomasset, iii., iv. 1924); Pondoland, Port St. John (R. E. Turner, iv., v. 1925), including type. Three males and eight females.

_var. infuscata*, nov.

There are four male specimens from Weenen (H. P. Thomasset, iv. 1924, including type, and iii. 1925), which have the same markings as *N. viridis* on the tegmina, but fainter, the specimens caught in March 1925 being faintest. As the structure of the male genitalia is similar, I consider that they are the same species. The specimens without markings are described as typical, as both sexes are represented.

*Numicia nigricans*, sp. n. (Fig. 2)

**Male.**—Length 3·8 mm.; tegmen 3·8 mm.

The width of vertex at base equal to the length in middle; the middle of base nearly level with the anterior margins of eyes. The general build of the head and thorax typical of the genus. The tegmina are thick, rough, and the venation slightly obscure, but it is typical of the genus.

Shiny black; the middle of vertex and pronotum, and more obscurely the middle of mesonotum, greenish; the frons, abdomen and legs black or very dark brown. Tegmina shiny black; wings fuscous, veins dark.
Genus the spines at the apex of the hind legs, and the middle and the marginal claval cell. Wings hyaline with brown veins. Anal segment long, tubular, anus near apex, beyond which the section turns slightly ventral, apex subtruncate, the lateral corners produced into a small spine curved ventrad. Lateral margins of pygofer slightly angular near middle, ventral margin entire. Genital style figured.

Fig. 3.—Ventral view of left genital style of Catullia njala, sp. n.
Fig. 4.—Ditto of Catullia ugandae, sp. n.

The female similar to male; the lateral margins of frons reddish. Anal segment short, tubular, anus at apex.

Two males and one female from Sierra Leone, Njala, and Semenban (E. Hargreaves, vi. 1925, viii. 1926).

**Catullia ugandae**, sp. n. (Fig. 4.)

In size, shape, and colour similar to C. njala, but darker. The difference in the genital styles is best seen in the figures. One male from Uganda (H. Hargreaves, 14. iv. 1926).

**Amaclairea**, gen. nov.

Head, including eyes, a little narrower than the thorax. Length of vertex in middle slightly greater than width, sides equally rounded, emarginate; middle of the base of vertex considerably in front of the middle of eyes, half or more of the vertex projecting in front of eyes; sides and middle of the base of vertex each apical corner and a silky pad between. Thorax, legs, and venation of tegmina similar to *Catullia*, Stål. This latter genus the spines at the apex of the hind basitarsus go right across and there is no pad beneath; the vertex is well defined with a basal margin and the frons has a median carina, broad at base, gradually narrowing to apex. *Catullia*, Birm. (= Baromoides, Dall.), is closely allied to *Catullia*, but has three spines on the hind tibiae, the median fronsal carina is not so wide at base and the apex and base of vertex more deeply arcuate.

Type, *C. njala*.

**Catullia njala**, sp. n. (Fig. 3.)

**Male.**—Length 4·9 mm.; tegmen 6·6 mm.

Stramineous; a red line down the middle of frons; lateral portions of pro- and mesonota darker; a small black dot on pleura at base of costa (similar to that found in *Catullia*

**Numidio nitidus**, sp. n.

**Frons** longer than wide, sides slightly curved, with the three margins finely carinate; surface smooth and shiny, without any trace of a median carina. Clypeus tricarinate. Hind basitarsus with the ventral surface forming a silky pad, some fine small spines at apex on outer half and one on inner corner, second tarsal segment fairly large, with a spine at each apical corner and a silky pad between.

Vertex wider than long, anterior margin notched; lateral margins of frons very straight apex and base equidistant. Anal segment long, narrow at base, widening at apex, which is roundly emarginate; anus near apex. Genital style figured.

**Female.**—Length 5·3 mm.; tegmen 4·6 mm.

**Hab.** Uganda, Yingo (C. C. Gowdy, 26. iii. 1916), type, and Kampala (G. L. R. Hancock, 16. viii. 1936), one male and one female.

**Catulliaria**, gen. nov.

**Vertex** wider than long, anterior margin curved, sloping downward and backward without a defined hind margin. Frons longer than wide, sides slightly curved, with the margins finely carinate; surface smooth and shiny, without any trace of a median carina. Clypeus tricarinate. Hind basitarsus with the ventral surface forming a silky pad, some fine small spines at apex on outer half and one on inner corner, second tarsal segment fairly large, with a spine at each apical corner and a silky pad between. Thorax, legs, and venation of tegmina similar to *Catullia*, Stål. In this latter genus the spines at the apex of the hind basitarsus go right across and there is no pad beneath; the vertex is well defined with a basal margin and the frons has a median carina, broad at base, gradually narrowing to apex. *Catuloides*, Stal. (= Baromoides, Dall.), is closely allied to *Catullia*, but has three spines on the hind tibiae, the median fronsal carina is not so wide at base and the apex and base of vertex more deeply arcuate.

Type, *C. njala*.

**Catulliaria njala**, sp. n. (Fig. 3.)

**Male.**—Length 4·9 mm.; tegmen 6·6 mm.

Stramineous; a red line down the middle of frons; lateral portions of pro- and mesonota darker; a small black dot on pleura at base of costa (similar to that found in *Catullia*...
carinae, sides rounded. Frontum tricarinate in middle, where it projects into the base of vertex, two shoulder-carinae behind eyes. Mesonotum tricarinate, antennae short, second segment about as long as wide. In lateral view frons and vertex at an angle of about 45 degrees. Tegmina narrow, about three times as long as broad. One forked about one-third from base, M and Sc+R simple, forked at nodal line; nodal line distinct, curved slightly basad. Corium 1:4 times the length of membrane. No costal area (membrane). A few faint cross-veins in membrane, some forming an incomplete apical line.

Type. A. gowdeyi.

This genus comes near to both Amapala and Clareda, but differs from both by the total absence of a costal area; from the former it differs in the length of head and from the latter in the absence of carina on the clypeus.

Amaclardea gowdeyi, sp. n.

Female.—Length 5·5 mm.; tegmen 6·5 mm.

Light brown; a fine dark line along each side of the lateral carina of vertex and one on each side of the middle carina; these extend in a broken manner along the middle and lateral carina of pro- and mesonota, a faint line on each side of the shoulder-carinae. The swollen part of the base of frons shiny black. Abdomen darker brown. Tegmina light brown, veins same colour; two small black spots on the stalk of M, black on the sides of the nodal line. Wings slightly brownish, veins darker, slightly fuscos around the apical margin.

Hab. Jamaica, Ciechona (C. C. Gowdey, vii. 1925, no. 1313), one female specimen.

Neanotangia munda, sp. n.

Male.—Length 5·5 mm.; tegmen 6 mm.

This species differs from N. angustata (Uhler) in having the tegmina wider, the apex more bluntly rounded, the vertex narrower, and the sides more parallel.

Length of vertex in middle subequal to width; sides slightly acute, apex broadly subangular, the forking of median carina at about the middle. Length of tegmina about three times the width. The laterals margins of the pygofer subangular beside the anal segment; anal segment with the lateral margins turned dorsad, deepest at apex; genital styles with ventral margins entire, curved, the dorsal margins

new and little-known Pulphorines.

biarhomin basal half with a curved spine, apex fairly distinctly rounded.

Stramineous, possibly green when alive; tegmina and wings hyaline with yellowish veins.

One male specimen from British Guiana, Blairmount (P. X. Williams, is. 1925).

Neanotangia marginata (Uhler), new combination.


This is typical of the genus; it differs from the type-species in having the vertex longer than wide in the middle (1:6 to 1). This species appears to have been overlooked by Melichar in his monographs of Dictyophorines and Tropiduchidae.

Tambisia zonata, sp. n.

Female.—Length 4·6 mm.; tegmen 5·0 mm.

Length of vertex in middle 1:3 times the width, in outline bluntly conical, base slightly sinuate and slightly emarginate. Frons distinctly longer than wide, gradually and slightly increasing in width from base to level of antennae, then decreasing; median carina distinct on base, gradually getting thinner and indistinct. On forking about the middle of corium, Sc+R fork short. Stramineous, lighter ventrally; the carina reddish, on vertex the red extending from the sides; fuscous over clypeus except the middle and extreme sides; fuscous over clypeus except the middle and extreme basal corners; basal abdominal tergites (third and fourth) fuscous; legs lighter; tegmina hyaline, very dark brown. Legs light. Tegmina hyaline, very dark brown. Legs clear slightly yellowish, veins slightly darker. Wings clear slightly yellowish, veins slightly dark. Wings clear slightly yellowish, veins slightly dark. Wings clear slightly yellowish, veins slightly dark. Wings clear slightly yellowish, veins slightly dark. Wings clear slightly yellowish, veins slightly dark.
Female.—Length 6-6 mm.; tegmen 4-9 mm.
Head yellow, the apex of clypeus fuscous; antennae light brown. Middle portion of pronotum, including the lateral carinae, brown, the lateral portions reddish yellow. Mesonotum brown. Legs and abdomen reddish yellow. Front
Mr. F. Muir on

Stenomechus; head and proboscis with a greenish tinge; tegmina and wings clear hyaline with light veins.

**Female.**—Length 6 mm.; tegmina, 7-7 mm.

In build and colour similar to male.

_Baltanax_ (Windward side), Oranada, W.I. (H. H. Smith, no. 411). The female bears the name of "Tangui viridia, Walk." in Uhler's handwriting, but they do not belong to that species, but to Tanguidia. I doubt if _Neomangia_, Melichar, will be able to stand apart from _Tanguidia_.

_Rochana intermedia_, ap. n.

_Male._—Length 9-5 mm.; tegmen 9 mm.

This species comes between _R. indicata_ (Walk.) and _R. obliquata_ (Powier), the vertex being shorter than the former and longer than in the latter; the length of vertex in the middle being slightly greater than the width, the median carina forked about the middle; frons about twice as long as broad, widest about the level of antennae, the oblique lateral carina reaching to the middle. Cu. forked about the middle of clavus, _M_ slightly more distal, and _Sc+R_ still more so. Lateral margin of tegumae produced into an angle, with the apex acute and reaching to the apex of clavus, _M_ straight, _Cu_ and _R_ still more so. Apex of the middle of clavus, _M_ slightly more distal, and _Sc+R_ still more so. Lateral margin of tegumae produced into an angle, with the apex acute and reaching to the apex of clavus, _M_ straight, _Cu_ and _R_ still more so. Apex of the middle of clavus, _M_ slightly more distal, and _Sc+R_ still more so.

**Female.**—Length 3·6 mm.; tegmen 4·5 mm.

This species is very close to _F. melichari_, but differs as follows. Vertex much narrower (length more than twice the width), the two black lines longer and more distinct; the tegmina are narrower and clear hyaline, without the fuscous mark from stigma to apex of clavus.

One female from the Philippine Islands (J. J. Meehan).

I regret to have to change this generic name, but the above synonymy will have to stand.
in the Tropiduchidae, even if the line separating the posterior angle of mesonotum is overlooked. In the male genitalia the periantrium is more greatly developed than I have previously observed in the family, but as it varies from total absence to larger size this is no surprise. The genus is related to Conchyoptera, Sign., from Madagascar and Bourbon, and to Turneriola; China from South Africa. It is interesting to note that Charles Darwin collected this in the Cape during his voyage round the world, and it does not appear to have been taken again till 1921, when R. E. Turner collected it.

Type, S. darwini.

Stenoconchyoptera darwini, sp. n. (Figs. 7, 8, 9, 10.)

Macropterous Male.—Length 6·6 mm.; tegmen 3·8 mm.

Brachypterous Male.—Length of tegmen 1·8 mm.

Light brown; a pair of darker, longitudinal marks on dorsal portion of abdomen in a medio-lateral position, and the outer portion of sternites darker, but this is variable; tegmina slightly lighter and wings much lighter.

The inner and outer margins of the genital styles straight, meeting together on the middle line; a large, slightly-curved spine from outer margin near base: The reagus figured. The basal portion of the periantrium is separated from the distal by a membrane.

The female is similar to the males in size and colour.

Hab. South Africa; Cape, two brachypterous females including type (C. Darwin, no. 3090); Cape Province, Ceres, four long-winged and one short-winged males, and one long-winged and eight short-winged females (R. E. Turner, January, February, March 1921 and 1925); Witzenberg Valley, 3000 feet elevation, one short-winged female (R. E. Turner, January 1921).

Turneriola breviceps, sp. n.

Brachypterous Male.—Length 3·8 mm.; tegmen 1·8 mm.

Width of vertex at base greater than the length in middle, the length in middle equal to the length of pronotum. The tegmina reaching to about the middle of seventh abdominal tergite; clavus reaching to the apex of the inner margin of tegmen, claval suture obscure. The middle of from on apical half depressed, carina very faint on basal half, in profile not prominent; surface of from finely rugose, bearing fine light hairs; light brown in colour. Clypeus light brown, darker on sides. Vertex, pro-, and mesonota light brown, a pair of blood-red stripes from apex of vertex to posterior margin
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of mesonotum in a medio-lateral position. Abdomen light brown, the dorsum with a median thin dark line and a broader one on each side. Tegmina brown with light veins, darkest between the Sc+R and M, especially the apical half.

_Hab._ Cape Province, Ceres (R. E. Turner, xi. 1925), one male.

_Turneriola_ hirsuta, sp. n.

**Brachypterous Female.**—Length 5·4 mm.; tegmen 1·6 mm. Length of vertex in middle 1·6 times the width at base and nearly as long as pro- and mesonotum together. Mediofrontal carina fine, prominent at base. Tegmina reaching to the middle of fourth abdominal tergite. The anal segment considerably longer than broad (nearly 3 to 1), very slightly narrowed to apex which is round, anus slightly before the middle. Comparatively long and distinct black hairs on the body and tegmina, most numerous on the head.

Brown, speckled with lighter markings. A row of light dots down each lateral margin of frons. The vertex and thorax with a few darker spots. An eye-like black spot on each side of the ninth abdominal tergite; a broken lighter line down the middle of dorsum. Tegmina leathery, venation obscure, an irregular network of cross-veins which are lighter than the area between.

_Hab._ Cape Province, Ceres (R. E. Turner, xi. 1924), one female.

The ovipositor is much longer than in _T. rowlandi_ 6~ and the apex is obliquely truncate.

**Ommatissus bimaculatus,** sp. n.

**Female.**—Length 3·3 mm.; tegmen 9·9 mm. This differs from _O. binotatus_, Fieb., in having the vertex wider at the base than at the apex, the lateral carina being thinner and higher and the apex a little more angular, the lateral carina of the pronotum diverging posteriorly to a greater extent, and the anterior margin between the lateral carina projecting a little further forward. The venation is practically the same, but the Ca forks a little more basad.

Stramineous; light brown over the median carina of frons and the middle of clypeus, the sides of the base of the clypeus; a small square black mark on genae in front of antennae; a round black spot on sides of pronotum as in _O. binotatus_. Abdomen brown, pale on hind margin of sternites; tergites pale, dark at sides and in middle. Tegmina hyaline with brown veins, except the first calval, which is only dark at the base.

_Hab._ N. India, Moradabad.
spine on each side. The ovipositor is small, incomplete, and appears (from an external examination) to have no cutting power, and to be on lines similar to that found in the Flatid group of families; the anal segment is small. The labium is short, not reaching to the middle coxae, the apical segment slightly longer than width.

The head and thorax are light stramineous, with a dark mark from apex of vertex to posterior margin of mesothorax, darkest over the vertex, where there is a black spot in middle of the apex. The abdomen is greenish. The thorax and head may be greenish in life. Tegmina and wings clear hyaline, the veins greenish or yellowish, the colour on the veins of the claval vein entering the hind margin very near to the apex. In the figure the outer cell of the clavus cannot be seen, because it is turned at right angles to the rest of the clava; the claval vein enters the hind margin very near to the apex of the clava. The ovipositor is simple, Sc + R forked near the base, and there is a small costal area which narrows very much halfway along the margin, and it is without cross-veins. There is no distinct suture separating the posterior angle of the mesonotum, only a slight depression.

The shape of this insect suggests an alliance with the Flatid group of families, a shape which is approached by some Tropiduchidae. The type of venation, especially the simple Cu, and the claval vein entering the hind margin, as well as the absence of the suture at the angle of the mesonotum, are against its Tropiduchid alliance. In all Tropiduchidae that I have examined the ovipositor is of a distinct type, the ventral and inner valvulae forming a strong procumbent organ capable of cutting, the dorsal valvulae being fairly long subquadrate plates on each side; evidently the eggs are embedded in plant-tissues. In Bucca the ovipositor is of this type, but very small. The absence of any granulations on the tegmina, as well as the general facies, exclude it from the Flatidae, and the absence of any transverse veins in the costal cell makes it improbable that it is a Ricaniid. Thus we find, by elimination, only the Acan­tonididae and Issididae remain.

These two families are closely allied, and at present it is difficult to draw a hard-and-fast line between them, but of the two I consider it best to place Bucca in the Issidae.

Eurybrachididae.

Microsmyrnychus, gen. nov.
In form flattened horizontally and thin. Vertex in outline broadly conical, the length in middle slightly less than width.

Microsmyrnychus vitrifrons, sp. n. (Fig. 11.)

Type. M. vitrifrons.

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between eyes, a very fine carina down middle; base slightly thicker than long, base angular, sides angular; galea wider than long, lateral angles projecting forward beyond wider than long, the lateral angles projecting forward beyond than the margin, and is without cross-veins. There is no distinct suture separating the posterior angle of the mesonotum, only a slight depression.

The shape of this insect suggests an alliance with the Flatid group of families, a shape which is approached by some Tropiduchidae. The type of venation, especially the simple Cu, and the claval vein entering the hind margin, as well as the absence of the suture at the angle of the mesonotum, are against its Tropiduchid alliance. In all Tropiduchidae that I have examined the ovipositor is of a distinct type, the ventral and inner valvulae forming a strong procumbent organ capable of cutting, the dorsal valvulae being fairly long subquadrate plates on each side; evidently the eggs are embedded in plant-tissues. In Bucca the ovipositor is of this type, but very small. The absence of any granulations on the tegmina, as well as the general facies, exclude it from the Flatidae, and the absence of any transverse veins in the costal cell makes it improbable that it is a Ricaniid. Thus we find, by elimination, only the Acana­tonididae and Issididae remain.

These two families are closely allied, and at present it is difficult to draw a hard-and-fast line between them, but of the two I consider it best to place Bucca in the Issidae.

Eurybrachididae.

Microsmyrnychus, gen. nov.
In form flattened horizontally and thin. Vertex in outline broadly conical, the length in middle slightly less than width.
Mr. J. R. Malloch on Exotic Muscaridæ.

raised and greenish; clypeus brown. Pronotum and mesonotum greenish; the vertex, pronotum, and mesonotum speckled with minute black dots. Legs brown, hind legs lighter. Tegmina hyaline, with a light greenish tinge speckled over with minute black dots, many of which bear hairs; veins irregular and raised.

One male from Pondoland, Port St. John (September 1923, R. E. Turner.)

XXXII.—Exotic Muscaridæ (Diptera).—XXXII. By J. R. Malloch, Bureau of Biological Survey, Washington, D.C.

Family Tachinidæ.

Tribe Cyclindromyiini.

The members of this tribe may be readily distinguished from others in this family by the vertical chitinous plate between the bases of the hind coxae and the base of the abdomen, the others having this area membranous centrally and usually very much lower than is the case here. Unfortunately the genera of the tribe have never been reviewed, and there is no synopsis available for the identification of the many generic concepts for which names have been proposed. In one of my papers on Australian Diptera I have given some comparative notes on some of the genera*, but have made no attempt to bring together data upon all the described genera. In this paper I merely present descriptions of some species from the Federated Malay States which are now in my possession for identification. These are very distinct species, and should be readily identified by the use of the descriptions. I also redescribe a genus which has not been recognized since its original description by Robineau-Desvoidy in 1830.

Genus Duvaucelia, Robineau-Desvoidy.

Myodaires, p. 227 (1830).

Though the description of this genus is rather brief, the essential characters mentioned are sufficient, coupled with the description of the species, to justify a belief that this identification is correct. Dr. Aldrich, of the United States National Museum, has gone over the material with me, and is of the same opinion. Structurally the genus is a true