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THE ANNALS

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MAGAZINE OF NATURAL HISTORY.

[TENTH SERIES.]

No. 40. APRIL 1931.

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 (*Stenoconchyoptera*), 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.

Tropiduchidæ.

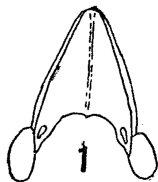
Daradax grandis, sp. n. (Fig. 1.)

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.



Daradax grandis, sp. n.
Dorsal view of head.

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

Mulucha variegata, 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 genæ light brown, the carinæ and a row of small spots down each side lighter. Vertex, pronotum, and mesonotum dark brown, carinæ light brown, the lateral portions of pronotum and the tegmæ 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 across 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, Njala (*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.

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 wulstig," 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 carinæ 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 dead specimens. In one specimen there is a faint infuscation in the first and second *M* apical cells.

Female.—Length 4.8 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. 1923), 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. insignis* on the tegmina, but fainter, the specimen 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 nitida, 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, genæ beneath the eyes, and the thoracic pleura greenish; abdomen and legs black or very dark brown. Tegmina shiny black; wings fuscous, veins dark.

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.



Numicia nitida, sp. n.
Ventral view of right genital style.

In build similar to male, the colour inclining more to brown, shiny, the green being yellowish.

Hab. Uganda, Yingo (C. C. Gowdey, 26.iii.1916), type, and Kampala (G. L. R. Hancock, 16.vii.1926), 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. *Catulloides*, Bierm. (= *Barunoides*, Dist.), is closely allied to *Catullia*, but has three spines on the hind tibiae, the median frontal carina is not so wide at base and the apex and base of vertex more deeply arcuate.

Type, *C. njala*.

Catullaria njala, sp. n. (Fig. 3.)

Male.—Length 4.9 mm.; tegmen 6.9 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*

subtestacea, Stål). Tegmina stramineous with light veins, lighter over costal area and cell and the marginal claval cell. Wings hyaline with brown veins.

Anal segment long, tubular, anus near apex, beyond which the segment turns slightly ventrad, apex subtruncate, the corners produced into a small spine curved ventrad. Lateral margins of pygofer slightly angular near middle, ventral margin entire. Genital style figured.

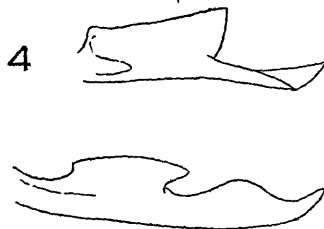


Fig. 3.—Ventral view of left genital style of *Catullaria njala*, sp. n.
Fig. 4.—Ditto of *Catullaria ugandæ*, sp. n.

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 Sembeun (*E. Hargreaves*, vi. 1925, viii. 1928).

Catullaria ugandæ, 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).

AMACLARDEA, gen. nov.

Head, including eyes, a little narrower than the thorax. Length of vertex in middle slightly greater than width, sides straight, apex and base equal in width, apex slightly rounded, base equally roundly, 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 apex keeled, the middle with a distinct simple carina. Frons considerably longer than wide, base rounded, swollen slightly, a median carina distinct at base but gradually getting fainter; frons very gradually widening from base to antennæ, then gradually narrowing to base of clypeus. Clypeus without

carinae, sides rounded. Pronotum 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. *Cu* 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 *Clardea*, 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 carinae 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 carinae of vertex and one on each side of the middle carina; these extend in a broken manner along the middle and lateral carinae 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 fuscous around the apical margin.

Hab. Jamaica, Cinchona (*C. C. Gowdey*, vii. 1923, no. 1313), one female specimen.

Neotangia 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 arcuate, apex broadly subangular, the forking of median carina at about the middle. Length of tegmina about three times the width. The lateral 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

excavate on basal half with a curved spine, apex fairly acutely rounded.

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

One male specimen from British Guiana, Blairmont (F. X. Williams, ix. 1923).

Neotangia emarginata (Uhler), new combination.

Dietyophara emarginata, Uhler, Proc. Zool. Soc. Lond. 1896, p. 58.

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 Dictyophoridae and Tropiduchidae.

Tambinia 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. *Cu* forking about the middle of the corium, *Sc + R* fork short. Stramineous, lighter ventrally; the carinae reddish, on vertex the red extending from the sides; fuscous over clypeus except the middle and extreme basal corners; basal abdominal tergites (third and fourth) yellow, the metanotum and the rest of the abdominal tergites dark brown. Legs light. Tegmina hyaline, very slightly yellowish, veins slightly darker. Wings clear hyaline, veins dark stramineous.

Hab. South India, Kodai Kanal (*T. V. Campbell*), one female specimen.

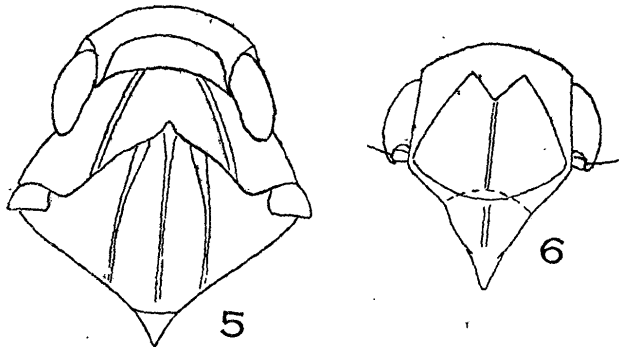
PARAGARUMNA, gen. nov.

The length of vertex half the width; anterior and posterior margins parallel, slightly curved; the anterior half raised, this raised portion extending along the lateral margins to the base; no median carina, but a very fine depression down the middle of the posterior sunken half. Frons as long as broad, the swollen condition of the anterior half of the vertex extending on to the base and sides of the frons; in the middle this forms an angle from which a fine median carina extends to the apex; on the sides this swollen portion narrows

until level with the antennæ, then slightly widens to the clypeus. The clypeus short and broad, the swelling on the sides of the frons continuing on the clypeus; an obscure carina down the middle. Pronotum with hind margin angularly emarginate; two strong carinæ, no median carina; a distinct shoulder-carina behind the eye reaching the hind margin. Mesonotum short, tricarinate. Tegmina with a very narrow costal area without cross-veins. The fork of *Sc+R* forming part of nodal line, likewise the fork of *M*; *Cu* forking a little distad of the middle of corium. Nodal line oblique, the node very near the apex; no apical line. Hind tibiae with two spines.

Type, *P. pseudolepida*.

This species comes so close to *Garumna lepida*, Melichaf, that one hesitates to place it in another genus, but *Garumna* is stated to have the outer sector (*Sc+R*) forking before the nodal line; the swollen condition of the base and sides of frons and the median carina differs, also the absence of the median carina of pronotum.



Paragarumna pseudolepida, sp. n.

Fig. 5.—Dorsal view of head and thorax.

Fig. 6.—Full view of frons and clypeus.

Paragarumna pseudolepida, sp. n. (Figs. 5, 6.)

Female.—Length 4.3 mm.; tegmen 4.8 mm.

Head yellow, the apex of clypeus fuscous; antennæ light brown. Middle portion of pronotum, including the lateral carinæ, brown, the lateral portions reddish yellow. Mesonotum brown. Legs and abdomen reddish yellow. Front

oxæ-brown. Tegmina hyaline. Clavus dark brown, extending at base as a small band to the costa, at the apex of clavus extending slightly into corium, also in a broad band over nodal line, expanding at node to apical margin over apical *Sc* and *R* cells and into apical *M* cell. Veins same colour as membrane except at node, where they are light. Wings hyaline, veins light to the forks, then brown.

Wings hyaline, veins light to the forks, then brown.

Hab. Siamese Malay States, Bulsit Besar.
In colour this species differs from *Garumna lepida*, Mel., in having all the head yellow.

Paragarumna melichari (Baker).

Garumna melichari, Baker, Phil. Jour. Sci. xxxii. 3, p. 409, fig. 13 (1927.)

This species belongs to this genus.

Tangidia uhleri, sp. n.

Male.—Length 5.6 mm.; tegmen 6.4 mm.

The width of vertex considerably greater than the length along middle; apex rounded, sides straight, base deeply and roundly emarginate, the bottom of the emargination about level with the anterior margin of eyes; the margins keeled, a median carina not quite touching the anterior margin of vertex, forked in the middle, the arms of the fork continuing along the hind margin of vertex; this forms a Y with a short stalk rather than a V. Pronotum in middle shorter than vertex, the hind margin deeply angularly emarginated, with a small indentation in the middle, the median carina distinct and continuing along the hind margin for a short distance; the lateral carinæ following the hind margin for a short distance; two shoulder-carinæ; the lateral portion of pronotum turned under and expanded, being nearly twice as long as in the middle. Hind basitarsus long, with a single row of five spines at apex, second tarsus small, roundly pointed at apex, a very small spine on each side, with a small pad between. The length of tegmen 2.6 times the width; *Sc+R* and *M* forking at the nodal line, *Cu* forking about level with fork of clavus; the costal cell wide; about fifteen apical cells; no apical line, but a number of obscure irregular cross-veins in membrane.

Anal segment fairly long, broadest at apex, where it is shallowly emarginate, the lateral angles produced into a small process. The genital styles appear to be joined together along the middle line, in ventral view fairly acutely conical in outline, boat-shaped, a small curved spine near base on outer margin.

Stramineous; head and pronotum 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.

Balthazar (Windward side), Grenada, W.I. (*H. H. Smith*, no. 411). The female bears the name of "*Tangia viridis*, Walk." in Uhler's handwriting, but they do not belong to that species, but to *Tangidia*. I doubt if *Neotangia*, Melichar, will be able to stand apart from *Tangidia*.

Rotunosa intermedia, sp. n.

Male.—Length 8.5 mm.; tegmen 9 mm.

This species comes between *R. indicanda* (Walk.) and *R. orbiculata* (Fowler), the vertex being shorter than in the former and longer than in the latter; the length of vertex in the middle being slightly greater than the width, the median carina forking about the middle; frons about twice as long as broad, widest about the level of antennæ, the oblique lateral carinæ reaching to the middle. *Cu* forking about the middle of clavus, *M* slightly more distad, and *Sc+R* still more so. Lateral margin of pygofer produced into an angle, with the apex acute and reaching to near the apex of anal segment; genital styles separate, symmetrical, ventral margin entire, slightly curved, the dorsal margin angular on basal half and slightly rounded on apical half, apex moderately rounded.

Stramineous; most likely green when alive, the veins of tegmina greenish.

One male from Republic of Honduras, Tegucigalpa.

NEOMMATISSUS, Muir.

Neommatissus, Muir, Proc. Haw. Ent. Soc. ii. 5, p. 267 (July 1913).

Trocholophya, Melichar, Notes Layden Mus. xxxvi. p. 92 (1914).

Stacotoides, Distant, Faun. Brit. Ind. Rhyn. vi. p. 50 (1918).

Neommatissus bakeri, sp. n.

Female.—Length 3.6 mm.; tegmen 4.5 mm.

This species is very close to *T. 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. Mounsey*).

I regret to have to change this generic name, but the above synonymy will have to stand.

STENOCONCHOPTERA, gen. nov.

Form long and narrow. Head slightly narrower than thorax; greatly produced before the eyes, apex narrower than base, subangular or rounded, base angularly emarginate to about the middle of eyes, the lateral margins very slightly concave beyond the eyes; the genæ visible in dorsal view; a median carina on basal third, after which it fades out. The sides of the vertex carinate to apex, where they meet the lateral carinæ of frons, the genæ thus reaching apex. Frons long and narrow, the middle and sides carinate from base to apex. In some specimens the apex of head is more curved upward than in the specimen figured, and in some the vertex is slightly narrower in the middle. Base of clypeus straight, lateral carinæ very ill defined or missing, no median carina, but in the middle there is a raised area with a depressed centre which in profile projects. The labium reaches to the hind coxæ. Antennæ short, second segment about as wide as long. Anterior margin of pronotum subangularly produced between the eyes, the hind margin about equally angularly emarginate, the disc with three carinæ, also a single shoulder-carina behind eye. Mesonotum slightly longer than pronotum, tricarinate, a faint line cuts off the posterior angle. Legs comparatively short, simple; hind femora with a simple row of apical spines and two spines on side on apical fourth; basitarsus fairly short and broad, apex with a simple row of small apical spines; second tarsal segment small, apex rounded, with a small tooth on each side, the sole hairy. In the brachypterous forms the tegmina barely reaches the apex of the fourth abdominal tergum; in the macropterous forms they project considerably beyond the apex of abdomen, the claval veins enter the apex of clavus and fork about the middle; *Sc+R* is not forked till the apex, *M* fork slightly basad of the apex of clavus, and *Cu* slightly distad; a few irregular cross-veins in membrane; *M* and *Cu* joined for a short distance at base; no nodal line. In the female the eighth abdominal tergum is very short, the lateral plates (eighth sternites) large; anal segment narrow, the ovipositor typical of the family. In the male the eighth abdominal tergum is small and membranous; the ædeagus consists of a large simple periandrium and a long narrow penis which has the basal portion curved and recurved; there are some large and complex armatures arising from the penis. The condition of the hind tarsi, the female ovipositor, and the claval vein entering the apex of clavus places this genus

in the Tropicuchidae, even if the line separating the posterior angle of mesonotum is overlooked. In the male genitalia the perianthrium is more greatly developed than I have previously observed in the family, but as it varies from total absence to large 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 aedeagus figured. The basal portion of the perianthrium is separated from the distal by a membrane.

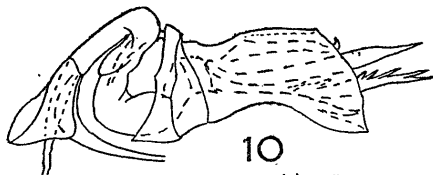
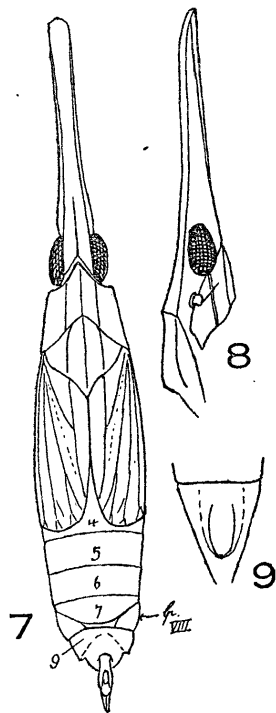
The female is similar to the male in size and colour.

Hab. South Africa: Cape, two brachypterous females including type (*C. Darwin*, no. 3690); 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 Vall, 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 frons on apical half depressed, carina very faint on basal half, in profile not prominent; surface of frons finely rugose, bearing fine light hairs; light brown in colour. Clypeus light brown, darker on sides. Vertex, pro-, and meso-nota light brown, a pair of blood-red stripes from apex of vertex to posterior margin



Stenoconchyoptera darwini, sp. n.

- Fig. 7.—Dorsal view of female.
 Fig. 8.—Lateral view of head and pronotum.
 Fig. 9.—Full view of clypeus.
 Fig. 10.—Left lateral view of aedeagus.

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, i. 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 *prq*- and *meso-nota* together. Medio-frontal 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* or *T. alicæ*, 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 carinae being thinner and higher and the apex a little more angular, the lateral carinae of the pronotum diverging posteriorly to a greater extent, and the anterior margin between the lateral carinae projecting a little further forward. The venation is practically the same, but the *Cu* 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 black; a small square black mark on genæ in front of antennæ; 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 claval, which is only dark at the base.

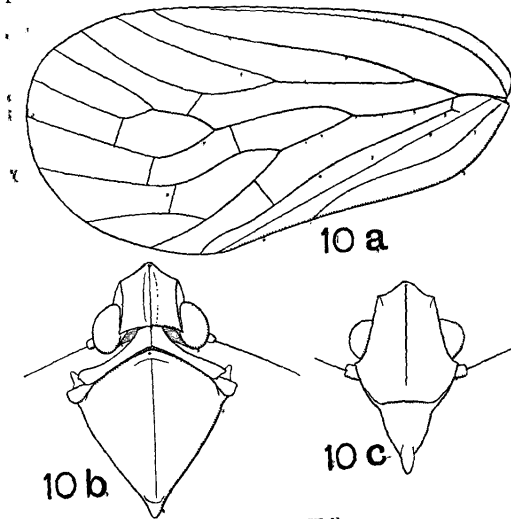
Hab. N. India, Moradabad.

Issidæ.

Buca simplex, Walker. (Fig. 10 a, b, c.)

Buca simplex, Walker, Cat. Hom. Supp. p. 122 (1858).

This genus and species was described from a female specimen in the British Museum (Natural History) from Villa Nova, Brazil. It was placed by Walker between the Flatidae and Issidæ, but it appears to have been overlooked by subsequent workers.



Buca simplex, Walker.

Fig. 10 a.—Tegmen.

Fig. 10 b.—Dorsal view of head and thorax.

Fig. 10 c.—Full view of face.

The figures given show the morphology of the head, pronotum, and mesonota, and the venation of the tegmen. The insect is compressed laterally and the tegmina are steeply tectiform, the abdomen is arched dorsally. The hind tibia with one small spine on the side; the hind basitarsus small, with spines at apex and without a pad; the second tarsus is very small and mostly hidden within the basitarsus, with a small

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 coxæ, the apical segment slightly longer than wide.

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 tegmina expanding slightly into the cells.

In the figure the outer cell of the clavus cannot be seen, because it is turned at right angles to the rest of the clavus; the claval vein enters the hind margin very near to the apex of the clavus. The *Cu* 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 Tropicuchidæ. 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 Tropicuchid alliance. In all Tropicuchidæ that I have examined the ovipositor is of a distinct type, the ventral and inner valvulæ forming a strong perfect organ capable of cutting, the dorsal valvulæ being fairly long subquadrate plates on each side; evidently the eggs are embedded in plant-tissues. In *Buca* the ovipositor is not of this type, but very small. The absence of any granulations on the tegmina, as well as the general facies, exclude it from the Flatidæ, 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 Acana-loniidæ and Issidæ 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 *Buca* in the Issidæ.

Eurybrachidæ.

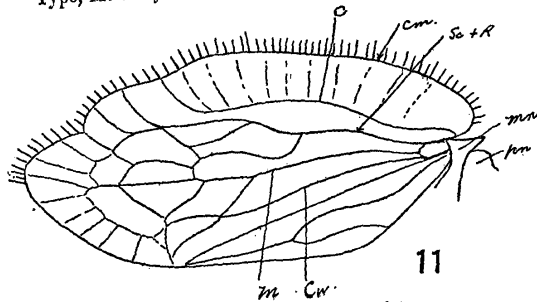
MICROEURYBRACHYS, gen. nov.

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

between eyes, a very fine carina down middle; base slightly sinuate. Frons wider than long, base angular; sides angular; the margins thickened; no median carina. Clypeus without carinæ. Antennæ very small. Pronotum narrower than head; hind margin nearly straight, no carinæ. Mesonotum wider than long, the lateral angles projecting forward beyond the pronotum. Hind coxæ projecting backward; tibia with three spines on side, apex not expanded, with fine small spines. Basitarsus fairly large, apex with five small spines, not expanded. Second-tarsus very small, apex round, no spines. Tegmina nearly horizontal; costal margin strongly curved at base; costal area much broader than costal cell, the cross-veins faint; *Sc+R* fork about middle of corium, *M* and *Cu* fork more distad; claval fork about one-third from apex, claval vein running into apex of clavus. The venation best understood from figure; the veins are irregular and raised in places; the apex bent ventrad. The margin from base of costa to apex bearing hairs. Wings narrow, rudimentary.

The second hind tarsus, the shape of frons, and the absence of carinæ on frons and clypeus place this genus in the Eurybrachidæ, but its general facies suggests *Flatoides*.

Type, *M. vitrifrons*.



Microeurybrachys vitrifrons, sp. n. Left tegmen.

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

Male.—Length 7 mm.; tegmen 6.3 mm.
Very light green inclining to yellow; the frons thin and transparent, so that one can see into the head, the margins
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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 CYLINDROMYIINI.

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 coxæ 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

* *Proc. Linn. Soc. N.S.W.* liv. pt. 4, p. 290 (1929).