

Some new Fulgorina (Homoptera) from Java and South America.

By

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A task of mine at the Entomological Museum of Lund has been the determination of the exotic material of Cicadina of the Museum. A few years ago this material was not very large. It consisted of some hundreds of specimens from the middle of the past century, mostly in a rather bad condition. During the last three or four years, however, the Director of the Museum, Professor Dr N. A. Kemner, has acquired new and valuable contributions to our collection of these interesting animals from different parts of the world. The most important of these contributions were collected in Colombia by Mr and Mrs G. Dahl during their recent travels in that country. Several hundreds of beautiful specimens from Java and Borneo were acquired from Mrs M. E. Walsh.

The work of determination of the material thus achieved sometimes has been rather difficult, owing to the impossibility of collecting and mastering the vast literature dealing with the Cicadina. In some cases, however, it was clear that we had to do with insects hitherto undescribed. Descriptions of six new species, all belonging to the Fulgorina, are given below.

Family Acanaloniidae.

Oxychara alata n. sp. — Head conically prolonged anteriorly. The prolongation wears a sharp median carina posteriorly bifurcate at the fore margin of the vertex. The ends of the branches of the carina are touching the medially obsolete transverse keel marking the fore limit of the vertex. Hind margin of the vertex with another transverse carina. Vertex with two faintly indicated longitudinal carinae. The sharp, elevated side margins of the vertex are continued anteriorly in a downcurved keel on each side of the head. The prolongation of this keel is forming the stout lateral margin of the frons. The frons is broader than long from the clypeus to the prolongation of the head. Frons with a distinct median keel not

continued on the prolongation. Head with a short and fine pilosity, especially below. The fore border of the pronotum is convex, its hind border slightly and evenly concave. The three longitudinal carinae of the pronotum are only very faintly indicated. On each side behind the eyes the pronotum wears a short and stout outwards-forwards directed spine. Mesonotum with three faintly indicated longitudinal keels and anteriorly with a somewhat stronger transverse keel, that laterally divides in three branches on each side. The branches reach the hind lateral margins of the mesonotum. The mesonotum is about twice as long as the pronotum. The fore wings are formed as those of *cyardiformis* Mel., and their venation is the same as that of that species. Hind wings well developed, broader than the fore wings, apically with two incisions, the posterior one deepest. Legs finely pilose.

Head, pro- and mesonotum and legs fuscous with numerous small light spots more or less confluent, especially on the ventrolateral parts of the head and on the anterior and median legs. Abdomen light, dorsally darker, ventrally spotted with dark. Fore wings olivaceous, minutely spotted with light. The larger veins are olivaceous or lighter but bordered with dark pigment, irregularly mingled with sanguineous. The red pigment is especially well developed along the smaller transverse veins, particularly in the clavus. Corium with a large pale yellowish irregular spot by form resembling a bird's head with the slender neck directed towards the base of the wing, the beak pointing towards its fore border. The spot begins near the base and reaches the middle of the fore wing. At the costal margin the ground colour is somewhat darker than in the rest of the fore wing, at the margin itself irregularly interrupted by small light spots. A somewhat larger light spot is situated in the apical margin of the fore wing. Hind wings semi-hyaline, grayish with fuscous yellow, apically darker veins; the veins in the anal area are blackish. — Length of the body 10 mm, to apex of the fore wings 15 mm.

This new species differs from *Oxychara cyardiformis* Mel. by the colour of the fore wings, the form of the forehead and the presence of well developed hind wings.

1 ♀, Java, Tjimerang, Djampang, October 1938 — Mrs M. E. Walsh.

Family Flatidae.

Cerynia bilineata n. sp. — Body greenish white with dark markings. Forehead unicolourous light. Antennae black, the furrow of the second segment lighter. Clypeus with two longitudinal fasciae and the sides dark; sometimes these markings are indistinct or wanting. Pronotum on each side behind the eyes with a dark spot. Mesonotum with six dark spots: two smaller at the fore border and on each side two bigger lateral spots, one anterior and one posterior. These markings are more or less distinct, sometimes totally absent. Tegulae dark. Femora light, the two anterior pairs with dark apices, fore and middle tibiae black, hind tibiae light, darker towards the tips, tarsi black, claws fuscous. Abdomen yellowish. Fore wings greenish white, overpowdered with white wax; a black dot near the tegulae, a roundish elevated orange spot near the base of the wing, a short black transverse line extending from apex of clavus half-way towards centrum of the wing, and a somewhat longer faintly curved black line starting at a point just behind apex of clavus and extending some distance towards apex of the wing. These two lines form together an imperfect L. Along the apical border of the fore wing two parallel greyish lines, the outer running immediately inside the light margin of the wing, the inner just outside the subapical line. Hind wings white. Length of the body ♂ 8–10 mm, ♀ 10–12 mm, to apex of wings ♂ ♀ 15–18 mm.

By the presence of two subapical dark transverse lines this species resembles

Cerynia albata Stål and *trilineata* Mel. It may be distinguished from both of them by having two of their three black lines on the disk of the fore wing, namely the two shorter of them. It also lacks the dark longitudinal lines at the basis of the fore wings of *trilineata*.

2 ♂♂, 5 ♀♀, Java, Tjiangsana, Mt Djampang, August 1938 — M. E. Walsh.

Adexia columbica n. sp. — Head with the eyes narrower than the pronotum, black. Pronotum black, posteriorly fuscous, with an abbreviated median carina and two lateral carinae diverging posteriorly. Mesonotum black, with three indistinct longitudinal carinae. Tegulae black. Fore and middle legs black, hind legs pale, irregularly spotted with dark and with dark tarsi. On the fore wings the anterior (costal) half of corium is fuscous, the posterior (claval) half of corium and the clavus colourless, the apical area is fuscous-greyish. All the veins are black, in the apical area fuscous. The numerous simple cross-veins are bordered with black, most broadly so towards the costal margin of the fore wing. There is a subapical line, situated nearer to the last cross-veins than to the apical margin. Hind wings white. The body as well as the wings are covered with a white waxy powder,

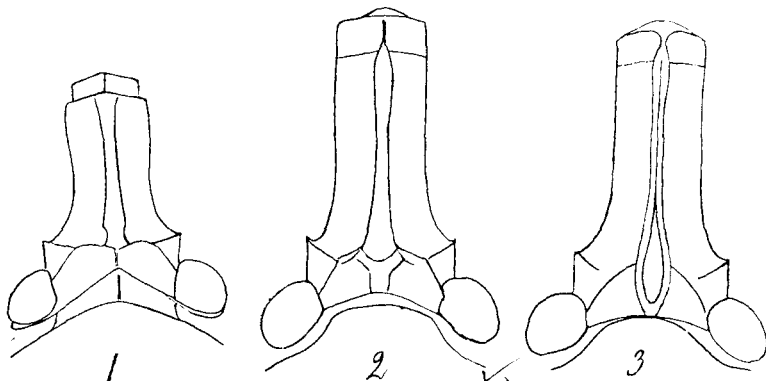


Fig. 1. *Diareusa kemneri* n. sp. Head from above. Fig. 2. *Diareusa dahli* n. sp. Head from above. Fig. 3. *Diareusa imitatrix* n. sp. Head from above.

making the ground colour of the fore wings almost invisible from above. The cross-veins and their black margins, however, are nude and distinct. In the specimen here described the ground colour is visible from beneath. Abdomen orange with long waxy filaments. Anal lobes of the female large, twice as high as broad, dorsally rounded, together cordiform, ventrally oblique. Length of the body (♀) 10 mm, exp. tegm. 53 mm.

1 ♀, Colombia Bolivar Batatal 1938—39. — M. Althén-Dahl.

This species differs from *Adexia fowleri* Mel. in the ground colour of the fore wings and by its much larger size. In *fowleri* the fore wings are black under the white powder. In *columbica* the black colour is lacking in the clavus and claval part of corium.

Family Fulgoridae.

Diareusa kemneri n. sp. — Head with a short (3.25 mm) cephalic process, that is narrowest behind middle. Above this process wears two sharp carinae diverging towards apex and caudad, the surface between them being narrowest at or a little in front of middle. Near apex of the process the dorsal longitudinal carinae suddenly

converge, together forming a very obtuse angle. The angular transverse carina so formed is continued laterally in a vertical carina. In front of this transverse carina the cephalic process is distinctly and suddenly narrower than the posterior part of the process and is above medially provided with a short and sharp middle carina. The mediodorsal longitudinal furrow of the process posteriorly ends with a transverse keel. Behind this keel on the vertex is a short, tolerably sharp median carina basally bifurcate. On the sides of head in front of the eyes goes a vertical transverse carina, a little beneath middle forming an obtuse angle. The anterior surface of rostrum is smooth with an indistinct middle keel and evenly rounded into the inferior surface. The frons and the process form an obtuse rounded angle, the inferior surface of head seen from side making an s-shaped figure. Frons with two very indistinct longitudinal carinae diverging towards clypeus. Clypeus with a distinct median carina. Pronotum with a distinct median carina behind middle inflated into a tuberculiform callosity instead of the depressed or flat surface of the other known species of this genus. The transverse carina of pronotum laterally partly fading out. Mesonotum with a distinct median carina and two faintly indicated lateral carinae parallel with the former; anteriorly on mesonotum an indistinct transverse carina.

The numerous veinlets in clavus and corium along claval suture run and branch irregularly, enclosing polygonal areolets.

The head is above orange yellowish, irregularly marked with black. The forehead is sordid yellowish with some rather small black spots, the largest on the lateral margin near the antennae. Pro- and mesonotum sordid yellowish with a more or less distinct reddish hue and numerous black spots. Abdomen above black, hind margins of the segments sordid yellow, beneath sordid yellowish. Ground colour of the fore wings pale yellow. Some of the areolets in the fore wing are blackish, and most of the dark areolets are ordered in groups forming dark spots irregularly distributed over the surface of the wing. In the basal half of the fore wing the numerous pseudoveinlets are bordered with punctiform sanguineous dots. Hind wings fuscous, basally pale green, with roundish white spots with a faint greenish hue. One of these spots is situated in the fore margin of the wing beyond middle. The apical margin of the wing is partly occupied by an elongated, irregularly shaped whitish spot (several confluent spots). Legs sordid yellow. Length of the body (♀) 27 mm. Exp. tegm. 83 mm.

One female from Perene, Perou (bought from Staudinger).

Named for Professor Dr N. A. Kemner, Director of the Entomological Museum of Lund, who introduced me in the study of the interesting group of insects here dealt with, and who called my attention to the probability of the species described in the present paper being new.

Diarcusa dahli n. sp. — This species is similar to *kemneri*, but the cephalic process is longer (5 mm) and parallel-sided. The carina of the cephalic process are almost parallel, only faintly diverging towards basis and apex. Anteriorly they meet forming an acute angle. The anterior transverse carina exists in its descending portion only, and even that is far less distinct than in *kemneri*. The portion of the cephalic process in front of this carina is as broad as the posterior portion. The posterior vertical carina forms a rather sharp tooth below middle, corresponding to the obtuse angle of *kemneri* above mentioned. The dorsal longitudinal furrow ends with an arcuate and obtuse transverse keel. The longitudinal carina of vertex is broad and obtuse. The anterior and inferior surfaces of the process form an obtuse angle. The anterior surface is provided with an obtuse and indistinct

longitudinal carina. This carina is continued on the inferior surface for about $\frac{1}{3}$ of its length and then disappears. On each side of the inferior surface is a sharp and distinct longitudinal carina that is continued on frons. These lateral carinae diverge towards clypeus. A short and very indistinct median carina in the inferior part of frons. Clypeus with a median longitudinal carina. The inferior surfaces of frons and cephalic process form together a rounded obtuse angle. The longitudinal carina of pronotum is more obtuse anteriorly than in *kemneri* and is bifurcate posteriorly. The two branches form an acute angle and make the lateral limits of a faintly depressed surface that is not carinated medially. The transverse keel of pronotum, forming the anterior limit of its dorsal surface, is sharp and well developed. Mesonotum and its carinae as in the preceding species. The veinlets in the basal part of corium and in clavus along the corio-claval suture are more or less parallel, enclosing narrow transverse areolets. Furthermore, the veinlets show an inclination of melting together in yellowish spots.

The head and pronotum are sordid yellowish and lack distinct dark markings save one dark spot on each side of pronotum behind the eyes. Mesonotum sordid yellowish with indistinct darker spots. Abdomen black with yellowish segment borders. Legs sordid yellowish. The red pigmentation of the fore wings is mostly not visibly punctiform as in the preceding species but more diffuse and appears to be mixed up with the yellow ground colour, making the fore wing basally orange yellow. The areolets are partly and irregularly filled with dark pigment, but the spots are not placed in the same way as in *kemneri*. Even the large longitudinal veins are irregularly bordered or coloured with red pigment. The hind wings are darker blackish than in the preceding species. The base and most of the spots are sanguineous, a triangular spot in the apical border and another spot in the disk near apex of wing being hyaline and colourless but with traces of sanguineous pigment. The spot in the fore border of the hind wing of *kemneri* is lacking. Length of the body 28 mm. Exp. tegm. 76 mm.

1 ♂ from Colombia, Rio San Agustin, Febr. 1938 (G. Dahl).

Named for Mr G. Dahl, the collector of this and many other interesting insects from Colombia.

Diareusa imitatrix n. sp. — Very similar to the preceding species. The cephalic process is narrowest behind middle, its dorsal longitudinal carinae melt together anteriorly and posteriorly, forming acute angles. The anterior transverse carina of the process is faint. The longitudinal carina of vertex most considerably abbreviated, almost non-existent. The posterior vertical carinae of head in front of the eyes are angular below middle as in *kemneri*. The anterior surface of the process forms an obtuse angle with its inferior surface. An indistinct transverse keel separates the two surfaces. A faintly indicated median carina on the anterior surface is continued and well developed on the inferior surface for somewhat more than half the length of the process. A faintly indicated median carina on frons. Lateral longitudinal carinae well developed. If seen from the side, the inferior surfaces of cephalic process and frons form an almost straight line. The longitudinal carina of pronotum broad and obtuse. Posteriorly it is bifurcate, the branches forming the lateral limits of a shallow fovea with laterally and anteriorly rounded sides and with a faintly indicated median carina. The transverse carina of pronotum is rather obtuse. Mesonotum as in the preceding species. The veinlets of the fore wings as in *dahli*.

Colour and pigmentation of the fore wings very similar to those of *dahli*. The red pigment, however, is partly punctiform. The hind wings are fuscous,

basally spotted with greenish. On the disk, the wings are spotted with white with a greenish tinge. Most of the apical border is occupied by a large hyaline spot. No spot on the fore border of the hind wings. Length of the body (♀) 28,5 mm. Exp. tegm. 82 mm.

One ♀ from Panama, Chiriqui (bought from Staudinger).