

On some South American Delphacidae. (Homoptera, Fulgoroidea.)

By

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I have to thank Professor Y. SJÖSTEDT, of the Naturhistoriska Riksmuseet, Stockholm, for the loan of the material on which the following descriptions and remarks are based. It is part of a larger collection of Fulgoroidea mostly collected by Dr. A. ROMAN in South America. The types, with one exception, are all in the Stockholm Museum.

That such a large proportion among these few species (8 out of 10) were undescribed, and two of them form the basis of two new genera, shows how little we know of this family from South America.

Delphacidae.

Asiracinae.

Tetrasteira minuta MUIR.

One male from the forest at Taracuá, River Uaupés (A. ROMAN, 11th March 1924). This was originally described from one male and one female from Belem, Pará.

Eucanyra romani sp. n. Fig. 1.

Male: length 5.4 mm.; tegmen 6 mm.

This species has a large stigma and the nodal line is thick and distinct, characteristics of the genus; it also has the basal segment of the antennae longitudinally sulcate and the anterior tibia equal to the femora, thus apparently combining the characters of *Ugyops*, *Canyra*, *Livatis* and *Eucanyra*. Sc. + R and Cu forking about the same distance from the base. This last character is used by STÅL to separate *Ugyops* from *Canyra* but it is not of generic value.

Vertex much longer than wide (about 2 to 1), width at base and apex equal. Length of frons 2.4 times the greatest width, sides curved, broadest on apical half; median carina simple. Antennae reaching to apex of clypeus, second segment 1.7 of the length of first.

Pygofer large; the ventral margin roundly emarginate, the angles of the emargination produced into a large, flat, apically rounded process, slightly beyond these the margins are again produced into a flat, pointed process. Anal segment asymmetrical, large, produced into a blunt point at apex. The genital styles long, narrow, parallel sided.

Frons brown with four longitudinal rows of light spots, one along each lateral carina and one on each side of the median carina. Clypeus and genae greenish brown. Vertex brown apically with a few light spots, greenish basally. Pronotum greenish in the middle, brown laterally with light spots, the largest near the lateral margin. Mesonotum brown, lighter in the middle. Legs light brown, the front and middle with lighter bands. Abdominal segments dark brown anteriorly, light greenish posteriorly; genitalia brown. Tegmina hyaline with some brown marks in apical cells, mostly from apex of Ms to the nodal line. Veins dark brown with some light marks. Granules very small bearing dark hairs. The node and the nodal line are yellow; the three cross veins in membrane white. Wings hyaline with brown veins; apex slightly fuscous.

Hab. River Uaupés, on the outskirts of an Indian plantation near Taracua (A. ROMAN, March 17), one male specimen.

Eucanyra taracuae sp. n. Fig. 2.

In size, build and colour this species is very similar to *E. romani*. The small white dots on each side of the median frontal carina join across and make little bands across the carina. The infuscation in the apical cells does not reach the nodal line.

The pygofer has only one pair of processes and they are larger, broader with a small indentation near the apex. The anal segment is larger, especially the apical produced portion, and the genital styles small.

There is one female I associate with this. The ovipositor is long, projecting considerably beyond the anal tube.

Hab. River Uaupés, Taracua. (A. ROMAN, March 23, 24), one male and one female.

Platysystatus g. n.

Head as wide as thorax. Vertex very short and broad (nearly 5 to 1), apex slightly rounded, base subparallel, a transverse ca-

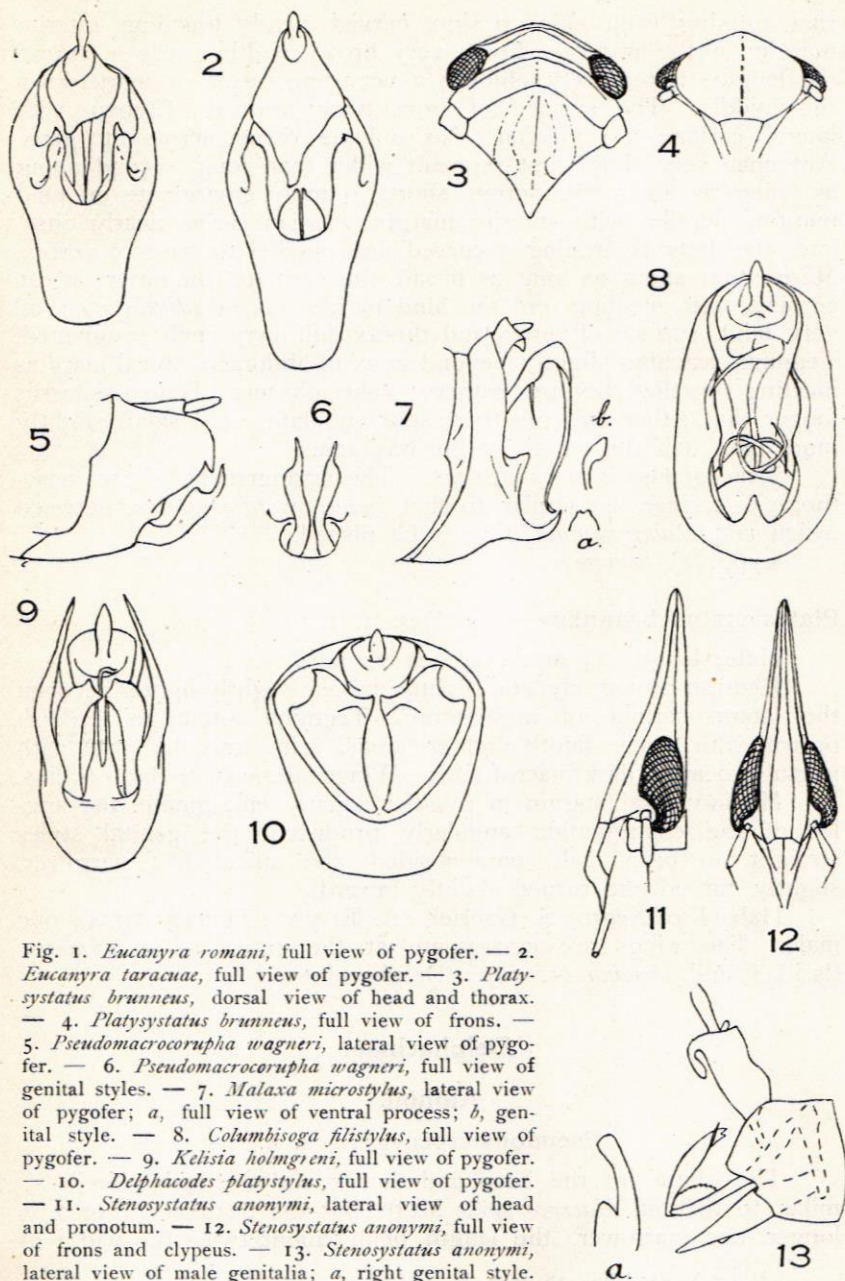


Fig. 1. *Eucanyra romani*, full view of pygofer. — 2. *Eucanyra taracuae*, full view of pygofer. — 3. *Platysystatus brunneus*, dorsal view of head and thorax. — 4. *Platysystatus brunneus*, full view of frons. — 5. *Pseudomacrocorypha wagneri*, lateral view of pygofer. — 6. *Pseudomacrocorypha wagneri*, full view of genital styles. — 7. *Malaxa microstylus*, lateral view of pygofer; a, full view of ventral process; b, genital style. — 8. *Columbisoga filistylus*, full view of pygofer. — 9. *Kelisia holmgreni*, full view of pygofer. — 10. *Delphacodes platystylus*, full view of pygofer. — 11. *Stenosystatus anonymi*, lateral view of head and pronotum. — 12. *Stenosystatus anonymi*, full view of frons and clypeus. — 13. *Stenosystatus anonymi*, lateral view of male genitalia; a, right genital style.

rina running from side to side, curved, nearly touching anterior margin in the middle. Frons very broad, width nearly 1.5 times the length, transversely oblong; a very fine carina or mark down the middle. The surface of frons finely rugose. Clypeus with lateral carinae, no median. No oblique carina across the gena. Antennae very short, first segment wider than long, second about as wide as long. Pronotum short, roundly emarginate on hind margin, parallel with anterior margin; median carina nearly obsolete, the laterals forming a curved line parallel to base of vertex. Mesonotum about as long as broad, fine-carinate, the outer carinae curving and meeting on the hind margin (as in *Idiosystatus*), all very faint, surface of vertex and thorax dull, very finely roughened. Tegmina reaching slightly beyond apex of abdomen, apical margins meeting together, texture leathery; veins obscure. Hind basitarsus longer than other two together; spur subulate, very small, slightly more than half the length of the basitarsus.

This genus is very distinct. The arrangement of the mesothoracic carinae is similar to that found in *Idiosystatus*, between which and *Pentagramma* it must be placed.

Type: *P. brunneus*.

Platysystatus brunneus sp. n. Figs. 3, 4.

Male: length 2.5 mm.; tegmen 2.8 mm.

Reddish brown; clypeus slightly darker; slightly lighter between the lateral carinae of mesonotum. Tegmina coriaceous, reddish brown with some faint lighter areas, veins irregularly set with granules bearing dark macrotrichia. Wings fuscous with darker veins.

Medio-ventral margin of pygofer squarely emarginate, the angles of the emargination angularly produced; the genital styles straight on basal half, parallel-sided, the apical half narrower, slightly curved and turned slightly inward.

Hab. Rio Negro, S. Gabriel, (A. ROMAN, January 1924), one male. The wings are emarginate at the suture as in *Thioniini* (Issidae) and *Punana breviceps* (Delphacidae).

Delphacinae.

Alohini.

Pseudomacrocorupha g. n.

The shape of the head and thorax and the carination is similar to that of *Macrocorupha* MUIR¹ but the head and thorax is longer and narrower, the length being about twice the width of

¹ H.S.P.A. Ent. Bull. 18, p. 8, Pl. 1, f. 7.

the mesonotum. Base of frons slightly rounded, slightly narrower than base, sides nearly straight, slightly constricted between the eyes. Diagonal carina on gena distinct. No median carina on clypeus, laterals obscure. Antennae reaching to base of clypeus, first segment very short, as broad as long, length of second segment twice the width, slightly more than twice the length of first, thicker than the first. Hind basitarsus thin, slightly longer than the other two together; spur not so long as the basitarsus, cultrate, thick, with about fourteen teeth on the hind margin. Tegmina long and narrow, the corium being about 3 times the length of the membrane; Sc + R and M forking at the nodal line, Cu forking a little distad of the middle of the corium.

The nature of the spur places this genus in the Alohini whereas *Macrocorupha* has no spines on the hind margin and so comes into the Tropidocephalini although the spur is not quite so thick as the typical genus.

Type: *P. wagneri*.

Pseudomacrocorupha wagneri sp. n. Figs 5, 6.

Macropterous male: length 2.7 mm.; tegmen 2.9 mm.

Length of vertex 1.6 times the width at base and about the same times the length of pronotum. Yellowish; the frons between carinae, the lateral portions of vertex and lateral carinae, the pronotum between the carinae and the lateral margins and the mesonotum between the carinae, greenish; the pygofer and styles brown; antennae with a black mark on each segment from base to apex. Tegmina hyaline, very slightly yellowish, veins light in corium; fuscous or black over nodal line and apical veins (specimen slightly damaged on posterior portion of apex).

The lateral view of pygofer and front view of styles figured; the anal segment is short, without armature. The aedeagus was not dissected and cannot be seen.

Hab. North Argentine, Chaco (WAGNER), one male specimen.

Tropidocephalini.

Malaxa microstylus sp. n. Fig. 7, a, b.

Macropterous male: length 2.1 mm.; tegmen 3.8 mm.

The width at base of vertex slightly greater than the length in middle, apex slightly narrower than base; the Y carina fine, the fork at apex very small; base about the middle of the eyes. Length of frons twice the width at apex which is slightly wider than the base; sides straight; median and lateral carinae distinct; clypeus with three distinct carinae. Antennae reaching nearly to

the middle of clypeus, first segment considerably longer than wide, the second segment twice the length of the first. In the tegmina the apical cells about as long as the corium; Cu forking considerably before the nodal line, Sc + R slightly before R at the nodal line.

Pygofer long and narrow, considerably compressed laterally, the lateral margins produced angularly, the ventral margin produced and curved upward, the apex being narrow and slightly emarginate. The genital styles are very small and hidden within the pygofer. The aedeagus is long and thin, bent at more than a right angle before the middle, a thin, long spine on the basal half. Anal segment without armature.

Vertex, frons, genae and antennae yellow, apical half of frons light; clypeus dark shiny brown, apex and labium lighter. Pronotum yellow in the middle, especially the median carina, brown over the lateral portions; pleura light brown; legs light brown, hind femora dark brown, mesonotum dark shiny brown. Abdomen light yellow with a large dark brown mark over the greater part of the tergum; pygofer and genitalia brown. Tegmina hyaline with a brown mark from Cu at nodal line to the hind margin and then across the apical cells to apex of Ms; veins same colour as membrane. Wing hyaline with light brown veins.

Hab. Bolivia, S. Fermin (N. HOLMGREN), one male specimen.

Columbisoga flistylus sp. n. Fig. 8.

Macropterous male: length 2.3 mm.; tegmen 3.8 mm.

The width of vertex at base slightly greater than the length in middle, base wider than apex which is widely angular, the Y vein indistinct with a small areolet near middle. Length of frons double the width. Antennae reaching slightly beyond the base of the clypeus, first segment considerably longer than wide, the second segment about twice the length of the first.

The pygofer compressed laterally, the opening long and narrow. The anal segment with a long curved spine with a bulbous base on the ventral margin. The genital styles are fairly narrow at base which is short, it then furcates into two long, thin, curved processes. The medio-ventral margin of the pygofer produced into a small, blunt spine. The aedeagus not dissected out.

Vertex light brown with the longitudinal middle line light; frons light brown, darker on the apical half, with light marks, one small one at base on median carina, a larger one in the middle and one at the apex, two small ones on each lateral carina near middle, the apical margin white. Clypeus brown, darker on apex. Genae dark, white around the ocellus. Antennae brown, first segment darker, a small dark mark on base of second segment. Pronotum brown, white on lateral portions, the carinae light with a

dark mark down each side. Mesonotum brown, the median carina light. Legs light brown, the hind femora darker. Abdomen brown, the hind margins of the tergites narrowly and the hind margins of the sternites widely light yellow. Pygofer and genitalia brown. Tegmina hyaline, a slight, broken fuscous mark across from middle of costa to apex of clavus; veins light brown with dark brown granules. Wings hyaline with brown veins.

Hab. Bolivia, S. Fermin (N. HOLMGREN), one male specimen.

This genus appears to be well represented in South America as this is the tenth species reported from there. They all have very distinctive male genitalia.

Delphacini.

Pissonotus haywardi MUIR.

One male and four females from Lower Amazon below Montealegre, at electric light on steamer (A. ROMAN, 28th October 1923). This was originally described from Argentine Republic, Villa Ana.

Kelisia holmgreni sp. n. Fig. 9.

Macropterous male: length 2.5 mm.; tegmen 3.4 mm.

Length of vertex very slightly greater than the width at base, apex rounded, slightly narrower than base, the inverted V and the Y carinae distinct, base about middle of eyes. Length of frons slightly less than twice the width, sides slightly curved, base slightly rounded, slightly narrower than apex; median carina simple, distinct. Antennae reaching to base of clypeus, first segment about as long as wide at apex, second segment about 2.5 times the length of the first. Hind basitarsus longer than the other two together; spur nearly as long as basitarsus, with about 18 teeth on hind margin.

The anal angles of the pygofer produced into long, acute angular processes; the medio-ventral margin turned upward in a small subquadrate plate which is produced into two long, slender spines. Aedeagus not dissected out.

Light crome yellow; the tips of the spines on the legs black; the carinae of head and thorax lighter. Tegmina hyaline, slightly yellowish, veins lighter, the apex of each apical vein slightly fuscous. Wings hyaline with light veins.

Hab. Bolivia, Tuiche (N. HOLMGREN), one male specimen.

This species is congeneric with the nine other South American species of the genus so far described and, like them, not quite typical of the genus. At present they are best left in *Kolisia*.

Delphacodes platystylus sp. n. Fig. 10.

Macropterous male: length 2.3 mm.; tegmen 2.9 mm.

Vertex slightly wider than long, apex as wide as base, carinae distinct. Head nearly as wide as thorax. Length of frons not quite twice the length, apex and base subequal in width, sides slightly curved; median carina simple. Antennae reaching slightly beyond the base of clypeus, first segment much longer than wide, second segment slightly longer than first. Lateral pronotal carinae diverging posteriorly, slightly curved, not quite reaching the hind margin. Hind basitarsus about equal to the other two together; spur about the length of the basitarsus, broad, thin, tectiform, with over twenty teeth on the hind margin.

The front view of pygofer figured. The styles are large and broad and hide the aedeagus and diaphragm. The anal segment sunk into the pygofer and appears to have no armature. Aedeagus not dissected out.

Stramineous; the abdomen and genitalia brown. Tegmina hyaline, slightly stramineous, veins the same colour. Wings hyaline with darker veins.

Hab. North Argentine, Chaco (WAGNER), one male specimen.

There are four female *Delphacodes* and one other female which I do not care to try to identify; also a male without a head which appears to be undescribed and comes near *Pissonotus equadorensis* MUIR.

The following species is included in this paper because it represents an interesting new genus and because I believe it is from South America. It represents an extreme development of *Idiosystatus* in one direction as *Platysystatus* does in an opposite direction.

Stenosystatus g. n. Figs. 11, 12, 13, a.

Length of vertex nearly twice the length of the pro- and mesonota together; broadest at base and gradually narrowing to the narrow apex; lateral carinae distinct to apex, median carina simple, distinct on basal half then faint. Frons long and narrow, base pointed, apex truncate, sides curved, broadest on apical half; four longitudinal carinae, the laterals joining one from before the eye near apex, the two medians distinct from apex to base. Clypeus tricarinate. Diagonal carina on gena distinct. Hind margin of pronotum slightly emarginate with a small, angular emargination in the middle; tricarinate. Mesonotum with four longitudinal carinae, the outer pair reaching the hind margin, the inner pair not reaching the hind margin but stopping on a level with the

outer pair. Antennae reaching to about the middle of clypeus, first segment about as long as wide or slightly longer, second about four times the length of first. Legs fairly short and stout; hind basitarsus short, subequal to middle tarsus in length.¹ The spur is as long as basitarsus, subspiniform, slightly flattened and curved slightly on the outer or hind margin. Tegmina long, narrow, the apex narrowly rounded; clavus reaching nearly four fifths from base, apical cells short; Sc + R forking about two third from base of corium, M and Cu forking at nodal line. Wing fully developed.

Type: *S. anonymi*.

The spur of this genus is the most generalized I have so far examined; it has the same arrangement of hairs as the spines at the apex of the tibia, the long, thin awl-shape spur being more specialized. The spur in *Tetrasteira* is very similar. It comes into the Asiracinae. The male genitalia also agree with this as the aedeagus consists of two segments. Its position is difficult to locate but I should place it next to *Idiosystatus*.

The specimens from which it is described are in the British Museum (Natural History) with no data as to locality or collector. It is interesting to speculate as to its habitat. So far Africa has produced no Asaracinae and so it is improbable that it has come from there. As in build it approaches the South American rather than the Oriental or Malay types I think it is reasonable to consider it as probably coming from there. If it were not such an interesting form I would not describe it without better data.

Stenosystatus anonymi sp. n.

Male: length 4 mm.; tegmen 2.7 mm.

Light reddish brown; a light mark from the apex of vertex to the hind margin of the mesonotum including the greater part of the vertex and the middle of the pro- and mesonota. Tegmina light brown, the veins and the margin of clavus lighter; granules on veins small, black, bearing black macrotrichia.

The genitalia figured; the apical portion of the aedeagus large.

The female similar in build, size and colour to the male. The ovipositor not reaching quite to the apex of pygofer.

Hab. Unknown; collector Anonymous; described from five males and two females. Type in the British Museum.

¹ Measurements made from base of basitarsus to base of middle tarsus and base of third tarsus.