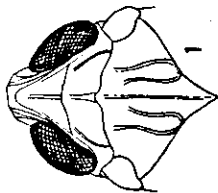


*New and little-known South-American Delphacidae (Homoptera,
Fulgoroidea) in the Collection of the British Museum.*
By F. MUIR, Hawaiian Sugar Planters' Experiment
Station, Honolulu, T.H.

Idiosystatus, Berg, 1884. *dece*

There are six specimens from Argentina, Terr. Rio Negro
(*F. and M. Edwards*), apparently belonging to this genus.
As the only description of this genus appears to be that of
Berg, I redescribe it herewith.

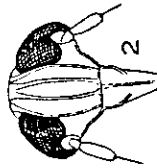
Width of vertex at base equal to length in middle, base
wider than apex, apex projecting beyond eyes, slightly
rounded; base about the middle of the eyes. The inverted



✓ *Idiosystatus acutiscutus*, Spin.
Dorsal view of head and thorax.

V-carina joining lateral margins behind middle, the areolets
long and narrow, the carina considerably flattened and
expanded at apex; the lateral margins with a fine carina
which is expanded at apex; a simple medio-longitudinal
carina reaching nearly to the apex of the inverted V-carina.
Length of frons slightly more than 1.5 times the width, sides

slightly arcuate; two medio-longitudinal carinae from apex to base, expanded and flattened at base where they join the apex of the V-shape carina of vertex; lateral carinae expanded at base where they meet the lateral carinae of vertex. Clypeus tricarinate, the middle carina distinct. Antennae reaching to about the base of clypeus, first segment short, about as long as broad, second segment twice the length of the first. Pronotum tricarinate, lateral carinae



Idiosystatus acutusculus, Spin.

Frontal view of head.

diverging posteriorly, straight or slightly curved inward, reaching hind margin. Mesonotum with five carinae, the lateral and medio-lateral carinae on each side curved round and meeting together on the hind margin. Hind basitarsus shorter than the other two segments together; spur longer than hind basitarsus, awl-shaped. Macropterous; tegmina very slightly longer than the wings; apical cells very short; Sc and R forking about the middle of tegmen, Cu-fork about level of the apex of clavus, M with two apical veins, 1+2 and 3+4. (Figs. 1, 2, 3, 4.)



Idiosystatus acutusculus, Spin.

Fig. 3.—Lateral view of anal segment and aedeagus.

Fig. 4.—Right genital style.

Five specimens, marked "Clemente onelli, 24. ix. 1926," appear to be *I. acutusculus* (Spin.), 1852; a sixth specimen marked "L. Gutierrez, 3-14. xi. 1926," has the vertex and frons slightly longer and the sides of the frons less arcuate; the pale mark across the frons is also more distinct.

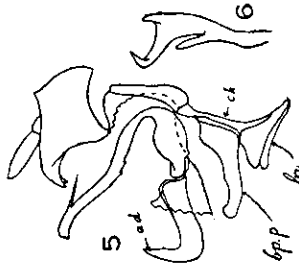
Owing to the nature of the spur and the male genitalia this must be placed in the *Asiracinae*, in which group I had provisionally located it.

Prisonorus, Van Duzee, 1897.

Pissonotus haywardi, sp. n. (Figs. 5, 6.)

Macropterous male: length 3.0 mm.; tegmen 3.8 mm. Length of vertex slightly greater than the width at base, base slightly wider than apex, apex projecting in front of eyes, base about the middle of the eyes. Length of frons three times the width on apical half, apex slightly wider than base, lateral margins very slightly arcuate; median carina simple or forked at extreme base. Antennae long, reaching nearly to apex of clypeus, first and second segments subequal in length. Hind basitarsus as long as the other two segments together, spur as long as basitarsus, broad, with about thirty teeth on the hind margin.

Uniformly light brown; tegmina hyaline, slightly stramineous, veins slightly darker.



Pissonotus haywardi, sp. n.

Fig. 5.—Lateral view of anal segment, aedeagus: *ad.*, armature of diaphragm; *ch.*, chamber; *br.*, bridge; *bp.p.*, basal plate prolongation.

Fig. 6.—Right genital style.

The opening of the pygofer longer than wide, margins entire, anal emargination wide, anal angles angular but not produced. The right genital style figured. Anal segment produced into two small curved spines with their bases close together. The diaphragm produced into a large strong spine with the apical third curved upward. The aedeagus long, tubular, thin, the base curved round and enlarged and attached to the armature of the diaphragm by a short membrane; a small spine pointing basad arises from near the apex of the aedeagus.

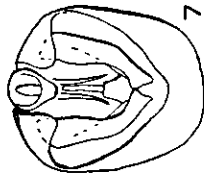
Macropterous female: similar in shape and colour to the male.

Hab. Argentine Republic, Villa Ana, F.C.S.F. (K. J. Hayward, no. 4430, x., xii, 1924). This species is allied to *P. belemensis*, Muir, from Belem, Brazil, and *P. equadorensis*, Muir, from Tena, Ecuador.

Delphacodes darwini, sp. n. (Figs. 7, 8.)

Brachypterous male: length 1.9 mm.; tegmen 1.2 mm.

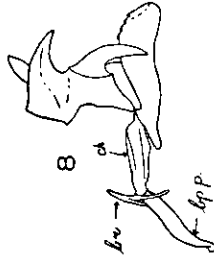
Head nearly as wide as the thorax; vertex broader than long, apex subequal to base in width, apex slightly rounded, projecting slightly in front of eyes, base anterior to the



Delphacodes darwini, sp. n.

Full view of pygofer.

middle of the eyes; the Y-shape carina indistinct. Length of frons 1.4 times the width, sides slightly arcuate, apex subequal to base in width; median carina simple. Antennæ reaching slightly beyond the base of clypeus, first segment slightly longer than broad, second segment double the length of the first. Lateral pronotal carinæ diverging posteriorly,



Delphacodes darwini, sp. n.

Lateral view of anal segment, aedeagus: *ca.*, chamber; *br.*, bridges; *cp.p.*, basal plate prolongation.

not reaching the hind margin. Hind basitarsus as long as the other two segments together, spur shorter than the basitarsus, thin, wide, with about fifteen teeth on the hind margin.

The opening of the pygofer wider than long, margins

entire. Anal emargination large, anal angles widely produced, rounded and curved over; diaphragm produced in middle into a small plate, narrowing to the apex which is truncate. The genital styles are long, flattened, widest on the apical half, apex subtruncate, a small ridge runs down the back of each style. Anal segment small, long, the medio-ventral margin of apex produced into a small lip; about the middle of the ventral surface arise two broad flattened spines, their apices acute, their bases close together. The aedeagus is flattened laterally, in lateral view widest on apical half, the orifice is on the dorsal aspect with two small rows of some four minute teeth each just basad of the orifice.

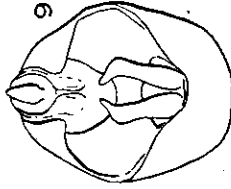
Dark brown; the antennæ, legs, and pronotum light brown or yellow, the anterior portion of the pronotum being slightly darker than the posterior. Tegmina dark shiny brown.

Hab. Chiloe Island, Chili; collected by Charles Darwin in 1834-1835, no. 2523.

Delphacodes (?) *chiloensis*, sp. n. (Figs. 9, 10, 11.)

Brachypterous male: length 2.3 mm.; tegmen 1.3 mm.

Head as wide as thorax or slightly wider; length of vertex slightly less than the width, apex rounded and projecting slightly beyond the eyes, base about the middle of the eyes, carinæ obscure. Length of frons 1.6 times the width, sides



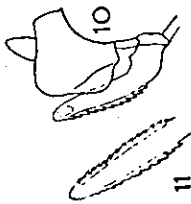
Delphacodes chiloensis, sp. n.

Full view of pygofer.

slightly arcuate, carinæ obscure, the median carina forked some little distance from base. Antennæ reaching about the base of the clypeus, first segment slightly longer than wide, second twice the length of the first. Lateral pronotal carinæ divergingly curved posteriorly, not reaching the hind margin. Hind basitarsus slightly longer than the

other two segments together; spur shorter than the basitarsus, thin, tectiform, with about sixteen teeth on its hind margin. The tegmina reaching to the apex of the seventh abdominal segment.

Opening of the pygofer wider than long, margins entire, anal emargination fairly large, anal angles produced, rounded and curved inward. Diaphragm fairly long, without armature. Anal segment with two longitudinal ridges along the medio-ventral surface, the basal half produced roundly. The aedeagus in transverse section sub-triangular, straight except at base where it is curved. A medio-lateral serrated carina runs from near apex to near base, a few teeth along the left side near apex. Genital styles comparatively small, broadest at base, slightly narrowed to apical third and then broadened, apex oblique, inner angle slightly enlarged.



Delphacodes chilensis, sp. n.

Fig. 10.—Lateral view of anal segment and aedeagus.

Fig. 11.—Ventral view of aedeagus.

Brown; genæ and clypeus darker than frons and vertex; the middle of pronotum and metanotum lighter than the lateral portions. Coxæ and abdomen dark, antennæ and legs lighter. Tegmina dark brown, margins (commissure, apical and costal margin) light.

Hab. Chiloe Island, Chili. One specimen collected by Charles Darwin in 1834-1835, no. 2523. This species might equally well be placed in *Anectopia*, Kirkaldy, 1907, if that genus can be distinguished from *Delphacodes*.

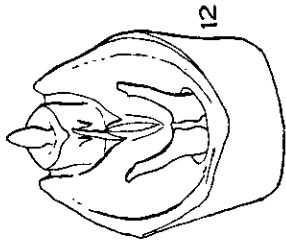
There is a macropterous female from the same locality taken by Charles Darwin which is similar in structure but much lighter in colour, being ochraceous, slightly brownish on the lateral portions of the pronotum and mesonotum. I have referred it to this species, but I do not include it in the type-material.

Calbodus pallidulus spinola 1852 (See Ferris, 1965) (L.L.C.)

Delphacodes (?) *correntosensis*, sp. n. (Figs. 12, 13.)

Brachypterous male: length 2.7 mm.; tegmen 1.5 mm. Head about as wide as thorax; vertex slightly wider than

long; apex slightly rounded and slightly projecting in front of eyes, base about the middle of the eyes, very slightly wider than apex. The Y-carina obscure. Length of frons twice the width, widest slightly before the middle; median carina simple, slightly obscure at base. Antennæ reaching slightly beyond the base of the clypeus, first segment longer than broad, second double the length of the first. Lateral



Delphacodes correntosensis, sp. n.

Full view of pygofer.

pronotal carinae divergently curved posteriorly, not reaching the hind margin. Tegmina reaching to the apex of the sixth abdominal segment. Hind basitarsus slightly longer than the other two segments together; spur not as long as basitarsus, wide, thin, with about eighteen teeth on hind margin.

Opening of the pygofer wider than long, margins entire; anal emargination large, anal angles angular. Anal segment



Delphacodes correntosensis, sp. n.

Lateral view of anal segment and aedeagus.

with two small spines about the middle of the ventral area. The diaphragm with the middle raised, projecting above the dorsal margin and reaching nearly to the orifice of diaphragm.

The frons, middle of clypeus, vertex, and antennæ yellow or light brown, the genæ and sides of the clypeus shiny black or dark brown. Pronotum and mesonotum yellow,

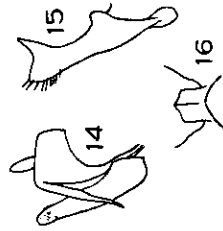
brown behind the eyes on the pronotum and on lateral angles of the mesonotum. Coxæ dark brown, legs lighter brown or yellow, abdomen brown with a light longitudinal mark down the middle of dorsum. Tegmina dark brown with the margins pale.

Hab. Argentina, Terr. Rio Negro, Lake Correntoso (*F. and M. Edwards*, xi. 1926). This species might also be placed in *Aneetopia*, Kirkaldy.

Delphacodes argentinensis, sp. n. (Figs. 14, 15, 16.)

Macropterous male: length 1.9 mm.; tegmen 2.5 mm.

Length of vertex slightly less than the width at base which is slightly greater than the width at apex, projecting slightly in front of the eyes, base slightly anterior to the middle of the eyes. Length of frons 2.2 times the width, sides very slightly arcuate, median carina simple. Antennæ reaching



Delphacodes argentinensis, sp. n.

Fig. 14.—Lateral view of anal segment and aedeagus.

Fig. 15.—Left genital style.

Fig. 16.—Armature of diaphragm.

slightly beyond the base of the clypeus, first segment slightly longer than wide, second about twice the length of first. Hind basitarsus not quite so long as the other two segments together, spur as long as the basitarsus, wide, thin, with about twenty small teeth on the hind margin.

The opening of the pygofer wider than long, margins entire, anal emargination large, the anal angles considerably produced, angular, and nearly surrounding the anal segment. Diaphragm short, produced into a plate of which the apex is angular. The left genital style, aedeagus, and anal segment are figured.

Stramineous; slightly fuscous between the carinæ of the head, darkest along the sides of the carinæ; slightly fuscous on pronotum behind the eyes and on coxæ. Tegmina hyaline, veins before the nodal line light, apical of nodal line and

the apical margin slightly fuscous. Wings hyaline, veins slightly fuscous.

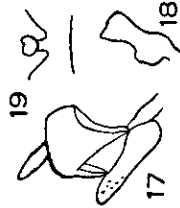
Hab. Argentine Republic, Villa Ana, F.C.S.F. (*K. J. Hayward*, xii. 1925), one male taken at light. There are two females which I refer to this species. This species is allied to the widely distributed *D. propinqua* (Fieber).

Delphacodes humilis (Van Duzee).

One macropterous male from Argentine Republic, Villa Ana, F.C.S.F. (*K. J. Hayward*, i. 1926), belonging to this species and four macropterous females from the same locality which I associate with it. This species was formerly reported from Florida, Jamaica, Mexico, British Guiana, and Ecuador.

Delphacodes haywardi, sp. n. (Figs. 17, 18, 19.)

Macropterous male: length 1.9 mm.; tegmen 2.9 mm. Vertex square, projecting in front of eyes, base distinctly



Delphacodes haywardi, sp. n.

Fig. 17.—Lateral view of anal segment and aedeagus.

Fig. 18.—Right genital style.

Fig. 19.—Armature of diaphragm.

in front of the middle of the eyes, carinæ distinct. Length of frons 2.4 times the width, sides very slightly arcuate, median carina simple. Antennæ reaching slightly beyond the base of the clypeus, first segment slightly longer than wide, second segment twice the length of the first. Lateral pronotal carinæ diverging posteriorly, slightly curved, not reaching the hind margin. Hind basitarsus as long as the other two segments together; spur not quite so long as basitarsus, wide, tectiform, with about thirty small teeth on hind margin.

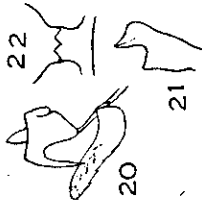
The opening of the pygofer about as long as broad, margins entire, anal emargination shallow, anal angles obscure, rounded. Anal segment with two spines curved convergingly towards the apex. Right genital style, armature of diaphragm and aedeagus and anal segment figured.

Head dark brown or black, carinae and antennae yellow or light brown; pronotum yellow, the space behind the eyes brown; mesothorax dark brown with the carinae and hind margins yellow; tegulae yellow. Pleurae and first and second coxae dark brown, rest of the legs light brown; abdomen dark brown. Tegmina hyaline, very slightly fuscous or stramineous over the apical cells and clavus, a dark brown mark at the apex of clavus, commissure pale; veins basad of nodal line pale, slightly fuscous distad of the nodal line, apical margin from node to apex of clavus fuscous. Wings hyaline with light brown veins.

Hab. Argentine Republic; Villa Ana, F.C.S.F. (K. J. Hayward, xii. 1925), two males taken "at light."

Sogata biangulata, sp. n. (Figs. 20, 21, 22.)

Macropterous male: length 1.8 mm.; tegmen 2.4 mm. Narrow form; head narrower than the thorax; length of vertex 1.3 times the length; apex narrower than the base,



Sogata biangulata, sp. n.

Fig. 20.—Lateral view of anal segment and aedeagus.

Fig. 21.—Right genital style.

Fig. 22.—Armature of diaphragm.

projecting in front of eyes. Length of frons slightly more than twice the width, sides slightly arcuate, base slightly narrower than apex, median carina simple or forked at extreme base. Antennae reaching to the base of clypeus, first segment sligher, longer than broad, second twice the length of first. Lateral pronotal carinae diverging posteriorly, straight or curved slightly convergingly, almost reaching the hind margin. Hind basitarsus as long as the other two segments together, spur as long as the basitarsus, wide, thin, with about sixteen teeth on the hind margin.

Margins of the pygofer entire, anal angles obscure, the diaphragm fairly long, the dorsal margin produced into two small angles; the anal segment with two large spines from the apical ventral margin; aedeagus semitubular, slightly

curved at the base, a few spines on the left side or on ventral surface. Right genital style figured.

Dark, shiny brown or nearly black; carinae of head, antennae, and vertex between the V-carina yellow; the middle and lateral portions of the pronotum, the middle of mesonotum, and the tegulae white or cream-colour, the rest of pronotum and mesonotum dark brown. Coxae dark brown, rest of legs pale; abdomen brown. Tegmina hyaline, slightly fuscous over clavus and the apical M and Cu cells. Wings hyaline with brown veins.

Hab. Argentine Republic; Villa Ana, F.C.S.F. (K. J. Hayward, xii. 1925).

The female which I associate with this male is similar in build and colour, but the tegmina are not so fuscous and there is a distinct dark mark at the end of the clavus.

The types of the species described above are preserved in the British Museum.