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SYNOPSIS OF THE CICADIDAE of Ecuador

By Dr. Frederic W. Goding

The Cicadidae are well known here where they are called *cigarras*, fifteen different kinds having been recorded from Ecuador. The present paper adds thirty three to the list, distributed in thirteen genera one of which genera and twelve species are first described and named.

The young *cigarras* are attached to the roots of trees where, by sucking the sap, they do great damage to orchards and forests; the fully matured *cigarra* injures trees by cutting a slit in the bark of the branches in which the female deposits her eggs, eventually causing the death of the branch. One species found in the United States of America remains in the ground for seventeen years before emerging into the perfect state.

In preparing this paper, use was made of the works of Stal, Distant, and Jacobi; and valued aid was given by Dr. L. O. Howard and his colleagues. Much material has been furnished by Prof. Campos, Dr. and Mrs. J. B. Rorer, Messrs Feyer, Goodfellow, Madera, Bernal, Tate, Cartwright, and Seminario. I am under special obligations to my highly esteemed friend and cultured fellow laborer in Entomology, Professor Francisco Campos R., who has translated this Synopsis into Castellano, and has supervised its publication; into his hands my collection will be placed, all of the species included herein being preceded by an ‡.

LIST OF THE CICADIDAE OF ECUADOR.

Subfamily GAERANINAE

Division Fidicinaria

Genus PROARNA, Stal.

‡ *P. grisea*, Fabr.

Fabr. Ent. Syst. iv, p. 17 (1794).

Habitat. Angelica, Los Rios (Cartwright); Boeza, El Oriente (Goodfellow); Chunchi (Campos); Surula, Rio Villacao (Feyer); Barraganetal (Plank); Milagro (Mrs. Rorer, Tate).

‡ *P. insignis*, Dist.

Biol. Cent. Amer. Rynch. Hom. i, 12 (1881).

Habitat: Ecuador (Jacobi); Baños (Campos).

‡ *P. guttulosa*, Walk.

Walker, Ins. Saund. Hom. p. 20 (1858).

Habitat: Macas (Madera).

Genus FIDICINA, Amy. y Serv.

‡ *F. mannifera*, Fabr.

Fabricius, Syst. Ryng. p. 36 (1803).

Habitat: Macas (Madera).

‡ *F. glaucus*, Godg.

Goding, in this Synopsis.

Habitat: Macas (Bernal).

‡ *F. viridis*, Oliv.

Oliver, Enc. Meth. v. p. 754 (1790).

Habitat: Ecuador (Jacobi); Macas (Feyer); Baños (Rorer).

F. bogotana, Dist. (Ann. Mag. Nat. Hist. x, p. 58 (1892):

Habitat: Ecuador (Distant); Coca, Santa Inez (Jacobi).

‡ *F. distanti*, Godg.

Goding, in this Synopsis.

Habitat: Macas (Feyer).

‡ *F. vitellina*, Jacobi.

Jacobi, Ges. Nat. Freunde Berl. p. 155, fig. 1 (1904).

Habitat: Balao, Bucay (Campos); Guayaquil (Mrs. Cartwright).

‡ *F. mulleri*, Dist.

Distant, Ann. Mag. Nat. Hist. ix, p. 319 (1892).

Habitat: Posorja (Campos); Macas (Feyer).

F. flavibasalis, Dist.

Distant, Ann. Mag. Nat. Hist. ix, p. 319 (1892).

Habitat: Cachabi (Distant).

Genus *HEMISCIERA*, Amy. y Serv.

‡ *H. pictipennis*, Lap.

Laporte, Ann. Soc. Ent. France, i, p. 412 (1832).

Habitat: Macas (Feyer, Madera).

Genus MAJEORONA Dist.

‡ *M. truncata*, Godg.

Goding, in this Synopsis.

Habitat: Posorja (Campos).

‡ *M. aper*, Walk.

Walker, List. Hom. Brit. Mus. i, p. 87 (1850).

Habitat: Posorja (Campos); Macas (Madera).

§ *M. ethelae*, Godg.

Goding, in this Synopsis.

Habitat: Quito (Mrs. Ethel Rorer); Macas (Feyer).

‡ *M. ecuatoriana*, Godg.

Goding, in this Synopsis.

Habitat: Zaruma (MaMahan); Macas (Feyer) San Rafael (Campos).

División Zammararia.

Genus ZAMMARA, Amy. y Serv.

‡ *Z. smaragdina*, Walk.

Walker, List. Hom. Brit. Mus. i, p. 33 (1850).

Habitat: Nannegal (Distant); environs of Guayaquil
(Goding).‡ *Z. calochroma*, Walk.

Walker, List Hom. Brit. Mus. Suppl. (1858).

Habitat: environs of Guayaquil (Goding).

‡ *Z. intricata*, Walk.

Walker, List Hom. Brit. Mus. i, p. 35 (1850).

Habitat: Guayaquil (Walker); many towns near Guayaquil (Goding).

Genus ORELLANA, Dist.

‡ *O. pulla*, Godg.

Goding, in this Synopsis.

Habitat: Milagro (Goding); Naranjapata (Plank);
Macas (Feyer).‡ *O. brumpennis*, Godg.

Goding, in this Synopsis.

Habitat: Lliquino, El Oriente (Feyer); Tenegal (Rorer).

‡ *O. nigriplaga*, Walk.

Walker, List Hom. Brit. Mus. Suppl. p. 4 (1858).

Habitat: Colimes (Campos); Antigua, (Distant).

‡ *O. brevis*, Dist.

Distant, Ann. Mag. Nat. Hist. xv, p. 382 (1905).

Habitat: Guayaquil (Goding).

Division Moganniaria.

Genus PACHYPSALTRIA, Stal,

‡ *P. cincto-maculata*, Stal.

Stal, Ofv. Vet.,-Ak.Forh. p. 243 (1854).

Habitat: Quito (Stal, Campos, Cartwright); Azoguez (Campos).

‡ *P. camposi*, Godg.

Goding, in this Synopsis.

Habitat: La Asunción, Bolívar (Campos).

Subfamily TIBICININAE.

Division Hyantiaria.

Genus QUESADA, Dist.

‡ *Q. gigas*, Oliv.

Oliver, Enc. Meth. v. p. 750 (1790).

Habitat: Surula (Madera); Macas (Feyer).

Division Tettigadesaria

Genus COATA, Dist.

‡ C. facialis, Dist.

Distant, Ann. Mag. Nat. Hist. xiii, p. 30-2(1906).

- Habitat: Quito (Distant); Coca, Balzapamba, Santa Inez (Jacobi); Rio Mangavisa (Feyer); Macas (Bernal).

‡ C. fragilis, Godg.

Habitat; Macas [Feyer].

Division Carinetaria.

Genus NOVEMCELLA, Godg.

‡ N. ecuatoriana, Godg.

Godg. in this Synopsis.

Habitat: Tarqui, Azuay [Campos].

Genus CARINETA, Amy, y Serv.

‡ C. ecuatoriana, Godg.

Godg. in this Synopsis.

Habitat: Surula, near Macas [Madera],

‡ C. boliviana, Dist.

Distant, Ann. Mag. Nat. Hist. xv. p. 484 [1905].

Habitat: Macas, Lliquino [Feyer].

‡ C. illustris, Dist.

Distant, Ann. Mag. Nat. Hist. xv. p. 485 [1905].

Habitat: Rio Lliquino, El Oriente [Feyer].

‡ C. socio, Uhler.

Uhler, Proc. Bost. Soc. Nat. Hist. xxii, p. 285 [1875].

Habitat: Baños, Rio Lliquino [Feyer]; Santo Domingo de los Colorados, Balzapamba [Campos]; Bucay [Tate]; La Mona, Tanti [Dist].

‡ *C. apicalis*, Dist.

Distant, Proc. Zool. Soc. Lond. p. 192 [1883].

Habitat: Macas [Madera].

‡ *C. congrua*, Walk.

Walker, Ins. Saund. Hom. p. 26 [1858].

Habitat: Surula [Madera].

‡ *C. bilineosa*, Walker.

Walker, Ins. Saund. Hom. p. 12 [1858].

Habitat: Balzapamba [Jacobi]; Chimbo [Campos];
Zaruma [Rorer]; Chaguarapata [Tate].

‡ *C. balsalis*, Walk.

Walker, List Hom, Brit, Mus. i, p. 245 [1850].

Habitat: Nanegal, Machachi [Distant]; Quito [Campos].

‡ *C. tracta*, Dist.

Distant, Ann. Mag. Nat. Hist. ix, p. 320 [1892].

Habitat: Ecuador [Distant]; Rio Mangavisa [Feyer];
Macas [Madera].

‡ *C. postica*, Walk.

Walker, Ins. Saund. Hom. p. 23 [1858].

Habitat. Balzapamba [Campos].

C. fasciculata, Germ.

Germar, in Thom. Ent. Arch. ii, p. 9 [1830].

Habitat: Santa Inez [Jacobi].

‡ *C. ventralis*, Jac.

Jacobi, Hom. Andina, i, Cicad. p. 19 (1907).

Habitat: Macas (Feyer); Bucay (Tate).

‡ *C. trivittata*, Walk.

Walker, Ins. Saund. Hom. p. 22 (1858).

Habitat: Baños, Santa Inez (Jacobi); Surula (Madera).

‡ *C. fimbriata*, Dist.

Distant, in Whymp. Tray. Gt. Andes. append.
p. 119, fig. (1891).

Habitat: Nanegal, Quito, Machachi (Distant); Angamarca, Azogues (Campos).

‡ *C. pilifera*, Walk.

Walker, List Hom. Brit. Mus. Suppl. p. 314 (1858).

Habitat: Azogues (Campos).

‡ *C. centralis*, Dist.

Distant, Ann. Mag. Nat. Hist. ix, p. 321 (1892).

Habitat: Ecuador. (Distant); Rio Mangavisa (Feyer).

‡ *C. crumena*, Godg.

Goding, in this Synopsis.

Habitat: Angamarca (Campos).

‡ *C. rustica*, Godg.

Goding, in this Synopsis.

Habitat: Macas (Feyer).

‡ *C. argentea*, Walk.

Walker, List Hom. Brit. Mus. iv, p. 1132 (1852).

Habitat: Tarqui, Azuay (Campos).

Division Tibicininae.

Genus TIBICEN, Latr.

‡ *T. crassimargo*, Spin.

Spinola, in Gay. Hist. Chile, Zool. vii, p. 241 (1854),

Habitat: Posorja (Campos).

Division Plautillaria.

Genus PLAUTILLA, Stal.

‡ *P. stalagmoptera*, Stal,

Stal, Ofv. Vet. Ak. Forh. p. 155 (1865).

Habitat: Quito (Stal),

SYNOPSIS.

Key to Subfamilies,

Tympanal coverings present.

Orifices of tympanum entirely concealed by tympanal coverings..... Subfamily CICADINAE.

Orifices of tympanum more or less exposed, tympanal coverings imperfect..... Subfamily, GAEANINAE.

Tympanal coverings absent, tympanal orifices completely exposed..... Subfamily TIBICININAE.

Subfamily GAEANINAE.

Key to Divisions.

Lateral margins of pronotum flat and convexly broadened, usually angulate at middle; tympanal orifices more or less exposed; tegmina and wings frequently spotted..... División Zamararia.

Lateral margins of pronotum not broadened or angulate at middle, usually turned downward

Tympanal coverings well developed, usually somewhat angulate at apices; posterior angles of lateral borders of pronotum sometimes lobately produced, but lateral margins never convexly angulate at middle; tegmina hyaline, sometimes spotted, but never opaque..... División Fidicinaria.

Tympanal coverings present but incomplete, orifices partly exposed; body ovate; front of head triangularly or globosely produced; tegmina and wings hyaline, spotted; front femora destitute of spines or teeth below..... División Moganniaria!

División FIDICINARIA.

Key to Genera.

Metasternum with transverse central plate not angularly produced anteriorly..... Genus *Proarua*.

Metasternum with transverse central elevated plate angularly produced anteriorly.

Head including eyes about equal in breadth to base of mesonotum; eyes not porrect.....*Genus Fidicina*.

Head including eyes considerably broader than base of mesonotum; eyes porrect, somewhat stylate.

Pronotum about equal in length to mesonotum; inner margins of tympanal coverings in male very concave.....*Genus Hemisciera*.

Pronotum shorter than mesonotum; inner margins of tympanal coverings in male not concave.....*Genus Majeorona*.

Genus PROARNA, Stal.

Key to Species.

Olivaceous or sordid greenish; spots on tegmina almost obsolete; abdomen concolorous; darker marks on pronotum and mesonotum barely evident.....*grisea*, Fabr.

Greenish yellow; spots on tegmina very distinct; abdomen darker; marks on pronotum and mesonotum very evident.

Fuscous spots on tegmina scattering; two short stripes from base to middle, and one stripe from middle not reaching posterior border of pronotum, black; bases of abdominal segments broadly castaneous.....*insignis*, Dist.

Fuscous spots on tegmina in a broken line at basal third, another at middle third on bases of apical cells, one near tips of longitudinal veins except the second, and six or seven spots along posterior margin beyond border vein; abdomen black, a pubescent silvery spot on each side near base, and pubescent stripe on each side of middle of dorsum; central stripe on dorsum of pronotum.....*guttulosa*, Walk.

Genus FIDICINA, Amy. y Serv.

Key to Species.

Tegmina and wings moderately opaquely colored at base, more or less strongly maculate.....*mannifera*, Fabr.

Tegmina barely opaquely colored at base, without spots.

Dorsum green.

Entirely pale pea green; tegmina and wings distinctly vitreous green; body destitute of fuscous marks, with luteous areas on pronotum, and on sides and last segment of abdomen *glaucus*, Godg.

Pronotum and mesonotum with dorsum much darker green: tegmina and wings colorless hyaline.

Abdomen black, with large orange-colored spots, first two segments bright green, hind borders black..... *distanti*, Godg.

Abdomen testaceous, hind borders segments darker..... *viridis*, Oliv.

Dorsum brownish ochraceous; basal margins of abdominal segments narrowly blackish.... *bogotana* Dist.

Tegmina and wings broadly opaque at bases which usually are bright colored.

Tegmina unspotted..... *flavibasalis* Dist.

Tegmina spotted.

Bases of second and third apical cells infusate; color olivaceous..... *vitellina*, Jac.

Bases of all apical cells of tegmina, and tips of their longitudinal veins very lightly, infusate; color dark red with black marks..... *mülleri*, Dist.

Genus *Hemisciera*, Amy. y Serv.

One species, with basal third of tegmina grass green, and basal half of wings scarlet red..... *maculipennis* Lap.

Note: Mr. Distant has described another species, *durhami*, from Para Brazil. "tegmina with about basal third opaquely virescent ochraceous, remainder pale creamy talc-like; wings with almost basal half pale ochraceous, etc." Among the fifteen examples of *maculipennis* in my collection two were relaxed with steam, and immediately afterward I had two examples which exactly agreed with Mr. Distant's description. From this experience I am led to believe that the two names refer to one species.

Genus MAJEORONA Dist.

Key to Species

Tegmina and wings hyaline, immaculate.....*truncata*, Godg.

Tegmina and wings spotted with brown.

Transverse veins at bases of second and third apical cells only infuscate.....*aper*, Walk.

Transverse veins of all apical cells infuscate.

Pronotum and mesonotum blood-red with black marks, excavation on hind border of the latter deep, narrow, outer angles ending in a tooth; abdomen black; tegmina with apical borders, tips of longitudinal veins, and all transverse veins at bases of apical cells, broadly infuscate.....*ethelae*, Godg.

Pronotum, mesonotum, and most of abdominal segments testaceous; excavation on hind border of mesonotum board, shallow, outer angles barely evident; tegmina with posterior borders, and tips of longitudinal veins strongly infuscate, transverse veins at bases of second and third apical cells lightly infuscate.....*ecuatorialiana*, Godg.

División Zammararia.

Key to Genera.

Head with eyes about as wide as base of mesonotum...
..... Genus *Zammara*.

Head with eyes about two-thirds width of base of mesonotum..... Genus *Orellana*.

Genus ZAMMARA, Amy. y Serv.

Tegmina mostly opaque brown, with some large vitreous spots.....*intricata*, Walk.

Tegmina mostly hyaline, with several small opaque brown spots.

Tegmina with brown spot on first, second and third discoidal cell, one on eighth apical cells, and a

larger one at tips of tegmina sometimes enclosing two or more colorless spots.....

..... *smaragdina*, Walk.

Tegmina with brown spot on radial cell, a brown irregular band covering bases of apical cells, and one on hind border..... *calochroma*, Walk.

GENUS ORELLANA, Dist.

Key to Species.

Tegmina almost wholly opaque brown, with a small basal vitreous area.

Wings with a fuscous spot on bases of second and third apical cells; abdomen length equal to that from apex of head to posterior border of mesonotum, broadest at middle; exterior border of tympanal coverings not extended beyond sides of abdomen..... *pulla*, Godg.

Wings unspotted; abdomen length equal to length of mesonotum, broadest at base; tympanal coverings extended over sides of abdomen..... *brunneipennis*, Godg.

Tegmina mostly hyaline, with some fuscous spots.

Wings clouded with brown on hind border and on transverse veins; tegmina with transverse veins and forks of longitudinal veins broadly brown... *nigriplaga*, Walk.

Wings immaculate; tegmina with spot on tip of radial vein, and at base of second apical cell, fuscous brown..... *brevis*, Dist.

DIVISION MOGANNIARIA.

GENUS PACHYPSALTRIA, Stal.

Key to Species.

Tegmina two and a half times longer than broad, all transverse veins, posterior borders between longitudinal veins of apical cells, and hind borders of wings lightly, infusate; head triangular, face pale yellow with a central black stripe on each side of lower half; hind border of mesonotum lightly excavated..... *cincto-maculata*, Stal.

Tegmina three times longer than broad, all markings as in *cincto-maculata* but more intense, with a distinct dart-shaped fuscous spot on each longitudinal vein a short distance from border vein, in addition; posterior borders of wings prominently infusate; head with front strongly produced in large globular form, face very convex, dark red, a large black spot on lower half; hind border of mesonotum well excavated.....
 *camposi*, Godg.

Subfamily TIBICININAE.

Key to Divisions.

Lateral margins of pronotum not dilated or angulate at middle, but are oblique, more or less narrowed anteriorly.

Abdomen more or less cylindrical, attenuated posteriorly, dorsum not longitudinally ridged at middle; males destitute of posterior metasternal processes between or behind hind coxae; anal appendages usually prolonged and prominent, lower plate usually lengthily porrect; base of tegmina distinctly reddish..... Division TIBICININAE.

Abdomen usually broad, robust, not cylindrical.

Metasternum globosely elevated centrally, ending posteriorly in two spinous processes between or behind hind coxae; dorsal surface of abdomen obtusely ridged along middle, depressed on each side, apex narrowed; tegmina usually spotted; opercula of male short, not passing base of abdomen..... Division HYANTIARIA.

Metasternum not globosely elevated centrally, destitute of spinous processes between or behind hind coxae; abdomen not dorsally ridged; body narrowed anteriorly and posteriorly; pronotum never longer than mesonotum; tegmina with or without spots..... Division CARINETARIA.

Lateral margins of pronotum some dilated, usually angulate at middle.

Head including eyes half the width at base of mesonotum; excluding apical segment, abdomen concave below, with a median longitudinal ridge,

and internal margins recurved; basal cell of tegmina emitting apparently but one longitudinal vein..... Division PLAUTILLARIA.

Head including eyes more than half width at base mesonotum; resembles *Zamara*..... Division TETTIGADESARIA.

Division HYANTIARIA.

Genus QUESADA, Latr.

One species has been recognized in Ecuador, which is greenish yellow, with a fuscous spot on the bases of the second and third apical cells of tegmina; it is one of our largest species..... *gigas*, Oliv.

Division TETTIGADESARIA.

Genus COATA, Dist.

Key to Species.

Body greenish to greenish brown; pronotum with central fuscous stripes destitute of branches; bases of first, second and third apical cells of tegmina infuscate, and other spots..... *fascialis* Dist.

Body pale green; each central stripe on pronotum with a short fuscous stripe on outer side hardly reaching posterior border, lateral margins concolorous; tegmina unspotted..... *fragilis*, Godg.

Division CARINETARIA.

Key to Genera.

Tegmina with nine apical cells..... Genus *Novemcella*.

Tegmina with eight apical cells..... Genus *Carineta*.

Genus NOVEMCELLA, Godg.

A rather small species which is dark green with black marks is the only representative..... *ecuatoriana*, Godg.

Genus CARINETA, Amy. y Serv.

Key to Species.

Tegmina and wings distinctly darkly margined.

Dark margin of tegmina and wings broad.

Color black; pronotum with large green spot on each side; abdomen black; pronotum with large green spot on each side; abdomen black; tegmina hyaline green; wings bluish.....
..... (?) *formosa*, Germ.

Color brown; pronotum with small spot at posterior margin, and two short diverging discal stripes, piceous; abdomen concolorous; tegmina and wings hyaline yellow-bronze.....
..... *boliviana*, Dist.

Dark margin of tegmina and wings a narrow border, bases of first, second and third apical cells infuscate; tegmina and wings pale bronze hyaline; body very broad at humeral angles, and short, olivaceous; abdomen of female suddenly constricted at middle and attenuated to apex, hind margins of segments darker, genitals sordid green on each side.....
..... *ecuatoriana*, Godg.

Tegmina and wings not darkly margined.

Bases of tegmina and wings broadly and darkly opaque, stigma, apices of interior ulnar cells and of clavus, infuscate..... *illustris*, Dist.

Bases of tegmina and wings very narrowly opaque.

Tegmina and wings without spots.

Head triangularly produced in front; pronotum light green or ochraceous; abdomen concolorous.

Apex of abdomen furnished with a tuft of hairs.

Tegmina yellow hyaline; anal appendage of males with a long slender bristle on each side; opercula broadly rounded..... *socio*, Uhler.

Tegmina clear hyaline; anal appendage without

lateral bristles; apices of opercula obtusely pointed..... *apicalis*, Dist.

Apex of abdomen destitute of a tuft of hairs.

Dorsum of abdomen brown with two broad tawny bands..... *basalis*, Walk.

Dorsum of abdomen testaceous, a black streak on each side of apex..... *congrua*, Walk.

Head almost truncate in front; pronotum and mesonotum dark green or ochraceous, with black marks..... *bilineosa*, Walk.

Tegmina or wings, or both, spotted.

Tegmina without spots; wings with fuscous spot at tips of anal cells;

Abdomen above, castaneous with two broad lighter cross bands, below, a broad median longitudinal stripe and apex black; sides of opercula in male black..... *ventralis*, Jac,

Abdomen ochraceous above.

Abdomen below, dark castaneous..... *tracta*, Dist.

Abdomen below, ochraceous; black mark on last ventral segment in male.

Dorsum of abdomen with two brown stripes..... *postica* Walk.

Dorsum of abdomen without stripes..... *fasciculata*, Germ.

Tegmina and wings more or less spotted.

Brown spot on apex of tegmina only..... *argentea*, Walk.

Brown spots on tegmina not only on apex.

Wings with a central fuscous spot.

Apex of wings fuscous.

Tegmina without fuscous spots at bases of second and third apical cells..... *centralis*, Dist.

Tegmina with bases of second and third apical cells infusate.

Body very hairy; dorsum of abdomen
destitute of longitudinal stripes...
..... *finbriata*, Dist.

Body not hairy; abdomen with three
dorsal longitudinal light bands...
..... *trivittata*, Dist.

Apex of wings clear, not infusate.

Form of body elliptical, with long and numerous
hairs..... *pilifera*, Walk.

Form of body cylindrical, not hairy... *rustica*, Godg.

Wings without a central fuscous spot; bases of second
and third apical cells of tegmina infusate; oper-
cula in male large, bulbous, reaching middle of ab-
domen; some hairy..... *crumena*, Godg.

Subfamily TIBICININAE.

Genus TIBICINA, Latr.

Represented by a small yellowish species, tegmina and
wings unspotted, hind border of mesonotum obsoletely ex-
cavated..... *crassimargo* Spin.

Division PLAUTILLARIA.

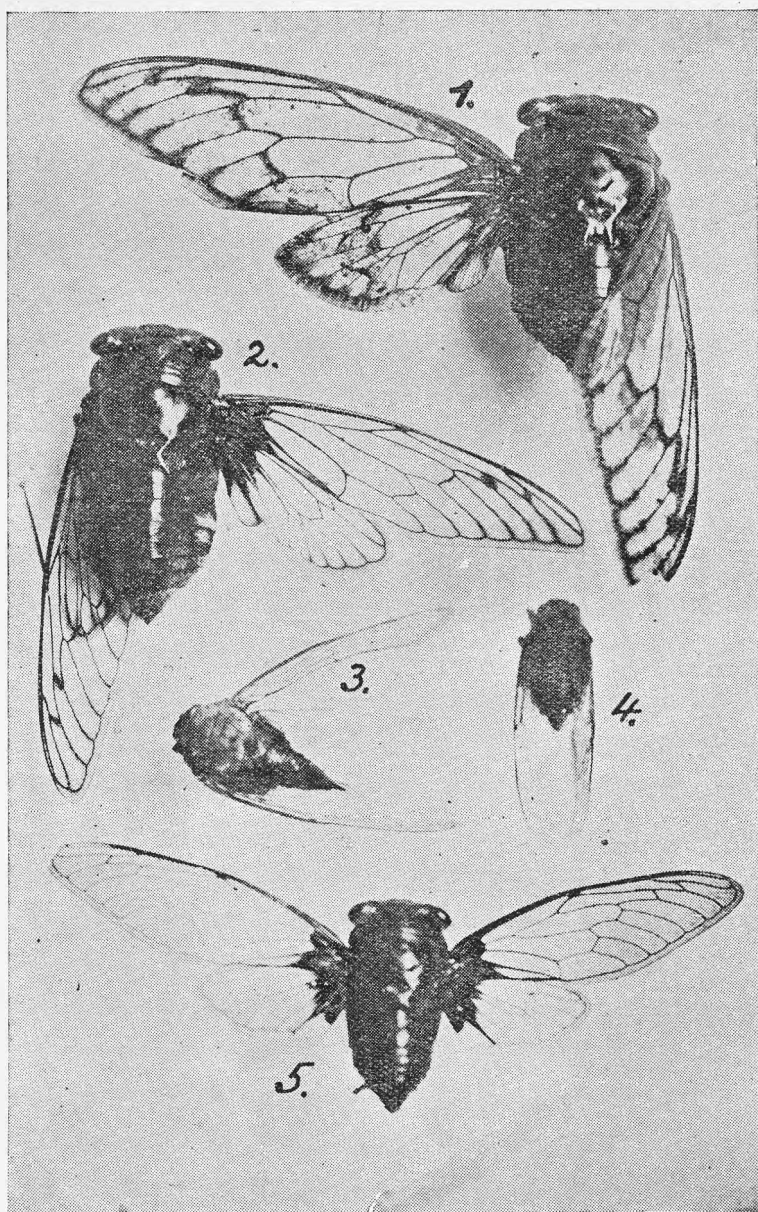
Genus PLAUTILLA, Stal

A single species has been described from Quito. It is
yellowish, with brown spots on bases of apical cells of teg-
mina and on their longitudinal veins at tips; apparently
but one vein passes out from basal cell; the costa sud-
denly and strongly curved near its base. The dilated bor-
ders of pronotum will separate this species from the Di-
vision Melampsaltria, which is not represented in Ecuador
..... *stalagmoptera*, Stal:

Descriptions of New Species.

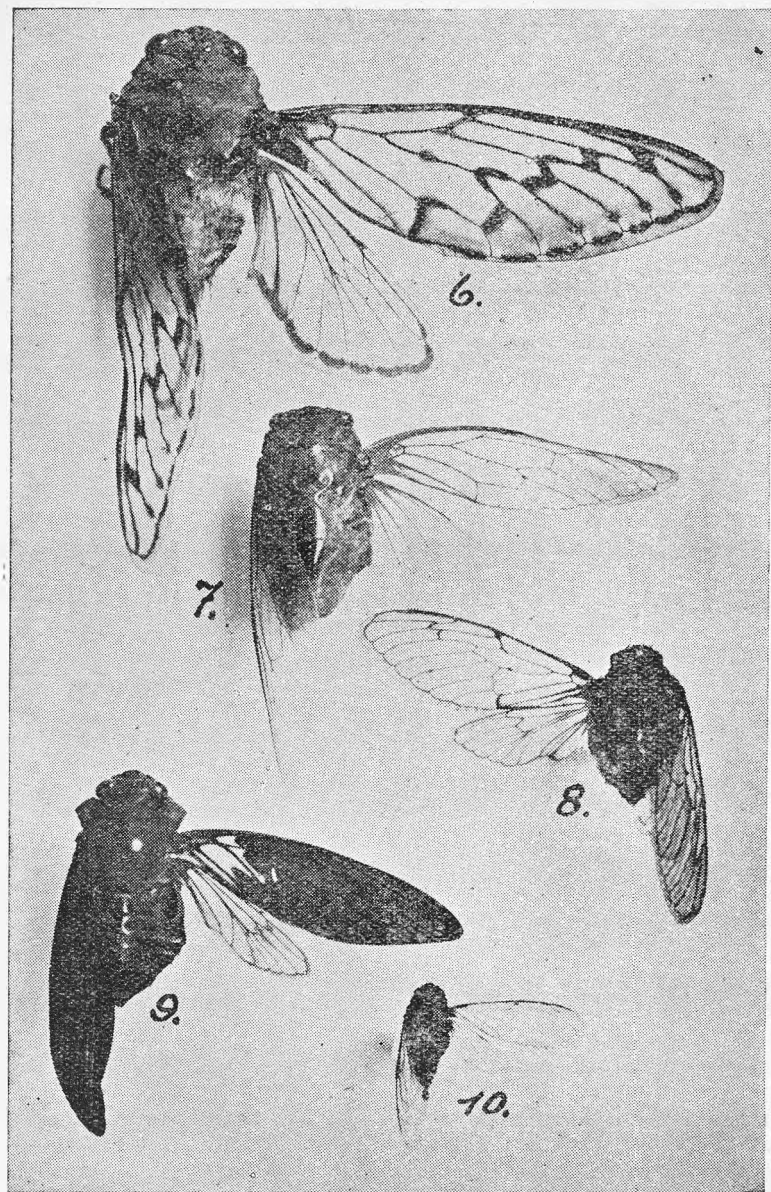
TIBICINA GLAUCUS. n. sp. Pale pea-green, more or less
mottled with pale yellow, immaculate except front tarsi
and all claws which are piceous. Head about as wide as
base of mesonotum; eyes not stylate; front not prominent,
with longitudinal sulcus not reaching apex; vertex with sc-

CICADIDAE OF ECUADOR



1. *Majeorona ethelae* Godg., n. sp.
2. *Majeorona ecuatoriana* Godg., n. sp.
3. *Carineta ecuatoriana* Godg., n. sp.
4. *Carineta basalis* Walk.
5. *Majeorona truncata* Godg., n. sp.

CICADIDAE OF ECUADOR



6. *Pachypsaltia camposi* Godg., n. sp.
7. *Fidicina glaucus* Godg., n. sp.
8. *Carineta crumena* Godg.
9. *Orellana pulla* Godg., n. sp.
10. *Novemcella ecuatoriana* Godg., n. sp.

veral longitudinal impressions, one central; ocelli pale red, three times farther from eyes than between themselves; face not prominent, deeply and broadly sulcate, and broadly sulcate above and below, shallower at middle; clypeus tectiform; beak reaching posterior coxae.

Pronotum green, mottled with pale yellow, hind band a little sinuate, angles broadly rounded. Mesonotum pale green, posterior border deeply and triangularly excavated, the angles rounded. Abdomen pale green, the three first segments with edges darker. Tegmina greenish hyaline, veins dark green, three times longer than broad; costa yellowish, first transverse vein upright, second oblique, second apical cell nearly twothirds length of first. Wings with veins entirely green, a dark spot on middle of front border; bases of both tegmina and wings, with basal cells, opaque green.

Below, chest and legs green, with darker green marks, front femora with two strong teeth and another small one near apex; opercula of male rather large, distant, borders rounded, dark green, not fully covering cavities; last abdominal segment oval, apex obtuse, with a number of transverse carinae; subgenital plate long, conical, apex obtusely rounded. It does not resemble any other known species.

Long. corp. 30; lat. 13; exp. tegm. 100 m. m.

Hab:—Macas, Ecuador (Bernal).

FIDICINA DISTANTI, n. sp. Grass-green, with bright orange spots on the abdomen. Head about as wide as base of mesonotum; eyes not stylate; ocelli double distance from eyes; vertex with base, broad stripe on middle extending to center of front, black; front depressed at middle; yellowish green, with golden pubescence.

Pronotum dark green, base black, a transverse stripe in front of hind border, and large spot on each lateral border, black; somewhat mottled with yellow; lateral borders strongly sinuate, posterior angles rounded. Mesonotum green, the usual spots obsolete, the inner ones with borders and bases black; a spot in front of cross on each side, and a stripe in front black; posterior border broadly and deeply excavated. Abdomen black, dorsum of first and second segments green; borders of fourth and fifth segments broadly bright orange, with a small orange spot on middle of third; apex of genital appendage orange; hairy.

Tegmina three times longer than broad, base slightly opaque; basal half of veins dark green, costa, basal cell, veins on apical half, and borders of anal flaps, fuscous; second apical cell two-thirds length of first; first and second transverse veins very oblique. Wings hyaline, base and borders of anal flaps fuscous. Both tegmina and wings immaculate.

Below, face rather prominent, green, deeply and broadly sulcate, striated on each side and black stripes, hairy, and large spot below each eye; clypeus hairy, black with a central green stripe; beak tawny, tip fuscous, passing posterior coxae; chest green with some black spots, hairy; legs green, marked on femora, tips of tibiae, and tarsi, fuscous; opercula rather large but not converging cavities. green with base black, exterior and posterior borders at right angle and sinuate at edges. Abdomen sordid yellow, base and apex fuscous, two large orange spots on lateral borders with a black spot between; last segment slightly sinuate; subgenital plate oval, angles rounded; apex sordid yellow with a broad center stripe and spot on each side, black, with long hairs, base black.

Long. corp. 25; lat. 9; exp. tegm. 88 m. m.

Hab: Macas (Feyer).

This beautiful species is named in honor of Mr. W. L. Distant, who has increased our knowledge of this family far more than any other man. It is near *viridis*, but stouter, has longer wings proportionately, and the head is more prominent in front, while the colors and general appearance is totally different.

MAJEORONA TRUNCATA, n. sp. Black and olivaceous. Head very broad, truncate in front, black, lateral borders green, wider than base of mesonotum; ocelli three times farther from eyes than each other; front a little shorter than vertex, black with two green spots on front border which is notched; eyes prominent, stylate, transversely oval.

Pronotum greenish olivaceous, base, furrows, spot on each side of dorsum, transverse spot posteriorly, lateral and hind borders, fuscous to black, the latter barely sinuous.

Mesonotum olivaceous, with four obconical spots, the two outer spots longer with inner basal part partly olivaceous, base in front of cross, with a long extension forward, and two small round spots in front of cross, black; posterior border hairy, broadly and deeply excavated with angles toothed.

Abdomen very dark reddish black, shining, hairy, tympanal covers well developed exteriorly and not concave interiorly; covered with golden pubescence.

Tegmina and wings broadly opaque and black, including basal cells; veins toward apex, costal edge, fuscous; costal membrane ferruginous; veins toward base green, borders of basal cell and clavus and bases of all longitudinal veins luteous together with subcostal vein. Wings with veins, exterior border and basal half of anal flaps, fuscous.

Below; face black, green striae on each side on basal half, with bronze hairs, central sulcus deep and broad not reaching apex; beak testaceous, tip black not reaching posterior coxae. Chest shining black, a testaceous cross band at middle. Legs dark testaceous, bases and tips, and tarsi, black. Opercula black, very hairy, exterior and posterior edges forming an acute right angle, the latter rounded toward tips which are approaching. Abdomen shining black, very hairy; edge of last segment broadly sinuate; tip of anal plate truncate, long haired.

Long. corp. 27; lat. 10; exp. tegm. 90 m. m.

Hab: Posorja (Campos).

Differs from all other congeners with its broad head, from which the body is gradually narrowed almost to apex of abdomen.

MAJEORONA ETHELAE, n. sp. Pronotum and mesonotum dark blood red, abdomen black, tegmina and wings strongly infusate, very hairy. Head broader than base of mesonotum; eyes stylate, amber-color, exceedingly prominent on high bases; ocelli three times more distant from eyes than between themselves, located in a large black spot on each side of which is a short longitudinal line, between there and eyes an irregular spot, black; front convex, very prominent and deeply sulcate; head otherwise blood red.

Pronotum dull blood red, base, irregular marks on each side, the transverse furrow in front of hind band which joins oblique furrows on each side, lateral and posterior edges, black; a triangular very pale infuscated cloud from base within first oblique furrows; posterior margin broadly and strongly sinuate.

Mesonotum dark shiny blood red; usual obconical inner spots indicated on the exterior margins by indented lines only, slightly infuscated at bases and along sides of mesonotum; two indented black spots before cross the

depression in front of which is also fuscous; excavation on posterior border deeply semicircular with parallel sides, and with a strong sharp tooth at each angle.

Abdomen black, hairy; tympanal coverings almost closing orifices, a minute space of the interior only being exposed.

Tegmina and wings hyaline, bases broadly black streaked with red; veins red, basal cells opaque red with two black spots; costa and its membrane, with anal flaps, red; posterior border, ends of longitudinal veins lengthily, bases of all apical cells except eighth, apex of radial cell, densely infusate, interior margin of clavus black. Wings with posterior border, apex, exterior border and basal half of anal flap, strongly infusate and broadly.

Below: face long, with lateral striae, sides, central line occupying sulcus, spot sides superiorly, sides and lower part covered with long yellow hairs forming a beard; beak red, the black tip passing posterior coxae. Chest dark red covered with long yellow hairs, a few black spots. Abdomen red and covered with long yellow hairs, anal segment truncate with long black hairs in the male, strongly sinuate on each side and lightly emarginate in female. Opercula rather large, extending a little beyond sides of abdomen, exterior border recurved, dark red, center lighter, covered with long hairs. Legs red covered with long light hairs, sides of femora with black stripe; tarsi dark-

Long. corp. 40; lat. 20; exp. tegm. 140 m. m.

Hab: Quito (Mrs, Ethel Rorer); Macas (Feyer).

Named in honor of Mrs. Ethel Rorer who has not only supplied many interesting examples, but has donated to the United States National Museum hundreds of specimens of all groups of insects, and is a most enthusiastic collector. This is the largest cicada in Ecuador.

MAJEORONA ECUATORIANA, n. sp. Olivaceous yellow to greenish, covered with golden pubescence, apical borders of wings strongly infusate. Head broader than base of mesonotum, yellow, base black, large black spot enclosing ocelli which are twice as far from eyes as from themselves; eyes strongly stylate their bases behind black; front long as vertex, front sulcus beginning at base as also black striae.

Pronotum yellow or greenish, with two small spots near base, a large spot in front of posterior border at trans-

verse furrow; posterior border pale green, lateral borders rather broad.

Mesonotum yellow or greenish, two obconical spots at base, the outer ones obsolete except at base, depression in front of cross with a forward extension, a round spot before each angle, black; excavation on posterior border semilunar, broad, angles not ending in teeth.

Abdomen with base of segments and a spot on tympanal covers black; tympanal covers almost completely developed exteriorly, exposing a very small area of cavities interiorly; covered with golden pubescence.

Tegmina and wings hyaline, broadly red-opaque at bases: tegmina with veins on basal half green, on apical half piceous; basal cell half as wide as long, of equal width, opaque green, exterior and interior borders piceous; basal half of costa green; bases of second, third, fifth and seventh apical cells, and posterior border lightly infuscate. Wings with posterior borders, exterior border of anal flaps and their basal half, infuscate.

Below. face concolorous, rather prominent, the deep median sulcus, lateral striae, borders, black and hairy. Legs olivaceous, femora piceous striped, with long pale hairs; beak yellow, black tip passing middle coxae. Abdomen yellow or greenish, covered with golden pubescence along sides; last segment of male with posterior border strongly sinuate, anal plate semicircular, in the female broadly semilunar and lightly emarginate and middle; covered with long pale hairs.

Long. corp. 40; lat. 15; exp. tegm. 120 m. m.

Hab: Zaruma (MacMahon); Macas (Feyer); San Rafael near Bucay (Campos).

Resembles in a general manner *ethelae*, but differs in being much less in width, color, and infuscations much less evident.

ORELLANA PULLA, n. sp. Piceous, tegmina narrower than base of mesonotum mostly dark brown; Head triangular, front very prominent suddenly depressed from vertex; vertex double length of front, base, two oblique stripes starting just below the single ocellus and extending to front border, one on each side between these and eyes reaching anterior lateral angles, and a semilunar stripe just within apical border of front, yellow; eyes yellow, transversely oval,

Pronotum piceous, with convexities yellow; lateral borders broad, flat, angulate at middle, green; posterior border green, with numerous wrinkles, narrowest at center, lengthily sinuate.

Mesonotum with two obconical loops from which extend posteriorly to the front angles of cross, two narrow stripes, two spots in depression in front of cross, and a stripe on each side near lateral borders, yellow cross green; posterior border triangularly excavated, angles broadly rounded.

Abdomen length equal to that from apex of head to apex of mesonotum, broadest at middle obtusely centrally ridged and flattened on sides, posterior edges of segments narrowly green or olivaceous, also apex; tympanal coverer green, well developed exteriorly, orifices broadly exposed interiorly, posterior border strongly concave.

Tegmina three times longer than broad, dark opaque brown except a small area including basal cell at base which is hyaline; veins piceous radial and ulnar vein at base; ulnar cell narrowed at apex; costa regularly and strongly curved; anal flaps bright green the borders piceous. Wings hyaline, a spot on middle of exterior border, and anal flaps bright green with apex and exterior vein broadly infuscate.

Below: face rather prominent, olivaceous, the middle sulcus evident only on inferior half, lateral striae, large spot at upper outer angle, and broad stripe on sides, piceous; clypeus tectiform olivaceous, a median line on lower two-thirds, and spot on each side of apex, fuscous; beak green, fuscous tip passing far beyond posterior coxae. Chest greenish piceous; legs olivaceous green, stripes on femora, three-fourths of front tibiae with tarsi, middle with outer edge and most of tarsi, tips of posterior tibiae and tarsi, fuscous. Opercula large, green, base fuscous, exterior and posterior borders forming a right angle its apex rounded, very little distant. Abdomen fuscous, outer borders and borders of segments more or less green; last segment truncate, angles rounded.

Long. 30; lat. 10; exp. tegm. 86 m. m.

Female smaller, paler, margins of abdominal segments greenish; central fuscous spot on wings; last abdominal segment with three sulci; and genital plates green; otherwise as in the male.

Long. corp. 25; lat. hum. ang. 11; exp. tegm 86 m. m.

Hab: Milagro (Goding); Naranjapata (Plank); Macas (Feyer).

ORELLANA BRUNNEIPENNIS, n. sp. Yellowish green, tegmina opaque brown. Head narrower than base of mesonotum; eyes not prominent, vertex testaceous, double length of front, with irregular fuscous marks; ocelli double distance from eyes; front prominent, fuscous

Pronotum testaceous, a broad central stripe not reaching posterior border, a stripe on each side of furrows, and lateral borders fuscous flat and angulate at middle; posterior border greenish, rather narrow at middle, posterior angles broader.

Mesonotum yellow, four obconical irregular, stripes, small round spot before each angle of cross between which is an arrow-shape central spot, fuscous and a large green spot on posterior angles of cross; posterior border deeply and angularly excavated.

Abdomen equal in length to mesonotum, ferruginous, apical half of first, transverse band on second, posterior border of last, segments, and transverse band on anal segment, olivaceous; lateral borders narrowed from middle to apex. Tympanal covers well developed exteriorly, pouch-like, orifices well exposed interiorly, posterior border yellow, reflexed and very concave, extending beyond sides of abdomen.

Tegmina almost entirely opaque brown, with a small area at base including basal cell and spot at middle of costa hyaline; costa lightly curved; second apical cell almost equal in length to first; veins red, first transverse vein more oblique and double length of second. Wings hyaline veins reddish brown.

Below: face prominent, destitute of a central longitudinal sulcus, fuscous with a central spot and lateral borders broadly yellow; clypeus large, tectiform, light fuscous; beak yellow, piceous tip passing posterior coxae; chest and legs yellow, front femora marked with black, very slightly haired. Metasternal plate lightly angulate anteriorly, extended in a point backward between hind coxae. Opercula rather narrow, broadly convex apices nearly touching, green with band on exterior border fuscous. Abdomen fuscous yellow, lateral borders fuscous; subgenital plate semicircular, apical half wrinkled transversely in male, in female very concave with a v-shape notch at middle.

Long. corp. mas, 25; lat. hum. ang. 10; exp. tegm. 80 m. m; fem. long. corp. 16; lat. 9; exp. teg. 80. mm.

Hab: Rio Lliquino, El Oriente (Feyer); Tenguel (Rorer).

Differs from *pulla* in the form of the anal segment, much shorter abdomen, pouch-like tympanal covers, and central area of wings unspotted in female.

PACHYSALTRIA CAMPOSI, n. sp. Female. Black densely covered with long hairs, marked with red. Head much narrower than base of mesonotum, base sinuate, front much longer than vertex; base of vertex black; a red spot on each side, with a small tubercle on each side near eyes, and with long black hairs; ocelli four times nearer to eyes than from each other; front bulbous. black, abruptly lower than vertex, with a broad median reddish stripe which extends on face.

Pronotum black covered with long hairs and golden pubescence; a median red stripe, with base narrowly ochraceous; greenish spot on exterior convexities; lateral borders convex. red; posterior border red, green when fresh, broad, its base narrowly fuscous joined to a median short stripe, exterior angles rounded flattened and produced.

Mesonotum reddish. green when fresh, two large spots at middle whose bases are reddish and sides largely black, outer borders reddish and green, a large black band extending across disc with two points backward and one in front at middle, two on front, round spot in front of cross, and large triangular spot on dorsum of cross extending to posterior border; posterior border very lightly excavated, with long hairs.

Abdomen fuscous with long black hairs, densely bronze pubescent apex heavily beaded.

Tegmina three times longer than broad, anal flaps opaque red with a fuscous spot; base black, basal cell vitreous with black spot at front and base, covered with hairs; veins green toward base, fuscous toward apex; costa fuscous subcostal membrane green; large spot on stigma, spot on inner branch of radial vein, spot on marginal vein between each longitudinal vein, a large spot on each longitudinal vein near apex, and all transverse veins and longitudinal veins near them, heavily infuscate. Wings with bases black and red spot on stigma, and border vein strongly infuscate; veins reddish, except the three principal longitudinal veins much darker; basal half of anal flap reddish opaque.

Below: Face red, apex black with long black hairs, sides red and black, bordered with long golden hairs, not sulcate; beak yellowish red, apical half fuscous, passing posterior coxae; legs fuscous, front femora destitute of teeth, with an ochraceous stripe; middle femora ochraceous with fuscous marks; posterior femora fuscous toward apex; opercula triangular, brown, covered with long hairs as also are legs; abdomen brown, densely covered with long white and brown hairs feltlike, which prevents examination of apex.

Long. corp 35; lat. 18; exp. teg. 144 m. m.

Hab: La Asuncion, province of Bolívar (Campos).

This species differs from its sole congener in the dimensions of tegmina, extra spots on tegmina, being more densely infusate, bulbous front and marks, and larger size. It is dedicated to Professor Francisco Campos R., the most prominent scientist in Ecuador.

COATA FRAGILIS, n. sp. Female, pale green, with a scanty golden pubescence. Head with two short stripes from base of vertex, and two curved stripes on front, black; vertex occupies more than two-thirds of superior surface, a shallow longitudinal sulcus not reaching front, deeply impressed longitudinally on each side; eyes large, prominent, globular, stylate, separated from base of pronotum; ocelli pale ruby, almost touching each other and very distant from eyes, situated on front border of vertex; front very prominent forming apex of the triangular head; beak greenish yellow, fuscous tip passing posterior coxae.

Pronotum with two central stripes not reaching front or hind borders, one on each side front middle to near posterior border, and furrows, fuscous; lateral borders sinuous, slightly converging anteriorly; with a central longitudinal sulcus broadened toward front; posterior border very narrow, posterior lateral angles lightly lobate.

Mesonotum with two obconical spots at base and depression before cross luteous; posterior border truncate, not excavated.

Abdomen luteous, doubtless green during life, between segment green; anal segment yellow on dorsum, sides green.

Tegmina immaculate, three times longer than broad, hyaline; costa near base strongly curved, green, sub costa luteous, veins on basal part brown, elsewhere pale green; basal cell twice longer than broad, vitreous; first and se-

cond apical cells of equal length, their bases forming a "v" its point directed forward, their length equal to about half that of the other apical cells which are long; eight apical cells. Wings narrow, immaculate hyaline, about half length of tegmina; six apical cells.

Below: luteous, green between abdominal segments; apices of posterior tibiae and tarsi pale brown, claws darker. Face joins front in an acute angle, very narrow, a short central ridge, not sulcate, and distantly striated on each side; clypeous tectiform, fuscous on each side, its union with apex of face being in a distinct sinus, apex acuminate.

Long. corp. 15; lat. hum. ang. 5; exp. tegm. 60 m. m.

Hab: Macas (Feyer).

The anal segment is long, cylindrical, apex truncate, deeply notched below, with long pale hairs on each side; the posterior femora are exceptionally long and very slender, a very small tooth on front femora below, while the metasternum is globosely elevated. It is easily distinguished from its congener by the immaculate tegmina and wings the more sudden curve of costa near base, and the posterior legs.

NOVEMCELLA, n. gen. This genus has all the characters of the Subfamily Tibicininae, Division Carineta, and would be included in the genus *Carineta* except that the tegmina have nine apical cells. Wings have six apical cells.

NOVEMCELLA ECUATORIANA, n. sp. Female. Fuscous brown, with fine silvery pubescence. Head fuscous, a spot near borders of eyes, sordid yellow; ocelli about equidistant from themselves and eyes, light red; eyes globular, prominent, with vertex about as wide as base of mesonotum. Front prominent convexed, almost globular, base and central stripe containing on face, sordid yellow.

Pronotum piceous, with central stripe from base acuminate end not reaching posterior border, small spots on each side, exterior and posterior borders, olivaceous.

Mesonotum piceous with outline of two obconical spots at base from their tips a stripe extends to cross, elevated cross, and lateral borders, sordid olivaceous; posterior border almost truncate, very obsoletely excavated.

Adbomen piceous, segmental borders narrowly, with sides and apex of terminal segment sordid olivaceous, the

latter with numerous pail long hairs. The abdomen at base is broader than, mesonotum and acuminate to apex.

Tegmina three times longer than broad, immaculate, with nine apical cells, hyaline including base and basal cells, veins on apical half, stigma and front border of anal flaps, fuscous veins on basal half ochraceous; first apical cell a third longer than second. basal vein of first oblique and curved, of second barely curved and perpendicular; ulnar cell broadest at apex. Wings hyaline, base only very slightly opaque; veins brown, front border darker, an opaque narrow streak at base of anal flap.

Below: face prominent, convex, striated on each side, with an obsolete central carina in place of the usual sulcus which is olivaceous with numerous long black hairs; clypeus linear, fuscous, acuminate, hairy; beak olivaceous, fuscous tip reaching posterior coxae; front legs piceous, covered with long hairs; middle femora olivaceous, tips and tarsi yellow, covered with long white hairs; posterior legs yellow, hairy. Abdomen piceous, pubescent, ovipositor piceous, very long; subgenital plate pale yellow, covered with long pale hairs.

Hab: Tarqui, province of Azuay (Campos).

Long. corp. 14; lat. 4; exp. teg. 40 m. m.

CARINETA ECUATORIANA, n. sp. Greenish olivaceous, very broad at humerals. Head very narrow; eyes prominent; ocelli twice as distant from each other as from eyes; vertex mostly piceous, considerably longer than front, its front sides produced as small lobes, hairy; front convex, prominent, piceous, a depression occupying superior surface.

Pronotum very narrow in front, very broad at humerals, nearly double broader, very hairy; greenish olivaceous, two interior oblique furrows, transverse furrow. posteriorly, large spot on each side of dorsum, infuscate posterior border narrow at middle much broader toward posterior lateral angles which are produced, green, exterior borders sinuate,

Mesonotum olivaceous, lateral borders, depression and two small dots in front of cross, fuscous; posterior border truncate, not excavated.

Abdomen fuscous, narrower than mesonotum, suddenly narrowed at middle and then gradually attenuate to pointed apex; sides of first and second segments, posterior

segmental borders except last narrowly, and anal segment, sordid olivaceous, with long hairs.

Tegmina three times longer than broad, including base and basal cell bronze hyaline, veins greenish toward base, darker toward apex; border beginning at base of first apical around to apex of clavus narrowly infusate, including bases of first and second apical cells; first apical cell one-third longer than second; first transverse vein oblique, second more oblique; apex of interior ulnar cell a little broader than base. Wings hyaline, posterior border lightly infusate; veins pale yellow except transverse veins, apex and front border of anal flaps, fuscous.

Below: Face convex, longitudinally sulcate, very hairy, fuscous, sides piceous; clypeus tectiform, fuscous, hairy. Chest greenish olivaceous fuscous marked; legs olivaceous, with stripes, tips of middle and posterior tibiae and claws, fuscous; front femora 3-toothed; beak olivaceous, apical half fuscous reaching posterior coxae. Abdomen castaneous and ochraceous, last ventral segment lightly sinuate; ovipositor long, ochraceous, covered with long hairs, apex yellowish.

Long. corp. 22; lat. 11; exp. teg. 74 m. m.

Hab: Surula, near Macas (Madera).

The broad humerals with narrow head, and peculiar shape of the abdomen together the narrowly bordered tegmina and wings will easily distinguish this species.

CARINETA CRUMENA, n. sp. Yellowish olivaceous, probably green when fresh, very hairy, short and broad, opercula purse-shape. Head narrower than base of mesonotum, olivaceous, two broad fuscous stripes from base to apex, front angles prominent a broad fuscous stripe on each side, very hairy; eyes brown not prominent bordered with golden pubescence; vertex equal in length to front, its apical part suddenly depressed to front on which is the single ocellus, ocelli about equidistant from eyes and from each other; apical border with numerous long black hairs; front not prominent, sordid ochraceous, covered with long black hairs.

Pronotum olivaceous, a triangular brown spot on each side joined laterally at base to a C-shape mark, on each side of which is a U-shape mark and lateral borders narrowly, piceous; posterior border broad with irregular piceous spot and, with sinuous lateral borders, covered with long black hairs; all angles rounded.

Mesonotum olivaceous, with four obconical spots indicated by piceous lines, depression in front of cross with a forward extension, and lateral borders, piceous; posterior border truncate, not excavated, a piceous central stripe.

Abdomen testaceous, not longer than mesonotum, short and thick, covered with yellow and white hairs, hind border of first segment piceous, borders of other segments paler, a fuscous stripe at middle; tympanal orifices widely exposed, covers absent, surrounded with long hairs.

Tegmina nearly three times longer than broad, veins olivaceous, a spot at base, apex of inner ulnar cell, posterior border of clavus, and exterior half of subcostal cell, fuscous, stigma piceous; first and second apical transverse veins infuscate; first and second apical cells of almost equal length; first transverse vein oblique, second vertical on inferior half then curved obliquely toward base. Wings hyaline, transverse veins lightly infuscate, all margins of anal flaps and streak at base fuscous yellow.

Below: Face yellow, convex, rather prominent, deeply sulcate at middle, striated on each side, a stripe on each side from base to middle and sides, fuscous, covered with long black hairs, a golden pubescence; clypeus tectiform, fuscous, very hairy; beak piceous, reaching posterior coxae. Chest olivaceous covered with long black and white hairs and pubescent; from femora olivaceous, base, apex, and tarsi piceous; middle femora with base and spot near apex, same with front legs, piceous; hind legs olivaceous, striped with piceous; all covered with long hairs. Opercula large, brown, almost circular, a little distant, swollen at middle and extending considerably beyond sides of abdomen, pouch-form. covered with white hairs and golden pubescence. Abdomen castaneous with fuscous streaks, densely yellow and black haired; last segment lightly convex; anal segment conical, apex obtuse, with long white hairs.

Long. corp. 20; lat. 9; exp. teg. 70 m. m.

This species is near to *pilosa*, Walk., but may be readily known by the pouch ed opercula.

CARINETA RUSTICA, n. sp. Greenish olivaceous, covered with short hairs and golden pubescence. Head equal in width to base of mesonotum, a large transverse fuscous spot enclosing ocelli which are equidistant from each other and eyes; prominent, elevated above vertex; front below

sudden declivity, of vertex with which it is a little shorter, convex, some prominent, sordid olivaceous.

Pronotum with a broad central stripe extending from middle to front of posterior border where it is extended laterally briefly; sides of dorsum with a scroll-like mark and two oblique furrows, fuscous lateral borders with long black hairs; posterior border narrow, green.

Mesonotum with two loops from their middle extend two bands backward, base in front of cross with an extension forward, and spot on each side behind, fuscous; posterior border truncate; golden pubescent.

Abdomen golden pubescent, apical third and a row of spots on each side, fuscous; tympanal covers absent.

Tegmina hyaline with two faint lines in all apical cells; costa, tip of first branch of radial vein, all veins, toward apex, front border of basal cell, inner border of interior ulnar cell, posterior border and apex of clavus, fuscous brown; basal cell three times longer than broad, broadest at apex. Wings hyaline, veins fuscous, base with apex and interior border of anal flaps infusate.

Below: Face convex, transversely striated, deeply and broadly sulcate; testaceous; clypeus testaceous; sides very hairy. Chest testaceous; front femora piceous, apex and tibiae testaceous inferior half of the latter and tarsi fuscous; middle and posterior femora and tips of tibiae and tarsi, fuscous; superior half of tibiae, and claws, testaceous. Opercula narrow, yellow, base with interior and posterior edges, fuscous, apices very distant; covered with hairs. Abdomen fuscous, border testaceous.

Long. corp. 14; lat. 5; exp. teg. 48 m. m.

Hab: Macas (Feyer);

It is closely related to *argentea*, Walk., which is marked with fuscous only at apex of tegmina.

