

ART. II. NEOTROPICAL HOMOPTERA OF THE
CARNEGIE MUSEUM

PART 7. REPORT ON SPECIES OF THE SUBFAMILY GYPONINÆ

(PLATES I-V).*

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The neotropic members of this group include a large proportion of the known species and, for the genus *Gypona* and allies particularly, we may consider the neotropic realm and especially the South American region, as the natural home of the group, if not its center of evolution.

The species are (many of them) of large size and are often marked with beautiful tints of color though these are seldom present in such strikingly brilliant and bizarre patterns as are to be found among the *Cicadellinae*. They are characterized by somewhat flattened bodies, the ocelli on the disk of the vertex (except in *Scaroidana*) and the border between vertex and front usually acute, sometimes very thin and sharp, but in some rounded or bluntly angled.

Most of the species have been described from coastal localities and probably a large portion of them are from an arboreal habitat. A number of the species included here are from the interior and some of them, from the upper Amazons, Bolivia and Colombia, may represent a plains or grassy habitat. Unfortunately we have very few records that give any certain indication as to the ecologic relations of the species.

The subfamily is based on the old genus *Gypona* of Germar and has, until recently, been composed largely of species in that genus, the representatives of other genera being very few in number. Dr. E. D. Ball divided the old genus *Gypona* first (1920) into subgenera, and later (Ball and Reeves, 1927) these were raised to generic rank which, considering the great number of species and the fact that fairly good differential characters are indicated, may be counted an advantage in the classification of the group. With the addition of genera, which include South American species not covered by Ball, we may present the following key to genera.

*Illustrations have been made by Mr. J. N. Knull and Mrs. Celeste Taft.

KEY TO THE NEOTROPIC GENERA OF GYPONINÆ.*

1. Pronotum strongly inclined, declivate, lateral angles produced. 2
Pronotum not or but slightly declivate. 3
2. Head triangular, vertex distinctly angulate. *Proranus*
Head broadly rounded before, vertex short. *Clinonana*
3. Dorsal surface pitted, pustulate or rugose. 4
Dorsal surface not pitted, usually finely striate or punctate. 6
4. Front narrow, deeply excavate, pronotum and elytra rugose.
Rhogosana
Front flat, pronotum and elytra not coarsely rugose. 5
5. Front narrow, pronotum and elytra pustulate. *Xerophloea*
Front broader, wedge-shaped, pronotum striate. *Dragonana*
6. Elytral areoles reticulate, at least on apical part. *Gyponana*
Elytra areoles not reticulate. 7
7. Anterior margin of head acute, sometimes foliaceous. 8
Anterior margin of head thick, vertex rounded to front or margin obtuse. 9
8. Elytral areoles without dots or spots. *Gypona*
Elytral areoles including dots or spots. *Prairiana*
9. Ocelli on disk separate from anterior border of vertex, elytral areoles sometimes dotted or irrorate. *Ponana*
10. Ocelli on the anterior border of vertex and very close to eyes, elytral areoles not dotted. *Scaroidana*

Genus PRORANUS Stål¹

Proranus STÅL, Bidrag. Till. Rio Janeiro, Hemipt. II, 1858, p. 49.
Type, *P. adpersipennis* Stål.

***Proranus adpersipennis* Stål**

Proranus adpersipennis Stål, Rio Janeiro, Hemipt. II, 1858, p. 49.
Epiclines godmani Fowler, Biol. Cent. Am., Homop. vol. 2, 1903, p. 293.

Head narrow, triangular, obtusely angulate in front; prothorax large, hexagonal; hind border slightly concave. Genitalia: female,

**Penthimia* also included in this subfamily is known in the Neotropic realm by very few species and is not represented in the Carnegie Museum. It is separated from *Ponana* by the short thick body with elytra bent and overlapping at tip.

¹I can find no record of the description of the genus by Spinola and Stål gives "Spin" as author. I believe this species must be taken as the type species of the genus and the genus credited to Stål.

last ventral segment much longer than preceding, notched at middle; male, plates narrow, compressed, bluntly pointed, minutely hairy, extending to tip of pygofer.

Color: dull green; elytra sparsely dotted with fuscous; upper surface of face and pleural pieces punctate; elytra opaque and punctate for the clavus and inner part of corium.

Length, female, 12 mm.; male, 10 mm.

This species was first described from Mexico by Stål and later by Fowler from specimens taken in Guatemala and Panama. Carnegie Museum specimens are from Chapada, Brazil, June and July, acc. no. 2966 (H. H. Smith Coll.); and Provincia del Sara, Bolivia, 450 m. (Steinbach). The author's collection includes specimens from Brazil.

Genus *CLINONANA* gen. nov.

Pronotum very broad, humeri prominent, disk strongly declivate; head small, transverse, anterior border rounded; vertex flat, ocelli near center of disk. Elytra broad, veins elevated, areoles punctured and rugose. Type species of genus, *Clinonana magna*.

The species upon which the genus is based are large, and the pronotum remarkably elevated posteriorly, strongly declivate to head, much as in *Proranus* but the head is quite different and other structural details seem to exclude it from that genus. While having some apparent affinities for the Oriental genus *Epiclina* it cannot, I think, be considered congeneric.

Clinonana magna sp. nov. (Plate I, fig. 2)

Head short, rounded in front; vertex one-half longer at middle than next the eye; ocelli one-half way between fore and hind border, about as far from each other as from the eye; front hollowed, striate at sides; clypeus one-half longer than sides; loræ elongate. Pronotum very broad; lateral angles produced; margins slightly reflexed; a depressed area bordering the anterior margin; hind border distinctly concave; scutellum large, acuminate at tip; elytra broad; veins somewhat elevated; areoles punctured and rugose. Genitalia: female, last ventral segment twice as long as preceding, produced at the side and at middle; the middle lobe broad and shallowly notched at center; male plates broad, nearly parallel, carinate; tips rather blunt, slightly divergent, reaching beyond end of pygofer.

Gray-brown; disk of pronotum darker brown; scutellum with yellowish basal angles and apex; elytra with a large velvety brown spot mid-way on the costa, preceded by a yellowish hyaline patch and with

a yellow nervure extending into the front portion; outer apical cells fuscous at tips; face light brownish tinged with red; legs brownish; tibiæ darker; abdomen light brownish, somewhat marmorate with red.

Length, female, 16 mm.; male, 14 mm.

One specimen, female (holotype), Mana River, French Guiana, March 1917, acc. no. 6008; one male (allotype) Pied Saut, Oyapok River, French Guiana (S. M. Klages), Feb. 1918, Carnegie Museum, acc. no. 6173.

These specimens, while approaching *Proranus* and *Epiclinae*, do not strictly belong to either on account of the broader, less triangular head, and the differences in structure of the parts of the face.

***Clinonana declivata* sp. nov.** (Plate I, fig. 1)

Head and pronotum strongly declivous; head large, broadly rounded in front, about twice as long at middle of vertex as next the eye; ocelli behind the middle, a little farther from each other than from the eye; margin thick, flattened; antennæ in rather deep pits; front hollowed at base; clypeus nearly twice as wide as long, sides parallel; tip truncate. Pronotum long, lateral margins nearly straight, divergent, postero-lateral margin emarginate; hind border concave; disk transversely, coarsely, striate and punctate; scutellum long; apex long, acuminate; disk minutely rugose and striate; elytra with veins distinct, margined with punctures. Genitalia: female, last ventral segment as long as preceding; lateral angles produced and a median lobe with a broad notch at center.

Greenish-yellow; margin of head, the ocelli, humeral angles, narrow line at tip of scutellum and wing veins, black; lines on the legs and hind border and ventral segments, red; elytra yellowish, transparent, veins concolorous.

Length, 13 mm. Width at humeri, 5 mm.

Described from one specimen, female (holotype), Prov. del Sara, Bolivia (Steinbach), Nov. 30, 1912, Carnegie Museum acc. no. 5064.

Genus RHOGOSANA gen. nov.

Body flattened, sides nearly parallel; head as wide as pronotum; vertex depressed, anterior border acutely angled; front excavate at base; face strongly reflexed; eyes prominent; elytra long, nearly parallel margined, apex obliquely subtruncate, venation coarse. Type species *Rhogosana rugulosa*.

Rhogosana rugulosa sp. nov. (Plate IV, fig. 22)

Head broad, obtusely angulate; vertex nearly half longer at middle than next the eye, distinctly depressed at middle and before ocelli; ocelli behind the middle, as far from each other as from eye. Front deeply excavate at base, antennæ in deep depressions and overhung by ridge. Front narrow, tapering to clypeus; clypeus long, sides sinuate, disk carinate; cheeks rugose. Pronotum twice the length of vertex with depressions near anterior border and coarse transverse striæ on disk, hind border deeply concave, lateral angles prominent, lateral margins sinuate; scutellum with broad smooth patch at basal angles, anterior disk coarsely punctate or subrugose; apical part transversely rugose; elytra rugose, margins of veins punctured; tips of claval veins distinctly curved. Female, last ventral segment nearly twice the length of preceding, deeply sinuate on hind margin, middle lobe rounded behind; pygofer short, sparsely setose at base, densely setose at tip.

Color, dull yellowish or fulvous, ocelli brilliant, eyes brown; pronotum with four longitudinal stripes widened posteriorly; basal angles of scutellum brown; elytra dull yellowish; clavus tinged with pinkish; clavus, corium and apical cells with numerous coarse fuscous spots or blotches. Beneath dark brown; femora, tips of tibiæ, coxæ and margins of ventral segments and hind tarsi infuscate. A stripe above ocelli, tibiæ, base of hind tarsal segments and dorsum of abdomen, dull yellowish.

Length, 18 mm. One specimen, female (holotype), Pied Saut, Oyapok, French Guiana, Jan. 1918 (S. M. Klages), Carnegie Museum acc. no. 6111.

This species, while evidently belonging to the Gyponinæ differs so radically from any of the species known to me that it is made the type of a new genus. It has something of the general fascies of the Jassine genus *Koebelia* and of the Fulgorid genus *Cyrpoptus* but the position of the ocelli and other fundamental characters ally it to the Cicadellidæ and the subfamily Gyponinæ. It should probably be placed between *Xerophloea* and *Prairiana* although showing little relationship to either.

Genus XEROPHLOEA Germar

Xerophloea GERMAR, Zeit. Z. Ent., p. 190, 1839.

Related to *Gypona*, the margins of head flattened, very thin and foliaceous; ocelli near base of vertex; surface, especially above, densely pitted and pustulate. Genotype *X. viridis* (Fab.)

Xerophloea viridis (Fabricius)

Ceropsis viridis Fabricius, Ent. Syst. iv, p. 50, 1794.

Xerophloea grisea Germ., Zeits. Z. Ent. 1, p. 190, 1839.

Parapholis pellata Uhler, Bul. U. S. Geog. Surv. Ill., p. 461, 1877.

Xerophloea viridis Osborn & Ball, Proc. Iowa Acad. Sci., iv, p. 179, pl. 19, fig. 1, 1897.

Xerophloea viridis Lawson, Pan Pacific Ent., vii, p. 167, 1931.

Light green, males often more or less infuscate. Head flattened, margins very thin; pronotum rugose, pitted; elytra with veins distinct, the areoles pustulate. Length, female, 7 mm.; male, 6.5 mm.

Nymphs with very broad head, densely hairy; abdomen narrow.

This species has been variously named on account of its wide distribution and the extent of variation especially in color of males.

Specimens in the Carnegie Museum collection from "Prov del. Sara, Bolivia, 450 m. (Steinbach)."

I have specimens from the West Indies, Guatemala, and many localities in the United States, and its distribution may be given as ranging from northern United States to Argentina in South America, including the West Indies as well as the mainland, since records cover Jamaica, Barbados, Puerto Rico and Cuba.

Dr. Lawson (1931) has reviewed the genus and described a number of species from southwestern United States but all specimens referred to here are, I believe, the widely distributed *viridis*.

Xerophloea tuberculata sp. nov. (Plate IV, fig. 23)

Larger than *viridis* and dark gray with a prominent tubercle or elevation near apex of front. Head broad, vertex produced, obtusely angulate, disk rough; front narrowing from antennæ to clypeus with a rather flat carina and a distinct elevation near apex; clypeus narrow slightly passing cheek; pronotum rough pitted and pustulate; scutellum finely and clavus coarsely pitted and pustulate. Female, last ventral segment half longer than preceding, rounded behind.

Mottled gray and fuscous. Vertex with an irregular median stripe; elytra with a diffuse oblique band on clavus and the apical half mostly dark brown with a whitish hyaline patch on costa beyond the middle; apical veins whitish; beneath gray, apices of femora infuscate.

Length, female, 8 mm. Described from one female (holotype) from Bartica, British Guiana, in author's collection, collected by H. M. Parish, July 5, 1901.

Aside from the larger size and difference in coloration this species is at once separated by the hump on the apical part of the front.

Genus GYPONA Germar (*sens. lat.*)

GERMAR, Mag. Ent., iv. p. 73, 1821.

BURMEISTER, Gen. Ins., i, gen. 16, 1838.

WALKER, List Homop. Ins. Brit. Mus., p. 834, 1855.

AMYOT ET SERVILLE, Hist. Nat. Ins. Hemiptères, p. 579, 1843.

STÅL, Hemip. Fabriciana, ii, p. 84, 1868.

SPANGBERG, Bihang. Till. K. Sv. Vet. Akad. Handl., v, no. 3, p. 5, 1878.

This genus, founded by Germar (1821) presents an extended and very bewildering array of tropical species. The most extended paper on the group is the one by Spangberg (1878) which includes mention of ninety-six species, and of these eighty are credited to the neotropic region; in a later paper (1881) are seventeen species, eleven neotropic; and another (1883) eleven new species, seven neotropic. A large proportion of these species were first described by Stål (1854) or Spangberg (1878). Both omit any reference to the species described by Walker in the British Museum "List of Homoptera" (1851-8) and in the "Insecta Saundersiana" (1858) which contains a large number credited to neotropic fauna. Berg (1879) records the species known for Argentina. Fowler (1902) includes a large number of species in the "Biologia Centrali Americana" with many described as new. Uhler, Van Duzee, Gibson and others have added some species and Dr. E. D. Ball (1920) has given a careful revision of the species for North America north of Mexico but most of these species are limited to the Nearctic region.

It is evident that Mexico, Central America and northern South America furnish the greatest wealth of species and it also seems probable from the records heretofore given and the material before the writer from the Carnegie Museum and in his own collection from neotropic localities, that many of the species have very limited geographic or ecologic distribution. These records however serve to extend the range of many of the species and no doubt future exploration will add greatly to the range and probably to the number of species credited to this region.

For a key to the genera, as recognized in this paper, see, *ante* page 12.

Genus GYPONANA Ball

Gypona (*Gyponana*) BALL, Ann. Ent. Soc. Am., xiii, p. 85, 1920.

Gyponana, BALL and REEVES, Ann. Ent. Soc. Am., xx, p. 489, 1927.

Distinguished by the reticulated elytral areoles. The species are

all green, usually pale and the elytra often milky hyaline. Genotype, *Gyponana octolineata* (Say).

***Gyponana lineata* (Burmeister)**

Gypona lineata Burmeister, Genera Insectorum I, [pl. xiv.], Genus 16.

Gypona lineata Spangberg, Species Gyponæ, Bih. Till K. Sv. Vet. Akad. v, no. 3, p. 5, 1878.

Head elongate, rounded, very faintly angulate, flat; vertex nearly as long at middle as between the eyes; ocelli near the hind border, as near together as to the eye; pronotum slightly longer than vertex; elytra densely reticulate to the base. Female, last ventral segment longer than preceding, truncate, with a shallow notch at middle. Male plates narrow, spoon-shaped, upturned, with a small appendage at tip.

Color: pale green with seven fulvous lines on the pronotum and four on the vertex, the inner pair including the ocelli; elytra hyaline with the veins and reticular veinlets green.

Length, female, 9 mm.; male, 8 mm.

Specimens from Buenos Aires, Argentina, collected by W. S. Blatchley, and also from Espirito Santo, Brazil; Cruz Alto, Rio Grande do Sul, in author's collection. One placed in Carnegie Museum.

***Gyponana chiriquensis* (Fowler)**

Gypona chiriquensis Fowler, Biol. Cent. Am., Homop., ii, 1908, p. 298.

Large, fusiform; head narrow, nearly as long as broad; vertex rounded, subangulate, flat, edge sharp; ocelli much nearer to base than apex, about as far from each other as from eye; pronotum scarcely longer than vertex, widening behind; elytra reticulate on apical third, subhyaline, narrowing toward apex and bluntly rounded. Genitalia: female, last ventral segment half longer than preceding; male, last ventral segment half longer than preceding, plates short, enlarged and rounded apically, half as long as pygofer; pygofer short, sinuate on lower margin, enlarged apically.

Pale yellowish green with very faint traces of stripes on pronotum and with the elytral veins pale orange yellow.

Length, female, 14-15 mm.; male, 13 mm.

Specimens from Provincia del Sara, Oct. 13, Dec. 12, Steinbach, Carnegie Mus., acc. nos. 5064 and 6443; Santa Cruz de la Sierra, Bolivia, 450 m., acc. no. 4549. The author's collection contains specimens from Yungas de la Paz, Bolivia, 1000 m.; Bartica, British Guiana, Aug. 22, 1901, H. S. Parish Collector; and Pachitia, Peru

and Coroica, Bolivia; giving it a wide range from Panama to Peru and British Guiana. Fowler's description was based on the female only from Volcan de Chiriqui, Panama. Two specimens from "Napa R., Peru" and one from Teffe, Brazil are in Dr. DeLong's collection.

***Gyponana boliviana* sp. nov. (Plate II, fig. 11)**

Large, fusiform; head narrow, paraboloid; vertex as long at middle as between the eyes; eyes small; ocelli near hind border, nearer to each other than to the eye, pink. Pronotum about as long as vertex, widening behind. Elytra narrowing to apex, reticulate on apical third, costal area broad with a few weak, oblique cross-veins near apex. Genitalia: female, last ventral segment short, scarcely as long as preceding, trisinuate, the three sinuations of equal depth and the four lobes equally produced; pygofer short, robust; male, last ventral segment as long as preceding, rounding, truncate medially; plates thick at base, narrowed and acute apically, three-fourths as long as pygofer; pygofer narrow, ventral border nearly straight or slightly sinuate.

Greenish yellow with distinct golden yellow stripes on vertex, eight on pronotum and two on scutellum; elytra subhyaline; veins golden yellow; beneath, pale yellow; tarsi of middle legs of male, fuscous; prothorax with a narrow whitish border. Female slightly darker than male.

One female (holotype) Cochabamba, Bolivia, in the author's collection. One male (allotype) from Inachaca, Bolivia, alt. 2500 m. (J. Steinbach), Carnegie Mus. acc. no. 6873. There seems to be no basis for separating these specimens, although they come from different localities, since they agree very perfectly in structural details, and the slight difference in color cannot be considered of specific value. The species is an interesting addition to the group with reticulate veins on elytra. It differs from *chiriquensis* in the narrower, more paraboloid vertex, nearness of ocelli to each other, and the golden yellow stripes on vertex and pronotum.

***Gyponana brachycephala* (Spangberg)**

Gypona brachycephala Spangberg, Gyponæ, Bih. Till K. Sv. Vet. Akad., Handl. V, no. 3, p. 9, 1878.

Head short, sublunate; vertex but little produced; ocelli equally distant from each other, the eyes and the anterior border; pronotum subquadrate, anterior margin longer than posterior; elytra sparsely reticulate toward apex, membrane rather wide. Male, last ventral

segment almost equal in length to the preceding with the hind border rounding and subtruncate.

Pale yellow or stramineous with eight faint golden-yellow stripes on the pronotum, indistinct or obsolete.

Length, male, 12.5 mm. A specimen from Bahia, Brazil, Nov. 1907, Carnegie Mus. acc. no. 3441, is referred to this species. Spangberg's description was based on a male from "Bogota."

Genus GYPONA Germar (*sens stricta*)

Gypona (*sens lat.*) GERMAR, Mag. Ent., 4, 1821, p. 73.

Gypona (*sens lat.*) BURMEISTER, Gen. Ins., i, 1838, gen 16.

Gypona (*Gypona*) BALL, Ann. Ent. Soc. Amer., xiii, 1920, pp. 83-100.

Gypona (*sens stricta*) BALL and REEVES, Ann. Ent. Soc. Amer., xx, 1927, p. 489.
(Should be Germar, not Burmeister.)

The genus, as here restricted, includes those forms without reticulate elytral areoles and without dots or lines in the areoles, but with acute margins between vertex and front. Type of the genus (as limited by Ball), *Gypona glauca* Fab.

Gypona glauca (Fabricius) (Plate II, fig. 12)

Cercopis glauca Fabricius, Syst. Rhyng., p. 91, 16, 1803.

Gypona glauca Burmeister, Hand. der Ent. II, i, 1835, p. 114.

Gypona glauca Stål, Hemiptera Fabriciana II, 1868, p. 84.

Gypona glauca Spangberg, Species Gyponæ, Bih. Till. K. Svenska, Vet. Akad., Handlingar V, no. 3, 1878, p. 15.

Gypona glauca Fowler, Biol. Cent. Am., Homop. II, 1903, p. 303.

Head broad, eyes small; vertex broad, evenly rounded before; ocelli behind the middle, a little nearer to each other than to eye; front slightly depressed at base, rounded to clypeus; clypeus borders nearly parallel. Pronotum transversely striate, emarginate behind; scutellum acuminate. Genitalia, female, last ventral segment sinuate, produced into rather long broad teeth each side of a broad median notch. Male, last ventral segment nearly twice as long as the preceding, rounded behind; plates short with blunt tooth-like processes at tip.

Color, yellowish; border of vertex, narrow border of pronotum and inner part of elytra infuscate. Elytra hyaline, veins of inner half and cells at apex more deeply infuscate. Beneath yellowish, tips of tibiae and tarsal joints dusky; two lines on fore and middle tibiae. Males darker than females and variable in extent of black.

Length, female, 12 mm.; male, 10.5 mm. Numerous specimens from Las Juntas (Steinbach coll.) Dec. 1913, Carnegie Museum acc. no. 5066; and S. Antonio de Guaporé, Brazil, July 26, 1909 (Haseman),

"Sweeping on island in Rio Guaporé," Carnegie Museum acc. no. 4043. A specimen from "Manaos, Brazil" and one from "Napa R., Peru" are in Dr. D. M. DeLong's collection.

This well known and apparently common species has a wide distribution in Central and South America.

***Gypona pulchella* sp. nov.** (Plate IV, fig. 24)

Head broad, almost as wide as pronotum; vertex produced, about one-fourth longer at middle than next the eye, broadly rounded; ocelli at middle and as far from each other as from eye; front depressed at base; pronotum nearly twice the length of vertex, rather deeply concave behind. Female, last ventral segment as long as preceding, hind border sinuate, central part a little more deeply than sides.

Color, bright sulphur yellow; vertex, pronotum and costal border of elytra tinged with light orange; clavus and inner part of corium beyond the cross-veins rich golden brown, a basal patch suffused with fuscous; apex smoky, beneath pale sulphur yellow, the two last ventral segments tinged with pale orange. Abdomen above orange, disc blackish; legs pale yellow, tips of tibiae and tarsal joints brownish.

Length, 9 mm. One specimen, female (holotype), Mana River, French Guiana, May, 1917, Carnegie Museum acc. no. 6008. This is a very beautiful species with much the pattern of *glauca* but it is much smaller and differs in many details from that species. Two specimens (paratypes), one female from Prata Brazil, and one with abdomen missing from Yuvimagnas Peru in Dr. DeLong's collection.

***Gypona thoracica* (Fabricius)** (Plate III, figs. 13-14)

Cercopis thoracica Fabricius, Syst. Rhyng., 1803, p. 91, 15.

Gypona thoracica Burmeister, Gypona, 2, 1838. Gen. 16.

Gypona thoracica Stål, Hemip. Fabriciana, 11, 1869, p. 84.

Gypona thoracica Spangberg, Gyponæ, 1878, p. 75.

Gypona fusiformis Spangberg, Gyponæ, 1878, p. 29.

Large, head narrower than pronotum; vertex long, paraboloid, flat, margin thin; ocelli behind the middle and farther from each other than from eye; pronotum scarcely half longer than vertex, widening posteriorly, distinctly striate; scutellum almost entirely minutely punctate. Elytra mostly hyaline, veins strong, apex narrow. Genitalia: female, last ventral segment at sides nearly twice as long as preceding, rather deeply emarginate across its hind border with a slight sinuation at middle where the segment is about as long as the preceding; male, last ventral segment long, hind border rounded; plates narrow, tapering, reaching tip of pygofer.

The females are mostly deep olive yellow to greenish, sometimes with golden luster, the elytra hyaline with the inner veins black. The males are extremely variable in color, especially the pronotum which may vary from bright golden yellow to dense black, the darker ones having a pale median line from vertex to scutellum.

Length, female, 17 mm.; male, 15 mm. The Carnegie Museum collection includes a good series of both sexes from Santarem, Brazil (S. M. Klages Coll.), July, 1919, acc. no. 6324.

My collection includes also a number of specimens of both sexes from Bartica, British Guiana, collected by H. M. Parish, April and July 1901. Two females and one male from "Manaos, Brazil" are in Dr. DeLong's collection.

The sexes are strikingly different in appearance and the males remarkably variable in color but aside from the agreement in essential structure the fact that only females of Spangberg's *fusiformis* and only males of the *thoracica* form appear in extended series and that both are evidently taken in the same localities at the same dates convinces me that they should be placed together.

There are doubtless other names to be added to the synonymy owing to the great variability of the male. Walker's *smaragdula* seems to be a very good description of some varieties of the male and Spangberg's *mirabilis* fits the light forms of males in all particulars except the width, given as 7 mm., a width that is all out of proportion for any species in the genus that I have ever seen. This is possibly an error in printing.

The records so far indicate a distribution from Guiana to the Amazons, as *thoracica* is credited to Guiana and Brazil, Spangberg's *fusiformis* to "Cayenna" and "Amazon," and if we include the records for *mirabilis* and *smaragdula* we have "Cayenna" and "Para."

Gypona vulnerata Walker. (Plate I, fig. 3)

Gypona vulnerata Walker, Ins. Saund. Hem., 1858, p. 102.

?*Gypona viridescens* Walker, List Homop. Sup. 1858, p. 257.

?*Gypona obesa* Spangberg, Ent. Tids., 1883, p. 102.

Female, head long; vertex much produced, rounded, nearly semi-circular or slightly parabaloid, more than one-half as long as width between eyes; ocelli a little behind the middle and nearly as far from each other as from the eye; front depressed at base, flattened on the disc, roundly narrowed to clypeus; clypeus, margins parallel, apex truncate; loræ narrow; cheek borders nearly straight; pronotum one-

half longer than vertex, hind border emarginate; elytra slightly longer than abdomen, vitreous. Genitalia: female, last ventral segment with lateral lobes twice as long as preceding segment, slightly produced and notched at center; outer part of lateral lobes thin and transparent.

Yellowish-green; margin of vertex red, partly black, ocelli red; eyes fuscous, base ferruginous; pronotum with narrow margin orange yellow; elytra hyaline, central part of clavus somewhat infuscated; disc of metathorax and basal bands on abdomen blackish; beneath yellowish-green, tarsi ferruginous.

Length of body 10 mm. with wings, 10.5 mm. Width of pronotum 4 mm.

This description is drawn from a series of specimens, Provincia del Sara, Bolivia, 450 m., J. Steinbach, Carnegie Museum acc. no. 6443. It agrees so closely with Walker's description that it seems correctly placed here, although the female segment does not agree with the figure given by Fowler in the "Biologia." However his figure is from a Mexican specimen and it is quite possible that it may represent a different species.

The following description applies to the form we consider the male of this species:

Male very similar in structure to *vulnerata* and we believe the male of that species. The head long, vertex strongly striate; ocelli a little behind the middle, nearly as distant from each other as from the eye, front depressed at base, flattened on the disc; clypeus with parallel margins; pronotum emarginate behind; elytra mostly hyaline. Genitalia: male, last ventral segment as long as preceding, plates rather short, thick and bluntly pointed, as long as pygofer.

Dull yellow or greenish, the upper part of head, pronotum, scutellum and base of elytra dark brown or fuscous and black; vertex with a central yellowish line, a small dot over base of antennæ and a dot each side on hind border; ocelli red; the fuscous spot on elytra extends slightly beyond tip of scutellum as in typical *vulnerata*; apical cells blackish, and the dorsum except the lateral and basal abdominal segments, black. Beneath yellow; tarsi and male plate ferruginous-brown.

Length, 9 mm. Described from two specimens, males, Provincia del Sara, Bolivia, Steinbach, Dec. 1912 and Feb. 1913, Carnegie Museum acc. no. 5064.

These specimens agree so perfectly with the *vulnerata* female described above, in all structural characters, that I feel quite confident that they must be the male of that species. However, the difference in color makes it desirable to describe it separately. *Vulnerata* as here defined, has some striking similarities with *verticalis* and *unicolor*

and probably represents a derivation from the same stock, possibly the original stock for those species, and occupies for tropical America the place those species fill in Mexico and southern United States.

***Gypona aurifera* sp. nov.** (Plate IV, fig. 26)

Head broad, almost as wide as pronotum, eyes small; vertex broad, roundly angulate, half longer at middle than next the eye, margin depressed; ocelli behind middle, a little farther from each other than from the eye, twice as far from each other as from base; front depressed at base; pronotum two-thirds longer than vertex; elytra tapering to narrow tips, fifth apical cell short and acute at tip, due to fusion of fourth with marginal vein. Female, last ventral segment nearly half longer than preceding, hind border sinuate at sides and excavate at middle half-way to base; male, plates short, broad, rounded at apex, not reaching tip of pygofer which has the lower border produced and tinged with red.

Color, golden yellow. Scutellum tinged with fulvous in basal angles; ocelli red, a black dot each side on pronotum in line with inner border of eye and a black streak on base of clavus. Elytra subhyaline, faintly smoky on appendix and tips of apical cells. Beneath golden yellow, tips of tibiae and tarsi tinged with green. Margin of the excavation on last ventral segment brownish.

Length, to tip of elytra, female, 12.5 mm.; male, 11.5 mm.

One female (holotype), one male (allotype), Provincia del Sara, Bolivia, 450 m. (J. Steinbach), Carnegie Museum acc. no. 6443. Two females Rio Bermejo, Argentina, J. Steinbach, also appear to belong here, although they are a trifle smaller and lack the black dots on the pronotum.

***Gypona fulvotincta* sp. nov.** (Plate V, fig. 34)

Head narrower than pronotum; vertex produced, depressed at margin, broadly rounded; ocelli behind middle, little farther from each other than from eye; front slightly depressed at base; pronotum twice as long as vertex, distinctly concave behind. Male, last ventral segment a little longer than preceding with extremely shallow indentations on hind margin forming a broad median lobe. Plates widened toward apex, tips rounded, thin, translucent, scarcely as long as pygofer.

Bright golden fulvous; ocelli red; eyes black; elytra with large infuscate patch on apical half of clavus and inner part of corium extending obliquely to costa on base of first apical areole. Apical areoles and apical part of anteapicals smoky; beneath golden yellow, legs a little paler, tarsi dusky, abdomen above tinged with red.

Length, 9 mm.

Described from two specimens, males (holotype and paratype) Puerto Suarez, Bolivia, 150 m. (Steinbach), Carnegie Museum acc. no. 3844.

***Gypona bigemmis* Spangberg (Plate II, fig. 7)**

Gypona bigemmis Spangberg, Species Gyponæ, 1878, p. 34.

Head rather broad, rounded before; vertex half longer at middle than next eye, with slightly depressed margin; ocelli near middle, as far from each other as from eye; pronotum nearly twice as long as vertex, deeply concave behind. Female, last ventral segment a little longer than preceding, hind border emarginate with a central rounded lobe nearly as long as lateral angles. Male, last ventral segment a little longer than preceding, plates narrow, with parallel margins, blunt tips reaching tip of pygofer.

Pale yellow. Male tinged with fulvous, ocelli rosy, eyes brown, tips of elytra a little smoky, a black dot at base of clavus.

Length, female, 7.5 mm.; male, 6.5 mm. Two females, June, one male, July 1898, Bonda, Colombia, Carnegie Museum acc. no. 1999. Spangberg described the male only. The females associated here agree so perfectly in all respects that I feel confident of their relation.

***Gypona lineosa* sp. nov. (Plate II, fig. 9)**

Head broad, nearly as wide as pronotum, long, paraboloid; vertex about two and one-half times as long at middle as next the eye; vertex margin very thin; ocelli at middle, twice as far from each other as from eye. Pronotum as long as vertex, hind border faintly concave. Male, last ventral segment produced at middle into a broad tooth, little longer than preceding segment; plates very short, bluntly rounded behind with slender appendage at tip; pygofer short with numerous bristles bordering the margin.

Pale green; vertex with a median fulvous line, scarcely touching apex; ocelli and eyes brown; lateral border of pronotum and costa yellowish; beneath pale greenish yellow.

Length, 7.5 mm. One male (holotype) Bartica, British Guiana, April 18, 1901 (Parish, collector). Distinguished especially by long vertex. Type in author's collection.

***Gypona hyalina* sp. nov. (Plate IV, fig. 29)**

Head broad; eyes small. Vertex half longer at middle than next eye, margin depressed; ocelli behind the middle, as far from each other as

from eye, nearly twice as far from each other as from base. Pronotum half longer than vertex. Elytra narrowing to tip. Female, last ventral segment truncate or faintly sinuate with median notch extending one-third way to base.

Color, pale yellow, some specimens faintly greenish and others tinged with brownish; ocelli margined with orange red. A small black dot each side of pronotum behind eye. Elytra hyaline, veins faintly greenish.

Length, 10 mm. Five specimens, females (holotype and paratypes) Santarem, Brazil, July 1919 (S. M. Klages), Carnegie Museum acc. no. 6324. Somewhat like *aurifera* but smaller, elytra entirely transparent and the notch in female segment much smaller.

***Gypona vitrea* sp. nov.** (Plate IV, fig. 24)

Head narrow, rounded, subangulate; vertex produced nearly twice as long at middle as next eye, margin depressed; ocelli before the middle, nearly twice as far from each other as from base. Pronotum half longer than vertex. Female, last ventral segment as long as preceding, truncate, faintly sinuate on hind margin.

Greenish yellow; vertex and anterior part of pronotum tinged with fulvous; eyes and ocelli red; a black dot on pronotum each side and a conspicuous black dot on base of clavus. Elytra vitreous hyaline tinged with greenish yellow except at tip; veins greenish yellow.

Length, 7 mm. One female (holotype) Provincia del Sara, Bolivia, Steinbach, Carnegie Museum acc. no. 5064.

***Gypona viridula* sp. nov.** (Plate IV, fig. 32)

Head narrow, short, broadly rounded; vertex slightly longer at middle than next the eye, bluntly depressed; ocelli before the middle, twice as far from each other as from eye; front flattened at base. Pronotum three and a half times as long as vertex. Elytral veins rather indistinct, internal apical areole very narrow. Female, last ventral segment long, nearly three times as long as preceding, with a broad deep excavation to more than one-half the distance to the base; pygofer broad; ovipositor short, not reaching tip of pygofer.

Pale yellowish green; vertex with greenish white border, a submargin of green; ocelli rosy; pronotum, anterior border, a transverse arcuate line, posterior angles, two stripes, and the apex of scutellum, propleura and lower part of face, green; disc of vertex, pronotum and clavus, and base of corium, pale greenish olive. A spot at the posterior angle, a narrow median line toward base, hind border on each side of base, broken margin at base of clavus, some scattered spots at base of clavus and corium, ivory-white. Apex of elytra hyaline, veins to-

ward tip and base of appendix, fuscous. Appendix with whitish band beyond which it is smoky.

Length, to tip of elytra, 8.5 mm. One specimen, female (holotype) Quatra Ojos, Bolivia (Steinbach), Nov. 1913, Carnegie Museum acc. no. 5065. A specimen, female, from "Napa R., Peru" almost identical in color pattern and size but with a different female segment is in the collection of Dr. D. M. DeLong.

Gypona flavicosta Stål

Gypona flavicosta Stål, Rio Jan. Hemip., Pt. 2, 1862, p. 46.

Gypona flavicosta Spangberg, Species Gyponæ, 1878, p. 38.

Rather slender, head nearly as wide as pronotum, distinctly flattened, vertex produced, nearly twice as long at middle as next the eye, evenly rounded before; ocelli half way from base to border, as far from each other as from eye; front rather narrow, half longer than broad; pronotum half longer than vertex, distinctly concave behind border. Genitalia, female, last ventral segment slightly longer than preceding at the sides, lateral angles obtuse, hind border faintly sinuate and with broad notch at middle.

Golden yellow above; pale yellow beneath; anterior border of vertex, margin of pronotum and costa pale yellow; border of vertex with narrow brown line scarcely visible from above; ocelli dark red; eyes reddish brown; antennæ yellow at base, setæ black; legs pale yellow, tips of tarsi dusky; elytra subhyaline, slightly smoky at tip which lacks concolorous yellow color, veins concolorous.

Length, 7 mm. One specimen, Cayenna, February 1917, Carnegie Museum acc. no. 5873.

Gypona pulchra Spangberg

Gypona pulchra Spangberg, Species Gyponæ, Bihang Till K. Sv. Vet.-Akad., Handl. Band 5, no. 3, 1878, p. 32.

Head narrower than pronotum; vertex rounded, one-third longer at middle than at eye; ocelli at middle and as near to each other as to eye. Pronotum nearly twice as long as vertex. Female, last ventral segment broadly sinuate and with a median emargination.

Color olive-brown tinged with reddish especially on the elytra. Apices of elytra subhyaline and faintly smoky.

Length, female, 9 mm. A specimen from "Las Juntas, Bolivia (Steinbach coll.) Dec. 1913, Carnegie Museum acc. no. 5066," and one "Santarem, July 1919, S. M. Klages, acc. no. 6324" are referred to this species.

Gypona germari Stål

Gypona germari Stål, Stett Ent. Zeit., XXV, 1864, p. 84.

Gypona germari Spangberg, Species Gyponæ, Bih. Till K. Sv. Vet.-Akad., Band 5, no. 3, 1878, p. 26.

Slender; head narrow; vertex nearly twice as long at middle as next the eye; ocelli a little nearer base than tip, as far from each other as from eye; pronotum about one-third longer than vertex; elytra narrow, much longer than abdomen, not reticulate; male, last ventral segment as long as preceding, slightly convex; plates widened at base, contracted beyond middle, with slender tips extended beyond tip of pygofer.

Color, pale green; elytra hyaline; veins concolorous or faintly yellow; beneath pale.

Length, 9 mm. One male, Minca, Colombia, June 1898, acc. no. 1999. One male, Don Diego (100 ft.), Dept. Magdalena, Colombia, July 1898, Carnegie Museum acc. no. 1999.

Dr. Ball suggests that *germari* should be a synonym of *verticalis* and the latter species appears first in Stål's "Hemiptera Mexicana." However, aside from the differences in size and other characters noted by Stål in his description, there seems sufficient question as to their identity in specimens I have examined to retain the species. Possibly a study of internal genitalia may be desirable for final determination.

Gypona peruviana sp. nov. (Plate III, figs. 19, 19a)

Head broad, vertex broadly rounded, slightly produced, nearly half longer at middle than next the eye, margin very thin, slightly reflexed, ocelli behind the middle and nearer to each other than eye. Pronotum twice as long as vertex, widening posteriorly, hind border concave. Female, last ventral segment sinuate emarginate with a deep incision at the middle reaching one-third the way to base. Pygofer broad, apical half with shorter setæ.

Sordid yellow, margin of vertex and the ocelli red. Two obscure orange stripes on vertex, pronotum and scutellum.

Length, female, 12 mm. One female (holotype) Callango, Peru, in author's collection. This species appears to resemble *lugubrina* Spangberg, which was described from a male from Bogota and which is given a total length of 9.5 mm., which is too great a difference in size to warrant assumption that the species are identical.

***Gypona cruzana* sp. nov.** (Plate I, fig. 6)

Head much narrower than pronotum; vertex nearly twice as long at middle as at eye, rounded; ocelli behind the middle and nearer to each other than to eye; pronotum nearly twice as long as vertex. Female, last ventral segment long, deeply roundly emarginate on hind border (fig. 6a).

Testaceous yellowish, scarcely paler below; anterior margin of vertex and the ocelli red. Elytra hyaline, the veins nearly colorous.

Length, female, body 10, to tip of elytra, 11 mm.

Described from one female (holotype) in author's collection Ohio State University from "Cruz Alta R. G. doSul". This is very similar to *peruviana* in every respect except that the vertex is a little more broadly rounded; there are no visible orange stripes and the female last ventral segment is very different.

***Gypona sierra* sp. nov.** (Plate III, fig. 15)

Head very broad, nearly as wide as pronotum; vertex short, margin depressed; ocelli scarcely behind the middle, as far from each other as from eye; front slightly depressed at base, short, rounded to clypeus. Pronotum about twice as long as vertex, outer margin subparallel and compressed, hind border slightly concave; elytra smooth. Male, last ventral segment little longer than preceding, hind border slightly sinuate; plates overlapping, sides nearly parallel; tips subtruncate, not reaching tip of pygofer.

Color, pale yellowish, with lateral margin of pronotum, costa and margins of abdomen more decidedly yellow; face and legs pale yellow; appendix of elytra fuscous.

Length, to tip of elytra, 8 mm. One specimen, male (holotype) Santa Cruz de la Sierra, Bolivia, 450 m. (J. Steinbach), Nov. 1910, Carnegie Museum acc. no. 4549. The head is unusually broad for the genus and the pale color with the fuscous appendix are the most pronounced features.

***Gypona concolor* Spangberg**

Gypona concolor Spangberg, Species Gyponæ, 1878, p. 24.

Head narrower than pronotum, vertex rounded, ocelli at middle and farther from each other than from eye, pronotum half longer than vertex. Male, last ventral segment scarcely longer than preceding, plates narrow, almost pedicellate at base, wide at middle and tapering to acute tip, the outer border with dense long delicate setæ.

Pale yellowish white, faintly tinged with golden, without spots or dots. Elytra milky hyaline.

Length, male, 9 mm. to tip of elytra. Prov. del Sara, Bolivia (Steinbach), Carnegie Museum acc. no. 5064.

Spangberg describes only a female from "Bogota" and says the male is unknown "Mas. ignotus." As the specimens in hand are males there may be some question as to their identity but they agree so well with the description given for the female and the male genitalia are so different from those of *germari*, a closely related species, that I place them here.

***Gypona ecuadora* sp. nov. (Plate II, figs. 10, 10a)**

Head much narrower than pronotum. Vertex rounded or broadly paraboloid, the ocelli at middle and farther from each other than from eye; pronotum half longer than vertex, widening distinctly to base, hind border faintly concave; scutellum distinctly wider than long. Female, last ventral segment short with hind border distinctly concave; pygofer moderately long and the apical half rather thickly set with short setæ. Pale yellowish green without dark markings.

Length, female, 8 mm. One female (holotype) from "Balsapamba, Ecuador, R. Haensch S," in author's collection.

***Gypona vittulata* Stål**

Gypona vittulata Stål, Ofv. K. Vet. Akad. Forh., 1854, p. 253.

Gypona vittulata Stål, Rio Janeiro Hemip. T. 2, 1862, p. 47.

Gypona vittulata Spangberg, Species Gyponæ, 1878, p. 44.

A small light yellow species with faint or obsolete orange stripes, four on vertex and six on pronotum. The species was described from Rio Janeiro and length given as 10 mm. I have a specimen from Minas Geræs a little smaller but agreeing with Stål's description and there are three specimens in the Carnegie Museum that are still smaller but agree so perfectly in other characters that I place them here. One Prov. del Sara, Bolivia, one "Rio Guaparé near Porta Principe, Brazil" and one "Don Diego, Dept. Magdalena, Colombia, S. A."

***Gypona ancona* sp. nov. (Plate III, figs. 18, 18a)**

Head narrower than pronotum; vertex long, paraboloid; ocelli behind middle and farther from each other than from eye; pronotum one-fourth longer than vertex, widening posteriorly, hind border concave; scutellum as wide as long, apex acute. Female, last ventral segment bisinuate, pygofers short and broad, extending a little be-

yond tip of ovipositor, the apical point with series of short setæ. Pale green or greenish yellow without spots.

Length, female, 9 mm. One specimen, female (holotype), from Ancon, Canal Zone, Panama, in author's collection. The longer vertex and genital characters separate this from *angulata* or *germari*.

***Gypona bahia* sp. nov.** (Plate IV, fig. 25)

Head subangulate, vertex produced, half longer at middle than next the eye, margin blunt; ocelli before the middle, nearly twice as far from each other as from eye; front convex. Pronotum twice as long as vertex, hind border faintly concave, elytra smooth. Male, last ventral segment broad, longer than preceding, broadly rounded behind; plates narrow, tapering, tips subtruncate, upper angle acute, reaching nearly to tip of pygofer.

Color, brown, subpruinose, front margin of vertex, inner margin of eye, and stripe on the pleuræ, fuscous. Elytra subhyaline, vinaceous; beneath yellowish, a line on hind femora, outer row of spines, tips of tarsi and joints and clavus, dusky.

Length, 6.5 mm. One specimen, male (holotype), "Rio San Franc, Bahia, Brazil, Dec. 9, 1908," Carnegie Museum acc. no. 3766.

***Gypona signoreti* Stål**

Gypona signoreti Stål, Stett. Ent. Zeit., XXV, 1864, p. 83.

Gypona signoreti Spangberg, Species Gyponæ, Bih. Till. K. Sv. Vet.-Akad., Band 5, no. 3, 1878, p. 42.

Gypona signoreti Ball and Reeves, Ann. Ent. Soc. Am., XX, 1927, p. 494.

Gypona unicolor Ball, Ann. Ent. Soc. Am., XIII, 1920, p. 89. (= var. *pilulæ* Ball and Reeves)

Gypona signoreti var. *pilulæ*, Ball and Reeves, Ann. Ent. Soc. Am., XX, 1927, p. 494.

Head broadly rounded before, ocelli near the middle of vertex, nearer to eye than to base and farther from each other than from eye. Female, ventral segment longer than preceding, apex at middle deeply, and at sides feebly sinuate. Male, last ventral segment half longer than preceding, hind border rounded.

Greenish, yellowish green and orange to reddish, tinged with golden, the disc of elytra usually somewhat darker than other parts and the apical elytral areoles more or less infuscate. Abdomen above, red.

Length, 8 to 10 mm. A specimen from Atoyac, Mexico, in author's collection and a series from Ancon, Canal Zone, taken by the author in May 1927. Two placed in Carnegie Museum collection. Also one specimen, Elvecia near Mt. Turumiquire, Estado de Sucre, Vene-

zuela, coll. M. G Netting. Stål described it from Mexico, Fowler records it from Panama and Venezuela, Ball and Reeves speak of it as distributed through Mexico, West Indies and on to South America, but without naming definite localities. The variety *pilula* was collected by Ball at Chads, Utah, which brings it into southwestern United States.

Gypona equestris (Fabricius) (Plate II, fig. 8)

Cercopis equestris Fabricius, Syst. Rhyng., 1803, p. 92.

Gypona equestris Stål, Hem. Fab., t. 28, 1869, p. 84.

Head rounded before; vertex half longer at middle than next the eye; depressed at border, margin obtuse; ocelli at middle, as far from each other as from the eye. Pronotum nearly twice as long as vertex, hind border distinctly concave. Female, last ventral segment little longer than preceding, with a rather broad middle lobe.

Deep fulvous without dots or markings; ocelli rosy; eyes brown, elytra subhyaline, a little smoky toward tip; abdomen red on disc above, fulvous at sides; yellow below; legs fulvous.

Length, 8 mm. Three specimens from Bartica, British Guiana, March 20-30, 1901, May 12 and 29, 1901, H. H. Parish collector, in author's collection. A specimen from Squatos, Brazil, in the DeLong collection is also placed here.

Genus PRAIRIANA Ball

Prairiana (subgenus) BALL, Ann. Ent. Soc. Am., XIII, 1920, p. 409.

Prairiana BALL and REEVES, Ann. Ent. Soc. Am., XX, 1927, p. 489.

Front long and narrow, eyes small, widely separated, the elytral areoles with dots, lines, or spots.

Type of the genus *Prairiana* (*Gypona*) *cinerea* Uhl.

Prairiana sordida (Stål)

Gypona sordida Stål, Ofv. Vet. Akad. Forh., 1854, p. 252.

Gypona sordida Spangberg, Species Gyponæ, 1878, p. 74.

Head broad; vertex hardly longer at middle than next the eye, broadly subangulate, distinctly depressed between ocelli; ocelli half way from base to border, as far from each other as from eye; front slightly depressed at base. Pronotum twice as long as vertex; hind border slightly sinuate. Female, last ventral segment half longer than preceding, lateral angles rounded, hind border sinuate, median lobe

short and faintly notched. Male, last ventral segment slightly longer than preceding, convex behind; plates narrow, elongate, slightly upturned, bristled at tip, and extending beyond tip of pygofer.

Color, dull gray; vertex and pronotum pale gray with minute rufous points; hind border of pronotum blackish; scutellum and elytra dull gray; elytral veins scarcely darker; beneath dull gray, pleural stripe and venter, blackish.

Length, female, 10.5 mm.; male, 9 mm. Recorded by Stål and Spangberg for Rio Janeiro and Minas Geraes. A long series in the Carnegie Museum, acc. nos. 6443 and 5064, Nov. and Dec. 1911, from Prov. del Sara, Bolivia, 450 m. (J. Steinbach). Also a specimen in author's collection from "Sta Cruz, Bolivia."

Prairiana nigrifrons sp. nov. (Plate V, fig. 45)

Head narrow, produced, vertex more than twice as long at middle as at eye, subangulate, margin depressed; ocelli behind the middle, twice as far from each other as from eye, a little nearer to the eye than to the base; front depressed at base, bordered by distinct ridge; clypeus with sides parallel; loræ elongate; cheeks rather narrow. Pronotum little more than half longer than vertex, hind border slightly concave. Elytral veins conspicuous. Male, last ventral segment somewhat produced, hind border rounded; plates elongate and narrow, tips slightly divergent, overlapping, thin and transparent, extending to tip of pygofer.

Dark gray. Vertex with median black line expanded at apex; pronotum with black line from anterior border to one-third distance from the border followed by a whitish line to base, and irregular double stripe behind the eyes. Scutellum with a dark curved spot in the angle. Elytra brownish gray with numerous fuscous dots in the areoles and short, irregular, mostly transverse, ivory-white spots or dots on the disc of areoles and along inner border of clavus. Front with the disc distinctly black, the margins gray with fuscous arcs; clypeus with black spot on disc; legs testaceous with fuscous dots and partial broken annulae.

Length, 11.5 mm. One specimen, male (holotype), Provincia del Sara, Bolivia (Steinbach), Carnegie Museum acc. no. 5064 and one specimen (paratype) Santa Cruz de la Sierra, Bolivia, 450 m. (J. Steinbach), Carnegie Museum acc. no. 5569. A female specimen (allotype) from Prata, Brazil, and a male from Squatos, Peru, in Dr. DeLong's collection. The female has the last ventral segment bisinuate with a little deeper emargination at the middle.

***Prairiana basalis* sp. nov. (Plate IV, fig. 27)**

Head wide, vertex somewhat produced, nearly twice as long at middle as next the eye, ocelli very near the base, about one-fourth distance from base to eye, as far from each other as from eye, margin thin, front depressed at base, pronotum two and a half times as long as vertex, distinctly concave behind. Elytra somewhat rugose. Genitalia: female, last ventral segment one-half longer than preceding at sides, bisinuate on hind border, the broad middle lobe rounded. Pygofer short, thick, with few bristles. Male, last ventral segment one-half longer than preceding, truncate; plates long, sides parallel, tips rounded, slightly overlapping, reaching tip of pygofer.

Color, greenish tinged with brown, vertex, pronotum, scutellum and elytra with irregular patches and lines of fuscous, more pronounced on the appendix and apical cells. Beneath greenish, front reddish brown, mesosternum black, bordered with greenish, legs greenish with fuscous patches at the tips. Tips of tibiae and tarsal joints brownish fuscous.

Length, female, 14 mm.; male, 13 mm. Six specimens, two females (holotype and paratype), one female, Dec. 1917, and one female, March 1918 (paratypes), and one male (allotype) Pied Saut Oyapok, French Guiana (S. M. Klages) Dec. 1917, Carnegie Museum acc. no. 6111. Three males apparently belong here but are a little larger than the type, from Provincia del Sara, Bolivia, Nov. 1913, Nov. 1909, 450 m., Carnegie Museum acc. no. 4549.

***Prairiana robusta* sp. nov. (Plate IV, figs. 31, 31a)**

Robust; pronotum sloping; head broad, about one-third longer at middle than next the eye; ocelli close to base, as far from each other as from eye; vertex margin thin, base of front depressed, margins curved, sides of clypeus nearly parallel. Pronotum little more than twice length of vertex, distinctly concave behind, coarsely striate; scutellum coarsely punctate on disc, subrugose at tip with smoother patches in basal angles; elytral veins strong, punctured each side except at tip. Female last ventral segment one-half longer than preceding, deeply bisinuate, middle lobe broad, rounded behind; pygofer short, polished at base, scantily bristled on apical half. Male plates long, strap-like, overlapping, as long as pygofer.

Color, gray brown, dots and splashes on vertex, pronotum and scutellum fuscous; elytra hyaline; veins brownish; apical cells with faint fuscous dots and splashes. Beneath greenish yellow, front and clypeus brown, darker at borders. Mesosternum and apex of hind femora infuscate.

Length, 14 mm. One specimen, female (holotype), Santa Cruz,

Bolivia, in author's collection. This species is rather unusually thick bodied, with pronotum decidedly sloping. One female (paratype), "Obidos Brazil," and one male (allotype) "Squatos Peru," in Dr. DeLong's collection.

Prairiana nigrina (Stål)

Gypona nigrina Stål, Öfvers. Vet. Akad. Forh., 1854, p. 252.

Gypona nigrina Spangberg, Species Gyponæ, Bi. Till. K. Sv. Vet. Akad., Hand. v. no. 3, 1878, p. 70.

Small; head rounded; vertex somewhat depressed; ocelli near the middle and about equally distant from each other and the eye. Pronotum a little more than half longer than vertex, distinctly striate. Male, last ventral segment half longer than preceding, hind border truncate or faintly sinuate; plates narrow, upcurved and reaching tip of pygofer.

Dull yellowish above and darker fuscous or blackish below. The vertex, pronotum and scutellum fuscous and densely dotted with fuscous or black and the areoles of the elytra with numerous fine maculations and lines. Length, 6.5 mm.

This species was described from Buenos Aires and specimens in the Carnegie Museum collection are from La Plata, Argentina, accession no. 4770.

Prairiana punctipennis (Stål)

Gypona punctipennis Stål, Stett. Ent. Zeit., vol. 25, 1864, p. 82.

Gypona punctipennis Spangberg, Species Gyponæ, 1878, p. 61.

Head broad, vertex produced, half longer at middle than next the eye, evenly rounded before; ocelli before the middle, about twice as far from each other as from the eye; front slightly depressed at base. Pronotum nearly twice as long as vertex, scarcely concave behind; female last ventral segment about one-fourth longer than preceding, faintly sinuate, or nearly truncate, the median part slightly produced and edged with black.

Color, brownish gray above, pale yellow beneath, the vertex with median line expanding at apex, a spot before ocelli, a short oblique dash each side at base behind ocelli, several distinctly inscribed lines with numerous punctures on pronotum and dots in elytral areoles, dark fuscous; a little more distinct and larger spot on cross-vein; a patch beyond tip of clavus and borders of apical areoles smoky. Abdomen above blackish, segments margined with yellow; tips of hind tibiæ and dots at base of spines dusky. (= *dohrni* Stål?)

Length, 8 mm. One specimen, Cacagualita, Colombia, Carnegie Museum acc. no. 1999, May 19.

Prairiana mystica (Spangberg)

Gypona mystica Spangberg, Species Gyponæ, 1878, p. 71.

?*Gypona atillana* Fowler, Biol. Cent. Am., Homop., 1903, p. 305.

?*Gypona abjecta* Fowler, Biol. Cent. Am., Homop., 1903, p. 309.

Gray, closely mottled, light fuscous, head narrower than pronotum. Vertex about one-fourth longer at middle than next the eye; ocelli as far from each other as from eye and just before middle of vertex. Female, segment slightly longer than preceding, rather deeply emarginate with an elongate central tooth, notched at center. The vertex is rather finely punctate, the pronotum irrorate and the elytra maculate in the cells with fuscous.

Length, female, 9 mm. Specimens are referred to this species from Puerto Suarez, Bolivia, 150 m., J. Steinbach, Carnegie Museum acc. no. 3844; Bahia, Brazil, Dec. 8th, 1907, Carnegie Museum acc. no. 3533; and one male, Provincia del Sara, Bolivia, Steinbach, Carnegie Museum acc. no. 5064, Oct. 1915.

Species described as *atillana* and *abjecta* appear to belong with this species as indicated by Dr. Ball.

Prairiana interspersa (Stål)

Gypona interspersa Stål, Ofv. Vet. Ak. Forh., 1854, p. 252.

Gypona interspersa Spangberg, Bih. Till. Ksv. Vet. Akad. Handl. Band 5, no. 3, 1878, p. 65.

Very similar to *mystica* but ocelli more widely separated, head nearly as wide as pronotum, distinctly depressed; ocelli slightly farther from each other than from eye, scarcely in front of the middle. Female, ventral segment as long as preceding, deeply incised toward the middle with a broad central lobe which is notched at tip.

Length, female, 10 mm. Two specimens, Puerto Suarez, Bolivia, 150 m. (J. Steinbach), Carnegie Museum acc. no. 3844.

Prairiana moesta (Spangberg)

Gypona moesta Spangberg, Species Gypona, Bih. Till. Ksv. Vet. Ak. Handl. Band 5, no. 3, p. 66.

Very similar to *interspersa* but with the hind border of the last ventral segment of female not deeply incised, but with a shallow emargination and a slightly produced medium lobe, minutely notched at the center.

Two specimens, Janaria, Bahia, Brazil, Dec. 11, 1907, Carnegie Museum acc. no. 3523. One specimen, Janaria, Minca, Brazil, Dec. 17, 1907, Carnegie Museum acc. no. 3702.

Two specimens of males, Chapada, Brazil, acc. no. 2966, Nov. The male was not described by Spangberg, but the three males in hand referred to this species agree very closely with the female in general characters and I believe should be placed here. The last ventral segment is convex, the plates rather long, nearly parallel and distinctly involute.

Prairiana histrio (Burmeister)

Gypona histrio Burmeister, Genera Insectorum, t.1, 1838, Gyp. 5, Gen. 16.

Gypona histrio, Spangberg, Species Gyponæ, 1878, p. 75.

Head broad, slightly produced, vertex one-fourth longer in middle than next eye, disc depressed; ocelli half-way from base to border, as far from each other as from eye; front depressed at base. Pronotum nearly three times as long as vertex. Male, last ventral segment one-half longer than preceding, hind border faintly sinuate; plates flat, strap-like, narrowing gradually to rounded tips which reach tip of pygofer.

Color dark brown, vertex and pronotum with dark fuscous spots; elytra with alternating yellowish and brownish fuscous spots, beneath dull yellowish more or less tinged with brown, legs lineate and dotted with fuscous.

Length, 11 mm., male. One specimen, R. Japacani, E. Bolivia (J. Steinbach), Feb. 1915, Carnegie Museum acc. no. 5573.

This specimen appears to answer very closely to Burmeister's short description. The species was unknown to Spangberg according to his monograph of 1878. Burmeister gave "Habitat in Brasilia" as locality.

The original description reads "G. histrio=corpore rufo, vertice pronotoque antice fusco-punctata; elytrorum areolis alternatim fuscis et flavis; pedibus flavescentibus, fusco-lineatis, tibiis posticis fuscis, flavo spinosis. Long 5": ♀."

Two males "Coroica, Bolivia" in the author's collection agree with the Carnegie Museum specimen, and a specimen from Vicosá, Minas Geraes, Brazil, collected by Edson Hambleton, may also be referred to this species.

Prairiana subtacta (Walker)

Gypona subtacta Walker, List Homop. Brit. Mus., Suppl., 1858, p. 256.

Head short, rounded before; vertex slightly depressed behind margin, bluntly angled to front, a little longer at middle than next

the eye; ocelli at the middle, as far from each other as from eye. Pronotum twice as long as vertex, hind border emarginate. Female, last ventral segment at sides nearly twice as long as preceding, lateral angles rounded, hind margin deeply bisinuate, a distinct central notch reaching one-third way to base. Male, last ventral segment as long as preceding, truncate; plates rather broad at base, minutely ciliate, tapering to angular tips which are thin, somewhat transparent and upcurved.

Color brown, ocelli reddish. Pronotum with series of fuscous dots near anterior border; elytra, brownish hyaline, marmorate with fulvous and fuscous, these alternating especially in the costal areole. Beneath yellowish brown.

Length, 10 mm. Provincia del Sara, Bolivia, Dec. 1911 (Steinbach), Carnegie Museum acc. no. 5064.

Prairiana rosacea sp. nov. (Plate IV, fig. 30)

Head narrow, rounded before; vertex produced, twice as long at middle as next the eye, slightly depressed at border; ocelli slightly before middle, as near to each other as to eye; front slightly depressed at base. Pronotum two-thirds longer than vertex. Elytral veins strong, punctured each side to near the apex. Appendix very narrow. Female, last ventral segment nearly twice as long as preceding, bisinuate, a broad central lobe with a shallow notch at middle, or broadly rounded; male plates long, exceeding pygofer, parallel-sided, apex rounded.

Pale yellow tinged with rosy. Vertex, pronotum, scutellum with minute punctures or irrorations with rosy red. Elytral veins narrowly yellow, bordered with closely set rosy punctures. Areoles subhyaline, becoming more transparent toward tip where veins are distinctly blood red. Front punctate with reddish brown or subfuscous dots, cheeks with red dots; abdomen with segments yellowish, narrowly margined with rose red.

Length, female, 9.5 mm.; male, 7.5 mm. Four females (holotype and paratypes) Provincia del Sara, Bolivia (Steinbach), Dec. 1911, Carnegie Museum acc. no. 5064. Two specimens 450 m. (J. Steinbach), Carnegie Museum acc. no. 6443. Two males (allotype and paratype) from same locality. The males are much smaller but agree very perfectly in all details of marking and were apparently taken at the same time as the females, so it seems proper to place them here.

Prairiana griseola sp. nov. (Plate III, fig. 20)

Similar to *rosacea* but much smaller and without prominent rosy tint. Head broad, vertex rounded; ocelli before middle, as far from

each other as from eye; front slightly depressed at base. Pronotum two-thirds longer than vertex. Elytral veins conspicuously punctured. Appendix very narrow. Male, last ventral segment as long as preceding, slightly convex; plates rather broad at base, tapering to bluntly rounded, slightly diverging tips, exceeding the pygofer, inner border slightly overlapping and subhyaline.

Color pale gray, tinged with reddish, elytral areas with faint fuscous dots; vertex, pronotum, scutellum, margins of nerves, punctate with fuscous; front punctate with fuscous. Abdomen pale gray, slightly tinged with rosy.

Length, 7 mm. One specimen, male (holotype), Provincia del Sara, Bolivia (Steinbach), Carnegie Museum acc. no. 5064.

Prairiana variegata sp. nov. (Plate V, fig. 43)

Head subangulate; vertex, one-third longer at middle than next to eye, depressed on disc; ocelli a little behind the middle, as far from each other as from eye; front slightly depressed at base, with faint, thin lateral carinae, apex contracted to clypeus, distinctly widened at tip. Pronotum three times length of vertex, hind border slightly concave. Elytra rather broad, narrowing apically. Male, last ventral segment scarcely longer than preceding, hind border broadly rounded; plates narrow at base, widening and then tapering gradually to bluntly rounded slightly upturned tips almost as long as pygofer; pygofer with coarse dark setae on outer face; female, last ventral segment short with a prominent median lobe.

Color coarsely maculate or blotched irregularly with fuscous, whitish and pale fulvous; vertex with a distinct central line, border and borders of ocelli, dark fuscous; pronotum anteriorly with transverse fuscous band, including a series of whitish points; scutellum at base angles fuscous; whitish maculae on elytra forming a broad rather poorly defined-shaped figure. Beneath pale brown; face dark brown with frontal arcs deeply infuscate, femora blackish with apical third whitish; tibiae dull yellowish with fuscous annuli near tip; hind tibiae with spots at base of spines and tips of tarsal joints fuscous.

Length, 9 mm. One male (holotype), Provincia del Sara, Bolivia (Steinbach), Carnegie Museum acc. no. 5064. One male (paratype), Puerto Suarez, Bolivia, 150 m., J. Steinbach, Carnegie Museum acc. no. 3844. The latter specimen, while distinctly shorter than the other, agrees perfectly in all details of color markings and genitalia. A female (allotype) of this species, is in the Osborn Collection at Old State University, Iquitoa Rio Itaya, Peru. Another smaller specimen (abdomen missing) in Osborn collection from "Sta Cruz, Bolivia," apparently belongs here.

Prairiana jansoni (Fowler)

Gypona jansoni Fowler, Biologia Centrali Americana, Homoptera, II, 1903, p. 306.

Head broad; vertex produced, depressed, anterior margin broadly rounded; ocelli behind the middle as near to each other as to the eye. Front at base. Pronotum twice as long as vertex, distinctly emarginate behind. Elytra somewhat rugose on basal half. Male, last ventral segment as long as preceding, truncate; plates narrow, sides parallel, tips slightly spoon-shaped, reaching tip of pygofer.

Color, pale brownish; disc of pronotum a little paler and tinged with yellow; elytra with oblique band composed of transverse broken lines, scattered dots at base and apex of clavus and on anteapical cells; apical cells subhyaline with scattered fuscous dots; beneath pale yellow; femora except at tip, dark brown; venter tinged with yellow.

Length, 10.5 mm. to tip of elytra. A specimen from Quatro Ojos, Bolivia (Steinbach), Nov. 1913, Carnegie Museum acc. no. 5065, is referred to this species. The size appears to be a little large. Fowler's description was based on females from Nicaragua, with which he connects a male from Guatemala but does not describe it in full.

Genus PONANA Ball

Ponana (subgenus) BALL, Ann. Ent. Soc. Amer., xiii, 1920, p. 93.

Ponana BALL and REEVES, Ann. Ent. Soc. Amer., xx, 1927, pp. 489, 496.

Body generally less flattened than *Gypona*; head usually short, vertex blunt or rounded to front, ocelli on the disc before the middle, elytra elongate, narrow, veins and sometimes areoles marked with darker dots or spots. Genotype *Ponana* (*Gypona*) *scarlatina* Fitch.

Ponana marmorata (Spangberg)

Gypona marmorata Spangberg, Species Gyponæ, Bih. till K. Sv. Vet.-Akad. Handl., Band 5, 1878, p. 59.

Head fairly broad, vertex short, margin parallel uniformly rounded before; ocelli half way from base to margin, slightly more than twice as far from each other as from eye; front slightly depressed on disc, rugose at sides; clypeus nearly twice as long as wide; pronotum broad, concave behind. Female, last ventral segment one-half longer than preceding, lateral angles produced, rounded, hind border deeply sinuate, each side of a median produced deeply notched lobe.

Color, dull ferruginous fuscous with numerous brown fuscous mottlings; beneath pale brownish, tips of tibiæ and two bands on fore femora infuscate.

Length, female, 13 mm. A specimen from Bonda, Colombia, June 10, Carnegie Museum acc. no. 1999.

Ponana notatula sp. nov. (Plate V, fig. 42)

Head short, obtuse; vertex as long at middle as next the eye; ocelli half way from base to apex, close to eyes, fully three times as far from each other as from eye, as far from eye as from base; front broad at base, not depressed, but slightly flattened on disc. Pronotum four times length of vertex, hind border distinctly concave. Male, last ventral segment one-half longer than preceding, broadly rounded behind; plates rather narrow, tapering to rounded tips with margins delicately ciliate and tips with a long brush of cilia; pygofer nearly twice as long as plate, rather densely ciliate.

Color, pale gray brown, numerous dots on vertex, pronotum and elytra with fuscous; elytral veins of disc darker; beneath, pale yellowish, tips of hind tibiae blackish.

Length, 11 mm. One specimen, male (holotype) Puerto Suarez, Bolivia, 150 m. (Steinbach), Carnegie Museum acc. no. 3844.

Ponana alboguttata (Spangberg)

Gypona alboguttata Spangberg, Species Gyponæ, Bih. Till K. Sv. Vet.-Akad. Handl., Band 5, 1878, p. 58.

Head narrow, vertex very short, obtuse; ocelli, half-way from base to margin, more than twice as far from each other as from margin of eye; front flattened; clypeus slightly swollen on disc. Pronotum broad, somewhat swollen, coarsely rugose, about five times as long as vertex. Elytra exceeding abdomen. Genitalia: female, last ventral segment half longer than preceding, lateral angles obtusely rounded, hind margin sinuate, produced at center forming two broad teeth at side of broad median notch. Male, last ventral segment half longer than preceding, hind border truncate; plates narrow, elongate, blunt, tips reaching two-thirds of way to tip of pygofer.

Color, dark chocolate brown, pronotum with numerous darker punctures, scutellum with white dot on each side, elytra with white point at base of clavus, about ten white dots on costal cell and a few scattered dots on disc and in base of apical cells; a transverse ivory white spot on cross-vein and another smaller one in the apical part of the inner discal cell. Beneath paler, dull yellowish, legs yellowish with fuscous dots.

Length, female, 13 mm.; male, 12 mm. A number of specimens, male and female, from Provincia del Sara, Bolivia (Steinbach), Oct. 1913, Carnegie Museum acc. no. 5064. One specimen "Napa R., Peru" in Dr. DeLong's collection.

Ponana grossa sp. nov. (Plate III, fig. 21)

Head short, distinctly arched; vertex scarcely longer at middle than next the eye, minutely rugose; anterior margin angular and slightly upturned; ocelli large before the middle, more than twice as far from each other as from the eye; front rugose at base, depressed on the disc, faintly carinate on the middle line; clypeus elevated at base, carinated toward apex; sides parallel; apex truncate; loræ narrow; cheeks rather broad, outer margins sinuate. Pronotum large, about five times as long as the vertex, rugose and densely punctured; hind border slightly concave; scutellum minutely rugose and punctate, disc depressed, apex acuminate. Elytrical veins conspicuous; a few extra cross-veinlets but not uniformly reticulate. Genitalia: female, last ventral segment nearly twice as long as preceding at sides; posterior angles broadly rounded, median two-thirds somewhat excavated, sinuate and broadly notched at middle; pygofer short, thick, sparsely setose toward tip.

Dark brown, tinged with purplish; the vertex with three fuscous stripes, the outer ones including the ocelli. Pronotum with elevations yellowish; elytra with a series of ivory yellow dots, two of which are on the clavus, and two on the disc of corium; tips subhyaline; outer apical cell including a black patch on the border. Beneath light yellowish; the face mostly dark fuscous; the legs striped and dotted with fuscous; pygofers brown, abdomen above blackish on the disc, reddish brown toward the border.

Length to tip of elytra, 14 mm., width 5 mm. One specimen, female (holotype), Nova Olinda, Rio Purús, Brazil, (S. M. Klages), June 1922, Carnegie Museum acc. no. 6962. Paratypes; one, Las Juntas, Bolivia (Steinbach), acc. no. 5066, and one from Mana River, French Guiana, March 1917, Carnegie Museum acc. no. 6008.

This is a very large and striking species nearly related to *albo-guttata*, quite distinctly marked by the coarse puncturing of the pronotum and the color pattern and with different female segment.

Ponana sarana sp. nov. (Plate V, fig. 40)

Head very short, vertex as long at middle as at eye, ocelli close to middle, more than twice as far from each other as from eye; front convex; pronotum about five times as long as vertex, distinctly concave behind. Female, last ventral segment nearly twice as long as preceding, deeply bisinuate, middle lobe notched; male, last ventral segment half longer than preceding, broadly rounded behind; plates narrow, tapering from base to blunt apex, not reaching tip of pygofer; margin of plate and apex of pygofer rather densely set with bristles.

Vertex and pronotum mostly pale fulvous or yellowish with numer-

ous dark brown dots and irrorations; hinder border of pronotum with dark brown or fuscous edged with light brown; scutellum with fuscous patches; elytra densely maculate with coarse fuscous spots in the areoles; beneath pale yellowish, femora and tibiae lined and dotted with fuscous.

Length, female, 13 mm.; male, 12.5 mm. One female (holotype), Provincia del Sara, Bolivia, 450 m., (J. Steinbach), Nov. 1909, Carnegie Museum acc. no. 4549. Two males (allotype and paratype), Santa Cruz del la Sierra, Bolivia (Steinbach) 450 m., Nov. 1910, Carnegie Museum acc. no. 4549.

Ponana bicolorata sp. nov. (Plate V, fig. 35)

Head very short, vertex as long at middle as next eye, ocelli at middle more than twice as far from each other as from eye; front a little flattened at base. Pronotum nearly five times as long as vertex, depressed polished areas on anterior border, hind border concave. Male, last ventral segment slightly longer than preceding, plates sub-tubulate, tapering to narrowly blunt tips, three-fourths length of pygofer.

Vertex and pronotum, except hind margin, bright yellow; outer border of vertex tinged a little with orange; disc of pronotum little darker than anterior border; hind border of pronotum dark brown or chocolate brown. Scutellum and elytra brown, disc of elytra somewhat darker and bluish pruinose, apical cells with fuscous dots. Beneath light yellow, fore and middle femora with a fuscous patch, hind tibiae with black bases to spines, a black spot at tip and abdomen above black, segments edged with yellowish. Beneath light yellow.

Length, 11.5 mm. One specimen, male (holotype). Upper Rocana, N. Para, Brazil in Carnegie Museum. This specimen is quite similar to *hebes* Fowler, but the color contrast is sharper and head apparently shorter than in that species. Also this species is much smaller than the measurement given for *hebes*. Three males (paratypes) "Napa R. Peru" in Dr. DeLong's collection.

Ponana sulfurea sp. nov. (Plate V, fig. 36)

Head short, vertex as long at middle as next eye, ocelli at middle, more than twice as far from each other as from eye; front little flattened on disc. Pronotum four times as long as vertex, deeply concave behind scutellum, punctured on disc, lateral angles polished, apical part rugose; elytra polished. Male, last ventral segment as long as preceding, plates narrow, tapering to apex, tips bluntly rounded, reaching almost to tip of pygofer.

Vertex and pronotum, except at base, bright sulfur yellow with scattered brownish dots; head, border of pronotum, scutellum and elytra, brown; ocelli margined with red; face, legs and abdominal segments pale yellow, the latter bordered with orange. Fore femora near tip, spines of hind tibiæ, tips of tibiæ and tarsal spines, brown or fuscous. Abdomen, above, brown edged with bright yellow.

Length, 14 mm. Two specimens, males (holotype and paratype), Huyutanahan, Rio Purús, Brazil, Saint Cloudies, Jan. 1922, Feb. 1922, Carnegie Museum acc. no. 6963. A large, handsome species, especially marked by the contrasting bright yellow and rich brown color of upper surface.

***Ponana ornata* sp. nov.** (Plate V, fig. 37)

Head short, vertex as long at middle as next the eye; ocelli nearly at middle, more than twice as far from each other as from eye; front flattened. Pronotum five times as long as vertex, concave behind. Male, last ventral segment nearly one-half longer than preceding, hind border truncate; plates short, tapering from base to narrow, slightly divergent tips, reaching little more than half-way to tip of pygofer. Tips of plates and base of pygofer with fine cilia; tip of pygofer with coarse bristles.

Vertex and pronotum yellow, deeply tinged with orange, hind border of pronotum brown, inner edge pale yellow, scutellum and elytra brown. Elytra somewhat suffused with yellowish, veins brown and areoles dotted with brown or, toward apex, with fuscous. Beneath pale yellow. Tips of fore and middle femora banded with fuscous; fore, middle and hind tibiæ lined with fuscous. Hind tibiæ and base of spines fuscous.

Length, 14 mm. One specimen, male (holotype), Cochabamba, Bolivia, Aug. Sept., '99. One specimen (paratype), Songo, Bolivia. One specimen (paratype), Madre de Dios, SE. Peru, in the author's collections. This handsome species is quite similar in coloration to *sulfurea* but more deeply tinged with orange and genital plates very much shorter. The brown color margin of pronotum is crenulate, deeply notched at middle and edged with light yellow.

***Ponana affinula* sp. nov.** (Plate V, fig. 39)

Like *hebes* but smaller. Head very short, vertex as long at middle as at eye; ocelli at middle or slightly before, very far apart, fully three times as far from each other as from eye; front somewhat flattened. Pronotum four and a half times as long as vertex, hind border distinctly concave.

Vertex and pronotum pale yellow, densely set with brown dots, a somewhat dusky patch on disc and a curved line on each side near anterior border; hind border black, crenulate anteriorly; scutellum blackish, apex brownish, with a whitish spot on each side; elytra marmorate with light yellow and fuscous; veins brown; beneath yellowish with numerous dots and spots of fuscous.

Length, 12 mm. One specimen (holotype), Songo, Bolivia, in author's collection. Very similar in pattern to *hebes* but smaller and the markings of the pronotum and vertex are somewhat different.

***Ponana labella* sp. nov.** (Plate V, fig. 31)

Rather slender; head narrow, subangulate; vertex depressed outside of ocelli, half as long at middle as next the eye; elevated anteriorly; ocelli before middle, nearly twice as far from each other as from eye or from base; front slightly depressed at base, flattened on disc, rather narrow; clypeus widening apically. Pronotum two and a half times length of vertex, coarsely striate on the disc and punctured on anterior margin; scutellum rather deeply striate; elytral veins coarse. Female, last ventral segment twice as long as preceding, lateral angles rounded, hind border deeply excavate with a broad tongue-like lobe at middle; pygofer sparsely setose on apical half.

Color dark fuscous; vertex and pronotum with dull yellowish patches and irrorate spots. Scutellum pale brown with darker discal spots on basal angles. Elytra with numerous dark fuscous spots of irregular shape, scattered through areoles on pale yellowish ground; veins dark brown; tips of coxæ and base of pygofer paler.

Length, 12 mm. One female (holotype), Coroico, Bolivia, in author's collection.

***Ponana piceata* sp. nov.** (Plate V, fig. 38)

Head wide, short; vertex as long at middle as next the eye, ocelli before the middle, very far apart, three times as far from each other as from eye. Front flattened on disc; clypeus swollen at base. Pronotum four times as long as vertex, hind border distinctly concave; elytra smooth, polished, nervures bordered with punctures. Male, last ventral segment produced, rounded, longer at middle than preceding; plates short, broad at base, narrowed to blunt tips, scarcely reaching tip of pygofer.

Pitch black; anterior border of vertex, spot at margin of pronotum, base of elytra, reddish brown; a light yellowish subhyaline patch beyond clavus on the base of fifth apical and appendix. Front blackish on disc, brownish at sides with dark arcs; tip of clypeus, border and lower part of cheeks brown. Abdomen dark brown, venter somewhat infuscate, legs fuscous, fore and middle tibiæ a little lighter.

Length, 9 mm. to tip of elytra. Described from one specimen, male (holotype), Provincia del Sara, Bolivia, 450 m., Nov. 1909 (Steinbach), Carnegie Museum acc. no. 4549.

***Ponana bruneola* sp. nov.** (Plate V, fig. 41)

Head short, obtuse anteriorly; vertex scarcely longer at middle than next the eye, transversely striate; ocelli before middle, quite near to anterior border, more than twice as far from each other as from eye; front broad, somewhat flattened on the disc. Pronotum four times as long as vertex, hind border concave; elytra broad, little longer than abdomen; last ventral segment nearly two times length of preceding, hind border bisinuate, a median lobe with broad shallow notch; pygofer short, apical half bristled.

Color, dark brown; vertex and anterior part of pronotum a little darker; elytral veins dark brown; cross-veins of disc fuscous, apical cells fumose; beneath brown, the femora, hind tibiae and basal parts of abdominal segments, apical part of last ventral segment and sides of pygofer, infuscate; faintly pruinose above and below.

Length, 8 mm. One specimen, female (holotype), Bonda, Colombia, June 1898, Carnegie Museum acc. no. 1999. A female specimen (paratype), Cayenne, Feb. 1917, acc. no. 5873, is slightly smaller (7 mm.) and has a little more distinct fuscous band on vertex, is somewhat lighter below with a band on vertex, a darker ventral segment and darker smoky apical cells, but agrees so closely with specimens described above that I place them together. Also two specimens (paratypes), Coroico, Bolivia, 7 mm., in author's collection.

***Ponana vinula* Stål**

Gypona vinula Stål, Stet. Ent. Zeit., vol. XXV, 1864, p. 81.

Gypona vinula Spangberg, Species Gyponæ, 1878, p. 51.

Head rather narrow, subangulate, vertex little longer at middle than next the eye, ocelli at middle nearly twice as far from each other as from eye. Pronotum twice as long as vertex, truncate or slightly emarginate behind. Female, last ventral segment a little longer than preceding, hind border slightly produced at middle.

Color, variable, light specimens stramineous with minute fuscous dot behind ocelli; ocelli brown; a median line on vertex brown; two large dots on anterior border of pronotum and two short streaks each side and some transverse irrorations fuscous; hind margin black, ocelli blackish in angles; inner border of elytra infuscate, veins dusky; beneath whitish.

Length, female, 8 mm.; male, 7.5 mm. Several specimens from

Prov. del Sara, Bolivia, 450 m. (J. Steinbach), placed here. A specimen from Mazatenango, Guatemala, Feb. 3, 1905, in Ohio State University Collection, collected by J. S. Hine; also one, Los Juntas, Bolivia (Steinbach), one "Rio Paraguay, on boat one day below San Luis de Caceres, Brazil," May 17, 1909 (Haseman).

Ponana præusta (Spangberg)

Gypona præusta Spangberg, Species Gyponæ, Bih. Till. Vet Akad., 1878, p. 47.

Robust, head short; vertex obtuse, ocelli before middle, about twice as far from each other as from eye; front broad, slightly flattened at base. Pronotum three times as long as vertex. Female, last ventral segment slightly concave.

Dull yellowish; ocelli fuscous, eyes gray brown; pronotum, scutellum and elytra gray with faint fuscous margins on cross nervures and apical veins; beneath dull yellowish, margins of front and clypeus, band on femora, tip of tibiæ, and dots at base of tibial spines, tips of tarsal joints and claws, dusky.

Length, 5.5 mm. One specimen, Bahia, Brazil, Dec. 8, 1907, Carnegie Museum acc. no. 3702.

Ponana obtusa (Spangberg) (Plate III, fig. 16)

Gypona obtusa Spangberg, Species Gyponæ, Gen. Hom., 1878, p. 55.

Head broad, vertex short, obtuse; ocelli before middle, twice as far from each other as from eye; pronotum nearly three times as long as vertex, slightly concave behind. Female, last ventral segment one-third longer than preceding, truncate behind; male, plates narrow, tapering to blunt rounded tips, scarcely reaching tip of pygofer.

Color, pale gray, dot on posterior border of vertex behind ocelli with small round spot on pronotum behind eye with dot at base of clavus, tips of claval veins and cross nervures, fuscous; borders of veins especially toward apex faintly fuscous; elytra hyaline, veins slightly darker, beneath pale gray.

Five specimens from Bonda, Colombia, June, Carnegie Museum acc. no. 1999. One specimen from Provincia del Sara, Bolivia, 150 m. (J. Steinbach), Carnegie Museum acc. no. 3844; one specimen, Provincia del Sara, Bolivia, 450 m. (J. Steinbach), Nov. 1909, acc. no. 4549; one specimen, Provincia del Sara, Feb. 1913, acc. no. 5064; one specimen, Santa Cruz de la Sierra, Bolivia, 450 m. (J. Steinbach), Nov. 1910, acc. no. 4549.

Spangberg's description was from specimens credited to "Bogota."

Ponana venosa (Stål)

Gypona venosa Stål, Ofv. Vet. Ak. Forh., 1854, p. 252.

Gypona venosa Spangberg, Species Gyponæ, Bih. Till., 1878, p. 55.

Head short, vertex scarcely longer at middle than next the eye; ocelli before middle, twice as far from each other as from eye. Pronotum three times as long as vertex. Female, last ventral segment one-half longer than preceding, hind border deeply sinuate, middle lobe produced, as long as lateral angles, faintly notched at middle. Male, last ventral segment as long as preceding, truncate; plates narrow, tapering to acute tips, reaching tip of pygofer.

Dull gray, slightly suffused with ferruginous on vertex, and pronotum, polished. Vertex with an oblique dash of fuscous behind ocelli, a series of dots and lines on anterior border of pronotum; basal angles of scutellum, dot at base of clavus, tips of claval veins, cross-veins of corium and distinct border of elytral veins, fuscous; apex subhyaline and slightly smoky; beneath dull gray; tips of hind tibiæ and tarsal claws dusky.

Length, female, 6.5 mm.; male, 7 mm. One specimen, female, Taperina, Brazil, Carnegie Museum acc. no. 2966. Four specimens, male, Minca, Colombia, May 1898, Carnegie Museum acc. no. 1999. One specimen (mutilated), Cacagualita, Colombia, May 1898, Carnegie Museum acc. no. 1999. The males from Minca are slightly larger but agree so closely in other respects that it seems safe to place them here. Also one female, "Rio Bermejo, Prov. Salto, Argentina, May 1914 (J. Steinbach)" and two males from "San Rafael, Cumanacoa, Sucre, Venezuela, coll. M. G. Netting" appear to belong here.

Ponana fusconotata sp. nov. (Plate III, fig. 17)

Head very short, blunt; vertex as long at middle as next eye; ocelli before middle, more than twice as far from each other as from the eye. Front convex. Pronotum nearly four times length of vertex. Male, last ventral segment as long as preceding, faintly convex; plates broad, outer margins rounded to blunt, rounded tips, reaching apex of short pygofer.

Dull gray brown, a minute round dot each side on pronotum behind the eye; tips of claval veins, cross-veins of corium and apical cross-veins fuscous. A fuscous patch about middle of costa is preceded by a small ivory white spot. Beneath, pale grayish brown; base of spines, tips of tibiæ and tarsal claws dusky.

Length, 6 mm. Two specimens, males (holotype and paratype), Puerto Suarez, Bolivia, 150 m. (J. Steinbach), Carnegie Museum acc. no. 3844. This resembles *Gypona obtusa* Stål. The most marked

difference being in the dusky spot and ivory patch on costa and lack of dots behind ocelli.

Ponana punctatella sp. nov. (Plate V, fig. 44)

Head narrow, short; vertex a little longer at middle than next the eye, obtusely angulate, margin bluntly rounded; ocelli before middle, twice as far from each other as from eye. Pronotum nearly twice as long as vertex; clavus and costal areole densely punctate. Female, last ventral segment little longer than preceding, hind border sinuate slightly produced at middle, pygofer very short, with few bristles toward tip.

Light fulvous tinged with reddish irrorations on pronotum; eyes and ocelli red, elytral veins red; beneath stramineous.

Length, 7 mm. One female (holotype), Bahia, Brazil, Dec. 8, 1907, Carnegie Museum acc. no. 3533.

Ponana nana (Fowler)

Gypsona nana Fowler, Biologia Centrali Americana, Homoptera, Vol. II, 1903, p. 315.

Head rather broad; vertex wide, little longer at middle than at eye, broadly rounded; ocelli before middle, wide apart, fully twice as far from each other as from eye; front broad, margins rounded to clypeus; loræ large, margins slightly elevated; pronotum little more than twice as long as vertex, hind border emarginate. Male, last ventral segment much produced, more than twice as long as preceding segment, hind border sinuate, subangulate and produced at middle; plates small, almost completely concealed by the last ventral segment which extends almost to tip of pygofer.

Color above, mostly rich chocolate brown with metallic iridescence; vertex, anterior border of pronotum, and base of scutellum with fuscous lines and dots; basal half of costa yellow, apical half dark fuscous interrupted by whitish hyaline toward tip. Beneath pale yellowish; front dark fuscous; tarsal claws dusky.

Length, 4.75 mm. One specimen, Minca, Colombia, May 1898, Carnegie Museum acc. no. 1999. This is a very handsome little species, one of the smallest in the genus.

Genus SCAROIDANA gen. nov.

Head short, as wide as pronotum, vertex rounded to front, transversely striate; ocelli very close to border between vertex and front; front broader than long; antennal pit under a prominent ridge; pro-

notum broad, uniformly transversely striate; elytra longer than abdomen, narrowed to rounded tip, costa strongly curved, veins not conspicuously elevated.

Deeper bodied than common for *Gyponinae*, otherwise somewhat related to the *hebes* group in *Ponana*. Type of genus, *Scaroidana flavida*, sp. nov.

The specimens described below, which represent the present known forms to be placed in the genus, seem to have some resemblance to *Scaris* but to have such definite differences as to exclude them from that group. They are thicker-bodied than the *Gyponinae* generally and the position of the ocelli might be considered as placing them in the *Jassinae*, but in general fascies they appear to me to belong close to the short vertex forms of *Gyponinae*. Possibly additional discoveries of related forms may change this view but for the present this seems their most appropriate place.

***Scaroidana flavida* sp. nov.** (Plate I, fig. 4)

Head as wide as pronotum, short; vertex scarcely longer at middle than next the eye, bluntly rounded to front; ocelli on the extreme border, very wide apart, nearer the eye than the middle; front broad, flattened, slightly elevated at the sides, a distinct ridge over the antennal pit; clypeus broad, wider than long, truncate at the apex; antennæ small, setæ very short. Pronotum nearly twice as wide as long, broadly arched in front, lateral margins long, slightly divergent, hind border broadly concave. Scutellum acuminate at apex. Elytra rather narrow, narrowing toward tip, longer than abdomen. Genitalia: female, last ventral segment about as long as preceding, convexly produced on the hind border; male, last ventral segment as long as preceding, narrowed slightly behind, hind border truncate, plates narrow, compressed, tips bluntly rounded, slightly upturned, reaching tip of pygofer.

Pale dull yellowish; bases of abdominal segments above more or less yellow; elytra yellowish subhyaline. Abdomen above in the male with orange bands on the segments.

Length, female, 13 mm.; male, 11 mm. Described from four specimens, one female (holotype), Prov. del Sara, Bolivia, 450 m., Nov. 1909, Steinbach, Carnegie Museum acc. no. 4549; two males (allotype and paratype), Puerto Suarez, Bolivia, 150 m., J. Steinbach, acc. no. 3844; and one male (paratype), apparently teneral, Villa Bella, Bolivia, Oct. 6, 1909, Carnegie Museum acc. no. 4043. Paratype in the author's collection.

Scaroidana fulvula sp. nov. (Plate I, fig. 6)

Head as wide as pronotum, short; vertex not produced, as long at middle as next the eye; ocelli wide apart, much nearer the eye than the middle of the vertex, on border between vertex and front flattened, broad; clypeus broad, scarcely longer than width, apex emarginate. Pronotum broad, lateral borders slightly divergent, hind border distinctly concave; scutellum with apex acuminate, disc with a strong curved suture. Elytra long, tapering toward tip. Genitalia: female, last ventral segment a little longer than preceding, narrowed, curved toward tip; male, plates narrow, compressed, tips upturned, blunt, slightly passing the tip of pygofer.

Color: dull yellow tinged with fulvous, becoming darker on the elytra, the tips of which are somewhat infuscate in the areoles. Beneath lighter yellow. Abdomen above orange-red on the disc, margins yellow in the female, tinged with reddish in the male.

Length, female, 12.5 mm.; male, 10 mm. Described from two specimens, one female (holotype), Villa Braga, Brazil, Dec. 1919, Carnegie Museum acc. no. 6544; one male (allotype), Prov. del Sara, Bolivia (Steinbach), Oct. 1913, Carnegie Museum acc. no. 5064. These specimens differ rather distinctly in size but correspond so completely in details of structure and coloration that it seems quite certain that they belong to the same species. Also one specimen (paratype) in author's collection, secured through a German dealer, from Coroico, Bolivia.

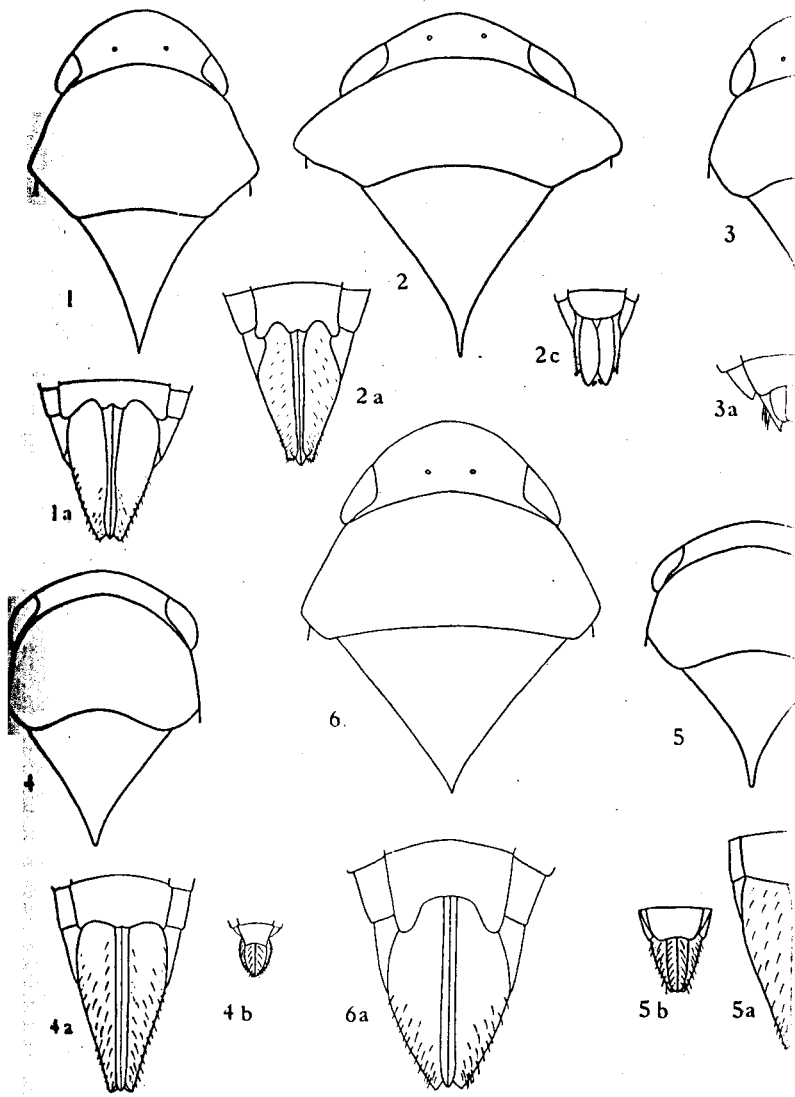
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EXPLANATION OF PLATE I

DRAWINGS BY J. N. KNULL

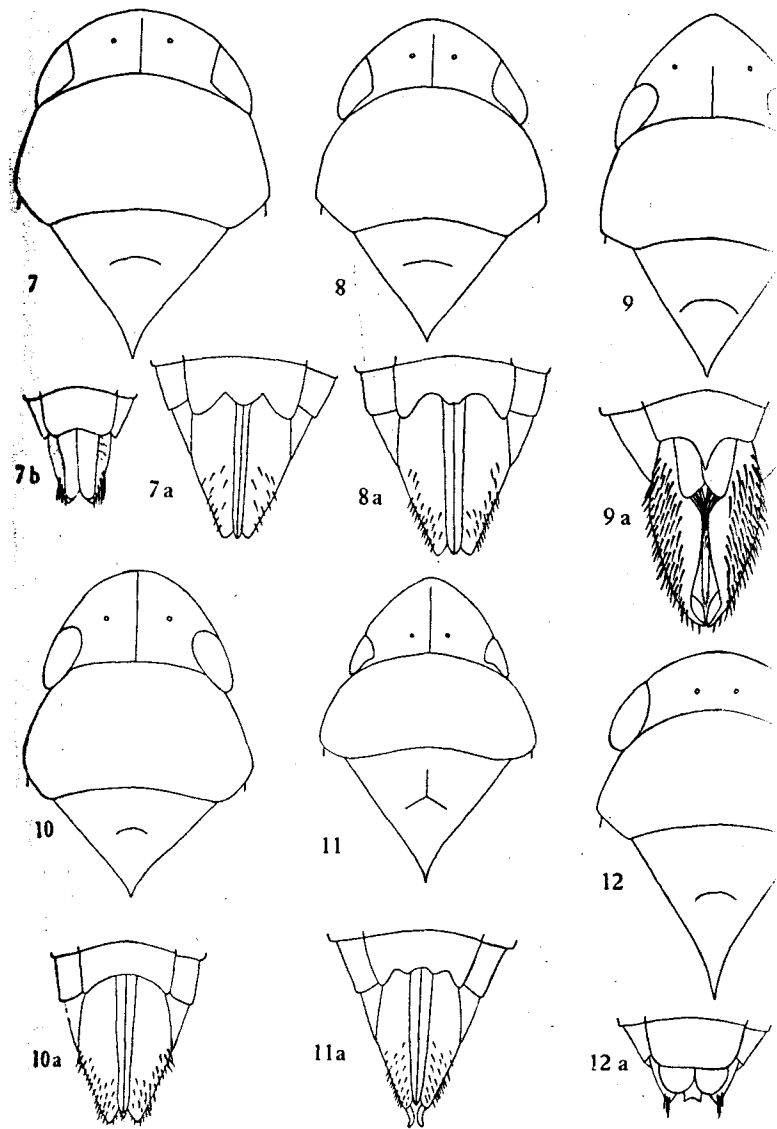
- FIG. 1. *Clinonana declivata* sp. nov. 1a, female genitalia.
FIG. 2. *Clinonana magna* sp. nov. 2a, female; 2c, male genitalia.
FIG. 3. *Gypona vulnerata* 3a, male genitalia.
FIG. 4. *Scaroidana flavida* sp. nov. 4a, female; 4b, male genitalia.
FIG. 5. *Scaroidana fulvula* sp. nov. 5a, female; 5b, male genitalia.
FIG. 6. *Gypona cruzana* 6a, female genitalia.



EXPLANATION OF PLATE II

DRAWINGS BY J. N. KNULL

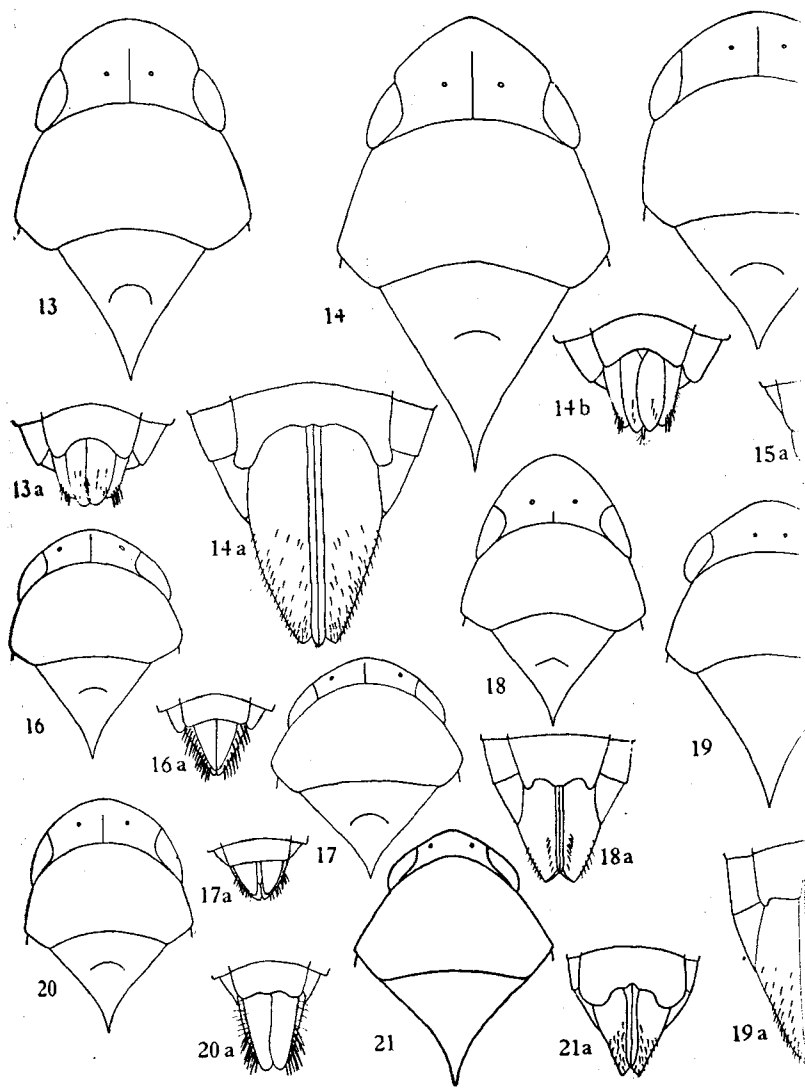
- FIG. 7. *Gypona bigemmis* Spg. 7a, female; 7b, male genitalia.
FIG. 8. *Gypona equestris* Fab. 8a, female genitalia.
FIG. 9. *Gypona lineosa* sp. nov. 9a, female genitalia.
FIG. 10. *Gypona ecuadora* sp. nov. 10a, female genitalia.
FIG. 11. *Gyponana boliviana* sp. nov. 11a, female genitalia.
FIG. 12. *Gypona glauca* Fab. 12a, male genitalia.



EXPLANATION OF PLATE III

DRAWINGS BY J. N. KNULL

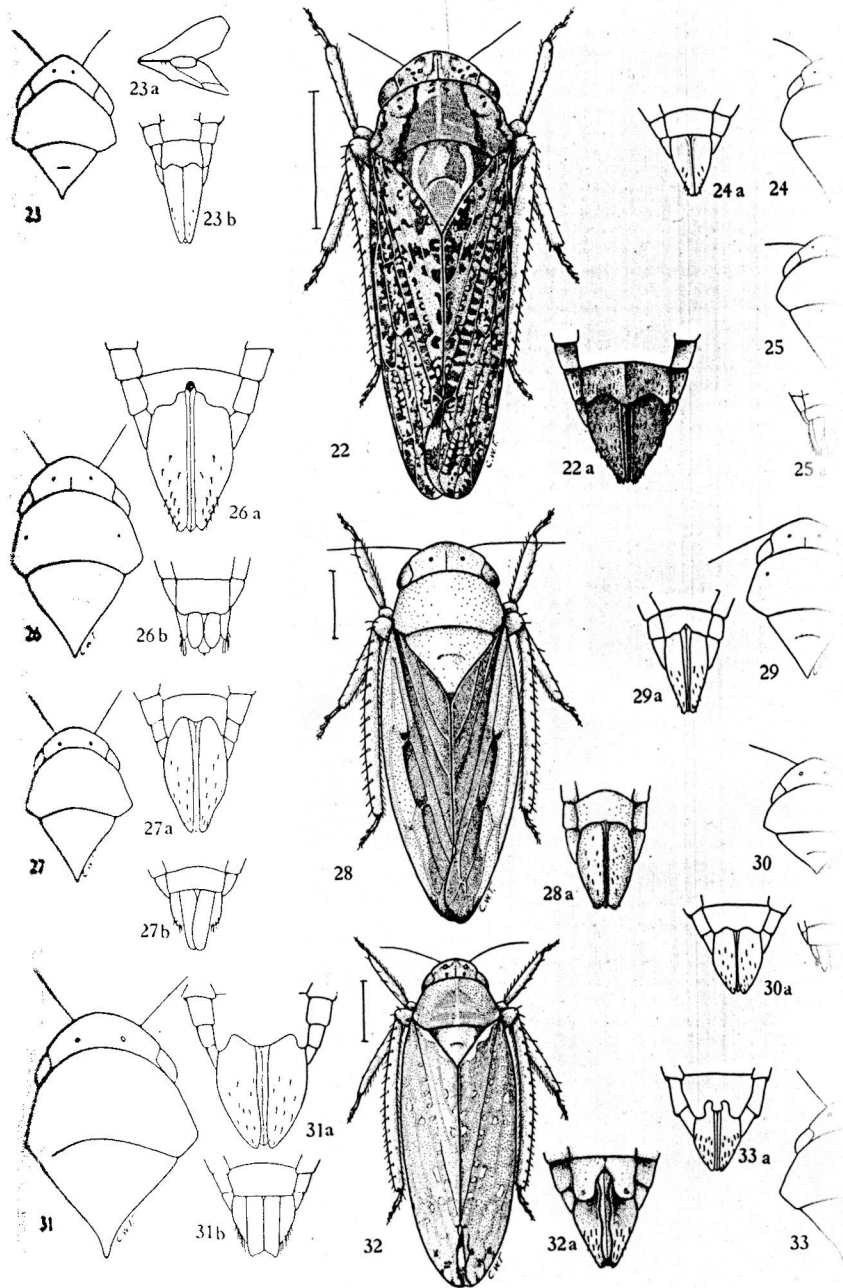
- FIG. 13. *Gypona thoracica* Fab. 13a, male genitalia.
FIG. 14. *Gypona thoracica* Fab. 14a, female genitalia.
FIG. 15. *Gypona sierra* sp. nov. 15a, male genitalia.
FIG. 16. *Gyponana obtusa* Stål, 16a, male genitalia.
FIG. 17. *Ponana fusconotata* sp. nov. 17a, male genitalia.
FIG. 18. *Gypona ancona* sp. nov. 18a, female genitalia.
FIG. 19. *Gypona peruviana* 19a, female genitalia.
FIG. 20. *Prairiana griseola* sp. nov. 20a, male genitalia.
FIG. 21. *Ponana grossa* sp. nov. 21a, female genitalia.



EXPLANATION OF PLATE IV

DRAWINGS BY MRS. CELESTE TAFT

- FIG. 22. *Rhogosana rugulosa* 22a, female genitalia.
FIG. 23. *Xerophloea tuberculata* 23a, profile; 23b, male genitalia.
FIG. 24. *Gypona vitraea* 24a, female genitalia.
FIG. 25. *Gypona bahia* 25a, male genitalia.
FIG. 26. *Gypona aurifera* 26a, female; 26b, male genitalia.
FIG. 27. *Prairiana basalis* 27a, female; 27b, male genitalia.
FIG. 28. *Gypona pulchella* 28a, female genitalia.
FIG. 29. *Gypona hyalina* 29a, female genitalia.
FIG. 30. *Prairiana rosacea* 30a, female; 30b, male genitalia.
FIG. 31. *Prairiana robusta* 31a, female; 31b, male genitalia.
FIG. 32. *Gypona viridula* 32a, female genitalia.
FIG. 33. *Ponana labella* 33a, female genitalia.



EXPLANATION OF PLATE V

DRAWINGS BY MRS. CELESTE TAFT

- FIG. 34. *Gypona fulvotincta* 34a, male genitalia.
FIG. 35. *Ponana bicolorata* 35a, male genitalia.
FIG. 36. *Ponana sulfurea* 36a, male genitalia.
FIG. 37. *Ponana ornata* 37a, male genitalia.
FIG. 38. *Ponana piccata* 38a, male genitalia.
FIG. 39. *Ponana affinula* 39a, male genitalia.
FIG. 40. *Ponana sarana* 40a, female; 40b, male genitalia.
FIG. 41. *Ponana bruneola* 41a, female genitalia.
FIG. 42. *Ponana notatula* 42a, male genitalia.
FIG. 43. *Prairiana variegata* 43a, female; 43b, male genitalia.
FIG. 44. *Ponana punctatella* 44a, female genitalia.
FIG. 45. *Prairiana nigrifrons* 45a, male genitalia.