

I. NEOTROPICAL HOMOPTERA OF THE CARNEGIE MUSEUM.

PART 1. REPORT UPON THE UNDESCRIBED SPECIES OF *Agallia* AND *Idiocerus* FROM TROPICAL AMERICA CONTAINED IN THE CARNEGIE MUSEUM, 1920.

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(PLATES I-III.)

INTRODUCTORY.

The extremely rich collections of Homoptera in the Carnegie Museum, which have been secured from a number of sources and which appear to include a large number of hitherto undescribed species, have been placed at my disposal for study. The present paper is the first of a series, which it is hoped may be made to cover a number of the groups in the near future. The species are so numerous and the additions are still coming in in such numbers, that it seems inadvisable to offer synopses or keys at present; but it is hoped that such treatment may be possible for many of the genera as the work progresses. Ultimately it is hoped that some one may be able to give a comprehensive treatise on the fauna as a whole.

The magnificent volumes of the *Biologia-Centrali-Americana* naturally include some of the Homoptera of South America, but it is evident that especially in the southern portions of the continent there is a great wealth of species as yet but scarcely touched.

I am deeply indebted to Dr. W. J. Holland, the Director of the Carnegie Museum for the opportunity to study these collections, and to Mrs. W. V. Balduf for the drawings, which accompany this part of my report.

Genus AGALLIA CURTIS (1883).

Agallia CURTIS, Entomological Magazine, I, 1833, p. 193.

1. *Agallia declivata* sp. nov.

Head scarcely wider than pronotum; eyes prominent; vertex very short, scarcely wider next the eye; face as in *A. major* sp. nov., q. v.

Pronotum short, distinctly elevated behind, or declivous to head. Scutellum with deep transverse suture, before which are two well marked depressions. Elytra distinctly reticulate; claval areoles with several cross-nervures; cross-nervures of corium occupying all cells, except basal half of costal.

Dark gray, tinged with fuscous; two irregular spots on vertex, four on anterior portion of pronotum, blackish; femora and tibiae dull whitish; veins of elytra white, bordered with fuscous, the central parts of the areoles whitish.

Length 5 mm.

A large species, with the pronotum humped and the elytra distinctly reticulate. It very distinctly resembles *A. balli* Baker (*reticulata* Ball) in the character of the elytra, but is much larger, and differs decidedly in the shape of the pronotum.

One specimen (*holotype*) Carnegie Museum Acc. No. 4,043, from San Antonio de Guaporé, Brazil, July 26, 1909 (Haseman *coll.*).

2. *Agallia major* sp. nov.

Head broad; eyes conspicuous; vertex very short; face flattened; front narrowing uniformly to clypeus; cheeks scarcely sinuate; pronotum short, elytra broad, extending slightly beyond end of abdomen. *Genitalia*: female ventral segment short, apparently crowded out of position.

Dark gray to light fuscous with black spots; two black spots and central black line on vertex; facial sutures and row of spots on front, two large triangular spots on hinder disk of pronotum, central line, the claval areoles, and a dull spot on middle of elytra, black or smoky.

Length 5.5 mm.

Resembling *A. oculata* Van Duzee, but larger.

One specimen, a female (*holotype*), Carnegie Museum, Acc. No. 5064, from Province del Sara, Bolivia (Steinbach *coll.*).

3. *Agallia furculata* sp. nov.

Head considerably broader than pronotum; eyes prominent; vertex very short, a mere line at center extending narrowly behind the eyes; face flattened in profile, scarcely convex; front broad at base, narrowed sharply below antennae, curving to clypeus; clypeus nearly twice as long as wide; lorae narrow; cheeks with margins slightly sinuate and reflexed; pronotum short, about three times as long as broad, carinate on middle line; scutellum broad; elytra broad; claval nervures forked and with cross-nervures in the inner angle; nerves of corium branched, as usual, but in addition to usual cross-nervures

there are a number of cross-nervures in apical and anteapical cells irregularly placed. *Genitalia*: the female ventral segment short, posterior margin truncate.

Dark gray, fuscous markings much as in *A. oculata* Van Duzee; dark spot next eye; central line and sutures of face, black; series of fuscous arcs on front; margins of clypeus dark; two rather large triangular spots on hind border of pronotum; central carinae and marginal patches behind eye fuscous; elytral nervures at base whitish, at tip fuscous; the areoles dull whitish. Beneath dark gray; femora sub-annulate with fuscous. Length 5 mm.

Resembling *A. oculata* Van Duzee, but more robust, and quite distinct in the forking of the claval veins and the reticulation of the elytra, the apical part of the corium having numerous cross-veins.

One specimen, female (*holotype*) Carnegie Museum, Acc. No. 3533, from Bom Fim, Bahia, Brazil, Oct. 30, 1907 (Haseman coll.).

4. *Agallia multipunctata* sp. nov.

Head distinctly wider than pronotum; vertex short, strongly concave behind, but not perceptibly elevated, nearly twice as long at eye as at middle, not continued back of eye; front rather narrow, long, narrowed gradually to clypeus; clypeus long, broadly expanded on apical half, apex emarginate; loræ large, outer margin circular; cheeks narrow; pronotum produced between eyes, lateral margin short, posterior margin scarcely concave; scutellum large, much wider than long, furrowed behind transverse suture so as to appear bifid; elytra long, extending well beyond abdomen, cross-vein before two central apicals straight and continuous. *Genitalia of male*: last ventral segment truncate, plates elongate, nearly as wide at base as ultimate segment, tapering nearly uniformly to acute upturned tips. Pygofer short, terminating in a truncate, dentate apex.

Light gray; vertex in front mostly yellowish, with two basal dots, four dots along anterior border, the outer two connecting with an oblique fuscous band running back to center of hind margin, a black dot near eye below ocellus, and margin of front and clypeus, dark brown; frontal arcs faint; pronotum gray-brown with faint yellowish spots and brown dots on front margin; scutellum gray-brown at base with brown and yellow triangles; apex yellowish; elytra grayish subhyaline, a fuscous patch near center of costa, veins white with brownish margins. Beneath yellowish varied with brownish.

Length: 5 mm.

This species differs somewhat from typical members of the genus in having the ocelli a little higher up on the face and nearer the margins of the eyes. The prevalent color is light gray, the head yellowish, marked with fuscous spots and lines.

One specimen, male (*holotype*), Carnegie Museum, Acc. No. 3793, from Sapucay, Paraguay, April 4, 1909 (Haseman *coll.*).

5. ***Agallia lineata*** sp. nov.

Head slightly wider than thorax; vertex arcuate, slightly wider next eye than at middle; front long, abruptly narrowed just below antennæ, then tapering gradually to clypeus; clypeus long, apex not widened; loræ elongate; cheeks sinuate; pronotum evenly arched in front, slightly concave behind; scutellum acuminate; elytra apparently without cross-veins, except for the apical series. *Genitalia of male*: plates broad at base, narrowed to beyond center, with short blunt tips.

Fulvous, vertex somewhat yellowish with large black spots, with a projection touching hind border; dark circles around ocelli, a very broad V-shaped line at base of front antennal pits; a double row of frontal dots, two spots on suture between front and clypeus, apical half of clypeus and inner border of cheek, fuscous; pronotum fulvous with darker discal band projected forward at middle, front border broadly black, with two oblique projections on the disk near median line; scutellum black at base, brownish on disk, lighter at apex; elytral veins tawny, interspaces darker subhyaline; wings opaque with brown veins. Pectus beneath black; legs pale fulvous.

Length: 4 mm.

This species is somewhat similar in appearance to *A. novella* (Say) but the shape of the head differs and the male genitalia are quite distinct. The general color is tawny with fuscous lines, two large spots on vertex, two oblique spots on front; frontal series of dots and apex of clypeus, dark brown or fuscous.

One specimen, male (*holotype*), Carnegie Museum, Acc. No. 4549, from Province del Sara, Bolivia, November, 1909 (Steinbach, *coll.*).

6. ***Agallia interrogationis*** sp. nov.

Head slightly wider at pronotum, distinctly arched; vertex short, scarcely longer at eyes than at middle; front long, margin sinuate; clypeus long, slightly widened apically; loræ elongate; cheeks narrow, and margin slightly sinuate; pronotum short, strongly arched in front, nearly straight behind; scutellum broad, apex acute, but not produced; elytral venation much as in *A. lineata*, sp. nov. (*q. v.*) *Genitalia: Female*, last ventral segment broadly notched; *male*, valve triangular, narrow; plates narrow, parallel to middle, tapering to points, extending to tip of pygofer.

Head black, vertex yellow with two large spots connected at base behind and with black area in front by extension of black median line;

front black with slender median line, two short yellow oblique lines just below ocelli; pronotum black with hind margin at lateral angles and interrogation mark bordering anterior margin on each side, two discal spots, and apical margin, yellow; elytra black, veins yellow, except costa and apical part; scutellum black. Beneath black, legs dull fuscous.

Length: ♂ 3.5 mm.; ♀, 4 mm.

This species somewhat resembles *A. lineata*, sp. nov., but has a quite different color-pattern, being prevalently black, marked with yellow lines; and the genital segment is different.

Three specimens, one male, two females (*type, allotype, paratype*), Carnegie Museum, Acc. No. 2966, from Chapada, Brazil, November (H. H. Smith, *Coll.*).

7. *Agallia sticticollis* (Stål).

Bythoscopus sticticollis STÅL, Eug. Resa., Ins. Hem., 1859, p. 291.

Head distinctly wider than pronotum; vertex short, strongly and subangularly rounded, as long at middle as at eye; front broad, rounded near apex to clypeus; clypeus narrow at tip, nearly elliptical; loræ broad; cheeks wide, sinuate; pronotum with hind border scarcely concave, hinder part faintly carinate and granulate; scutellum very small, granulate; elytra with usual venation. *Genitalia of male*: valve short, rounded behind; plates slender, tapering to blunt tip; about length of pygofer.

Dull yellowish, with numerous spots and lines of black; vertex with two large roundish black spots touching hind border; a faint double median line; two oblique lines next eye; a lunate line at base of front; a number of short arcs; sutures of front and clypeus black or fuscous; pronotum yellowish, with an irregular black band near anterior border; three faint longitudinal lines and numerous granules black; scutellum black, apical margins whitish; elytra pellucid, with blackish veins, except tips of the claval veins, which are white.

Length: 3 mm.

A dark species with pronotum and scutellum distinctly punctate or granulate with black.

The specimen before me seems to agree very closely with Stål's description, based on specimens from Rio Janeiro, although he does not speak of the pronotal punctations as granular, nor does he give details of the genitalia.

One specimen, male, Carnegie Museum, Acc. No. 5064, from Province del Sara, Bolivia, February, 1913 (Steinbach, *coll.*).

Genus IDIOCERUS Lewis.

Idiocerus LEWIS, Trans. Ent. Soc. London, I, 1835, p. 47.8. *Idiocerus magnus* sp. nov.

Head broad, much exceeding width of pronotum, hind margin evenly curved; vertex short, a little longer next the eyes than at middle; ocelli near the eyes, small, black; front broad, sides nearly parallel to below antennæ, then curving sharply to clypeus; clypeus twice as long as width at base, slightly widened toward tip; loræ broad, outer margin circular; cheeks narrow, margins nearly straight, slightly reflexed; pronotum nearly twice as wide as long, posterior angles rounded, hind margins slightly concave; scutellum large, depressed at center; elytra rather narrow, apical cells transverse. *Genitalia of male*: last ventral segment slightly shorter than preceding, hind margin straight; plates elongate, strongly upcurved on outer third and enclosing slender upturned styles of equal length.

Dull gray; head and pronotum tinged with rufous or brown; dark spot on vertex next eye, numerous irregular arcs and dots or dashes on front, and large spot on base of clypeus, its apex and facial sutures black; pronotum with irregular black irrorations; scutellum black on disk, two basal triangular fuscous or blackish spots; elytra hyaline, nervures blackish, fuscous spots at middle and apex of clavus, transverse fuscous or blackish bars across hyaline apical cells. Legs and underside dull yellowish with fuscous markings on hind coxæ and venter.

Length: 10 mm.

This striking species, having the pronotum and front brown, coarsely irrorate with black, is recorded as having been taken in sweeping on an island in the Rio Guaporé, and, if similar in habit to North American forms, may have occurred on willows or poplars.

One male specimen (*holotype*) Carnegie Museum Acc. No. 4043, from San Antonio de Guaporé Brazil, July 26, 1909 (Haseman coll.).

9. *Idiocerus quadrangularis* sp. nov.

Head broad, much wider than pronotum; vertex short, rounding uniformly to front, profile quite uniformly curved from vertex to tip of clypeus; front convex hexagonal, lateral angles at antennal pits; pronotum short, lateral margins reduced to angle, hind margins distinctly concave; scutellum broad, apex acute.

Vertex light green, with two quadrangular spots with open court at sides, separated by a median space about equal to width of the red mark; front darker at sides; clypeus infuscated; pronotum light green with faint reddish stripes on disk and tinged with reddish at sides;

scutellum brownish green at base, light green on apex, two triangular spots at base in basal angles; elytra brownish smoky, base of costa brown, base of costal cells and costal vein green. Beneath dull green; pectus and coxæ blackish; legs greenish; posterior femora and tips of tibiæ brownish.

Length: 4 mm.

A small greenish species with quadrangular spots on head and a black triangle at base of scutellum.

One specimen, female (*holotype*), Carnegie Museum, Acc. No. 4043, from Villa Bella, Bolivia, October 6, 1909 (Haseman *coll.*).

10. **Idiocerus flavidus** sp. nov. (Plate I, fig. 1).

Head slightly wider than pronotum, uniformly curved; vertex rounding uniformly to front; front broad at base, distinctly angled at antennal pits, narrowing with a sharp curve at apex to meet clypeus; loræ rather broad; pronotum with lateral posterior angles rounded, hind border straight; scutellum large, almost equilaterally triangular; elytra long, extending far beyond tip of abdomen. *Genitalia of male*: last ventral segment short, truncate; plates with parallel sides to middle, then contracting to sharp spine-like tips.

Head, pronotum, and scutellum light yellow, unmarked, strongly contrasting with black basal parts of elytra; face unmarked, but faintly tinged with fulvous; ocelli black; elytra blackish hyaline, opaque blackish at base and on most of clavus, the blackish spot on costal, basal and apical cells and base of membrane rather dark smoky. Beneath yellowish, tips of male plates brownish.

Length: 4.5 mm.

This small, slender species is very distinctly marked by the sharply contrasting colors of the body and the bases of the elytra, the head, pronotum, and scutellum being yellow, and the elytra, especially at base, being blackish.

Two males (*type* and *paratype*), Carnegie Museum, Acc. No. 4043, ticketed "Brazil along Rio Guaporé below Rio S. Miquel, VIII, 22, 1909. Haseman."

11. **Idiocerus maculifrons** sp. nov. (Plate I, fig. 2).

Head much wider than pronotum; eyes prominent; vertex short, rounding evenly to front; front with parallel sides to below antennæ, then narrowed abruptly to clypeus; clypeus twice as long as wide, widening slightly toward tip; loræ large; cheeks narrow, margin bordering loræ slightly reflexed; pronotum wide, short, scarcely emarginate behind; scutellum very broad. *Genitalia of male*: hind border of last ventral segment truncate; plates thick, and narrowing, tapering to acute point behind.

Greenish, with brownish central line on vertex; a round spot near eye, broken transverse band between eyes, ocelli, arcs on front, apex of front and all of clypeus, six spots on pronotum, basal angles and discal spots on scutellum, spots on claval and elytral veins, black; elytra transparent, veins white, except for alternating black spots. Beneath pale, legs pale, with apices of femora and hind tibiae fuscous.

Length: 5.5 mm.

This species is recognized by being pale yellowish or greenish yellow, maculate with fuscous or black on face, pronotum, scutellum, and elytra.

One male specimen, (*holotype*) Carnegie Museum, Acc. No. 2966, from Taperina, Brazil (H. H. Smith, *coll.*).

12. **Idiocerus rotundifrons** sp. nov. (Plate I, fig. 3).

Head broad; vertex narrow, merging without any trace of angulation into rounded front, which tapers rather sharply to clypeus; cheeks narrow, overhung by loræ at the tips; pronotum short, hind margin scarcely concave.

Dull yellowish or greenish, probably pale green in life, without markings, except that the ocelli are dark, each set in a blackish dot, and the costa at base is yellowish; veins indistinct, and entire elytra hyaline with faint iridescent reflections.

Length: 5 mm.

This species may be recognized by its being uniformly dull yellowish, except the black ocellar spots, and by its rounded head.

One female specimen (*holotype*) Carnegie Museum, Acc. No. 4043, from Brazil, ticketed, "Along Rio Guaporé, August 22, 1909" (Hase-man *coll.*).

13. **Idiocerus hyalinus** sp. nov. (Plate I, fig. 4).

Head broad, vertex uniformly curved, margins parallel, evenly curved to the front; ocelli below transverse blackish bar; front broad at base, tapering rather uniformly to base of clypeus; clypeus longer than broad, sides nearly parallel; loræ narrow, outer margins slightly curved; cheeks narrow, margins nearly straight; pronotum short; scutellum large, acute at apex; elytral veins indistinct, except where marked with black. *Genitalia: female*, last ventral segment concave; *male*, valve wanting, plates elongate, narrowed, and acuminate at tip. Greenish yellow; vertex with central dark line; broad sinuate band extending across between eyes, ocelli each in black dot, rest of face whitish; pronotum greenish with a central dark line expanded posteriorly, two large triangular spots near hind border, two oval transverse brownish spots near front border a little nearer the center;

scutellum greenish with fulvous patches in basal angles and across hinder part of disk; elytra very clear transparent, with densely black claval sutures, black or fuscous on part of claval veins, and on inner sector and parts of apical veins.

Length: 6 mm.

This striking species does not seem to have any counterpart in our North American fauna, but shows some resemblance to *Idiocerus duzei* Provancher. It is large, robust, greenish yellow, having the elytra hyaline, except the veins.

There are three specimens from Brazil, taken on the Rio Guaporé below Rio S. Miguel, August 22, 1909, by Haseman; and four specimens from Bolivia, Rio Matupo, near Rio Guaporé, taken August 25-29, 1909, by Haseman. Carnegie Museum, Acc. No. 4043, *type* ♂, and *allotype* ♀, Carnegie Museum; *paratypes* in Carnegie Museum and Osborn Collection.

14. *Idiocerus minutus* sp. nov.

Head broad, vertex rounding to front; front broad at base narrowing sharply from antennal pits to base of clypeus; clypeus long; pronotum broad, short, posterior margin concave; scutellum large.

Gray, head marked with brownish bars, each forming an indistinct quadrangular mark with black dot at center; ocelli dark; front with a row of short, fuscous arcs on each side; pronotum with very faint reddish stripes at each side of center, some blackish dots behind the eye; scutellum dull yellowish, a dark stripe at center, bifid at tip; black triangles in basal angles; elytra hyaline, nerves indistinct, but with a fuscous line on disk of clavus, and a discal cross-nervure infuscated. Beneath thorax and basal segments of abdomen blackish, legs and pygofers dull yellowish.

Length: female, 3 mm.

A very small wedge-shaped species, dark gray, marked with reddish and brown, easily distinguished by its color-pattern.

Two specimens, both females, Carnegie Museum, Acc. No. 2966, taken at Chapada, Brazil, November. *Type* in Carnegie Museum; *paratype* in Osborn Collection, Ohio State University.

15. *Idiocerus tumidulus* sp. nov.

Vertex rounded, front tumid, narrowed abruptly from antennal pits to base of clypeus; pronotum very short, concave behind. *Genitalia of male*: ventral segment long, narrowed toward tip and truncate at apex.

Dull yellowish brown; front, clypeus, and loræ deeper brown; ocelli

and antennal pits fuscous; pronotum lighter anteriorly, with faint brownish markings in depressions; scutellum yellowish with brownish discal spots in basal angles; elytra brownish hyaline, a large fuscous patch just back of center and inner apical area, fuscous. Beneath brown, apical margins of abdominal segments and terminal segment with central line, yellow.

Length: 3.5 mm.

A small obscurely marked species with tumid frons.

A single male specimen, Carnegie Museum, Acc. No. 2966 (*type*), from Chapada, Brazil, November (H. H. Smith *coll.*).

16. **Idiocerus areatus** sp. nov. (Plate II, fig. 1).

Head broad; eyes prominent; vertex rounding uniformly to front; front curved at base, lateral angles distinct, lateral suture nearly straight to base of clypeus; clypeus not quite twice as long as width at base, widening slightly at tip; loræ reaching reflexed margin of cheeks; pronotum broad, posterior angles very broadly rounded, hind border distinctly concave; elytra slightly longer than exerted ovipositor. *Genitalia of female*: ventral segment short, very shallowly notched, ovipositor extending about one-fourth its length beyond the pygofer.

Light greenish; head with trapezoidal reddish spots including a round spot opening on outer margin; ocelli reddish; front with two obscure fulvous stripes, rest of face greenish; pronotum greenish with a broad L-shaped reddish mark, the short limb of the L paralleling the middle line; scutellum yellowish with faint mark at center and triangle in basal angles, fulvous. Elytra hyaline, base of clavus with a greenish opaque area, costal nerve greenish, apices faintly smoky. Beneath greenish; legs and ovipositor light testaceous; apex of hind tibia and tarsal claws dark.

Length: 4 mm.

This is a handsome little species, closely resembling *I. fulvus*, sp. nov. (*q. v.*), but smaller, with a different pattern for the reddish areas on head and thorax, and distinctly blackened apices of hind tibiae and tarsal joints; it differs also in the length of the ovipositor.

One specimen, female (*type*) Carnegie Museum, Acc. No. 2966, from Chapada, Brazil (H. H. Smith *coll.*).

17. **Idiocerus fulvus** sp. nov. (Plate II, fig. 2).

Head broad, strongly curved; vertex short, rounded to front; front broad, base curved, antennal angles sharp, sides narrowing abruptly to narrow base of clypeus; clypeus narrow, twice as long as wide,

slightly expanded at tip; loræ large, approaching closely to margin of cheek; pronotum rather long, strongly arched in front, distinctly concave behind; scutellum large, apex acuminate; elytra exceeding ovipositor. *Genitalia of female*: last ventral segment short, posterior margin concave.

Light yellow, somewhat tinged with greenish, with two large quadrate fulvous areas on vertex extending down to ocelli, somewhat narrowed below, separated by narrow greenish stripe; pronotum tinged with fulvous, somewhat lighter laterally; scutellum greenish; elytra hyaline, scarcely colored, tinged with fulvous basally, apex faintly smoky. Underside, including face, body, and legs, pale greenish.

Length: 5 mm.

This species is prevalently light yellowish, with two broad fulvous stripes on vertex, the pronotum light fulvous.

Two females (*type* and *paratype*) Carnegie Museum, Acc. No. 2966, from Chapada, Brazil (H. H. Smith *coll.*).

18. **Idiocerus intricatus** sp. nov. (Plate II, fig. 3).

Head broad; eyes large; vertex slightly longer at middle than next the eye, rounded to front; front broad at base, sides converging gradually to near clypeus, much widened at tip; loræ large, elongate, triangular; antennæ slender without disks; pronotum strongly curved in front, lateral angles short, hind border straight; scutellum, broad, margins straight; elytra long, much exceeding body. *Genitalia of male*: last ventral segment truncate; plates broad, slightly tumid at base, narrowing uniformly to thick spur-like pointed tips.

Yellowish tinged with green; vertex with two elliptical spots on disk, a round spot next eye, two transverse broken bars above and below ocelli, two discal stripes and lateral patch on pronotum, reddish or tawny; a central line, dot on inner margin of each eye, ocelli, antennal pits, spot on base of loræ, and apex of clypeus, central line on posterior margin of pronotum, hind border of lateral angles, central line and suture and basal angles of scutellum, claval veins, dot at base and on cross-nervure, and transverse band at tip of clavus and apical cells, brownish fuscous to blackish. Underside of body and legs yellowish, more or less tinged with brownish.

Length: 4.5 mm.

The prevalent color of this species is light yellowish, with numerous reddish and fuscous markings in rather intricate patterns.

One male specimen (*holotype*) Carnegie Museum, Acc. No. 2966, from Chapada, Brazil, October (H. H. Smith *coll.*).

19. **Idiocerus fasciatus** sp. nov. (Plate II, fig. 4).

Head slightly wider than pronotum; eyes forming part of outline of head; vertex rounding uniformly to front; front broad, narrowed roundly to clypeus; clypeus slender, widening toward apex; loræ with outer margin concave; cheeks narrowed abruptly, their margins closely contiguous to loræ; pronotum broad, short; scutellum broad; vertex, front, pronotum, and base of scutellum, minutely rugulose. *Genitalia: Female*, ultimate ventral segment short, slightly convex; *male*, plates broad at base, outer margin sinuate, tips narrowly rounded, scarcely attaining tip of pygofer.

Brown; margin of face, apex of clavus, broad stripe extending from base to beyond scutellum in outer cell of clavus bright yellow; borders of this stripe, an oblique patch at tip of clavus, and broad cross-band at base of apical cells and narrow apical margin, dark brown to fuscous. Underside pale, dull whitish; tips of tibiae and tarsal claws brown; abdomen in male sanguineous above.

Length: 4. mm.

This is a very beautiful little species and has not been connected with any described form. It is prevalently brown, with apex of scutellum and broad stripe on outer base of clavus, bright yellow.

Two specimens, male and female (*type* and *allotype*) Carnegie Museum, Acc. No. 2966, from "Chapada, Brazil, October" (H. H. Smith coll.).

20. **Idiocerus trifasciatus** sp. nov. (Plate III, fig. 1).

Head broad, vertex longer than usual, rounded to front; front convex, sutures indistinct, roundly narrowed to clypeus; clypeus and loræ tumid; pronotum scarcely concave behind; scutellum with margins straight, almost equilaterally triangular, apex minutely pointed; elytra long, exceeding tip of ovipositor. *Genitalia of female*: ventral segment short, truncate behind.

Grass-green; vertex with curved reddish spots; ocelli black; pronotum with three fulvous stripes, one at center and one on either side in line with fulvous spot in angle of scutellum; disk of scutellum and elytra fulvous hyaline, tips faintly smoky. Beneath light green, femora paler; hind tibiae and tarsi darker green with dusky apical spines and claws.

Length: 4 mm.

A small greenish species, with two spots on vertex, and three stripes on pronotum in line with the spots of scutellum.

One specimen, female (*holotype*), Carnegie Museum Acc. No. 4043, from Brazil "along Rio Guaporé, below Rio S. Miguel" (Haseman coll.).

21. **Idiocerus ocellatus** sp. nov. (Plate III, fig. 2).

Head broad, bluntly rounded; vertex short, rounded to front; front slightly convex, basal sutures curved, lateral margin nearly straight from antennal pit to clypeus; pronotum broad, hind margin scarcely sinuate; scutellum large, margins nearly straight, tip minutely pointed; elytra long, much exceeding abdomen. *Genitalia of male*: valve large, hind border rounded, plates broad at base narrowed abruptly near the center, tips slender and upturned.

Uniformly dull greenish, ocelli and antennal setae and a dot on disk of elytra, apical spines of hind tibiae and tarsi, brownish. Beneath light green, darker at apex of abdomen.

Length: 3.5 mm.

The species is uniformly dull green, except ocelli and a small dot on disk of elytra, which are black.

One specimen, male (*holotype*) from Brazil, "along Rio Guaporé below Rio S. Miguel," August 22, 1909 (Haseman coll.).

22. **Idiocerus viridicatus** sp. nov. (Plate III, fig. 3).

Head broad, strongly curved in front, slightly longer at middle than next eye, rounded to front; front hexagonal, widening from base to antennal pits, then narrowed to base of clypeus; clypeus narrow, nearly twice as long as width at base, widened slightly at tip, apex notched; lorae elongated, touching reflexed margin of cheek at tip; pronotum rather long, nearly one-half as long as wide, posterior angles hardly perceptible, hind margins slightly concave next scutellum; scutellum acuminate; elytra extending well beyond ovipositor. *Genitalia of female*: ventral segment short, with a deep excavation, rounded at bottom, reaching over half-way to base.

Green, somewhat bluish on hind margin of vertex and between the reddish spots; spots on vertex reddish or dark fulvous, these spots enlarged at either end and touching the ocellus; ocellus yellowish, face somewhat yellow or whitish centrally, margins pale green; pronotum with oblique fulvous stripes meeting at anterior edge; scutellum pale green, scarcely marked; elytra with a fulvous stripe next to scutellum and another bordering claval suture, hyaline-greenish at base, clear hyaline toward apex, tips slightly smoky. Beneath pale green to whitish including pygofer and edges, except tarsal claws, which are dusky.

Length: 4 mm.

This is a very striking little species, especially characterized by the much rounded head and the pattern of spots and stripes. Similar to *I. areatus* sp. nov. (*q. v.*) in size, but with head much more rounded in front, frontal marks of different shape, and with fulvous stripes on pronotum and elytra.

One specimen, female, (*holotype*) Carnegie Museum, Acc. No. 4043, "Sweeping in forest" August 22, 1909, Villa Bella, Bolivia (Hase-man *coll.*).

23. **Idiocerus acuminatus** sp. nov. (Plate III, fig. 4).

Head broadly rounded, vertex slightly shorter at middle than next the eye; eyes prominent; front broad, lateral margin roundingly narrowing to base of clypeus; clypeus small, slightly elevated on disk; pronotum broad, hind border distinctly concave; scutellum distinctly impressed on disk and acuminate; elytra with nervures faintly punctured. *Genitalia of female*: ventral segment short, truncate on hind edge, notched at middle; ovipositor scarcely exceeding pygofer.

Green, a broad band across front of vertex partially divided on median line; pronotum and scutellum light green, unmarked; elytra greenish hyaline, nervures pale, costa greenish. Beneath light green.

Length: 4 mm.

Size and form of *areatus* sp. nov. (p. 17) but with no markings on pronotum and the spots of vertex meeting at the middle.

One specimen, female (*holotype*) Carnegie Museum, Acc. No. 5064, from Province del Sara, Bolivia, November, 1912 (Steinbach *coll.*).

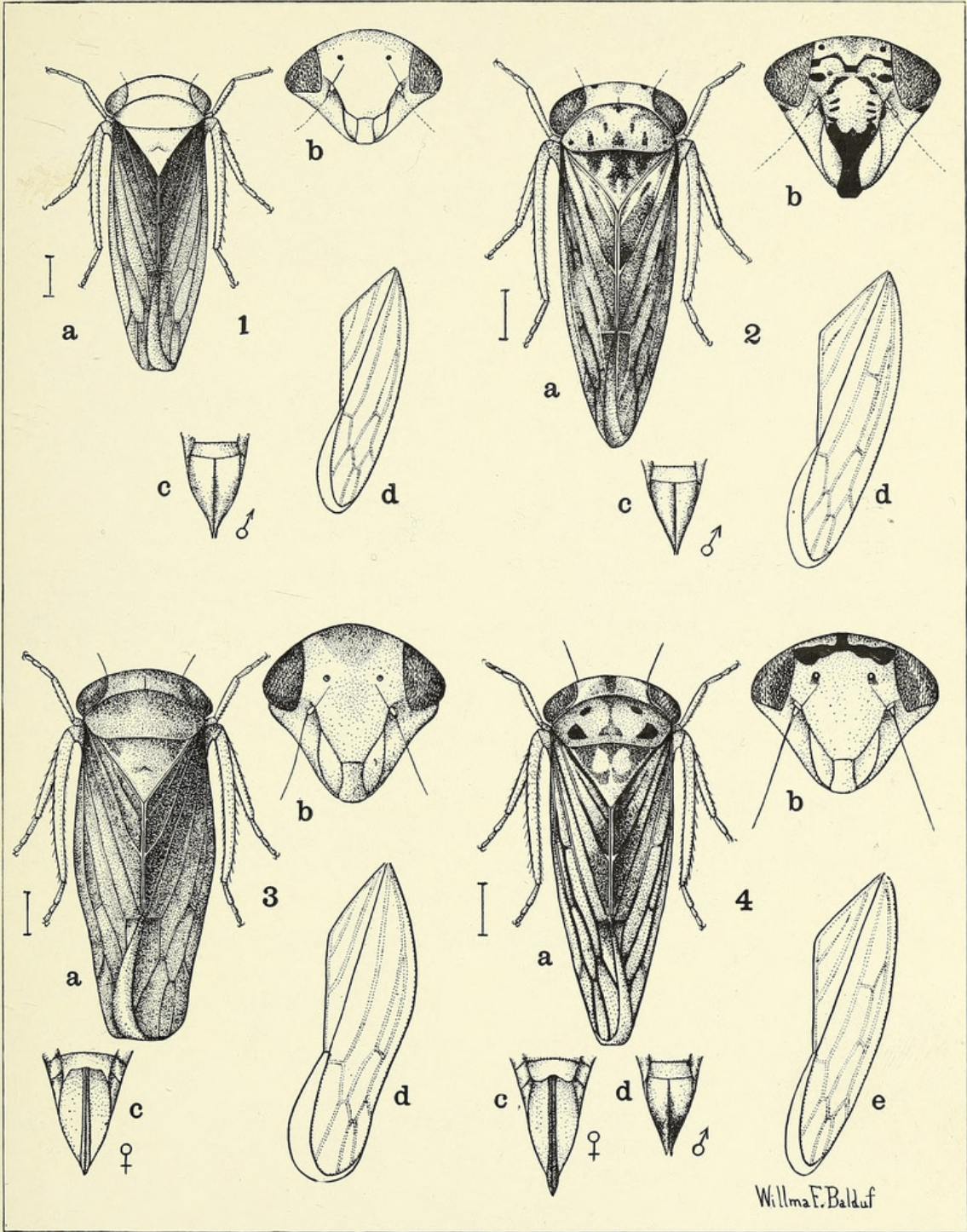
EXPLANATION OF PLATE I.

FIG. 1. *Idiocerus flavidus* Osborn, sp. nov. (See p. 14.) *a*, dorsal view; *b*, face; *c*, male genitalia; *d*, elytron.

FIG. 2. *Idiocerus maculifrons* Osborn, sp. nov. (See p. 14.) *a*, dorsal view; *b*, face; *c*, male genitalia; *d*, elytron.

FIG. 3. *Idiocerus rotundifrons* Osborn, sp. nov. (See p. 15.) *a*, dorsal view; *b*, face; *c*, female genitalia; *d*, elytron.

FIG. 4. *Idiocerus hyalinus* Osborn, sp. nov. (See p. 15.) *a*, dorsal view; *b*, face; *c*, female genitalia; *d*, male genitalia; *e*, elytron.



Idiocerus.

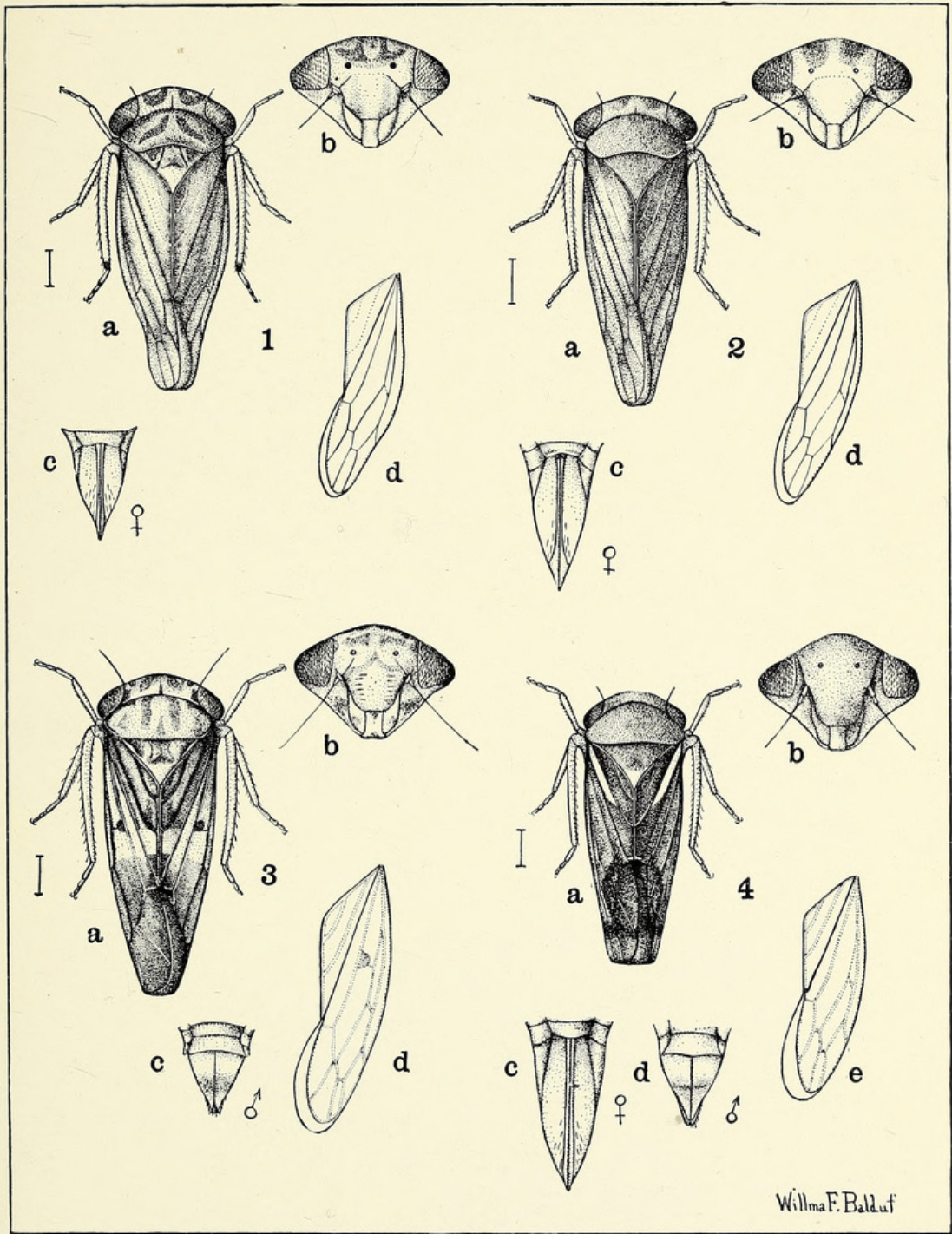
EXPLANATION OF PLATE II.

FIG. 1. *Idiocerus areatus* Osborn, sp. nov. (See p. 17.) *a*, dorsal view; *b*, face; *c*, female genitalia; *d*, elytron.

FIG. 2. *Idiocerus fulvus* Osborn, sp. nov. (See p. 17.) *a*, dorsal view; *b*, face; *c*, female genitalia; *d*, elytron.

FIG. 3. *Idiocerus intricatus* Osborn, sp. nov. (See p. 18.) *a*, dorsal view; *b*, face; *c*, male genitalia; *d*, elytron.

FIG. 4. *Idiocerus fasciatus* Osborn, sp. nov. (See p. 19.) *a*, dorsal view; *b*, face; *c*, female genitalia; *d*, male genitalia; *e*, elytron.



Idiocerus.

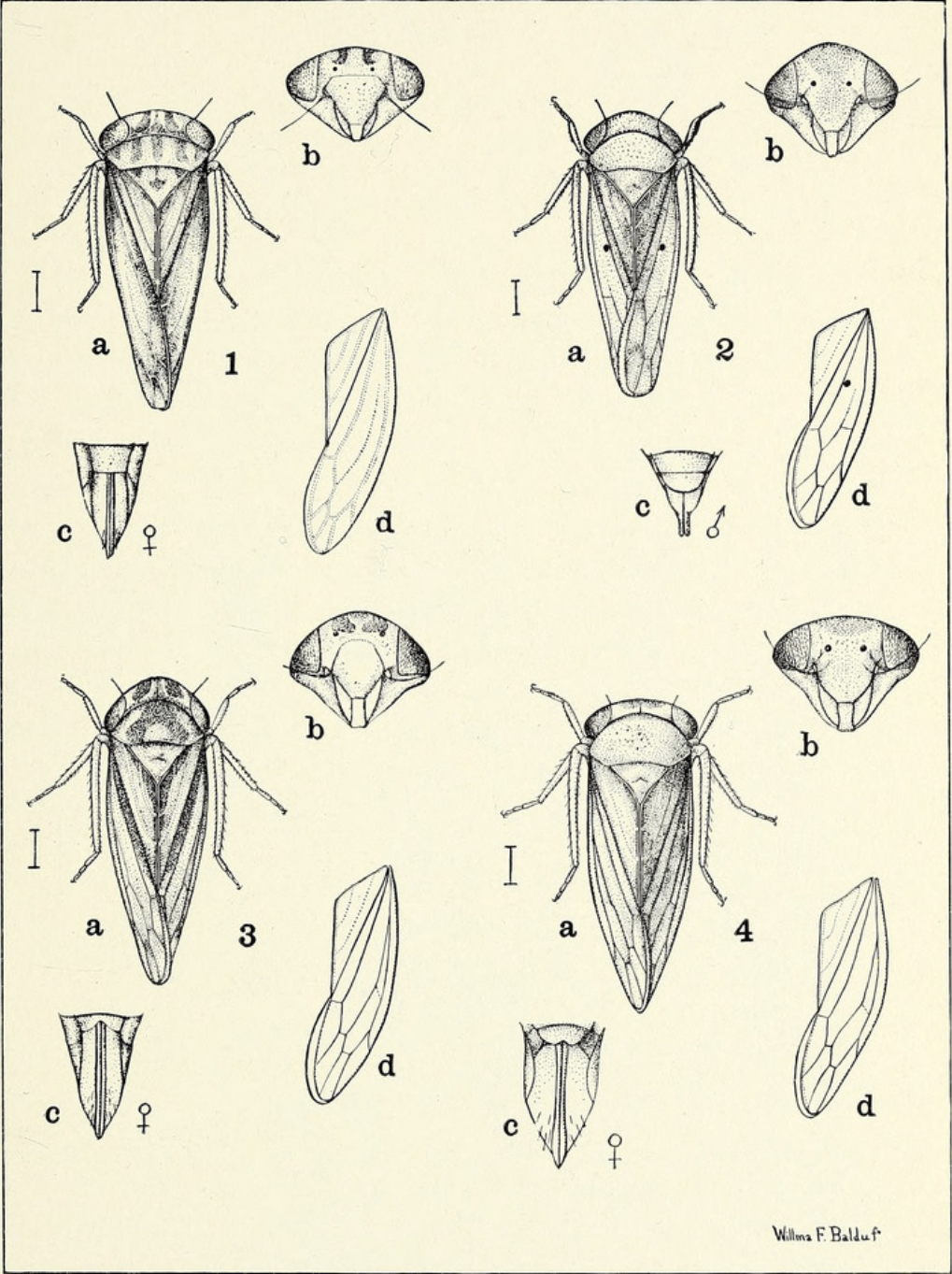
EXPLANATION OF PLATE III.

FIG. 1. *Idiocerus trifasciatus* Osborn, sp. nov. (See p. 19.) *a*, dorsal view; *b*, face; *c*, female genitalia; *d*, elytron.

FIG. 2. *Idiocerus ocellatus* Osborn, sp. nov. (See p. 20.) *a*, dorsal view; *b*, face; *c*, male genitalia; *d*, elytron.

FIG. 3. *Idiocerus viridicatus* Osborn, sp. nov. (See p. 20.) *a*, dorsal view; *b*, face; *c*, female genitalia; *d*, elytron.

FIG. 4. *Idiocerus acuminatus* Osborn, sp. nov. (See p. 21.) *a*, dorsal view; *b*, face; *c*, female genitalia; *d*, elytron.



Wilms F. Balduf

Idiocerus.



Osborn, Herbert. 1923. "Neotropical Homoptera of the Carnegie Museum, Part I. Report upon the undescribed species of Agallia and Idiocerus from tropical America contained in the Carnegie Museum, 1920." *Annals of the Carnegie Museum* 15(1), 8–26. <https://doi.org/10.5962/p.330955>.

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