

**New Deltocephaline Leafhoppers from Central
America (Homoptera: Cicadellidae) and
Illustrations of Some Osborn
Bolivian Species**

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ABSTRACT

The following new Deltocephalinae taxa are described from Central America: *Tenucephalus longicauda* sp. n. (Panama), *Dariena amabilis* gen. et sp. n. (Panama), *Caphodus panamensis* sp. n. (Panama), *Ollarianus comayagus* sp. n. (Honduras) and *O. uniformis* sp. n. (Panama). *Scaphytopius bolivianus* Om., *Thamnotettix lineiceps* Osb., *T. fuscipennis* Osb., *Tropicanus punctatus* (Osb.) and *Atanus lobatus* (Osb.) from South America are redescribed.

A portion of the material treated at this time was collected in 1967 in the area where the survey was being made for a new Panama Canal. The collections were made by C. A. Triplehorn and D. M. DeLong. Other species treated are type specimens of Bolivian material described by Herbert Osborn in 1923 and now in the Carnegie Museum. For the most part it has not been possible to determine their exact identity. These species are therefore redescribed and/or illustrated to assist others in this field who are working with Cicadellids.

The authors are indebted to Dr. George E. Wallace, Curator of Insects in the Carnegie Museum for loan of these types for study.

Tenucephalus longicauda sp. n.

Length ♂ 4.25–4.5 mm, ♀ 6.0 mm. Like *T. marginellus* DeL. but bigger, crown in ♀ shorter and with dissimilar genitalia.

Male genitalia in Figs. 1–5 and 7. Pygofer elongate; side lobes strongly setose, provided with a long falcate appendage arising from dorsal margin near base of anal tube and directed caudo-ventrad. Genital plates long, elongately triangular. Apophysis of style long and relatively slender. Shaft of aedeagus rather short, flattened; basal appendages short, claw-like. Hind margin of 7th sternite (♀) (Fig. 6) roundedly produced in middle. Ovipositor sheath extending far beyond apex of elytra (only slightly in *T. marginellus*).

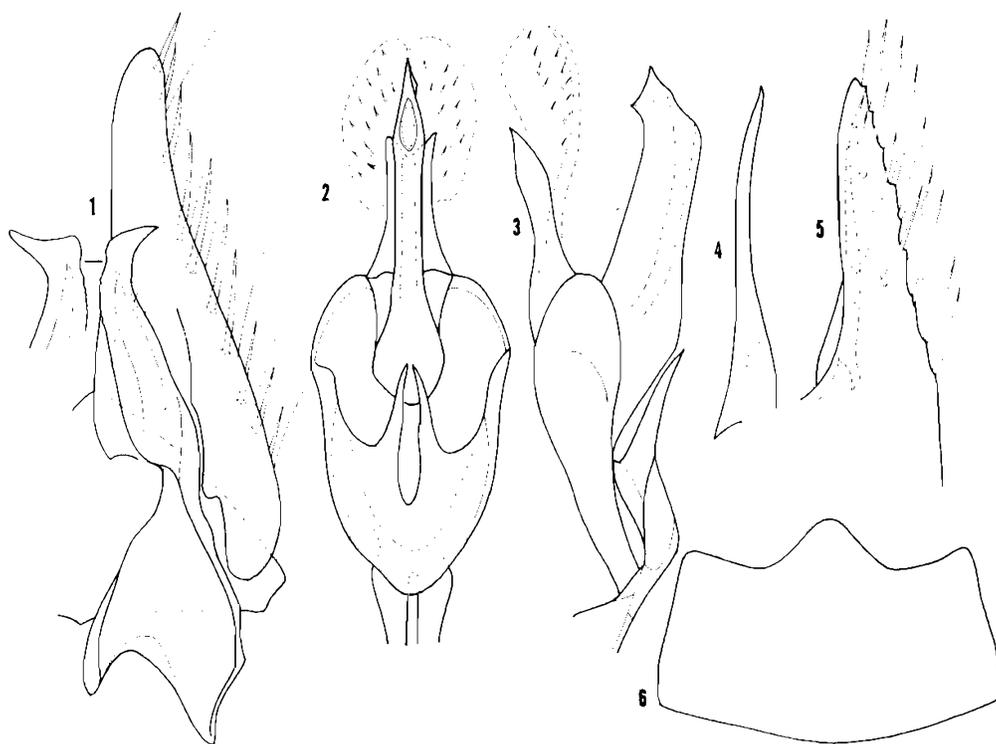
Panama, Darien Prov., 1 ♂, type and 4 paratypes, 2.VI.1967, and Panama, Prov. Chica, 1 paratype, 12.VI.1967, DeLong & Triplehorn.

The other species of the genus (*T. marginellus* DeL., Mexico, *T.*

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FIGS. 1-6. *Tenucephalus longicauda* sp. n.: 1. genital plate and style; 2. aedeagus in ventral and 3. in lateral aspect; 4. side lobe of pygofer, dorsal aspect; 5. appendage of same; 6. 7th sternite (♀).

sagittarius Lv. & DeL., Peru, and *T. quadricornis* Lv. & DeL., Bolivia) differ in the much broader genital plates (♂) and other genital characters.

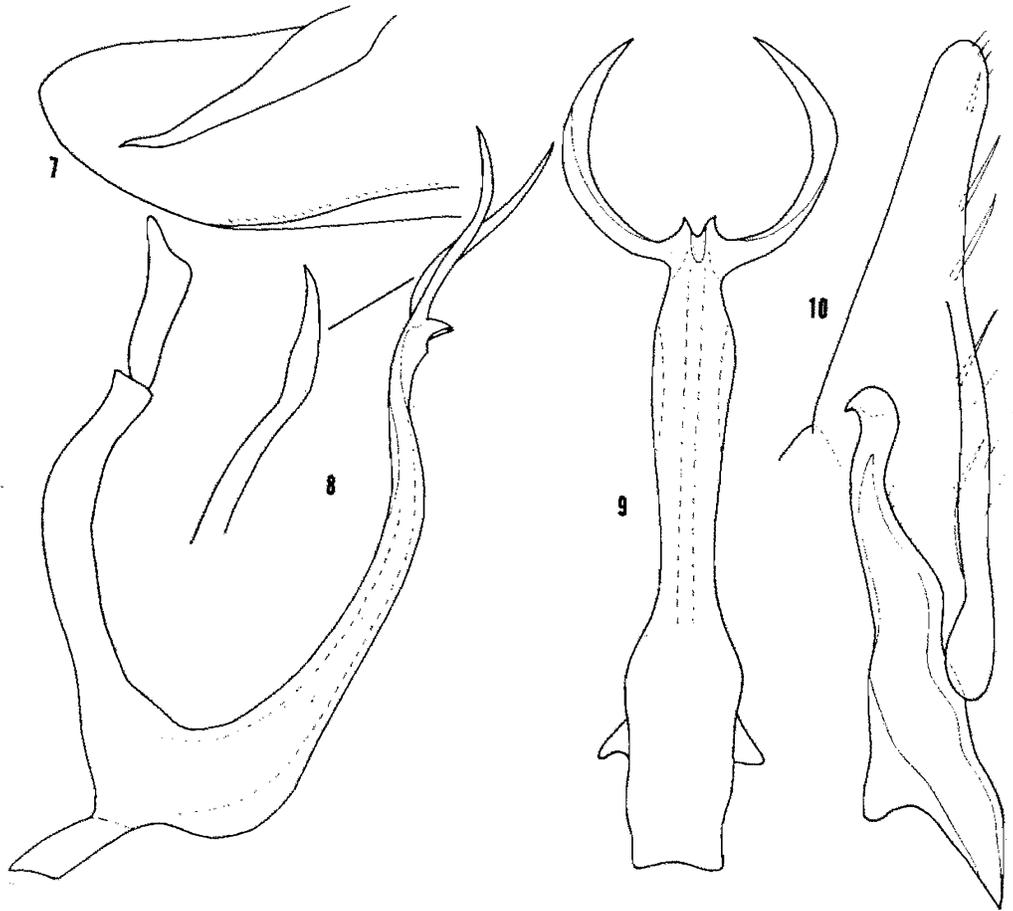
Scaphytopius (Convelinus) bolivianus Om. (= *lineolatus* Osb.)

Incorrectly listed as a member of the subgenus *Cloanthanus* Ball by LINNAVUORI (1959:80). The species is readily distinguished from the other representatives of *Convelinus* Ball by the coloring (pattern as in *S. (Cloanthanus) lineus* DeL. & Lv.) and the male genitalia (Figs. 8-10): Side lobes of pygofer rounded, setose. Genital plates long, elongately triangular, with a row of macrosetae. Apophysis of style long. Aedeagus provided with a pair of long apical appendages recurved apico-mesad.

Material studied: Bolivia, Villa Bella, 1 ♂, type, 6.X.1909, Haseman, in the Carnegie Museum.

"*Thamnotettix*" *lineiceps* Osb.

Of the tribe Deltocephalini. Generic position uncertain in absence of males. Readily recognized by the coloring:



FIGS. 7-10. *Tenucephalus longicauda* sp. n.: 7. side lobe of pygofer (without macrosetae), median aspect.—*Scaphytopius bolivianus* Om.: 8. aedeagus in lateral, 9. in ventral aspect; 10. genital plate and style.

Fig. 11. Length 4.5-4.75 mm. Shiny. Whitish ochraceous. Anterior margin of head white, bordered with narrow dark brown band both above and below, the upper band broken in middle and \pm evanescent laterally. Frontoclypeus orange with a pale longitudinal median spot; other parts of face yellowish. Crown white with a broad longitudinal orange band on either side. Eyes reddish grey. Pronotum with two broad longitudinal, \pm divided orange bands. Basal triangles of scutellum orange. Elytra yellowish hyaline, veins somewhat paler. Dorsum of abdomen, under surface and legs uniformly pale yellow.

Body elongate. Head a little broader than pronotum, anterior margin in profile subacute. Face flat; anteclypeus parallel-sided; frontoclypeus elongate and nearly parallel-sided; genae broad and only slightly insinuated near eyes; ocellocular area very narrow. Crown roundedly produced, 1.23-1.25 \times as long in middle as laterally, 0.75-0.76 \times as long as median length of pronotum, 1.01-1.2 \times as broad

as long; frontal region flat, finely shagreened, discal region slightly concave, finely longitudinally striated; postfrontal suture distinct, coronal suture long; ocelli close to eyes. Pronotum twice as broad as long in middle. Elytra long and narrow; appendix distinct, 3 closed subapical cells, the central one divided. Spinulation of fore tibiae 1 + 4. Hind margin of 7th sternite roundedly produced.

Material studied: Bolivia, Prov. del Sara, 1 ♀ paratype, XI.1909, Steinbach, in the Carnegie Museum; San Esteban 49 km N Sta. Cruz, 1120 ft, numerous exx, 20.X.1959, R. Cummings.

"Thamnotettix" fuscipennis Osb.

Generic position uncertain in absence of males. Tentatively placed in *Haldorus* Om. by LINNAVUORI (1959:149) but differing from that genus in the tumid face, rounded anterior margin of the head, more convex pronotum and elytral venation.

Additions to the original description:

Head (Fig. 12) appearing large, anterior margin rounded to face. Face densely shagreened, tumid, lower part bluntly angular in outline; anteclypeus convex, slightly tapering apicad; frontoclypeus large, convex, broadening upwardly; lora elongate; genae bluntly notched near eyes; ocellular area narrow. Crown roundedly produced, 1.3× as long in middle as laterally, 0.62× as long as broad, 0.68× as long as pronotum; frontal region broad, sloping apicad, shagreened; discal region rather flat, microsculpturing indistinct; ocelli near eyes. Pronotum convex, lateral margins fairly long. Elytra (Fig. 13) with two long parallel-sided closed subapical cells. Spinulation of fore tibiae 1 + 4.

Material studied: Bolivia, Prov. del Sara, 1 ♀ paratype, Steinbach, in the Ohio State University.

Tropicanus punctatus (Osborn), comb. n.

Eutettix punctatus OSBORN 1923:50-51.

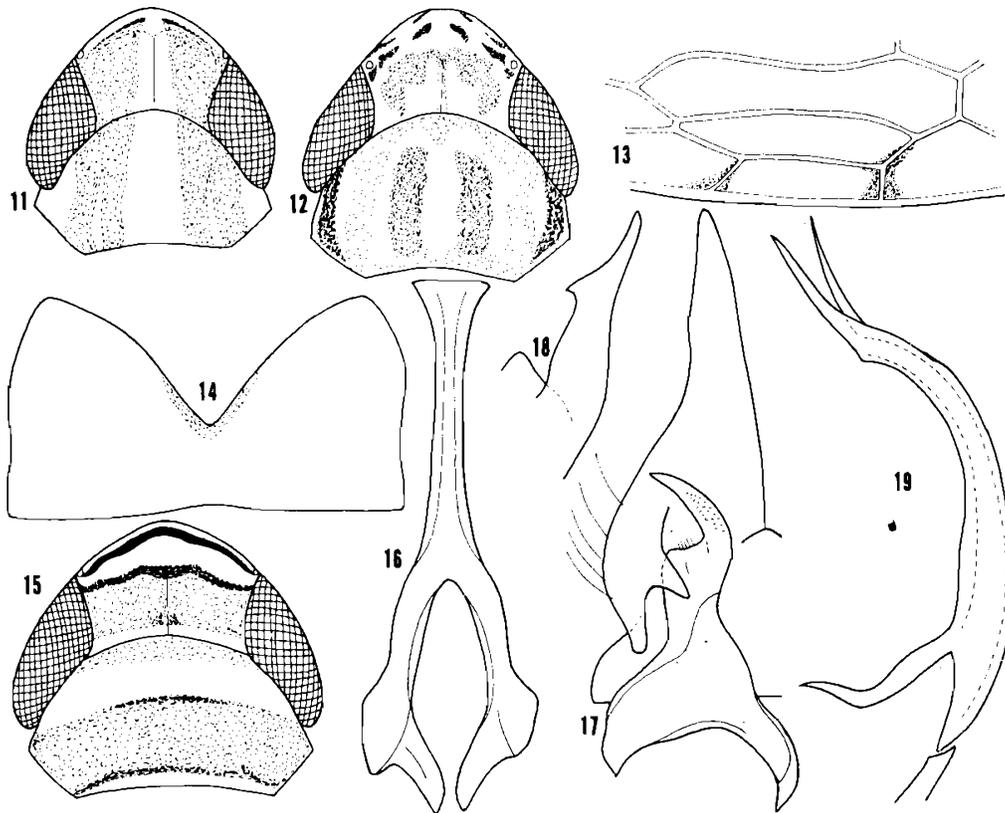
Menosoma (?) *punctata* LINNAVUORI 1959:185.

The original description is not repeated here. Resembling *T. costomaculatus* (V.Dz.) but crown of nearly uniform length, coloring of elytra different (a conspicuous whitish callosity on scutellar margin of clavus, brown false veins present only in discal and subapical cells, a distinct dark brown spot in middle of clavus, in discal cell and in cross veins of 5th apical cell), and hind margin of 7th sternite (♀) (Fig. 14) deeply insinuated medially.

Material studied: Bolivia, Quatro Ojos, 1 ♀, type, XI.1913, Steinbach, in the Carnegie Museum.

Dariena gen. n.

Medium-sized whitish ochraceous leafhoppers. Crown and pronotum with transverse orange bands. Elytra with dark reflexed veinlets.



FIGS. 11-19. *Thamnotettix lineiceps* Osb.: 11. head and pronotum.—*T. fuscipennis* Osb.: 12. same; 13. subapical area of elytron.—*Tropicanus punctatus* (Osb.): 14. 7th sternite (♀).—*Dariena amabilis* gen. et sp. n.: 15. head and pronotum; 16. connective; 17. genital plate and style; 18. apex of style; 19. aedeagus, lateral aspect.

Body fairly elongate. Head a little broader than pronotum, anterior margin bluntly rounded to face. Face convex, lower part bluntly angular in outline; anteclypeus expanding apicad; frontoclypeus rather narrow, distinctly broadening upwardly; lora rather large; genae shallowly insinuated near eyes; ocellular area narrow; flagellum of antennae long. Crown roundedly produced; the densely shagreened frontal region distinctly elevated, discal region smooth, sloping apicad; coronal suture long, postfrontal suture distinct; ocelli near eyes. Elytra elongate, appendix distinct; two closed subapical cells, the outer ovate and much shorter than the central one; cross veins of 4th and 5th apical cells and a few extra subapical costal veinlets reflexed and provided with dark triangular spots. Spinulation of fore tibiae 1 + 4, of hind knees 2 + 2 + 1.

Male genitalia: Pygofer rather short, conical, only shallowly insinuated behind the small and dorsally membranous anal tube; side lobes rounded apically, with numerous long macrosetae, without appendages. Valve broadly triangular. Genital plates acutely triangular, lateral mar-

gins insinuated, without macrosetae. Apophysis of style digitate, with a subapical tooth; preapical angle prominent. Connective long, shaft slender, arms recurved mesad apically. Aedeagus without enlarged basal part, shaft slender, recurved dorsad, provided with apical appendages; gonopore apical. Hind margin of 7th sternite (♀) slightly produced.

Type: *D. amabilis* sp. n.

Apparently related to the *Osbornellus* group (genital plates sharply triangular, without macrosetae) differing from the other neotropical genera as follows:

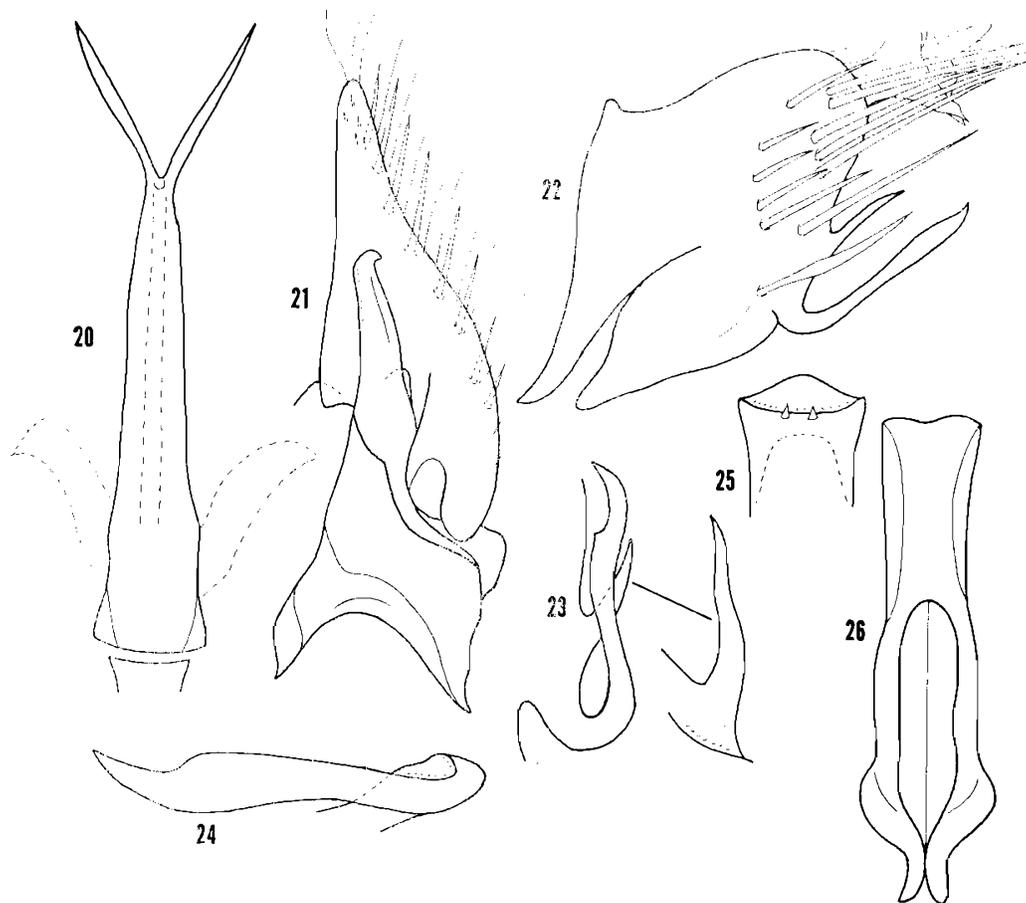
- | | |
|--|--------------------------------------|
| 1 (2) Aedeagus with basal appendages | |
| | <i>Osbornellus</i> Ball (widespread) |
| 2 (1) Aedeagus with apical appendages | 3 |
| 3 (4) Body broad, depressed. Anterior margin of head subacute.
Apophysis of style very incrassate | <i>Concepusa</i> Lv. & DeL. (Chile) |
| 4 (3) Body elongate, convex. Anterior margin of head rounded to
face | 5 |
| 5 (6) Frontal and discal regions of crown sharply delimited, the
former distinctly elevated. With bright orange markings | <i>Dariena</i> gen. n. |
| 6 (5) Frontal and discal regions of crown in the same plane, finely
microsculptured and not distinctly separated. Without orange
pattern | <i>Carelmapu</i> Lv. (Chile) |

Dariena amabilis sp. n.

Fig. 15. Length ♂ 4.2 mm, ♀ 4.75–5.0 mm. Ground color pale ochraceous. Face brown; frontoclypeus with upper margin whitish, delimited by a narrow black band, below that a transverse orangish band, a few pale ochraceous lateral arcs between eyes; anteclypeus, lora and genae with brownish or pale spots. Crown whitish, a narrow black band along anterior margin, another black band along postfrontal suture, disk with a broad transverse orange band; eyes greyish. Anterior margin and a broad transverse discal band on pronotum orangish. Basal part of scutellum largely orangish. Elytra golden brown with several milky spots in clavus and corium, cells also with longitudinal dark brown shadows; veins dark brown, claval veins nearly concolorous basally; apex of clavus, reflexed tips of claval veins, reflexed subapical costal veinlets and two conspicuous spots in basal half of costal margin dark brown. Under surface largely dark or golden brown. Femora, save tips, blackish; middle and hind tibiae dark-spotted.

Crown roundedly produced, 1.23 (♂) or 1.15–1.21 (♀) × as long at middle as laterally, 1.5 (♂) or 1.6–1.73 (♀) × as broad as long. Pronotum about twice as broad as long at middle.

Male genitalia in Figs. 16–20. Aedeagus with a pair of falcate apical processes. Hind margin of 7th sternite (♀) slightly produced.



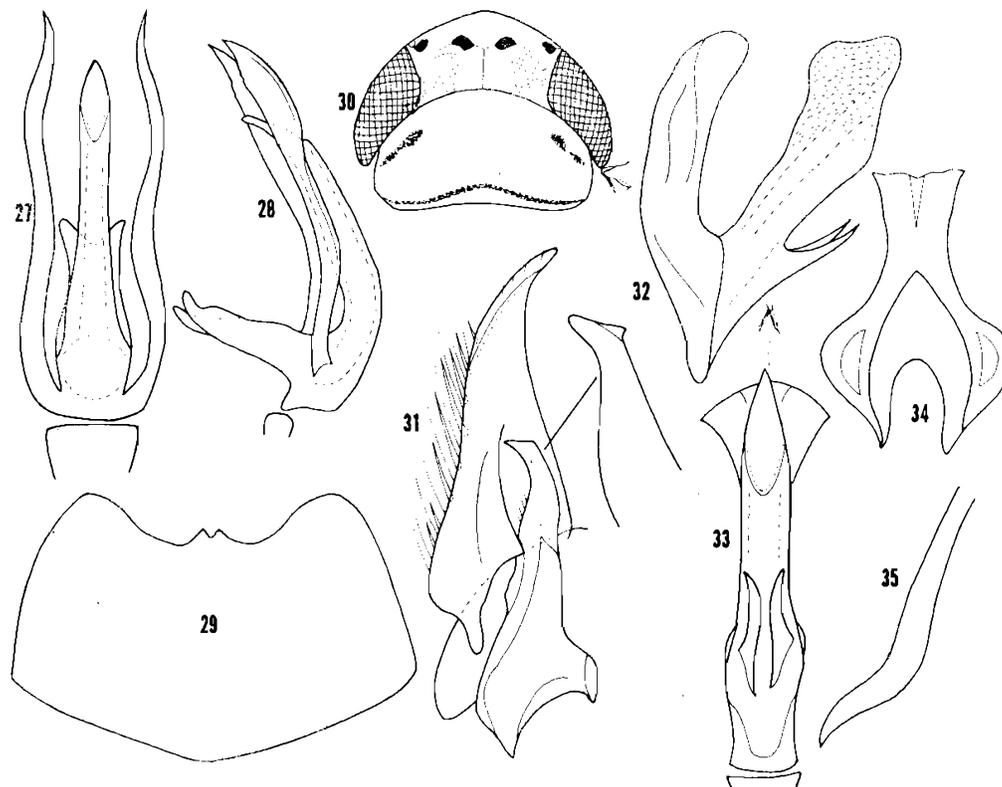
FIGS. 20-26. *Dariena amabilis* sp. n.: 20. aedeagus, ventral aspect.—*Caphodus panamensis* sp. n.: 21. genital plate and style; 22. pygofer, lateral aspect; 23. appendages of same, ventral aspect; 24. lower appendage of same, broad aspect; 25. anal tube, ventral aspect; 26. connective.

Panama, Darien Prov., Santa Fe, 1 ♂, type, 29.V.1967, 4 paratypes, 2.VI.1967; Barro Colo. Is. C.Z., 2 paratypes, 19.V.1967, DeLong & Triplehorn.

Caphodus panamensis sp. n.

Length ♂ 4.25 mm, ♀ 4.5-4.75 mm. Like *C. maculatus* Om. (re-description in LINNAVUORI 1959:225-227) but smaller and with different genitalia.

Male genitalia in Figs. 21-28. Pygofer short, not incised dorsally; side lobes broad, with long macrosetae and a pair of falcate appendages on apical margin. Anal tube sclerified dorsally only apically, apico-ventral margin with two small teeth. Apophysis of style long, slightly recurved laterad apically. Shaft of aedeagus slender, digitate; basal appendages long, falcate; gonopore subapical on ventral surface. 7th sternite (♀) in Fig. 29.



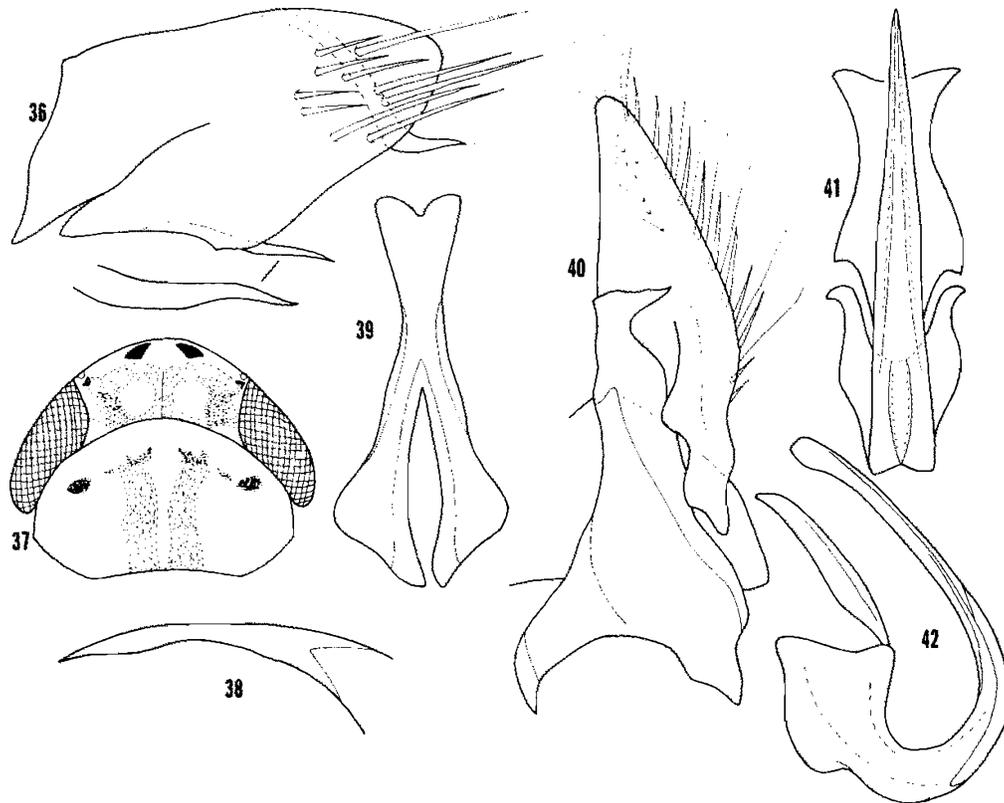
FIGS. 27-35. *Caphodus panamensis* sp. n.: 27. aedeagus in ventral, 28. in lateral aspect; 29. 7th sternite (♀).—*Ollarianus comayagus* sp. n.: 30. head and pronotum; 31. genital plate and style; 32. aedeagus in lateral, 33. in ventral aspect; 34. connective; 35. dorsal appendage of pygofer.

Panama, Las Cumbres, 1 ♂, type, 2 ♀ paratypes, 4.IV.1974, Henk Wolda.

Ollarianus comayagus sp. n.

Fig. 30. Length 3.75 mm. Whitish ochraceous. Crown with a transverse row of 4 small black spots between anterior angles of eyes and with two very faint irregular pale brown discal spots. Eyes pale grey. Pronotum pale brownish, anterior margin with irregular whitish areas and two dark dashes behind eyes, basal margin with a transverse brown band. Basal triangles and median band on scutellum pale orangish. Elytra hyaline, yellow-brown, veins concolorous. Under surface and legs whitish ochraceous, hind tibiae with small brown dots.

Body small, elongately wedge-shaped. Head much broader than pronotum. Face rather flat, broad and relatively short; anteclypeus broadening apicad, frontoclypeus distinctly expanding upwardly. Crown of nearly uniform length; frontal region broad, rounded to face, shagreened; discal region minutely longitudinally striated.



FIGS. 36-42. *Ollarianus comayagus* sp. n.: 36. pygofer, lateral aspect.—*O. uniformis* sp. n.: 37. head and pronotum; 38. appendage of pygofer, ventral aspect; 39. connective; 40. genital plate and style; 41. aedeagus in ventral, 42. in lateral aspect.

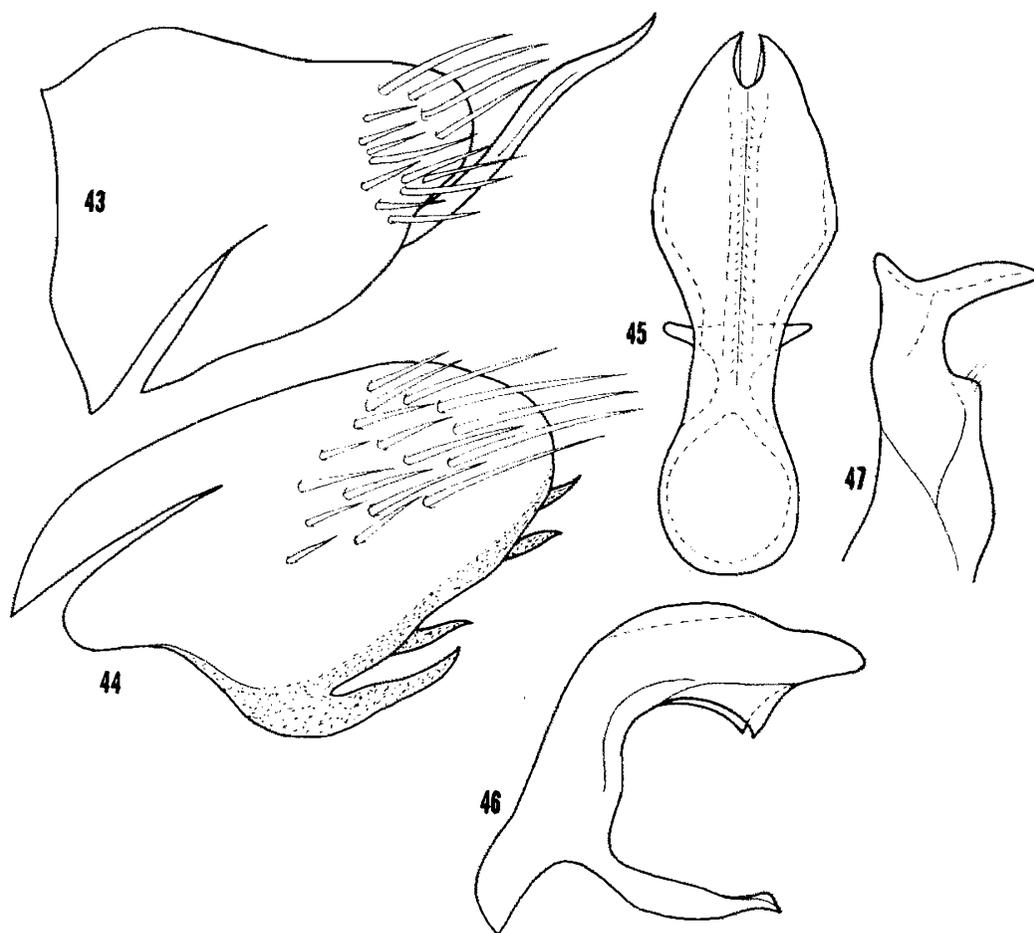
Male genitalia in Figs. 31-36. Pygofer not incised dorsally; side lobes elongate, a long falcate appendage arising near base of anal tube from dorsal margin directed ventrad, another falcate process on ventral margin recurved mesad. Anal tube sclerified dorsally. Genital plates weakly sclerified apically. Apophysis of style fairly long. Connective short and robust. Shaft of aedeagus short and flattened, with a pair of claw-like basal processes on ventral surface; gonopore subapical.

Honduras, Chiquita Comayagua, 1♂, type, 29.V.1964, Blanton, Woodruff & Broce.

The genus *Ollarianus* Ball was revised by DELONG (1944) and LINNAVUORI (1959:293-296). The new species is related to *O. strictus* (Ball) and *O. bullatus* Ball but easily distinguished by the broad head, short face, coloring and the male genitalia.

Ollarianus uniformis sp. n.

Fig. 37. Length 4.75 mm. Pale ochraceous. Lower part of frontoclypeus slightly embrowned with pale lateral arcs and median stripe;



FIGS. 43-47. *Ollarianus uniformis* sp. n.: 43. side lobe of pygofer, lateral aspect.—*Atanus lobatus* (Osb.): 44. same, latero-ventral aspect; 45. aedeagus in ventral, 46. in lateral aspect; 47. apex of style.

antennal pits with a dark spot. Crown pale yellow, anterior margin with two black apical spots and a small dark spot behind ocelli; disk with faint irregular transverse yellow figure and a longitudinal slightly darkened spot on either side; eyes yellowish grey. Pronotum whitish yellow, anterior margin with a transverse row of dark spots, disk with two faint golden yellow longitudinal middle bands. Scutellum whitish yellow, basal triangles and median band yellow. Elytra yellow hyaline; clavus with tip, irregular spots along commissural margin and a subbasal spot in scutellar margin dark fuscous; corium with a dark brown spot in base of upper discal cell and minute fuscous spotting in upper subapical cell; veins concolorous, tips of claval veins whitish. Under surface and legs pale ochraceous. Femora with dark subapical spots, hind tibiae with dark dots.

Robust. Head broader than pronotum. Face fairly convex; ante-

clypeus broadening apicad; frontoclypeus distinctly expanding upwardly. Crown of uniform length.

Male genitalia in Figs. 38–43. Side lobes of pygofer with a long falcate appendage arising subapically from ventral margin and directed caudad. Anal tube sclerified laterally and apically. Genital plates broad, well sclerified also apically, lateral margins curved. Apophysis of style short, strongly bent laterad. Connective fairly long, arms lying close to each other. Aedeagus simple, shaft slender, recurved dorsad, ventral surface with a median keel; gonopore subbasal on ventral surface.

Panama, Darien Prov., Santa Fe, 1 ♂, type, 6.VI.1967. DeLong & Triplehorn.

Differs from the other species of the genus by the shape of the connective (arms of connective clearly separated from each other in the other species) and the position of the gonopore (apical or subapical in the others).

Atanus lobatus (Osborn)

The original description (LINNAVUORI 1959:298) is not repeated here. Male genitalia in Figs. 44–47. Ventral margin of side lobes of pygofer sclerified and provided with 4 claw-like processes. Anal tube without appendages. Apophysis of style short, irregularly T-shaped. Shaft of aedeagus short, in ventral aspect very broad, with a median keel on ventral surface.

Material studied: Bolivia, Prov. del Sara, 1 ♂, type, Steinbach, in the Carnegie Museum.

Of the *Tubulanus* group. Close to *A. cineratus* (Lv.) but dark pattern on face and upper surface more abundant and male genitalia dissimilar.

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